Critical Release Notice

Publication number: 297-8021-814
Publication release: Preliminary 18.01

The content of this customer NTP supports the SN07 (DMS) software release.

Bookmarks used in this NTP highlight the changes between the NA015 baseline and the current release. The bookmarks provided are color-coded to identify release-specific content changes. NTP volumes that do not contain bookmarks indicate that the NA015 baseline remains unchanged and is valid for the current release.

Bookmark Color Legend

Black: Applies to new or modified content for NA015 that is valid through the current release.

Red: Applies to new or modified content for NA017 that is valid through the current release.

Blue: Applies to new or modified content for NA018 (SN05 DMS) that is valid through the current release.

Green: Applies to new or modified content for SN06 (DMS) that is valid through the current release.

Purple: Applies to new or modified content for SN07 (DMS) that is valid through the current release.

Attention!
Adobe® Acrobat® Reader™ 5.0 or higher is required to view bookmarks in color.

Publication History

September 2004

Preliminary release 18.01 for software release SN07 (DMS).

For the Preliminary SN07 (DMS) release, the following changes were made:

Volume 1

AIN, AINICOFF, AINICSUB, AINOGOFF, AINOGSB2, ATTAMA

Volume 2

CP, IS41TOPS (obsolete, removed)

Volume 3

no changes

Volume 4

SMSTOPS (new)

Volume 5

TC7WRLSS (new), VOW (new), WINTOPS (new)

Volume 6

no changes

March 2004

Standard release 17.03 for software release SN06 (DMS).

For the Standard SN06 (DMS) release, the following changes were made:

Volume 1

no changes

Volume 2

DCA references removed/marked obsolete

Volume 3

no changes

Volume 4

no changes

Volume 5

TFCANA

Volume 6

DCA references removed/marked obsolete

September 2003

Standard release 17.02 for software release SN06 (DMS).

For the Standard SN06 (DMS) release, the following changes were made:

Volume 1

OM group BTTANDM (new)
OM group BCTPOOL (new)

Volume 2

OM group IS41TOPS (new)

Volume 3

no changes

Volume 4

no changes

Volume 5

OM group TOPSDACC
OM group TOPSISUP
OM group TRK
OM group TRKQOSOM

Volume 6

no changes

June 2003

Preliminary release 17.01 for software release SN06 (DMS).

For the Preliminary SN06 (DMS) release, the following changes were made:

Volume 1

no changes

Volume 2

OM group DCTS

Volume 3

no changes

Volume 4

no changes

Volume 5

OM group TRK2
OM group TRKDCTS
OM group TRKQOSOM (new)

Volume 6

no changes

297-8021-814

DMS-100 Family

North American DMS-100

Operational Measurements Reference Manual Volume 3 of 6

OM Groups ISGBD-OHQCBQRT

LET0015 and up Standard 14.02 May 2001

NORTEL NETWORKS™

DMS-100 Family

North American DMS-100

Operational Measurements Reference Manual Volume 3 of 6

OM Groups ISGBD-OHQCBQRT

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1 Operational measurements

Introduction

This chapter contains descriptions of operational measurement (OM) groups. Each OM group description contains the following sections:

- OM description
- Release history
- Registers
- Group structure
- Associated OM groups
- Associated functional groups
- Associated functionality codes
- OM group registers flowchart
- Register descriptions

OM description

This section provides a short description of the data the OM group counts and how the OM group uses this data.

Release history

This section contains a history of changes to the OM group. The release history describes the changes and the software releases that associate with the changes.

Registers

This section indicates how the registers in the OM group appear on the MAP display.

Group structure

This section describes the structure of the OM group that includes:

- the number of OM tuples
- the number of OM key fields

- office parameters
- other information entered associated with the group

Associated OM groups

This section lists other OM groups for the OM group.

Associated functional groups

This section lists the associated functional groups for the OM group.

Associated functionality codes

This section lists the associated functionality codes for the OM group.

OM group registers flowchart

This section provides an operating flowchart of all associated registers for the OM group. The flowchart shows the sequence of events that cause the registers to increase. The flowchart also shows the relationship between registers within the group.

Register descriptions

This section provides a short description of each register that associates with the OM group.

Register descriptions are arranged in alphabetical order within each group. There are three types of registers:

- Peg registers that increase when an event occurs.
- Usage registers that record activities or states at specified time intervals.
- High water registers that indicate the maximum number of items in simultaneous use during the current transfer period.

Each register description contains the following sections:

- register <short name>
- register <short name> release history
- Associated registers
- Associated logs
- Extension registers

Register <short name>

This section expands the register acronym and describes the data the register counts.

If the description refers to registers from a different group, the group name identifies these registers. An underscore and the register name follows the

group name. For example, OFZ_ORGFSET refers to register ORGFSET in group OFZ.

Register <short name> release history

This section shows the software development stream in which the system register was created and lists register changes.

Associated registers

This section lists related registers and explains how these registers relate. This section can include validation formulae or equations. Registers from a different group are identified by the group name and register name, separated by an underscore, for example, OFZ_ORGFSET.

Associated logs

This section lists logs that the system generates, together with events that are counted or related to the understanding of OM data.

Extension registers

This section provides the name of the register that the system uses for overflow when the original register is full. The system multiplies the value in the extension register by 65336. The system adds this total to the original register value to get the total count.

OM group ISGBD

OM description

ISDN service group Bd D-channel performance summary (ISGBD)

The OM group ISGBD monitors traffic handling on Bd-type D-channels in offices that have peripheral module types:

ISDN line group controller (LGCI)

ISDN line trunk controller (LTCI)

ISDN remote cluster controller (RCCI)A Bd-type D-channel carries packet data to a packet handler.

The D-channel handler (DCH) increases the five registers in ISGBD and transfers the counts to the central control (CC). The registers count frames:

- that the system receives from a packet handler
- that the system transmits to a packet handler
- that are destined for packet handlers, but the system discards because of hardware problems
- that the system receives from a packet handler with cyclic redundancy check (CRC) errors
- that the system receives from a packet handler, but discards for one of the following reasons:
- invalid logical terminal identifiers (LTID)
- messages that the ? cannot decode
- flow control problems
- aborts

Release history

The OM group ISGBD was introduced in BCS28.

BCS32

The PCM30 remote cluster controller (PRCC) increases registers DBDTXDSC, DBDCRC, DBDRXDSC, DBDTXPH, and DBDRXPH.

Registers

The OM group ISGBD registers appear on the MAP terminal as follows:

Group structure

The OM group ISGBD provides one tuple for each Bd-type D-channel.

Key field:

The ISGBD_OMTYPE values range from 0 to the maximum number of ISDN service groups (ISG) in an office (255) multiplied by the maximum number of channels for each ISG (32).

Info field:

Info field ISGBG_OMINFO consists of the extended multiprocessor system (XMS)-based peripheral module (XPM) number, the DCH number, and the channel number.

Associated OM groups

The OM group ISGBRA counts like information for basic rate access (BRA) D-channels.

Associated functional groups

The ISDN offices with LGCI, LTCI, and RCCI peripherals functional groups associate with OM group ISGBD.

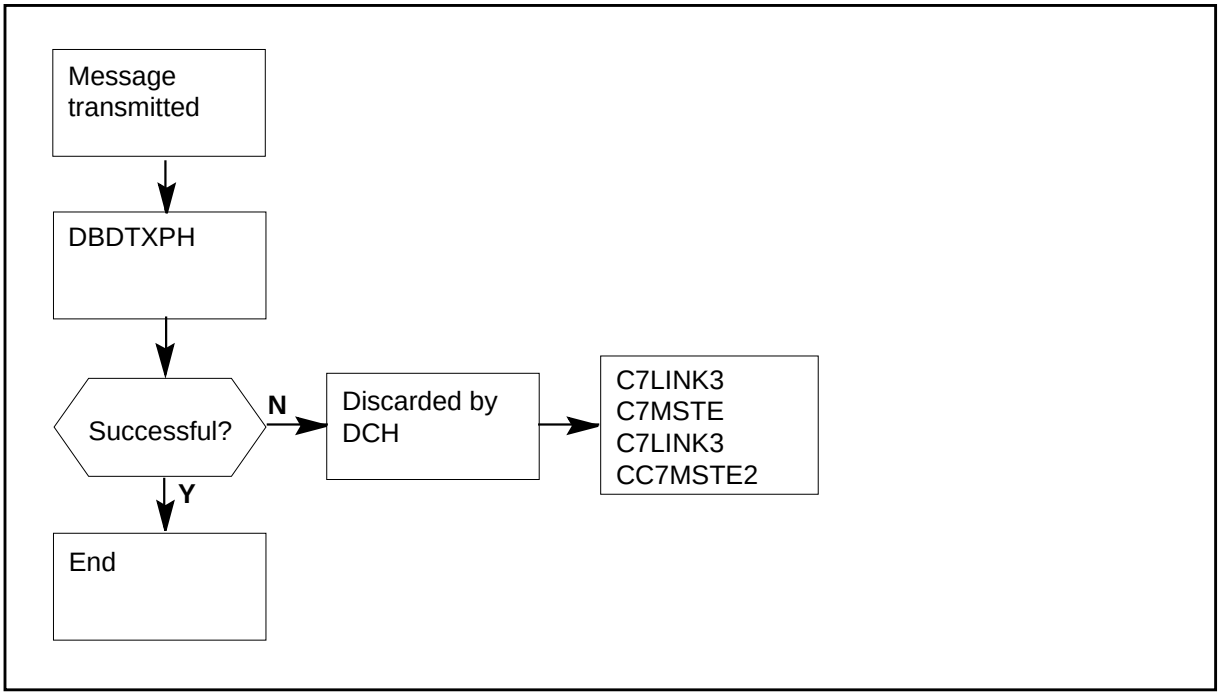
Associated functionality codes

The associated functionality codes for OM group ISGBD appear in the following table.

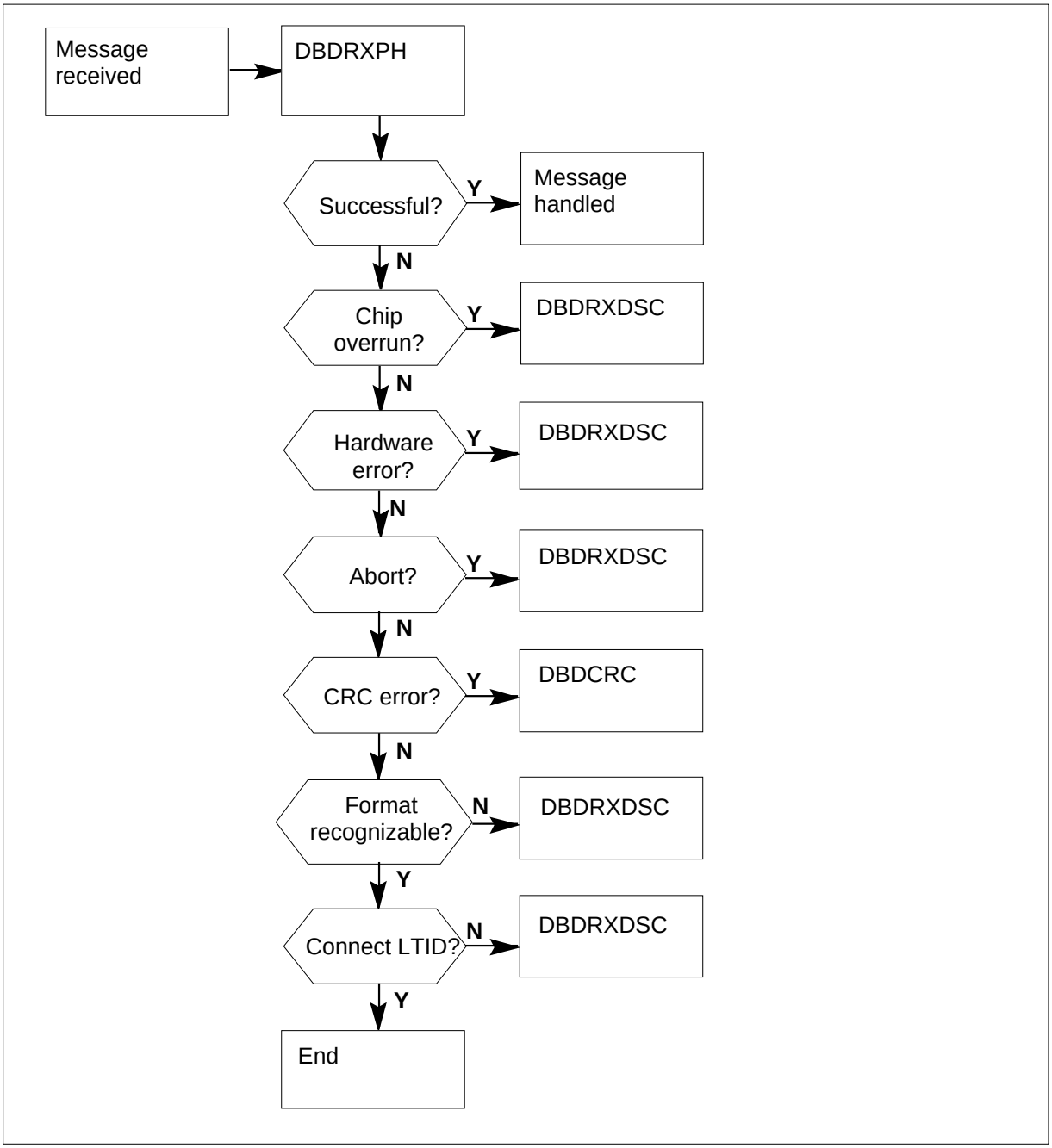
Functionality	Code
ISDN--Basic Access	NTX750AB

OM group ISGBD (continued)

OM group ISGBD registers - message transmitted



OM group ISGBD registers - message received



Register DBDCRC

Bd D-channel cyclic redundancy check (CRC) errors (DBDCRC)

OM group ISGBD (continued)

Register DBDCRC counts the frames that the system receives from a packet handler and a DCH discards because of CRC errors.

Register DBDCRC release history

Register DBDCRC was introduced in BCS28.

BCS32

The PCM30 remote cluster controller (PRCC) increases the register.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DBDRXDSC

Bd D-channel received and discarded frames (DBDRXDSC)

Register DBDRXDSC counts the frames that the system receives from a packet handler and a DCH discards for the following reasons:

- LTIDs that are not correct
- messages that the ? cannot decode
- flow control problems
- aborts
- hardware errors

Register DBDRXDSC release history

Register DBDRXDSC was introduced in BCS28.

BCS32

The PCM30 remote cluster controller (PRCC) increases the register.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DBDRXPH

Bd D-channel frames received from packet handler (DBDRXPH)

Register DBDRXPH counts the frames that the system receives from a packet handler on a Bd-type D-channel. Each unit in DBDRXPH represents 100 frames.

Register DBDRXPH release history

Register DBDRXPH was introduced in BCS28.

BCS32

The PCM30 remote cluster controller (PRCC) increases the register.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DBDTXDSC

Bd D-channel transmitted and discarded frames (DBDTXDSC)

Register DBDTXDSC counts the frames destined for a packet handler that a DCH discards because of hardware problems.

Register DBDTXDSC release history

Register DBDTXDSC was introduced in BCS28.

BCS32

The PCM30 remote cluster controller (PRCC) increases the register.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group ISGBD (end)

Extension registers

There are no extension registers.

Register DBDTXPH

Bd D-channel frames transmitted to packet handler (DBDTXPH)

Register DBDTXPH counts the frames that the system transmits to a packet handler on a Bd-type D-channel. Each unit in DBDTXPH represents 100 frames.

Register DBDTXPH release history

Register DBDTXPH was introduced in BCS28.

BCS32

The PCM30 remote cluster controller (PRCC) increases the register.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group ISGBRA

OM description

ISDN service group basic rate access channel performance summary (ISGBRA)

The OM group ISGBRA monitors traffic on basic rate access (BRA) D-channels in offices with the following types of peripheral modules:

- ISDN line group controller (LGCI)
- ISDN line trunk controller (LTCI)
- ISDN remote cluster controller (RCCI)

The D-channel handler (DCH) increases the registers in ISGBRA and transfers the counts to the central control (CC).

Fifteen registers in ISGBRA count the following events and frame types:

- frames with cyclic redundancy check (CRC) errors
- service access point identifier (SAPI) frames that the system transmits and receives
- link resets by a DCH and far end
- reject frames that a DCH and far end transmit and receive
- receiver-not-ready (RNR) frames that a DCH transmits and receives

The system makes counts for each DCH. The system does not make counts for each BRA D-channel. A large number of BRA d-channels that can exist on a single DCH (124).

Release history

The OM group ISGBRA was introduced in BCS28.

BCS32

The PCM30 remote cluster controller (PRCC) increases registers: DBRTXDSC, DBRCRC, DBRRXDSC, DBRS0TX, DBRS16TX, DBRSATX, DBRS0RX, DBRS16RX, DBRSARX, DBRLKRED, DBRLKREP, DBRRNRD, DBRRNRP, DBRREJTX, and DBRREJRX

Registers

The OM group ISGBRA registers appear on the MAP terminal as follows:

OM group ISGBRA (continued)

DBRTXDSC	DBRCRC	DBRRXDSC	DBRS0TX
DBRS16TX	DBRSATX	DBRS0RX	DBRS16RX
DBRSARX	DBRLKRED	DBRLKREP	DBRRNRD
DBRRNRP	DBRREJTX	DBRREJRX	

Group structure

The OM group ISGBRA provides one tuple for each DCH with BRA D-channels.

Key field:

Key field ISGBRA_OMTYPE consists of the LTCI number and the ISDN service group (ISG) number for the LTCI. The maximum number for each office is 255.

Info field:

Info field ISGBRA_OMINFO consists of the LTCI number and the ISG number.

Associated OM groups

The OM group ISGBD counts similar information for Bd-type D-channels.

Associated functional groups

The ISDN offices with LGCI, LTCI, and RCCI peripherals functional groups associate with OM group ISGBRA .

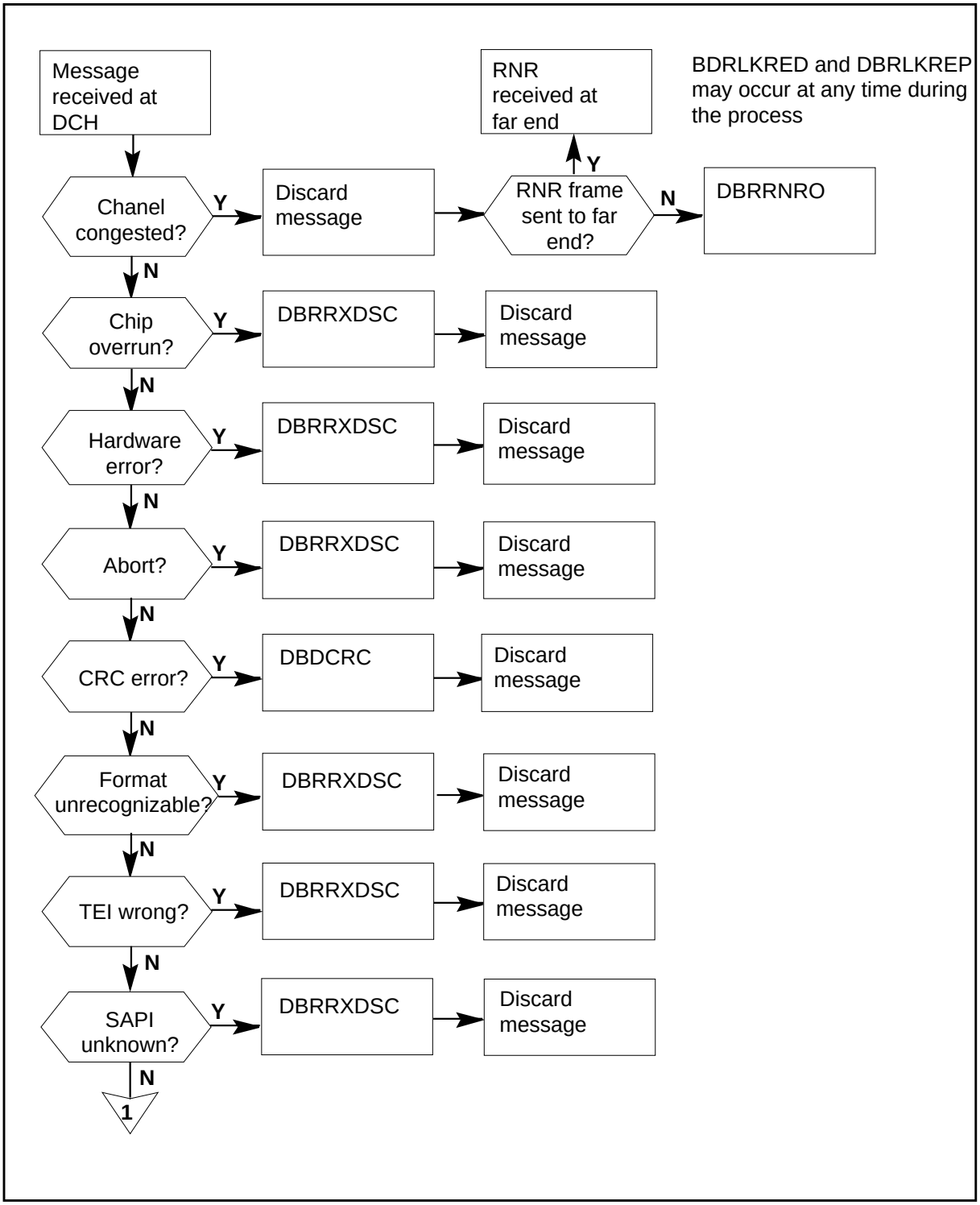
Associated functionality codes

The associated functionality codes for OM group ISGBRA appear in the following table.

Functionality	Code
ISDN--Basic Access	NTX750AB

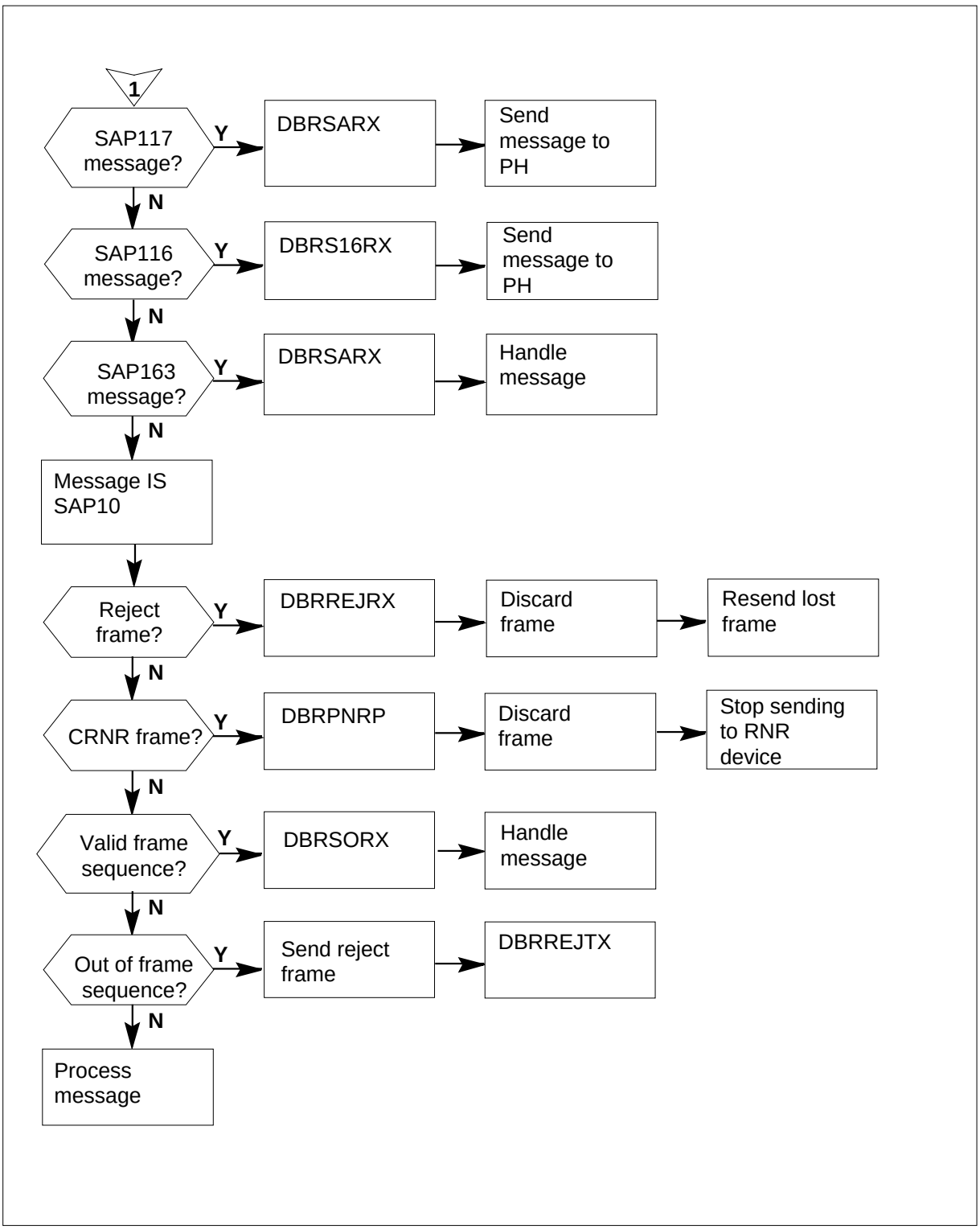
OM group ISGBRA (continued)

OM group ISGBRA registers: DCH receives message

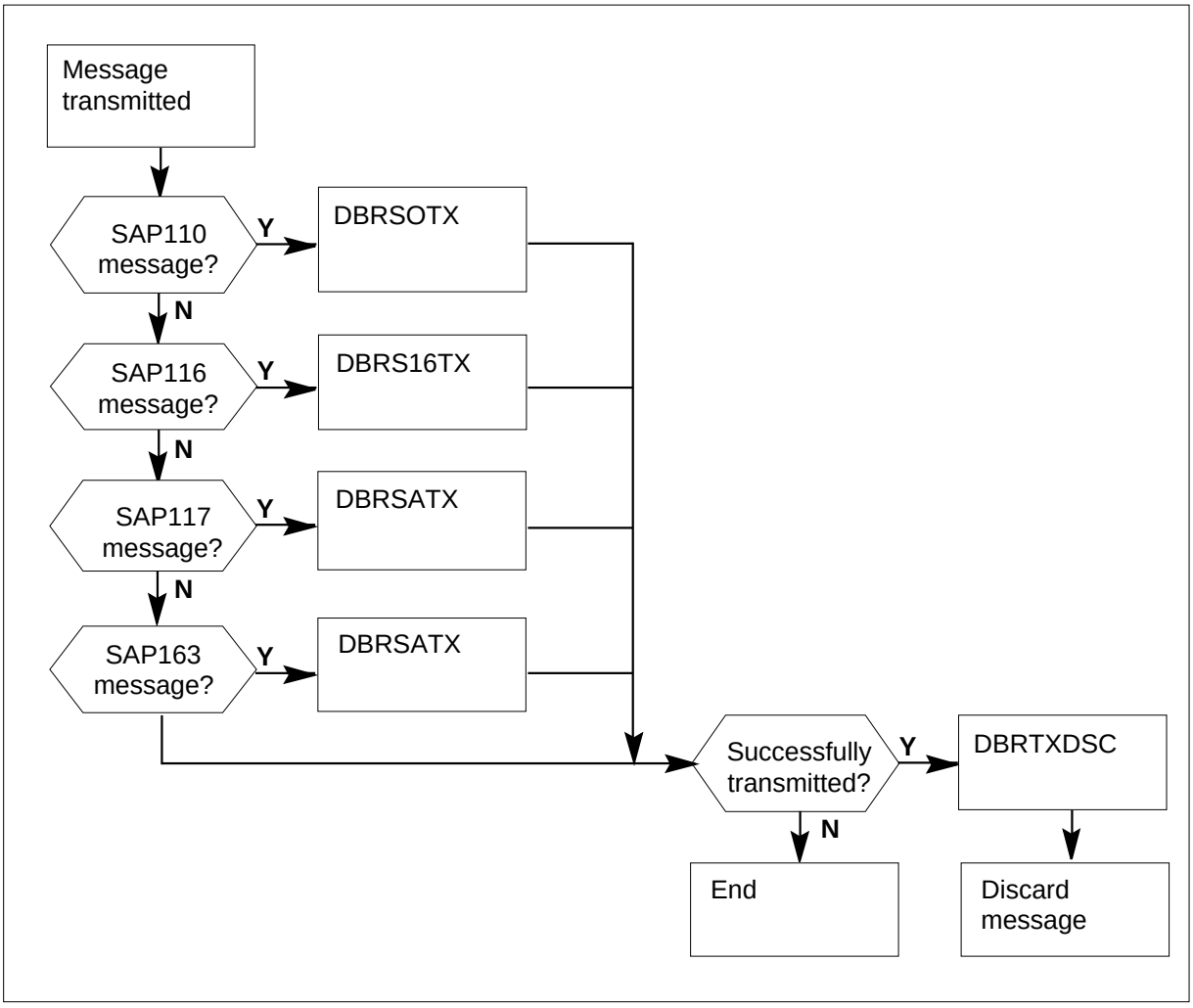


OM group ISGBRA (continued)

OM group ISGBRA registers - message received at DCH (continued)



OM group ISGBRA registers - message transmitted



Register DBRCRC

BRA D-channel cyclic redundancy check errors (DBRCRC)

Register DBRCRC counts the frames a DCH discards because of CRC errors.

Register DBRCRC release history

Register DBRCRC was introduced in BCS28.

BCS32

The PCM30 remote cluster controller (PRCC) increases the register.

OM group ISGBRA (continued)

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DBRLKRED

BRA D-channel link resets by D-channel handler (DBRLKRED)

Register DBRLKRED counts the link resets by a DCH.

Register DBRLKRED release history

Register DBRLKRED was introduced in BCS28.

BCS32

The PCM30 remote cluster controller (PRCC) increases the register.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DBRLKREP

BRA D-channel link resets by far-end device (DBRLKREP)

Register DBRLKREP counts the link resets by a far-end device.

Register DBRLKREP release history

Register DBRLKREP was introduced in BCS28.

BCS32

The PCM30 remote cluster controller (PRCC) increases the register.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DBRREJRX

BRA D-channel reject frames received (DBRREJRX)

Register DBRREJRX counts the reject frames that a DCH receives. Reject frames indicate that one of the sequenced frames is missing.

Register DBRREJRX release history

Register DBRREJRX was introduced in BCS28.

BCS32

The PCM30 remote cluster controller (PRCC) increases the register.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DBRREJTX

BRA D-channel reject frames transmitted (DBRREJTX)

Register DBRREJTX counts the reject frames that a DCH transmits. Reject frames indicate that the far end loses one of the sequenced frames.

Register DBRREJTX release history

Register DBRREJTX was introduced in BCS28.

BCS32

The PCM30 remote cluster controller (PRCC) increases the register.

Associated registers

There are no associated registers.

OM group ISGBRA (continued)

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DBRRNRD

BRA D-channel receiver-not-ready (RNR) frames sent (DBRRNRD)

Register DBRRNRD counts the RNR frames that a DCH sends to a far-end device.

Register DBRRNRD release history

Register DBRRNRD was introduced in BCS28.

BCS32

The PCM30 remote cluster controller (PRCC) increases the register.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DBRRNRP

BRA D-channel receiver-not-ready (RNR) frames received (DBRRNRP)

Register DBRRNRP counts the RNR frames that a DCH receives from a far-end device.

DBRRNRP release history

Register DBRRNRP was introduced in BCS28.

BCS32

The PCM30 remote cluster controller (PRCC) increases the register.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DBRRXDSC

BRA D-channel received and discarded frames (DBRRXDSC)

Register DBRRXDSC counts the frames that a DCH discards because of one of the following problems:

- a terminal endpoint identifier that is not registered
- a message that the system cannot decode
- flow control problems
- only a part of a message is received
- sequencing errors
- an SAPI that is not known

Register DBRRXDSC release history

Register DBRRXDSC was introduced in BCS28.

BCS32

The PCM30 remote cluster controller (PRCC) increases the register.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DBRS16RX

BRA D-channel received service access point identifier 16 frames (DBRS16RX)

Register DBRS16RX counts the SAPI 16 frames that a DCH receives. The SAPI 16 frames indicate a request for packet-switched service.

Each unit in DBRS16RX represents 100 frames.

OM group ISGBRA (continued)

DBRS16RX release history

Register DBRS16RX was introduced in BCS28.

BCS32

The PCM30 remote cluster controller (PRCC) increases the register.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no associated registers.

Register DBRS16TX

BRA D-channel transmitted service access point identifier 16 frames (DBRS16TX)

Register DBRS16TX counts the SAPI 16 frames that a DCH transmits. The SAPI 16 frames indicate a request for packet-switched service.

Each unit in DBRS16TX represents 100 frames.

Register DBRS16TX release history

Register DBRS16TX was introduced in BCS.

BCS32

The PCM30 remote cluster controller (PRCC) increases the register.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DBRSARX

BRA D-channel received service access point identifier 17 and 63 frames (DBRRXDSC)

Register DBRSARX counts the SAPI 17 and SAPI 63 frames that a DCH receives.

The SAPI 17 frames indicate a request for intraloop signaling. The SAPI 17 allows terminals on the same BRA interface to communicate. It also allows terminal testing.

The SAPI 63 frames indicate a request for layer 2 management services. Layer 2 management services include terminal endpoint identifier management, error reporting, and physical link control.

Each unit in DBRSARX represents 100 frames.

Register DBRSARX release history

Register DBRSARX was introduced in BCS.

BCS32

The PCM30 remote cluster controller (PRCC) increases the register.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DBRSATX

BRA D-channel transmitted service access point identifier 17 and 63 frames (DBRSATX)

Register DBRSATX counts the SAPI 17 and SAPI 63 frames that a DCH transmits.

The SAPI 17 frames indicate a request for intraloop signaling. The SAPI 17 allows terminals on the same frame to communicate. It also allows terminal testing.

The SAPI 63 frames indicate a request for layer 2 management services. Layer 2 management services include terminal endpoint identifier management, error reporting, and physical link control.

Each unit in DBRSATX represents 100 frames.

OM group ISGBRA (continued)

Register DBRSATX release history

Register DBRSATX was introduced in BCS28.

BCS32

The PCM30 remote cluster controller (PRCC) increases the register.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DBRS0RX

BRA D-channel received service access point identifier 0 frames (DBRSORX)

Register DBRS0RX counts the SAPI 0 frames that a DCH receives. The SAPI 0 frames indicate a request for call control.

Each unit in DBRS0RX represents 100 frames.

Register DBRS0RX release history

Register DBRS0RX was introduced in BCS28.

BCS32

The PCM30 remote cluster controller (PRCC) increases the register.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DBRS0TX

BRA D-channel transmitted service access point identifier 0 frames (DBRSOTX)

Register DBRS0TX counts the SAPI 0 frames that a DCH transmits. The SAPI 0 frames indicate a request for call control.

Each unit in DBRS0TX represents 100 frames.

DBRS0TX release history

Register DBRS0TX was introduced in BCS28.

BCS32

The PCM30 remote cluster controller (PRCC) increases the register.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DBRTXDSC

BRA D-channel transmitted and discarded frames (DBRTXDSC)

Register DBRTXDSC counts the frames destined for a packet handler that a DCH discards because of hardware problems.

DBRTXDSC release history

Register DBRTXDSC was introduced in BCS.

BCS32

The PCM30 remote cluster controller (PRCC) increases the register.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group ISGCPU

OM description

ISDN services group CPU occupancy (ISGCPU)

The OM group ISGCPU measures ISDN services group (ISG) occupancy of the D-channel handler (DCH) CPU. The ISGCPU includes a count of the CPU occupancy that lies in each of ten percentage ranges. For example, 0-10%, 10-20%, and so on.

Release history

The OM group ISGCPU was introduced in BCS33.

Registers

The OM group ISGCPU registers appear on the MAP terminal as follows:

```
DCPU10          DCPU20          DCPU30          DCPU40
DCPU50          DCPU60          DCPU70          DCPU80
DCPU90          DCPU100         DCPUTOT         DCPURTR
```

Group structure

The tuples for each office for OM group ISGCPU depend on the number of ISGs entered.

Key field:
There is no key field.

Info field:
ISGPERF_OMINFO

The info field data that the OM report provides has three parts:

the peripheral module (PM) type

the PM number

the ISG number

Correct PM types are as follows:

- ISDN line group controller (LGCI)
- ISDN line trunk controller (LTCI)
- ISDN remote cluster controller (RCCI)

Associated OM groups

The OM group ISGVOLD associates with OM group ISGCPU.

Associated functional groups

The ISDN LTC/LGC functional groups associate with OM group ISGCPU.

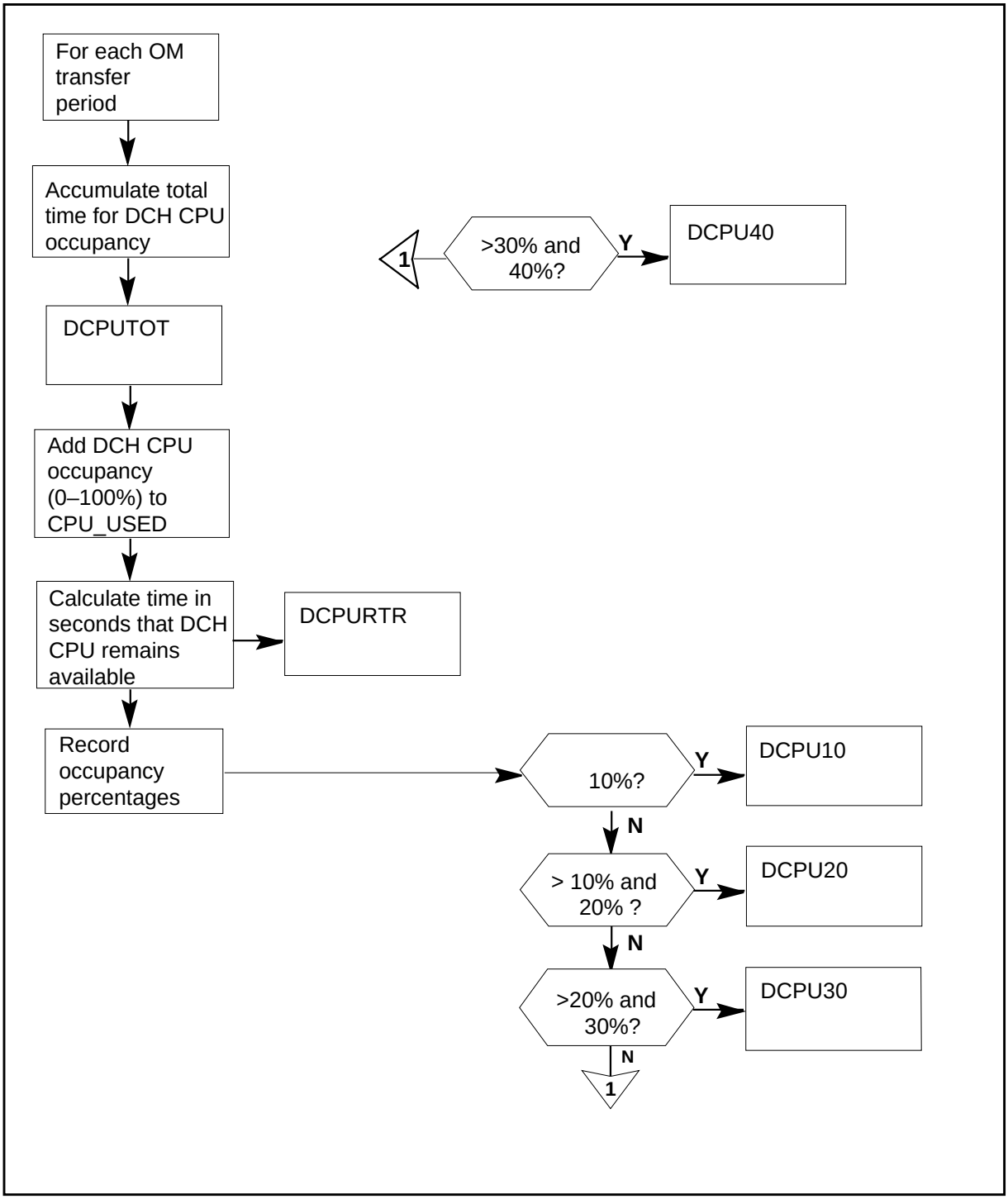
Associated functionality codes

The associated functionality codes for OM group ISGCPU appear in the following table.

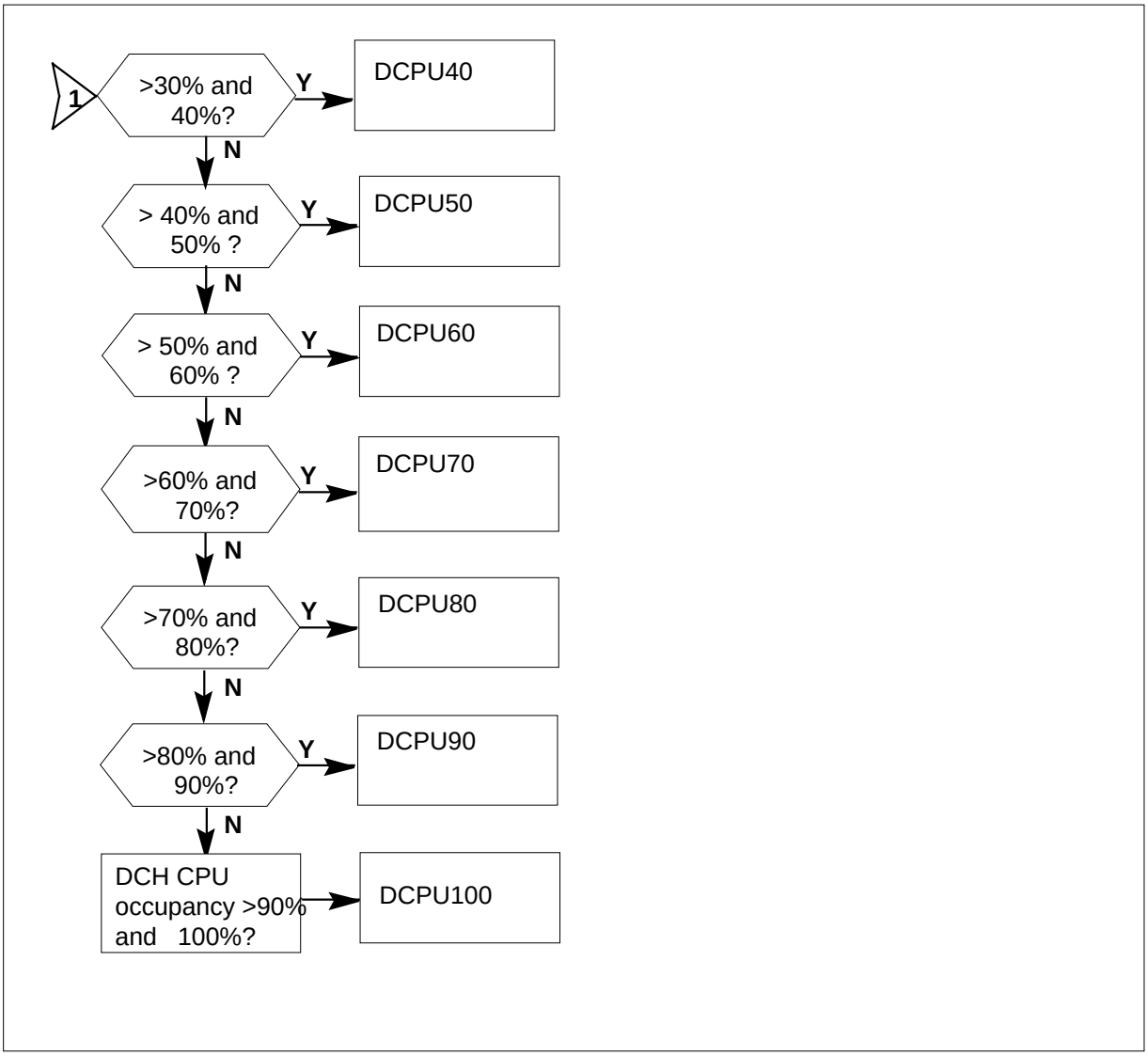
Functionality	Code
ISDN Basic Access	NTX750AB

OM group ISGCPU (continued)

OM group ISGCPU registers



OM group ISGCPU registers (continued)



Register DCPU10

DCH CPU occupancy £ 10% (DCPU10)

Register DCPU10 counts the seconds that the DCH CPU is occupied for less than or equal to 10%. Register DCPU10 divided by DCPUTOT gives the percentage of time an ISG has an average CPU occupancy of 0% to 10%.

Register DCPU10 release history

Register DCPU10 was introduced in BCS33.

OM group ISGCPU (continued)

Associated registers

Registers DCPU10 to DCPU100 together provide the CPU application profile of an ISG.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DCPU20

DCH CPU occupancy £ 20% (DCPU20)

Register DCPU20 counts the seconds that DCH CPU is occupied for more than 10% but less than or equal to 20%. Register DCPU20 divided by DCPUTOT gives the percentage of time an ISG has an average CPU occupancy of 10% to 20%.

Register DCPU20 release history

Register DCPU20 was introduced in BCS33.

Associated registers

Registers DCPU10 to DCPU100 together provide the CPU application profile of an ISG.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DCPU30

DCH CPU occupancy £ 30% (DCPU30)

Register DCPU30 counts the seconds that the DCH CPU is occupied for more than 20% but less than or equal to 30%. Register DCPU30 divided by DCPUTOT count gives the percentage of time an ISG has an average CPU occupancy of 20% to 30%.

Register DCPU30 release history

Register DCPU30 was introduced in BCS33.

Associated registers

Registers DCPU10 to DCPU100 together provide the CPU use profile of an ISG.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DCPU40

DCH CPU occupancy £ 40% (DCPU40)

Register DCPU40 counts the seconds that the DCH CPU is occupied more than 30% but less than or equal to 40%. Register DCPU40 divided by the DCPUTOT gives the percentage of time an ISG has an average CPU occupancy of 30% to 40%.

Register DCPU40 release history

Register DCPU40 was introduced in BCS33.

Associated registers

Registers DCPU10 to DCPU100 together provide the CPU application profile of an ISG.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DCPU50

DCH CPU occupancy £ 50% (DCPU50)

Register DCPU50 counts the seconds that the DCH CPU is occupied for more than 40% but less than or equal to 50%. Register DCPU50 divided by DCPUTOT gives the percentage of time an ISG has an average CPU occupancy of 40% to 50%.

Register DCPU50 release history

Register DCPU50 was introduced in BCS33.

OM group ISGCPU (continued)

Associated registers

Registers DCPU10 to DCPU100 together provide the CPU application profile of an ISG.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DCPU60

DCH CPU occupancy £ 60% (DCPU60)

Register DCPU60 counts the seconds that the DCH CPU is occupied for more than 50% but less than or equal to 60%. Register DCPU60 divided by DCPUTOT gives the percentage of time an ISG has an average CPU occupancy of 50% to 60%.

Register DCPU60 release history

Register DCPU60 was introduced in BCS33.

Associated registers

Registers DCPU10 to DCPU100 together provide the CPU application profile of an ISG.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DCPU70

DCH CPU occupancy £ 70% (DCPU70)

Register DCPU70 counts the seconds that the DCH CPU is occupied for more than 60% but less than or equal to 70%. Register DCPU70 divided by DCPUTOT gives the percentage of time an ISG has an average CPU occupancy of 60% to 70%.

Register DCPU70 release history

Register DCPU70 was introduced in BCS33.

Associated registers

Registers DCPU10 to DCPU100 together provide the CPU application profile of an ISG.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DCPU80

DCH CPU occupancy £ 80% (DCPU80)

Register DCPU80 counts the seconds that the DCH CPU is occupied for more than 70% but less than or equal to 80%. Register DCPU80 divided by DCPUTOT gives the percentage of time an ISG has an average CPU occupancy of 70% to 80%.

Register DCPU80 release history

Register DCPU80 was introduced in BCS33.

Associated registers

Registers DCPU10 to DCPU100 together provide the CPU application profile of an ISG.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DCPU90

DCH CPU occupancy £ 90% (DCPU90)

Register DCPU90 counts the seconds that the DCH CPU is occupied for more than 80% but less than or equal to 90%. Register DCPU90 divided by DCPUTOT gives the percentage of time an ISG has an average CPU occupancy of 80% to 90%.

Register DCPU90 release history

Register DCPU90 was introduced in BCS33.

OM group ISGCPU (continued)

Associated registers

Registers DCPU10 to DCPU100 together provide the CPU application profile of an ISG.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DCPU100

DCH CPU occupancy £ 100% (DCPU100)

Register DCPU100 counts the seconds that the DCH CPU is occupied for more than 90% but less than or equal to 100%. Register DCPU100 count divided by DCPUTOT gives the percentage of time an ISG has an average CPU occupancy of 90% to 100%.

Register DCPU100 release history

Register DCPU100 was introduced in BCS33.

Associated registers

Registers DCPU10 to DCPU100 together provide the CPU application profile of an ISG.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DCPURTR

DCH CPU real time remaining (DCPURTR)

Register DCPURTR counts the seconds that the DCH CPU is available to process additional calls. Register DCPURTR divided by DCPUTOT gives the percentage of time an ISG CPU is available to process additional calls.

Register DCPURTR release history

Register DCPURTR was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DCPUTOT

DCH CPU total count (DCPUTOT)

Register DCPUTOT counts the seconds in the period during which the system counts DCH CPU occupancy.

Register DCPUTOT release history

Register DCPUTOT was introduced in BCS33.

Associated registers

Register DCPUTOT divided into any other register in this OM group, gives a percentage measurement of that register use.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group ISGOVLD

OM description

ISDN services group overload (ISGVOLD)

The OM group ISGVOLD measures the degree of overload of an ISDN services group (ISG). The OM group ISGVOLD provides information on the three levels of overload control for an ISG: congestion, overload, and frame discard.

Release history

The OM group ISGOVLD was introduced in BCS33.

Registers

The OM group ISGOVLD registers appear on the MAP terminal as follows:

CONGENTR	CONGEXIT	CONGTIE	OVLDENTR
OLDEXIT	OVLDTIME	OV16DSC	OV16DSC2

Group structure

The OM group ISGOVLD tuples for each office depends on the number of ISGs entered.

Key field:
There is no key field

Info field:
ISGPERF_OMINFO

The info field information the OM report provides has three parts: peripheral module (PM) type, PM number, and ISG number. Correct PM types are as follows:

- ISDN line group controller (LGCI)
- ISDN line trunk controller (LTCI)
- ISDN remote cluster controller (RCCI)

Associated OM groups

ISGCPU

Associated functional groups

The following functional groups associate with OM group ISGOVLD:

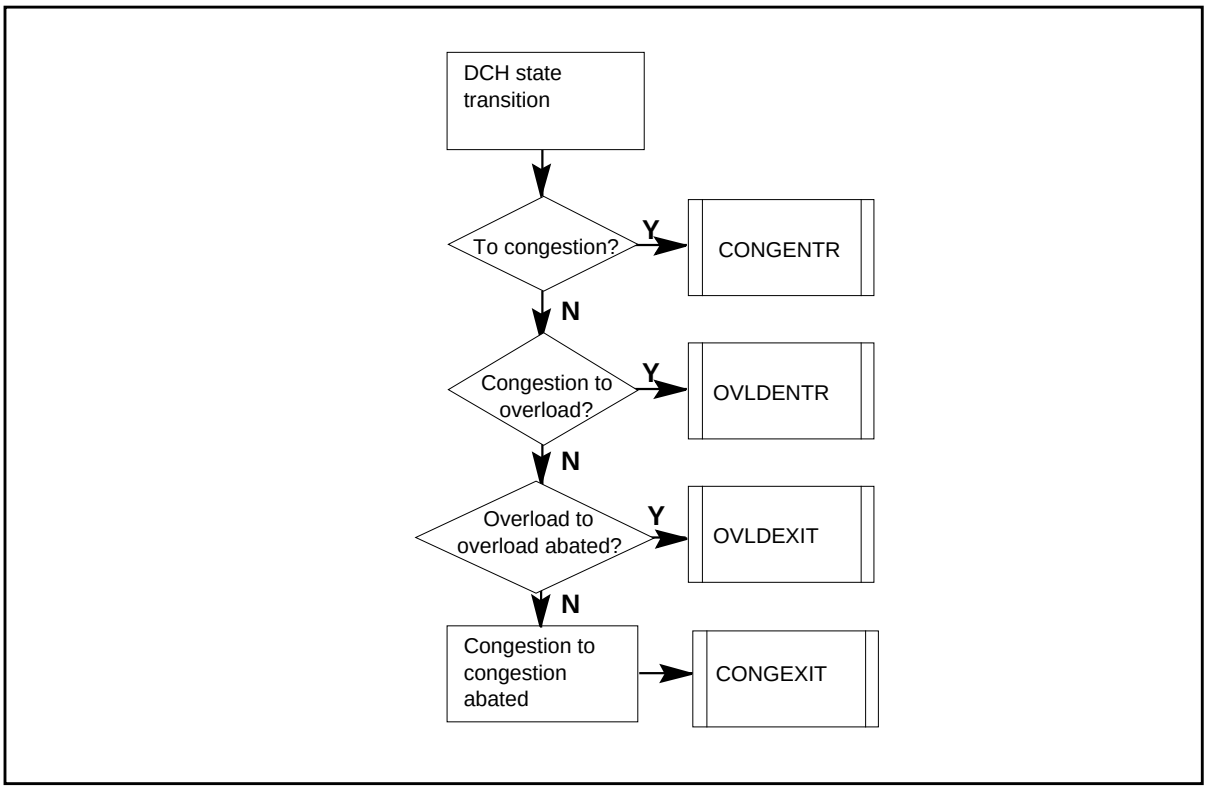
- LTCI
- LGCI
- RCCI

Associated functionality code

The associated functionality code for OM group ISGOVLD appears in the following table.

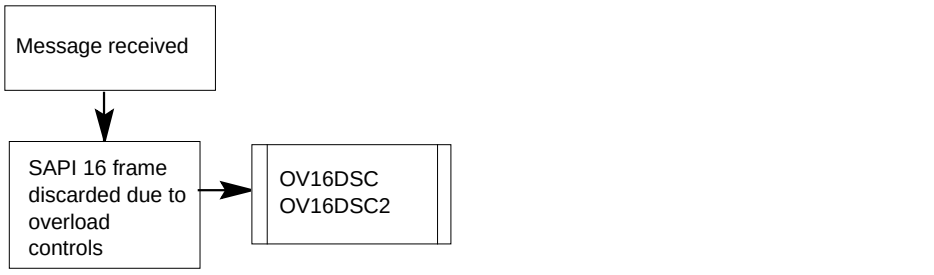
Functionality	Code
ISDN Basic Access	NTX750AB

OM group ISGOVLD registers



OM group ISGOVLD (continued)

OM group ISGOVLD registers (continued)



Note: Registers CONGTIME and OVLDTIME are computed in the XPM by using the time DCH enters and leaves the congestion/overload state.

Register CONGENTR

Number of times entering congestion (CONGENTR)

Register CONGENTR counts the times an ISG enters a congested state.

Register CONGENTR release history

Register CONGENTR was introduced in BCS33.

Associated registers

Register CONGEXIT counts the times an ISG leaves a congested state.

Associated logs

There are no associated

Extension registers

There are no extension registers.

Register CONGEXIT

Number of times leaving congestion (CONGEXIT)

Register CONGEXIT counts the number of times that an ISG leaves a congested state.

Register CONGEXIT release history

Register CONGEXIT was introduced in BCS33.

Associated registers

Register CONGENTR counts the times an ISG enters a congested state.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CONGTIME

Congestion Time (CONGTIME)

Register CONGTIME counts the seconds an ISG remains in a congested state.

Register CONGTIME release history

Register CONGTIME was introduced in BSC33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register OV16DSC

SAPI 16 frames discarded (OV16DSC)

Register OV16DSC counts the services access point identifier 16 (SAPI 16) frames the system discards caused by overload controls.

Register OV16DSC release history

Register OV16DSC was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

OV16DSC2

OM group ISGOVLD (continued)

Register OVLDENTR

Number of times entering overload (OVLDENTR)

Register OVLDENTR counts the number of times an ISG enters an overloaded state.

Register OVLDENTR release history

Register OVLDENTR was introduced in BCS33.

Associated registers

Register OVLDENTR counts the times an ISG enters an overloaded state.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register OVLDEXIT

Number of times leaving overload (OVLDEXIT)

Register OVLDEXIT counts the times an ISG leaves an overloaded state.

Register OVLDEXIT release history

Register OVLDEXIT was introduced in BCS33.

Associated registers

Register OVLDEXIT counts the times an ISG leaves an overloaded state.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register OVLDTIME

Period of time in overload (OVLDTIME)

Register OVLDTIME counts the seconds an ISG is in an overloaded state.

Register OVLDTIME release history

Register OVLDTIME was introduced in BCS33.

OM group ISGOVLD (end)

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group ISUPCGRP

OM description

ISUP circuit group availability (ISUPCGRP)

The OM group ISUPCGRP provides information on circuit availability for the ISDN user part (ISUP). The system uses this information to determine circuit performance.

Register ISCKTRAC increases when a circuit fails a continuity check test.

Register ISCKTRAO increases when a message is received that is not appropriate. This condition indicates that the circuit is defective and is not available.

Register ISCKTRAE counts exit message (EXM) timeouts that occur on a trunk group. A timeout occurs when the end office expects and does not recieve an EXM from a tandem office.

Release history

The OM group ISUPCGRP was introduced in BCS26.

BCS31

Software change to allow this group to contain 8192 tuples.

BCS30

Register ISCKTRAC counts telephone user part plus (TUP+) calls

BCS28

ISCKTRAE was introduced

Registers

The OM group ISUPCGRP registers appear on the MAP terminal as follows:

```
ISCKTRAC     ISCKTRAO     ISCKTRAE
```

Group structure

The OM group ISUPCGRP provides one tuple for each trunk group.

Key field:
There is no associated key field

Info field:
There is no associated info field

Associated OM groups

The OM group ISUPUSAG counts incoming and outgoing ISUP messages.

The OM group ISUPCKTA counts circuit and circuit group blocking messages the system sends between local and far-end offices.

The OM group ISUPERRS counts the following during call setup and call takedown:

- conditions that are not normal
- messages that are not planned
- the absence of acknowledgement messages

The OM group ISUPCONN counts call attempts that are not successful.

Associated functional groups

The following functional groups associate with OM group ISUPCGRP:

- ISDN integrated services digital network
- CCS7 Common Channel Signaling 7

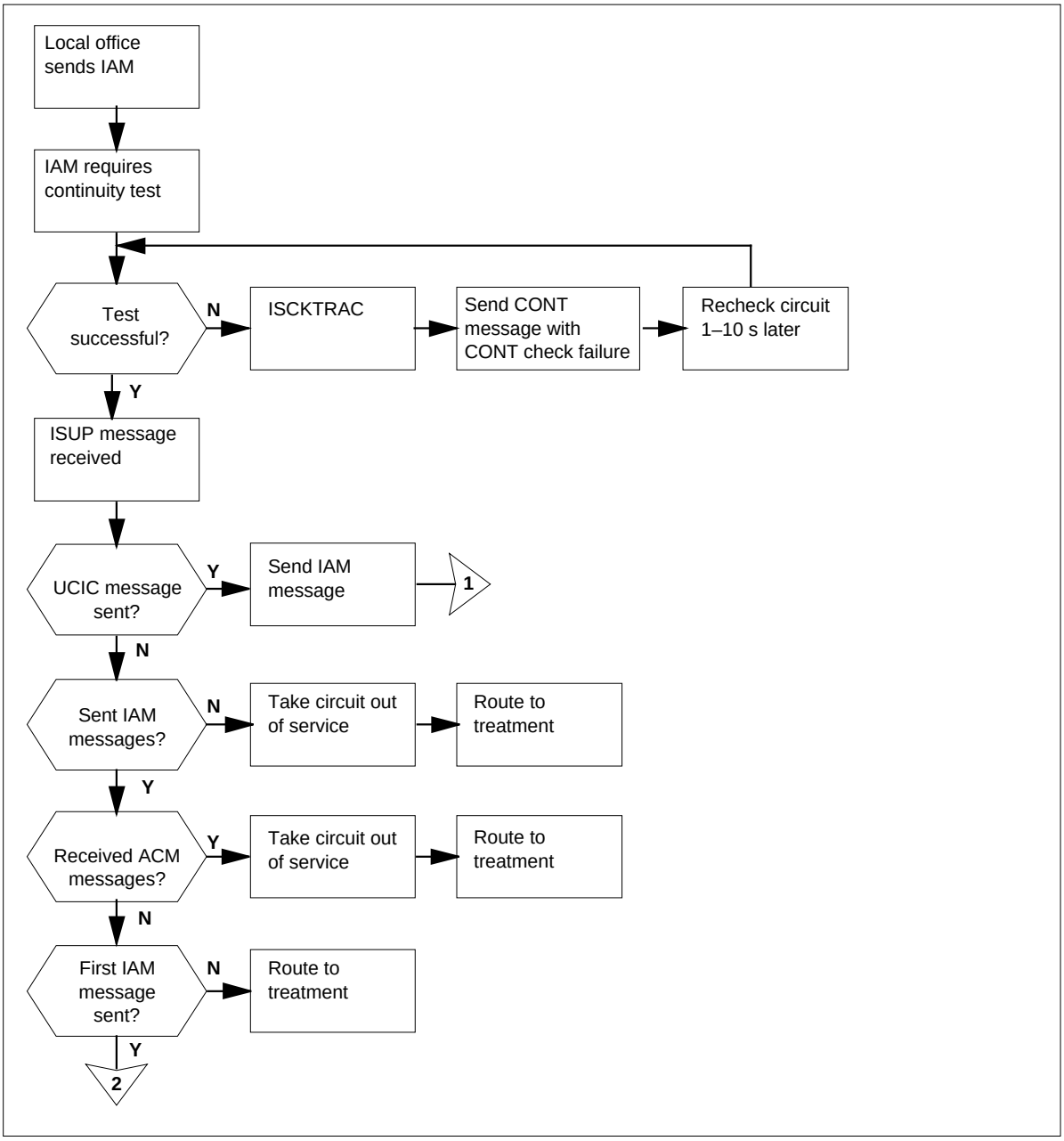
Associated functionality codes

The associated functionality codes for OM group ISUPCGRP. appear in the following table.

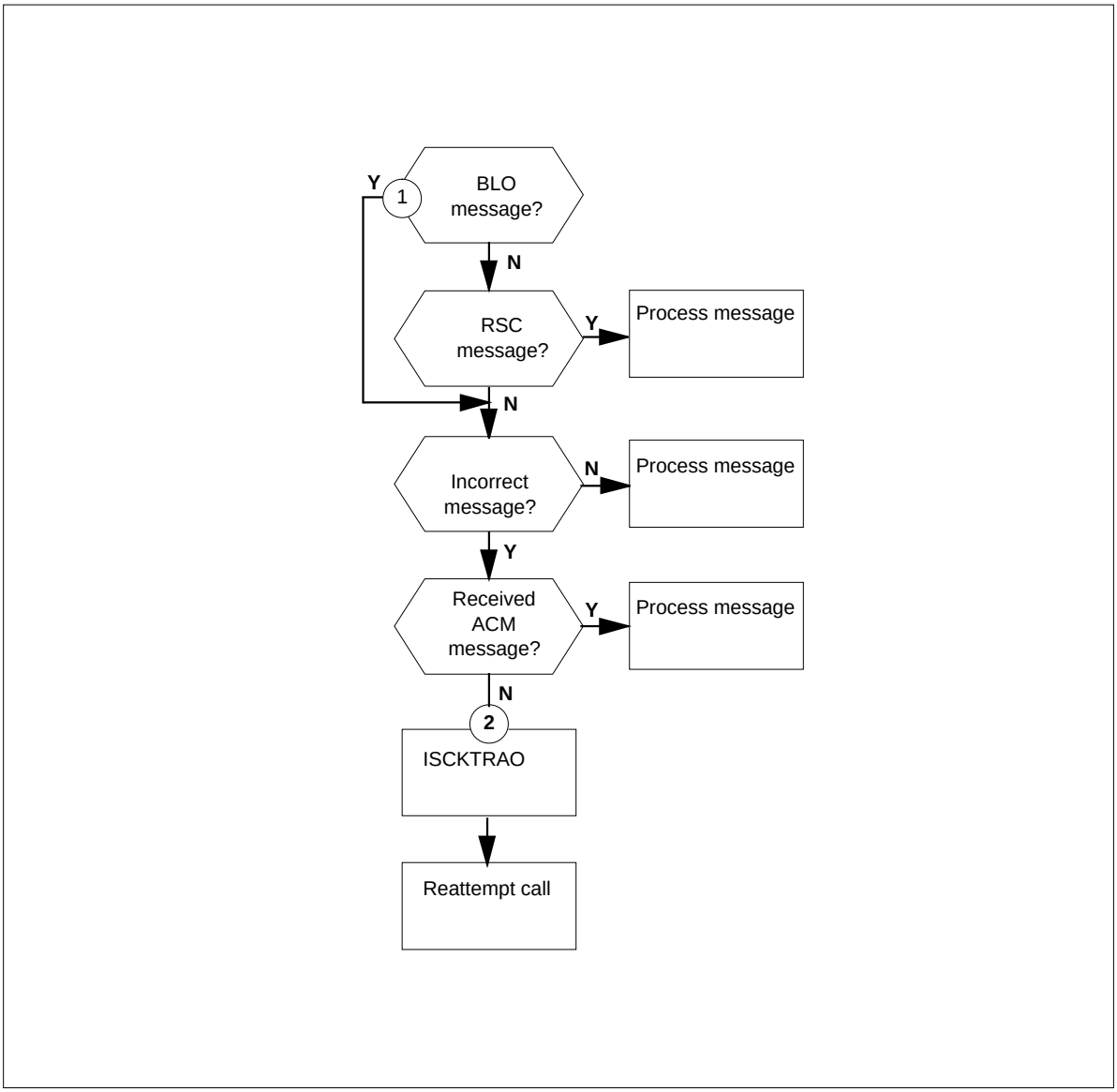
Functionality	Code
TUP+ on DMS-300	NTXK06AA
Common Basic	NTX001AA
ISUP Operational Measurements	NTX167AB

OM group ISUPCGRP (continued)

OM group ISUPCGRP registers



OM group ISUPCGRP registers (continued)



Register ISCKTRAC

ISUP circuit reattempt continuity (ISCKTRAC)

Register ISCKTRAC increases when a circuit in a trunk group fails a continuity check test. The initial address message (IAM) requests the test for the circuit on which a call is made.

Register ISCKTRAC release history

Register ISCKTRAC was introduced in BCS26.

OM group ISUPCGRP (continued)

BCS30
Register ISCKTRAC counts TUP+ calls.

Associated registers
There are no associated registers.

Associated logs
There are no associated logs.

Register ISCKTRAO
ISUP circuit reattempt other reasons (ISCKTRAO)

Register ISCKTRAO counts automatic repeat call setup attempts that occur for each trunk group for reasons other than:

- two-seizure detections
- continuity check test failures

Register ISCKTRAO increases for the following reasons:

- a blocking message is received after the initial address message (IAM) is sent and before an acknowledgement is received
- a reset circuit message is received after an IAM is received before an acknowledgement is received
- any other messages that are not appropriate are received before the address complete message (ACM) is received
- an unequipped circuit identification code (UCIC) message is received on a first attempt

ISCKTRAO release history
Register ISCKTRAO was introduced in BCS26.

Associated registers
There are no associated registers.

Associated logs
There are no associated logs.

Register ISCKTRAE
ISUP trunk group exit messages (ISCKTRAE)

Register ISCKTRAE counts exit message (EXM) timeouts that occur on a trunk group. A timeout occurs when the end office expects and does not receive an EXM from a tandem office.

Register ISCKTRAE release history

Register ISCKTRAE was introduced in BCS28.

Associated registers

There are no associated registers.

Associated logs

The system generates C7UP102 when an EXM timeout occurs in an office. An EXM timeout occurs because a carrier fails to respond to CCS7 equal access protocol.

OM group ISUPCKTA

OM description

ISUP circuit availability (ISUPCKTA)

The OM group ISUPCKTA counts circuit and circuit group blocking and unblocking messages sent between near- and far-end offices. The OM group ISUPCKTA counts determine overall circuit performance for the ISDN user part (ISUP).

Local or remote offices can block separate circuits. The system diverts traffic from blocked circuits for circuit testing and servicing. Two methods are used to unblock a circuit:

- Maintenance personnel originate an unblock (UBL) message or switching equipment at the near-end office returns a blocked circuit to service from the far-end office.
- An initial address message (IAM) received from a far-end office returns a remotely blocked circuit at the near-end office to service.

Registers that count available groups of circuits have also been created. These registers are activated when a future BCS group message sending procedure is implemented.

Release history

The OM group ISUPCKTA was introduced in BCS26. Registers ISCKTGBT, ISCKTGBF, and ISCKTCGU are not active until a future BCS.

GL04

The OM group ISUPCKTA was introduced in GL04.

Registers ISCKTLBT and ISCKTRBT are not increased in GL04.

Registers

The OM group ISUPCKTA registers appear on the MAP terminal as follows:

```
ISCKTBLO        ISCKTUBL        ISCKTGBT        ISCKTGBF
ISCKTCGU        ISCKTLBT        ISCKTRBT
```

Group structure

The OM group ISUPCKTA provides one tuple for each office.

Key field:
There is no key field.

Info field:
There is no info field.

Associated OM groups

The OM group ISUPCGRP counts the circuits that are available for each trunk.

The OM group ISUPCONN counts the call attempts that are not successful.

The OM group ISUPERRS counts conditions that are not normal and messages that are not expected. The ISUPERRS also counts the absence of acknowledgment messages during call setup and call takedown.

The ISUPUSAG counts incoming and outgoing ISUP messages.

Associated functional groups

The ISDN integrated services digital network functional group associates with OM group ISUPCKTA.

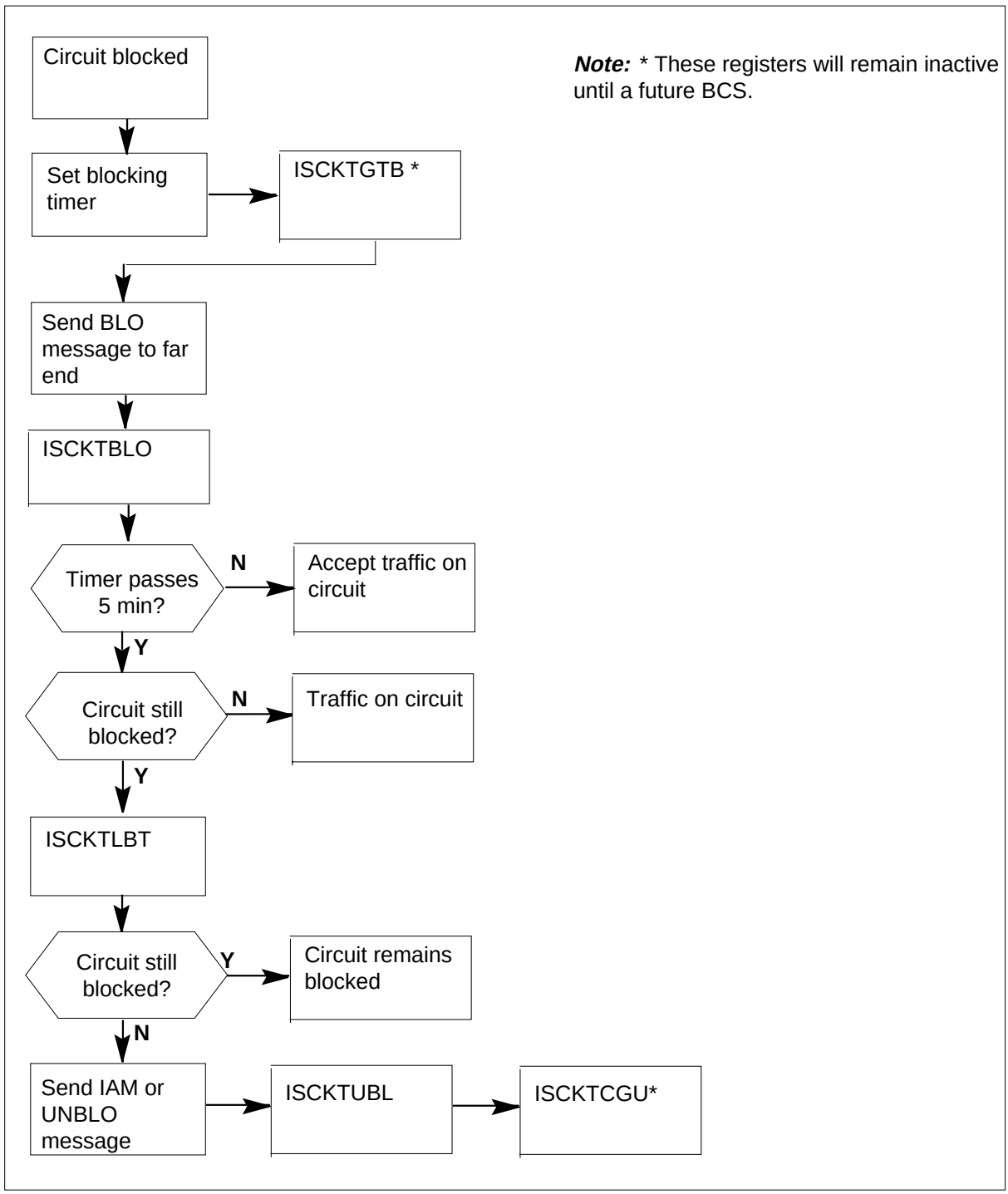
Associated functionality codes

The functionality codes associated with OM group ISUPCKTA appear in the following table.

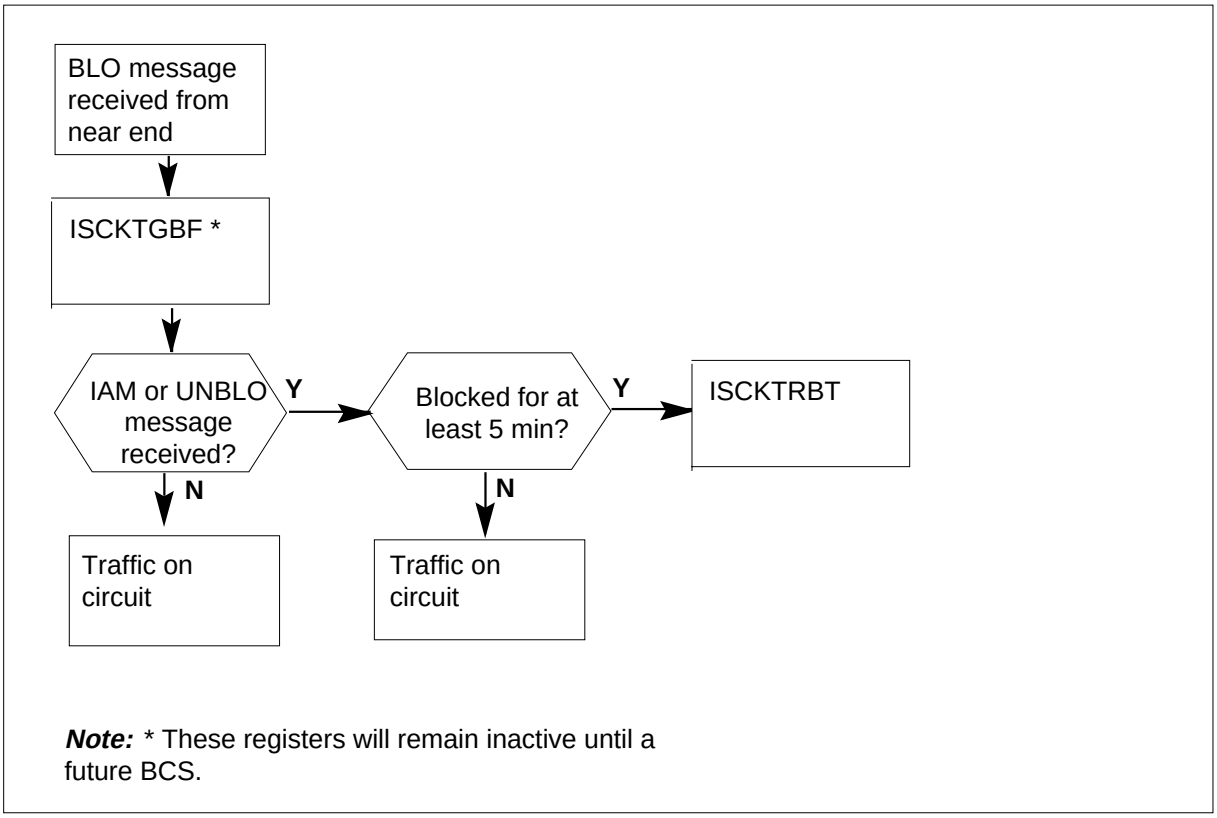
Functionality	Code
ISUP Operational Measurements	NTX167AB

OM group ISUPCKTA (continued)

OM group ISUPCKTA near-end registers



OM group ISUPCKTA far-end registers



Register ISCKTBLO

ISUP circuit blocked (ISCKTBLO)

Register ISCKTBLO counts circuit blocking messages sent to remove traffic from a circuit. The register prevents the far-end office from originating outgoing calls on a blocked circuit.

Register ISCKTBLO release history

Register ISCKTBLO was introduced in BCS26.

Associated registers

There are no associated registers.

Associated logs

The C7UP103 reports blocked or unblocked circuit conditions.

Extension registers

There are no extension registers.

OM group ISUPCKTA (continued)

Register ISCKTCGU

ISUP circuit group unblock (ISCKTCGU)

Register ISCKTCGU counts the following circuit group unblocking messages that an office sends:

- maintenance-oriented group unblocking.
- hardware failure-oriented group unblocking.
- software-generated group unblocking.

Register ISCKTCGU counts for each trunk in the group.

Register ISCKTCGU release history

Register ISCKTCGU was introduced in BCS26 but is not active.

Associated registers

There are no associated registers.

Associated logs

The system generates C7UP104 to report group blocking or unblocking conditions.

Extension registers

There are no extension registers.

Register ISCKTGBF

ISUP circuit group blocked failure (ISCKTGBF)

Register ISCKTGBF counts circuit group blocking messages that the system sends again after the first attempt to send messages fails. Failure occurs when the time allowed for acknowledgment elapses before the acknowledgment message is received.

Circuits are automatically released from all calls when the system receives a circuit group blocking message.

Register ISCKTGBF release history

The definition of register ISCKTGBF was corrected in NA005.

Register ISCKTGBF was introduced in BCS26 but is not active.

Associated registers

There are no associated registers.

Associated logs

The system generates C7UP104 logs to report group blocking or unblocking conditions.

Extension registers

There are no extension registers.

Register ISCKTGBT

ISUP circuit group blocked this end (ISCKTGBT)

Register ISCKTGBT counts circuit group blocking messages sent to block a circuit group at the far-end office for maintenance or software-generated reasons. This action does not affect calls on the circuits. Register ISCKTGBT counts circuit group blocking messages for each trunk in the group.

Register ISCKTGBT release history

Register ISCKTGBT was introduced in BCS26. Register ISCKTGBT will not be active until a future BCS.

Associated registers

There are no associated registers.

Associated logs

The system generates C7UP104 logs to report group blocking or unblocking conditions.

Extension registers

There are no extension registers.

Register ISCKTLBT

ISUP circuit locally blocked (ISCKTLBT)

Register ISCKTLBT counts circuits that are locally blocked for five min. This action blocks outgoing calls on this circuit at the far-end office. The system sends a blocking message to the far-end office.

Register ISCKTLBT is not increased for GL04.

Register ISCKTLBT release history

Register ISCKTLBT was introduced in BCS26.

GL04

Register ISCKTLBT is not increased.

OM group ISUPCKTA (continued)

Associated registers

There are no associated registers.

Associated logs

The system generates C7UP103 logs to report blocked or unblocked circuit conditions.

Extension registers

There are no extension registers.

Register ISCKTRBT

ISUP circuit remote blocked (ISCKTRBT)

Register ISCKTRBT counts circuits that are blocked from a far-end office for 5 min. The register counts once for each blockage at the 5 min mark.

Register ISCKTRBT is not increased for GL04.

Register ISCKTRBT release history

Register ISCKTRBT was introduced in BCS26.

GL04

Register ISCKTRBT is not increased.

Associated registers

There are no associated registers.

Associated logs

The system generates C7UP103 logs to report blocked or unblocked circuit conditions. If work on the trunk must exceed five min, personnel at the far-end office must remove the circuit from service.

Extension registers

There are no extension registers.

Register ISCKTUBL

ISUP circuit unblocked

Register ISCKTUBL counts circuit unblocking messages that an office sends to cancel the blocked condition of a circuit. Register ISCKTUBL increases when the system receives an initial address message (IAM) from a far-end office to attempt a call on a blocked circuit. The circuit is automatically unblocked when the system receives the IAM message.

Register ISCKTUBL release history

Register ISCKTUBL was introduced in BCS26.

Associated registers

There are no associated registers.

Associated logs

The system generates C7UP103 logs to report blocked or unblocked circuit conditions.

Extension registers

There are no extension registers.

OM group ISUPCONG

OM description

ISUP Congestion

Release history

The OM group ISUPCONG was introduced in NA008.

Registers

The OM group ISUPCONG register appears on the MAP terminal as follows:

```
NUMBLOCK                    ACCDFIL
```

Group structure

The OM group ISUPCONG provides one tuple for each office.

Key field:
COMMON_LANGUAGE_NAME

Info field:
There is no info field.

Associated OM groups

There are no associated OM groups.

Associated functional groups

There are no associated functional groups

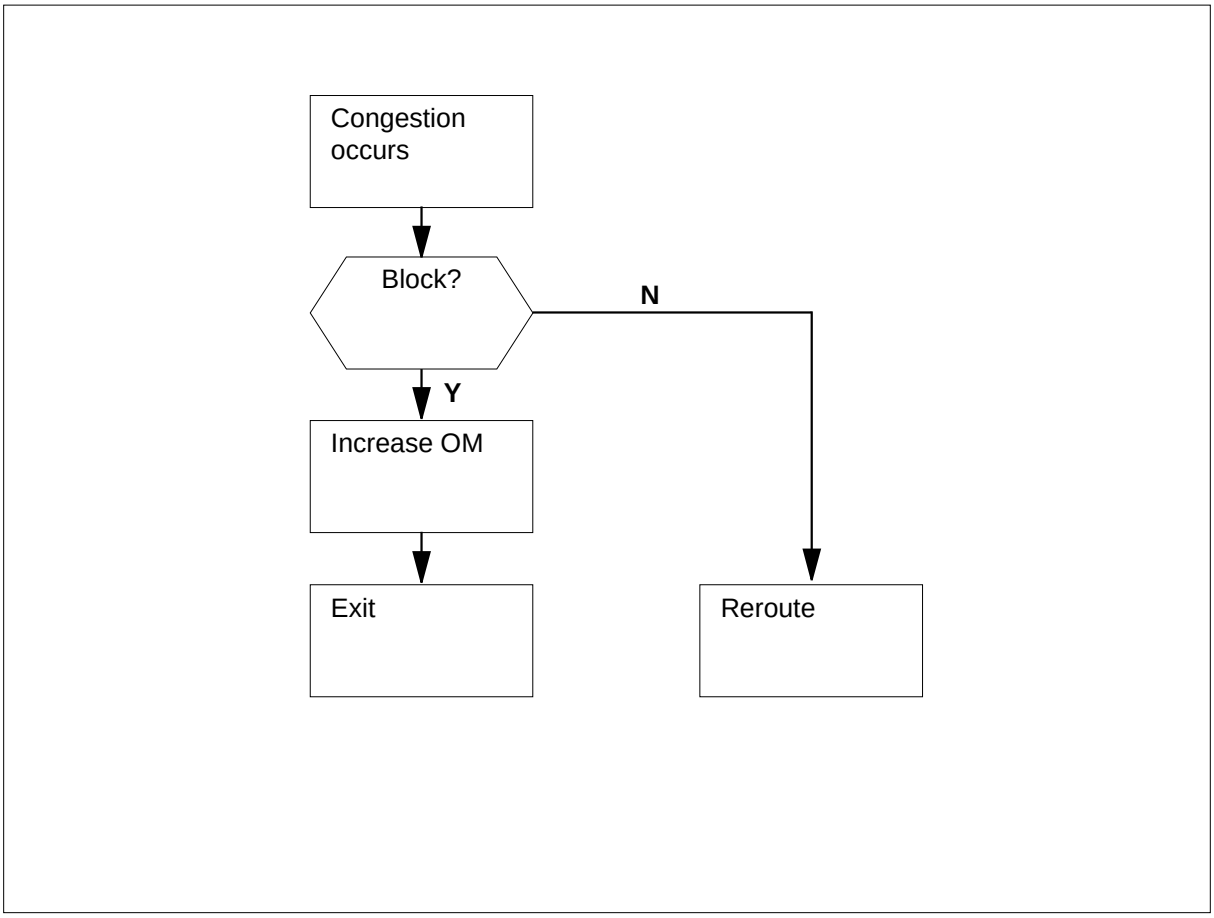
Associated functionality codes

The functionality codes associated with the OM group ISUPCONG appear in the following table.

Functionality	Code
ISP7 Automatic Congestion Controls	ISP73003

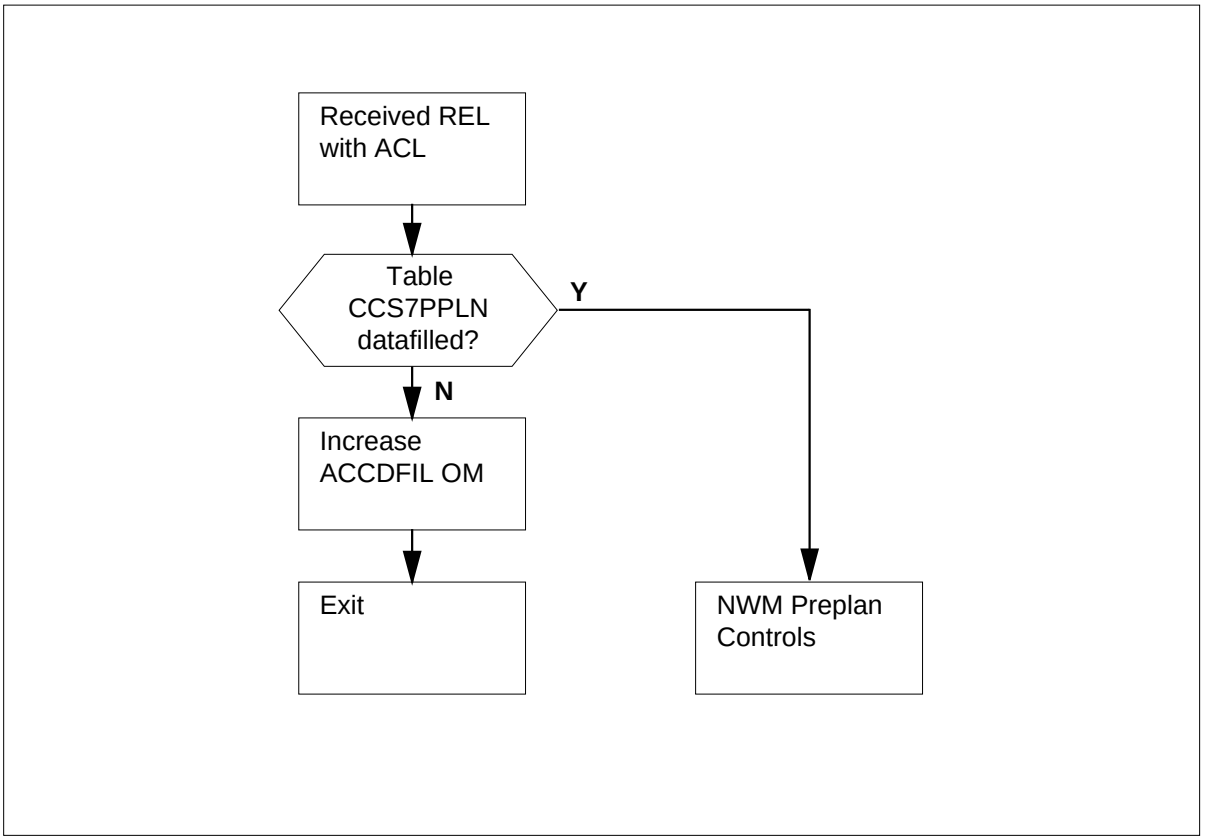
OM group ISUPCONG (continued)

OM group ISUPCONG register: trunk termination



OM group ISUPCONG (continued)

OM group ISUPCONG register: trunk disconnect



Register NUMBLOCK

Register Number of Blocked Calls (NUMBLOCK)

Register NUMBLOCK counts the total number of blocked calls that transfer controlled (TFC) and transfer prohibited (TFP) cause. These blocked calls are caused when the BLOCK option in table TRKSGRP is on.

Register NUMBLOCK release history

Register NUMBLOCK was introduced in NA008.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register ACCDFIL

Automatic Congestion Control Datafill (ACCDFIL)

Register ACCDFIL is used to increase the number of times a trunk group detected ACL but could not apply network management (NWM) controls. The NWM controls could not be applied because of missing datafill in table CCS7PPLN.

The technician can take the trunk CLLI and reference table ISUPDEST to determine the point code name of the office experiencing congestion. Refer to table C7RTESET and use the point code name to determine the accurate CCS7 point code.

Refer to tables NWMPPLN, PREPLANS, and CCS7PPLN to implement NWM controls.

Register ACCDFIL release history

Register ACCDFIL was introduced in NA008.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group ISUPCONN

OM description

ISUP connection

ISUP connection (ISUPCONN) provides information on circuit availability and call attempts that are not successful. This information determines how the surrounding network affects ISDN user part (ISUP) performance.

Release history

The OM group ISUPCONN was introduced in BCS26.

BCS30

The following registers count TUP+ calls:

- ISCONBAD
- ISCONBD2
- ISCONUCE
- ISCOUCE2
- ISCONUCC
- ISCOUCC2
- ISCONUCA
- ISCONUCF
- ISCOUCF2
- ISCONUCB
- ISCONUB2
- ISCONUCS
- ISCONUCO
- ISCONUO2

CSP18/SN05

Extension registers ISCOUCC2, ISCOUCE2, and ISCOUCF2 introduced.

Registers

The OM group ISUPCONN registers display on the MAP terminal as follows:

```
ISCONBAD        ISCONBD2        ISCONUCE        ISCONUCC
ISCONUCA        ISCONUCF        ISCONUCN        ISCONUCB
ISCONUB2        ISCONUCS        ISCONUCO        ISCONUO2
ISCONCOT        ISCONICC        ISCONIC2        ISCONFAR
ISCONINR        ISCOUCC2        ISCOUCE2        ISCOUCF2
```

Group structure

The OM group ISUPCONN provides one tuple for each office.

Key field:
There is no Key field.

Info field:
There is no Info field.

Associated OM groups

The OM group ISUPCGRP provides information on circuit availability.

The OM group ISUPCKTA counts circuit and circuit group blocking messages between near-end and far-end offices.

The OM group ISUPERRS counts conditions that are not normal, messages that are not expected, and the absence of messages that acknowledge. This OM group performs these counts during call setup and call take down.

The OM group ISUPUSAG counts incoming and outgoing ISUP messages.

Associated functional groups

The following functional groups associate with the OM group ISUPCONN:

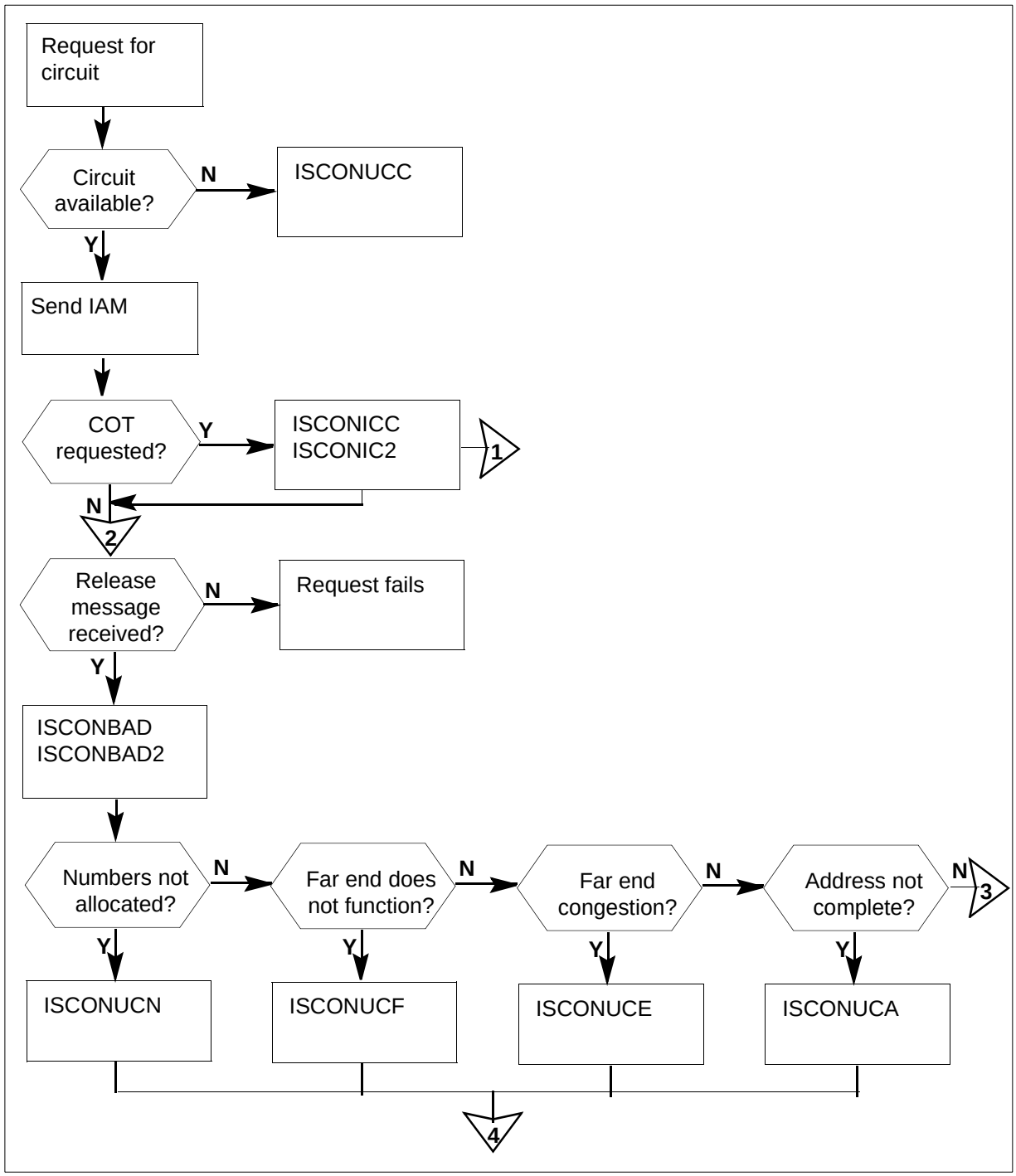
- The ISDN integrated services digital network
- The CCS7 Common Channel Signaling 7

Associated functionality codes

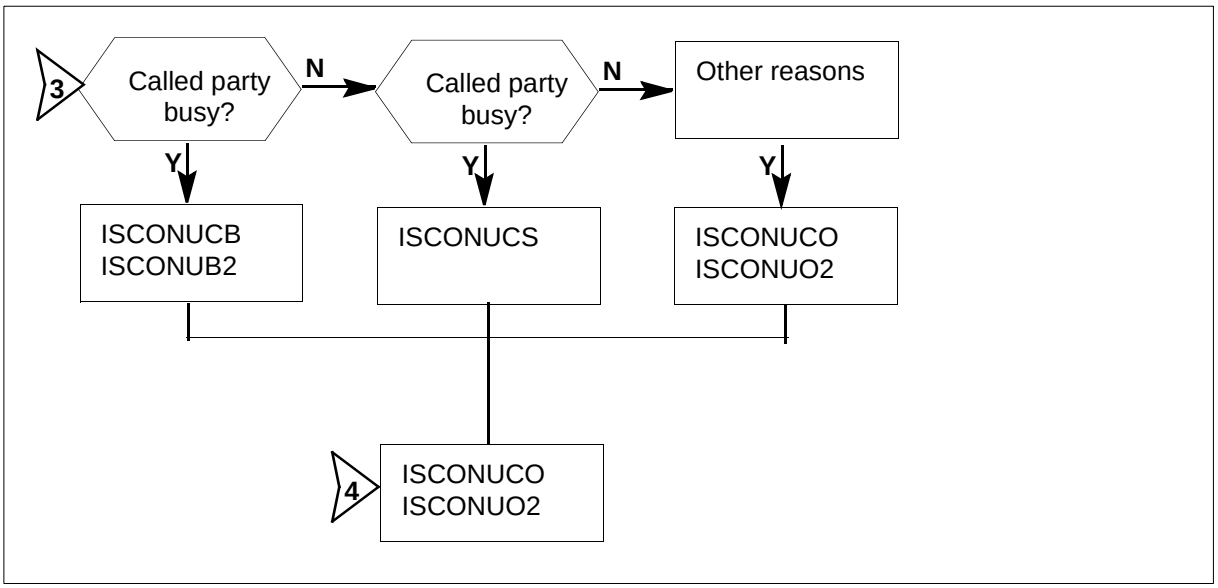
The functionality codes that associate with the OM group ISUPCONN appear in the following table.

Functionality	Code
ISUP Operational Measurements	NTX167AB
TUP+ on DMS-300	NTXK06AA

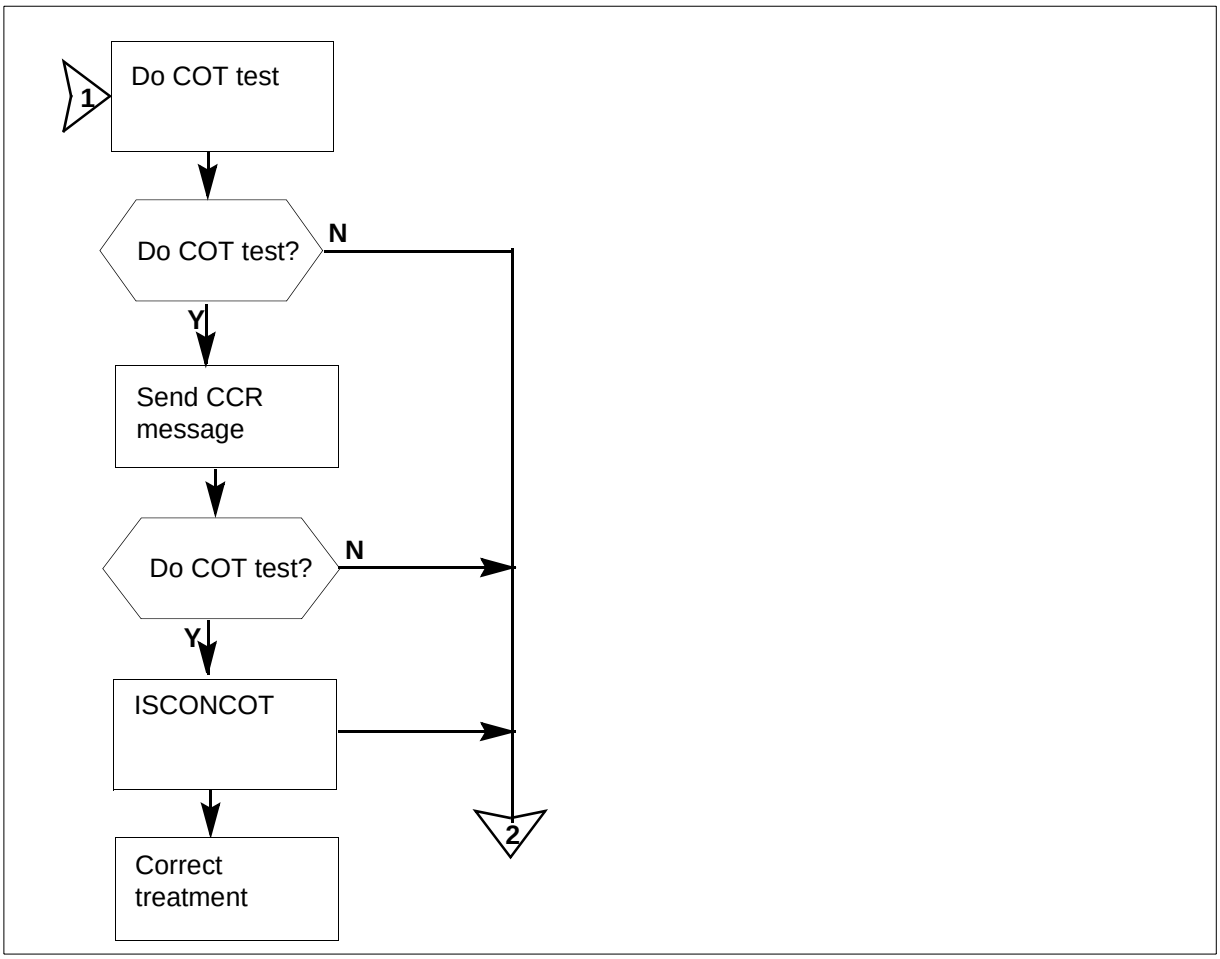
OM group ISUPCONN registers



OM group ISUPCONN registers (continued)



OM group ISUPCONN - continuity checks



Register ISCONBAD

ISUP bad

The ISUP bad (ISCONBAD) register counts call attempts that fail during call setup. When a call attempt fails during call setup, the originating office receives a release message instead of an address complete message.

Register ISCONBAD release history

Register ISCONBAD was introduced in BCS26.

BCS30

Register ISCONBAD counts TUP+ calls.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

ISCONBD2

Register ISCONCOT

ISUP continuity

The ISUP continuity (ISCONCOT) register counts calls that fail the first continuity check test. The continuity check request (CCR) message initiates the first continuity check test.

The CCR message performs an automatic recheck 10 s after the first continuity check failure.

Register ISCONCOT release history

Register ISCONCOT was introduced in BCS26.

Associated registers

There are no associated registers.

Associated logs

The system generates log C7UP107 when a continuity check test runs on an outgoing trunk.

Extension registers

There are no extension registers.

Register ISCONFAR

ISUP facility request

The ISUP facility request (ISCONFAR) counts failures. These failures occur when there is no response to the second attempt to send a facility request message.

Register ISCONFAR release history

Register ISCONFAR was introduced in BCS26. Register ISCONFAR is inactive.

Associated registers

There are no associated registers.

Associated logs

The system generates log C7UP108 when the system does not receive a response to a facility request message or information request message.

Extension registers

There are no extension registers.

Register ISCONICC

ISUP continuity check

The ISUP continuity check (ISCONICC) register counts calls that receive the continuity check test. This count occurs at the office that performs the continuity check test that the initial address message requests.

Register ISCONICC release history

Register ISCONICC was introduced in BCS26.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension register

ISCONIC2

Register ISCONINR

ISUP information request

The ISUP information request (ISCONINR) counts failures. These failures occur when there is no response to a second attempt to send an information request message.

Register ISCONINR release history

Register ISCONINR was introduced in BCS26. Register ISCONINR is inactive.

Associated register

There are no associated registers.

Associated logs

The system generates log C7UP108 when the system does not receive a response to a facility request message or information request message.

Extension registers

There are no extension registers.

Register ISCONUCA

ISUP unsuccessful address

The ISUP unsuccessful address (ISCONUCA) register counts call attempts that are not successful. These call attempts are not successful because another office determines one of the following conditions. The office determines that the number is not in a valid format, or that the number is not complete.

Register ISCONUCA release history

Register ISCONUCA was introduced in BCS26.

BCS30

Register ISCONUCA counts TUP+ calls.

Associated register

There are no associated registers.

Associated logs

The system generates log C7UP105 when an ISDN call attempt is not successful.

Extension registers

There are no extension registers.

Register ISCONUCB

ISUP unsuccessful busy

The ISUP unsuccessful busy (ISCONUCB) register counts call attempts that are not successful because the called party is busy.

Register ISCONUCB release history

The ISCONUCB was introduced in BCS26.

BCS30

The ISCONUCB counts TUP+ calls.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension register

ISCONUB2

Register ISCONUCC

ISUP unsuccessful circuit

The ISUP unsuccessful circuit (ISCONUCC) counts call attempts that are not successful. These call attempts fail because there are no correct idle circuits in another office to handle the call.

Register ISCONUCC release history

Register ISCONUCC was introduced in BCS26.

BCS30

Register ISCONUCC counts TUP+ calls.

Associated registers

There are no associated registers.

Associated logs

The system generates C7UP106 when problems occur because not enough resources are available.

Extension registers

ISCOUCC2

Register ISCONUCE

ISUP unsuccessful

The ISUP unsuccessful (ISCONUCE) register counts call attempts that are not successful. These call attempts fail because switching equipment in another office handles too many calls.

Register ISCONUCE release history

Register ISCONUCE was introduced in BCS26.

BCS30

Register ISCONUCE counts TUP+ calls.

Associated registers

There are no associated registers.

Associated logs

The system generates C7UP106 when problems occur because not enough resources are available.

Extension registers

ISCOUCE2

Register ISCONUCF

ISUP unsuccessful faults

The ISUP unsuccessful faults (ISCONUCF) register counts call attempts that are not successful. These call attempts fail because of a temporary fault in the network at the far end.

Register ISCONUCF release history

Register ISCONUCF was introduced in BCS26.

BCS30

Register ISCONUCF counts TUP+ calls.

Associated registers

There are no associated registers.

Associated logs

The system generates C7UP106 when problems occur because not enough resources are available.

Extension registers

ISCOUCF2

Register ISCONUCN

ISUP unsuccessful numbers

The ISUP unsuccessful numbers (ISCONUCN) register counts call attempts that are not successful. These call attempts fail because the dialed number is a blank directory number in the far-end office.

Register ISCONUCN release history

Register ISCONUCN was introduced in BCS26.

BCS30

Register ISCONUCN counts TUP+ calls.

Associated registers

There are no associated registers.

Associated logs

The system generates log C7UP105 when an ISDN call attempt is not successful.

Extension registers

There are no extension registers.

Register ISCONUCO

ISUP unsuccessful other

The ISUP unsuccessful other (ISCONUCO) register counts call attempts that are not successful because of reasons other than the following:

- destination out-of-service faults
- called party busy condition
- numbers not allocated
- temporary faults
- address not complete
- circuit not available
- switching equipment congestion

The system records the reason the call attempt is not successful in the cause field of the release message to the office.

Register ISCONUCO release history

Register ISCONUCO was introduced in BCS26.

BCS30

Register ISCONUCO counts TUP+ calls.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

ISCONUO2

Register ISCONUCS

ISUP unsuccessful service

The ISUP unsuccessful service (ISCONUCS) register counts call attempts that are not successful. These call attempts fail because an equipment failure occurs at the far-end office. These call attempts also can fail because the directory number of the called party is disconnected or out of service.

Register ISCONUCS release history

Register ISCONUCS was introduced in BCS26.

BCS30

Register ISCONUCS counts TUP+ calls.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no associated extension registers.

OM group ISUPERRS

OM description

ISDN user part errors

The ISDN user part errors (ISUPERRS) OM group counts abnormal conditions, unexpected messages, and the absence of acknowledgement messages during call setup and call takedown and during maintenance procedures. These counts are used by maintenance personnel to track ISDN user part (ISUP) stability.

If the far end has difficulty in routing a call during call setup, it sends a release (RLS) message to the originating office. The reason for the failure is included in the message. When the RLS message is received, the call is released from the far end. To take down a call, the first party that goes on-hook sends a RLS message. In response, a release complete (RLC) message is sent from the other end. Timers ensure that the call is not left in an inactive state. If the RLC message is not sent within one minute after receipt of an RLS message, the RLS message is sent again. If there is still no response, the far end sends a reset circuit (RSC) message.

Release history

OM group ISUPERRS was introduced in BCS26.

NA005

Register ISERRHOP was added to the group.

BCS32

Register ISERRREL is incremented by the ISUP to Telephone User Part (TUP) Interworking feature.

BCS30

Register ISERRREL counts calls between British telephone user part (BTUP) trunks and TUP plus (TUP+) trunks, as well as between T101 test lines and BTUP, TUP, and TUP+ trunks.

Registers

OM group ISUPERRS registers display on the MAP terminal as follows:

```
ISERRRSC        ISERRGRS        ISERRBLO        ISERRBAD
ISERRRLC        ISERRREL        ISERRHOP
```

Group structure

OM group ISUPERRS provides one tuple per office.

Key field:
None

Info field:
None

Associated OM groups

ISUPCGRP counts available circuits for each trunk.

ISUPCKTA counts circuit and circuit group blocking messages sent between local and far-end offices.

ISUPCONN counts unsuccessful call attempts.

ISUPUSAG counts incoming and outgoing ISUP messages.

Associated functional groups

The following functional groups are associated with OM group ISUPERRS:

- ISDN
- Common Channel Signaling 7 (CCS7)

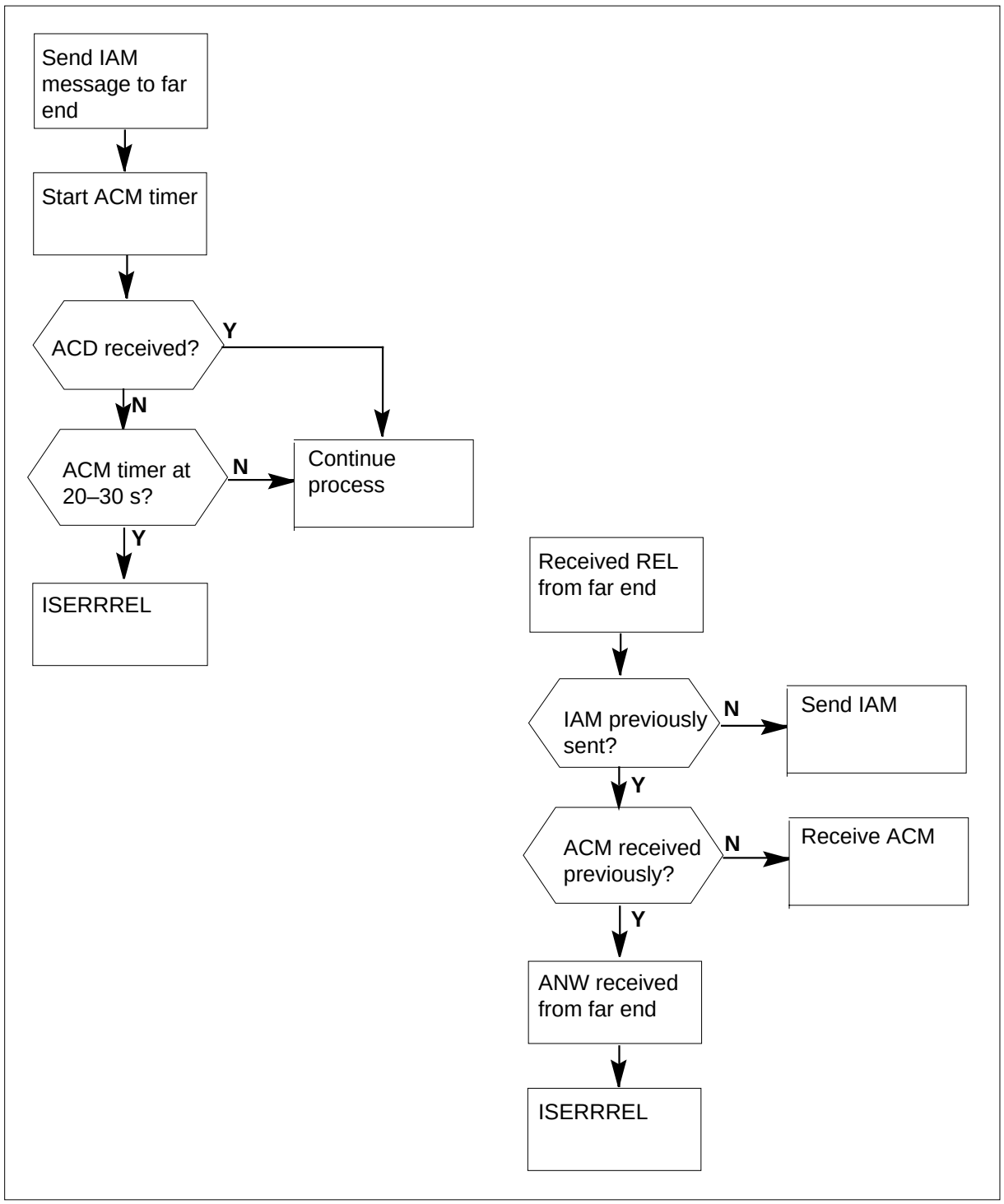
Associated functionality codes

The functionality codes associated with OM group ISUPERRS are shown in the following table.

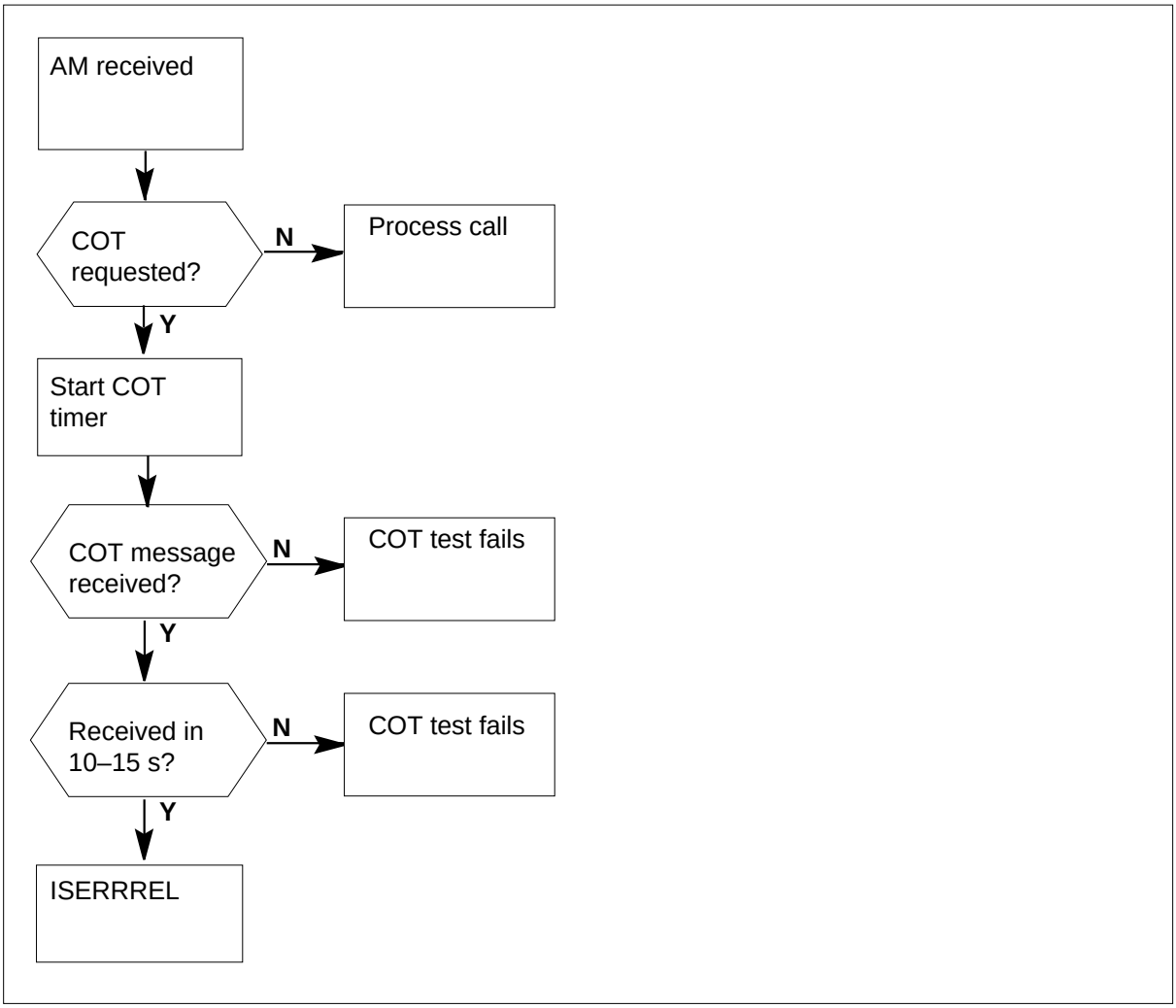
Functionality	Code
ISUP Operational Measurements	NTX167AB
BTUP on DMS-300	NTXK05AA
TUP+ on DMS-300	NTXK06AA
ISC Maintenance	NTX301AA

OM group ISUPERRS (continued)

OM group ISUPERRS abnormal conditions - near end

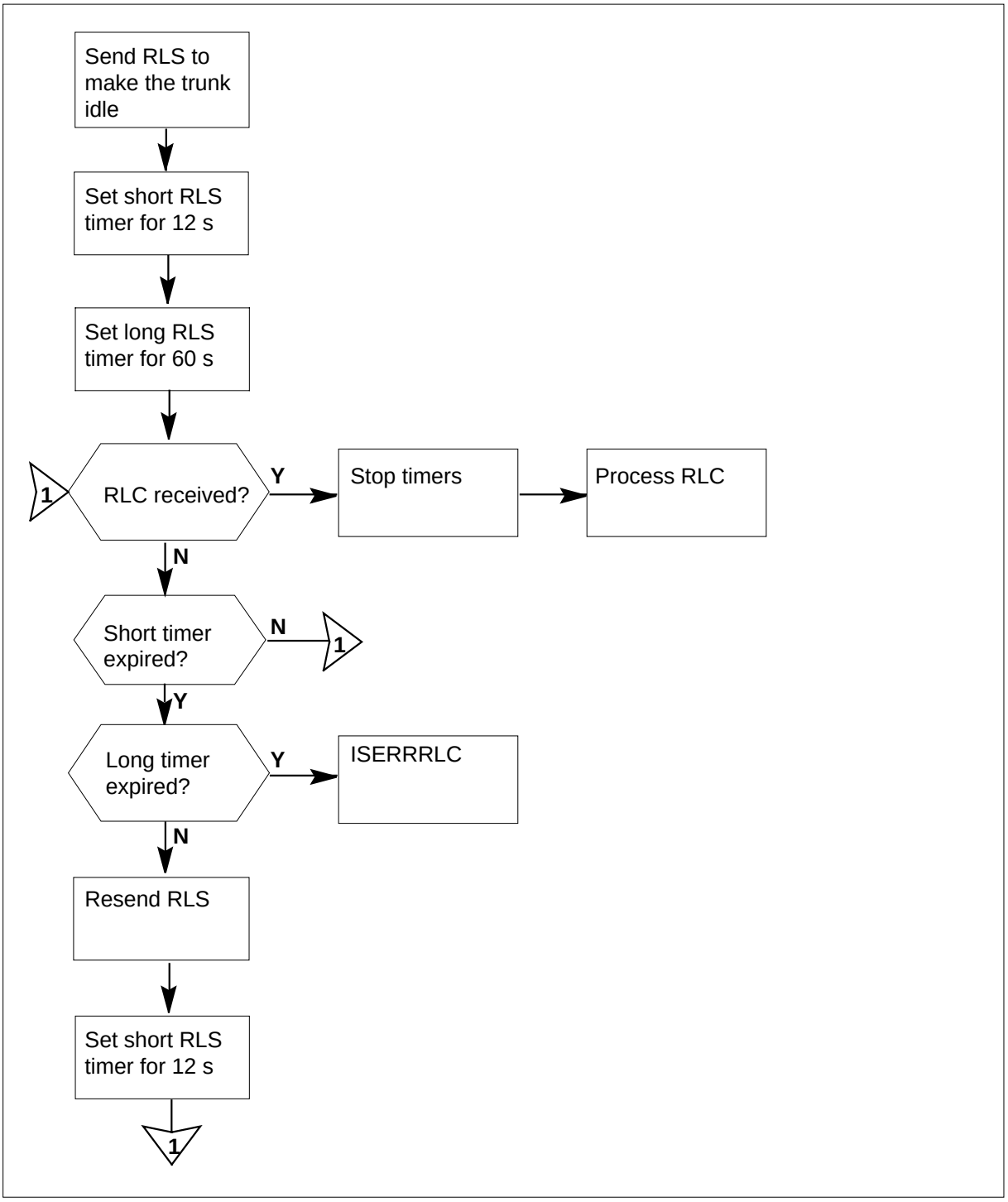


OM group ISUPERRS abnormal conditions - far end



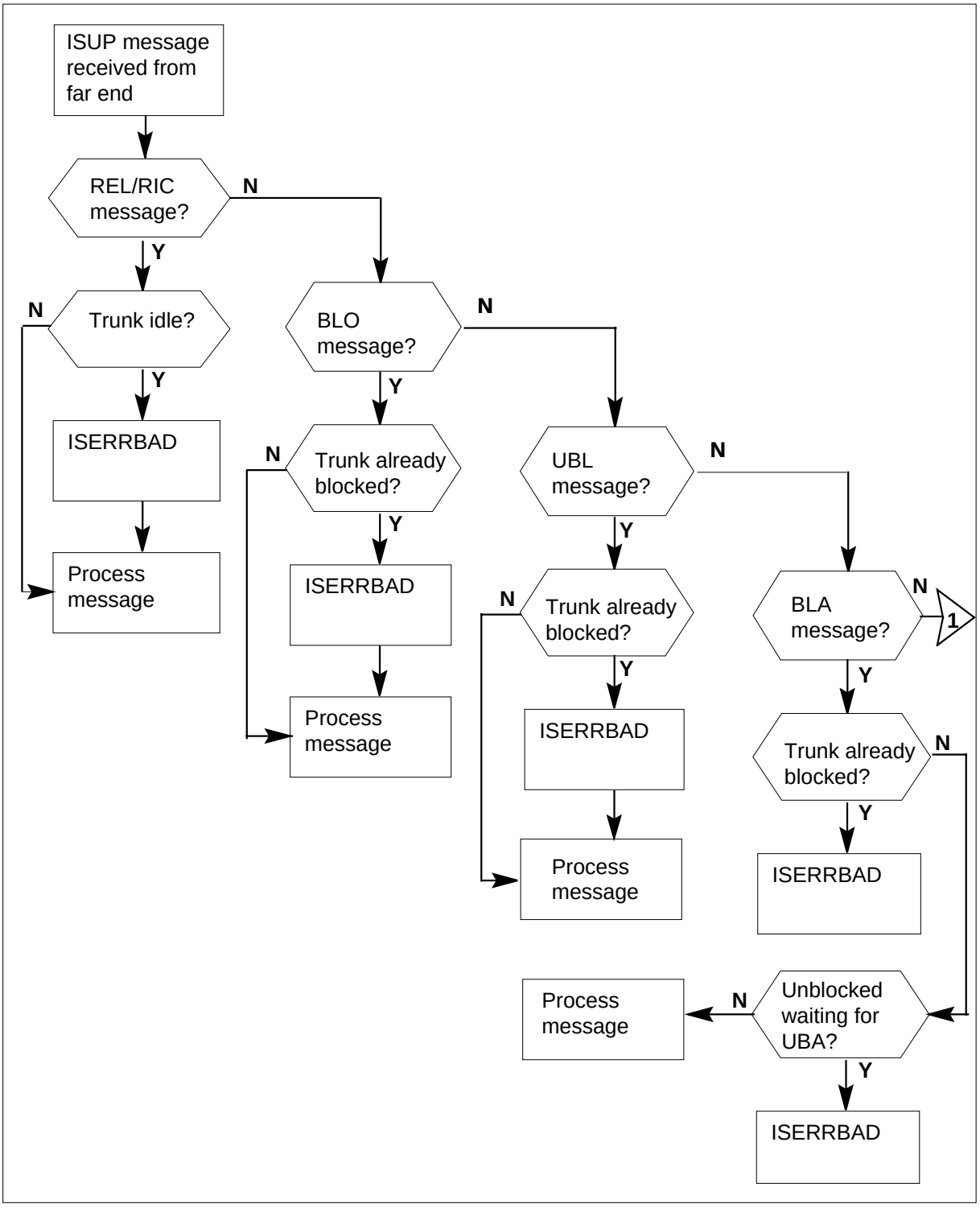
OM group ISUPERRS (continued)

OM group ISUPERRS RLC message sent



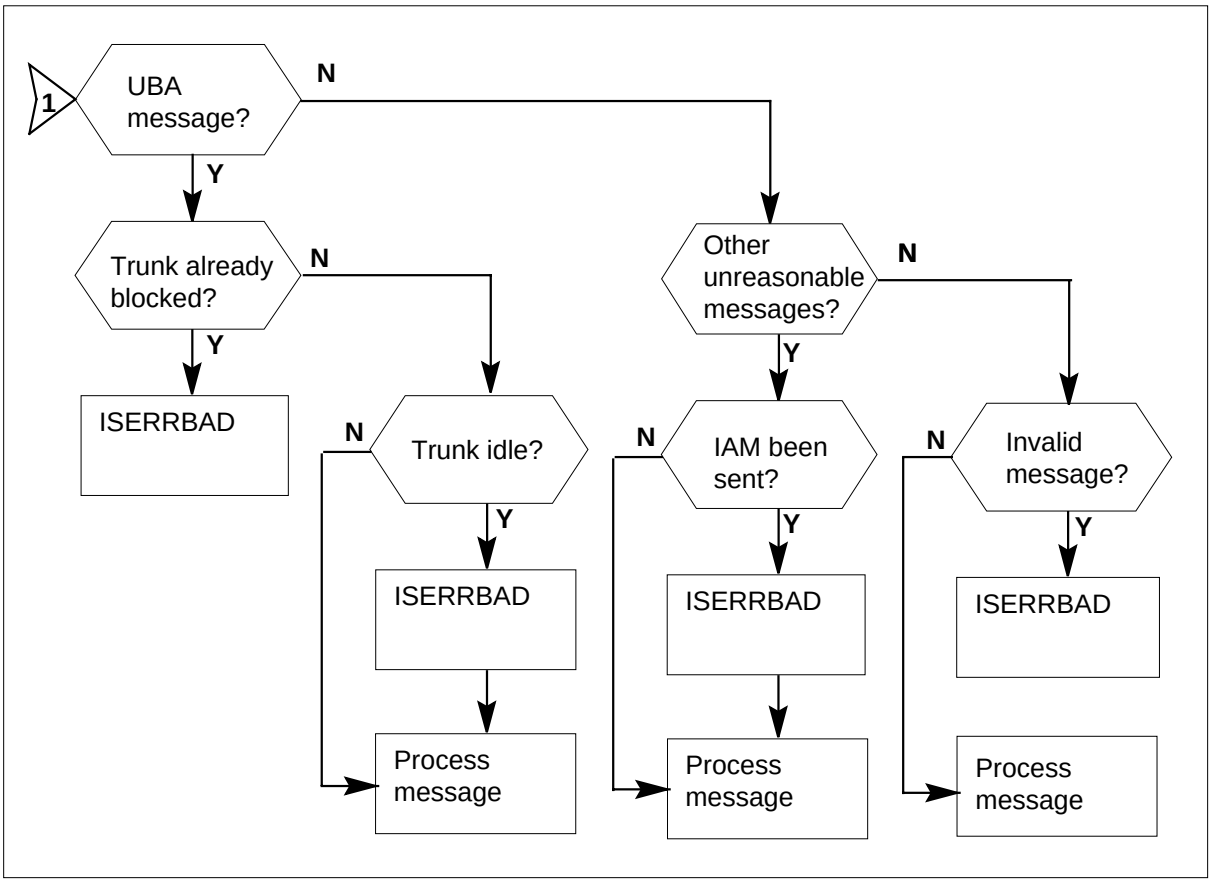
OM group ISUPERRS (continued)

OM group ISUPERRS - inappropriate messages (continued)



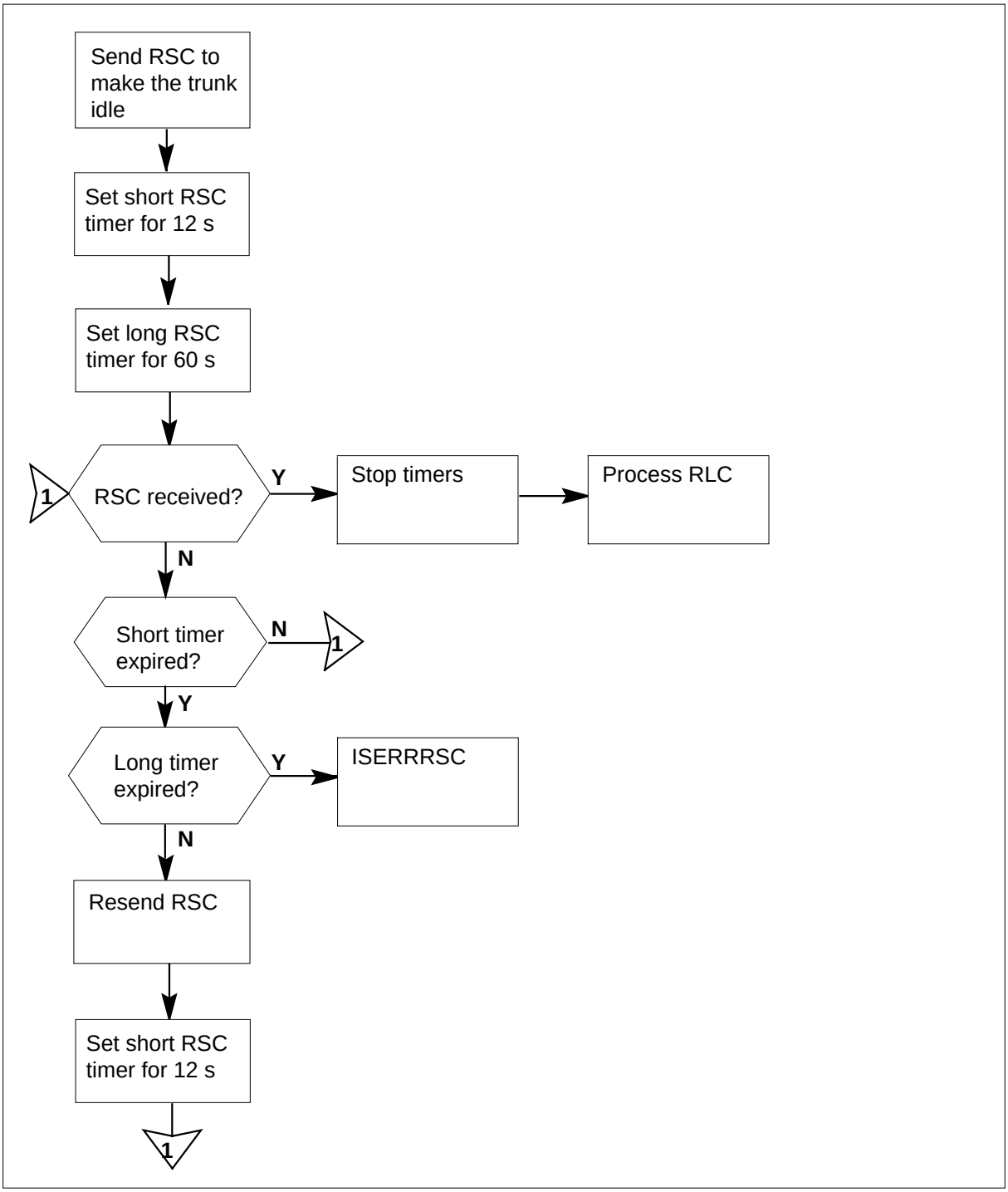
OM group ISUPERRS (continued)

OM group ISUPERRS - inappropriate messages (continued)



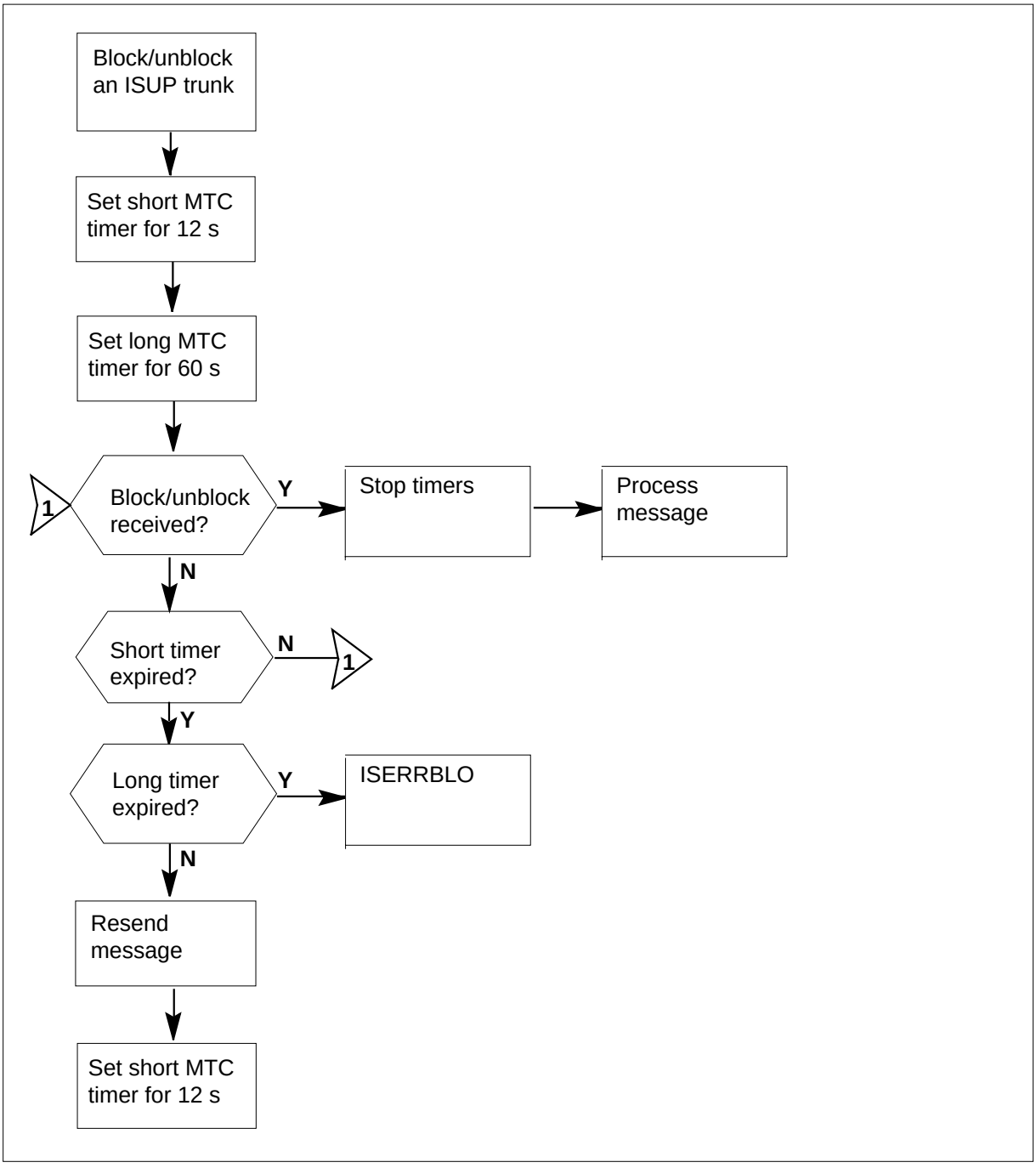
OM group ISUPERRS (continued)

OM group ISUPERRS - RSC message sent



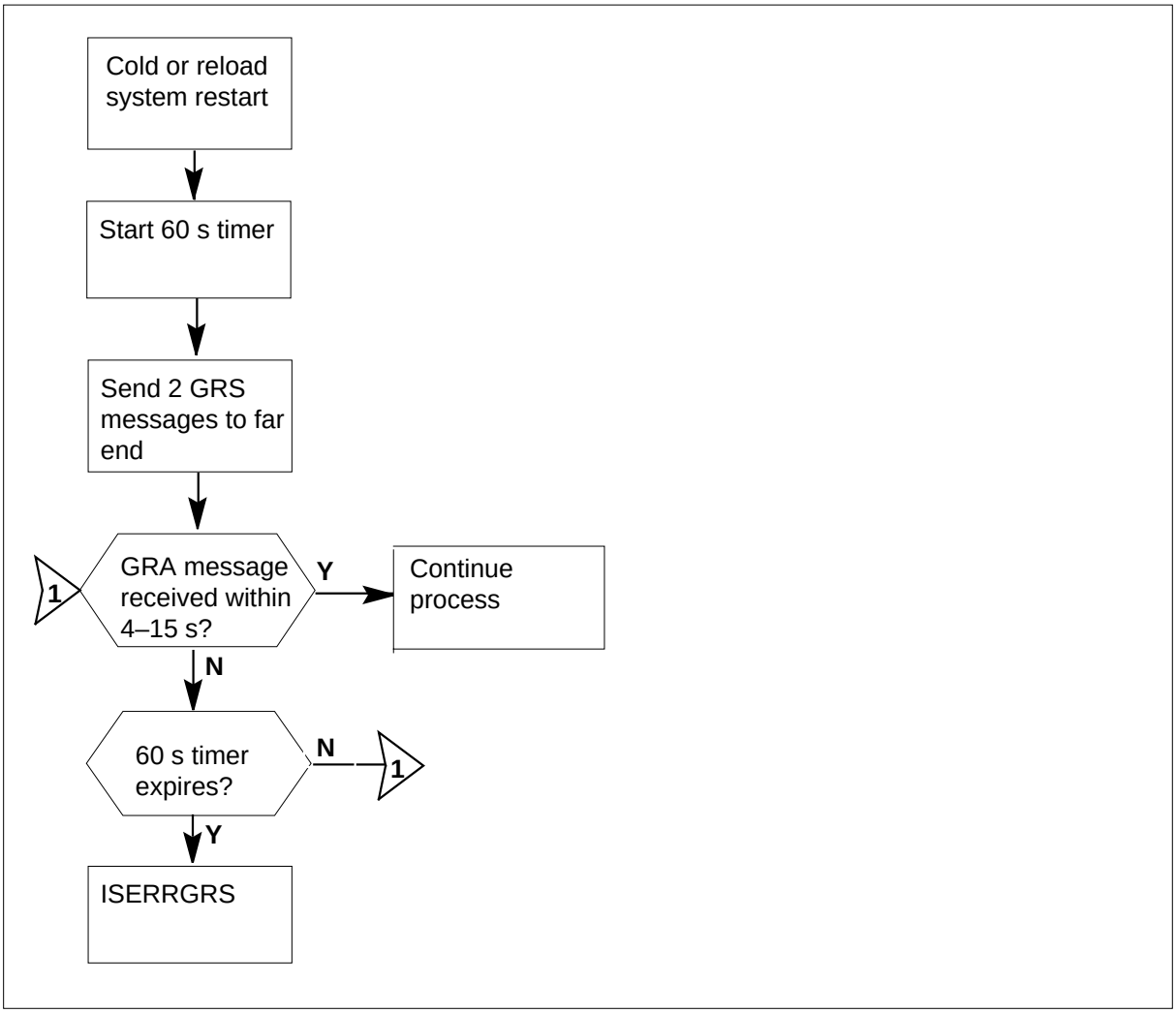
OM group ISUPERRS (continued)

OM group ISUPERRS - block/unblock message sent



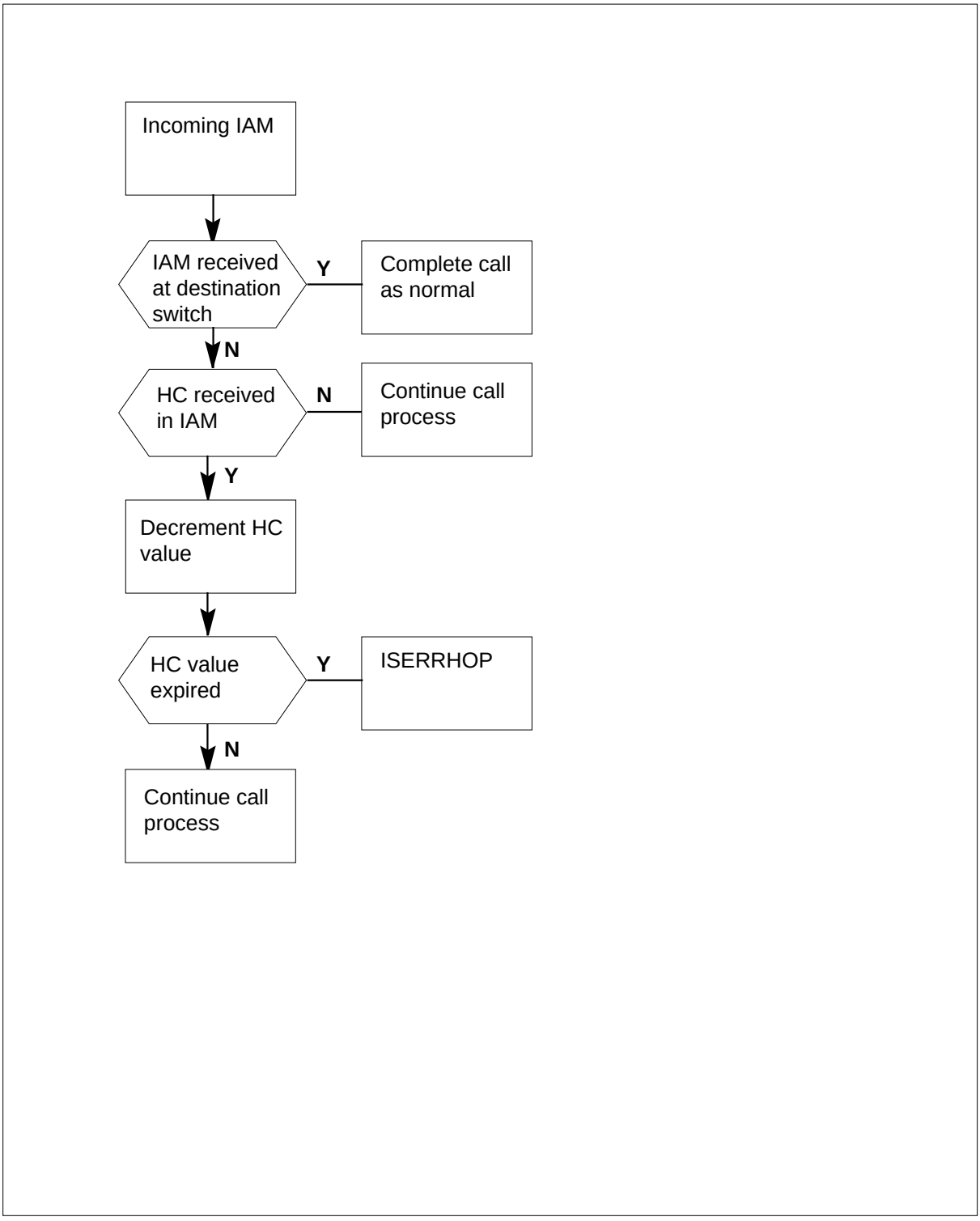
OM group ISUPERRS (continued)

OM group ISUPERRS - GRS message sent



OM group ISUPERRS (continued)

OM group ISUPERRS - expiration of the ISUP hop counter parameter value



Register ISERRBAD

ISDN error bad

ISDN error bad (ISERRBAD) counts messages received in inappropriate situations, such as the following:

- RLS or RLC messages received on an idle circuit
- blocking messages received for a blocked circuit
- unblocking messages received for an unblocked circuit
- blocking acknowledgement messages received unexpectedly
- unblocking acknowledgement messages received unexpectedly
- other unreasonable messages received after the initial address message has been sent
- invalid messages

Register ISERRBAD release history

ISERRBAD was introduced in BCS26.

Associated registers

None

Associated logs

C7UP101 is generated when an unreasonable report is received in a trunk, except when unreasonable messages are received on an idle circuit.

Extension registers

None

Register ISERRBLO

ISUP error blocking message

The ISUP error blocking message (ISERRBLO) register is incremented when an acknowledgement message is not received within one minute of sending blocking/unblocking messages at 4- to 15-second intervals. Message intervals during the 1-minute period are determined by the blocking/unblocking maintenance timer. The register is incremented at the end of the 1-minute period.

Register ISERRBLO release history

ISERRBLO was introduced in BCS26.

OM group ISUPERRS (continued)

Associated registers

None

Associated logs

C7UP100 is generated when no acknowledgement message is received from the far-end office in response to an RSC, circuit group reset (GRS), blockage or unblockage, or RLS message.

Extension registers

None

Register ISERRGRS

ISUP error circuit group reset (GRS)

The ISUP error circuit group reset (GRS) (ISERRGRS) register is incremented when a GRS acknowledgement (GRA) message is not received within one minute of sending a pair of GRS messages.

GRS messages originate from the DMS switch only after cold and reload system restarts.

Register ISERRGRS release history

ISERRGRS was introduced in BCS26.

Associated registers

None

Associated logs

C7UP100 is generated when an acknowledgement message is received from the far-end office in response to an RSC, GRS, blockage or unblockage, or RLS message.

Extension registers

None

Register ISERRHOP

ISDN HOP counter expiry

ISERRHOP is pegged every time a hop counter (HC) parameter in the incoming initial address message (IAM) expires.

Register ISERRHOP release history

ISERRHOP was introduced in the NA005 release.

Associated registers

None

Associated logs

A C7UP130 log is generated when the HC parameter expiration is detected.

Extension registers

None

Register ISERRREL

ISDN error release (RLS) message

The ISDN error release (RLS) message (ISERRREL) register counts circuits that are released in outgoing offices because of the following abnormal conditions:

- no address complete message (ACM) received within 20 to 30 seconds of an initial address message sent by this office
- RLS message received after an ACM and before an answer message

The register also counts circuits released in incoming offices because no continuity message (if applicable) is received at the incoming office after receipt of the initial address message.

All abnormal conditions listed above cause the release of circuits in transit offices because they are both incoming and outgoing offices.

Register ISERRREL release history

ISERRREL was introduced in BCS26.

BCS32

Register ISERRREL is incremented by the ISUP-to-TUP Interworking feature.

BCS30

Register ISERRREL counts calls between BTUP trunks and TUP+ trunks, as well as between T101 test lines and BTUP, TUP, and TUP+ trunks.

Associated registers

None

OM group ISUPERRS (end)

Associated logs

C7UP102 is generated when a CCS7 connection is released because of an abnormal condition, except when an RLS message is received instead of an answer message.

Extension registers

None

OM group ISUPUSAG

OM description

The integrated services user part utilization

The ISUPUSAG counts incoming and outgoing messages that use ISDN user part (ISUP), based on message types defined in the following standards:

- American National Standard T1.113.2 - 1987- ISUP Message Acronyms
- ITU Q.763
- ETS 300 356-1

The system counts outgoing call processing messages in the digital trunk controller for SS7 (DTC7) and the NA100 Spectrum Peripheral Module (SPM) product. The system counts outgoing maintenance messages in the central control complex (CCC). The system counts incoming call processing and maintenance messages in the message switch and buffer SS7 (MSB7). The system also counts these messages in the link interface unit SS7 (LIU7).

The ISUPUSAG monitors message volume to determine ISUP performance, activity, and stability.

Note: In GL04, OM group ISUPUSAG increases for ISUP and TUP.

Release history

NA011

Added reference to the NA100 SPM product.

GL04

The OM group ISUPUSAG was introduced in GL04.

EUR006

The ETSI ISUP V2 support adds nine new tuples to this OM group. This support increases the maximum number of tuples to 62.

BCS28

Six key fields (ALT, CRG, PRG, CRM, CRA, IAMN1) were added.

BCS27

A new key field for ISUP call progress messages (CPG) was added.

OM group ISUPUSAG was introduced in BCS26.

OM group ISUPUSAG (continued)

Registers

OM group ISUPUSAG registers display on the MAP terminal as follows:

ISMSGOUT	ISMSGOT2	ISMSGIN	ISMSGIN2

Group structure

OM group ISUPUSAG provides one tuple for each ISUP message acronym.

Key field:
ISUPOM_MSG_TYPE:

OM group ISUPUSAG (continued)

The following acronyms are counted in ISUPUSAG and are specified in the following standards:

- American National Standard T1.113.2 D 1987- ISUP Message Acronyms
- ETSI (ETS 300 356-1)
- International (ITU Q.763)

ACM:
address complete

ALT:
alerting message

ANM:
answer

BLA:
blocking acknowledgment

BLO:
blocking

CCR:
continuity check request

CFN:
Confusion

CGB:
circuit group blocking

CGBA:
circuit group blocking acknowledgment

CGU:
circuit group unblocking

CGUA:
circuit group unblocking acknowledgment

CMC:
call modification completed

CMRJ:
call modification rejected

CMR:
call modification request

CON:
connect

COT:

OM group ISUPUSAG (continued)

continuity

CPG:
call progress message

CQM:
circuit query

CQR:
circuit query response

CRA:
circuit reservation acknowledgment

CRG:
charge information

CRM:
circuit reservation

CSVR:
closed user group selection and validation request

CSVS:
closed user group selection and validation response

CVR:
circuit validation response

CVT:
circuit validation test

DRS:
delayed release

EXM:
exit

FAA:
facility accepted

FAC:
facility

FAD:
facility deactivated

FAI:
facility information

FAR:
facility request

FRJ:

facility reject

FOT:
forward transfer

GRA:
circuit group reset acknowledgment

GRS:
circuit group reset

IAM:
initial address message

IAMN1:
initial address message not priority one

IDR:
identification request

INF:
information

INR:
information request

IRS:
identification response

LOP:
loop prevention

LPA:
loop back acknowledgment

NRM:
network resource management

PAM:
pass along message

PRG:
progress

REL:
release

RES:
resume

RLC:
release complete

RPM:

OM group ISUPUSAG (continued)

reconfiguration progress message (also counts OLM:Overload)

RSC:
reset circuit

SAM:
subsequent address message

SGM:
segmentation

SUS:
suspend

UBA:
unblocking acknowledgment

UBL:
unblocking

UCIC:
unequipped circuit identification code

UPA:
user part available

UPT:
user part test

USR:
user-to-user information

Info field:
There is no info field.

The maximum number of keys is 62.

Associated OM groups

The ISUPCGRP provides information on circuit availability for each trunk group.

The SUPCKTA counts circuit and circuit group blocking and unblocking messages sent between local and far-end offices.

The ISUPCONN counts call attempts that are not complete.

ISUPERRS counts not normal conditions, not planned messages, and the absence of acknowledgment messages during call setup and call takedown.

OM group ISUPUSAG (continued)

Associated functional groups

The following switched groups associate with OM group ISUPUSAG:

- ISDN
- ISUP
- CCS7

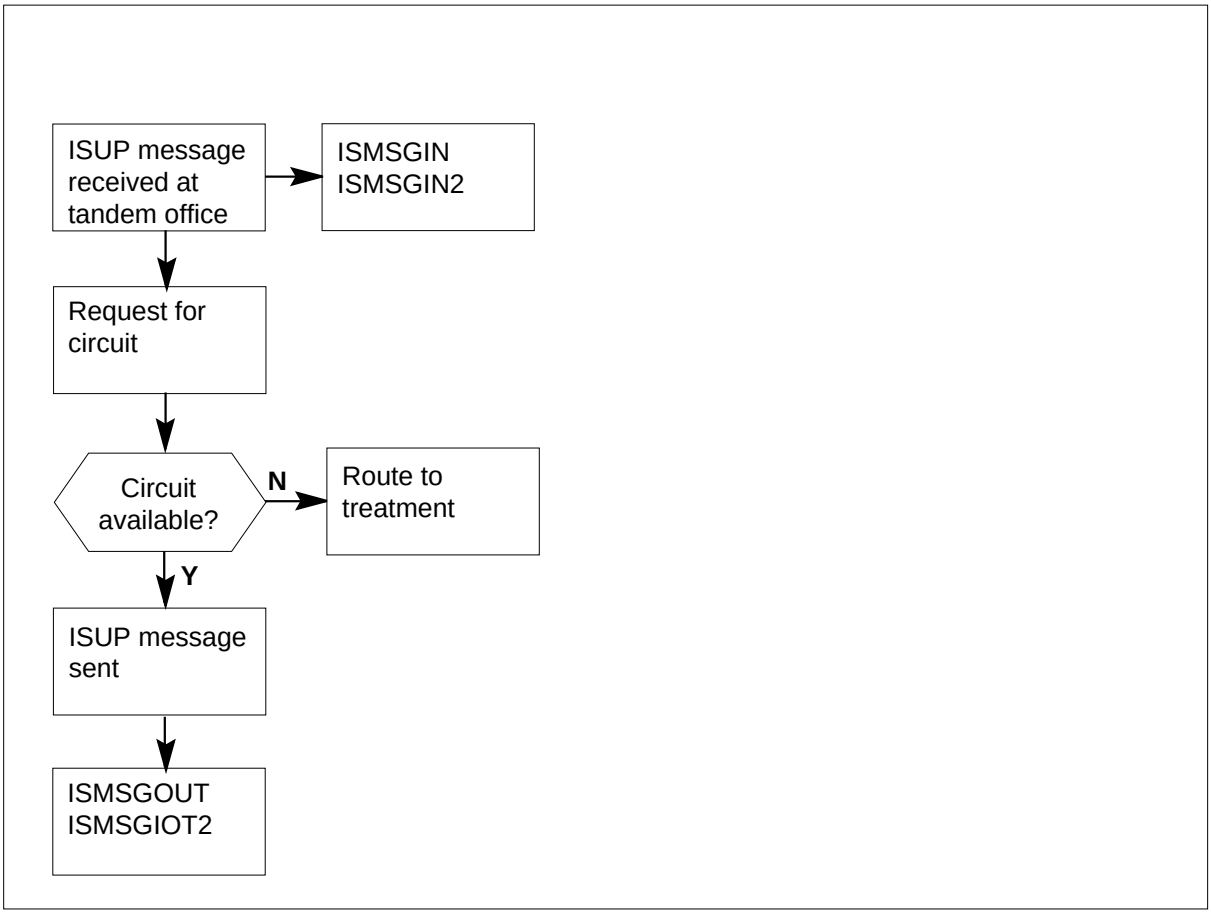
Associated functionality codes

The functionality codes that associate with OM group ISUPUSAG appear in the following table.

Functionality	Code
ISUP Operational Measurements	NTX167AB
Network Number Display	NTXA35AA
SPMS SHR	SPMS0001

OM group ISUPUSAG (continued)

OM group ISUPUSAG registers



Register ISMSGIN

The integrated services digital network user part messages incoming

The ISMSGIN counts ISUP messages the office receives. These messages include incoming messages that pass through a move (tandem) office. Count each type of incoming ISUP message separately.

These measurements collect in the link interface unit for SS7 (LIU7). The system sends these messages to the central control complex (CCC) when at least one count reaches the maximum value of 65535.

Measurements also collect in the message switch and buffer for SS7 (MSB7). The system sends messages to the central control complex (CCC) every 15 s. The system also sends messages to the CCC when at least one count reaches the maximum value of 255.

Register ISMSGIN release history

The ISMSGIN was introduced in BCS26.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

ISMSGIN2

Register ISMSGOUT

The integrated services digital network user part messages outgoing

Register ISMSGOUT counts ISUP messages sent from an office, including messages that pass through a move (tandem) office. Count each type of ISUP message separately. Count maintenance messages in the central control complex (CCC). Outgoing call processing messages are collected in the digital trunk controller (DTC) and sent to the CC. At least one count reaches the maximum value of 255.

Register ISMSGOUT release history

Register ISMSGOUT was introduced in BCS26.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

ISMSGOT2

OM group IWUC

OM description

International wake-up call (IWUC)

The OM group IWUC provides information on the use and performance of the International Wake-up Call (IWUC) feature. This information includes:

- counts of successful subscriber attempts to activate, deactivate, and interrogate IWUC
- wake-up calls the system generates
- wake-up calls the system does not generate because of resource failure or subscriber error

Release history

The OM group IWUC was introduced in BCS24.

Registers

The OM group IWUC registers appear on the MAP terminal as follows:

```
WUCACT      WUCDACT WUCINTG     WUCUSGE
WUCDENY WUCABDN WUCOVFL WUCCERR
WUCRSET     WUCNRSC
```

Group structure

The OM group IWUC provides one tuple for each office.

Key field:
There is no key field.

Info field:
There is no info field.

Associated OM groups

TRMTFR

Associated functional groups

There are no functional groups.

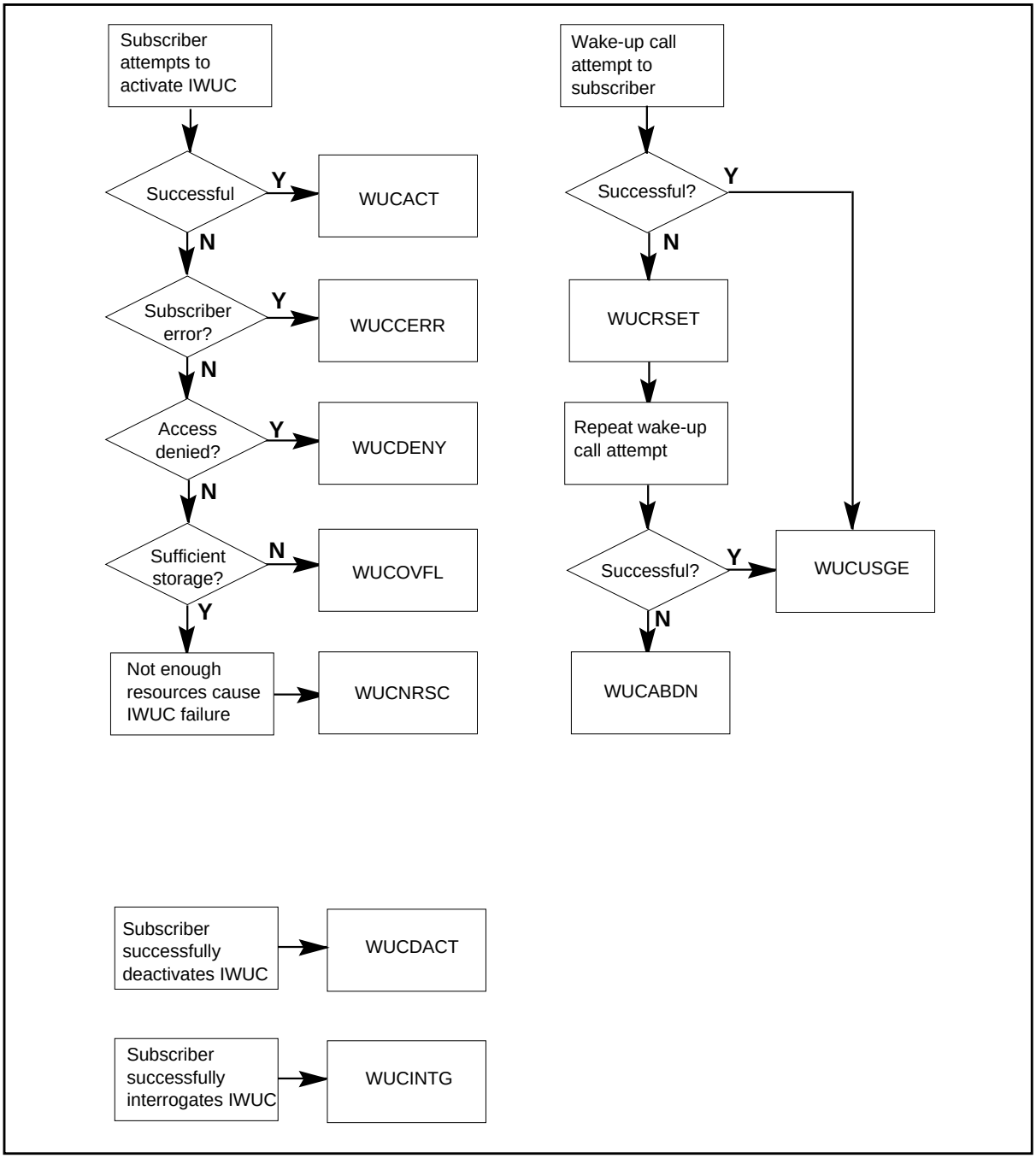
Associated functionality codes

The associated functionality codes for OM group IWUC appear in the following table.

Functionality	Code
CEPT Subscriber Services--I	NTX499AA

OM group IWUC (continued)

OM group IWUC registers



Register WUCABDN

Wake-up call abandoned (WUCABDN)

Register WUCABDN counts the times a subscriber telephone is busy or not answered after the second wake-up call attempt.

Register WUCABDN release history

Register WUCABDN was introduced in BCS24.

Associated registers

There are no associated registers.

Associated logs

The system generates ISF103 when the subscriber does not answer the wake-up call or the line is busy.

Register WUCACT

Wake-up call activation (WUCACT)

Register WUCACT counts the times the system correctly activates a wake-up call. The subscriber receives the “confirmation" tone that indicates the system accepts the request.

Register WUCACT release history

Register WUCACT was introduced in BCS24.

Associated registers

There are no associated registers.

Associated logs

The system generates FTR138 when this register increases.

Register WUCCERR

Wake-up call customer error (WUCCERR)

Register WUCCERR counts the times a subscriber does not correctly activate, deactivate or interrogate a wake-up call. The subscriber receives the “negative acknowledgement" tone that indicates the system does not accept the request.

Register WUCCERR release history

Register WUCCERR was introduced in BCS24.

Associated registers

There are no associated registers.

OM group IWUC (continued)

Associated logs

The system generates FTR138 when this register increases.

Register WUCDACT

Wake-up call deactivated (WUCDACT)

Register WUCDACT counts the times a subscriber cancels a wake-up call. The subscriber receives the “confirmation" tone that acknowledges the cancelation.

Register WUCDACT release history

Register WUCDACT was introduced in BCS24.

Associated registers

There are no associated registers.

Associated logs

The system generates FTR138 when this register increases.

Register WUCDENY

Wake-up call denied (WUCDENY)

Register WUCDENY counts the times the system denies a wake-up call attempt because of predetermined restrictions, for example:

- a cold start was not performed after changes to office parameter CASUAL_FEATURES_OFF were made
- the line has options Denied Origination (DOR), Denied Termination (DTM), Suspended Service (SUS), or Plug-up (PLP)
- the office parameter CASUAL_FEATURES_OFF = Y and the line does not have IWUC assigned
- the line is in a hunt group

The subscriber receives a “negative acknowledgement" tone that indicates the system does not accept the request.

Register WUCDENY release history

Register WUCDENY was introduced in BCS24.

Associated registers

There are no associated registers.

Associated logs

The system generates FTR138 when this register increases.

Register WUCINTG

Wake-up call interrogation (WUCINTG)

Register WUCINTG counts the times a subscriber queries the International Wake-Up Call feature. The subscriber can check if a request is active or can specify a time. The subscriber receives a confirmation tone if a wake-up call is active or the specified time agrees with the request. The subscriber receives the “negative acknowledgement" tone if a wake-up call is not active or the specified time differs from the requested time.

Register WUCINTG release history

Register WUCINTG was introduced in BCS24.

Associated registers

There are no associated registers.

Associated logs

The system generates FTR138 when this register increases.

Register WUCNRSC

Wake-up call no resources (WUCNRSC)

Register WUCNRSC counts the number of times a wake-up call cannot be activated because of insufficient call processing resources such as no feature data blocks, no central processor blocks (CPWAKEUPS), or no free wake-up call blocks on second requests. The subscriber receives the “negative acknowledgement" tone. WUCNRSC is not incremented on the DMS-100G switch.

Register WUCNRSC release history

Register WUCNRSC was introduced in BCS24.

Associated registers

There are no associated registers.

Associated logs

The system generates IFS102 when system problems cause a wake-up call request to fail.

OM group IWUC (continued)

Register WUCOVFL

Wake-up call overflow (WUCOVFL)

Register WUCINTG counts the number of times a subscriber queries the International Wake-Up Call feature. The subscriber can check if a request is active or specify a particular time. The subscriber receives a confirmation tone if a wake-up call is active or if the specified time agrees with the request. The subscriber receives the “negative acknowledgement" tone if a wake-up call is not active or the specified time differs from the requested time.

Register WUCOVFL release history

Register WUCOVFL was introduced in BCS24.

Associated registers

There are no associated registers.

Associated logs

The system generates FTR138 when this register increases.

Register WUCRSET

Wake-up call reset (WUCRSET)

Register WUCRSET counts the times the first wake-up call fails and the system makes a second attempt.

Register WUCRSET release history

Register WUCRSET was introduced in BCS24.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register WUCUSGE

Wake-up call usage (WUCUSGE)

Register WUCUSGE counts the times a wake-up call is successful and the subscriber answers. The subscriber receives the wake-up announcement.

Register WUCUSGE release history

Register WUCUSGE was introduced in BCS24.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group KSHUNT

OM description

Key short hunt (KSHUNT)

The OM group KSHUNT provides information to operating companies on the use of the Business Set Key Short Hunt feature. This feature allows incoming calls to hunt through a set of directory numbers for an idle directory number on which to terminate. The set of directory numbers can be a standard directory number appearance or a multiple-appearance directory number (MADN). The set of directory numbers can include all or a part of the directory numbers on a Meridian Business Set.

Five registers count:

- attempts to terminate on a short hunt group directory number
- attempts to follow the overflow route
- attempts to terminate on the the overflow directory number
- when all of the group is busy and the system provides no overflow option
- failures caused by not enough software resources

Option OVERFLOW in table KSETFEAT specifies the overflow directory number and overflow route.

Release history

The OM group KSHUNT was introduced in BCS19.

Registers

The OM group KSHUNT registers appear in the MAP terminal as follows:

KSHATT	KSHOVFL	KSHBLKD	KSHDFLCT
KSHBUSY			

Group structure

The OM group KSHUNT provides one tuple for each key.

Key field:
IBNG_INDEX. This key field identifies up to 4096 customer groups.

Info field:
OMIBNGINFO. Customer name as defined in field CUSTNAME in table CUSTHEAD.

Parameter KSHUNT_EXT_BLOCKS in table OFCENG specifies the number of KSHUNT extension blocks available in a DMS office.

Parameter option OVERFLOW in table KSETFEAT specifies the overflow directory number and overflow route.

Associated OM groups

There are no associated OM groups.

Associated functional groups

The following functional groups associate with OM group KSHUNT:

- IBN Integrated Business System
- MBS Meridian Business Set

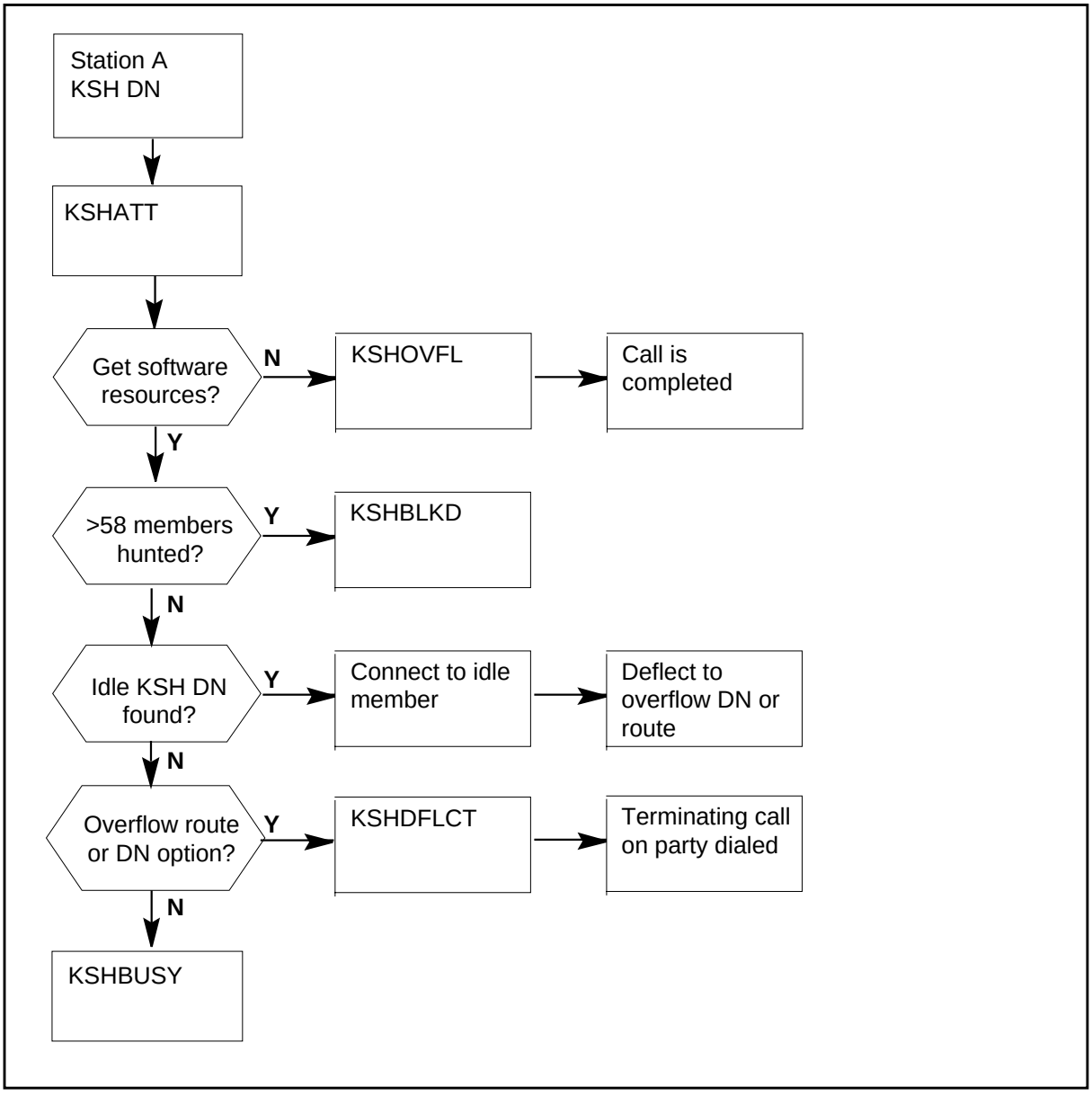
Associated functionality codes

The associated functionality codes for OM group KSHUNT appear in the following table.

Functionality	Code
IBN-Proprietary Business Set	NTX106AA

OM group KSHUNT (continued)

OM group KSHUNT registers



Register KSHATT

Key short hunt attempts (KSHATT)

Register KSHATT increases when a call attempts to terminate on a key short hunt group directory number.

If the short hunt directory number dialed is busy and has the Call Forward Busy feature assigned, then the system forwards the call. Hunting does not occur. In this condition, KSHATT does not increase.

Register KSHATT release history

Register KSHATT was introduced in BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register KSHBLKD

Key short hunt blocked (KSHBLKD)

Register KSHBLKD increases when the system blocks a call because of an attempt to hunt over more than 56 busy members. This condition can occur when the overflow directory number specified for a short hunt group refers to a member of another short hunt group.

Parameter OVEFLOW in table KSETFEAT specifies the overflow directory number.

Register KSHBLKD release history

Register KSHBLKD was introduced in BCS20.

Associated registers

There are no associated registers.

Associated logs

The system generates LINE138 and TRK138 when the system routes a call to a treatment after being call processing busy.

Extension registers

There are no extension registers.

Register KSHBUSY

Key short hunt busy (KSHBUSY)

OM group KSHUNT (continued)

Register KSHBUSY increases when:

- a call attempts to terminate on a business set key short hunt group where all directory numbers are busy
- no overflow option associate with the key short hunt group in table KSETFEAT

Register KSHBUSY release history

Register KSHBUSY was introduced in BCS20.

Associated registers

There are no associated registers.

Associated logs

The system generates LINE138 and TRK138 when the system routes a call to a treatment after being call processing busy.

Extension registers

There are no associated registers.

Register KSHDFLCT

Key short hunt deflect (KSHDFLCT)

Register KSHDFLCT increases when:

- a call attempts to terminate on a business set key short hunt group where all directory numbers are busy
- the call deflects either to an overflow directory number or an overflow route

Parameter OVERFLOW in table KSETFEAT specify the overflow directory number and overflow route.

Register KSHDFLCT release history

Register KSHDFLCT was introduced in BCS20.

Associated registers

There are no associated registers.

Associated logs

The system generates LINE138 and TRK138 when the system routes a call to a treatment after being call processing busy.

Extension registers

There are no associated registers.

Register KSHOVFL

Key short hunt overflow (KSHOVFL)

Register KSHOVFL increases when:

- a call attempts to terminate on a business set key short hunt group
- a call attempt to terminate fails because of not enough software resources

When KSHOVFL increases, the system does not hunt and the call terminates on the party dialed if that party is idle. The system can also route the call to busy treatment if that member is busy.

Parameter KSHUNT_EXT_BLOCKS in table OFCENG specifies the number of KSHUNT extension blocks available in a DMS office.

Register KSHOVFL release history

Register KSHOVFL was introduced in BCS20.

Associated registers

There are no associated registers.

Associated logs

The system generates LINE138 and TRK138 when the system routes a call to a treatment after being call processing busy.

Extension registers

There are no associated registers.

OM group LDS

OM description

Long Distance Signal (LDS)

The OM group LDS provides the following measurements:

- toll call terminations on busy lines of end users qualified for LDS
- data for end users with LDS which receive toll calls. Toll calls trigger LDS distinctive call waiting (CWT) tones when office parameter LDS_ENABLED is set to Y. The OM group LDS provides measurements for the following data:
  - — call completion and non-completion rates for end users without option CWT
  - — call completion and non-completion rates for end users with option CWT
- call completion and non-completion rates for end users. End users receive both LDS and CWT. End users receive calls that trigger standard CWT tones when office parameter LDS_ENABLED is set to N.

TRMTFR2 contains one register for each call treatment. The system names the registers TFRnnnn, where nnnn is the external treatment abbreviation. The system increases the register when the system routes a call to treatment.

Release history

OM group LDS was introduced in NA004.

Registers

The following OM group LDS registers appear on the MAP terminal as follows:

```
LDSCWA      LDSCWNA     LDSRCWA     LDSRCWNA
LDSNCWA     LDSNCWNA    LDSBUSY
```

Group structure

The OM group LDS provides one tuple for each office.

Key field:
There is no key field

Info field:
There is no info field

Associated OM groups

There are no associated OM groups.

Associated functional groups

There are no associated functional groups.

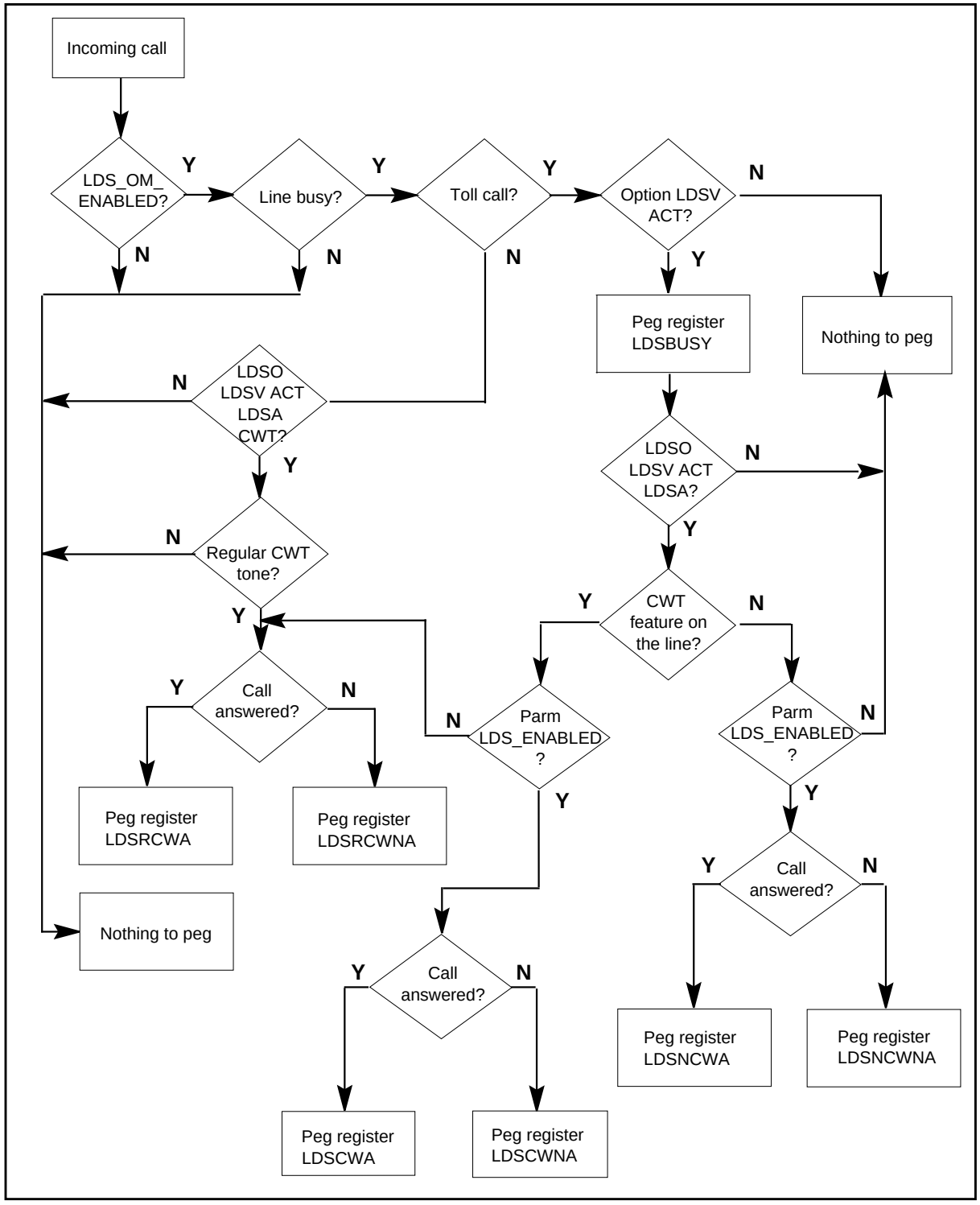
Associated functionality codes

The following table shows the functionality code for OM group LDS.

Functionality	Code
Long Distance Signal	RES00038

OM group LDS (continued)

OM group LDS registers



Register LDSCWA

Long Distance Signal Toll Call Answer on Busy Line (LDSCWA)

Under the conditions that follow, the system increments LDSCWA when the system answers a toll call on a busy line:

- The end user has a line with options CWT, Long Distance Signal Option (LDSO), and Long Distance Signal Activate (LDSA).
- The line option LDSV of the end user is set to ACT.
- Office parameter LDS_ENABLED is set to Y.

Register LDSCWA release history

Register LDSCWA was introduced in NA004.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LDSCWNA

Long Distance Signal Toll Call No Answer on Busy Line (LDSCWNA)

Under the following conditions, the system increases LDSCWNA when a toll call is not answered on a busy line:

- The end user has a line equipped with options CWT, LDSO, and LDSA.
- The line option LDSV of the end user is set to ACT.
- Office parameter LDS_ENABLED is set to Y.

The system considers a call not answered under the following conditions:

- An LDS time-out occurs
- The calling or called party goes on-hook and the calling party did not receive a call answer.

Register LDSCWNA release history

Register LDSCWNA was introduced in NA004.

OM group LDS (continued)

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LDSRCWA

Long Distance Signal Regular Call Waiting Tones Applied - Call Answered (LDSRCWA)

The register LDSRCWA increases when a user answers a call that triggers standard CWT tones. Register LDSRCWA increases for the following call types:

- local calls that terminate on a busy line provisioned with
  - — options CWT, LDSO, and LDSA
  - — option LDSV activated
  - — office parameter LDS_ENABLED set to Y or N
- toll calls that terminate on a busy line provisioned with
  - — options CWT, LDSO, and LDSA
  - — option LDSV activated
  - — office parameter LDS_ENABLED set to N

Register LDSRCWA release history

Register LDSRCWA was introduced in NA004.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LDSRCWNA

Long Distance Signal Regular Call Waiting Tones Applied - Call Not Answered (LDSRCWNA)

The register LDSRCWNA increases when a call that triggers standard CWT tones is not answered. Register LDSRCWNA increases for the following call types:

- local calls that terminate on a busy line provisioned with
  - — options CWT, LDSO, and LDSA
  - — option LDSV activated
  - — office parameter LDS_ENABLED set to Y or N
- toll calls that terminate on a busy line provisioned with
  - — options CWT, LDSO, and LDSA
  - — option LDSV activated
  - — office parameter LDS_ENABLED set to N

Note: The system considers a call not answered when an LDS time-out occurs. The system considers a call not answered when the calling or called party goes on-hook and the calling party did not receive a call answer.

Register LDSRCWNA release history

Register LDSRCWNA was introduced in NA004.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LDSNCWA

Long Distance Signal Toll Call Answered on Busy Line (LDSNCWA)

Register LDSNCWA increases when a toll call is answered on a busy line under the following conditions:

- The called line has options CWT, LDSO, and LDSA.
- The option LDSV of the called line is set to ACT.
- Office parameter LDS_ENABLED is set to Y.

OM group LDS (continued)

Register LDSNCWA does not increase when office parameter LDS_ENABLED is set to N.

Register LDSNCWA release history

Register LDSNCWA was introduced in NA004.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LDSNCWNA

Long Distance Signal Toll Call Not Answered on Busy Line (LDSNCWNA)

Register LDSNCWNA increases when the user answers a toll call on a busy line under the following conditions:

- The called line has options CWT, LDSO, and LDSA.
- The LDSV option of the called line is set to ACT.
- Office parameter LDS_ENABLED is set to Y.

The register LDSNCWNA does not increase when office parameter LDS_ENABLED is set to N.

The system considers a call not answered under the following conditions:

- An LDS time-out occurs
- The calling or called party goes on-hook and the calling party did not receive a call answer.

Register LDSNCWNA release history

Register LDSNCWNA was introduced in NA004.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LDSBUSY

Long Distance Signal Total Toll Call Terminations on Busy Line (LDSBUSY)

The register LDSBUSY increases when a toll call terminates on a busy line. The line option LDSV of the busy line is set to ACT or INACT.

Register LDSBUSY pegs all toll calls qualified for LDA that terminate on busy lines. The value of register LDSBUSY can appear as follows:

```
LDSBUSY     LDSCWA +  LDSCWNA + LDSNCWA + LDSNCWNA
```

Register LDSBUSY release history

Register LDSBUSY was introduced in NA004.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group LIMFBTP

OM description

Link interface module frame transport bus taps (LIMFBTP)

The OM group LIMFBTP provides information about the frame transport bus (F-bus) tap maintenance operation operational measurements (OM) peg counts.

The OM group LIMFBTP contains five registers that count the following:

- errors detected for an in-service F-bus tap
- number of times that an F-bus tap goes into the system busy state
- when commands from the MAP terminal busy the F-bus tap
- the amount of time the F-bus tap is in the manual busy state
- the amount of time the F-bus tap is in the system busy state

Release history

OM group LIMFBTP introduced in CSP04.

Registers

The following registers appear on the MAP terminal as follows:

```
LIMTPERR    LIMTPFLT    LIMTPMBP    LIMTPMBU    LIMTPSBU
```

Group structure

The OM group LIMFBTP can provide two tuples for each LIM unit in table LIMINV.

Key field:
There is no key field

Info field:
lim_unit_number

Associated OM groups

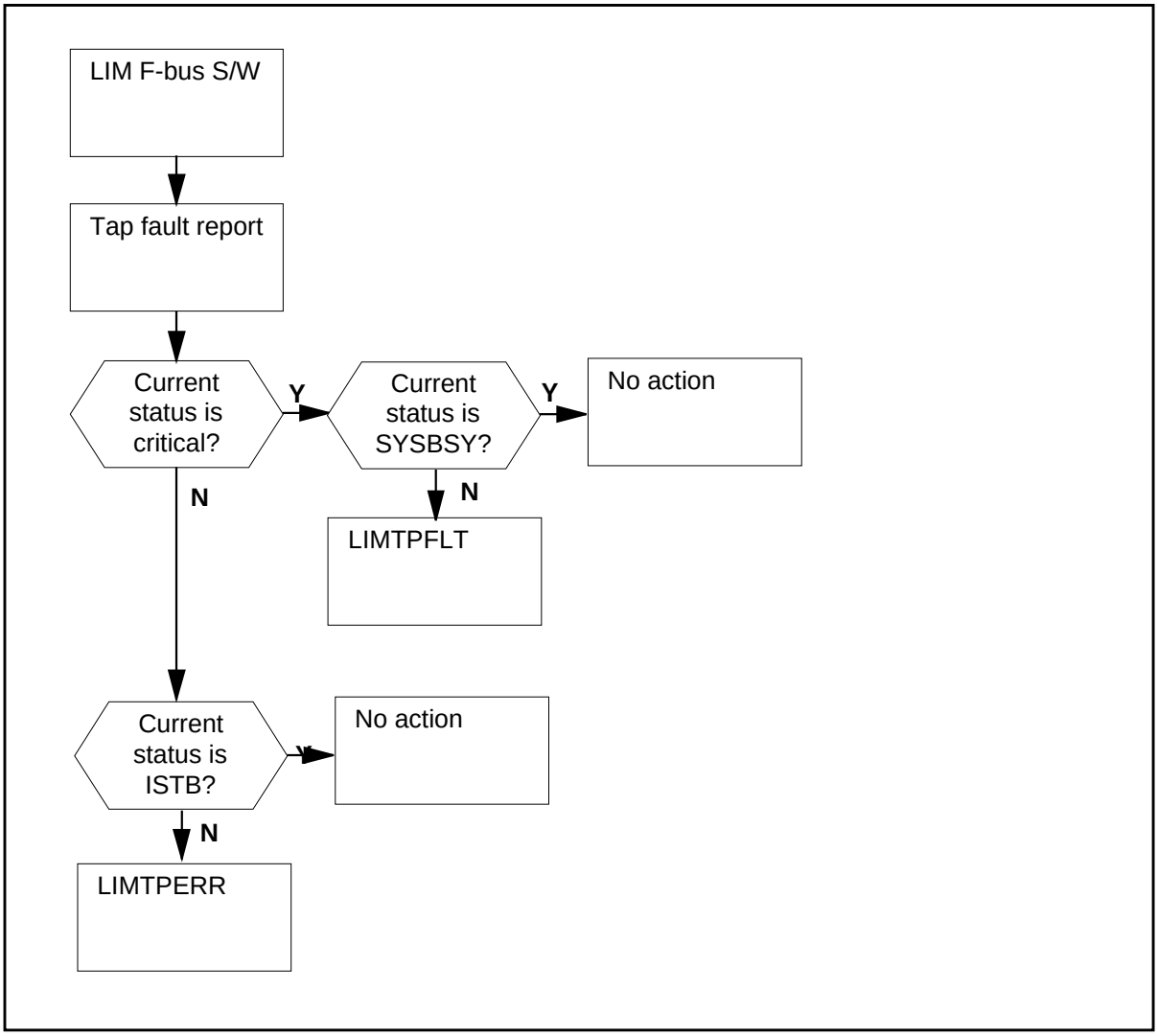
There are no associated OM groups.

Associated functional groups

There are no associated functional groups.

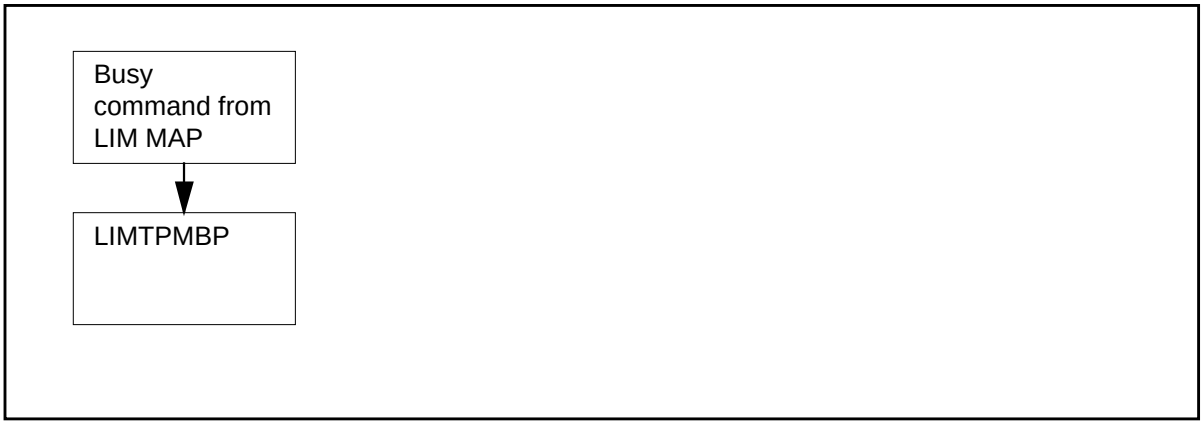
OM group LIMFBTP (continued)

OM group LIMFBTP registers for F-bus faults and errors

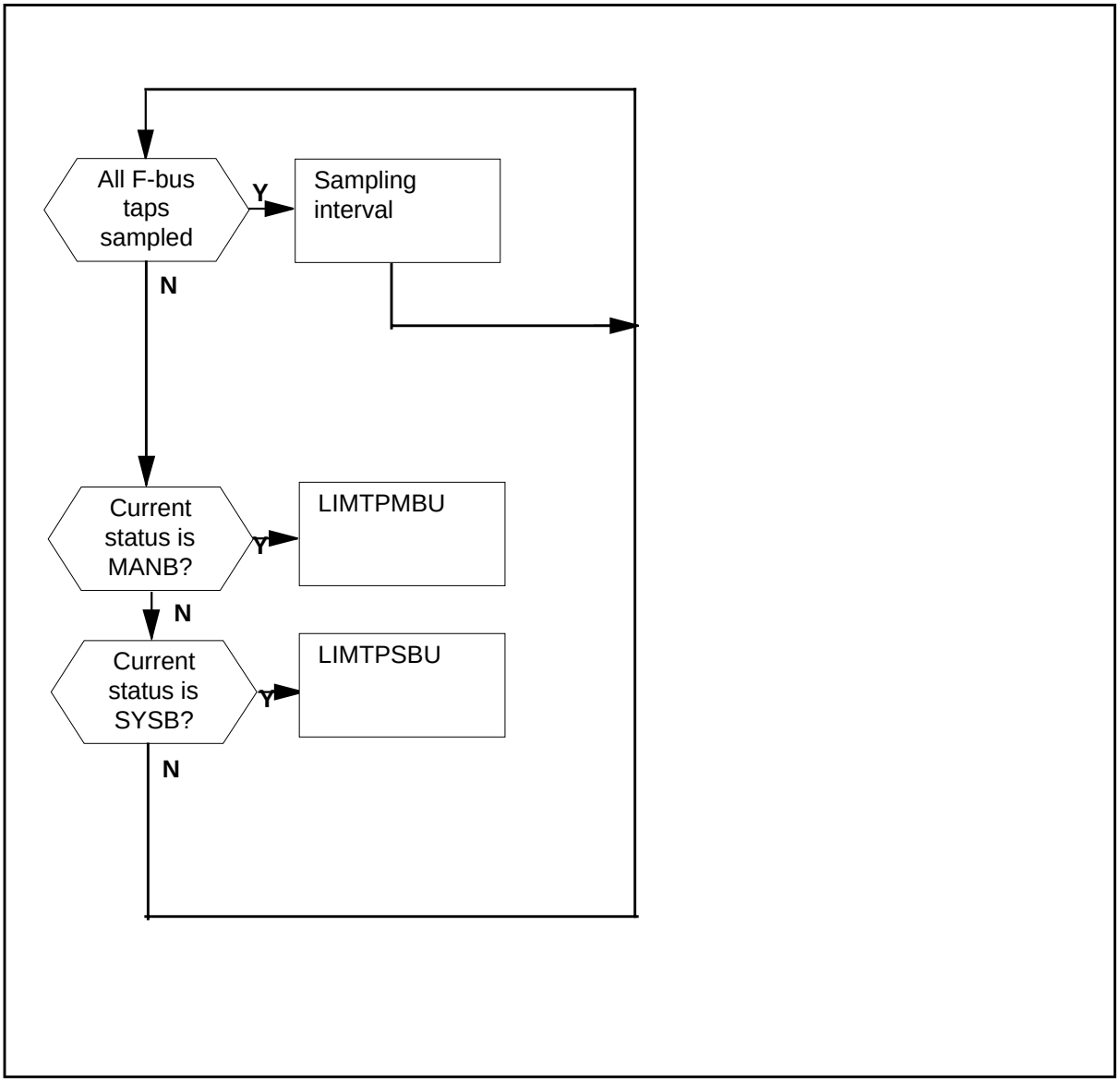


OM group LIMFBTP (continued)

OM group LIMFBTP registers for manual-busy peg, diagnostic run and diagnostic failure



OM group LIMFBTP registers for F-bus manually-busy use and system busy use



Register LIMTPERR

Register Link Interface Module Frame Transport Bus Tap Error (LIMTPERR)

Register LIMTPERR increases when the system detects errors for an in-service F-bus tap, not including additional maintenance action. LIMTPERR increases by one for every fault on the F-bus tap.

OM group LIMFBTP (continued)

Included are:

- the failure of an in-service test.
- error reports from the tap controller.

Register LIMTPERR release history

Register LIMTPERR was introduced in CSP04.

Associated registers

There are no associated registers.

Associated logs

PM181

PM183

Extension registers

There are no extension registers.

Register LIMTPFLT

Register Link Interface Module Frame Transport Bus Tap Fault (LIMTPFLT)

Register LIMTPFLT counts the number of errors, already counted in LIMTPFLT, which warrant the removal of the LIM F-bus tap from service. That is, all events that result in the change to system busy. LIMTPFLT increases by one for every fault on the F-bus tap.

Included are:

- the critical failure of an in-service test.
- critical error reports from the F-bus.

Register LIMTPFLT release history

Register LIMTPFLT was introduced in CSP04.

Associated registers

There are no associated registers.

Associated logs

PM181

PM183

Extension registers

There are no extension registers.

Register LIMTPMBP

Link Interface Module Frame Transport Bus Tap Manual Busy Peg

Register LIMTPMBP increases when commands from the MAP terminal busy the F-bus tap. The LIMTPMBP increases by one for every manual busy on the F-bus tap.

Included are:

- change from in-service (INSV) to manual busy (MANB).
- change from system busy (SYSB) to manual busy (MANB)
- change from c-side busy to manual busy (MANB)
- change from offline to manual busy (MANB)

Register LIMTPMBP release history

Register LIMTPMBP introduced in CSP04.

Associated registers

There are no associated registers.

Associated logs

PM182

Extension registers

There are no extension registers.

Register LIMTPMBU

Link Interface Module Frame Transport Bus Tap Manual Busy Usage (LIMTPMBU)

Register LIMTPMBU counts the amount of time the F-bus tap is in the manual busy state. The LIMTPMBP increases by one for every manual busy F-bus tap for every sampling interval.

Register LIMFBMBU release history

Register LIMTPMBU introduced in CSP04.

Associated registers

There are no associated registers.

OM group LIMFBTP (end)

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LIMTPSBU

Register Link Interface Module Frame Transport Bus Tap System Busy Usage (LIMTPSBU)

Register LIMTPSBU counts the amount of time the F-bus tap is in the system busy state. LIMTPSBU increases by one for every system busy F-bus tap for every sampling interval.

Register LIMTPSBU release history

Register LIMTPSBU introduced in CSP04.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group LINAC

OM description

Line access measurements (LINAC)

The OM group (LINAC) monitors grade of service for line access. The LINAC indicates the problems which customers experience in an attempt to access a telephone network through an XMS-based peripheral module (XPM). Counts are made for each line concentrating module (LCM).

Four registers count the following:

- call attempts
- call failures
- call abandons
- dial tone delays

Register counts for the LCMs are collected in the XPMs and transferred to the central control (CC). The default transfer period is 15 minutes.

Release history

The OM group LINAC introduced in BCS28.

Registers

The OM group LINAC registers appear on the MAP terminal as follows:

```
LINCAT          LINCATF          LINABAN          LINTDEL
```

Group structure

The OM group LINAC can provide one tuple for each LCM.

Key field:
There is no Key field

Info field:
Contains the following parts:

- LCM_NUMBER is the line module index number
- SITE_INDEX is the site number
- LCD_TYPE is the module type
- EXT_LINE_MOD_NUMBER is the module number

OM group LINAC (continued)

Associated OM groups

The OM group LMD counts call attempts to originate and terminate on a line, failed originating and terminating attempts, and abandoned calls for line modules.

The OM group DTSR counts dial tone delays greater than 3 s for line modules.

The OM group DTSRPM counts calls that receive dial tone.

Associated functional groups

The functional groups that associate with OM group LINAC are as follows:

- XMS-based peripheral modules (XPM)
- Line concentrating modules (LCM)

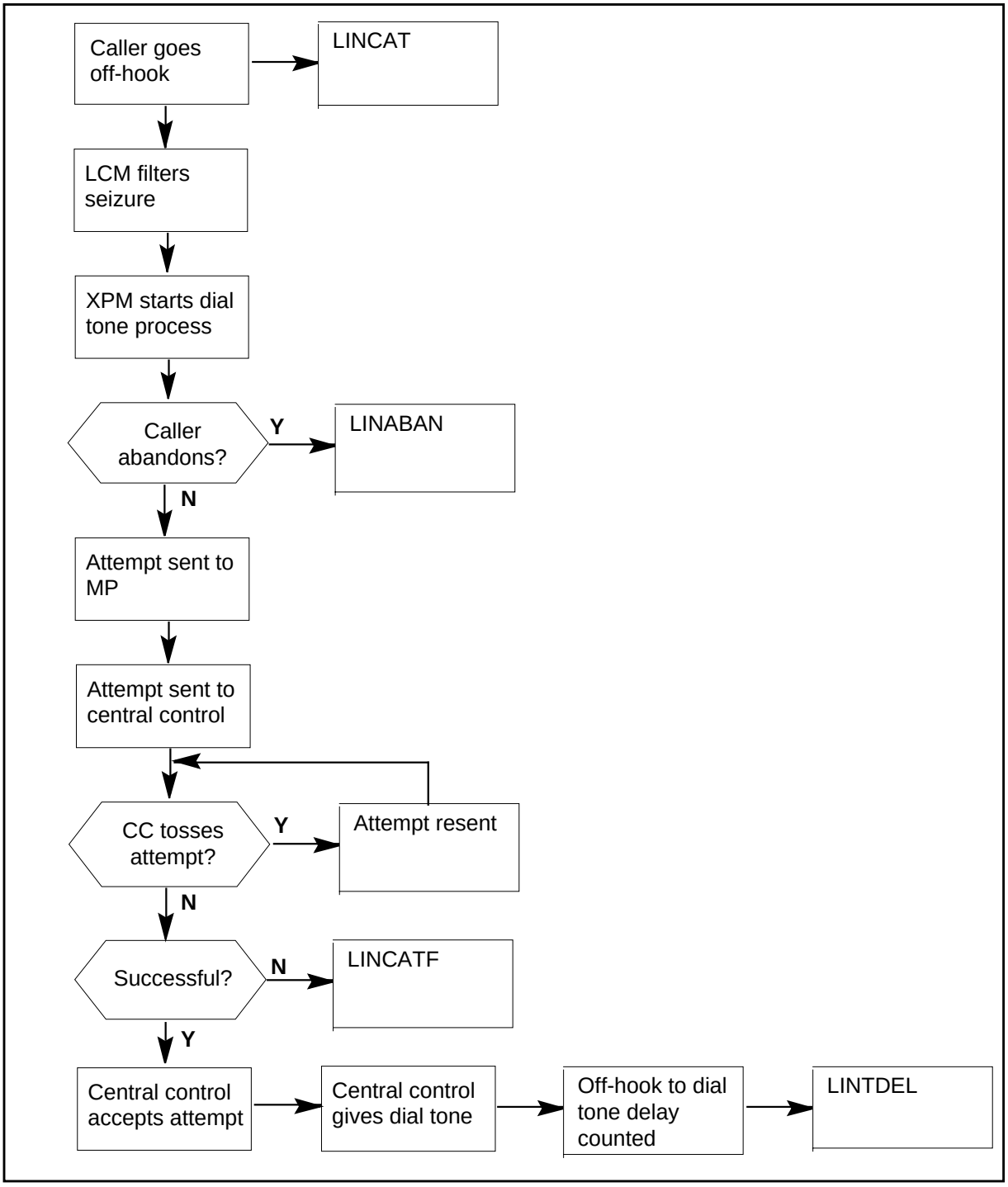
Associated functionality codes

The associated functionality codes for OM group LINAC appear in the following table:

Functionality	Code
LOCAL FEATURES I	NTX901AA

OM group LINAC (continued)

OM group LINAC registers



OM group LINAC (continued)

Register LINABAN

Line call abandons (LINABAN)

Register LINABAN counts calls in a line concentrating module (LCM) that abandon before the dial tone receives.

Register LINABAN release history

Register LINABAN introduced in BCS28.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LINCAT

Line call attempts (LINCAT)

Register LINCAT counts call attempts in an LCM.

Register LINCAT release history

Register LINCAT introduced in BCS28.

Associated registers

Register LMD_NORIGATT counts line origination attempts for line modules.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LINCATF

Line call attempt failures (LINCATF)

Register LINCATF counts call attempts from an LCM that fail to receive a response from the central control (CC).

Register LINCATF release history

Register LINCATF introduced in BCS28.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LINTDEL

Line access dial tone delay (LINTDEL)

Register LINTDEL records the total dial tone delay time for all calls from an LCM that receive a dial tone during the XPM OM transfer period.

Dial tone delay is the time between a subscriber going off-hook and hearing dial tone. The system reports the value in LINTDEL in tenths of a second.

Register LINTDEL release history

Register LINTDEL introduced in BCS28.

Associated registers

Register DTSR_DELAY counts dial tone delays greater than three seconds for XPMs.

Register DTSRPM_DPLDLY, DTSRPM_DGTDLY and DTSRPM_KSDLY count dial tone delays in peripheral modules.

Average dial tone delay for a call during the transfer period in tenths of a second = LINTDEL divided by LINCAT-LINCATF-LINABAN.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group LINEHAZ

OM description

Line hazards (LINEHAZ)

The OM group LINEHAZ measures the number of line hazard conditions on the loop of the subscriber.

Release history

The OM group LINEHAZ was introduced in BCS33.

Registers

The OM group LINEHAZ registers appear on the MAP terminal as follows:

```
HAZDET          HAZCLR          HAZSCAN
```

Group structure

The OM group LINEHAZ provides three tuples for every office.

Key field:
There is no Key field

Info field:
There is no Info field

Associated OM groups

There are no associated OM groups.

Associated functional groups

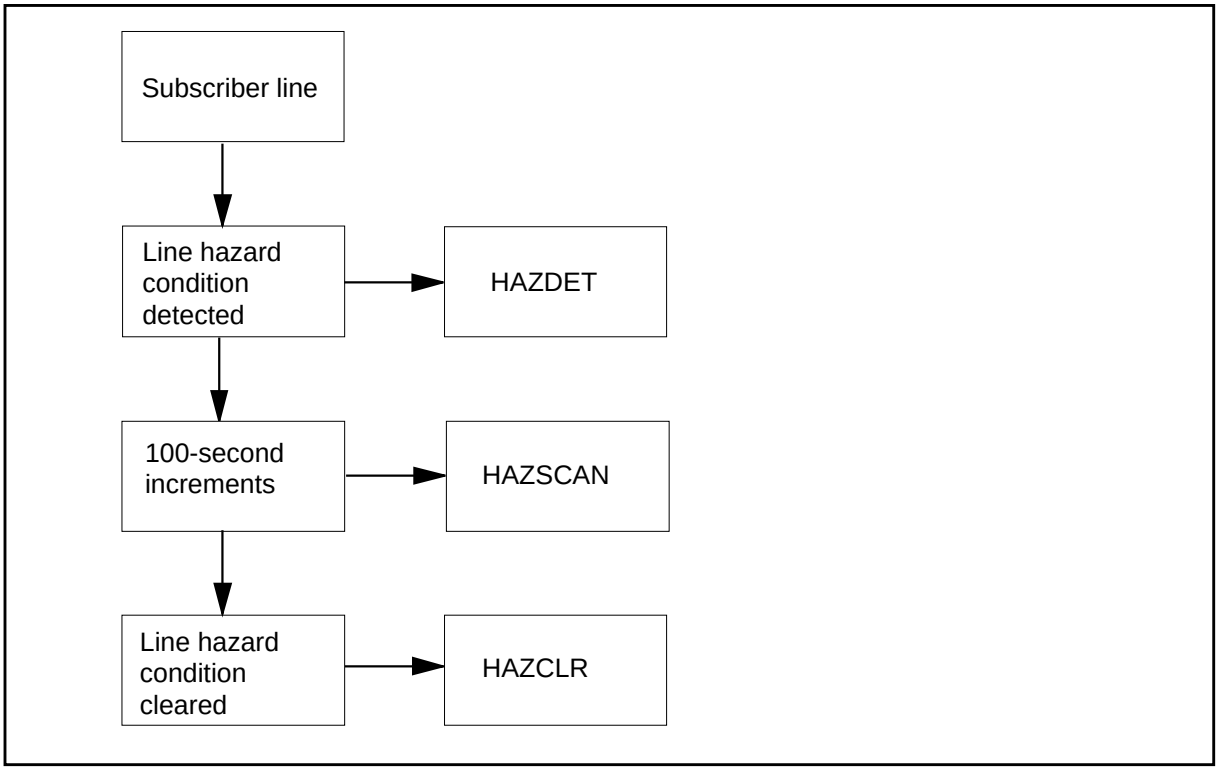
Type A and B line card (North American) functional groups associate with OM group LINEHAZ.

Associated functionality codes

The associated functionality codes for OM group LINEHAZ appear in the following table:

Functionality	Code
Line Card Monitor	NTXP00AA

OM group LINEHAZ registers



Register HAZCLR

Hazard cleared (HASCLR)

Register HAZCLR increases when the system clears the line hazard condition. This register also increases when the cut-off relay manually releases on a line that was in a line hazard condition.

Register HAZCLR release history

Register HAZCLR introduced in BCS33.

Associated registers

Register HAZDET increases when the Line Card Monitor feature detects a line hazard condition and isolates the line from the facility hazard. Operation of the cut-off relay in the line card isolates the line from the facility hazard.

Associated logs

The system generates log LINE133 each time the system releases the cut-off relay to clear a line hazard condition.

OM group LINEHAZ (end)

Extension registers

There are no extension registers.

Register HAZDET

Hazard detected (HAZDET)

Register HAZDET increases when the Line Card Monitor feature detects a line hazard condition and isolates the line from the facility hazard. Operation of the cut-off relay in the line card isolates the line from the facility hazard.

Register HAZDET release history

Register HAZDET introduced in CS33.

Associated registers

Register HAZCLR increases when the line hazard condition clears. This register can also increase when the cut-off relay manually releases on a line that was in a line hazard condition.

Associated logs

LINE132 generates each time the system detects a line hazard condition.

Extension registers

There are no extension registers.

Register HAZSCAN

Hazard scan (HAZSCAN)

Register HAZSCAN counts the number of lines with a line hazard condition in effect every 100 s.

Register HAZSCAN release history

Register HAZSCAN introduced in BCS33.

Associated registers

Registers HAZDET and HAZCLR are associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group LIUFBUS

OM description

Link interface unit frame bus (LIUFBUS)

The OM group LIUFBUS provides information about traffic at the frame bus (FBUS) interface.

The OM group LIUFBUS contains ten registers that count the following:

- messages received on the FBUS
- messages received on the FBUS and discarded because there is no buffer available on the link interface unit (LIU) or high-speed link interface unit (HLIU)
- messages received on the FBUS that contain errors
- messages transmitted through the FBUS
- outbound messages on the FBUS that cannot transmit because of errors

Release history

The OM group LIUFBUS introduced in BCS31.

The OM group LIUFBUS set to zero in CSP03. Refer to OM group ASUFBUS.

Registers

The OM group LIUFBUS registers appear on the MAP terminal as follows:

```
LIURXPKT    LIUFXPK2    LIURXDIS    LIURXDI2
LIURXERR    LIURXER2    LIUTXPKT    LIUTXPK2
LIUTXERR    LIUTXER2
```

Group structure

The OM group LIUFBUS provides one tuple for each LIU that you enter in table LIUINV.

Key field:
None

Info field:
LIU_type nnn, where LIU_type is one of EIU, LIU7, HLIU, HSLR, SVR7, or FRIU, and nnn is between 0 and 750

OM group LIUFBUS (continued)

Associated OM groups

The data from OM group LIUFBUS collects in OM group ASUFBUS as of CSP03.

Associated functional groups

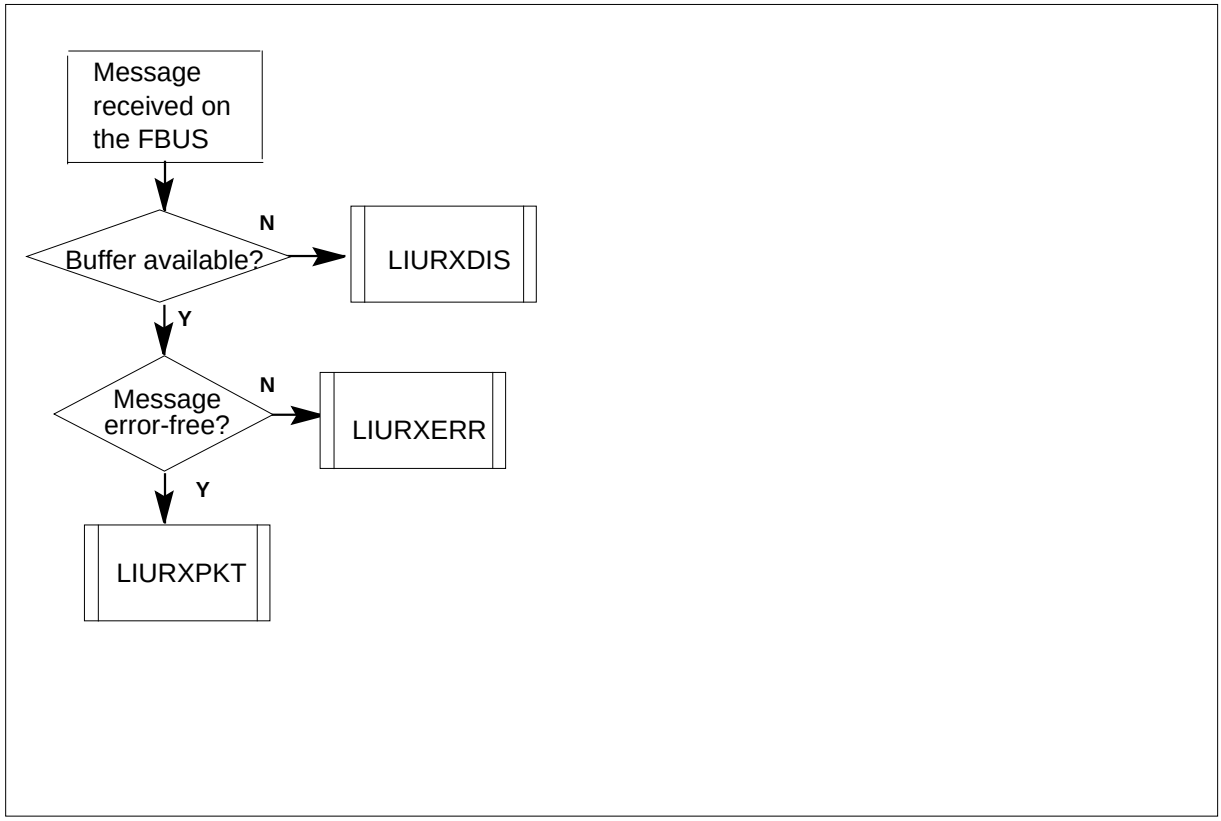
There are no associated functional groups.

Associated functionality codes

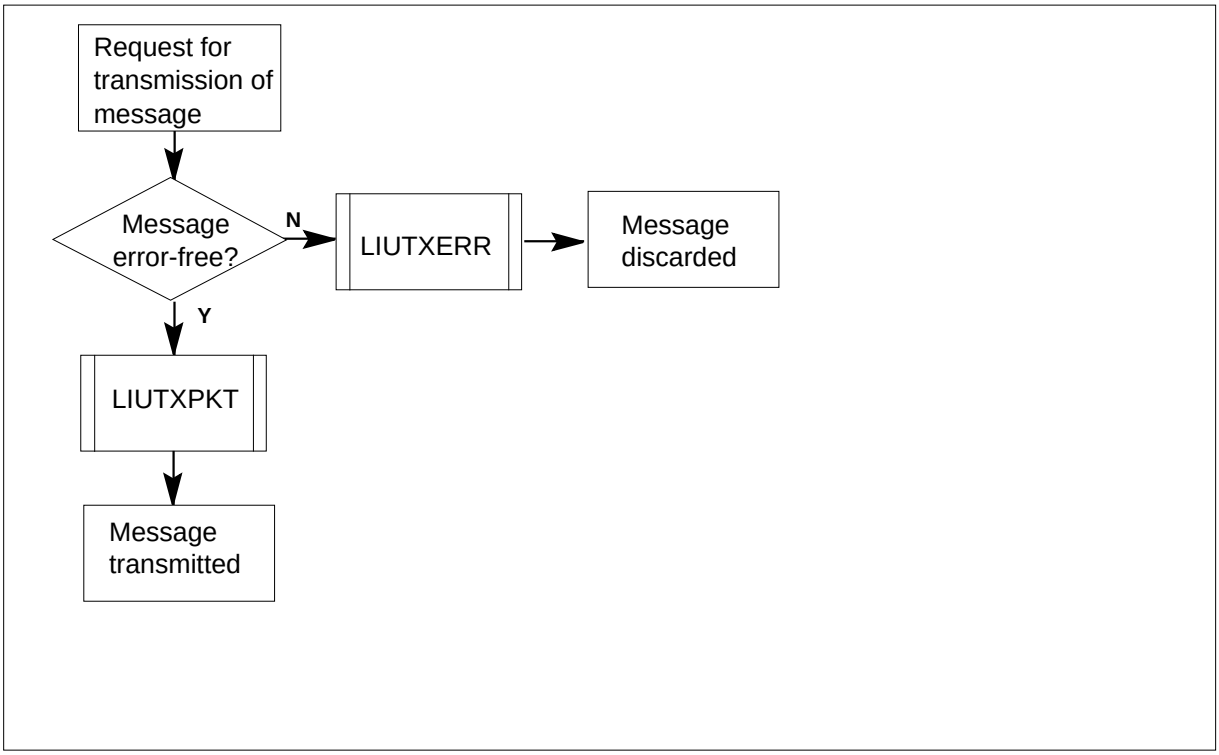
The associated functionality codes for OM group LIUFBUS appear in the following table.

Functionality	Code
Ethernet Interface Unit	NTXF05AA

OM group LIUFBUS registers



OM group LIUFBUS registers (continued)



Register LIURXDIS

LIU FBUS receive discards (LIURXDIS)

Register LIURXDIS counts messages that the FBUS received and discarded because a buffer is not available on the LIU or HLIU.

Register LIURXDIS release history

Register LIURXDIS introduced in BCS31.

Register LIURXDIS set to zero in CSP03.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension register

LIURXDI2

OM group LIUFBUS (continued)

Register LIURXERR

LIU FBUS receive errors (LIURXERR)

Register LIURXERR counts messages the FBUS received that contain errors.

Register LIURXERR release history

Register LIURXERR introduced in BCS31.

Register LIURXERR sets to zero in CSP03.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension register

LIURXER2

Register LIURXPKT

LIU FBUS receive packets (LIURXPKT)

Register LIUTXPKT counts error-free messages that the FBUS receives.

Register LIURXPKT release history

Register LIURXPKT introduced in BCS31.

Register LIURXPKT sets to zero in CSP03.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension register

LIURXPK2

Register LIUTXERR

LIU FBUS transmit errors (LIUTXERR)

Register LIUTXERR counts outbound messages that the FBUS discards before transmission because they contain errors.

Register LIUTXERR release history

Register LIUTXERR introduced in BCS31.

Register LIUTXERR sets to zero in CSP03.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension register

LIUTXER2

Register LIUTXPKT

LIU FBUS transmit packets

Register LIUTXPKT counts messages that transmit through FBUS.

Register LIUTXPKT release history

LIUTXPKT introduced in BCS31.

Register LIUTXPKT sets to zero in CSP03.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

LIUTXPK2

OM group LM

OM description

Line module maintenance summary (LM)

The OM group LM provides maintenance measurements for line modules and remote line modules.

Nine registers count the following:

- errors detected in in-service LMs
- line card diagnostic tests
- the number of times LMs are made manual busy and system busy
- terminals that are cut off as a result of LMs that are made manual busy and system busy
- outside plant circuit failures

Two usage registers record the number of line modules in the system busy and manual-busy states.

Release history

The OM group LM introduced in BCS20.

BCS28

Software change to include activities associated with E911 introduced in BCS28. Creation and deletion of a node for a line appearance on a digital trunk (LDT) are examples of activities that associate with E911.

Registers

The OM group LM registers appear on the MAP terminal as follows:

```
LMERR          LMFLT          LMSBU          LMMBU
LMCCTDG        LMCCTFL        LMMBP          LMSBP
LMMBTCO        LMSBTCO        LMCCTOP
```

Group structure

The OM group LM provides one tuple for each office.

Key field:
There is no key field.

Info field:
There is no Info field.

OM group LM (continued)

Associated OM groups

The OM group PM provides maintenance information for each peripheral module.

The OM group PMTYP counts registers in group PM for each peripheral module type.

Associated functional groups

There are no associated functional groups.

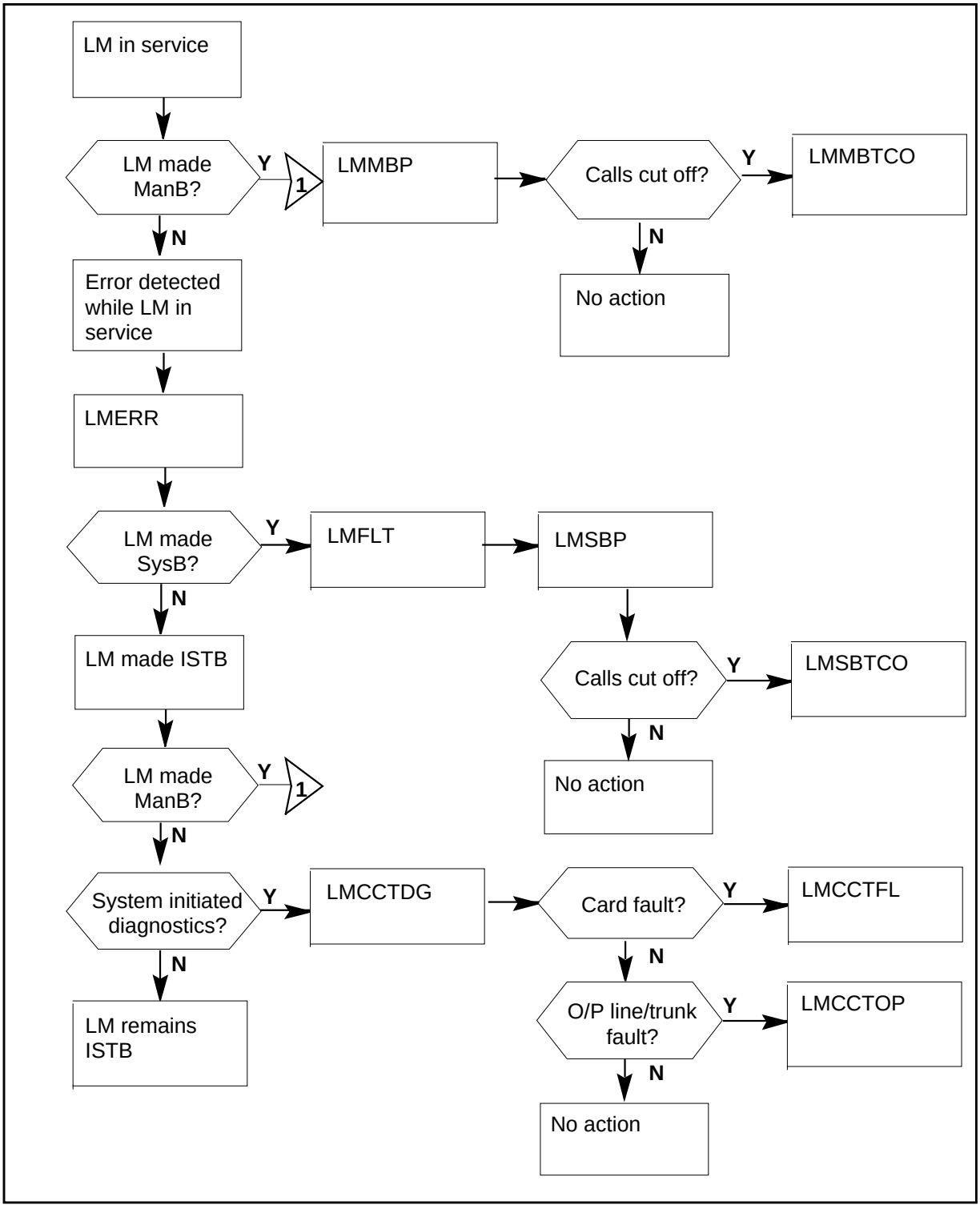
Associated functionality codes

The associated functionality codes for OM group LM appear as follows:

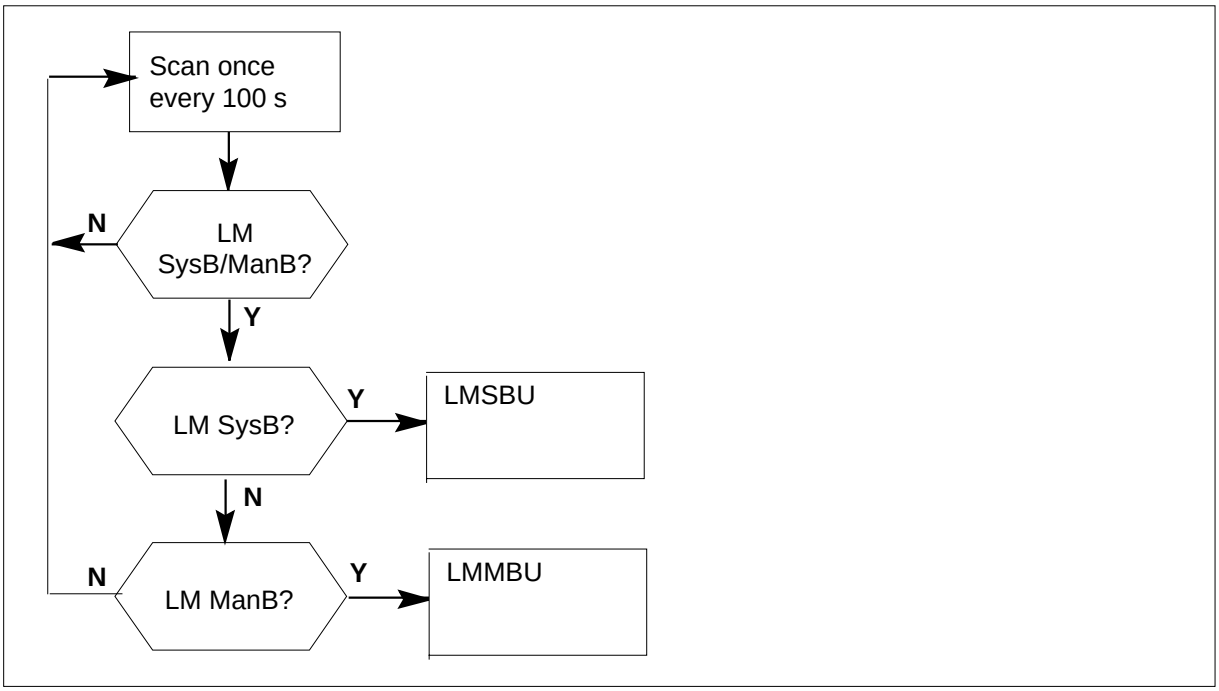
Functionality	Code
Local Features I	NTX901AA

OM group LM (continued)

OM group LM registers



OM group LM registers (continued)



Register LMCCTDG

Line module circuit diagnostics run (LMCCTDG)

Register LMCCTDG counts line card diagnostic test sequences that run because call processing refers a trouble to the maintenance system.

Register LMCCTDG increases after the diagnostic is complete.

Register LMCCTDG release history

LMCCTDG introduced before BCS20.

Associated registers

PM_PMCCTDG counts line card diagnostic test sequences that run because call processing refers a trouble to the maintenance system. Register PMCCTDG increases after the diagnostic runs.

PMTYP_PMTCCTDG is the amount of the register PM_PMCCTDG for a peripheral module type.

OM group LM (continued)

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LMCCTFL

Line module circuit diagnostics failed (LMCCTFL)

Register LMERR increases when the line card diagnostic can find one of the following faults:

- a peripheral module fault
- a card fault
- a facility fault
- no card
- the wrong card

Register LMCCTFL release history

Register LMCCTFL introduced before BCS20.

Associated registers

Register PM_PMCCTFL increases when the line card diagnostic finds one of the following faults:

- a peripheral module fault
- a card fault
- a facility fault
- no card
- the wrong card

Associated logs

There are no associated logs.

Extension registers

There are no extension register.

Register LMCCTOP

Line module circuit diagnostics outside plant (LMCCTOP)

Register LMCCTOP counts outside plant circuit failures that one of the conditions that follow detects:

- system diagnostics
- automatic line tests (ALT)
- line insulation tests (LIT)
- long tests

Register LMCCTOP release history

LMCCTOP introduced before BCS20.

Associated registers

PM_PMCCTOP counts outside plant circuit failures that are detected by one of the conditions that follow:

- system diagnostics
- automatic line tests (ALT)
- line insulation tests (LIT)
- long tests

PMTYP_PMTCCTOP is the amount of the register PM_PMCCTOP for a peripheral module type.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LMERR

Line module errors

Line module errors (LMERR) counts errors in an in-service line module (LM). LMERR increases when an in-service LM does one of the following:

- reports a software error, RAM parity failure, LM firmware error, or LM controller message congestion
- experiences an accuracy failure
- fails a test during a routine or initializing audit

OM group LM (continued)

- puts up a WAI (who-am-I) flag, indicating that processing in the LM completely fails
- fails to respond to messages over either plane

Register LMERR release history

LMERR introduced before BCS20.

Associated registers

PM_PMERR counts errors in an in-service peripheral module.

PMTYP_PMTERR is the amount of the register PM_PMERR for a peripheral module type.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LMFLT

Line module faults

Line module faults (LMFLT) counts line module (LM) errors that leave the LM system busy. The system performs the count pending manual interruption or a successful system-initiated recovery attempt.

Errors that are counted in LMFLT are also counted in LMERR.

Register LMFLT release history

LMFLT introduced before BCS20.

Associated registers

PM_PMFLT counts PM errors that leave the PM system busy, pending manual interruption or a successful system-initiated recovery attempt.

PMTYP_PMTFLT is the amount of the register PM_PMFLT for a peripheral module type.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LMMBP

Line module changes to man-busy

Register LMMBP counts line modules (LM) in an in-service or an in-service trouble state that are made manual busy.

Register LMMBP release history

LMMBP created before BCS20.

Associated registers

PM_PMMBP counts PMs within an in-service or an in-service trouble state that is made manual busy.

PMTYP_PMTMBP is the amount of the register PM_PMMBP for a peripheral module type.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LMMBTCO

Line module man busy terminals cut off

Line module man busy terminals cut off (LMMBTCO) counts terminals that are call processing busy, or in the call processing busy deload state, when the line module (LM) is manual busy.

If a warm restart occurs, two-port calls are not cut off. If a restart does not occur, LMMBTCO increases only once for the two terminals that are involved in a two-port call.

When a warm restart occurs from a manual busy state, LMMBTCO counts the terminals that are cut off.

Register LMMBTCO release history

LMMBTCO created before BCS20.

Associated registers

PM_PMMBTCO counts terminals that are cut off when the peripheral module (PM) is put in the manual-busy state from an in-service state.

OM group LM (continued)

PMTYP_PMTMBTCO is the amount of the register PM_PMMBTCO for a peripheral module type.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LMMBU

Line module manual busy usage

Line module manual busy usage (LMMBU) is a use register. The scan rate is slow: 100 seconds. LMMBU records if a line module (LM) is manual busy.

Register LMMBU release history

LMMBU created before BCS20.

Associated registers

PM_PMMMBU records if a peripheral module is manual busy. PMMMBU is a use register. The scan rate is slow: 100 seconds.

PMTYP_PMTMMBU is the amount of the register PM_PMMMBU for a peripheral module type.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LMSBP

Line module changes to system busy

Line module changes to system busy (LMSBP) counts line modules (LM) in an in-service or an in-service trouble state that are made system busy.

Register LMSBP release history

LMSBP created before BCS20.

Associated registers

PM_PMSBP counts peripheral modules (PM) in an in-service or in-service trouble state that are made system busy.

PMTYP_PMTSBP is the amount of the register PM_PMSBP for a peripheral module type.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LMSBTCO

Line module system busy terminals cut off

Line module system busy terminals cut off (LMSBTCO) counter terminals that are call processing busy, or in the call processing busy deload state, when the line module (LM) is system busy.

Occasionally the LM becomes C-side busy before it becomes system busy. In this occurance, if the LM can recover but the mate is busy, LMSBTCO counts only the terminals taken over from the mate.

If a take-over occurs, two-port calls cut off. If a take-over does not occur, then LMSBTCO increases once for the two terminals involved in a two-port call.

When a warm restart occurs from a system busy state, LMSBTCO counts the terminals that cut off.

Register LMSBTCO release history

LMSBTCO created before BCS20.

Associated registers

PM_PMSBTCO counts terminals that are call processing busy, or in the call processing busy deload state, when the LM is system busy.

PMTYP_PMTSBTCO is the amount of the register PM_PMSBTCO for a peripheral module type.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group LM (end)

Register LMSBU

Line module system busy usage

Line module system busy usage (LMSBU) is a use register. The scan rate is slow: 100 seconds. LMSBU records if a line module (LM) is system busy.

A line module is system busy if it fails an audit of its common control functions, if inaccessible, or if more than 200 controller or line errors are reported within one 10-minute audit period.

Register LMSBU release history

LMSBU created before BCS20.

Associated registers

PM_PMMSBU records if an LM is system busy. PMMSBU is a use register. The scan rate is slow: 100 seconds.

PMTYP_PMTMSBU is the amount of the register PM_PMMSBU for a peripheral module type.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group LMD

OM description

Line traffic

The OM group LMD provides traffic information for the following peripheral modules (PM):

- remote line modules (RLM)
- line concentrating modules (LCM)
- virtual line concentrating modules (VLCM)
- remote concentrator terminals (RCT)
- remote concentrator subscribers (RCS)
- integrated services line modules (ISLM)
- digital line modules (DLM)
- very small remotes (VSR)
- enhanced line concentrating modules (ELCM)
- integrated services digital network (ISDN) line concentrating modules (LCMI)
- intelligent peripheral equipment (IPE)
- line modules (LM)

ISUPCGRP counts available circuits for each trunk.

ISUPCONN counts call attempts that are not complete.

One use register records the number of busy lines.

Ten registers count the following:

- attempts to find a speech link from the network module to a terminating line
- attempts to find a speech link that fail
- originating call attempts
- originating call attempts that fail
- originating call attempts that the subscriber abandons
- attempts to terminate on a line that fail
- attempts to collect or return coins that fail

OM group LMD (continued)

- revertive call attempts
- Multiple Appearance Directory Number (MADN) group secondary units that are notified of an incoming call

All types of DMS offices have LMD.

Release history

OM group LMD introduced before BCS20

APC009

Virtual line concentrating module (VLCM) added to OM description and group structure.

GL04

Registers MADNTATT, REVERT and STKCOINS do not increase.

BCS35

The info field includes the ADNUM field. The ADNUM field contains a different unit number that identifies each peripheral module.

BCS33

Register LMTRU can convert from CCS to deci-erlangs before display. Use the OMSHOW command on the ACTIVE class to perform this conversion.

BCS32

LMD includes traffic measurements for the lines associated with the remote digital terminal.

BCS31

One tuple for each IPE module on an SL-100 that LMD provides.

BCS24

One tuple for each ELCM and LCMI that LMD provides

BCS23

One tuple for each VSR that LMD provides.

BCS21

One tuple for each DLM that LMD provides.

BCS20

Software change provides use registers in CCS or in deci-erlangs, and one tuple for each ISLM that LMD provides.

Registers

OM group LMD registers appear on the MAP terminal as follows:

```
NTERMATT    NORIGATT    LMTRU       TERMBLK
ORIGFAIL    PERCLFL     STKCOINS    REVERT
MADNTATT    ORIGBLK     ORIGABN
```

Group structure

OM group LMD can provide one tuple for each line peripheral.

Key field:
There is no key field.

Info field:
LMD_OMINFO is the PM identifier.

The PM identifier contains the site identifier, the frame number, and the unit number. The site identifier is four alphanumeric characters. For ISLM, the site identifier must be HOST. The frame number is a number from 0-511. Unit numbers appear according to PM type in the following list:

- ALCM 0-1
- DLM 0-1
- ELCM 0-1
- FRU 0-1
- IPE 0-3
- ISLM 0-3
- LCM 0-1
- LCME 0-1
- LCMI 0-1
- LDT 0
- LM 0-1
- LRU 0-9
- RCS 0-9
- RCT 0-9
- RCU 0-9

OM group LMD (continued)

- RDT 0-9
- VLCM 0-1

Associated OM groups

The OM group OFZ monitors office-wide traffic. The OFZ registers count calls based on the source of the call and the intended destination.

The OM group OTS monitors office-wide traffic. OTS registers count calls based on the source of the call and the accurate destination.

Associated functional groups

There are no associated functional groups.

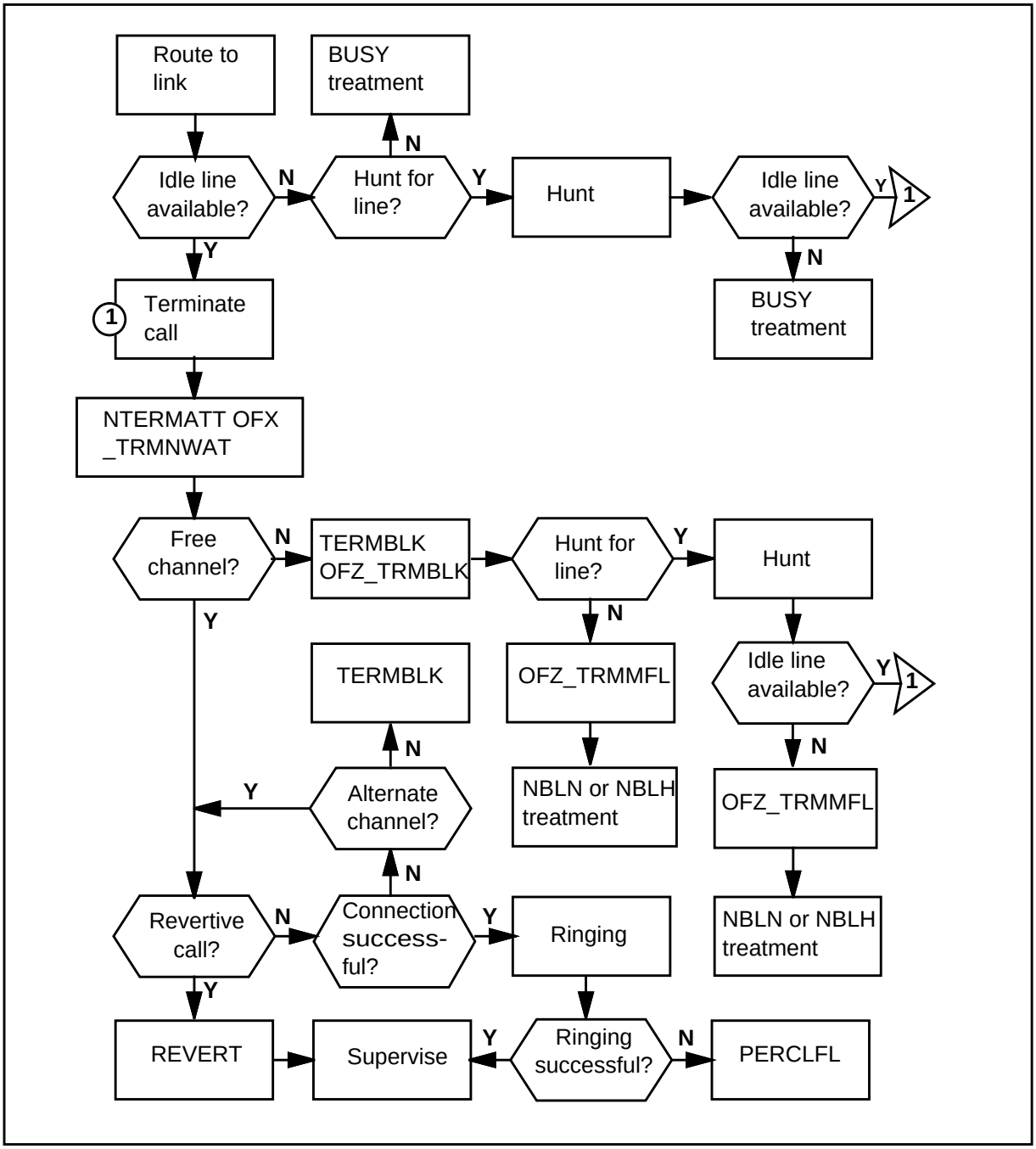
Associated functionality codes

The associated functionality codes for OM group LMD are in the table:

Functionality	Code
Meridian SL-100 Cabinetized Software	NTXA10AA
Extended Peripheral Equipment	NTXN25AA
Common Basic	NTX001AA
Digital Telephone M2000-Basic	NTX640AA
OMs in Erlangs	NTX664AA
ISDN Basic Access	NTX750AB

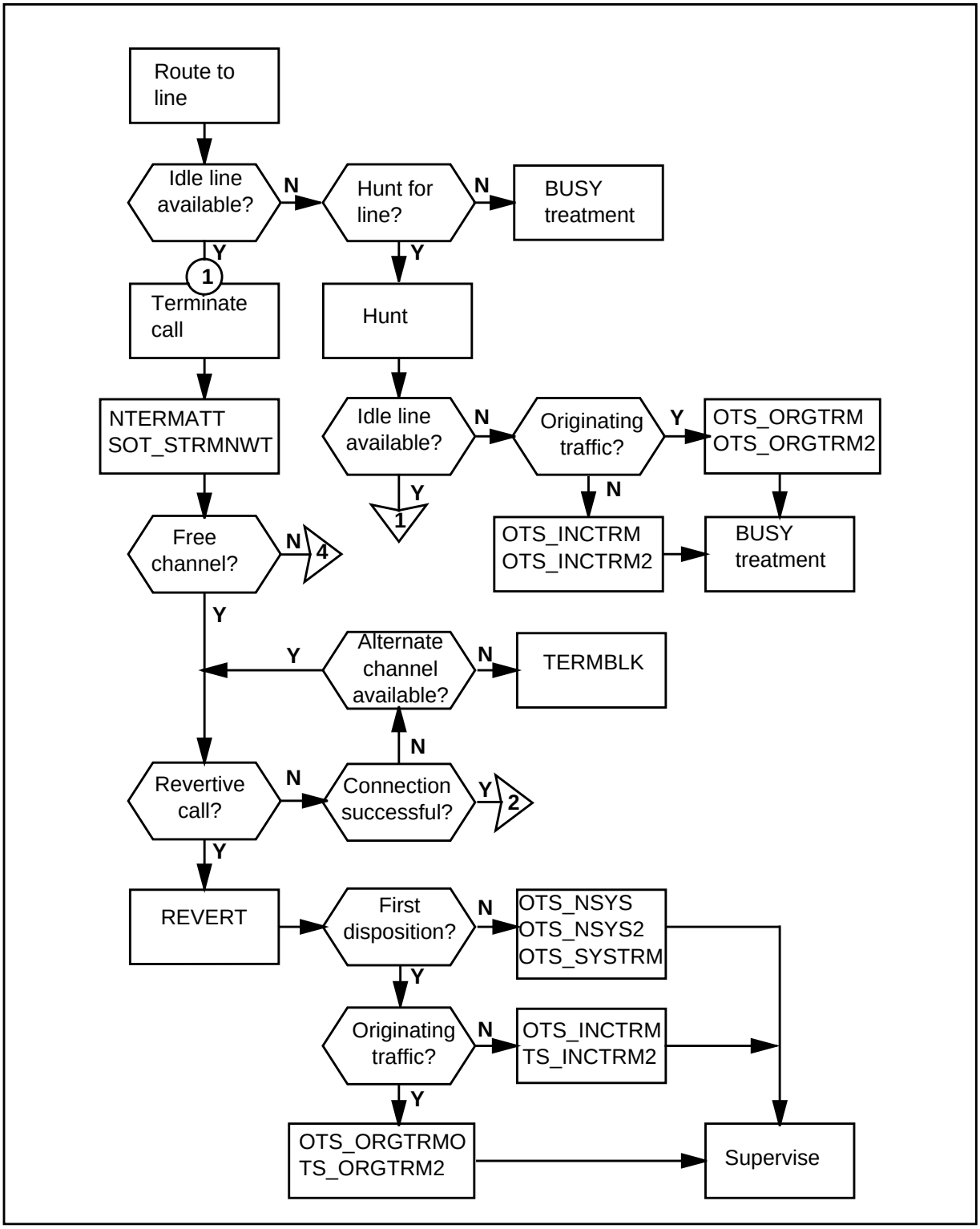
OM group LMD (continued)

OM group LMD registers

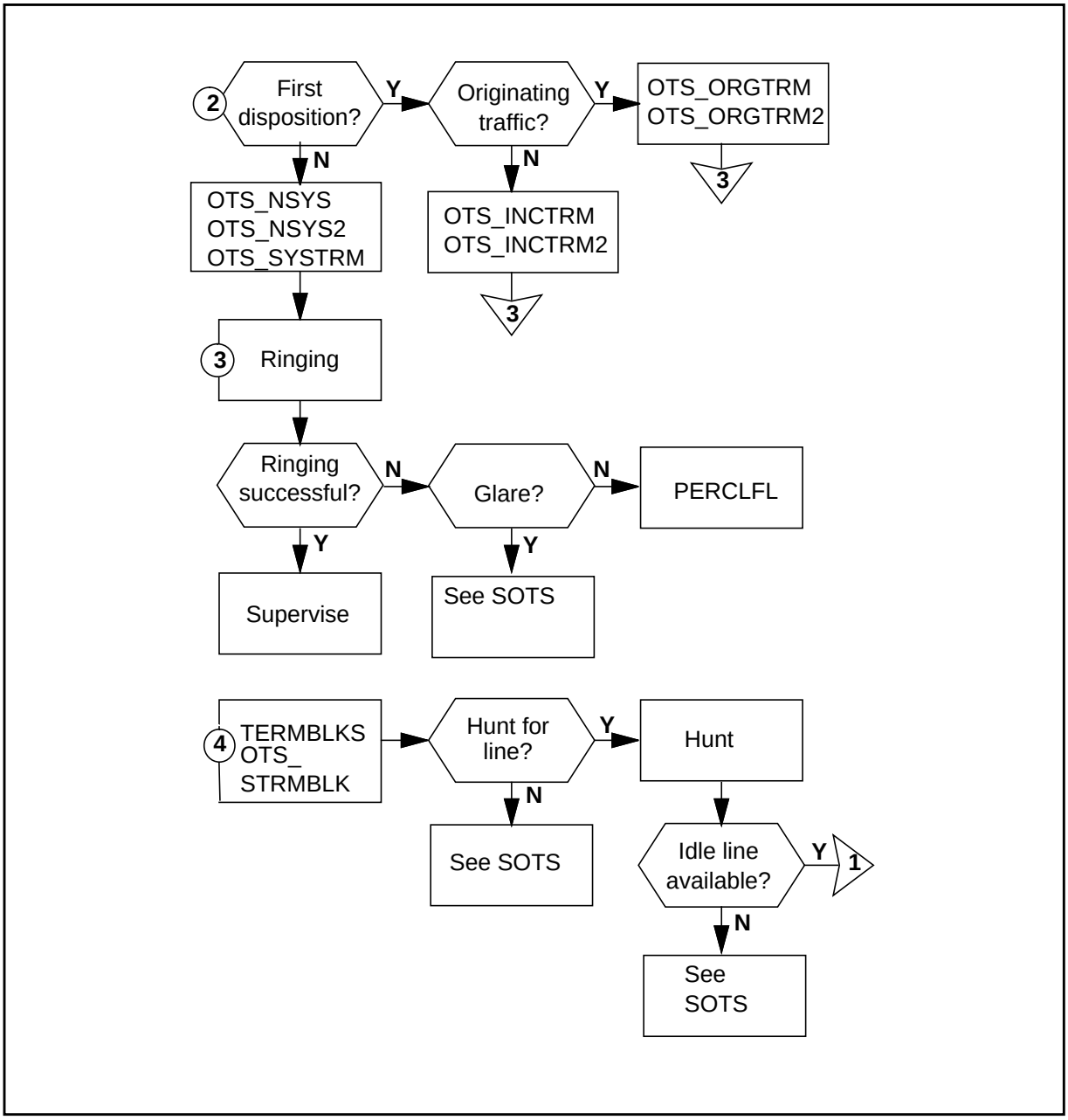


OM group LMD (continued)

OM group LMD registers (continued)

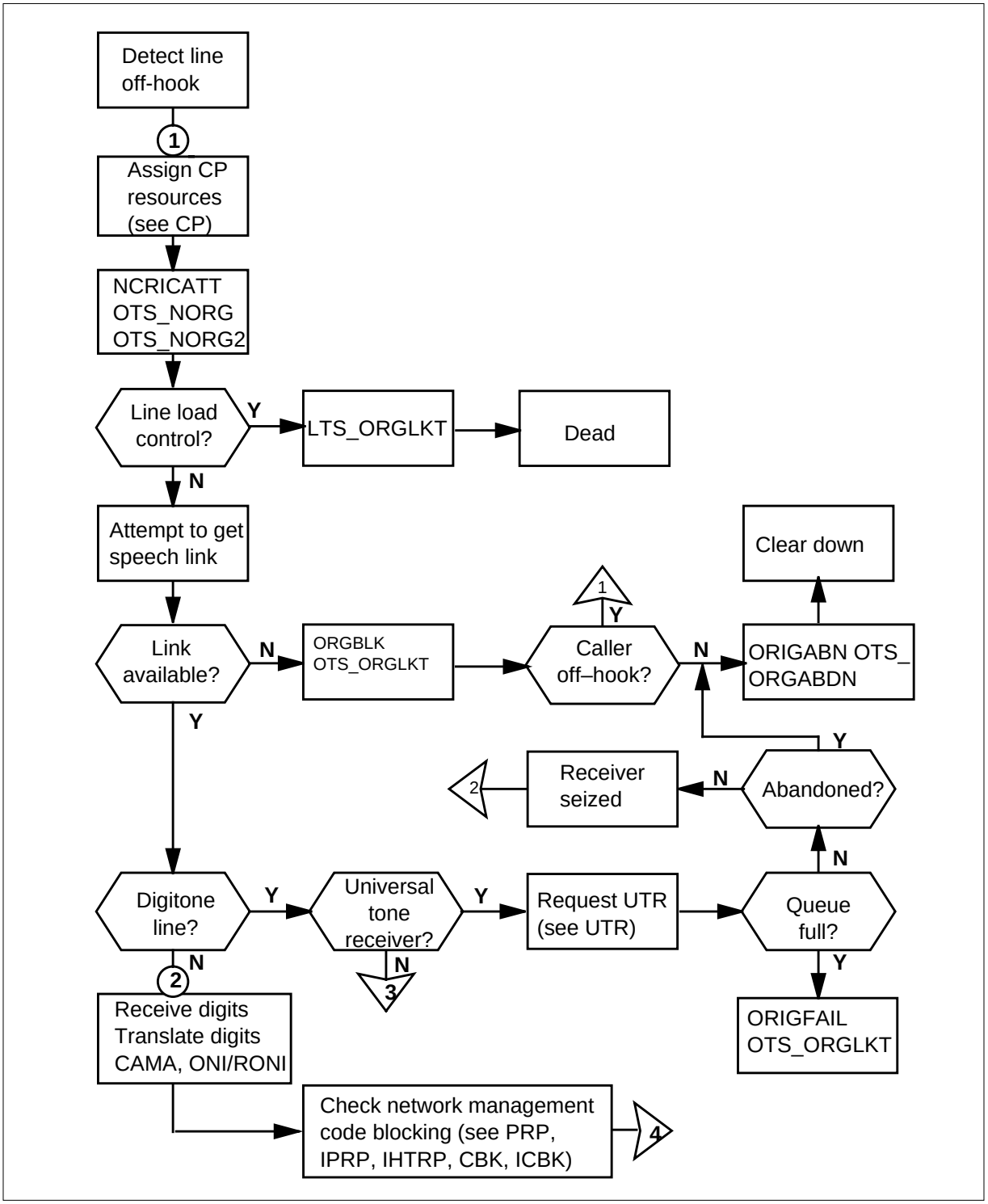


OM group LMD registers (continued)



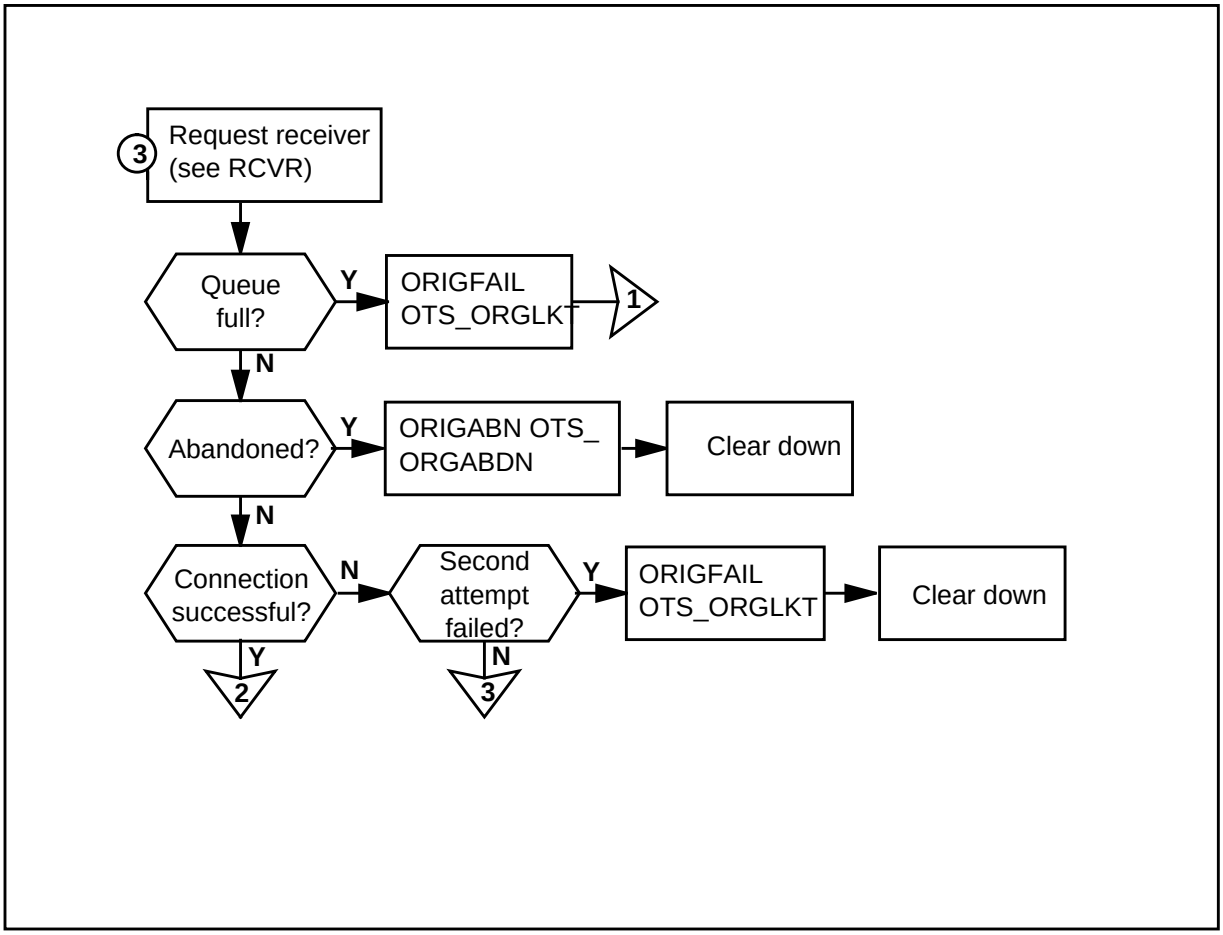
OM group LMD (continued)

OM group LMD registers (continued)



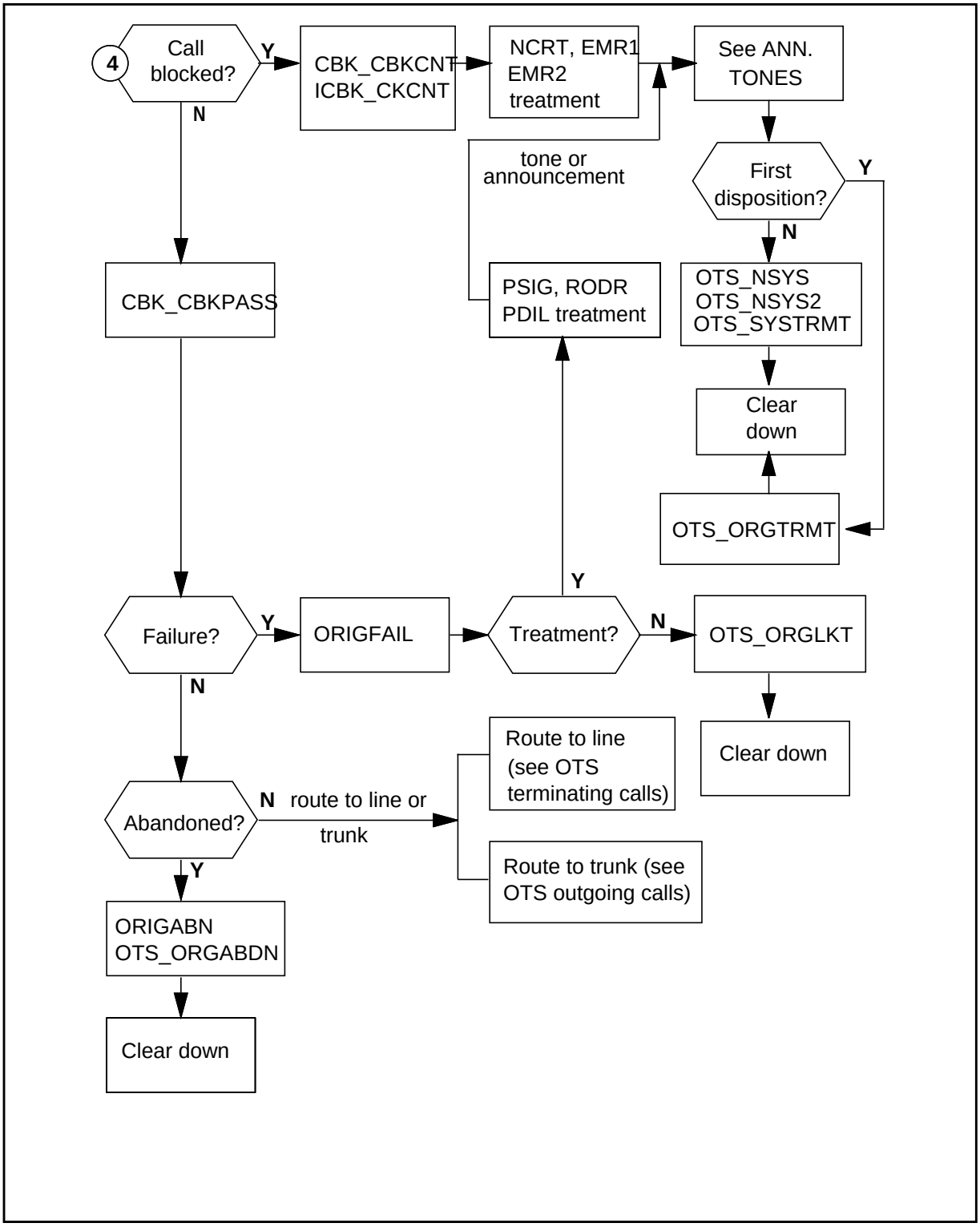
OM group LMD (continued)

OM group LMD registers (continued)



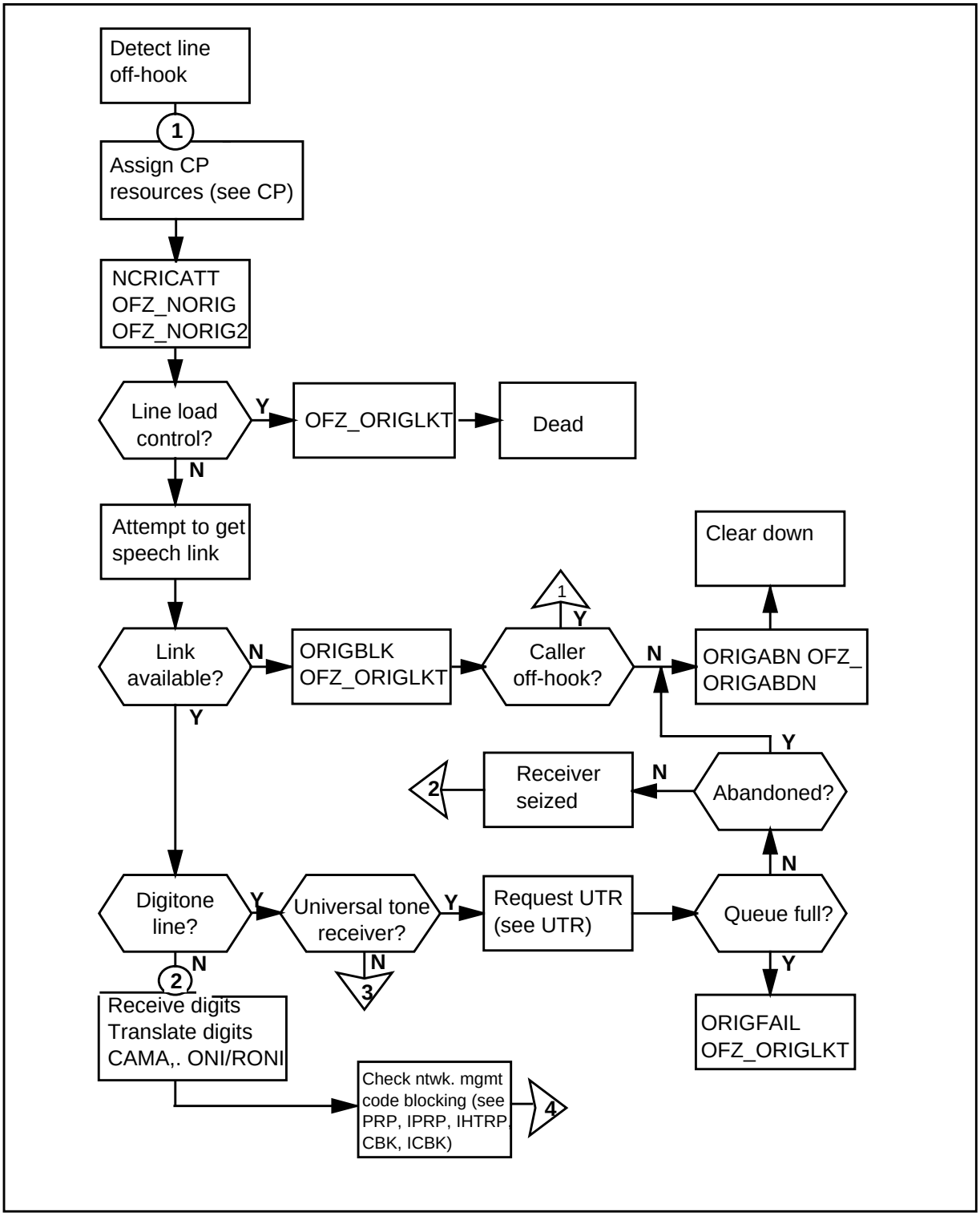
OM group LMD (continued)

OM group LMD registers (continued)



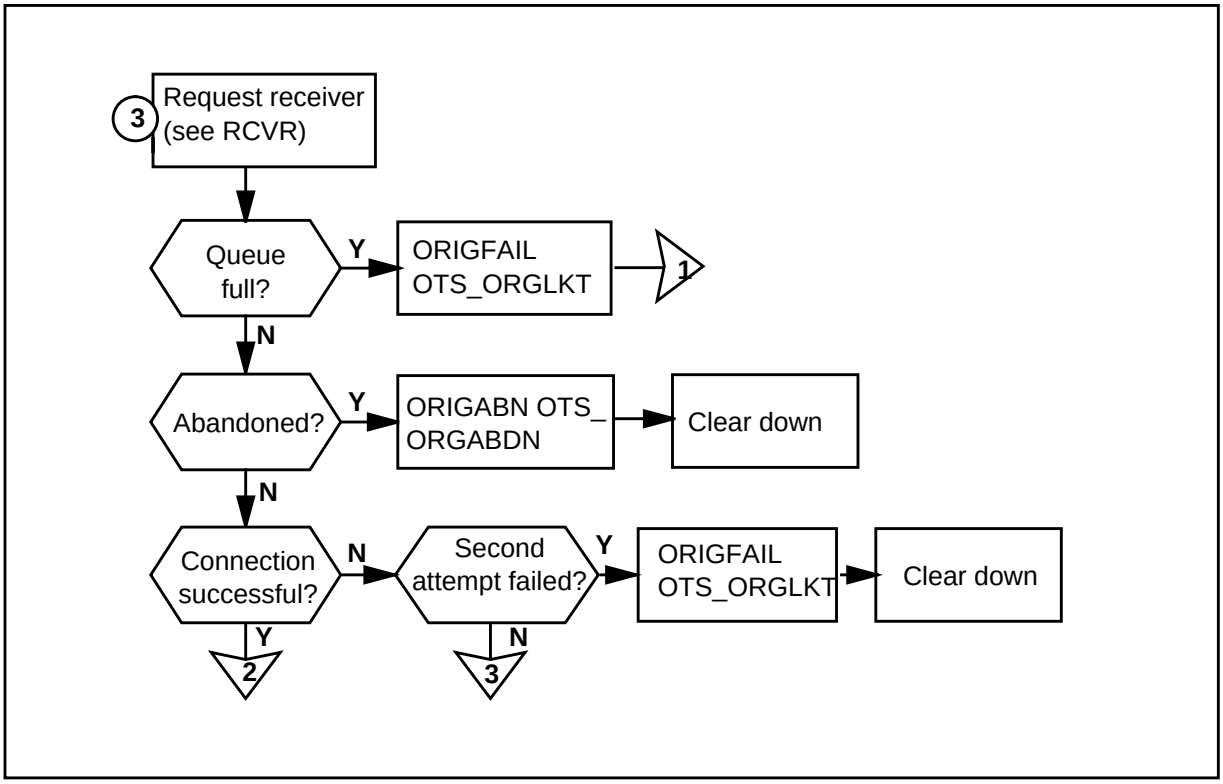
OM group LMD (continued)

OM group LMD registers (continued)

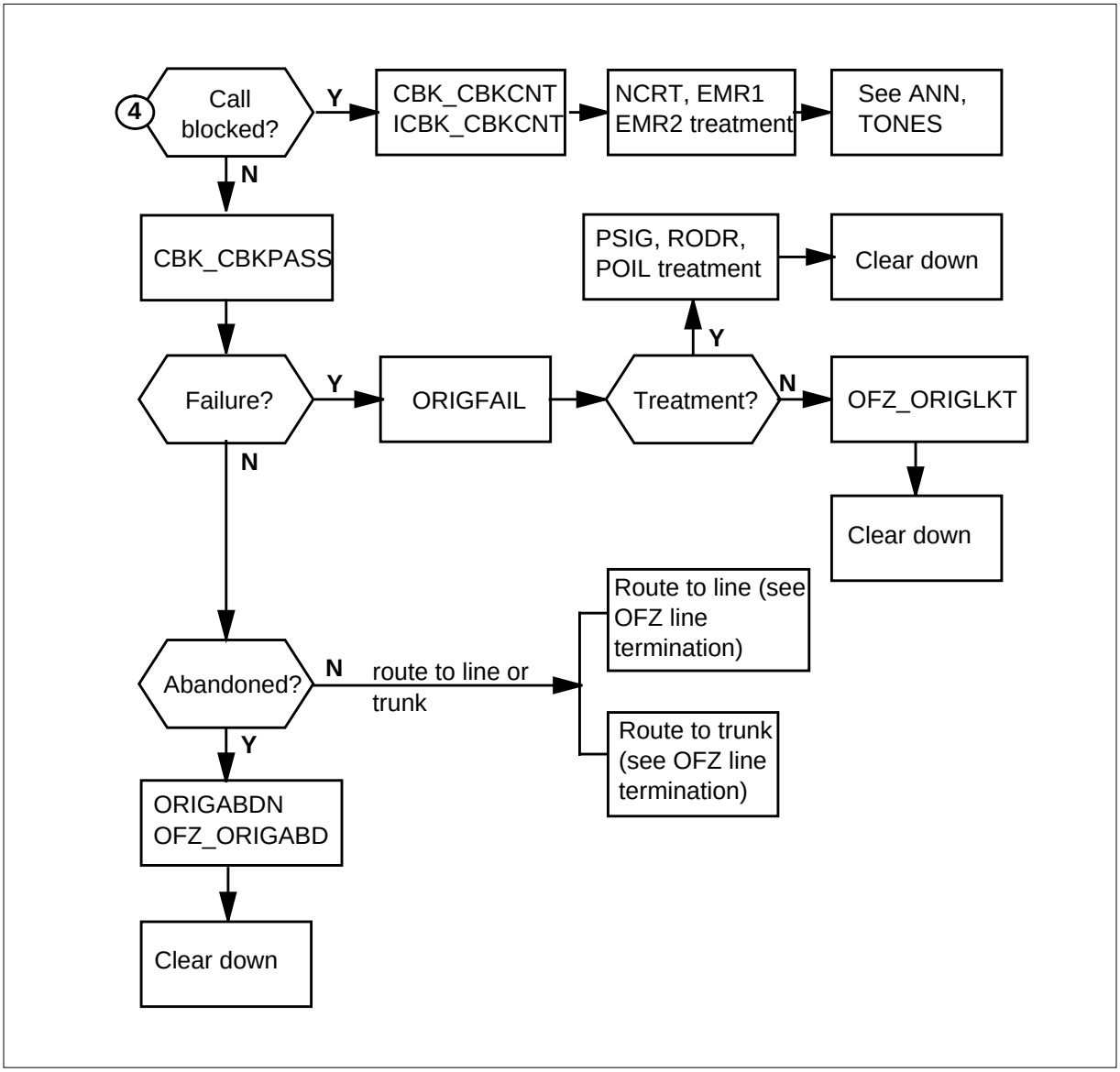


OM group LMD (continued)

OM group LMD registers (continued)



OM group LMD registers (continued)



Register LMTRU

Traffic busy use (LMTRU)

Register LMTRU is a use register. The scan rate is 100 s. Register LMTRU records the number of lines that are call processing busy or call processing busy deloading.

OM group LMD (continued)

Register LMTRU release history

Register LMTRU introduced before BCS20.

BCS33

When you set the office parameter OMINERLANGS to Y, you change the use count from CCS to deci-erlangs before the count appears. Use the OMSHOW command on the ACTIVE class to display the usage count. The value in the active registers remains in CCS.

BCS31

Register LMTRU records traffic busy use on the SL-100 for IPE.

BCS20

Software change provides use register LMTRU in CCS or deci-erlangs

Associated registers

There are no associated registers

Associated logs

There are no associated logs.

Register MADNTATT

Multiple Appearance Directory Number (MADN) secondary member terminating attempts (MADNTATT)

Register MADNTATT counts secondary units of MADN groups in the PM that notify the system of an incoming call.

Register MADNTATT is increases for each electronic business set (EBS) or ringing 500/2500 set that the system notifies. The primary termination increases in NTERMATT.

Register MADNTATT does not count recalls or re-rings of a group unit.

This register does not increase in GL04.

Register MADNTATT release history

Register MADNTATT introduced before BCS20.

GL04

Register does not increase

BCS31

MADNTATT increases on the SL-100 for IPE

BCS24

One tuple for each ELCM and LCMI that LMD provides

BCS23

One tuple for each VSR that LMD provides

BCS21

One tuple for each DLM that LMD provides

BCS20

One tuple for each ISLM that LMD provides

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NORIGATT

Register NORIGATT counts originate call attempts that the LM reports to the central control. Register NORIGATT includes attempts to originate a three-way call.

This register increases at the start of call processing. The register increases before the system performs checks for line load control or congestion on the speech link to the network module. If congestion is present and the originator remains off-hook, the switch automatically makes several attempts at origination. Registers NORIGATT and LMD_ORIGBLK increase for each origination attempt.

Register NORIGATT release history

Register NORIGATT introduced before BCS20.

BCS31

Register NORIGATT increases on the SL-100 for IPE

BCS24

One tuple for each ELCM and LCMI that LMD provides

BCS23

One tuple for each VSR that LMD provides

BCS21

One tuple for each DLM that LMD provides

OM group LMD (continued)

BCS20
One tuple for each ISLM that LMD provides

Associated registers

Registers OFZ_NORIG counts start call attempts that the central control recognizes.

The relationship between LMD_NORIGATT and OFZ_NORIG is:

Σ LMD_ORIGATT = (65536 * OFZ_NORIG2) + OFZ_NORIG line modules

Register OTS_NORG counts start call attempts that the central control recognizes.

The relationship between LMD_NORIGATT and OTS_NORG is:

Σ LMD_ORIGATT = (65536 * OTS_NORG2) + OTS_NORG line modules

Register ORIGBLK counts originating call attempts that fail. The call attempts fail because an idle speech path from the originating LM to the network module is not present.

Associated logs

There are no associated logs.

Register NTERMATT

Terminating attempts (NTERMATT)

Register NTERMATT counts attempts to find an available speech link from the network module to a terminating line. This attempt occurs after call processing determines that the terminating line is available.

The count in NTERMATT includes call-waited calls that ring through when the earlier conversation ends. The count also includes calls that the secondary unit of a MADN group answer.

Register NTERMATT release history

Register NTERMATT introduced before BCS20.

BCS31
Register NTERMATT increases on the SL-100 for IPE

BCS24
One tuple for each ELCM and LCMI that LMD provides

BCS23
One tuple for each VSR that LMD provides

BCS21
One tuple for each DLM that LMD provides

BCS20
One tuple for each ISLM that LMD provides

Associated registers

Register OFZ_TRMNWAT counts attempts to find a speech path to a terminating line.

The relationship between LMD_NTERMATT and OFZ_NTRMNWAT is:

Σ LMD_NTERMATT = (65536 * OFZ_TRMNWAT2) + OFZ_TRMNWAT line modules

Register SOTS_STRMNWT counts attempts to find a speech path to a terminating line.

The relationship between LMD_NTERMATT and SOTS_STRMNWT is:

Σ LMD_NTERMATT = (65536 * SOTS_STRMNWT2) + SOTS_STRMNWT line modules

Associated logs

There are no associated logs.

Register ORIGABN

Originating abandons before connection (ORIGABN)

Register ORIGABN counts originating call attempts that the subscriber abandons before call set up completes.

Large counts in ORIGABN indicate line problems or problems in PMs.

Register ORIGABN release history

Register ORIGABN was introduced before BCS20.

BCS31
Register ORIGABN increases on SL-100 for IPE

OM group LMD (continued)

BCS24
One tuple for each ELCM and LCMI that LMD provides

BCS23
One tuple for each VSR that LMD provides

BCS21
One tuple for each DLM that LMD provides

BCS20
One tuple for each ISLM that LMD provides

Associated registers

Register LMD_NORIGATT counts originating call attempts that the LM reports to the central control.

Register OFZ_ORIGABDN counts originating call attempts that the subscriber abandons before the system routes the call.

The relationship between LMD_ORIGABN and OFZ_ORIGABDN is:

Σ LMD_ORIGABN = OFZ_ORIGABDN line modules

Register OTS_ORGABDN counts originating call attempts that the subscriber abandons before the call routes.

The relationship between LMD_ORIGABN and OTS_ORGABDN is:

Σ LMD_ORIGABN = OTS_ORGABDN line modules

Associated logs

The system generates LINE106 when the system has problems during dial pulse reception on a line.

The system generates LINE108 when the system has problems during Digitone reception on a line.

Register ORIGBLK

Originating failures (ORIGBLK)

Register ORIGBLK counts originating call attempts that fail. The attempts fail because the idle speech path from the original LM to the network module is not present. The PM originates the call for as long as the caller stays off-hook.

If the count in ORIGBLK is high, a fault condition can be present. Any RLM links that are manual busy or system busy are examples of a fault condition. Lower counts indicate a need to supply more links or reduce load.

Register ORIGBLK release history

Register ORIGBLK introduced before BCS20.

BCS31
Register ORIGBLK increases on the SL-100 for IPE

BCS24
One tuple for each ELCM and LCMI that LMD provides

BCS23
One tuple for each VSR that LMD provides

BCS21
One tuple for each DLM that LMD provides

BCS20
One tuple for each ISLM that LMD provides

Associated registers

Register LMD_NORIGATT counts originating attempts that the LM reports to the central control.

Register OFZ_ORIGLKT counts originating call attempts that fail and route to lock-out. These calls do not connect or route to treatment.

The relationship between LMD_ORIGBLK and OFZ_ORIGLKT is:

Σ LMD_ORIGBLK = OFZ_ORIGLKT line modules

Register OTS_ORGLKT counts originating call attempts that fail and route to lockout. These calls do not connect or route to treatment.

The relationship between LMD_ORIGBLK and OTS_ORGLKT is:

Σ LMD_ORIGBLK = OTS_ORGLKT line modules

Associated logs

The system generates NET130 when the system does not find a network path.

OM group LMD (continued)

Register ORIGFAIL

Originating attempt failures (ORIGFAIL)

Register ORIGFAIL counts originating call attempts that fail for one of the following reasons:

- the system does not sent enough digits before a timeout occurs (partial dial)
- the system sends no digits before a timeout occurs (permanent signal)
- additional pulses or bad tones are sent
- the system generates two Digitone (DT) frequencies that have more than a 6 dB spread between both of the frequencies
- the system receives a message type that was not planned from a PM during automatic number identification tests on record-able calls. A test failure is an example of a message type that was not planned.

- *Note:* Register does not increase in GL04 for the following reasons:
- The system receives two Digitone (DT) frequencies that have more than a 6 dB spread between the frequencies.
- The system receives a message type that is not planned from a PM during automatic number identification tests on recordable calls.

Register ORIGFAIL release history

ORIGFAIL introduced before BCS20.

GL04

Reasons noted above to not increase the register

BCS31

Register ORIGFAIL increases on the SL-100 for IPE

BCS24

One tuple for each ELCM and LCMI that LMD provides

BCS23

One tuple for each VSR that LMD provides

BCS21

One tuple for each DLM that LMD provides

BCS20
One tuple for each ISLM that LMD provides

Associated registers

Register TRMTCM_TCMPSIG counts calls that the system routes to permanent signal timeout treatment. The system routes the call to treatment because the system does not receive digits before a timeout.

Register TRMTCM_TCMPDIL counts calls that the system routes to partial dial timeout treatment. The system routes the call to treatment because the system received a minimum of one digit, but not all of those required to complete the call.

Register TRMTER_TERRODR counts calls that the system routes to reorder treatment because the system receives distorted signals during dialing or impulsing.

Associated logs

The system generates AMAB151 when an identification failure occurs while the system makes a Station-Message Detail Recording (SMDR) record for a call.

The system generates LINE108 when the system has problems during DT reception on a line. If the problem interrupts a call in progress, the DMS switch routes the call to treatment and generates LINE138. Log LINE138 identifies the treatment for the line.

The system generates LINE109 when the system has problems during call processing. If the problem interrupts a call in progress, the DMS switch routes the call to treatment and generates LINE138. Log LINE138 identifies the treatment for the line.

The system generates LINE138 when a call routes to treatment after the call call processes busy.

The system generates LINE104 when the system has problems during call processing. If the problem interrupts a call in progress, the DMS switch routes the call to treatment and generates LINE138. Log LINE138 identifies the treatment for the line.

The system generates LINE105 when the system has problems during call processing. If the problem interrupts a call in progress, the DMS switch routes the call to treatment and generates LINE138. Log LINE138 identifies the treatment for the line.

OM group LMD (continued)

The system generates LINE106 when the system has problems during DP reception on a line. If the problem interrupts a call in progress, the DMS switch routes the call to treatment and generates LINE138. Log LINE138 identifies the treatment for the line.

Register PERCLFL

Terminating call attempt failures (PERCLFL)

Register PERCLFL counts calls that cannot terminate on a line because of problems in ringing the terminating line.

A ringing failure on an emergency service line does not cause the call to fail and does not increase PERCLFL. The system attempts ringing until the system is successful.

When you set the office parameter PER_CALL_GND_LOOP_TEST in table OFCVAR to Y, PERCLFL includes loop faults. The system detects loop faults in attempted terminations on ground start lines.

Register PERCLFL release history

Register PERCLFL introduced before BCS20.

BCS31

Register PERCLFL increases on the SL-100 for IPE

BCS24

One tuple for each ELCM and LCMI that LMD provides

BCS23

One tuple for each VSR that LMD provides

BCS21

One tuple for each DLM that LMD provides.

BCS20

One tuple for each ISLM that LMD provides.

Associated registers

Register TRMTER_TERSYFL counts calls that the system routes to system failure treatment. The system routes these calls to treatment because of a software or hardware failure in the switching unit.

Associated logs

The system generates LINE107 when the system requests a line insulation test.

The system generates LINE110 when the system detects an electromagnetic force on a line that is not normal. The system detects this force during a foreign potential test.

The system generates LINE113 if the system has problems when ringing applies to a line. If the problem interrupts a call in progress, the DMS switch routes the call to treatment and generates LINE138. Log LINE138 identifies the treatment for the line.

Register REVERT

Revertive call attempts (REVERT)

Register REVERT counts revertive calls initiated on an LM. This register increases when ringing starts after the caller goes on-hook for the first time.

This register does not increase in GL04.

Register REVERT release history

Register REVERT introduced before BCS20.

GL04

Register does not increase

BCS31

Register REVERT increases on the SL-100 for IPE

BCS24

One tuple for each ELCM and LCMI that LMD provides

BCS23

One tuple for each VSR that LMD provides

BCS21

One tuple for each DLM that LMD provides

BCS20

One tuple for each ISLM that LMD provides

Associated registers

There are no associated registers.

Associated logs

The system generates LINE138 when the system routes a call to treatment after the call is call processing busy.

OM group LMD (continued)

Register STKCOINS

Stuck coins (STKCOINS)

Register STKCOINS counts attempts to collect or return coins that fail because the coins are stuck.

STKCOINS increases when call processing stops an attempt to collect or return the coins. The call proceeds as if the attempt to collect or return the coin completed.

This register does not increase in GL04.

Register STKCOINS release history

Register STKCOINS introduced before BCS20.

GL04

Register does not increase

BCS31

Register STKCOINS increases on the SL-100 for IPE

BCS24

One tuple for each ELCM and LCMI that LMD provides

BCS23

One tuple for each VSR that LMD provides

BCS21

One tuple for each DLM that LMD provides

BCS20

One tuple for each ISLM that LMD provides

Associated registers

There are no associated registers.

Associated logs

The system generates LINE112 when the system fails to remove a stuck coin on a line connected to a coin box.

Register TERMBLK

Terminating failures (TERMBLK)

Register TERMBLK counts attempts to find a speech link from the network module to a terminating line that fail. The attempts fail for one of the following reasons:

- there are no speech links available from the network to a terminating line
- no match between an idle channel on the links to the network and an idle channel on the link shelf that serves the terminating line is present

Register TERMBLK release history

Register TERMBLK introduced before BCS20.

BCS31

Register TERMBLK increases on the SL-100 for IPE

BCS24

One tuple for each ELCM and LCMI that LMD provides

BCS23

One tuple for each VSR that LMD provides

BCS21

One tuple for each DLM that LMD provides

BCS20

One tuple for each ISLM that LMD provides

Associated registers

Register OFZ_TRMBLK counts attempts to find a voice path from the network module to a terminating line that fail. The attempts fail for one of the following reasons:

- all LM channels to the network are busy
- no match between an idle channel on the links to the network and an idle channel on the line shelf that serves the terminating line is present

The relationship between LMD_TERMBLK and OFZ_TRMBLK is:

Σ LMD_TERMBLK = OFZ_TRMBLK line modules

SOTS_STRMBLK counts attempts to find a voice path from the network to a terminating line that fail. These attempts fail for one of the following reasons:

- all LM channels to the network are busy
- no match is present between an idle channel on the links to the network and an idle channel on the line shelf that serves the terminating line

OM group LMD (end)

The relationship between LMD_TERMBLK and SOTS_STRMBLK is:

Σ LMD_TERMBLK = SOTS_STRMBLK line modules

Register SOTS_STRMRBLK counts calls that the system routes to network blockage normal (NBLN) traffic treatment. The system routes these calls to treatment because the calls fail to find a voice path from a network module to a terminating line.

Register SOTS_STRMMFL counts calls that fail to find a voice path to a terminating line. The attempts fail because a network connection is not available.

Register TRMTRS_TRSNBLN counts calls that route to NBLN traffic treatment when the call aborts. The system routes these calls to treatment because of a failure to get a channel in the terminating PM.

Register TRMTRS_TRSNBLH counts calls that route to the network blockage heavy (NBLH) traffic treatment when the call aborts. The system routes the call to treatment because of failure to get a path through the network.

Associated logs

The system generates NET130 when a network path is not present.

OM group LMSCPUST

OM description

Local message switch central processing unit status. (LMSCPUST)

The OM group LMSCPUST displays the central processing unit (CPU) occupancy data of a local message switch (LMS) unit.

The LMSCPUST contains seven registers that perform the following procedures:

- accumulate call processing class occupancy
- accumulate scheduler class CPU occupancy
- accumulate foreground class CPU occupancy
- accumulate maintenance class CPU occupancy
- accumulate CPU occupancy of the processes that run in the idle schedule class
- accumulate input and output interrupt CPU occupancy
- accumulate background class CPU occupancy

Release history

The OM group LMSCPUST introduced in CSP04.

Registers

The OM group LMSCPUST registers appear on the MAP terminal as follows:

```
LMSCP    LMSSCHED    LMSSYS    LMSMAINT    LMSBKG
LMSIDLE    LMSIO
```

Group structure

The OM group LMSCPUST provides two tuples for each LIM unit in table LIMINV.

Key field:
There is no key field.

Info field:
Duplex_ncmnode_info

STRUCT

OM group LMSCPUST (continued)

namePM_TYPE,%LIM

idunsignedint,%LIM number

unitunsignedint,%LIM unit number

ENDSTRUCT;

Associated OM groups

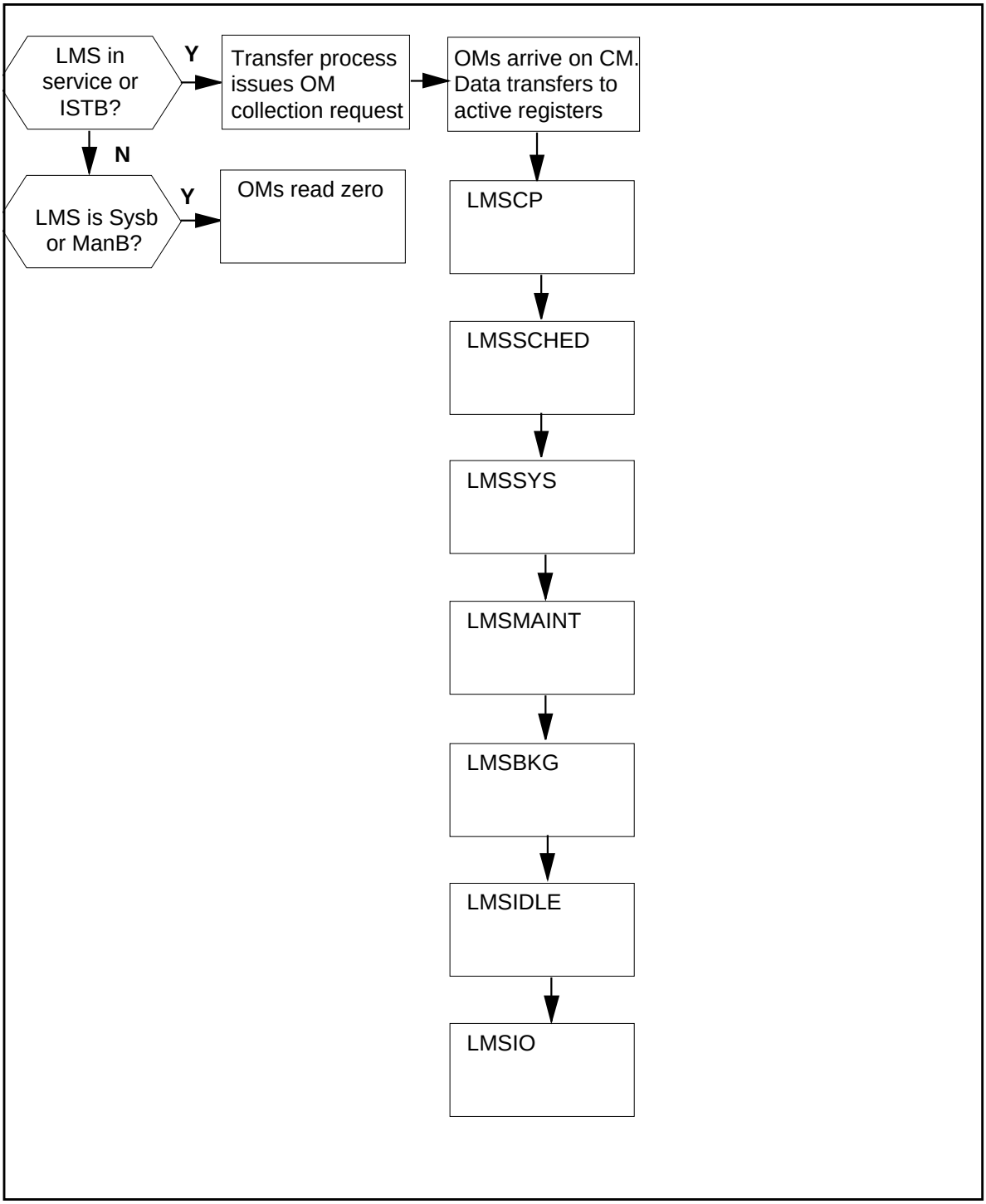
There are no associated OM groups.

Associated functional groups

The local message switch (LMS) associates with OM group LMSCPUST.

OM group LMSCPUST (continued)

OM group LMSCPUST registers



OM group LMSCPUST (continued)

Register LMSCP

Local message switch call processing class occupancy. (LMSCP)

Register LMSCP reports the percentage that CPU uses to maintain call processing. In the LMS, the messaging system is the main user of the call processing CPU class. The call processing CPU class provides real-time performance. The messaging system uses the call processing class time to maintain message routes and to program mapper card. The messaging system allows payload traffic to switch through the LPP. The system can use the LMS switch hardware to switch payload traffic through the LPP.

Register LMSCP release history

Register LMSCP introduced in CSP04.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LMSSCHED

Local message switch scheduler class occupancy. (LMSSCHED)

Register LMSSCHED accumulates the scheduler class central processing unit occupancy.

Register LMSSCHED release history

Register LMSSCHED introduced in CSP04.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LMSSYS

Local message switch system class occupancy. (LMSSYS)

Register LMSSYS accumulates foreground class CPU occupancy.

Register LMSSYS release history

Register LMSSYS introduced in CSP04.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LMSMAINT

Local message switch maintenance class occupancy. (LMSMAINT)

Register LMSMAINT accumulates maintenance class CPU occupancy.

Register LMSMAINT release history

Register LMSMAINT introduced in CSP04.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LMSBKG

Local message switch background class occupancy. (LMSBKG)

Register LMSBKG accumulates background class CPU occupancy.

Register LMSBKG release history

Register LMSBKG introduced in CSP04.

Associated registers

There are no associated registers.

OM group LMSCPUST (end)

Associated logs

There are no associated registers.

Extension registers

There are no extension registers.

Register LMSIDLE

Local message switch idle class occupancy. (LMSIDLE)

Register LMSIDLE accumulates CPU occupancy of the processes that run in the idle schedule class.

Register LMSIDLE release history

Register LMSIDLE introduced in CSP04.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LMSIO

Local message switch input and output interrupt occupancy. (LMSIO)

Register LMSIO accumulates input and output interrupt CPU occupancy.

Register LMSIO release history

Register LMSIO introduced in CSP04.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group LMSMEM

OM description

Local message switch memory

LMSMEM displays the memory usageover the OM transfer period.

LMSMEM contains six registers that:

- display the number of available program store (PS) vast areas. A vast area is 32K-1 words in size.
- displays the number of available data store (DS) vast areas.
- displays the amount of total DS memory.
- displays the amount of available DS memory.
- displays the amount of total PS memory.
- displays the amount of available PS memory.

Release history

OM group LMSMEM was introduced in CSP04.

Registers

The following OM group LMSMEM registers display on the MAP terminal as follows:

```
PSVTABL     DSVTABL     LMSDSTOT     LMSDSAVL     LMSPSTOT
LMSPSAVL
```

Group structure

OM group LMSMEM provides two tuples for each LIM unit in table LIMINV.

Key field:

None

Info field:

Duplex_ncmnode_info

```
STRUCT
    name        pm_type,        %LIM
    id          unsignedint,    %LIM  number
    unit        unsignedint,    %LIM unit number
ENDSTRUCT;
```

OM group LMSMEM (continued)

Associated OM groups

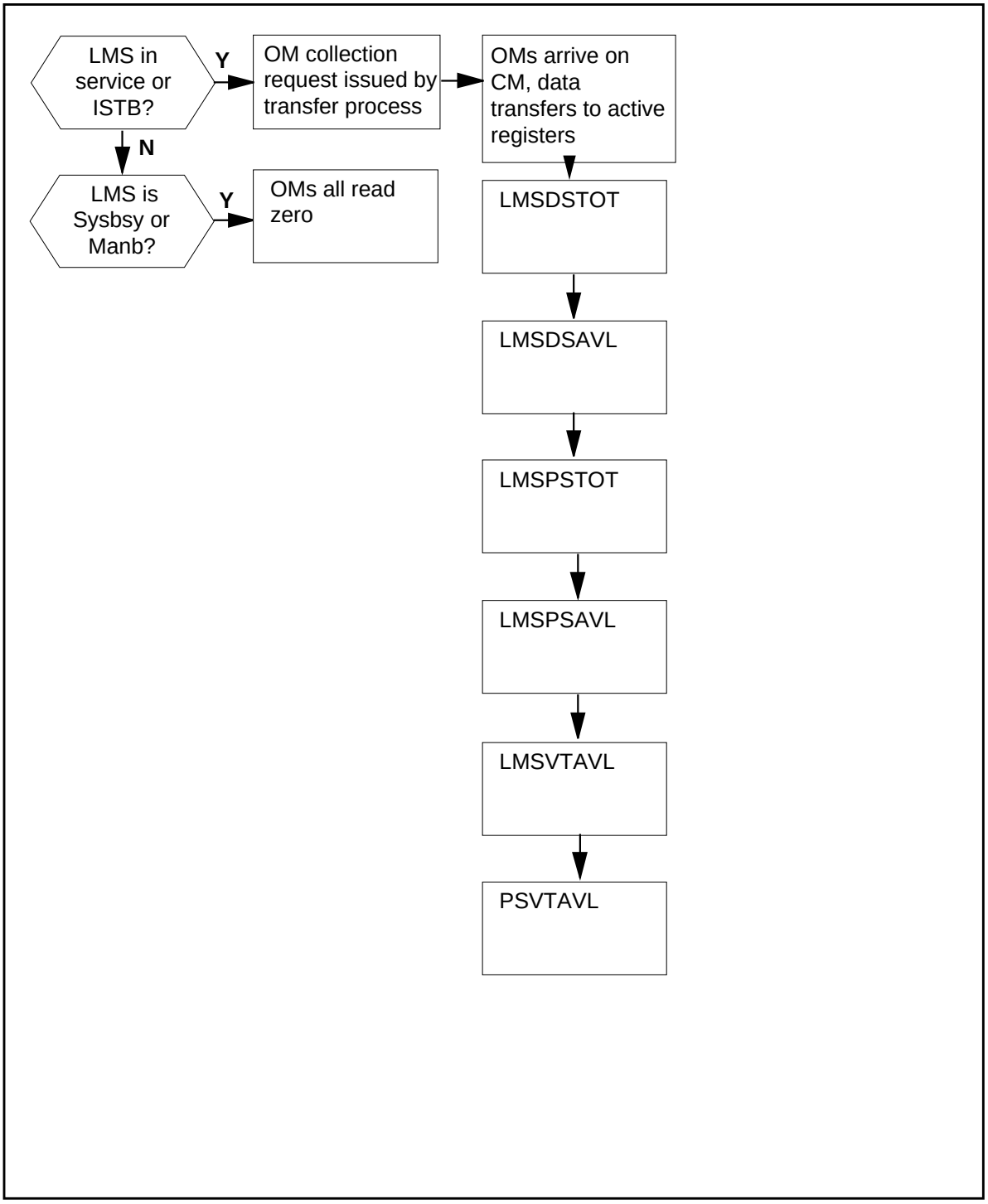
None

Associated functional groups

Local message switch

OM group LMSMEM (continued)

OM group LMSMEM registers



OM group LMSMEM (continued)

Register PSVTAVL

Program store vast areas available

PSVTAVL displays the number of available program store (PS) vast areas.

Register PSVTAVL release history

Register PSVTAVL was introduced in CSP04.

Associated registers

None

Associated logs

None

Extension registers

None

Register DSVTAVL

Data store vast areas available

DSVTAVL displays the number of available data store (DS) vast areas.

Register DSVTAVL release history

Register DSVTAVL was introduced in CSP04.

Associated registers

None

Associated logs

None

Extension registers

None

Register LMSDSTOT

Local message switch data store total

LMSDSTOT displays the amount of total DS memory.

Register LMSDSTOT release history

Register LMSDSTOT was introduced in CSP04.

Associated registers
None

Associated logs
None

Extension registers
None

Register LMSDSAVL
Local message switch program store available

LMSDSAVL displays the amount of available DS memory.

Register LMSDSAVL release history
Register LMSDSAVL was introduced in CSP04.

Associated registers
None

Associated logs
None

Extension registers
None

Register LMSPSTOT
Local message switch program store total

LMSPSTOT displays the amount of total PS memory.

Register LMSPSTOT release history
Register LMSPSTOT was introduced in CSP04.

Associated registers
None

Associated logs
None

Extension registers
None

OM group LMSMEM (end)

Register LMSPSAVL

Local message switch program store available

LMSPSAVL displays the amount of available PS memory.

Register LMSPSAVL release history

Register LMSPSAVL was introduced in CSP04.

Associated registers

None

Associated logs

None

Extension registers

None

OM group LNP

OM description

Local number portability (LNP).

The OM group LNP allows subscribers to change service providers. The OM group LNP also allows subscribers to retain a directory number (DN). To access a ported DN, the DMS switch sends a query to a database at a Service Control Point (SCP). If the dialled DN ports, the SCP returns a location routing number (LRN) that identifies the DN switch. If the dialled DN does not port, the SCP returns the dialled DN.

The OM group LNP counts the number of LNP

- queries launched
- queries escaped
- query failures
- response failures
- calls routed to numbers that are not allocated
- queries by the service command QLRN

Release history

The OM group LNP introduced in NA007.

NA008

The QLRN command adds four registers.

Registers

The OM group LNP registers appear on the MAP terminal as follows:

```
   LNPQRY     LNPQRY1      LNPQFT1     LNPRFERR
LNPQFRTE     LNPQESC     LNPQESC1     LNPQFACG
LNPQFSCP    LNPQFSSP     LNPRFCNT     LNPRFDSC
LNPRFSTR     LNPPORT     LNPPORT1       LNPREL
LNPUADNR    LNPUAHOM     LNPQLRNQ     LNPQLRNR
LNPQLRNV    LNPQLRNA
```

OM group LNP (continued)

Group structure

The OM group LNP provides one tuple per office.

Key field:
There is no key field.

Info field:
There is no info field.

Associated OM groups

There are no associated OM groups.

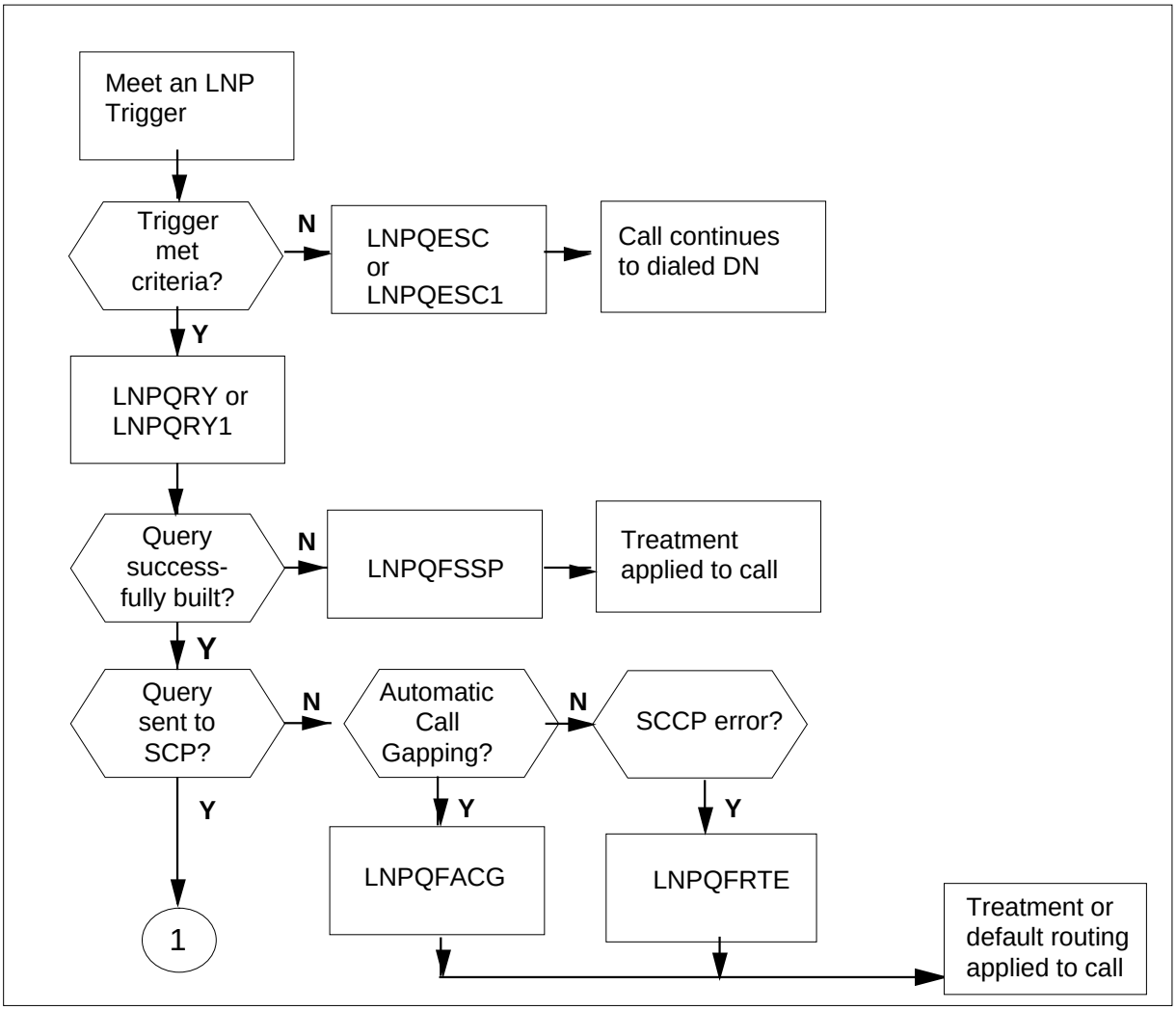
Associated functional groups

There are no associated operating groups OM group LNP.

Associated functionality codes

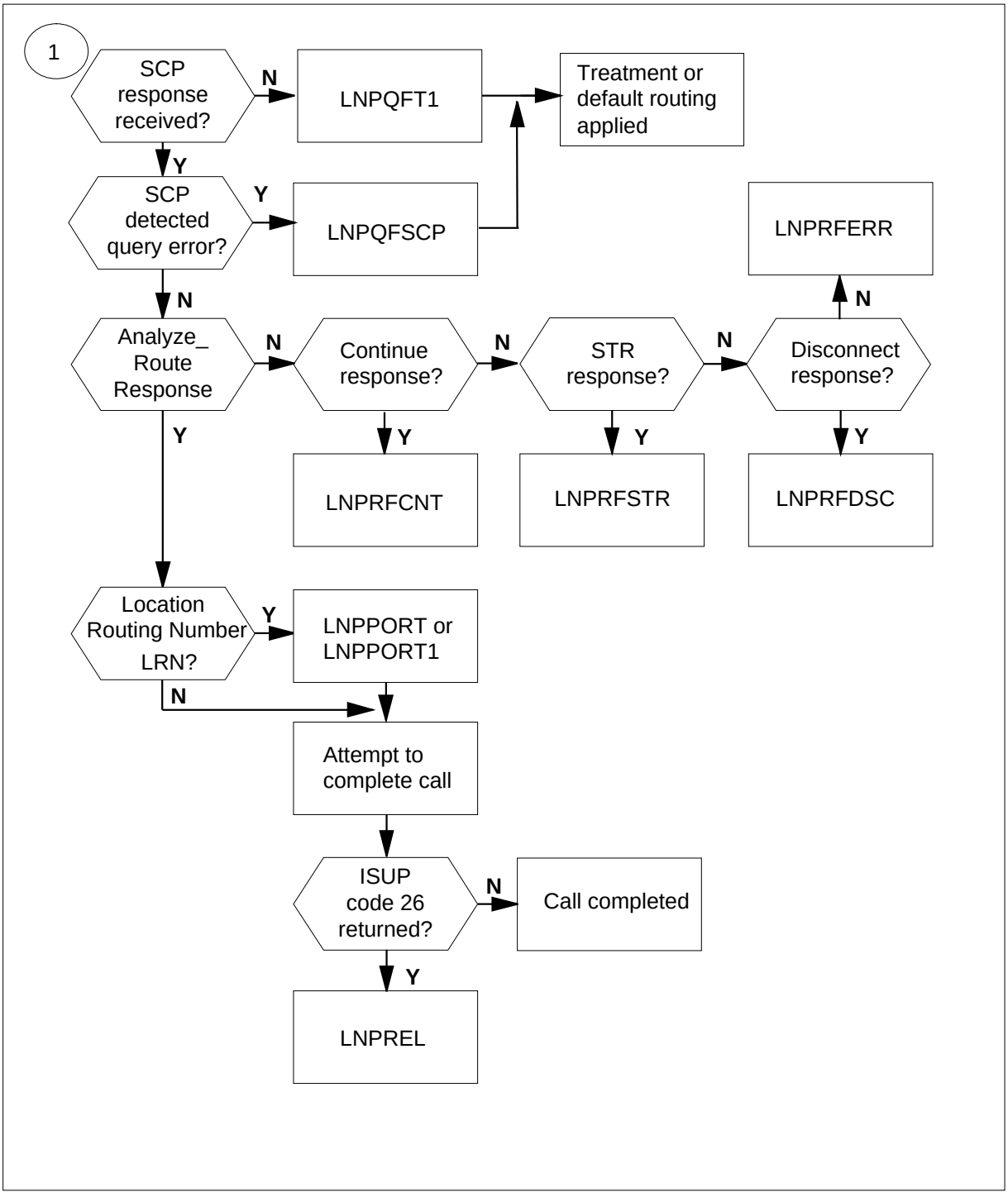
There are no associated functionality codes OM group LNP.

OM group LNP registers - Query and Response Processing

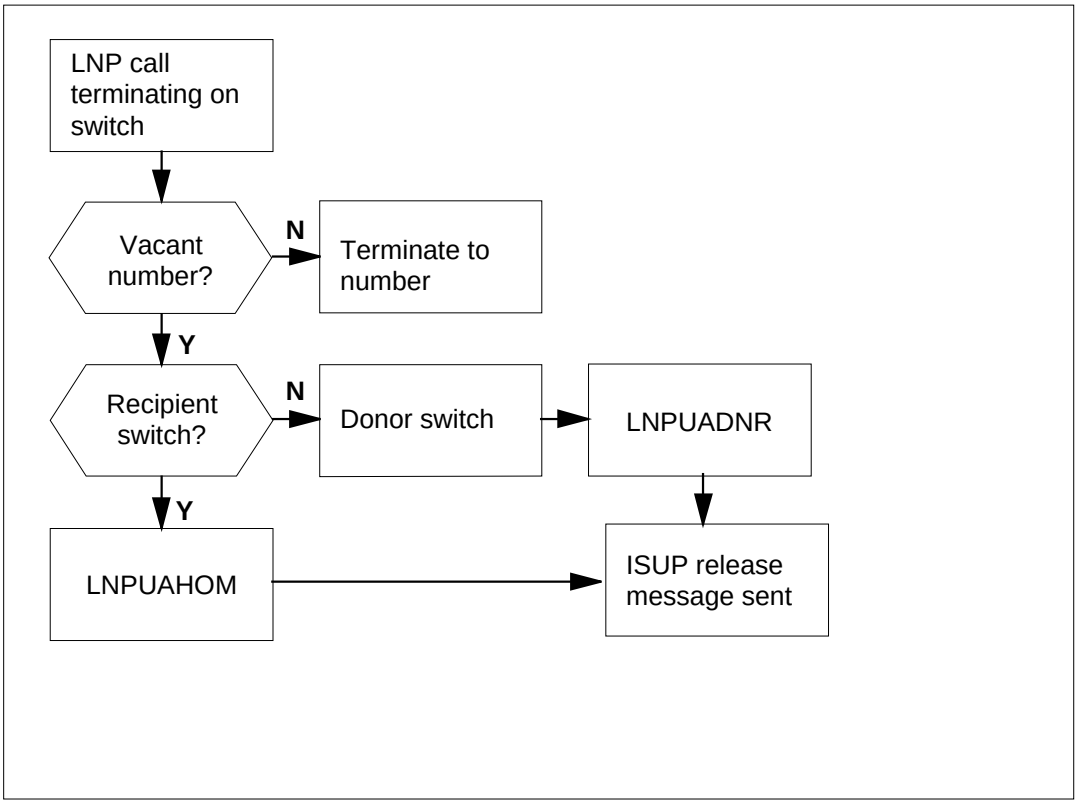


OM group LNP (continued)

OM group LNP registers - Query and Response Processing (continued)

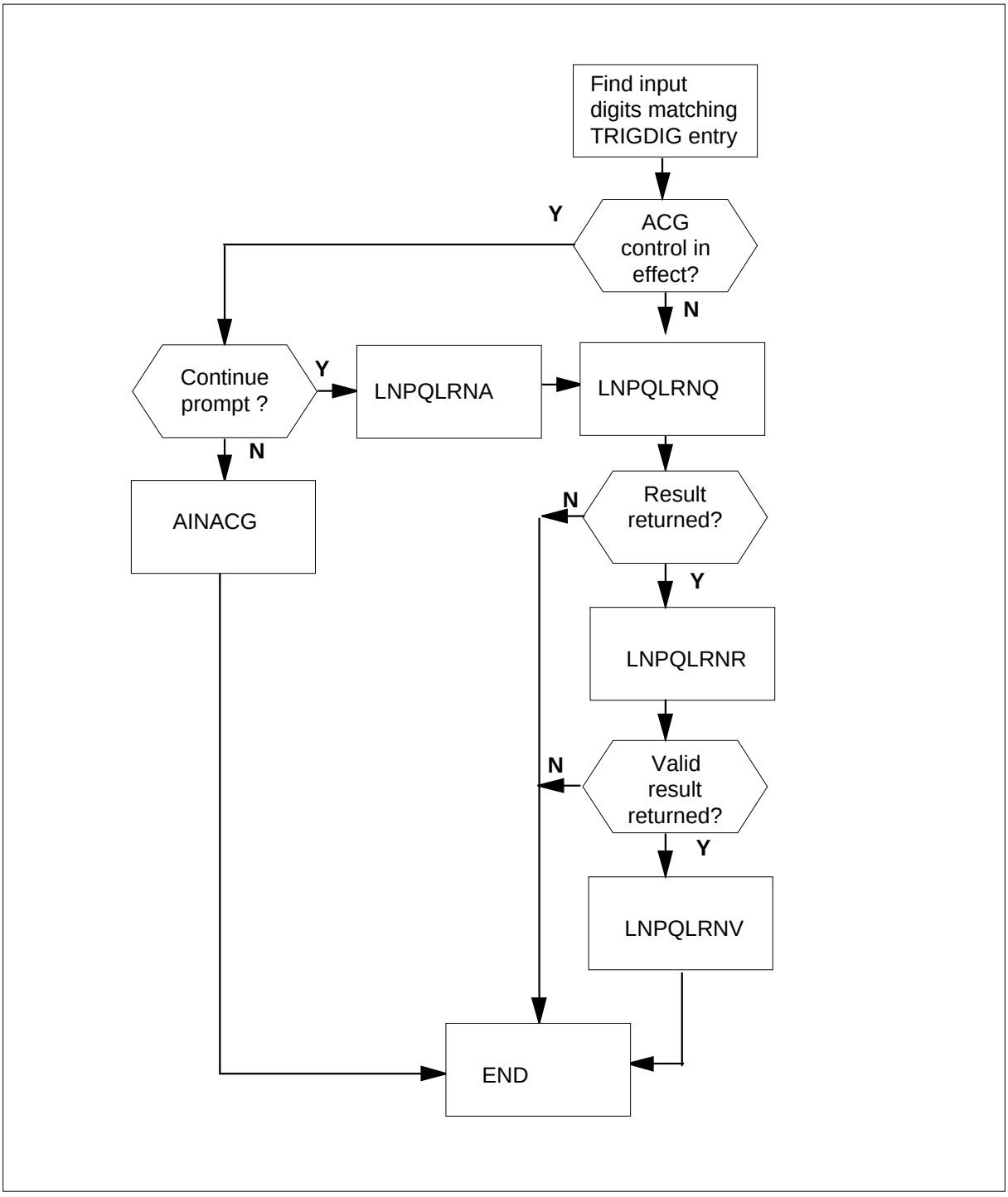


OM group LNP registers - Terminating Switch



OM group LNP (continued)

OM group LNP registers - QLRN query command



Register LNPQRY

Register LNP Query. (LNPQRY)

Register LNPQRY counts the calls that meet an LNP trigger and that result in an LNP SCP query.

Register LNPQRY release history

Register LNPQRY introduced in NA007.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

LNPQRY1

Register LNPQRY1

LNP Query extension (LNPQRY1)

This register counts overflows from the LNPQRY register.

Register LNPQRY1 release history

Register LNPQRY1 introduced in NA007.

Associated registers

LNPQRY

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LNPQFT1

LNP Query Failure - T1 timer expiration (LNPQFT1)

This register counts the number of calls that fail because of a T1 timer time-out. A T1 timer starts when the switch makes query to an LNP SCP. The switch queries the LNP SCP for a call that meets LNP trigger.

OM group LNP (continued)

Register LNPQFT1 release history

Register LNPQFT1 introduced in NA007.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LNPRFERR

LNP Response Failure (LNPRFERR)

Register LNPRFERR counts the number of calls that result in a failed LNP SCP query. The query fails because the response generates a fatal protocol error or because of an application error.

Register LNPRFERR release history

Register LNPRFERR introduced in NA007.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LNPQFRTE

LNP Query Failure - SS7 error (LNPQFRTE)

Register LNPQFRTE counts the number of SCP queries that the system cannot launch. The system cannot launch SCP queries because of problems with Signaling System 7 (SS7).

Register LNPQFRTE release history

Register LNPQFRTE introduced in NA007.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LNPQFACG

LNP Query blocked by Automatic Call Gapping (ACG) (LNPQFACG)

Register LNPQFACG counts the number of queries the ACG blocks.

Register LNPQFACG release history

Register LNPQFACG introduced in NA007.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LNPQFSCP

LNP Fatal protocol/application error in the query message (LNPQFSCP)

Register LNPQFSCP counts the number of calls that meet an LNP trigger that result in a failed LNP SCP query. The query fails because the SCP query message reports a fatal protocol error or application error.

Register LNPQFSCP release history

Register LNPQFSCP introduced in NA007.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group LNP (continued)

Register LNPQFSSP

LNP Query cannot be built (LNPQFSSP)

Register LNPQFSSP counts the number of queries the system cannot build.

Register LNPQFSSP release history

Register LNPQFSSP introduced in NA007.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LNPRFCNT

LNP Continue response received (LNPRFCNT)

Register LNPRFCNT counts the number of continue responses the system receives from the SCP.

Register LNPRFCNT release history

Register LNPRFCNT introduced in NA007 .

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LNPRFDSC

LNP disconnect response received (LNPRFDSC)

Register LNPRFDSC counts the number of disconnect responses that the system received.

Register LNPRFDSC release history

Register LNPRFDSC introduced in NA007.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LNPRFSTR

LNP Send_To_Resource received (LNPRFSTR)

Register LNPRFSTR counts the number of send to resource responses that the system received.

Register LNPRFSTR release history

Register LNPRFSTR introduced in NA007.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LNPQESC

LNP Query escaped (LNPQESC)

Register (LNPQESC) counts the number of calls that encounter an LNP trigger that does not launch a query to the LNP SCP.

Register LNPQESC release history

Register LNPQESC introduced in NA007.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group LNP (continued)

Extension registers

LNPQESC1

Register LNPQESC1

LNP Query escaped extension (LNPQESC1)

Register LNPQESC1 counts the overflow from register LNPQESC.

Register LNPQESC1 release history

Register LNPQESC1 introduced in NA007.

Associated registers

LNPQESC

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LNPPORT

LNP Ported number (LNPPORT)

Register (LNPPORT) counts the number of SCP responses to LNP SCP queries that contain a Location Routing Number (LRN).

Register LNPPORT release history

Register LNPP introduced in NA007.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

LNPPORT1

Register LNPPORT1

LNP Ported number extension (LNPPORT1)

Register LNPPORT1 counts the overflow from register LNPPORT.

Register LNPPORT1 release history

Register LNPPORT1 introduced in NA007.

Associated registers

LNPPORT

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LNPREL

LNP ISUP Release - cause 26 (LNPREL)

Register LNPREL counts the number of LNP calls that cause a ISUP REL message with an ISUP cause value of 26.

Register LNPREL release history

Register LNPREL introduced in NA007.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LNPUADNR

LNP unallocated number on donor (LNPUADNR)

Register LNPUADNR counts the number of LNP calls that meet an indication in the donor switch that is not allocated. This register also counts the number of LPN calls that meet an empty number indication in the donor switch. This indication follows an LNP query in this switch or another switch.

Register LNPUADNR release history

Register LNPUADNR introduced in NA007.

Associated registers

There are no associated registers.

OM group LNP (continued)

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LNPUAHOM

Register LNP unallocated number on recipient (LNPUAHOM)

Register (LNPUAHOM) counts the number of LNP calls that encounter an indication in the recipient switch that is not allocated. This register also counts the number of LPN calls that encounter an empty number indication in the recipient switch. This indication follows an LNP query in this switch or another switch.

Register LNPUAHOM release history

Register LNPUAHOM introduced in NA007.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LNPQLRNQ

Query LRN tool - count of queries.

Register LNPQLRNQ counts the number of queries the query-LRN command QLRN sent.

Register LNPQLRNQ release history

Register LNPQLRNQ introduced in NA008.

Associated registers

TCMSGOUT, TCINVKL of group TCAPUSAG for TCAP messages.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LNPQLRNR

Query LRN tool - count of responses (LNPQLRNR)

Register LNPQLRNR counts the number of responses for the query-LRN command QLRN.

Register LNPQLRNR release history

Register LNPQLRNR introduced in NA008.

Associated registers

TCMSGIN, TCQWPERM, TCRESPNS of group TCAPUSAG.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LNPQLRNV

Query LRN tool - correct count (LNPQLRV)

Register LNPQLRNV counts the correct responses the query-LRN command QLRN receives.

Register LNPQLRNV release history

Register LNPQLRNV introduced in NA008.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register LNPQLRNA

Query LRN tool - ACG count (LNQLRNA)

OM group LNP (end)

Register LNPQLRNA counts the number of times a user of the query-LRN command QLRN selected to override ACG controls.

Register LNPQLRNA release history

Register LNPQLRNA introduced in NA008.

Associated registers

BLKCASCP, BLKCASMS, SCPOVLDO, SMSOVLDO of group AINACG, which maintain different information about ACG queries.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group LNREDIAL

OM description

Last Number Redial (LNR)

The OM group LNR is an Meridian Digital Centrex (MDC) feature that permits the last number the subscriber dialed to dial again. The subscriber enters a keystroke sequence or access code to dial the number again. When the subscriber dials a number, the system stores the number as the LNR number.

The OM group LNREDIAL provides information on LNR feature activity. Register LNRCATT counts attempts to use LNR. Register LNRCFAIL increases if the system cannot retrieve the last number dialed. Register LNRPOVFL increases when the system cannot store the last number dialed because there are not enough software resources. The system does not count attempts to store the last number the subscriber dials.

Release history

The OM group LNREDIAL introduced before BCS20.

APC005

New functionality supports MDC features on Global Peripheral Platform (GPP) lines for the following:

- Australian telephone user part (ATUP)
- ANSI ISDN user part (ANSI ISUP)
- Australian ISUP (AISUP) trunk signalling

Registers

The OM group LNREDIAL registers appear on the MAP terminal as follows:

```
LNRPOVFL        LNRCATT         LNRCFAIL
```

Group structure

The OM group LNREDIAL provides one tuple for each customer group. Each tuple contains the three registers in LNREDIAL.

Key field:
IBNG_INDEX. The tuple number of LNREDIAL serves as the key in the OMSHOW command. The maximum number of key fields is 4096

Info field:
OMIBNGINFO is the name of the customer group the field

OM group LNREDIAL (continued)

CUSTNAME in table CUSTENG defines

Office parameter FTRQ2WAREAS specifies the number of FTRQ2WAREAS software resources an engineering interval requires. Each directory number (DN) assigned the LNR feature requires one FTRQQ2WAREAS block. A DN requires one FTRQQ2WAREAS block to store the last call dialed that involves a 1- to 7-digit number.

Office parameter FTRQ4WAREAS specifies the number of FTRQ4WAREAS software resources that an engineering interval requires. The following require one FTRQ4WAREAS block:

- a DN appearance with the LNR feature in which the last call involves an 8- to 15-digit number
- a DN appearance with the LNR feature in which the last call involves a 1- to 7-digit number. This call occurs when an FTRQ2WAREA block is not available

Office parameter FTRQ8WAREAS specifies the number of FTRQ8WAREAS software resources that an engineering interval requires. The following require one FTRQ8WAREAS block:

- a DN appearance with the LNR feature in which the last call involves a number of more than fifteen digits
- a DN appearance with the LNR feature in which the last call involved an 8- to 15-digit number. This call occurs when no FTRQ4WAREAS block is available
- a DN appearance with the LNR feature in which the last call involves a 1- to 7-digit number. This call occurs when no FTRQ2WAREA block is available

Office parameter FTRQAGENTS specifies the number of agents that can have different features, which include LNR. The LNR can be waiting or active at any time.

Office parameter FTRQSIZE specifies the size of the head table for office parameter FTRQAGENTS.

Table CUSTENG lists the values for the engineering parameters and options for each of the customer groups.

Associated OM groups

The OM group FTRQ contains peg and usage registers that provide information about extension blocks. The FTRQ2WAREAS,

FTRQ4WAREAS, and FTRQ8WAREAS blocks are auxiliary software resources that provide additional storage for data that is associated with the LNR feature.

The TRMT counts the use of different call treatments. When the system routes a call through a treatment, the associated register increases.

Associated functional groups

The associated functional groups for OM group LNREDIAL are:

- Meridian Digital Centrex
- Meridian SL-100

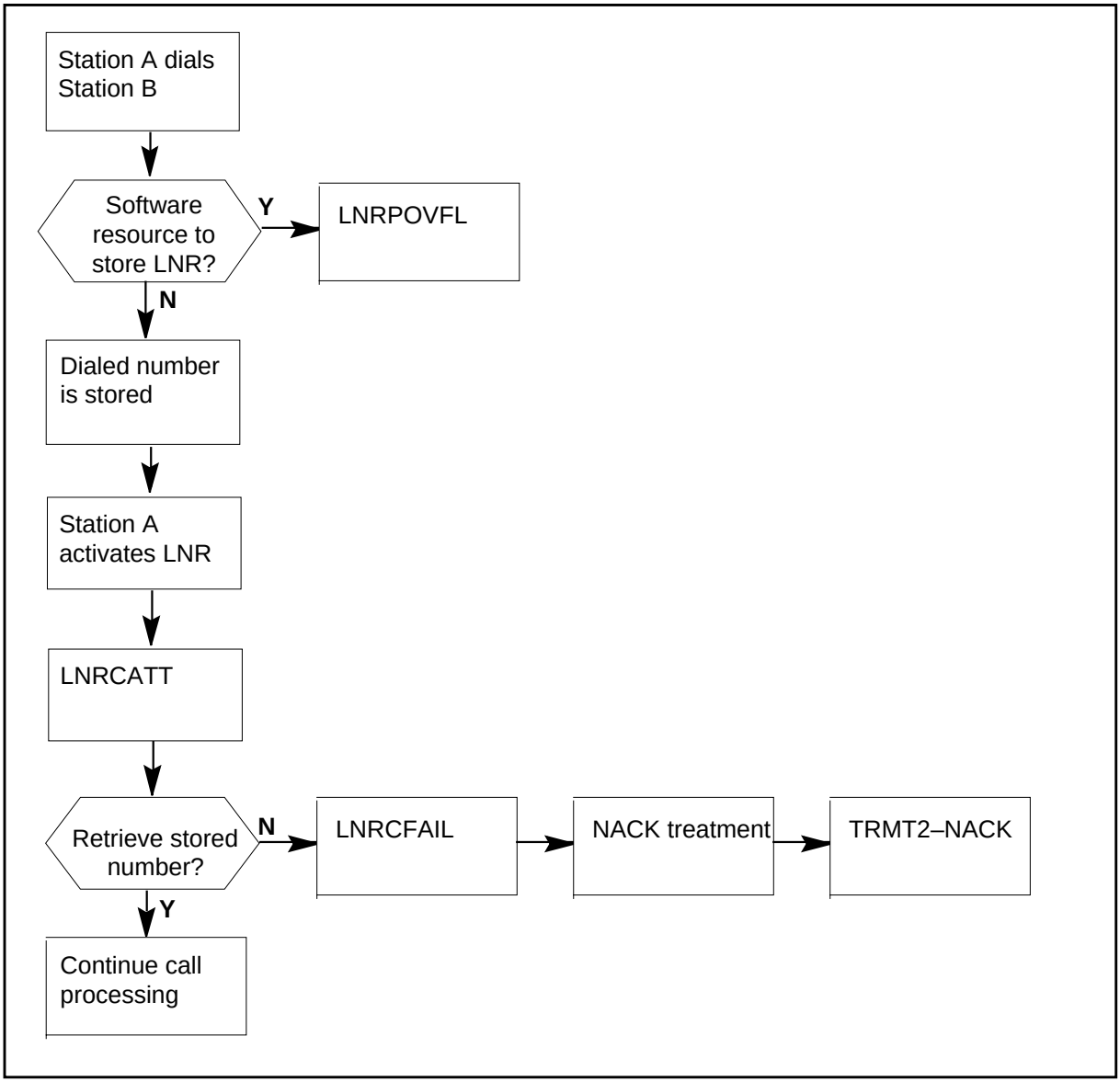
Associated functionality codes

The associated functionality codes for OM group LNREDIAL appear in the following table.

Functionality	Code
Integrated Business Network - Basic (IBN)	NTX100

OM group LNREDIAL (continued)

OM group LNREDIAL registers



Register LNRCATT

LNR attempts (LNRCATT)

Register LNRCATT counts attempts to use the LNR feature.

Register LNRCATT release history

Register LNRCATT introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

The system generates AMAB105 when an AMA call entry occurs and office parameter SPECIAL_AMA_REPORT is set to ON in table OFCPARMS. (Request this report during low traffic periods to avoid excess output reports.)

Extension registers

There are no extension registers.

Register LNRCFAIL

LNR call failures (LNRCFAIL)

Register LNRCFAIL counts attempts to use the LNR feature that fail because the system cannot retrieve the last number stored. Negative acknowledgement treatment receives the call.

Register LNRCFAIL release history

Register LNRCFAIL introduced before BCS20.

Associated registers

The TRMT3_NACK increases when acknowledgement (NACK) treatment receives a call.

Associated logs

The system generates AUD395 when a call process stops without warning. The AUD395 is a data dump for a Call Condense Block (CCB). The CCB stores data about a basic call. The CCB is associated with a SWER100 report with the same CALLID. The CCB is also associated with a CC103 trap report.

The system generates AUD398 when a call process stops without warning. The AUD398 is a data dump for a Call Data Block (CDB). The CDB stores data about a call setup and connection. The CDB is associated with a SWER100 report with the same CALLID. The CDB is associated with a CC103 trap report.

Extension registers

There are no extension registers.

Register LNRPOVFL

LNR overflow (LNRPOVFL)

OM group LNREDIAL (end)

Register LNRPOVFL increases when the system does not store the last number dialed because not enough software resources are present. The FTRQ2WAREAS, FTRQ4WAREAS, and FTRQ8WAREAS office parameters allocate these resources.

Register LNRPOVFL release history

Register LNRPOVFL introduced before BCS20.

Associated registers

Register FTRQ_FTRQOVFL counts requests for a feature queue block that fail because no feature queue blocks are available.

Associated logs

The system generates SWER when a software condition that affects normal operation of the DMS or the DMS peripherals occurs. The system also generates SWER when the LOGUTIL MAP level makes a manual request for a log trace. A text response of CANNOT GET AN FTRQ BLOCK indicates that no FTRQ block large enough is available.

Extension registers

There are no extension registers.

OM group LOGS

OM description

Log messages (LOGS)

The OM group LOGS counts:

- lost log reports
- software error reports from the central control complex (CCC)
- software error reports from peripheral modules (PM)
- trap reports from PMs

Release history

The OM group LOGS introduced in BCS2.

BCS22

PMSWERCT and PMTRAPCT added to BCS22.

BCS21

SWERRCT added to BCS21.

Registers

The OM group LOGS registers display on the MAP terminal as follows:

```
LOSTREC     SWERRCT     PMSWERCT        PMTRAPCT
```

Group structure

The OM group LOGS

Key field:
There is no key field

Info field:
There is no info field

Office parameter LOG_CENTRAL_BUFFER_SIZE in table OFCVAR defines the length of the central log buffer.

Associated OM groups

The OM group SYSPERF provides information on the performance of the switch.

OM group LOGS (continued)

The OM group CP2 provides information on the use of extended call control blocks.

Associated functional groups

The following are associated functional groups for the OM group LOGS:

- DMS-100 Local
- DMS-100/200 Local/Toll
- DMS-100/200 TOPS
- DMS-200 Toll
- DMS-200 TOPS
- DMS-100 Meridian
- DMS-MTX
- DMS-250 Toll/Tandem
- DMS-300
- Meridian SL-100 PBX

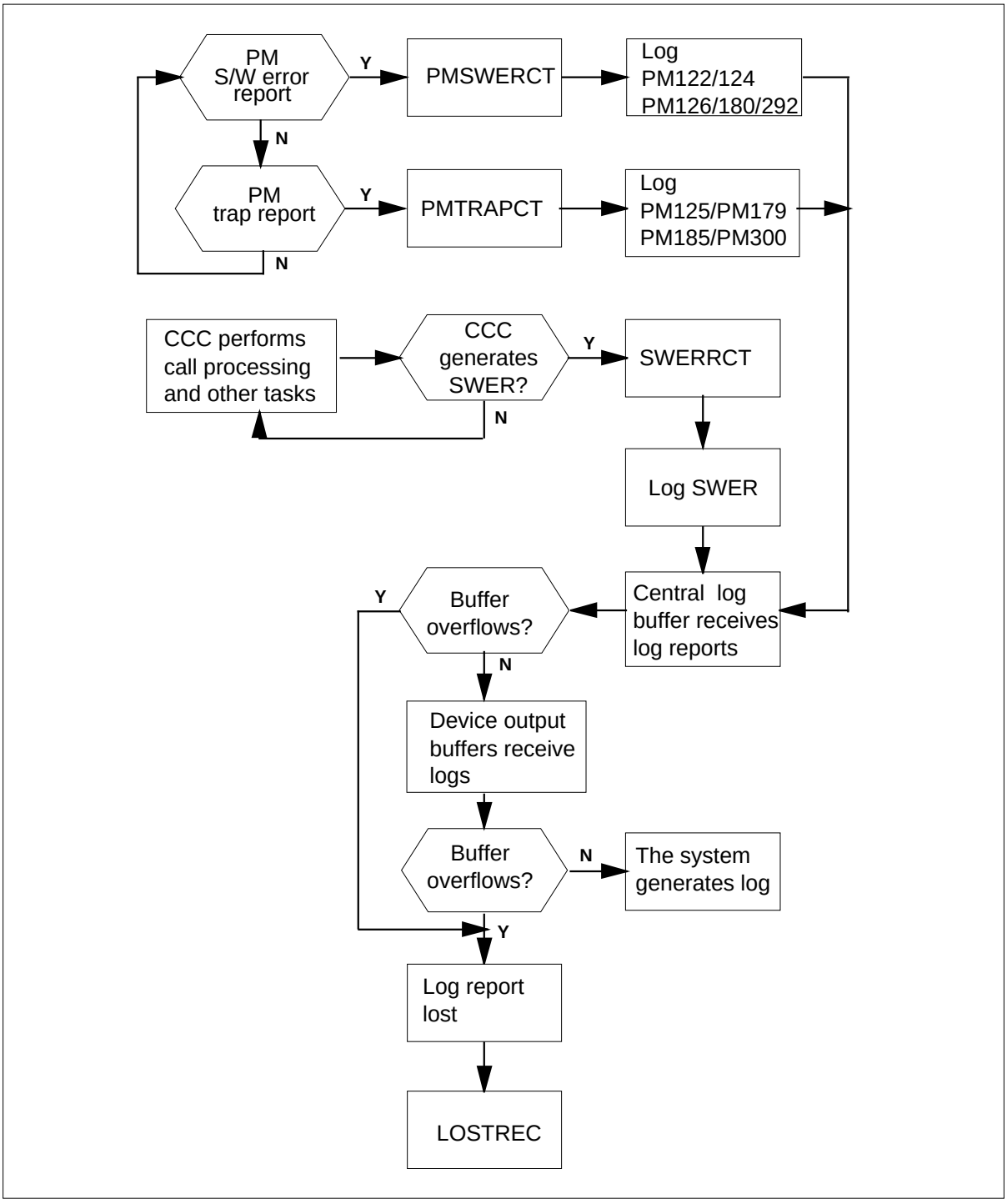
Associated functionality codes

The associated functionality codes for the OM group LOGS appear in the following table.

Functionality	Code
Common Basic	NTX001AA
Switch Performance Monitoring System	NTX738AA

OM group LOGS (continued)

The OM group LOGS



OM group LOGS (continued)

Register LOSTREC

Register lost records (LOSTREC)

Register LOSTREC counts log reports lost because the central log buffer or the output device buffers overflows.

Register LOSTREC release history

Register LOSTREC introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register PMSWERCT

Peripheral module software error (PMSWERCT)

Register PMSWERCT counts software error reports that peripheral modules (PM) generate and hardware errors that affect software execution.

The value in PMSWERCT can be larger than the number of log reports because of log suppression or buffer overflows.

Register PMSWERCT release history

Register PMSWERCT introduced in BCS22.

Associated registers

Register PM_PMERR counts errors detected in an in-service PM. Register PM_PMERR counts errors even if the errors result in additional maintenance action.

Associated logs

The system generates PM122 after an exception report is received from a PM.

The system generates PM124 and PM126 when the peripheral processor of a PM detects a condition that is not normal. This condition is not hardware related or is not yet linked to a hardware fault.

The system generates PM180 because software executed improperly or because a hardware problem affects software execution.

The system generates PM290 for DSPM and ICRM SWERRs.

Register PMTRAPCT

Peripheral module trap (PMTRAPCT)

Register PMTRAPCT counts trap reports that peripheral modules (PM) generate.

The value in PMTRAPCT can be larger than the number of log reports because of log suppression or buffer overflows.

Collect and bring trap log reports and all associated logs to the attention of the technical support group.

Register PMSWERCT release history

Register PMTRAPCT introduced in BCS22.

Associated registers

Register PM_PMERR counts errors that an in-service PM detects. Register PM_PMERR counts errors even if the errors result in additional maintenance action.

Associated logs

The system generates PM125 when a firmware or hardware error is detected in the peripheral processor of the PM.

The system generates PM179 when a software condition occurs that affects the normal operation of a PM.

The system generates PM180 and PM300 when an error condition causes a trap interrupt that the firmware, hardware or software detects.

Register SWERRCT

Software error count (SWERRCT)

Register SWERRCT counts software error reports that the central control complex (CCC) generates.

Software error reports are output as SWER log reports. The value in SWERRCT can be larger than the number of SWER log reports because of log suppression or buffer overflows.

OM group LOGS (end)

The following cause software error reports:

- software errors
- data corruption
- data errors made by the user

Collect and bring SWER log reports and all associated logs to the attention of the technical support group.

Register SWERRCT release history

Register SWERRCT introduced in BCS21.

Associated registers

There are no associated registers.

Associated logs

The system generates SWER if a software problem occurs. The system also generates SWER if the LOGUTIL MAP level makes a manual request for a log trace.

OM group M20CARR1

OM description

M20 carrier 1 (M20CARR1)

The OM group M20CARR1 provides information about alarms and state changes that occur on M20 carriers. These 30-channel carriers with 32 time slots support communication at a rate of 2048 kbits/s between the DMS system and the Japanese network.

Release history

The OM group M20CARR1 introduced in BCS29.

Registers

The OM group M20CARR1 registers display on the MAP terminal as follows:

```
FAERR       ALERR       AISSERR     SLIPPERR
FAFLT       ALFLT       AISSFLT     SLIPPFLT
CARSYSB     CARCBSY     CARMANB
```

Group structure

The OM group M20CARR1 provides one tuple for each office.

Key field:
There is no Key field

Info field:
M20OMINF

Associated OM groups

The OM group M20CARR2

Associated functional groups

There are no associated functional groups.

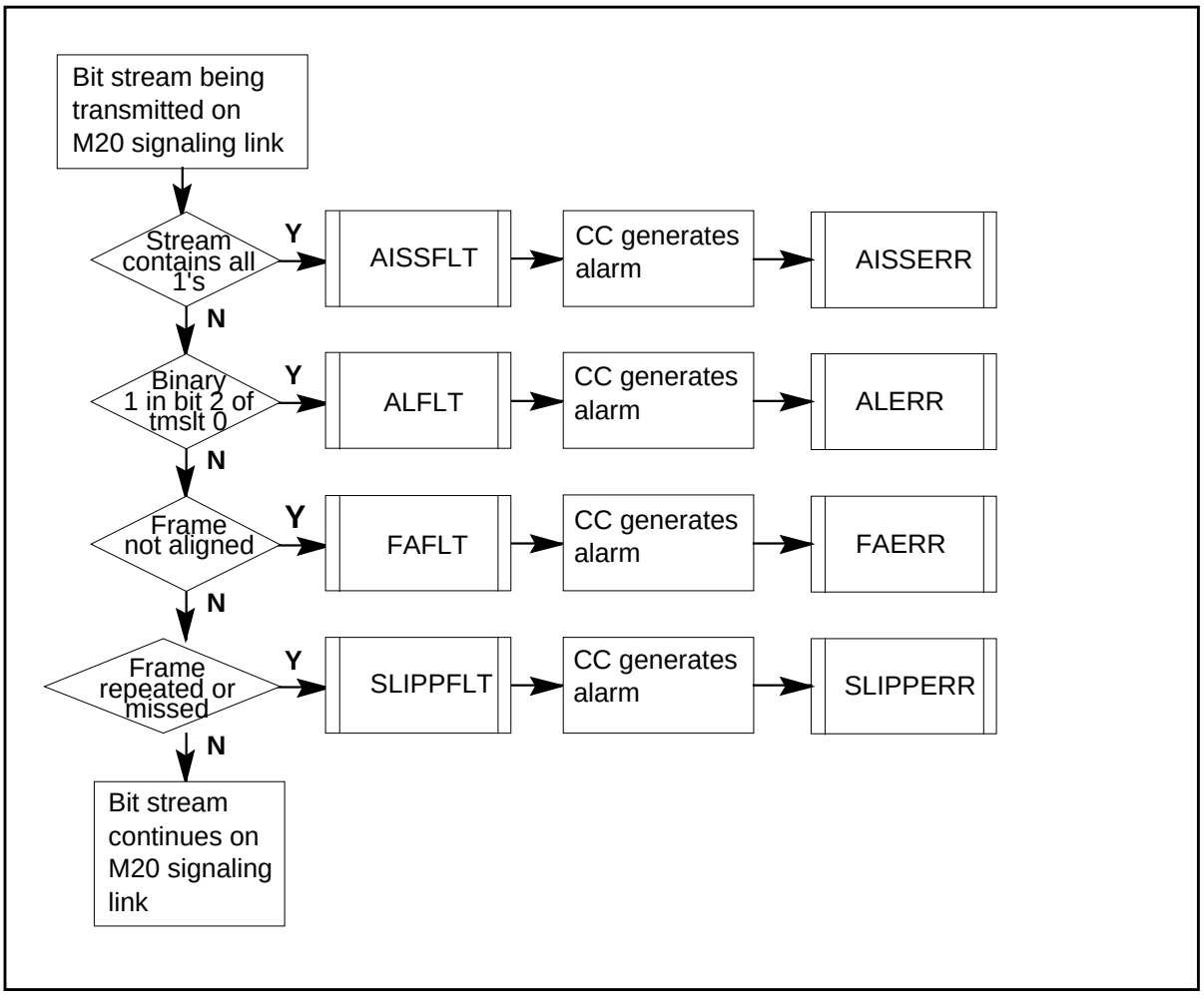
Associated functionality codes

The associated functionality codes for OM group M20CARR1 appear in the following table.

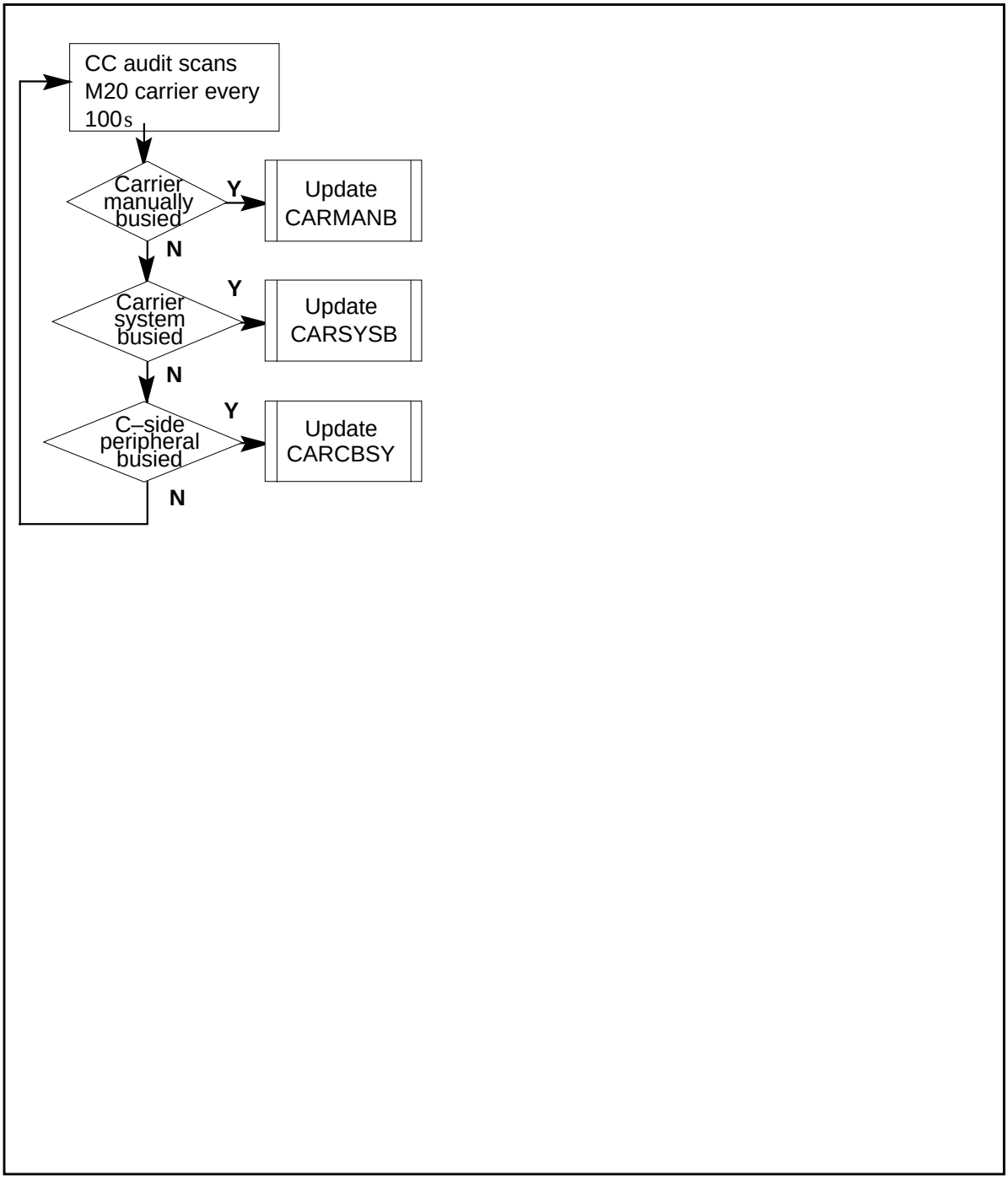
Functionality	Code
NTXH11AA	M20 Maintenance

OM group M20CARR1 (continued)

OM group M20CARR1 registers



OM group M20CARR1 usage registers



Register AISSERR

Register Alarm indication signal error (AISSERR)

OM group M20CARR1 (continued)

Register AISSERR increases when the central control (CC) generates an alarm because of a fault on an M20 signaling link. The CC detects the fault when a continuous stream of 1's is found on the incoming link. A continuous stream of 1's on the incoming link indicates the link is in a manually busy state. A minimum of one frame of 1's must be received before an alarm indication signal (AIS) is raised.

Register AISSERR release history

Register AISSERR introduced in BCS29.

Associated registers

Register AISSERR increases when the CC detects an AIS fault on an incoming M20 signaling link.

Associated logs

There are no associated logs.

Register AISSFLT

Alarm indication signal fault (AISSFLT)

Register AISSFLT increases when the CC detects an AIS fault on an incoming M20 signaling link. This fault occurs when the CC detects a continuous stream of 1's on the incoming link. A continuous stream of 1's on the incoming link indicates the link is in a manually busy state. At least one frame of 1's must be received before an AIS is raised.

Register AISSFLT release history

Register AISSFLT introduced in BCS29.

Associated registers

Register AISSFLT increases when the CC generates an alarm because of an AIS fault the CC detects on an M20 signaling link.

Associated logs

There are no associated logs.

Register ALERR

Register Alarm error (ALERR)

Register ALERR increases when the CC detects a fault on an M20 signaling link and generates an alarm. The CC detects a fault when a binary 1 is found in bit 2 of timeslot 0. This fault indicates that the incoming 2048 kbits/s signal on the M20 link cannot be received.

Register ALERR release history

Register ALERR introduced in BCS29.

Associated registers

Register ALERR increases when the CC detects a fault on an incoming M20 signaling link.

Associated logs

There are no associated logs.

Register ALFLT

Register Alarm fault (ALFLT)

Register ALFLT increases when the CC detects a fault on an incoming M20 signaling link. This fault occurs when a binary 1 is found in bit 2 of timeslot 0. This fault indicates that the incoming 2048 kbits/s signal on the M20 link cannot be received.

Register ALFLT release history

Register ALFLT introduced in BCS29.

Associated registers

Register ALFLT increases when the CC detects a fault on an M20 signaling link and generates an alarm.

Associated logs

There are no associated logs.

Register CARCBSY

Register Carrier C-side peripheral busy (CARCBSY)

Register CARCBSY updates every 100 [hairsp]s. Register CARCBSY records the amount of time the M20 carrier is in a Core side (C-side) peripheral busy (CBSY) state. The system places the carrier in this state when the C-side peripheral module goes out of service.

Register CARCBSY release history

Register CARCBSY introduced in BCS29.

Associated registers

There are no associated registers.

OM group M20CARR1 (continued)

Associated logs

There are no associated logs.

Register CARMANB

Register Carrier manually busy (CARMANB)

Register CARMANB updates every 100[hairsp] s. Register CARMANB records the amount of time that the M20 carrier is in a manual-busy (ManB) state. Maintenance personnel place a carrier in a ManB state.

Register CARMANB release history

Register CARMANB introduced in BCS29.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register CARSYSB

Register Carrier system busied.

Register CARSYSB updates every 100[hairsp]s. Register CARSYSB records the amount of time that the M20 carrier is in a system busy (SysB) state. The M20 carrier is in a SysB state because of system alarms or faults.

Register CARSYSB release history

Register CARSYSB introduced in BCS29.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register FAERR

Register Frame alignment error.

Register FAERR increases when the CC generates an alarm because of a frame alignment (FA) fault the CC detects on an M20 signaling link. This fault occurs when a code violation bit is missing or when two bits are not positioned correctly on the link. The two bits are less or more than 125 us apart. The FA

alarm indicates a loss of the incoming signal or a loss of incoming frame alignment.

Register FAERR release history

Register FAERR introduced in BCS29.

Associated registers

Register FAFLT increases when the CC detects an FA fault on an M20 signaling link.

Associated logs

There are no associated logs.

Register FAFLT

Frame alignment fault (FAFLT)

Register FAFLT increases when the CC detects an FA fault on an incoming M20 signaling link. This fault occurs when a code violation bit is missing or when two bits are not positioned correctly on the link. The two bits are less or more than 125 us apart. The result is a loss of the incoming signal.

Register FAFLT release history

Register FAFLT introduced in BCS29.

Associated registers

Register FAERR increases when the CC generates a frame alignment alarm. The CC generates a frame alignment alarm to indicate a loss of the incoming signal or a loss of incoming frame alignment.

Associated logs

There are no associated logs.

Register SLIPPERR

Slip error (SLIPPERR)

Register SLIPPERR increases when the CC generates an alarm because of a slip fault on an M20 signaling link. This fault occurs when a frame of data on the link repeats or slips over.

Register SLIPPERR release history

Register SLIPPERR introduced in BCS29.

OM group M20CARR1 (end)

Associated registers

Register SLIPPFLT increases when the CC detects a slip fault on an incoming M20 signaling link.

Associated logs

There are no associated logs.

Register SLIPPFLT

Register Slip fault (SLIPPFLT)

Register increases when the CC detects a slip fault on an incoming M20 signaling link. This fault occurs when a frame of data on the link repeats or slips over.

Register SLIPPFLT release history

Register SLIPPFLT introduced in BCS29.

Associated registers

Register SLIPPERR increases when the CC generates an alarm because of a slip fault the CC detects on an M20 signaling link.

Associated logs

There are no associated logs.

OM group M20CARR2

OM description

M20 handling group (M20CARR2)

The OM group M20CARR2 provides information about alarms and state changes that occur on M20 handling groups. A handling group consists of six of the 30 voice/data channels on an M20 carrier. The M20 carrier supports communication at a rate of 2048 kbits/s between the DMS system and the Japanese network.

Release history

OM group M20CARR2 introduced in BCS29.

Registers

The OM group M20CARR2 registers appear on the MAP terminal as follows:

```
TNR11ERR    TNR21ERR    TNR12ERR    TNR22ERR
TNR13ERR    TNR23ERR    TNR14ERR    TNR24ERR
TNR15ERR    TNR25ERR    TNR11FLT    TNR21FLT
TNR12FLT    TNR22FLT    TNR13FLT    TNR23FLT
TNR14FLT    TNR24FLT    TNR15FLT    TNR25FLT
H1SYSB      H2SYSB      H3SYSB      H4SYSB
H5SYSB      H1MANB      H2MANB      H3MANB
H4MANB      H5MANB      HGCFL
```

Group structure

The OM group M20CARR2 provides one tuple per office.

Key field:
There is no key fields.

Info field:
M200MINF

Associated OM groups

There are no associated OM groups.

Associated functional groups

There are no associated functional groups.

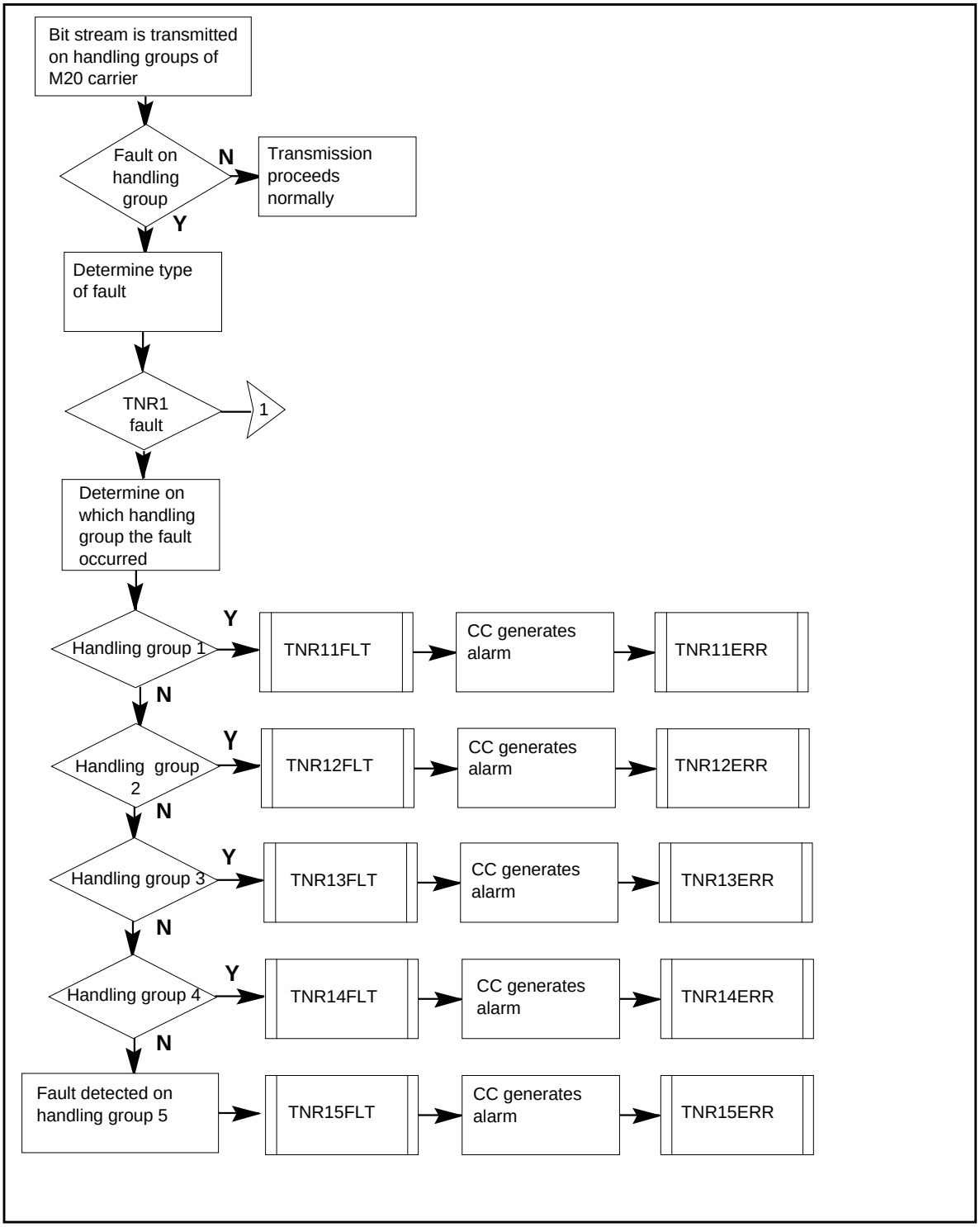
OM group M20CARR2 (continued)

Associated functionality codes

The associated functionality code for OM group M20CARR2 appears in the following table:

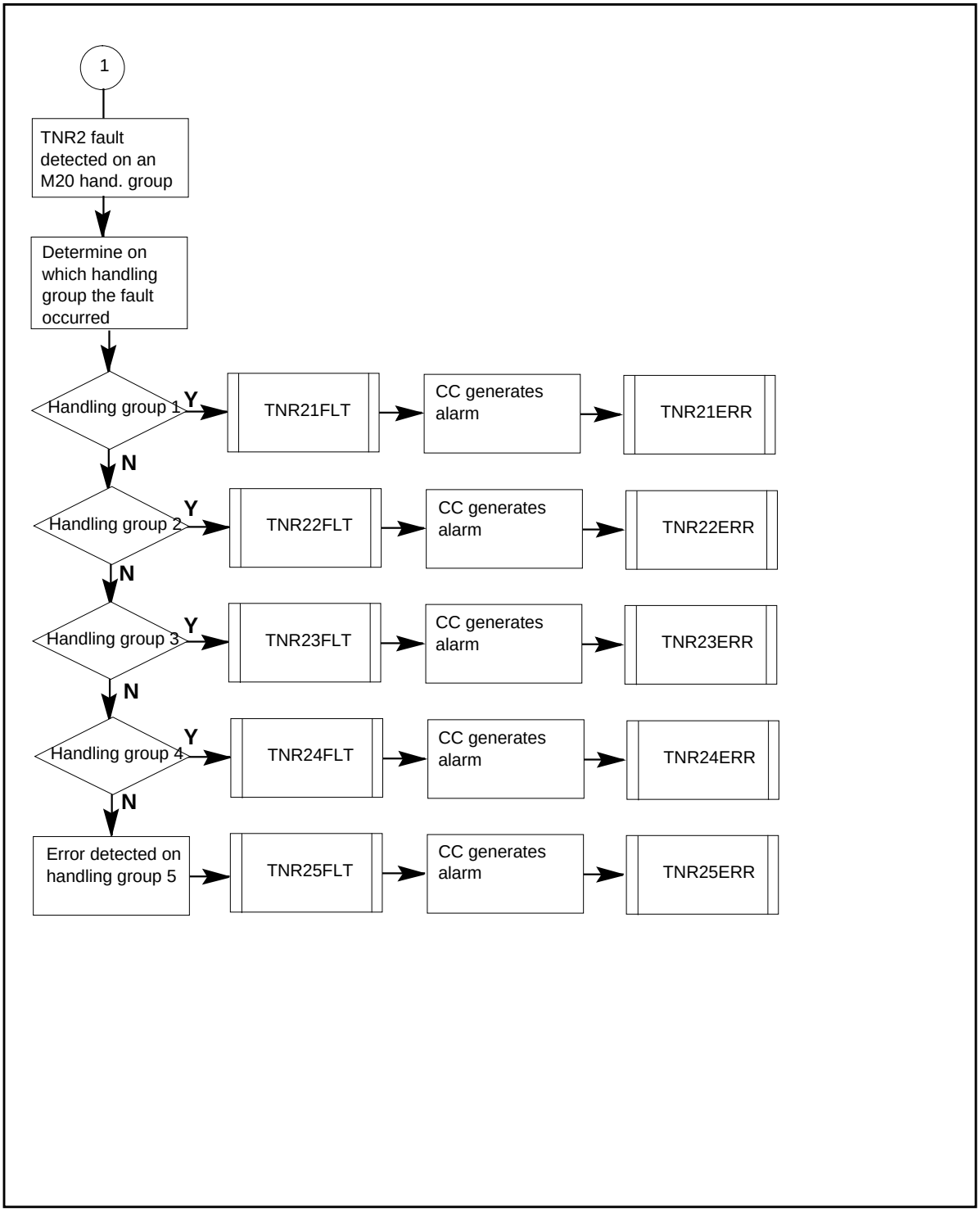
Functionality	Code
M20 Maintenance	NTXH11AA

OM group M20CARR2 registers

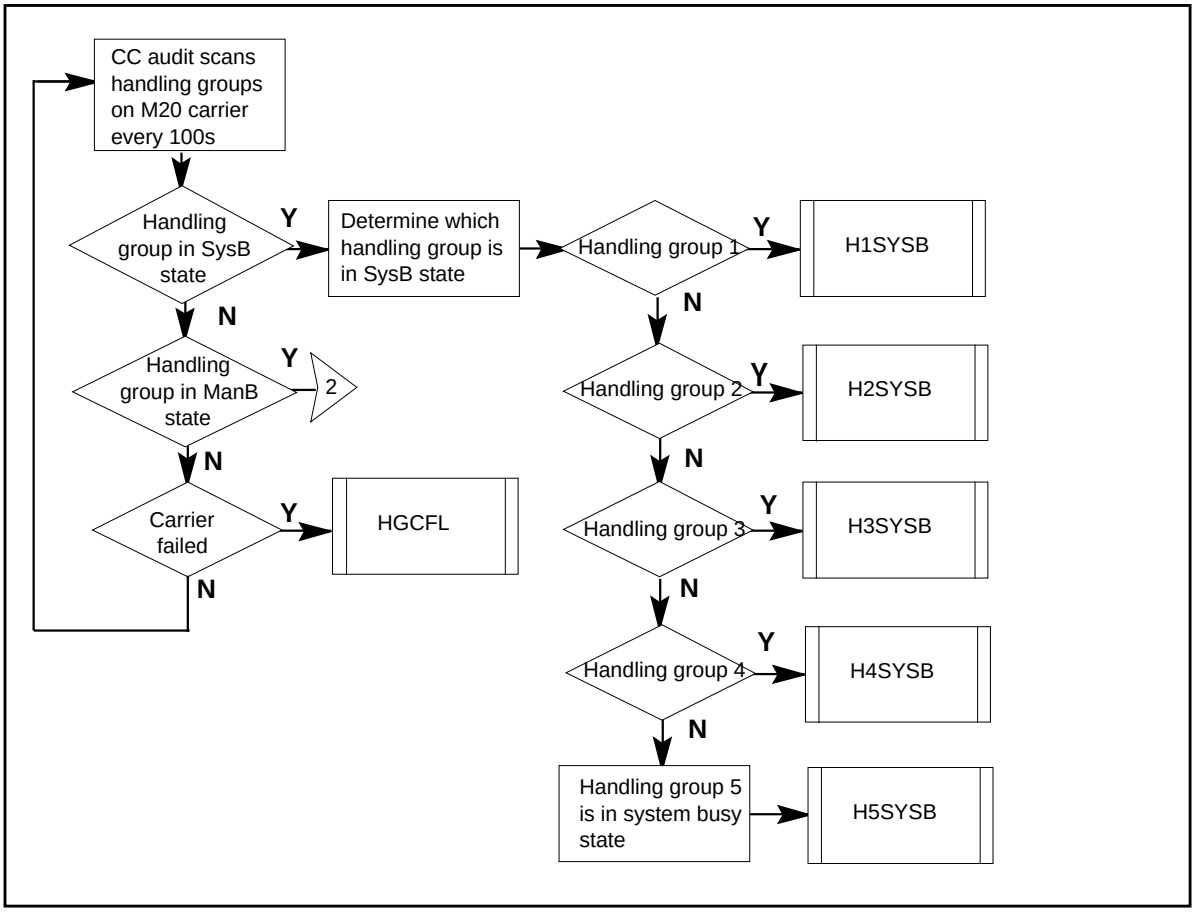


OM group M20CARR2 (continued)

OM group M20CARR2 registers (continued)

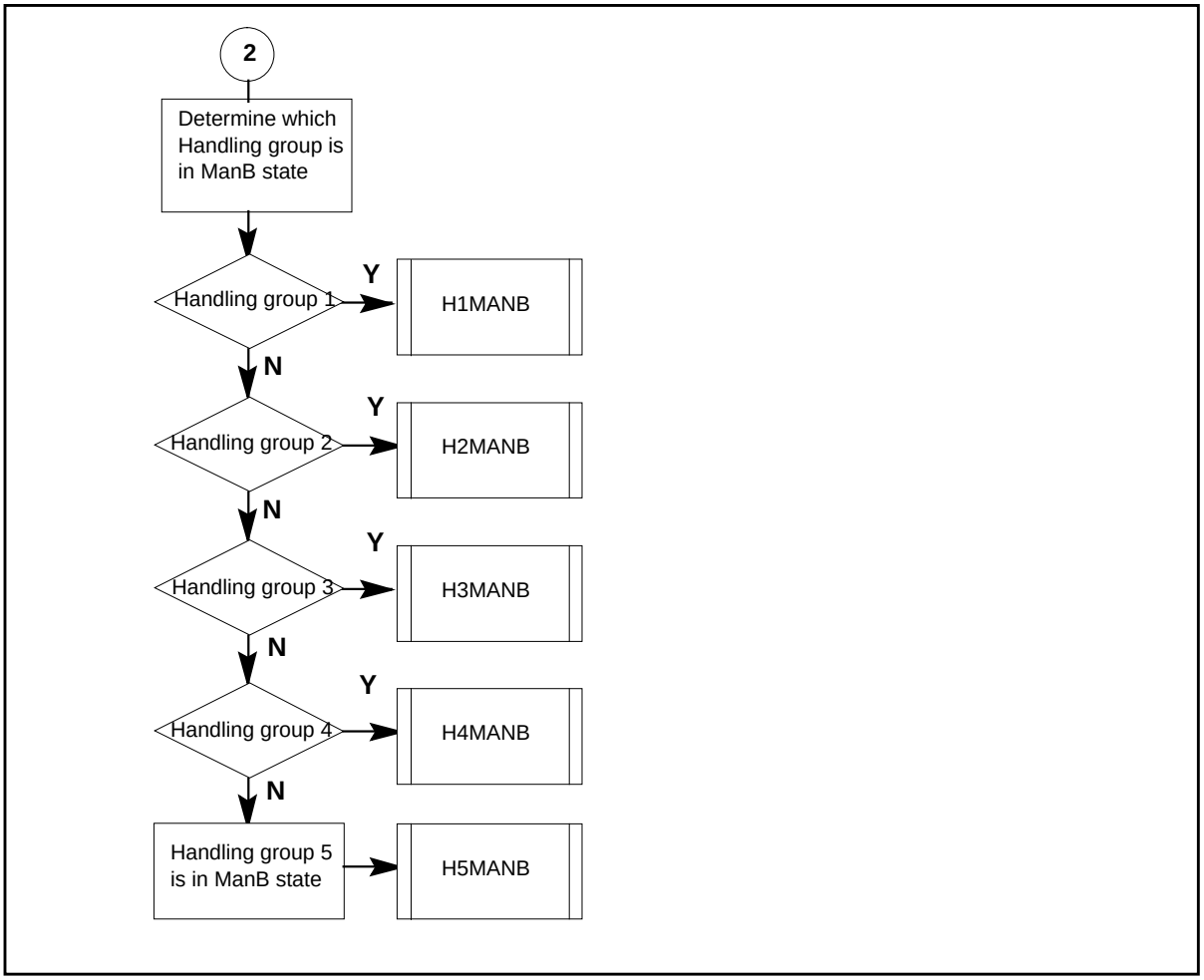


OM group M20CARR2 usage registers (continued)



OM group M20CARR2 (continued)

OM group M20CARR2 usage registers (continued)



Register H1MANB

Handling group 1 manually busied (H1MANB)

Register H1MANB updates every 100s. Register H1MANB records the amount of time handling group 1 of an M20 carrier is in a manual-busy state. Handling group 1 is in a manual busy state so that telephone company personnel can perform maintenance tasks on the handling group. An M20 carrier is in an in-service trouble (ISTb) state when a minimum of one of the handling groups is manual busy.

Register H1MANB release history

Register H1MANB introduced in BCS29.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register H1SYSB

Handling group 1 system busied (H1SYSB)

Register H1SYSB updates every 100s. Register H1SYSB records the amount of time handling group 1 of an M20 carrier is in a system busy state. Handling group 1 can be in a system busy state. An unsolicited message from the extended peripheral module (XPM) also places handling group 1 in a system busy state. An M20 carrier is in an ISTb state when a minimum of one of the handling groups is system busy

Register H1SYSB release history

Register H1SYSB introduced in BCS29.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register H2MANB

Handling group 2 manually busied.

Register H2MANB updates every 100s. Register H2MANB records the amount of time handling group 2 of an M20 carrier is in a manual busy state. Handling group 2 is in a manual busy state so that telephone company personnel can perform maintenance tasks. Telephone company personnel perform maintenance tasks on the handling group. An M20 carrier is in an ISTb state when a minimum of one of the handling groups manual busies.

Register H2MANB release history

Register H2MANB introduced in BCS29.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group M20CARR2 (continued)

Register H2SYSB

Handling group 2 system busied (H2SYSB)

Register H2SYSB updates every 100s. Register H2SYSB records the amount of time handling group 2 of an M20 carrier is in a system busy state. A carrier fault that the CC detects during an audit places handling group 2 in a system busy state. An unsolicited message from the XPM also places handling group 2 in a system busy state. An M20 carrier is in an ISTb state when a minimum of one of the handling groups is system busy.

Register H2SYSB release history

Register H2SYSB introduced in BCS29.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register H3MANB

Handling group 3 manually busied (H3MANB)

Register H3MANB updates every 100s. Register H3MANB records the amount of time handling group 3 of an M20 carrier is in a manual busy state. Handling group 3 is in a manually busy state so that telephone company personnel can perform maintenance tasks on the handling group. An M20 carrier is in an ISTb state when a minimum of one of the handling groups is manually busy.

Register H3MANB release history

Register H3MANB introduced in BCS29.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register H3SYSB

Handling group 3 system busied (H3SYSB)

Register H3SYSB updates every 100s. Register H3SYSB records the amount of time handling group 3 of an M20 carrier is in a system busy state. A carrier

fault that the CC detects during an audit places handling group 3 in a system busy state. An unsolicited message from the XPM also places handling group 3 in a system busy state. An M20 carrier is in an ISTb state when a minimum of one of the handling groups is system busy.

Register H3SYSB release history

Register H3SYSB introduced in BCS29.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register H4MANB

Handling group 4 manually busied (H4MANB)

Register H4MANB updates every 100s. Register H4MANB records the amount of time handling group 4 of an M20 carrier is in a manual busy state. Handling group 4 is in a manually busy state so that telephone company personnel can perform maintenance tasks on the handling group. An M20 carrier is in an ISTb state when a minimum of one of the handling groups is manually busy.

Register H4MANB release history

Register H4MANB introduced in BCS29.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register H4SYSB

Handling group 4 system busied (H4SYSB)

Register H4SYSB updates every 100s. Register H4SYSB records the amount of time handling group 4 of an M20 carrier is in a system busy state. A carrier fault that CC detects during an audit places handling group 4 in a system busy state. An unsolicited message from the XPM. An M20 carrier is in an ISTb state when a minimum of one of the handling groups is system busy.

OM group M20CARR2 (continued)

Register H4SYSB release history

Register H4SYSB introduced in BCS29.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register H5MANB

Handling group 5 manually busied (H5MANB)

Register H5MANB updates every 100s. Register H5MANB records the amount of time handling group 5 of an M20 carrier is in a manual busy state. Handling group 5 is in a manual busy state so that telephone company personnel can perform maintenance tasks on the handling group. An M20 carrier is in an ISTb state when a minimum of one of the handling groups is manually busy.

Register H5MANB release history

Register H5MANB introduced in BCS29.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register H5SYSB

Handling group 5 system busied (H5SYSB)

Register H5SYSB updates every 100s. Register H5SYSB records the amount of time handling group 5 of an M20 carrier is in a system busy state. Handling group 5 can be in a system busy state. An unsolicited message from the XPM also places handling group 5 in a system busy state. An M20 carrier is in an ISTb state when a minimum of one of the handling groups system busy.

Register H5SYSB release history

Register H5SYSB introduced in BCS29.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register HGCFL

Handling group carrier failed (HGCFL)

Register HGCFL updates every 100s. Register HGCFL records the amount of time that an M20 carrier is in a carrier failed (CFL) state. An M20 carrier is in a CFL state because of the failure of the handling groups.

Register HGCFL release history

Register HGCFL introduced in BCS29.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register TNR11ERR

Error count for TNR1 alarm for handling group 1 (TNR11ERR)

Register TNR11ERR increases when the CC generates a TNR1 frame alignment alarm. The CC generates a TNR1 frame alignment alarm when the CC detects a TNR1 fault on handling group 1 of an M20 carrier. The TNR1 faults occur when the correct sequence of framing bits in a handling group is lost.

Register TNR11ERR release history

Register TNR11ERR introduced in BCS29.

Associated registers

Register TNR11FLT increases when the CC detects a TNR1 fault on handling group 1 of an M20 carrier.

Associated logs

There are no associated logs.

Register TNR11FLT

Fault count for TNR1 alarm for handling group 1 (TNR11FLT)

Register TNR11FLT increases when the CC detects a TNR1 fault on handling group 1 of an M20 carrier. A TNR1 fault occurs when the correct sequence of

OM group M20CARR2 (continued)

framing bits in a handling group is lost. The group is in a system busy state when the correct sequence of framing bits is lost.

Register TNR11FLT release history

Register TNR11FLT introduced in BCS29.

Associated registers

Register TNR11ERR increases when the CC generates a TNR1 frame alignment alarm. The CC generates a TNR1 frame alignment alarm when detecting a TNR1 fault on handling group 1 of an M20 carrier.

Associated logs

There are no associated logs.

Register TNR12ERR

Error count for TNR1 alarm for handling group 2 (TNR11FLT)

Register TNR12ERR increases when the CC generates a TNR1 frame alignment alarm. The CC generates a TRN1 frame alignment alarm when the CC detects a TNR1 fault on handling group 2 of an M20 carrier. TNR1 faults occur when the correct sequence of framing bits in a handling group is lost.

Register TNR12ERR release history

Register TNR12ERR introduced in BCS29.

Associated registers

Register TNR12FLT increases when the CC detects a TNR1 fault on handling group 2 of an M20 carrier.

Associated logs

There are no associated logs.

Register TNR12FLT

Fault count for TNR1 alarm for handling group 2 (TNR12FLT)

Register TNR12FLT increases when the CC detects a TNR1 fault on handling group 2 of an M20 carrier. A TNR1 fault occurs when the correct sequence of framing bits in a handling group is lost. The group is in a system busy state when the correct sequence of framing bits is lost.

Register TNR12FLT release history

Register TNR12FLT introduced in BCS29

Associated registers

The TNR12ERR increases when the CC generates a TNR1 frame alignment alarm. The CC generates a TRN1 frame alignment alarm when the CC detects a TNR1 fault on handling group 2 of an M20 carrier.

Associated logs

There are no associated logs.

Register TNR13ERR

Error count for TNR1 alarm for handling group 3 (TNR13ERR)

Register TNR13ERR increases when the CC generates a TNR1 frame alignment alarm. The CC generates a TNR1 frame alignment alarm when the CC detects TNR1 fault on handling group 3 of an M20 carrier. TNR1 faults occur when the correct sequence of framing bits in a handling group is lost.

Register TNR13ERR release history

Register TNR13ERR introduced in BCS29.

Associated registers

Registers TNR13FLT increases when the CC detects a TNR1 fault on the handling group 3 of an M20 carrier.

Associated logs

There are no associated logs.

Register TNR13FLT

Fault count for TNR1 alarm for handling group 3 (TNR13FLT)

Register TNR13FLT increases when the CC detects a TNR1 fault on handling group 3 of an M20 carrier. A TNR1 fault occurs when the correct sequence of framing bits in a handling group is lost. The group is in a system busy state when the correct sequence of framing bits in a handling group is lost.

Register TNR13FLT release history

Register TNR13FLT introduced in BCS29.

Associated registers

Register TNR13ERR increases when the CC generates a TNR1 frame alignment alarm. The CC generates a TNR1 frame alignment alarm when the CC detects a TNR1 fault on handling group 3 of an M20 carrier.

OM group M20CARR2 (continued)

Associated logs

There are no associate logs.

Register TNR14ERR

Error count for TNR1 alarm for handling group 4.

Register TNR14ERR increases when the CC generates a TNR1 frame alignment alarm. The CC generates a TNR1 frame alignment alarm when detecting a TNR1 fault on handling group 4 of an M20 carrier. TNR1 faults occur when the correct sequence of framing bits in a handling group is lost.

Register TNR14ERR release history

Register TNR14ERR introduced in CS29.

Associated registers

Register TNR14FLT increases when the CC detects a TNR1 fault is on handling group 4 of an M20 carrier.

Associated logs

There are no associated logs.

Register TNR14FLT

Fault count for TNR1 alarm for handling group 4 (TNR14FLT)

Register TNR14FLT increases when the CC detects a TNR1 fault on handling group 4 of an M20 carrier. A TNR1 fault occurs when the correct sequence of framing bits in a handling group is lost. The group is in a system busy state when the correct sequence of framing bits is lost.

Register TNR14FLT release history

Register TNR14FLT introduced in BCS29.

Associated registers

Register TNR14ERR increases when the CC generates a TNR1 frame alignment alarm. The CC generates a TNR1 frame alignment alarm when the CC detects a TNR1 fault on handling group 4 of an M20 carrier.

Associated logs

There are no associated logs.

Register TNR15ERR

Error count for TNR1 alarm for handling group 5 (TNR15ERR)

Register TNR15ERR increases when the CC generates a TNR1 frame alignment alarm. The CC generates a TRN1 frame alignment alarm when the CC detects a TNR1 fault on handling group 5 of an M20 carrier. TNR1 faults occur when the correct sequence of framing bits in a handling group is lost.

Register TNR15ERR release history

Register TNR15ERR introduced in BCS29.

Associated registers

Register TNR15FLT increases when the Cc detects a TNR1 fault on handling group 5 of an M20 carrier.

Associated logs

There are no associated logs.

Register TNR15FLT

Fault count for TNR1 alarm for handling group 5 (TNR15FLT)

Register TNR15FLT increases when a the CC detects a TNR1 fault is detected on handling group 5 of an M20 carrier. A TNR1 fault occurs when the correct sequence of framing bits in a handling group is lost. The group is in a system busy state when the correct sequence of framing bits is lost.

Register TNR15FLT release history

Register TNR15FLT introduced in BCS29.

Associated registers

Register TNR15ERR increases when CC generates a TNR1 frame alignment alarm. The CC generates a TNR1 frame alignment alarm when detecting a TNR1 fault on handling group 5 of an M20 carrier.

Associated logs

There are no associated logs.

Register TNR21ERR

Error count for TNR2 alarm for handling group 1 (TNR21ERR)

Register TNR21ERR increases when the CC generates a TNR2 alarm. The CC generates a TNR2 alarm when the CC detects a TNR2 fault on handling group 1 of an M20 carrier. The CC uses the signaling processor (SP) alarm bits on the handling group bit streams to detect TNR2 faults. These faults occur when the remote M20 multiplexer cannot receive signaling information from the local M20 multiplexer.

OM group M20CARR2 (continued)

Register TNR21ERR release history

Register TNR21ERR introduced in BCS29.

Associated registers

Register TNR21FLT increases when the CC detects a TNR2 fault is detected on handling group 1 of an M20 carrier.

Associated logs

There are no associated logs.

Register TNR21FLT

Fault count for TNR2 alarm for handling group 1.

Register TNR21FLT increases when the CC detects a TNR2 fault on handling group 1 of an M20 carrier. The SP alarm bits on the handling group bit streams detect TNR2 faults. These faults occur when the remote M20 multiplexer cannot receive signalling information from the local M20 multiplexer.

Register TNR21FLT release history

Register TNR21FLT introduced in BCS29.

Associated registers

Register TNR21ERR increases when the CC generates a TNR2 alarm. The CC generates a TNR2 alarm when the CC detects a TNR2 fault on handling group 1 of an M20 carrier.

Associated logs

There are no associated logs.

Register TNR22ERR

Error count for TNR2 alarm for handling group 2.

Register TNR22ERR increases when the CC generates a TNR2 alarm. The CC generates a TNR2 alarm when the CC detects a TNR2 fault on handling group 2 of an M20 carrier. The CC uses the SP alarm bits on the handling group bit streams to detect TNR2 faults. These faults occur when the remote M20 multiplexer cannot receive signaling information from the local M20 multiplexer.

Register TNR22ERR release history

Register TNR22ERR introduced in BCS29.

Associated registers

Register TNR22FLT increases when the CC detects a TNR2 fault is detected on handling group 2 of an M20 carrier.

Associated logs

There are no associated logs.

Register TNR22FLT

Fault count for TNR2 alarm for handling group 2 (TNR22FLT)

Register TNR22FLT increases when the CC detects a TNR2 fault on handling group 2 of an M20 carrier. The CC uses the SP alarm bits on the handling group bit streams to detect TNR2 faults. These faults occur when the remote M20 multiplexer cannot receive signaling information from the local M20 multiplexer.

Register TNR22FLT release history

Register TNR22FLT introduced in BCS29.

Associated registers

Register TNR22ERR increases when the CC generates a TNR2 alarm. The CC generates a TNR2 alarm when the CC detects a TNR2 fault on handling group 2 of an M20 carrier.

Associated logs

There are no associated logs.

Register TNR23ERR

Error count for TNR2 alarm for handling group 3 (TNR23ERR)

Register TNR23ERR increases when the CC generates a TNR2 alarm. The CC generates a TNR2 alarm when the CC detects a TNR2 fault on handling group 3 of an M20 carrier. The CC uses the SP alarm bits on the handling group bit streams to detect TNR2 faults. These faults occur when the remote M20 multiplexer cannot receive signaling information from the local M20 multiplexer.

Register TNR23ERR release history

Register TNR23ERR introduced in BCS29.

Associated registers

Register TNR23FLT increases when the CC detects a TNR2 fault on handling group 3 of an M20 carrier.

OM group M20CARR2 (continued)

Associated logs

There are no associated logs.

Register TNR23FLT

Fault count for TNR2 alarm for handling group 3 (TNR23FLT)

Register TNR23FLT increases when the CC detects a TNR2 fault on handling group 3 of an M20 carrier. The CC uses the SP alarm bits on the handling group bit streams to detect TNR2 faults. These faults occur when the remote M20 multiplexer cannot receive signaling information from the local M20 multiplexer.

Register TNR23FLT release history

Register TNR23FLT introduced in BCS29.

Associated registers

Register TNR23ERR increases when the CC generates a TNR2 alarm. The CC generates a TNR2 alarm when detecting a TNR2 fault on handling group 3 of an M20 carrier.

Associated logs

There are no associated logs.

Register TNR24ERR

Error count for TNR2 alarm for handling group 4.

Register TNR24ERR increases when the CC generates a TNR2 alarm. The CC generates a TNR2 alarm when the CC detects a TNR2 fault on handling group 4 of an M20 carrier. The CC uses the SP alarm bits on the handling group bit streams to detect TNR2 faults. These faults occur when the remote M20 multiplexer cannot receive signaling information from the local M20 multiplexer.

Register TNR24ERR release history

Register TNR24ERR introduced in BCS29.

Associated registers

Register TNR24FLT increases when the CC detects a TNR2 fault on handling group 4 of an M20 carrier.

Associated logs

There are no associated logs.

Register TNR24FLT

Fault count for TNR2 alarm for handling group 4.

Register TNR24FLT increases when the CC detects a TNR2 fault on handling group 4 of an M20 carrier. The CC uses the SP alarm bits on the handling group bit streams to detect TNR2 faults. These faults occur when the remote M20 multiplexer cannot receive signaling information from the local M20 multiplexer.

Register TNR24FLT release history

Register TNR24FLT introduced in BCS29.

Associated registers

Register TNR24ERR increases when the CC generates a TNR2 alarm. The CC generates a TNR2 alarm when the CC detects a TNR2 fault on handling group 4 of an M20 carrier.

Associated logs

There are no associated logs.

Register TNR25ERR

Error count for TNR2 alarm for handling group 5 (TNR25ERR)

Register TNR25ERR increases when the CC generates a TNR2 alarm. The CC generates a TNR2 alarm when the CC detects a TNR2 fault on handling group 5 of an M20 carrier. The SP alarm bits on the handling group bit streams detect TNR2 faults. These faults occur when the remote M20 multiplexer cannot receive signaling information from the local M20 multiplexer.

Register TNR25ERR release history

Register TNR25ERR introduced in BCS29.

Associated registers

Register TNR25FLT increases when the CC detects a TNR2 fault on handling group 5 of an M20 carrier.

Associated logs

There are no associated logs.

Register TNR25FLT

Fault count for TNR2 alarm for handling group 5 (TNR25FLT)

OM group M20CARR2 (end)

Register TNR25FLT increases when the CC detects a TNR2 fault on handling group 5 of an M20 carrier. The CC uses the SP alarm bits on the handling group bit streams to detect TNR2 faults. These faults occur when the remote M20 multiplexer cannot receive signaling information from the local M20 multiplexer.

Register TNR25FLT release history

Register TNR25FLT introduced in BCS29.

Associated registers

Register TNR25ERR increases when the CC generates a TNR2 alarm. The CC generates a TNR2 alarm when the CC detects a TNR2 fault on handling group 5 of an M20 carrier.

Associated logs

There are no associated logs.

OM group MACHCONG

OM description

Machine congestion

Machine congestion (MACHCONG) provides information on MC1 and MC2 machine congestion levels in the central control complex (CCC). MC1 and MC2 congestion levels occur in the CCC when predetermined threshold values are exceeded. MC1 and MC2 are defined by the same threshold values that determine when the first- and second-level internal dynamic overload controls (IDOC) are activated.

IDOC is a network management (NWM) feature that generates control signals when internal overload is detected in a switch. The NWM system provides supervision and control of switching office networks to ensure the maximum flow of traffic during overload conditions.

MACHCONG has three registers:

- one usage register that records whether the MC1 and MC2 congestion levels are reached for call processing or the multifrequency queue
- two peg registers that are incremented if the MC1 and MC2 congestion levels are reached for call processing or the multifrequency (MF) queue

The data supplied by MACHCONG is used to assess how well the CCC is processing calls.

Release history

OM group MACHCONG was introduced in BCS23.

BCS30

Software change to provide usage counts either in CCS or deci-erlangs.

Registers

OM group MACHCONG registers display on the MAP terminal as follows:

```
MCU          MCMFCT          MCCPUCT
```

Group structure

OM group MACHCONG provides one tuple for each key.

OM group MACHCONG (continued)

Key field:

nwm_mc_level is a value (MC1, MC2, or MC3) that represents the level of machine congestion. MC1 represents a lower level of machine congestion than MC2, but both levels are triggered by the same causes. MC3 represents the level of machine congestion that results when an office cannot perform call processing because of a dead system or a system restart. The registers in MACHCONG do not count level MC3. The threshold values must be datafilled in table NWMIDOC to specify when MC1 and MC2 levels are reached and IDOC levels one and two are activated.

Info field:

None

Associated OM groups

None

Associated functional groups

The following functional groups are associated with OM group MACHCONG:

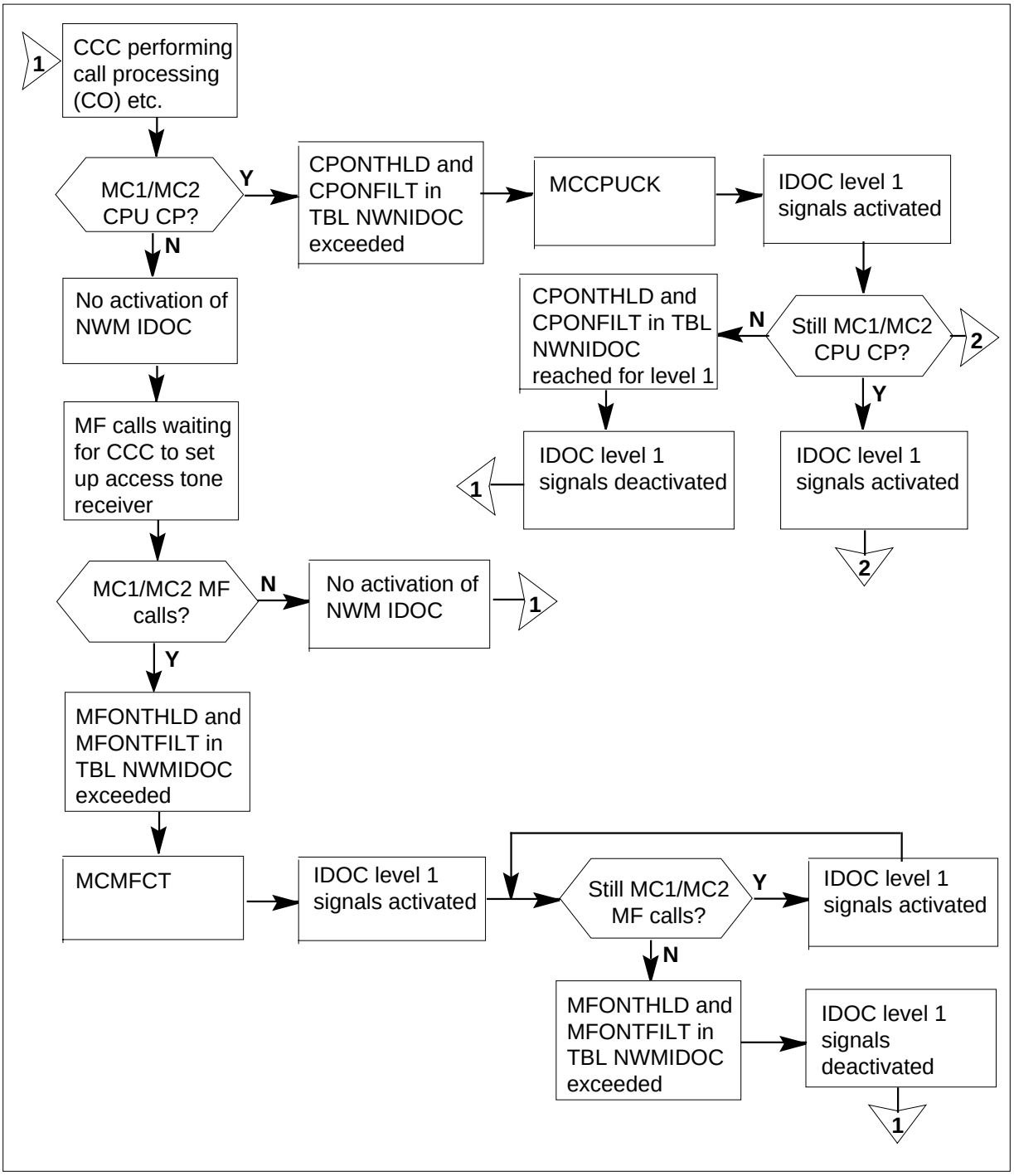
- DMS-100 Local
- DMS-200 Toll
- DMS-250 Toll/Tandem
- DMS-300 Gateway
- DMS-100 International
- DMS-MTX Mobile Telephone Exchange
- Network Management Internal Dynamic Overload Control

Associated functionality codes

The functionality codes associated with OM group MACHCONG are shown in the following table.

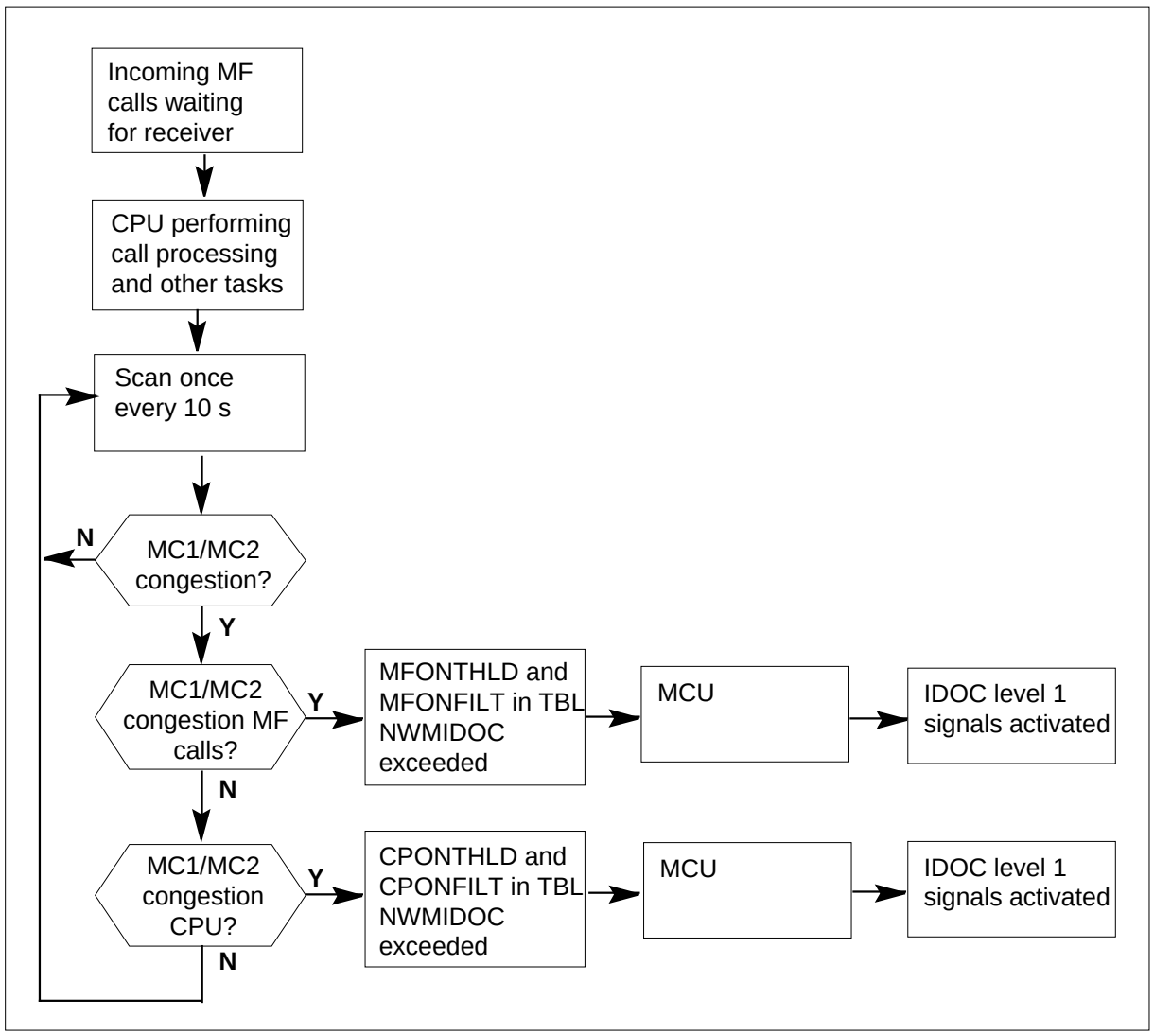
Functionality	Code
NTX060AB	Network Management

OM group MACHCONG MC1 and MC2 congestion level registers



OM group MACHCONG (continued)

OM group MACHCONG MC1 and MC2 usage registers



Register MCCPUCT

Register Machine congestion CPU count

Register Machine congestion CPU count (MCCPUCT) is incremented if the MC1 and MC2 congestion levels are reached for CPU call processing. CPU congestion occurs when the percentage of time the CPU spends on call processing exceeds the predetermined threshold values in table NWMIDOC. At maximum speed, MCCPUCT is incremented at one-minute intervals.

Threshold values must be datafilled in table NWMIDOC to specify the percentage of time that the CPU can devote to call processing before the MC1

and MC2 congestion levels are reached and IDOC levels one and two are activated.

Register MCCPUCT release history

Register MCCPUCT was introduced in BCS23.

Associated registers

None

Associated logs

None

Extension registers

None

Register MCMFCT

Register Machine congestion multifrequency count

Register Machine congestion multifrequency count (MCMFCT) is incremented if the MC1 and MC2 congestion levels are reached for incoming multifrequency (MF) calls that are queued while the CCC sets up a connection to a tone receiver. At maximum speed, MCMFCT is incremented at one-minute intervals.

Threshold values must be datafilled in table NWMIDOC to specify when MC1 and MC2 congestion levels are reached and IDOC levels one and two are activated.

Register MCMFCT release history

Register MCMFCT was introduced in BCS23.

Associated registers

None

Associated logs

None

Extension registers

None

Register MCU

Register Machine congestion usage

OM group MACHCONG (end)

Register Machine congestion usage (MCU) is a usage register. The scan rate is fast: 10 seconds. MCU records whether the MC1 and MC2 congestion levels have been reached for:

- incoming multifrequency calls that are queued until the CCC sets up a connection to a tone receiver
- CPU call processing

Congestion occurs during CPU call processing when the percentage of time the CPU spends on call processing exceeds the predetermined threshold values in table NWMIDOC.

Threshold values must be datafilled in table NWMIDOC to specify when MC1 and MC2 congestion levels are reached and IDOC levels one and two are activated.

Register MCU release history

Register MCU was introduced in BCS23.

BCS30

Software change to provide usage counts either in CCS or deci-erlangs.

Associated registers

None

Associated logs

None

Extension registers

None

OM group MDCWAKUP

OM description

Wake-up call (MDCWAKUP)

The OM group wake-up call MDCWAKUP maintains counts for aspects of the Wake-Up Call feature.

Release history

The OM group MDCWAKUP added to BCS33.

Registers

The OM group MDCWAKUP registers display on the MAP terminal as follows:

WUCSACT	WUCDNY	WUCDCT	WUCCOMP
WUCRTRY1	WUCRTRY2	WUCBLCK	WUCDSCRD
WUCOVRDU			

Group structure

OM group MDCWAKUP provides one tuple per office.

Key field:
There is no Key field

Info field:
There is no Info field

The user must enter the activation and termination codes for the Wake-Up Call feature in table IBNXLA.

Associated OM groups

There are no associated OM groups.

Associated functional groups

The Meridian Digital Centrex operating group associates with OM group MDCWAKUP.

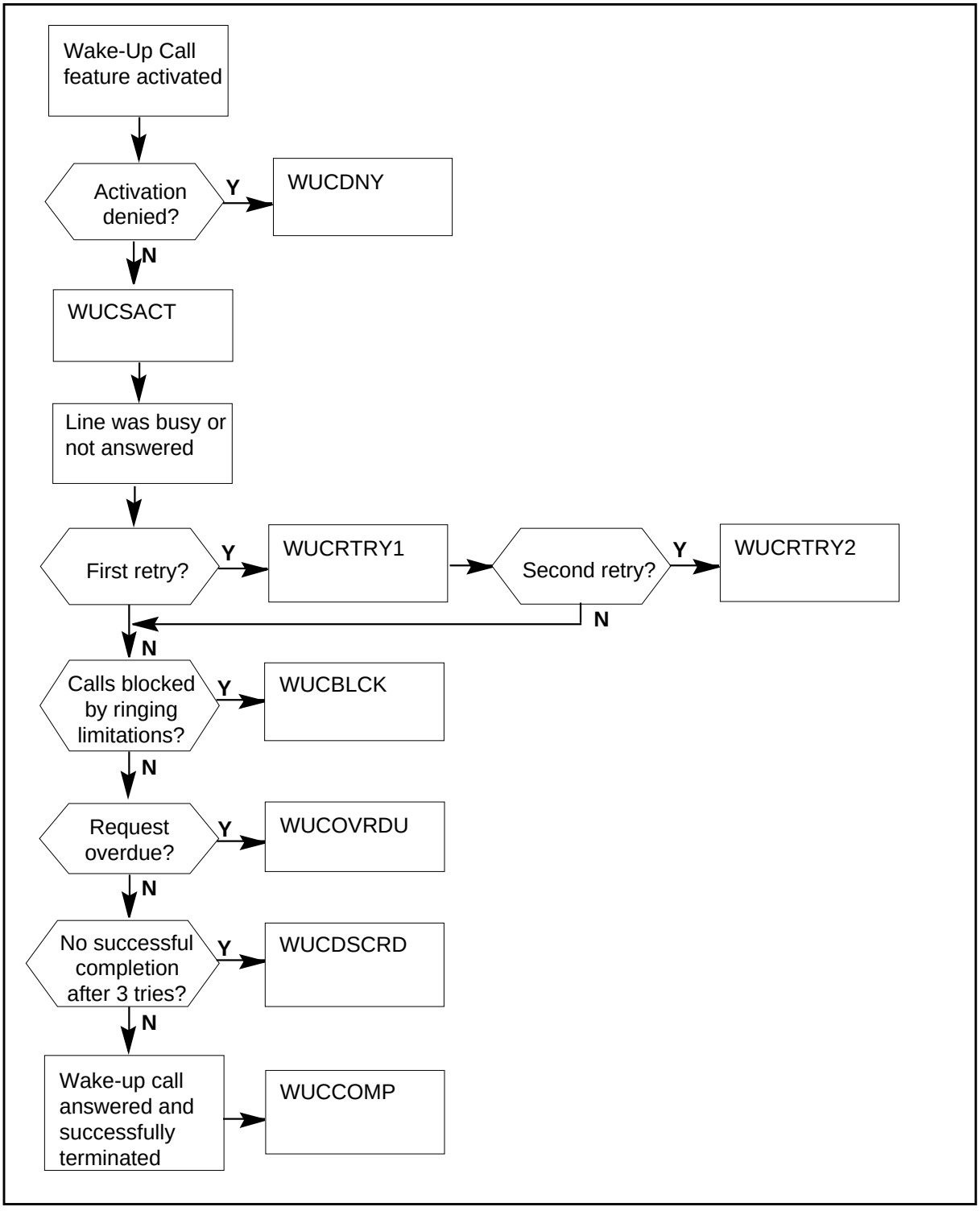
OM group MDCWAKUP (continued)

Associated functionality codes

The associated functionality code that associates with OM group MDCWAKUP appear in the following table.

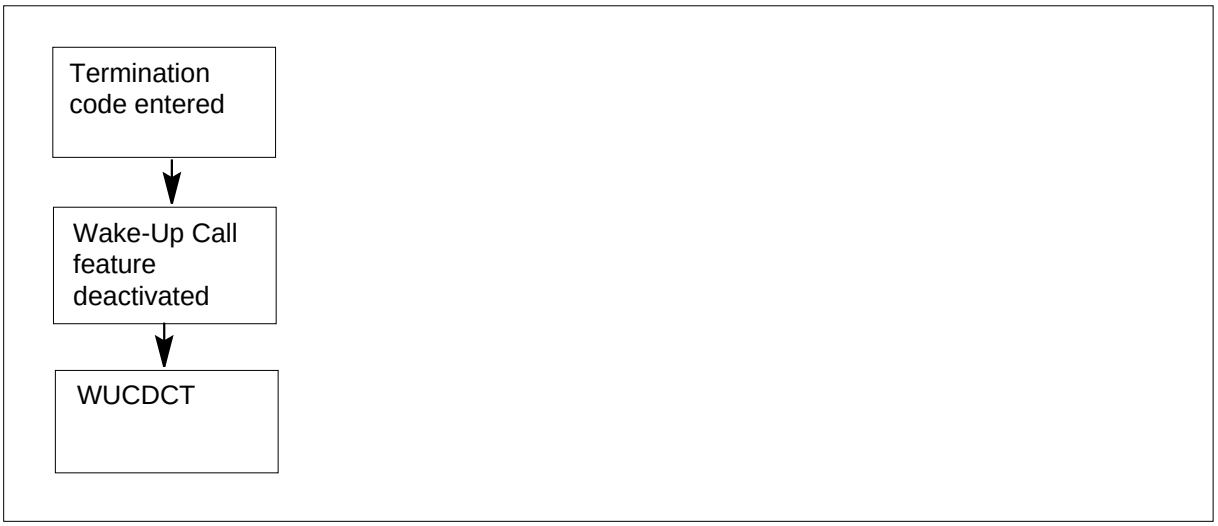
Functionality	Code
Meridian Wake-Up Service	NTXP57AA

OM group MDCWAKUP activation registers



OM group MDCWAKUP (continued)

OM group MDCWAKUP termination registers



Register WUCBLCK

Wake-up call ringing blocked (WUCBLCK)

Register (WUCBLCK) counts the number of wake-up calls that the system blocks because of ringing limitations.

Register WUCBLCK release history

Register WUCBLCK introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

The system generates WUCR101 when a wake-up call cannot be completed because of the ringing limitations of the peripheral.

Extension registers

There are no extension registers.

Register WUCCOMP

Wake-up call completions

Register (WUCCOMP) counts the number of wake-up calls that are terminated and answered.

Register WUCCOMP release history

Register WUCCOMP introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated registers.

Extension registers

There are no extension registers.

Register WUCDCT

Wake-up call deactivations (WUCDCT)

Register (WUCDCT) counts the number of complete terminations of the Wake-Up Call feature.

Register WUCDCT release history

Register WUCDCT introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register WUCDNY

Wake-up call deny activation (WUCDNY)

Register (WUCDNY) counts the number of Wake-Up Call feature activations that the system denies. Denial occurs because the requested time slot is full or the total number of requests exceeds the allowed limit. Denial of Wake-Up Call feature can also occur because the system gives an invalid time or an invalid ringing time out value.

Register WUCDNY release history

Register WUCDNY introduced in BCS33.

OM group MDCWAKUP (continued)

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register WUCDSCRD

Wake-up call request discarded (WUCDSCRD)

Register (WUCDSCRD) counts the number of wake-up calls that the system discards. The system discards the calls when the system makes three wake-up calls but can not complete them.

Register WUCDSCRD release history

Register WUCDSCRD introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

The system generates WUCR102 when the system discards a wake-up call request because no answer occurred after three calls. The system includes the message “3 Calls — No Completion" in the log.

Extension registers

There are no extension registers.

Register WUCOVRDU

Wake-up call request overdue (WUCOVRDU)

Register (WUCOVRDU) counts the number of wake-up calls that the system discards. The system discards the calls because the request was overdue, as a result of a change in the time or date.

Register WUCOVRDU release history

Register WUCOVRDU introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

The system generates WUCR102 when the system discards a wake-up call request because it is overdue. The system generates the log with the text, “Request Overdue".

Extension registers

There are no extension registers.

Register WUCRTRY1

Wake-up call first retry (WUCRTRY1)

Register (WUCRTRY1) counts the number of wake-up calls that require a retry. A retry is required because the first call attempt is busy or is not answered. WUCRTRY1 increases when the system attempts the first retry.

Register WUCRTRY1 release history

Register WUCRTRY1 introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register WUCRTRY2

Wake-up call second retry

Register (WUCRTRY2) counts the number of wake-up calls that require both first and second retries. The calls require retries because the first retry was busy or was not answered. WUCRTRY2 increases when the system attempts a second retry.

Register WUCRTRY2 release history

Register WUCRTRY2 introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group MDCWAKUP (end)

Extension registers

There are no associated logs.

Register WUCSACT

Wake-up call successful activations

Register (WUCSACT) counts the number of successful activations of the Wake-Up Call feature.

Register WUCSACT release history

Register WUCSACT introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group MDSACT

OM description

Message delivery system activity

MDSACT records events occurring in the DMS switch portion of the Message Delivery System (MDS). The group measures the number of calls

- eligible for MDS
- monitored for MDS
- in which the subscriber chose to use MDS

Release history

OM group MDSACT was introduced in BCS36.

Registers

OM group MDSACT registers display on the MAP terminal as follows:

ELIG3RD	ELIG3RD2	INELG3RD	INELG3R2
ELIGCC	ELIGCC2	INELGCC	INELGCC2
ELIGCOL	INELGCOL	MON3RDSU	MON3RDS2
MON3RDFA	MONCCSU	MONCCSU2	MONCCFA
MONCOLSU	MONCOLFA	ACC3RD	NOACC3RD
NOACC3R2	ACCCC	NOACCCC	NOACCCC2
ACCCOL	NOACCCOL		

Group structure

OM group MDSACT provides one tuple per office.

Key field:
None

Info field:
None

Associated OM group

AABS

Associated functional groups

The following functional groups are associated with OM group MDSACT:

- Automated Alternate Billing System (AABS)
- Traffic Operator Position System (TOPS)

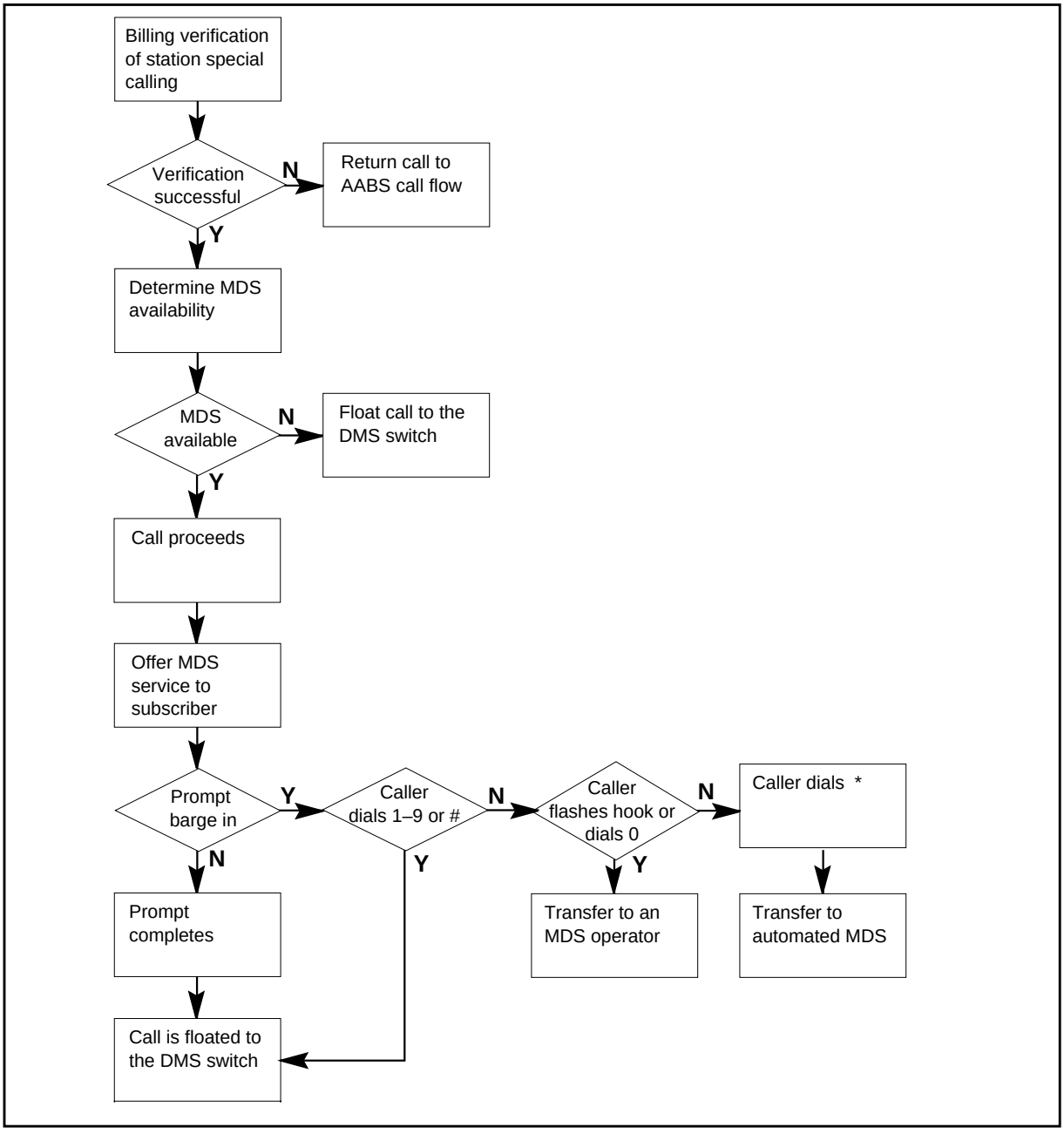
OM group MDSACT (continued)

Associated functionality codes

The functionality codes associated with OM group MDSACT are shown in the following table.

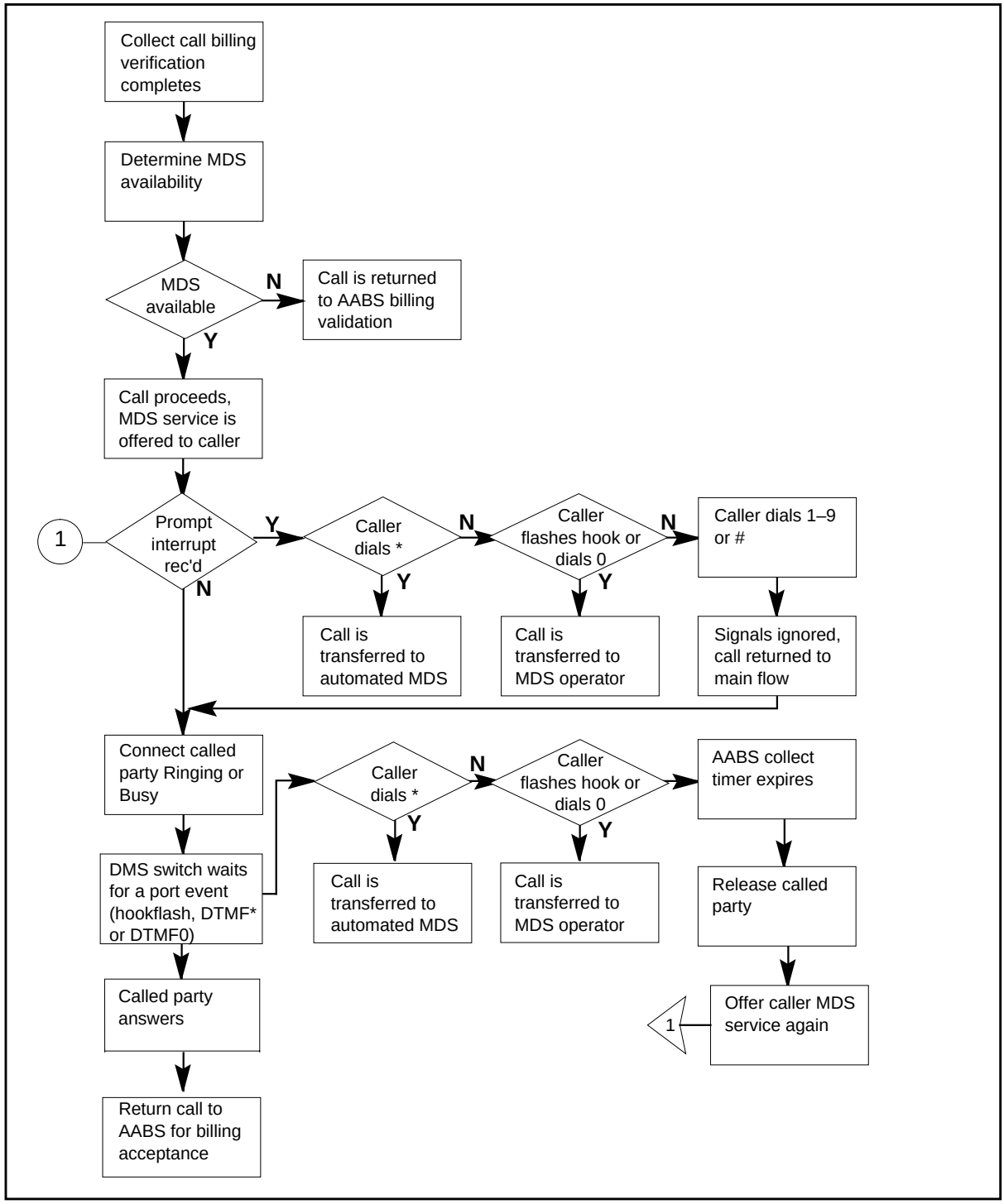
Functionality	Code
AABS Enhanced Services Access	NTXS37AA

OM group MDSACT call flow for station special calling



OM group MDSACT (continued)

OM group MDSACT call flow collect



Register ACC3RD

Third number call accepted service

ACC3RD is incremented when a caller on an AABS third number call that has been floated chooses to select MDS.

Register ACC3RD release history

ACC3RD was introduced in BCS36.

Associated registers

None

Associated logs

None

Extension registers

None

Register ACCCC

Calling card call accepted service

ACCCC is incremented when a subscriber on an AABS calling card call that has been floated chooses to select MDS.

Register ACCCC release history

ACCCC was introduced in BCS36.

Associated registers

None

Associated logs

None

Extension registers

None

Register ACCCOL

Collect call accepted service

ACCCOL is incremented when a subscriber on an AABS collect call that has been floated selects MDS.

OM group MDSACT (continued)

Register ACCCOL release history

ACCCOL was introduced in BCS36.

Associated registers

None

Associated logs

None

Extension registers

None

Register ELIG3RD

Third number call eligible

ELIG3RD is incremented when an AABS third number call is sent from the voice services node to the switch with a language present in table MDSLANG with MONITOR = Y.

Register ELIG3RD release history

ELID3RD was introduced in BCS36.

Associated registers

None

Associated logs

None

Extension register

ELIG3RD2

Register ELIGCC

Calling card call eligible

ELIGCC is incremented when an AABS calling card call is sent from the voice services node to the switch with a language present in table MDSLANG with MONITOR = Y.

Register ELIGCC release history

ELIGCC was introduced in BCS36.

Associated registers

None

Associated logs

None

Extension register

ELIGCC2

Register ELIGCOL

Collect calls eligible

ELIGCOL is incremented when an AABS collect call is sent from the voice services node to the switch with a language present in table MDSLANG with MONITOR = Y.

Register ELIGCOL release history

ELIGCOL was introduced in BCS36.

Associated registers

None

Associated logs

None

Extension registers

None

Register INELG3RD

Third number call ineligible

INELG3RD is incremented when an AABS third number call is sent from the voice services node to the switch with a language to which one of the following conditions applies:

- the language is not present in table MDSLANG
- the language is present in table MDSLANG and MONITOR = N

Register INELG3RD release history

INELG3RD was introduced in BCS36.

Associated registers

None

Associated logs

None

OM group MDSACT (continued)

Extension register

INELG3R2

Register INELGCC

Calling card call ineligible

INELGCC is incremented when an AABS calling card call is sent from the voice services node to the switch with a language to which one of the following conditions applies:

- the language is not present in table MDSLANG
- the language is present in table MDSLANG and MONITOR = N

Register INELGCC release history

INELGCC was introduced in BCS36.

Associated registers

None

Associated logs

None

Extension register

INELGCC2

Register INELGCOL

Collect call ineligible

INELGCOL is incremented when an AABS collect call is sent from the voice services node to the switch with a language to which one of the following conditions applies:

- the language is not present in table MDSLANG
- the language is present in table MDSLANG and MONITOR = N

Register INELGCOL release history

INELGCOL was introduced in BCS36.

Associated registers

None

Associated logs

None

Extension registers

None

Register MON3RDFA

Monitor third number call failure

MON3RDFA is incremented when monitoring an AABS third-number call for MDS selection fails, that is, no receiver was obtained or the call could not be connected to the receiver.

Register MON3RDFA release history

MON3RDFA was introduced in BCS36.

Associated registers

None

Associated logs

None

Extension registers

None

Register MON3RDSU

Monitor third number call success

MON3RDSU is incremented when an AABS third number call is successfully monitored for MDS selection, that is, a receiver was obtained and a connection was made to it.

Register MON3RDSU release history

MON3RDSU was introduced in BCS36.

Associated registers

None

Associated logs

None

Extension register

MON3RDS2

Register MONCCFA

Monitor calling card call failure

OM group MDSACT (continued)

MONCCFA is incremented when monitoring an AABS calling card call for MDS selection fails because a receiver was not obtained or the call could not be connected to the receiver.

Register MONCCFA release history

MONCCFA was introduced in BCS36.

Associated registers

None

Associated logs

None

Extension registers

None

Register MONCCSU

Monitor calling card call success

MONCCSU is incremented when an AABS calling card call is successfully monitored for MDS selection, that is, a receiver was obtained and a connection was made to it.

Register MONCCSU release history

MONCCSU was introduced in BCS36.

Associated registers

None

Associated logs

None

Extension register

MONCCSU2

Register MONCOLFA

Monitor collect call failure

MONCOLFA is incremented when monitoring an AABS collect call, which has been sent from the voice services node to the switch, for MDS selection fails. Failures occur because a receiver is not obtained or the call could not be connected to the receiver.

Register MONCOLFA release history

MONCOLFA was introduced in BCS36.

Associated registers

None

Associated logs

None

Extension registers

None

Register MONCOLSU

Monitor collect call success

MONCOLSU is incremented when an AABS collect call is successfully monitored for MDS selection, that is, a receiver is obtained and a connection is made to it.

Register MONCOLSU release history

MONCOLSU was introduced in BCS36.

Associated registers

None

Associated logs

None

Extension registers

None

Register NOACC3RD

Third number call did not accept service

NOACC3RD is incremented whenever a subscriber on an AABS third number call is offered MDS and does not choose to select MDS.

Register NOACC3RD release history

NOACC3RD was introduced in BCS36.

Associated registers

None

OM group MDSACT (end)

Associated logs
None

Extension register
NOACC3R2

Register NOACCCC
Calling card call did not accept service

NOACCCC is incremented when a subscriber on an AABS calling card call that was offered MDS does not select MDS.

Register NOACCCC release history
NOACCCC was introduced in BCS36.

Associated registers
None

Associated logs
None

Extension register
NOACCCC2

Register NOACCCOL
Collect call did not accept service

NOACCCOL is incremented when a subscriber on an AABS collect call that was offered MDS does not select MDS.

Register NOACCCOL release history
NOACCCOL was introduced in BCS36.

Associated registers
None

Associated logs
None

Extension registers
None

OM group MDSSTATS

OM description

MDS Statistics

This OM group provides the Modular Documentation System (MDS) provider with information about:

- how many times each offer of service prompt has been played
- the total number of times offer of service prompts have been played
- how the subscribers have accepted the service
- the total number of times the service has been accepted
- how many time the subscribers have interrupted the playing of the offer of service prompts
- how many times the subscribers have hung-up during the playing of the offer of service prompts.

These statistics can be used to determine the percentage of calls that chose MDS with respect to how many have been offered the service. The statistics can also indicate why the service is being offered (for example; due to CLD Busy, RNA, and so forth) and how the subscribers are accepting it. Also useful is to see the percentage of calls that are being offered the Generic prompt due to the switch's inability to determine the exact network condition.

Release history

OM group MDSSTATS was introduced in TOPS05.

Registers

OM group MDSSTATS registers display on the MAP terminal as follows:

OM group MDSSTATS (continued)

```
>OMSHOW MDSSTATS ACTIVE

CLASS: ACTIVE
START: 1995/04/13 15:30:00 FRI; STOP; 1995/04/13 15:38:45 FRI;
SLOWSAMPLES: 5 ; FASTSAMPLES: 98;


     BSYOOSP        BSYOOSP2        NETOOSP        NETOOSP2

     RNAOOSP        RNAOOSP2        GENOOSP        GENOOSP2

     TOTOOSP        TOTOOSP2        STARACC        STARACC2

     ZEROACC        ZEROACC2        HOOKACC        HOOKACC2

     TOTLACC        TOTLACC2        PRMTSTP        PRMTSTP2

     PRMTABD        PRMTABD2


          3              0               1              0
          2              0               1              0
          7              0               3              0
          1              0               0              0
          4              0               0              0
          0              0
```

Group structure

OM group MDSSTATS provides one tuple for each office.

Key field:
None

Info field:
None

Associated OM groups

MDSACT - This existing OM group contains statistics regarding calls eligible for MDS, monitored for MDS, and that chose MDS. These are all based upon call types (for example; collect, bill-to-3rd, and so forth).

Associated functional groups

The TOPS MDS Enhancements functional group is associated with OM group MDSSTATS.

OM group MDSSTATS (continued)

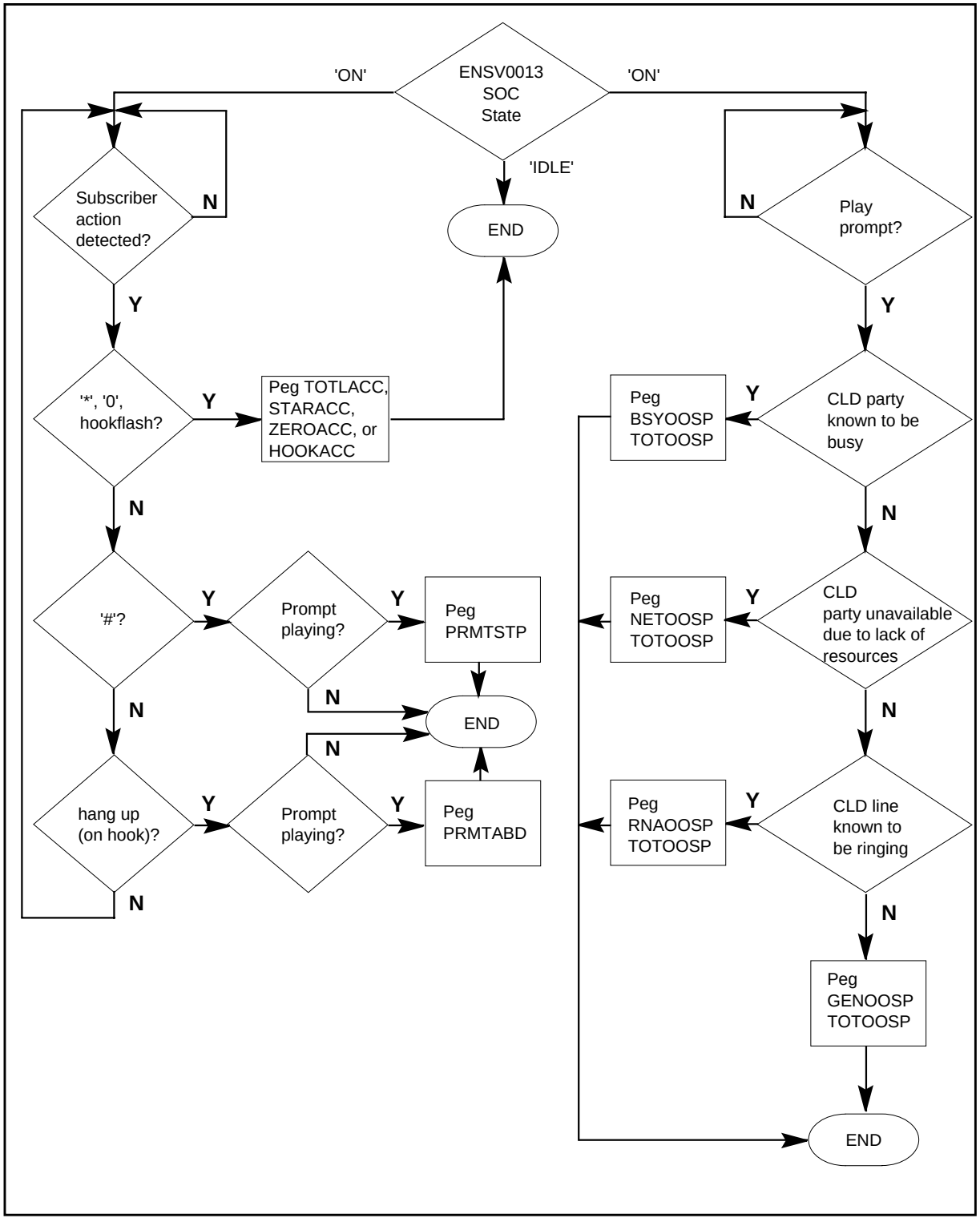
Associated functionality codes

The functionality codes associated with OM group MDSSTATS are shown in the following table.

Functionality	Code
MDS - Offer of Service Prompt	ENSV0013

OM group MDSSTATS (continued)

OM group MDSSTATS registers



Register BSYOOSP

Busy Offer of Service Prompt Played

This register is pegged whenever the BUSY Offer Of Service Prompt (OOSP) is played.

Register BSYOOSP release history

BSYOOSP was introduced in TOPS05.

Associated registers

The TOTOOSP register is pegged every time this register is pegged.

Associated logs

None

Extension registers

BSYOOSP2

Register GENOOSP

Generic Offer of Service Prompt Played

This register is pegged whenever the GENERIC OOSP is played.

Register GENOOSP release history

GENOOSP was introduced in TOPS05.

Associated registers

The TOTOOSP register is pegged every time this register is pegged.

Associated logs

None

Extension registers

GENOOSP2

Register HOOKACC

Detection of `Hookflash' For Acceptance of MDS

This register is pegged whenever the TOPS subsystem detects that the subscriber keyed `hookflash' to choose MDS and was therefore routed to MDS. It is assumed that the hookflash enable office wide parms in the DMS and in the VSN are enabled or disabled consistently with respect to each other (that is, if one is enabled the other is also be enabled).

OM group MDSSTATS (continued)

Register HOOKACC release history

HOOKACC was introduced in TOPS05.

Associated registers

The TOTLACC register is pegged every time this register is pegged.

Associated logs

None

Extension registers

HOOKACC2

Register NETOOSP

Network Busy Offer of Service Prompt Played

This register is pegged whenever the NETWORK BUSY OOSP is played.

Register NETOOSP release history

NETOOSP was introduced in TOPS05.

Associated registers

The TOTOOSP register is pegged every time this register is pegged.

Associated logs

None

Extension registers

NETOOSP2

Register PRMTABD

Number of Subscriber Hang-ups During Prompt

This register is pegged every time a subscriber hangs up during the playing of a prompt.

Register PRMTABD release history

PRMTABD was introduced in TOPS05.

Associated registers

None

Associated logs

None

Extension registers

PRMTABD2

Register PRMTSTP

Detection of `#' to Stop Playing of a Prompt

This register is pegged every time a subscriber keys `#' to stop the playing of a prompt. A prompt must be playing when the subscriber keys `#' in order to peg this register.

Register PRMTSTP release history

PRMTSTP was introduced in TOPS05.

Associated registers

None

Associated logs

None

Extension registers

PRMTSTP2

Register RNAOOSP

Ring-No-Answer Offer of Service Prompt Played

This register is pegged whenever the RNA OOSP is played.

Register RNAOOSP release history

RNAOOSP was introduced in TOPS05.

Associated registers

The TOTOOSP register is pegged every time this register is pegged.

Associated logs

None

Extension registers

RNAOOSP2

Register TOTLACC

Total Number of Subscriber Acceptances for MDS

This register is pegged every time a subscriber chooses and is routed to MDS.

OM group MDSSTATS (continued)

Register TOTLACC release history

TOTLACC was introduced in TOPS05.

Associated registers

The TOTLACC register is pegged every time registers STARACC, ZEROACC, or HOOKACC are pegged.

Associated logs

None

Extension registers

TOTLACC2

Register TOTOOSP

Total Number of Offer of Service Prompts Played

This register is pegged whenever any OOSP is played.

Register TOTOOSP release history

TOTOOSP was introduced in TOPS05.

Associated registers

The TOTOOSP register is pegged every time registers BSYOOSP, NETOOSP, RNAOOSP, or GENOOSP are pegged.

Associated logs

None

Extension registers

TOTOOSP2

Register STARACC

Detection of `*' For Acceptance of MDS

This register is pegged whenever the TOPS subsystem detects that the subscriber keyed `*' to choose MDS and was therefore routed to MDS.

Register STARACC release history

STARACC was introduced in TOPS05.

Associated registers

The TOTLACC register is pegged every time this register is pegged.

Associated logs

None

Extension registers

STARACC2

Register ZEROACC

Detection of `0' For Acceptance of MDS

This register is pegged whenever the TOPS subsystem detects that the subscriber keyed `0' to choose MDS and was therefore routed to MDS.

Register ZEROACC release history

ZEROACC was introduced in TOPS05.

Associated registers

The TOTLACC register is pegged every time this register is pegged.

Associated logs

None

Extension registers

ZEROACC2

OM group MOC4TONE

OM description

To be assigned by licensee

The licensee can assign MOC4TONE to track any activity in the software stream the license adds to the BNR software base.

This group supports the integration of the exact software loads of the licensee.

Release history

The OM group MOC4TONE introduced in BCS22.

Registers

The OM group MOC4TONE registers appear on the MAP terminal as follows:

```
TONE4NATT
```

Group structure

The OM group MOC4TONE does not have group structure.

Associated OM groups

There are no associated OM groups.

Associated functional groups

The OM group MOC4TONE does not have associated functional groups.

Register TONE4NATT

The licensee can assign TONE4NATT to track any activity in the software stream the license adds to the BNR software base.

This register supports the integration of the exact software loads of the licensee.

Register TONE4NATT release history

Register TONE4NATT introduced in BCS22.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group MPB

OM description

Multi-party bridge (MPB)

The operational measurement (OM) group MPB counts all of the attempts to allocate conference circuits for multi-party bridge calls. The multi-party bridge consists of up to four single-party lines on a DMS-100 switch. Lines associate through the conference circuits located in a maintenance trunk module (MTM). The members of the multi-party bridge group appear as separate parties on a multi-party line.

Operating company personnel use the data the MPB provides to determine if there are enough conference circuits on a switch.

Release history

The OM group MPB was introduced in BCS24.

Registers

The OM group MPB registers appear on the MAP terminal as follows:

```
MPBFAIL          MPBCONF
```

Group structure

The OM group MPB provides one tuple for each office.

Key field:
There is no key field.

Info field:
There is no info field.

Associated OM groups

There are no associated OM groups.

Associated functional groups

The following are associated functional groups for OM group MPB:

- DMS-100 local
- DMS-100/200 local/toll
- DMS-100/200 local/toll with TOPS

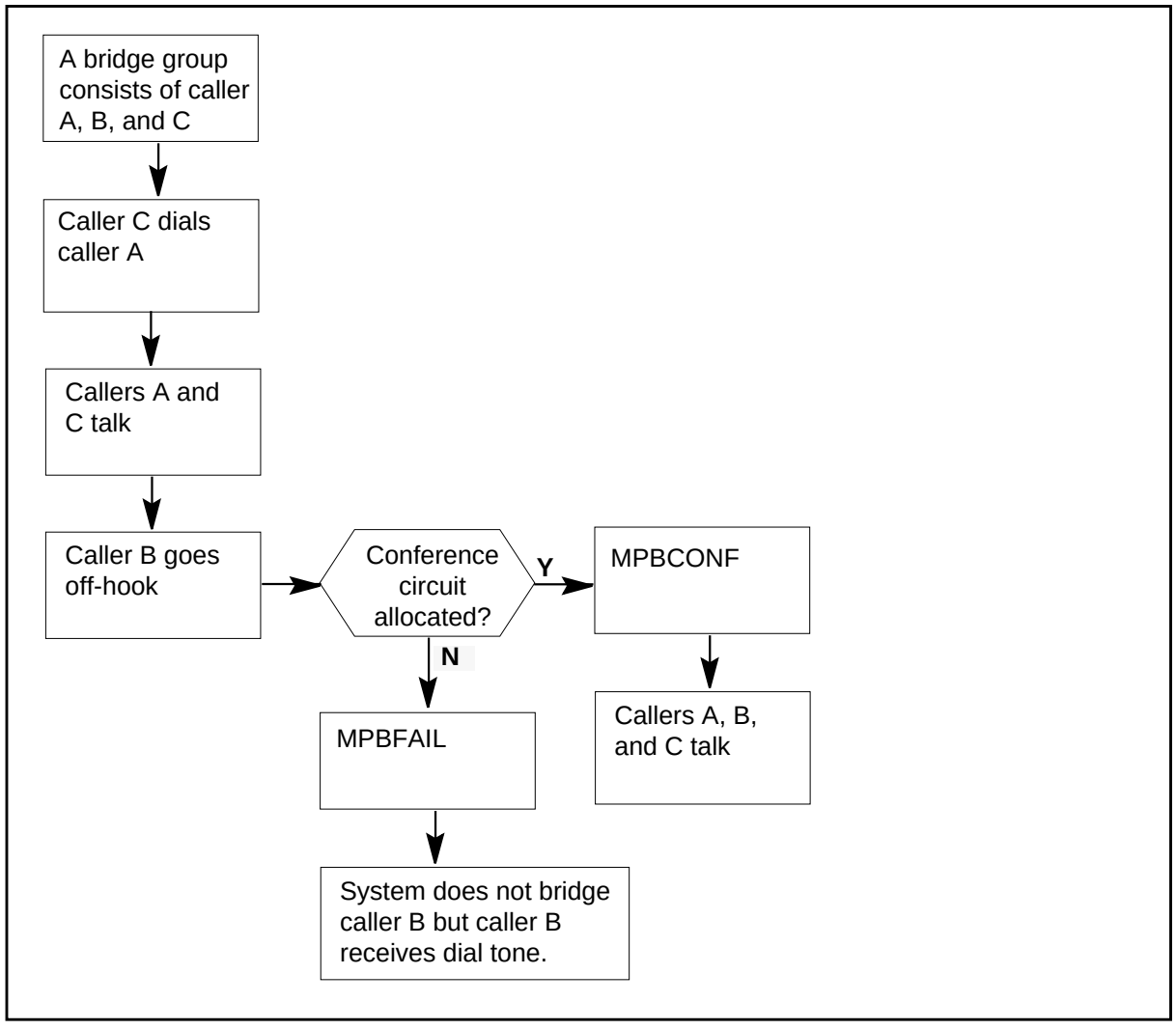
OM group MPB (continued)

Associated functionality codes

The associated functionality codes for OM group MPB appear in the following table.

Functionality	Code
Bridges Services	NTX297AA

OM group MPB registers



Register MPBCONF

Multi-party bridge conference (MPBCONF)

Register MPBCONF counts the successful attempts to allocate a conference circuit for a multi-party bridge call.

Register MPBCONF release history

Register MPBCONF was introduced in BCS24.

Associated registers

Register MPBFLT counts all of the attempts that fail to allocate a conference circuit for a multi-party bridge call.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register MPBFAIL

Multi-party bridge failure (MPBFAIL)

Register MPBFAIL counts attempts that fail to allocate a conference circuit for a multi-party bridge call. Register MPBFAIL cannot count a second failed attempt in the same bridge group until all bridge group members go on-hook. The system places the bridge group members on hold until all bridge group members go on-hook.

Register MPBFAIL release history

Register MPBFAIL was introduced in BCS24.

Associated registers

Register MPBCONF counts successful allocations of a conference circuit for a multi-party bridge call.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group MPCBASE

OM description

Multiprotocol controller base software (MPCBASE)

The OM group MPCBASE collects data within multiprotocol controller (MPC) central control software. The data collected includes measurements or the use and availability of MPC cards and nodes, and data transfer through an MPC.

Registers L2UDSIN, L3DUSIN, L2UDSOUT, L3UDSOUT count incoming and outgoing messages an MPC handles. Register CONVESTB counts successful conversations an MPC handles.

The following registers provide information about maintenance problems:

- MPCNSBBU and MPCNSSBU for busy time
- RESETL2 and RESETL3 for link reliability
- CONVERR for protocol problems
- LOSTMSGS for messages that cannot be delivered
- BDAPPERR for MPC card problems

The following registers provide information about available MPC:

- MPCNSOK for MPC node availability
- CONVIREF for conversations not allowed because of high traffic volume
- LOSTMSGS for messages not delivered because there are not enough resources
- FCTRLDEL for messages delayed because of high traffic volume

Release history

The OM group MPCBASE introduced in BCS26.

BCS32

The Call History Information Processing System (CHIPS) File Transfer feature on the enhanced multiprotocol controller (EMPC) card increases registers.

Registers

The OM group MPCBASE registers appears on the MAP terminal as follows:

MPCNSOK	MPCNSSBU	MPCNSMBU	RESETL2
RESETL3	CONVESTB	CONVIREF	CONVERR
LOSTMSGS	L2UDSIN	L3UDSIN	L2UDSOUT
L3UDSOUT	FCTRLDEL	BDAPPERR	

Group structure

The OM group MPCBASE provides one tuple for each MPC key.

Key field:
There is no key field for this group. The maximum number of tuples cannot be greater than the index range in table MPC.

Info field:
MPCOMINFOTYPE

The system creates the Info field with the following information:

- MPCNO refers to the MPC number to which the tuple data applies.
- IOCNO refers to the input/output controller (IOC) where the system locates the MPC.
- CARDNO indicates the card of the MPC for the IOCNO.

The L2 L3, L2_L3 and LNONE links are the entered links. The L2 means that link 2 is entered. The L3 means that link 3 is entered. The L2_L3 means that both link 2 and link 3 are entered. The LNONE means that no links are entered.

The DLDFILE is the download file for the MPC entered in table MPC.

The MPC numbers, IOC information and download file information are entered in table MPC. The MPC links are entered in table X25LINK.

Associated OM groups

The OM group MPCFASTA provides information on outgoing traffic and exception conditions for MPC multi-link management.

The OM group MPCLINK2 provides information on traffic and faults. This information applies to traffic and faults that occur in the link, network level peripheral hardware and software for link 2 on an MPC.

OM group MPCBASE (continued)

Register MPCLINK3 provides information on traffic and faults. This information applies to traffic and faults that occur in the link, and network level peripheral hardware and software for link 3 on an MPC.

Associated functional groups

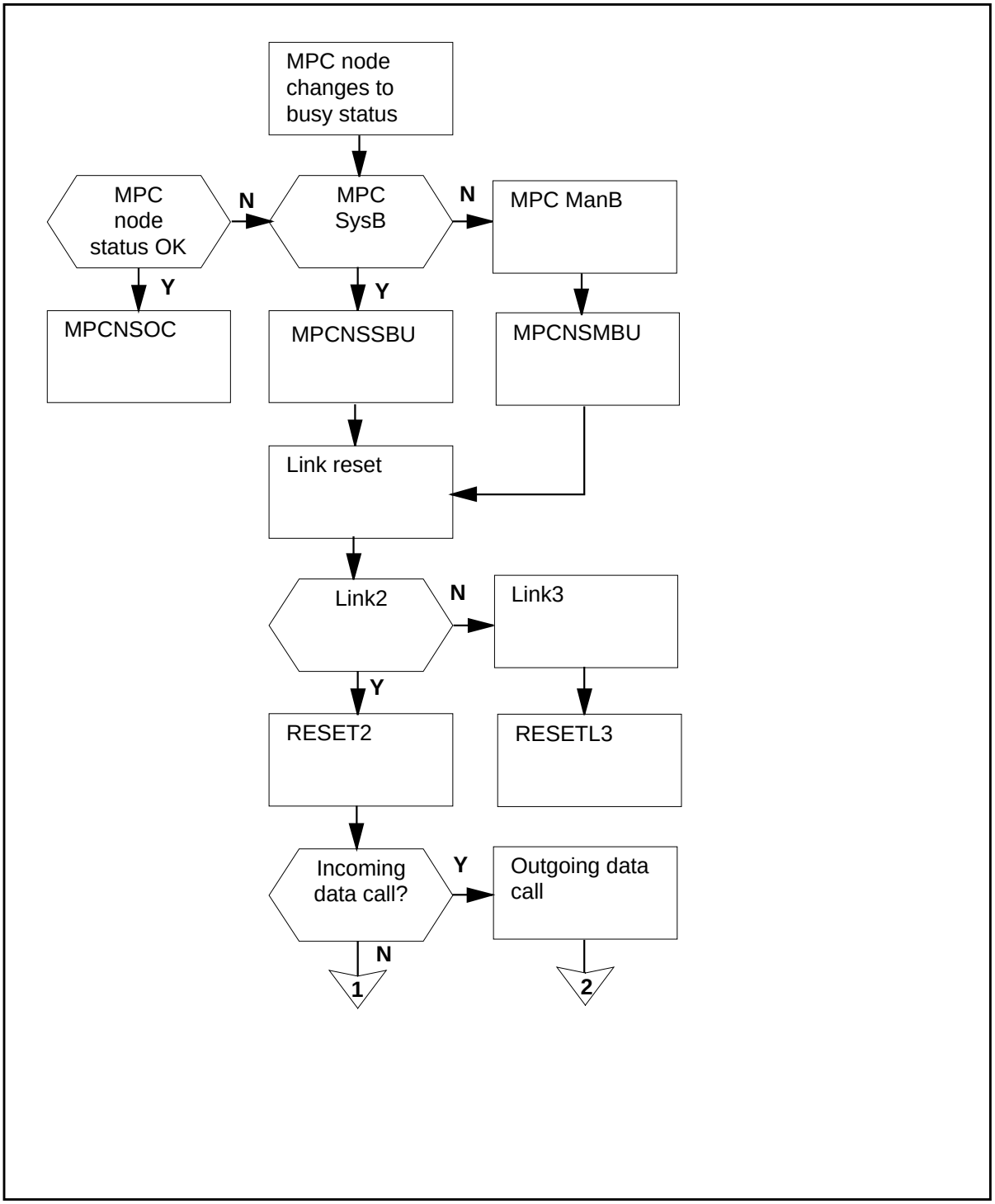
The associated functional group MPC associates with OM group MPCBASE.

Associated functionality codes

The functionality codes for OM group MPCBASE appear in the following table.

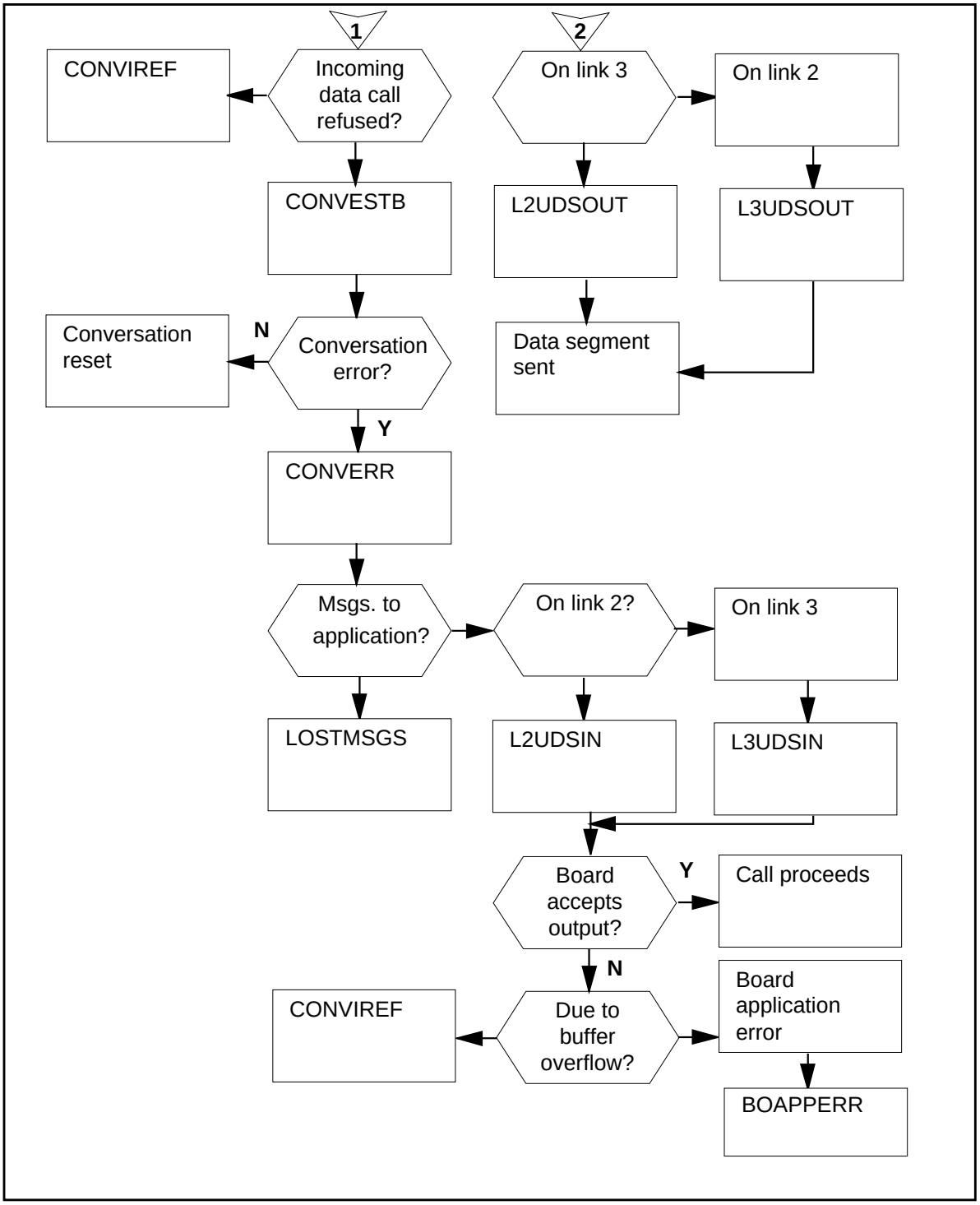
Functionality	Code
MPC	NTX273AA

OM group MPCBASE registers

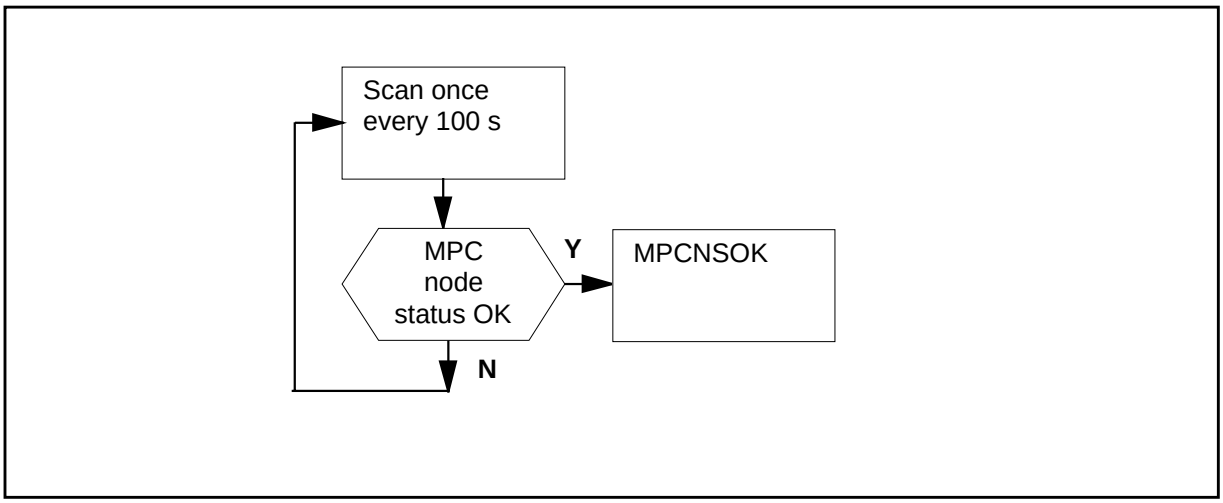


OM group MPCBASE (continued)

OM group MPCBASE registers (continued)



OM group MPCBASE usage registers (continued)



Register BDAPPERR

Multiprotocol controller (MPC) board application error

The system increases BDAPPERR when the MPC board cannot process application data. This condition is a peripheral trap.

A peripheral trap indicates problems with the MPC board, the IOC, or the peripheral software.

Register BDAPPERR release history

BDAPPERR added to BCS26.

Associated registers

There are no associated registers.

Associated logs

The system genereates MPC103 when a trap occurs in the MPC software.

Register CONVERR

Conversation error

The system increases CONVERR when a conversation reset occurs on links 2 or 3 of the MPC.

OM group MPCBASE (continued)

Conversation resets are normally caused by protocol problems. Other conversations on the link are not affected.

Register CONVERR release history

CONVERR added to BCS26.

Associated registers

There are no associated registers.

Associated logs

The system generates MPC102 when a controller condition in the SPCSUB or X25SUB subsystems could prevent normal X.25 protocol support functions.

Register CONVESTB

Conversation established

The system increases CONVESTB when the system establishes a conversation between a DMS switch and a remote.

The system establishes a conversation between a DMS switch and a remote implies that data can be transferred. CONVESTB includes counts for links 2 and 3. Link resets, which re-establish conversations, are also included in this count.

Register CONVESTB release history

CONVESTB added to BCS26.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register CONVIREF

Incoming conversation refused

The system increases CONVIREF when the DMS switch refuses an incoming data call from the network.

This count should be zero or very low. A high count can indicate one of the following:

- data entry for the link in table X25LINK is not compatible with the parameters of the remote
- facilities or data entry are not enough to handle the number of calls made
- A user is attempting to make a non authorized attempt to establish a conversation with the DMS switch

Register CONVIREF release history

CONVIREF added to BCS26.

Associated registers

There are no associated registers.

Associated logs

The system generates MPC101 when a software condition in the MPCSUB subsystem could prevent normal MPC functions.

Register FCTRLDEL

Flow control delay

The system increases FCTRLDEL when flow control delays a message to the MPC. The message is delayed because there is not enough buffer space available.

Retries are done automatically and the system counts each attempt in FCTRLDEL. The system counts the second successful attempt in L2UDSOUT or L3UDSOUT, depending on the link type.

Not enough equiptment or the remote not ready to receive messages can cause message delay. The registers reads zero unless the system is sending the data in large bursts. The system sends the data by applications such as the Engineering and Administrative Data Acquisition System (EADAS).

Register FCTRLDEL release history

FCTRLDEL added to BCS26.

Associated registers

The system counts a successful attempt in L2UDSOUT or L3UDSOUT, depending on the link type.

OM group MPCBASE (continued)

Associated logs

There are no associated logs.

Register L2UDSIN

Link 2 user data segment in

L2UDSIN counts incoming data messages that arrive on link 2 of an MPC from a remote user.

Register L2UDSIN release history

L2UDSIN added to BCS26.

Associated registers

The system increases LOSTMSGS if the system loses the message.

Associated logs

There are no associated logs.

Register L2UDSOUT

Link 2 user data segment out

L2UDSOUT counts outgoing user data segments on link 2 of an MPC. This count depends on the volume of messages output by a local user of link 2.

Register L2UDSOUT release history

L2UDSOUT added to BCS26.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L3UDSIN

Link 3 user data segment in

L3UDSIN counts incoming data messages that arrive on link 3 of an MPC from a remote user.

Register L3UDSIN release history

L3UDSIN added to BCS26.

Associated registers

The system increases LOSTMSGS if the system loses the message.

Associated logs

There are no associated logs.

Register L3UDSOUT

Link 3 user data segment out

L3UDSOUT counts outgoing user data segments on link 3 of an MPC. This count depends on the volume of messages output by a local user of link 3.

Register L3UDSOUT release history

L3UDSOUT added to BCS26.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register LOSTMSGS

Lost messages

LOSTMSGS counts data messages that the system can not deliver to their intended application after the system has established a conversation.

The system can lose messages because of errors or because there is not enough application resources. The count in LOSTMSGS should be zero or very low. A high count indicates that a process no longer reads incoming data.

Register LOSTMSGS release history

LOSTMSGS added to BCS26.

Associated registers

There are no associated registers.

Associated logs

The system generates MPC102 to report on the number of failures to deliver a message and the reason for each failure.

Register MPCNSMBU

Multiprotocol controller (MPC) node status manual busy

OM group MPCBASE (continued)

The system increases MPCNSMBU when MPC node status changes to manual busy for maintenance purposes.

The system changes MPC node status to manual busy at the MAP.

Register MPCNSMBU release history

MPCNSMBU added to BCS26.

Associated registers

MPCLINK2 and MPCLINK3 registers are not increased when MPC node status is manual busy.

Associated logs

The system generates Log MPC903 each time the MPC becomes manual busy.

Register MPCNSOK

Multiprotocol controller (MPC) node status okay

MPCNSOK is a use register. The scan rate is slow: 100 seconds. MPCNSOK records if an MPC node is available for use.

MPCNSOK does not record if MPC node status is manual busy, system busy, or offline.

Register MPCNSOK release history

MPCNSOK added to BCS26.

Associated registers

There are no associated registers.

Associated logs

The system generates MPC905 when the user enters a return to service command at the MPC MAP level. MPC905 also generates when the MPC returns to service and an okay state.

Register MPCNSSBU

Multiprotocol controller (MPC) node status system busy

The system increases MPCNSSBU when MPC node status changes to system busy.

A problem in the hardware or peripheral software can cause a count other than zero in MPCNSSBU.

Register MPCNSSBU release history

MPCNSSBU added to BCS26.

Associated registers

There are no associated registers.

Associated logs

The system generates MPC904 when the system detects a important fault with an MPC.

Register RESETL2

Reset on link 2

The system increases RESETL2 when the protocol software executes a reset on link 2.

When a link is reset, all conversations in progress on the link are disabled and communications are re-initiated. MPC data links must be reset each time the MPC is made manual busy for maintenance or system busy. The MPC would be made manual or system busy because of link problems.

This count indicates the reliability of a link and it should be low.

Register RESETL2 release history

RESETL2 added to BCS26.

Associated registers

There are no associated registers.

Associated logs

The system generates MPC102 if a problem occurs at the link protocol level.

Register RESETL3

Reset on link 3

The system increases RESETL3 when the protocol software executes a reset on link 3.

When a link is reset, all conversations in progress on the link are disabled and communications are reinitiated. MPC data links must be reset each time the MPC is made manual busy for maintenance or system busy. The MPC is made manual or system busy because of link problems.

OM group MPCBASE (end)

This count indicates the reliability of a link and it should be low.

Register RESETL3 release history

RESETL3 added to BCS26.

Associated registers

There are no associated registers.

Associated logs

The system generates MPC102 if a problem occurs at the link protocol level.

OM group MPCFASTA

OM description

Multi-protocol controller fast applications

MPCFASTA provides information on outgoing traffic and exception conditions for multi-protocol controller (MPC) multilink management.

MPC is a peripheral device that controls data communication between a DMS-100 and a remote system. It can use different data communications protocols.

Four registers count indications of traffic the application generates and record the availability of the data links involved. Table MPCFASTA identifies applications that use the MPC fast utility, a fast input/output interface through the MPC. Each application has an associated logical link, which is a data communications channel through the MPC.

Separate registers for each application show the traffic each application generates (FAMSGOUT), the availability and stability of the data links the applications uses (LLNKAVBL and LLNKXFRD). A register also shows the quantity and quality of internal resources (FAOUTFLD).

Release history

OM group MPCFASTA added to BCS26

Registers

OM group MPCFASTA registers display on the MAP terminal as follows:

```
LLNKAVBL     LLNKXFRD     FAOUTFLD     FAMSGOUT
```

Group structure

OM group MPCFASTA provides one tuple for each application that uses MPC links.

Key field:
mpcfastapplnid. Application name datafilled in table

MPCFASTA. The maximum number of applications allowed is 15.

Info field:
mpcfastaominfotype.

OM group MPCFASTA (continued)

NUMLINKS - Number of logical links datafilled in MLCLIST in table MPCFASTA.

APPLQ - Number of application queue items.

LMKIN - Suggested minimum number of logical links for the application in table MPCFASTA.

Associated OM groups

MPCBASE provides information on traffic handled by the MPC.

MPCLINK2 and MPCLINK3 provides information on traffic and faults that occur in the link. MPCLINK2 and MPCLINK3 also moniters network level peripheral hardware and software for links 2 and 3 on an MPC.

Associated functional groups

The functional group IBN Attendant Console associates with OM group MPCFASTA.

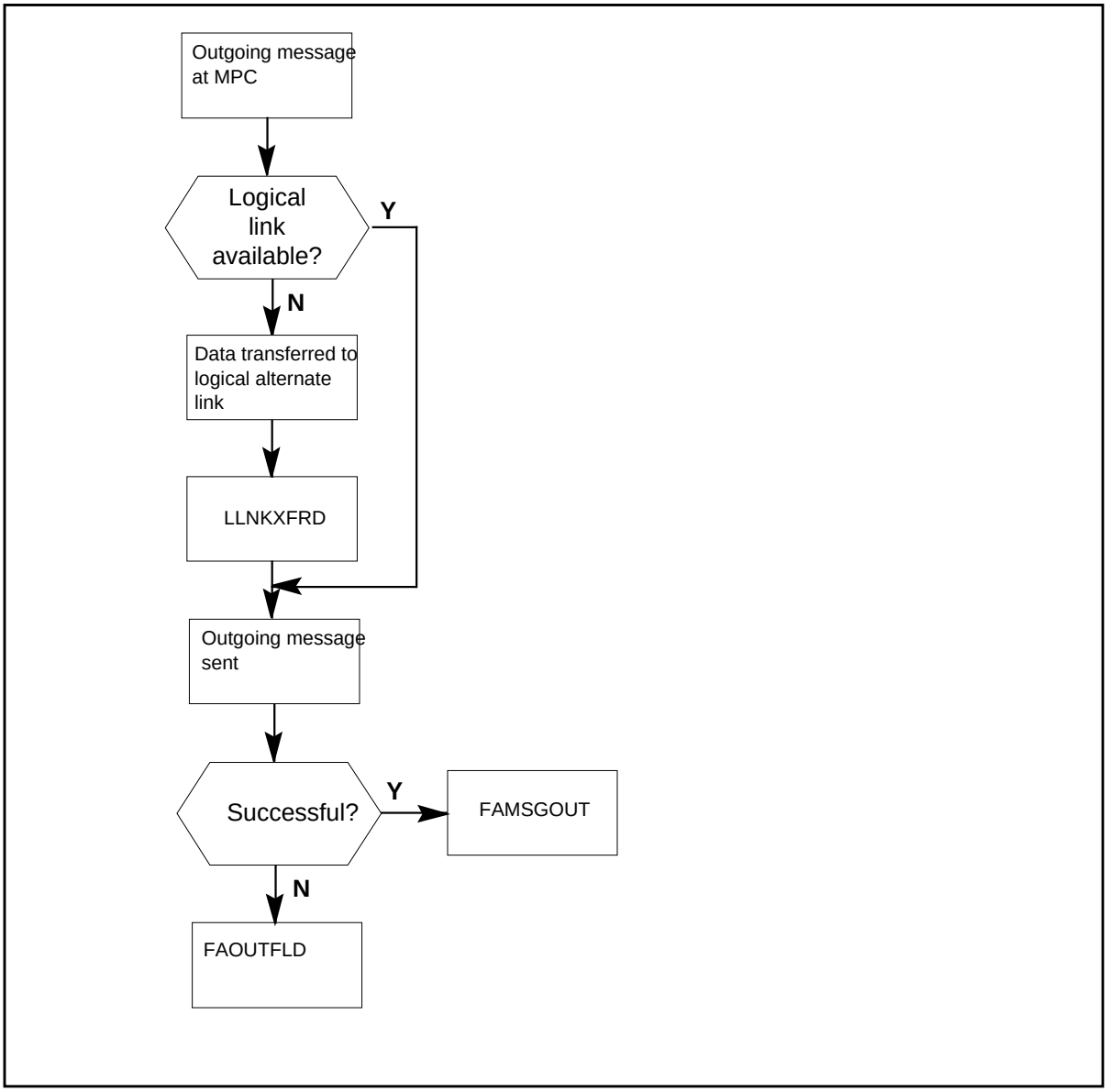
Associated functionality codes

The functionality codes associates with OM group MPCFASTA are shown in the following table.

Functionality	Code
Multilink Management	NTX892AA

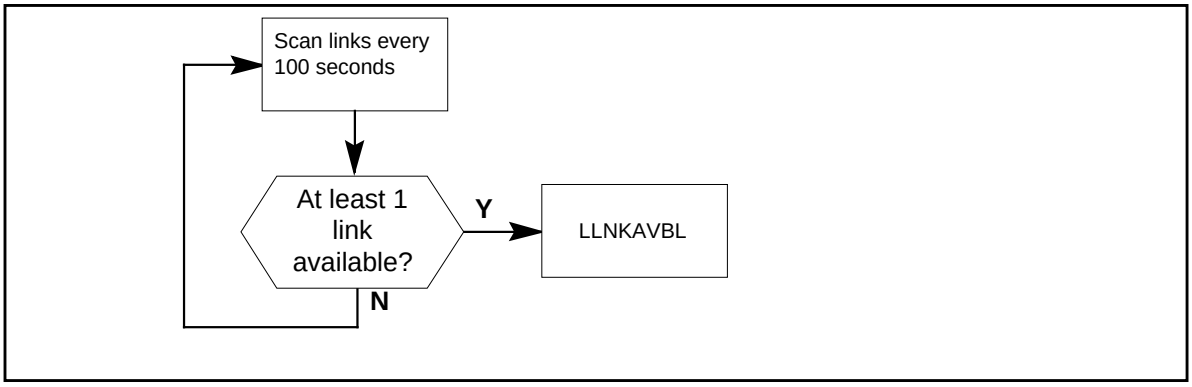
OM group MPCFASTA (continued)

OM group MPCFASTA registers



OM group MPCFASTA (continued)

OM group MPCFASTA use registers



Register FAMSGOUT

FAST application message output

FAMSGOUT counts outgoing messages that the application sends over data links.

Register FAMSGOUT release history

FAMSGOUT added to BCS26.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register FAOUTFLD

Fast application output operation failed

The system increases FAOUTFLD when an application output attempt fails. Failure occurs because of there is not enough internal resources to que the output attempts.

High counts in FAOUTFLD may show there is not enough of internal resources to que the output attempts. Application parameters and traffic level estimates allocate internal que resources. High counts in FAOUTFLD can also occur because messages are backed up at the multi-protocol controller (MPC). Messages can be backed up because of application or protocol software problems.

FAOUTFLD does not count application output failures caused by invalid application identification, invalid message size, or the links are not availability.

Register FAOUTFLD release history

FAOUTFLD added to BCS26.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register LLNKAVBL

Logical link availability

LLNKAVBL is a use register. The scan rate is slow: 100 seconds. The system increases LLNKAVBL when at least one logical link is available for use by an MPC FAST application.

Register LLNKAVBL release history

LLNKAVBL added to BCS26.

Associated registers

There are no associated registers.

Associated logs

The system generates MPC201 when the system uses an MPC for a fast utility application.

Register LLNKXFRD

Logical link data transferred

The sytem increases LLNKXFRD when the system sends data to an alternate logical link. The alternate link is used because the logical link that the system first targeted is not available.

The system makes a logical link not available when an output attempt fails or when the system resets the link by software,. A link can also be made unavalible when the system detects no response. The system can use LLNKXFRD as an indicator of link stability.

Register LLNKXFRD release history

LLNKXFRD added to BCS26.

Associated registers

There are no associated registers.

OM group MPCFASTA (end)

Associated logs

The system generates MPC201 when the system uses an MPC for a fast utility application.

OM group MPCLINK2

OM description

Multiprotocol controller link 2

MPCLINK2 provides information on traffic and faults. These are traffic and faults that occur in the link and network level of the open system interconnect (OSI) model. The OSI model is for link 2 on a multiprotocol controller (MPC). The system collects data at the MPC card level in the peripheral processor software.

The following registers count at the physical level:

- L2PABORT counts frames aborted because of line, modem, or card problems
- L2PSYNCU counts link synchronization errors
- L2PDOWN incremented when the peripheral module processor attempts to enable the physical layer of a link
- L2PHWERR counts hardware errors

The following registers count at the link level:

- L2LSETUP counts link restarts
- L2LDISC counts link disconnects
- L2LDOWN counts links that are out of service (OOS)
- L2LACKTO counts acknowledgement timeouts
- L2LRXMIT counts retransmissions
- L2LLVIO counts invalid messages
- L2LLRVIO counts invalid messages
- L2LRCV counts messages received
- L2LXMIT counts messages transmitted
- L2MSGLST counts incoming messages lost

The following registers count at the network level:

- L2NURVC counts data received
- L2NUXMIT counts data transmitted

Release history

OM group MPCLINK2 added to BCS26.

OM group MPCLINK2 (continued)

BCS32

The system increases registers by the Call History Information Processing System (CHIPS) File Transfer feature. This feature is on the enhanced multiprotocol controller (EMPC) card.

BCS30

The system adds L2MSGLST to count incoming messages lost on link 2 of the MPC. Only applies to the asynchronous protocol implementation of the MPC subsystem L2PABORT, L2PSYNC, L2PDOWN, L2PHWERR, L2LXMIT, L2LRCV, L2NUXMIT, and L2NURCV count events associated with asynchronous protocol implementation of the MPC subsystem.

Registers

OM group MPCLINK2 registers display on the MAP terminal as follows:

```
L2PABORT    L2PSYNC     L2PDOWN     L2PHWERR
L2LSETUP    L2LDISC     L2LDOWN     L2LACKTO
L2LXMIT     L2LRCV      L2LRXMIT    L2LLVIO
L2LRVIO     L2NUXMIT    L2NURCV     L2MSGLST
```

Group structure

OM group MPCLINK2 provides one tuple per datafilled MPC.

Key field:
none

Info field:
The MCPLOMINFOTYPE information field is MPCNO, RF_CONVS, and RXMIT_TIME.

MPCNO is the MPC number in table MPC. DF_CONVS is the number of conversations datafilled on the link. If the user can not enter conversations, the system considers DF_CONVS to be 1.

DF_CONVS must be non-zero. RXMIT_TIME is the value in seconds of the protocol retransmission timer.

The user enters MPC information in table MPC.

Associated OM groups

MPCFASTA provides information on outgoing traffic and exception conditions for MPC multilink management.

MPCBASE provides information on traffic handled by an MPC.

MPCLINK3 provides information on traffic and faults that occur in the link, and network level peripheral hardware and software. The hardware and software exist for link 3 on an MPC.

Associated functional groups

The functional group MPC associate with OM group MPCLINK2.

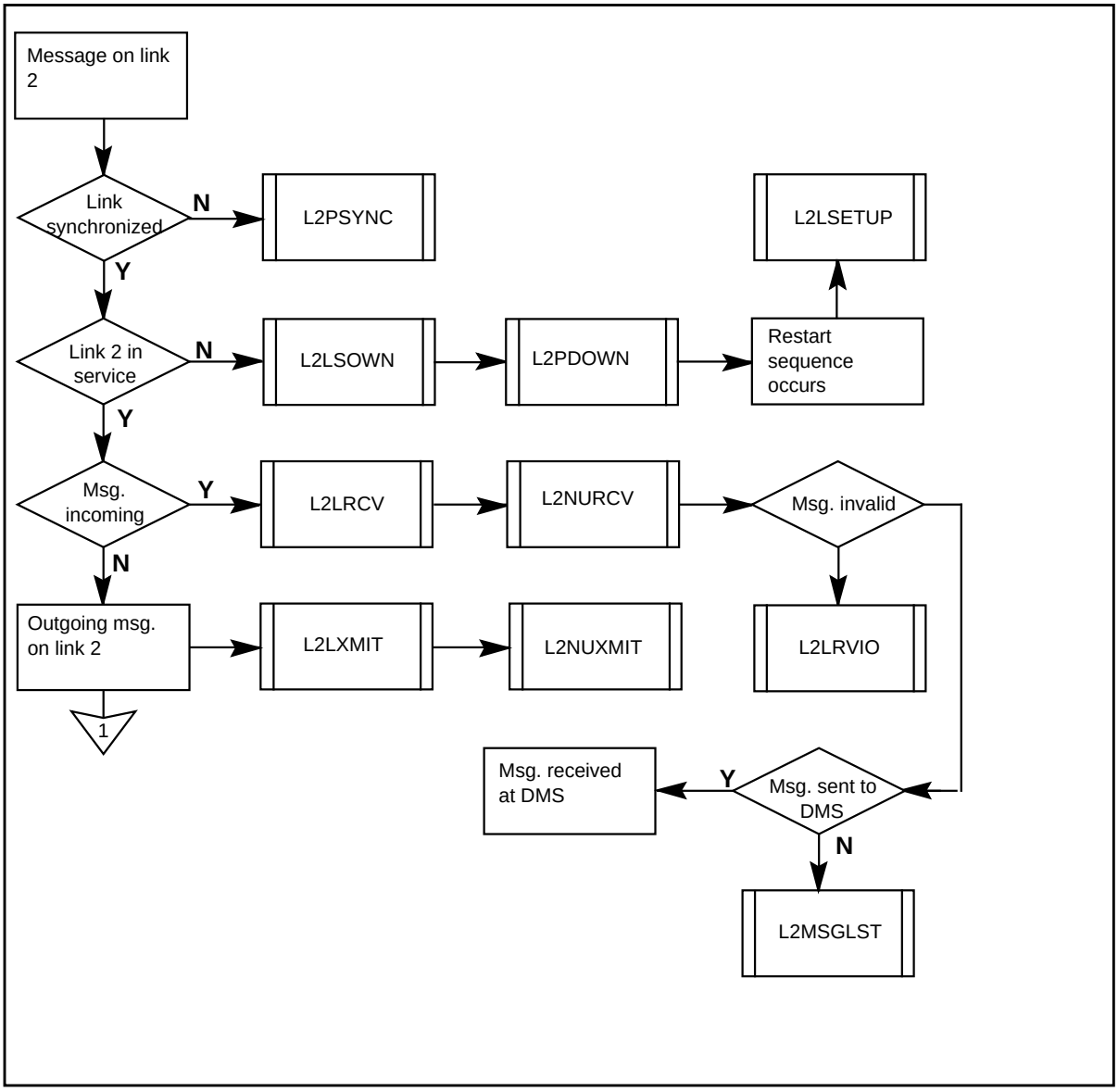
Associated functionality codes

The functionality codes that associate with OM group MPCLINK2 are shown in the following table.

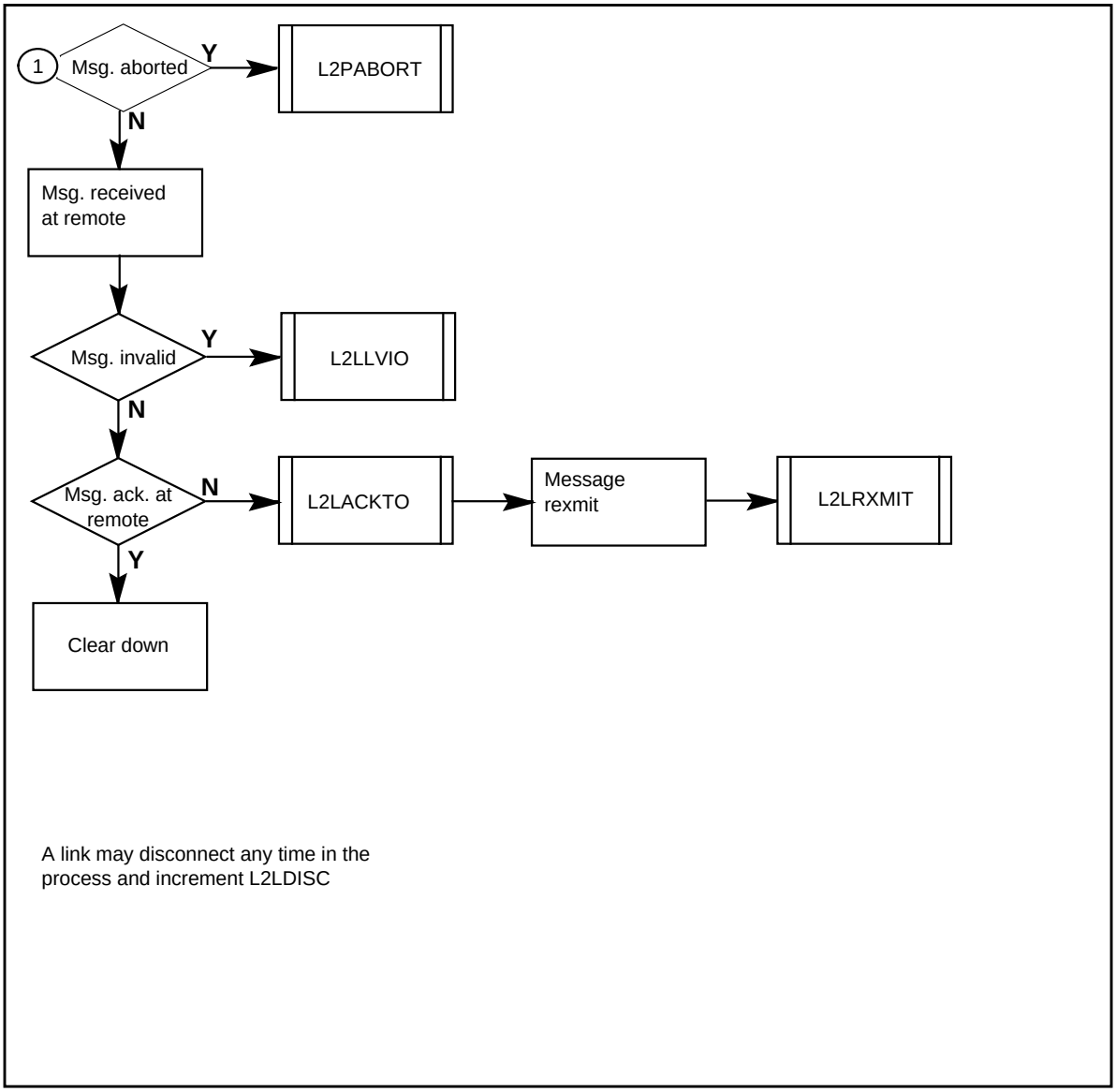
Functionality	Code
MPC	NTX273AA
High-speed Simplified Message Desk Interface (SMDI)	NTXN10AA

OM group MPCLINK2 (continued)

OM group MPCLINK2 registers



OM group MPCLINK2 registers (continued)



Register L2LACKTO

Link 2 link acknowledgement timeout

The system increases L2LACKTO when acknowledgement for a message sent is not received from the remote within a specified time.

Field T2, or T2_MS in table X25LINK specifies the time. The default is 3 seconds.

OM group MPCLINK2 (continued)

If the count in L2LACKTO is high, the link will go OOS and the system increases L2LDOWN. The other option is that the system initiates a link restart and increases the L2LSETUP.

Register L2LACKTO release history

L2LACKTO added to BCS26.

Associated registers

If the count in L2LACKTO is high, the system automatically removes the link from service and increases L2LDOWN. The other option is that the system will initiate a link set-up and increase the L2LSETUP.

Associated logs

There are no associated logs.

Register L2LDISC

Link 2 link disconnect

The system will increase L2LDISC when the system sends a link disconnect from either end of the link.

A link disconnect terminates communication on a link. A link restart is necessary to prepare the link again for active communication.

Register L2LDISC release history

L2LDISC added to BCS26.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L2LDOWN

Link 2 link down

The system increases L2LDOWN once for every second that a link 2 is not in service. A link 2 is not in service because there is not a response from the remote level two software.

The link must be restarted.

Register L2LDOWN release history

L2LDOWN added to BCS26.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L2LLVIO

Link 2 link local problems

L2LLVIO counts messages from the MPC that are considered invalid by the remote.

Register L2LLVIO release history

L2LLVIO added to BCS26.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L2LRCV

Link 2 messages received

The system increases L2LRCV when an incoming message arrives on the link.

Register L2LRCV release history

L2LRCV added to BCS26.

BCS30

For the asynchronous protocol implementation of the MPC subsystem, data messages received by the peripheral are counted by L2LRCV.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group MPCLINK2 (continued)

Register L2LRVIO

Link 2 link remote violations

L2LRVIO counts invalid messages received from the remote at the MPC.

Register L2LRVIO release history

L2LRVIO added to BCS26.

BCS30

For the asynchronous protocol implementation of the MPC subsystem, wrong data messages received by the peripheral counted by L2LRVIO.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L2LRXMIT

Link 2 link retransmission

L2LRXMIT counts messages that are transmitted again because of a request from the remote or because the message was not acknowledged.

Register L2LRXMIT release history

L2LRXMIT added to BCS26.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L2LSETUP

Link 2 link set-up

The system increases L2LSETUP when a link restart sequence occurs.

The system initiates a link restart by the local MPC or remote to ensure that communication is possible over a link. During a restart, the system loses the MPC output data and data in transit on the link.

A high count indicates a problem in the line, modem, or card. A high count occurs because of a protocol incompatibility.

Register L2LSETUP release history

L2LSETUP added to BCS26.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L2LXMIT

Link 2 messages sent

The system increases L2LXMIT when the system sends a message on the link.

Messages can be data related or protocol related.

Register L2LXMIT release history

L2LXMIT added to BCS26.

BCS30

For the asynchronous protocol implementation of the MPC subsystem, data messages transmitted by the peripheral are counted by L2LXMIT.

Associated registers

There are no associated registers.

Associated logs

There are no associated registers.

Register L2MSGLST

Link 2 messages lost

L2MSGLST counts incoming messages lost on link 2 of the MPC.

L2MSGLST is correct only for the asynchronous protocol implementation of the MPC subsystem.

Register L2MSGLST release history

L2MSGLST added to BCS26.

OM group MPCLINK2 (continued)

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L2NURCV

Link 2 user data received

The system increases L2NURCV when 1 Kbyte of user data is received at the MPC on the link.

Register L2NURCV release history

L2NURCV added to BCS26.

BCS30

For the asynchronous protocol implementation of the MPC subsystem, the system increases L2NURCV. L2NURCV increases when the MPC on the link receives I Kbyte of Data.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L2NUXMIT

Layer 2 link user data transmitted

The system increases L2NUXMIT when the system transmitts 1 Kbyte of user data on the link from the MPC.

Register L2NUXMIT release history

L2NUXMIT added to BCS26.

BCS30

For the asynchronous protocol implementation of the MPC subsystem, the system increases BCS30. The system increases BCS30 when 1 kbyte of data is transmitted on the link from the MPC.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L2PABORT

Abort on link 2

L2PABORT counts outgoing frames on link 2 that are aborted because of line, modem or card problems. L2PABORT also increases when frames are sent with an abort indication at the logical level.

A count in this register may indicate line noise, a common cause of link and network exceptions.

Register L2ABORT release history

L2ABORT added to BCS26.

BCS30

For the asynchronous protocol implementation of the MPC subsystem, parity and framing errors on received data are counted by L2PABORT.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L2PDOWN

Link 2 time down

The system increases L2PDOWN once for every second the peripheral processor tries to enable the physical layer of link 2.

Register L2PDOWN release history

L2PDOWN added to BCS26.

BCS30

For the asynchronous protocol implementation of the MPC subsystem, the system increases L2PDOWN. The system increases L2PDOWN once every second the peripheral processor tries to enable the physical layer of link 2. The physical layer of link 2 will be enabled under modem control.

Associated registers

There are no associated registers.

OM group MPCLINK2 (continued)

Associated logs

There are no associated logs.

Register L2PHWERR

Link 2 hardware errors

Hardware errors include:

- direct memory access
- incoming byte overruns
- incoming frame overruns

A non-zero count can be a problem. A count greater than 40 in a 30-minute period indicates the need to replace the MPC card. The need to replace the MPC card is more important in the absence of high L2PABORT or L2PSYNC counts.

Register L2PHWERR release history

L2PHWERR added to BCS26.

BCS30

For the asynchronous protocol implementation of the MPC subsystem, the system increases L2PHWERR when processing exceptions occur at the hardware interface.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L2PSYNC

Link 2 synchronization error

The system increases L2PSYNCU when the system detects a loss of carrier or a clear-to-send signal.

The loss of carrier or a clear-to-send signal indicates a line, cable, or modem failure. A high corresponding count in L2PHWERR may show a bad card.

Register L2PSYNC release history

L2PSYNC added to BCS26.

BCS30
For the asynchronous protocol implementation of the MPC subsystem, the system increases L2PSYNC when disconnected or clear-to-send signal movements.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group MPCLINK3

OM description

Multiprotocol controller link 3 (MPCLINK3)

The OM group MPCLINK3 provides information on traffic and faults that occur in the link, and network level of the open system interconnect (OSI) model. The OSI model is for link 3 on a multiprotocol controller (MPC). The system collects data at the MPC card level in the peripheral processor software.

The following registers count at the physical level:

- L3PABORT counts frames aborted because of line, modem, or card problems
- L3PSYNC counts link synchronization errors
- L3PDOWN increases when the peripheral module processor attempts to enable the layer of a link
- L3PHWERR counts hardware errors

The following registers count at the link level:

- L3LDISC counts link disconnects
- L3LSETUP counts link restarts
- L3LDOWN counts links that are out of service (OOS)
- L3LACKTO counts acknowledgement timeouts
- L3LRXMIT counts retransmissions
- L3LLVIO counts invalid messages
- L3LRVIO counts invalid messages
- L3LRCV counts messages received
- L3LXMIT counts messages transmitted
- L3MSGLST counts incoming messages lost

The following registers count at the network level:

- L3NURCV counts data received
- L3NUXMIT counts data transmitted

Release history

The OM group MPCLINK3 introduced in BCS26.

BCS32

The system increases current registers by the Call History Information Processing System (CHIPS) file transfer feature. The CHIPS file transfer feature is on the enhanced multiprotocol controller (EMPC) card.

BCS30

Register L3MSGLST added to count incoming messages lost on link 3 of the MPC. Only applies to the asynchronous protocol implementation of the MPC subsystems L3PABORT, L3PSYNC, L3PDOWN, L3PHWERR, L3LXMIT, L3LRCV, L3LRVIO, L3NUXMIT, and L3NURCV count events associated with asynchronous protocol implementation of the MPC subsystem.

Registers

The OM group MPCLINK3 registers appear on the MAP terminal as follows:

```
L3PABORT    L3PSYNC     L3PDOWN     L3PHWERR
L3LSETUP    L3LDISC     L3LDOWN     L3LACKTO
L3LXMIT     L3LRCV      L3LRXMIT    L3LLVIO
L3LRVIO     L3NUXMIT    L3NURCV     L3MSGLST
```

Group structure

The OM group MPCLINK3 provides one tuple for each entered MPC.

Key field:
There is no Key field

Info field:
The MPCLOMINFOTYPE information field contains MPCNO,DF_CONVS, and RXMIT_TIME. The MPCNO is the MPC number in table MPC. The DF_CONVS is the number of conversations that the user entered on the link. If the user cannot enter conversations, DF_CONVS is 1. The DF_CONVS must be a value that is not zero. The RXMIT_TIME is the value in seconds of the protocol retransmission timer.

Table MPC contains entries for MPC information.

OM group MPCLINK3 (continued)

Associated OM groups

The OM group MPCFASTA provides information on outgoing traffic and exception conditions for MPC multi-link management.

The OM group MPCBASE provides information on traffic an MPC handles.

The OM group MPCLINK2 provides information on traffic and faults. The traffic and fault occur in the, link and network level peripheral hardware and software for link two on an MPC.

Associated functional groups

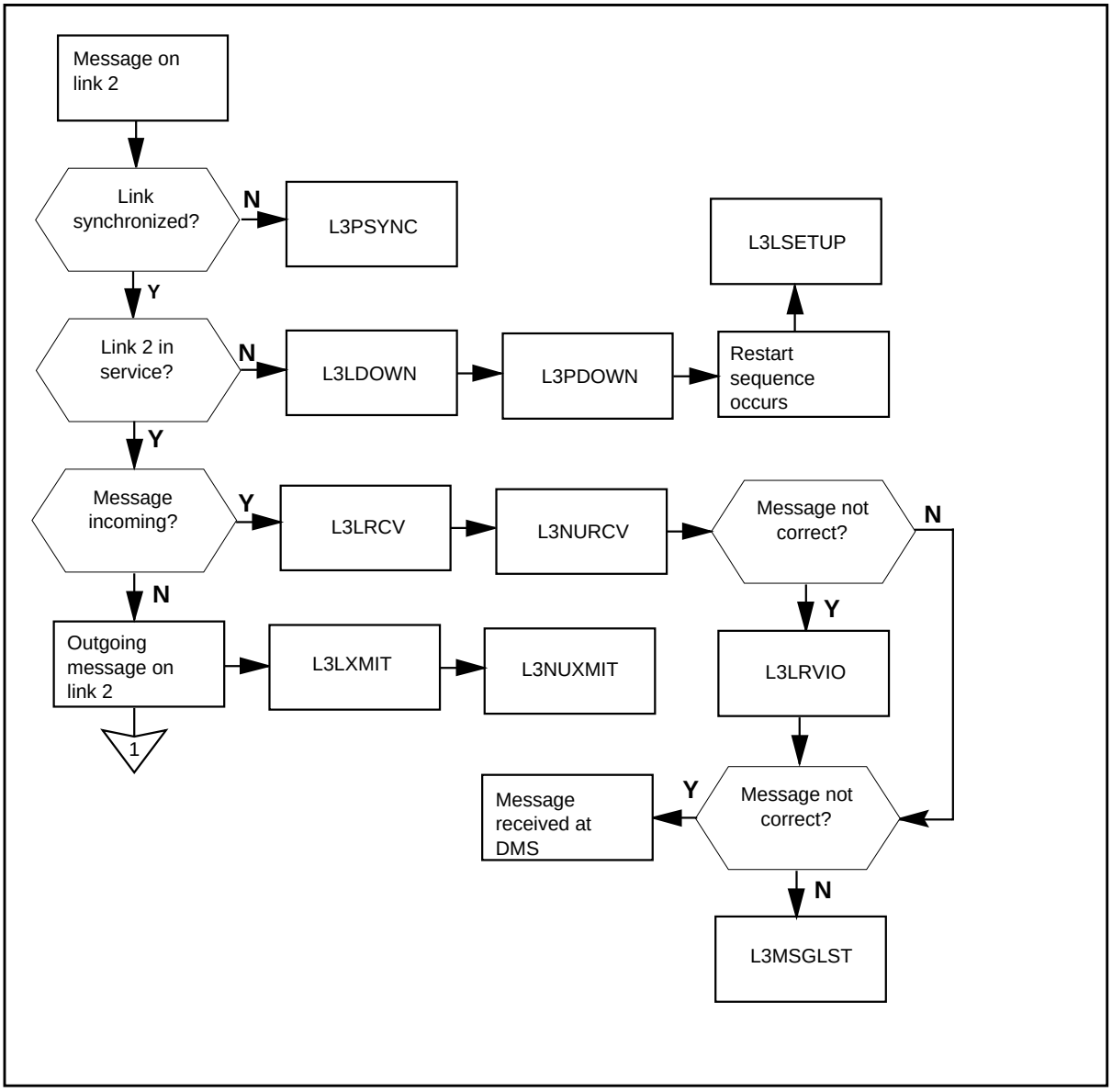
The functional group MPC associates with OM group MPCLINK3.

Associated functionality codes

The associated functionality codes for OM group MPCLINK3 appear in the following table.

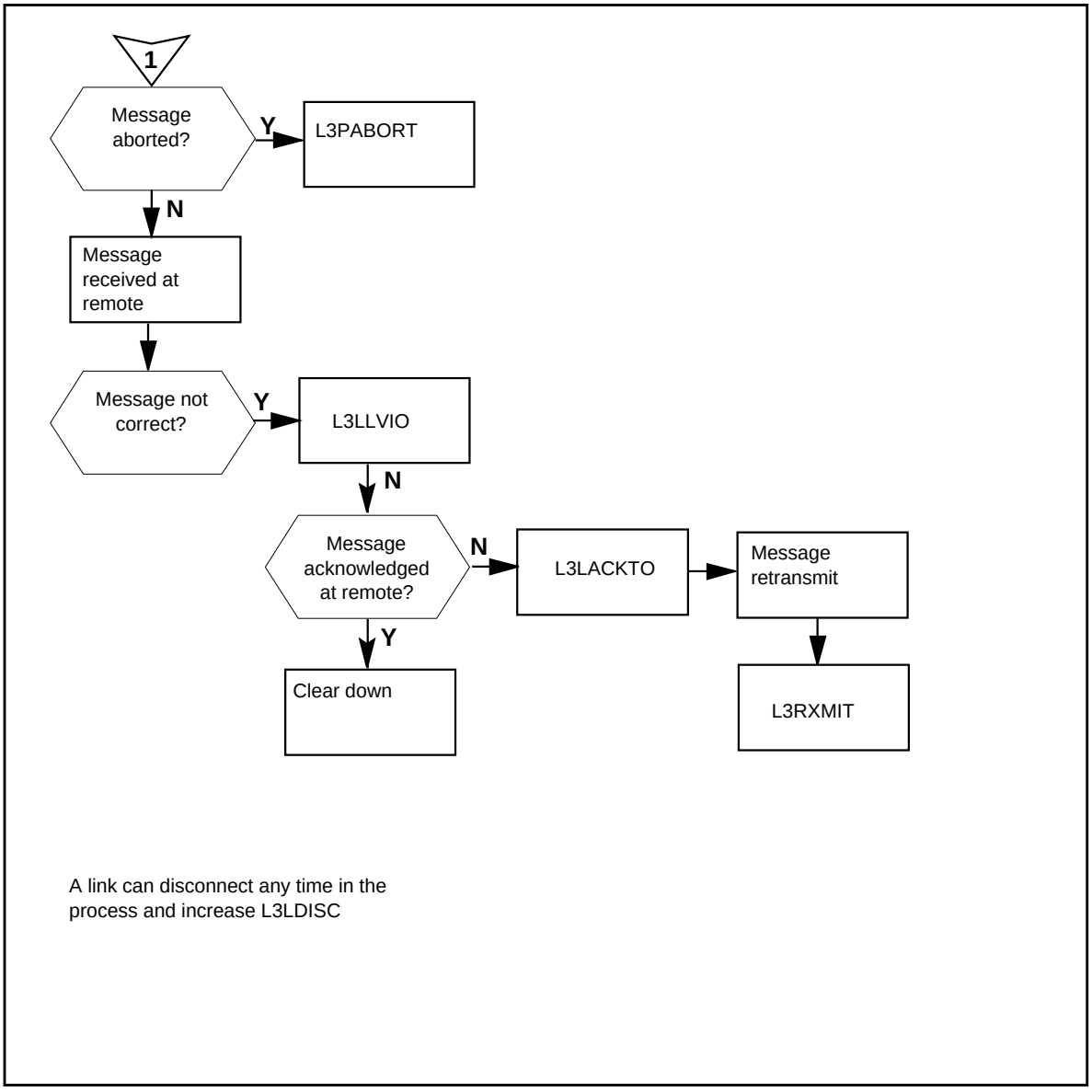
Functionality	Code
MPC	NTX273AA
High-speed Simplified Message Desk Interface (SMDI)	NTXN10AA

OM group MPCLINK3 registers



OM group MPCLINK3 (continued)

OM group MPCLINK3 registers (continued)



Register L3LACKTO

Link 3 link acknowledgement timeout (L3LACKTO)

The system increases L3LACKTO when the system does not receive acknowledgement for a sent message from the remote in a specified time.

Field T2, or T2_MS in table X25LINK specifies the time. The default is 3 s.

If the count in L3LACKTO is high, the link will go OOS and L3LDOWN increases. If the count is high, the system can also initiate a link restart and L3LSETUP increases.

Register L3LACKTO release history

Register L3LACKTO introduced in BCS26.

Associated registers

If the count in L3LACKTO is high, the system automatically removes the link from service and L3LDOWN increases. If the count is high the system can initiate a link setup and L3LSETUP increases.

Associated logs

There are no associated logs.

Register L3LDISC

Link 3 link disconnect (L3LDISC)

Register L3LDISC increases when either end of a link sends a link disconnect.

A link disconnect terminates communication on a link. A link restart is necessary to prepare the link again for active communication.

Register L3LDISC release history

Register L3LDISC introduced in BCS26.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L3LDOWN

Link 3 link down

Register L3LDOWN increases once for every second that a link 3 link is not in service because of a lack of response from the remote level 2 software.

The link must be restarted.

Register L3LDOWN release history

L3LDOWN introduced in BCS26.

OM group MPCLINK3 (continued)

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L3LLVIO

Link 3 link local violations (L3LLVIO)

Register L3LLVIO counts messages from the MPC that the remote considers not correct.

Register L3LLVIO release history

L3LLVIO introduced in BCS26.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L3LRCV

Link 3 messages received (L3LRCV)

Register L3LRCV increases when an incoming message arrives on the link.

Register L3LRCV release history

Register L3LRCV introduced in BCS26.

BCS30

For the asynchronous protocol implementation of the MPC subsystem, L3LRCV counts data messages the peripheral receives.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L3LRVIO

Link 3 link remote violations (L3LRVIO)

Register L3LRVIO counts messages the system receives from the remote at the MPC that are not correct.

Register L3LRVIO release history

Register L3LRVIO introduced in BCS26.

BCS30

For the asynchronous protocol implementation of the MPC subsystem, L3LRVIO counts messages that are not correct the peripheral receives.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L3LRXMIT

Link 3 link retransmission (L3LRXMIT)

Register L3LRXMIT counts messages the system transmits again because of a request from the remote. The system will also transmit messages again because the message was not acknowledged.

Register L3LRXMIT release history

Register L3LRXMIT introduced in BCS26.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L3LSETUP

Link 3 link setup (L3LSETUP)

Register L3LSETUP increases when a link restart sequence occurs.

The local MPC or remote can initiate a link restart to make sure that communication is possible over a link. A restart causes the loss of MPC output data and data in transit on the link.

A high count indicates a problem in the line, modem, or card. Protocol incompatibility can also cause a high count.

OM group MPCLINK3 (continued)

Register L3LSETUP release history

Register L3LSETUP introduced in BCS26.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L3LXMIT

Link 3 messages sent (L3LXMIT)

Register L3LXMIT increases when the system sends a message on the link.

Messages can be data related or protocol related.

Register L3LXMIT release history

Register L3LXMIT introduced in BCS26.

BCS30

For the asynchronous protocol implementation of the MPC subsystem, L3LXMIT counts data messages the peripheral transmits.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L3MSGLST

Link 3 messages lost (L3MSGLST)

Register L3MSGLST counts incoming messages lost on link 3 of the MPC.

Register L3MSGLST is correct only for the asynchronous protocol implementation of the MPC subsystem.

Register L3MSGLST release history

Register L3MSGLST introduced in BCS26.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L3NURCV

Link 3 user data received (L3NURCV)

Register L3NURCV increases when the MPC on the link receives 1 Kbyte of user data.

Register L3NURCV release history

Register L3NURCV introduced in BCS26.

BCS30

For asynchronous protocol implementation of the MPC subsystem, L3NURCV increases when the MPC on the link receives 1 Kbyte of data.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L3NUXMIT

Layer 3 link user data transmitted (L3NUXMIT)

Register L3NUXMIT increases when the system transmits 1 kbyte of user data on the link from the MPC.

Register L3NUXMIT release history

Register L3NUXMIT introduced in BCS26.

BCS30

For the asynchronous protocol implementation of the MPC subsystem, L3NUXMIT increases when the system transmits 1 kbyte of data. The system transmits data on the link from the MPC.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group MPCLINK3 (continued)

Register L3PABORT

Physical abort on link 3 (L3PABORT)

Register L3PABORT counts outgoing frames on link 3 that the system aborts because of line, modem, or card problems. The system also aborts outgoing frames because frames are sent with an abort indication at the logical level.

A count in this register can indicate line noise, a common cause of link and network exceptions.

Register L3PABORT release history

Register L3PABORT introduced in BCS26.

BCS30

For the asynchronous protocol implementation of the MPC subsystem, L3ABORT counts parity and framing errors on received data.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L3PDOWN

Link 3 physical time down (L3PDOWN)

Register L3PDOWN increases for every second that peripheral processor tries to enable the physical layer of link three.

Register L3PDOWN release history

Register L3PDOWN introduced in BCS26.

BCS30

For the asynchronous protocol implementation of the MPC subsystem, L3PDOWN increases. Register L3PDOWN increases for every second that peripheral processor tries to enable the physical layer of link two under modem control.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L3PHWERR

Link 3 physical hardware errors (L3PHWERR)

Register L3PHWERR increases when the system detects hardware errors during hardware maintenance operations on link 3.

Hardware errors include:

- direct memory access
- incoming byte overruns
- incoming frame overruns

A count that is not zero can indicate a problem. A count greater than 40 in a 30-min period indicates the need to replace the MPC card. The situation is more important in the absence of high L3PABORT or L3PSYNC counts.

Register L3PHWERR release history

Register L3PHWERR introduced in BCS26.

BCS30

For the asynchronous protocol implementation of the MPC subsystem, L3PHWERR increases when processing exceptions occur at the hardware interface.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register L3PSYNC

Link 3 physical synchronization error (L3PSYNC)

Register L3PSYNC increases when the system detects a loss of carrier or a clear-to-send signal.

A loss of carrier or a clear-to-send signal indicates a line, cable, or modem failure. A high corresponding count in L3PHWERR can indicate a card that has faults.

Register L3PSYNC release history

Register L3PSYNC introduced in BCS26.

OM group MPCLINK3 (end)

BCS30
For the asynchronous protocol implementation of the MPC subsystem, L3PSYNC increases for disconnected or clear-to-send signal actions.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group MPHCON

OM description

Multiple position hunt console (MPHCON)

The OM group MPHCON monitors the performance of multiple position hunt (MPH) consoles.

The OM group MPHCON contains two registers that count the following:

- calls offered to a multiple position hunt console
- calls that a multiple position hunt console answers

Release history

The OM group MPHCON introduced in BCS30.

Registers

The registers appear on the MAP terminal as follows:

```
MPHCOFRD          MPHCANS
```

Group structure

The OM group MPHCON provides one tuple for each multiple position hunt console.

Key field:
a number that identifies the multiple position hunt console as defined in field MPHCNUM in table MPHCON.

Info field:
defines the console group and the console number in the group. Fields MPHGRP and MPHCON in table MPHCON define the console group and number.

Associated OM groups

The OM group MPHGRP monitors the performance of multiple position hunt (MPH) console groups.

Associated functional groups

The MDC functional group associates with OM group MPHCON.

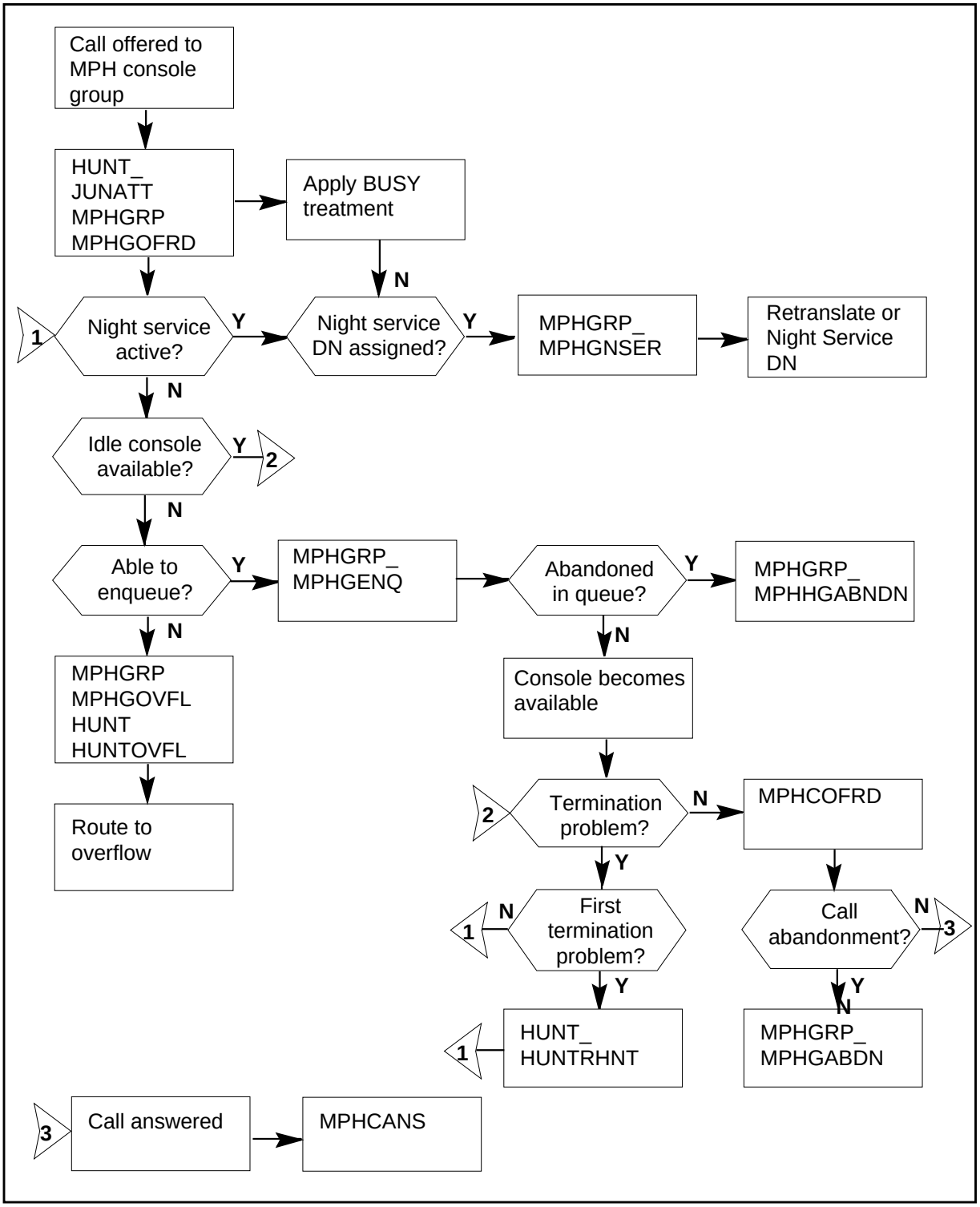
OM group MPHCON (continued)

Associated functionality codes

The associated functionality codes for OM group MPHCON appear in the following table.

Functionality	Code
Interface to Non-Data Link Console	NTX877AB

OM group MPHCON registers



OM group MPHCON (end)

Register MPHCANS

Calls answered (MPHCANS)

Register MPHCANS counts calls that a multiple position hunt (MPH) console answers.

Register MPHCANS release history

Register MPHCANS introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register MPHCOFRD

Calls offered (MPHCOFRD)

Register MPHCOFRD counts calls offered to a multiple position hunt (MPH) console.

Register MPHCOFRD release history

Register MPHCOFRD introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group MPHGRP

OM description

Multiple position hunt console group (MPHGRP)

The OM group MPHGRP monitors the performance of multiple position hunt (MPH) console groups.

The OM group MPHGRP contains five registers that count:

- calls offered to the MPH console group
- calls placed in the central office queue of the MPH console group
- calls abandoned while in the central office queue of the console group
- calls that the system could not place in a queue for an MPH console group
- calls to the MPH console group that the system routes to night service

Release history

The OM group MPHGRP introduced in BCS30.

Registers

OM group MPHGRP registers display on the MAP terminal as follows:

```
MPHGOFRD        MPHGENQ         MPHGABDN        MPHGOVFL
MPHGNSER
```

Group structure

The OM group MPHGRP provides one tuple for each multiple position hunt console group.

Key field:
the number of the multiple position hunt console group as defined in field MPHGRP in table MPHGRP

Info field:
there is no Info field

Associated OM groups

The OM group MPHCON monitors the performance of each multiple position hunt (MPH) console.

Associated functional groups

The MDC functional group associates with OM group MPHGRP.

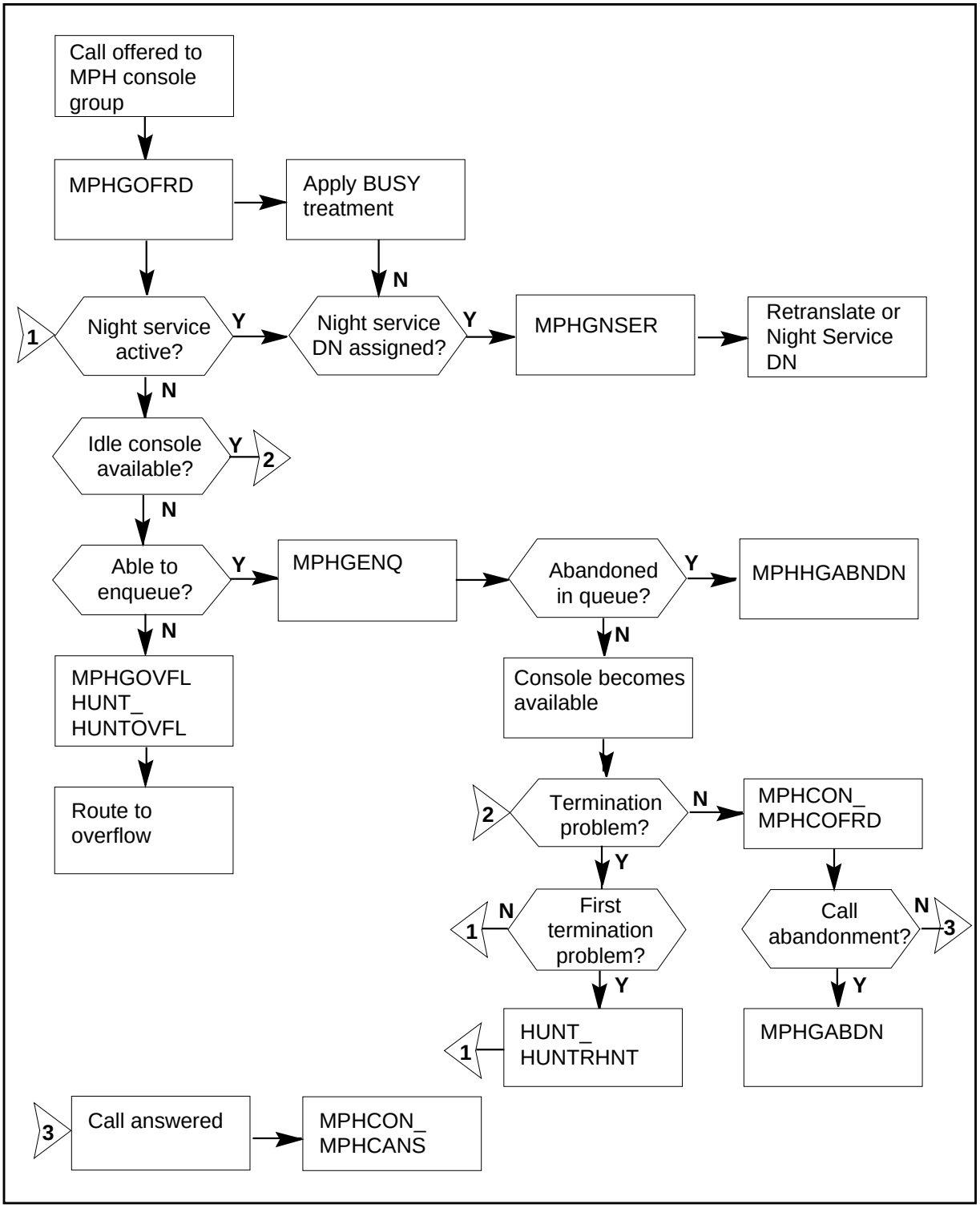
OM group MPHGRP (continued)

Associated functionality codes

The associated functionality codes for OM group MPHGRP appear in the following table.

Functionality	Code
Interface to Non-Data Link Console	NTX877AB

OM group MPHGRP registers



OM group MPHGRP (continued)

Register MPHGABDN

Calls abandoned (MPHGABDN)

Register MPHGABDN counts calls the user abandons while in the multiple central office queue of the position hunt (MPH) console group. Register MPHGABDN also counts calls abandoned while the system offers the calls to the console.

Register MPHGABDN release history

Register MPHGABDN introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register MPHGENQ

Calls enqueued (MPHGENQ)

Register MPHGENQ counts calls the system places in the central office queue of the multiple position hunt (MPH) console group.

Register MPHGENQ release history

Register MPHGENQ introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register MPHGNSER

Calls routed to night service (MPHGNSER)

Register MPHGNSER counts calls to the multiple position hunt (MPH) console group that the system routes to night service. The system assigns the calls a night service directory number (DN).

Register MPHGNSER release history

Register MPHGNSER introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register MPHGOFRD

Calls offered (MPHGOFRD)

Register MPHGOFRD counts calls offered to the multiple position hunt (MPH) console group.

Register MPHGOFRD release history

Register MPHGOFRD introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register MPHGOVFL

Calls overflowed (MPHGOVFL)

Register MPHGOVFL counts calls for a multiple position hunt (MPH) console group that the system cannot place in a queue. The system reroutes calls that overflow the MPH group central office queue to the route specified in field CQOVRTE in table MPHGRP.

OM group MPHGRP (end)

Register MPHGOVFL release history

Register MPHGOVFL introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group MS

OM description

Message switch (MS)

The OM group MS monitors the quality of the performance of the message switch (MS). You can use the MS to evaluate maintenance efforts.

The OM group MS resources are in three categories: node, card, and link. The MS node resource has system cards the system requires for the operation of the MS. These system cards include the:

- processor card
- clock card
- memory card
- mapper card
- P-bus termination card
- T-bus termination card

The MS card resource has interface cards that contain the MS ports. The MS link resource has ports that receive messages from peripheral side (P-side) peripheral modules (PM). The system sends messages to the T-bus. The T-bus sends the message to the system.

Seven OM registers are present for each of the three resource categories. Registers count errors, faults, tests, test failures, and MSs that are manually busy. Usage registers record if the MS is manually busy or system busy.

The operating company uses MS to measure the reliability and availability of MS resources.

Release history

The OM group MS introduced in BCS22.

BCS32

The human machine interface for the Inter-MS Links feature increases registers MSPTERR, MSPTFLT, MSPTDIA, MSPTDIAF, MSPTMBP, MSTMBU, and MSPTSBU. The human machine interface increases the registers during maintenance actions on inter-MS ports.

BCS31

Registers MSERR, MSCDERR, and MSPTERR increase for out-of-service (OOS) MSs returned to service.

OM group MS (continued)

BCS30

Registers MSPTERR, MSPTFLT, MSPTDIA, MSPTDIAF, MSPTMBP, MSPTMBU, and MSPTSBU count maintenance actions on inter-MS ports. Software provides usage counts in hundred call seconds (CCS) or deci-erlangs.

BCS28

Register MSLKERR
now called MSPTERR

Register MSLKFLT
now called MSPTFLT

Register MSLKDIA
now called MSPTDIA

Register MSLKDIAF
now called MSPTDIAF

Register MSLKMBP
now called MSPTMBP

Register MSLKMBU
now called MSPTMBU

Register MSLKSBU
now called MSPTSBU

Registers

The OM group MS registers appear on the MAP terminal as follows:

```
MSERR       MSFLT       MSDIA       MSDIAF
MSMBP       MSMBU       MSSBU       MSCDERR
MSCDFLT     MSCDDIA     MSCDDIAF    MSCDMBP
MSCDMBU     MSCDSBU     MSPTERR     MSPTFLT
MSPTDIA     MSPTDIAF    MSPTMBP     MSPTMBU
MSPTSBU
```

Group structure

The OM group MS provides one tuple for each MS.

Key field:
MESSAGE_SWITCH_NUMBER is 0 or 1

Info field:
there is no Info field

Associated OM groups

The OM group MSCHAIN monitors the performance and maintenance quality of chains on an MS. The OM group MSCHNLK monitors the performance and maintenance quality of channelized links on an MS.

Associated functional groups

There are no associated functional groups.

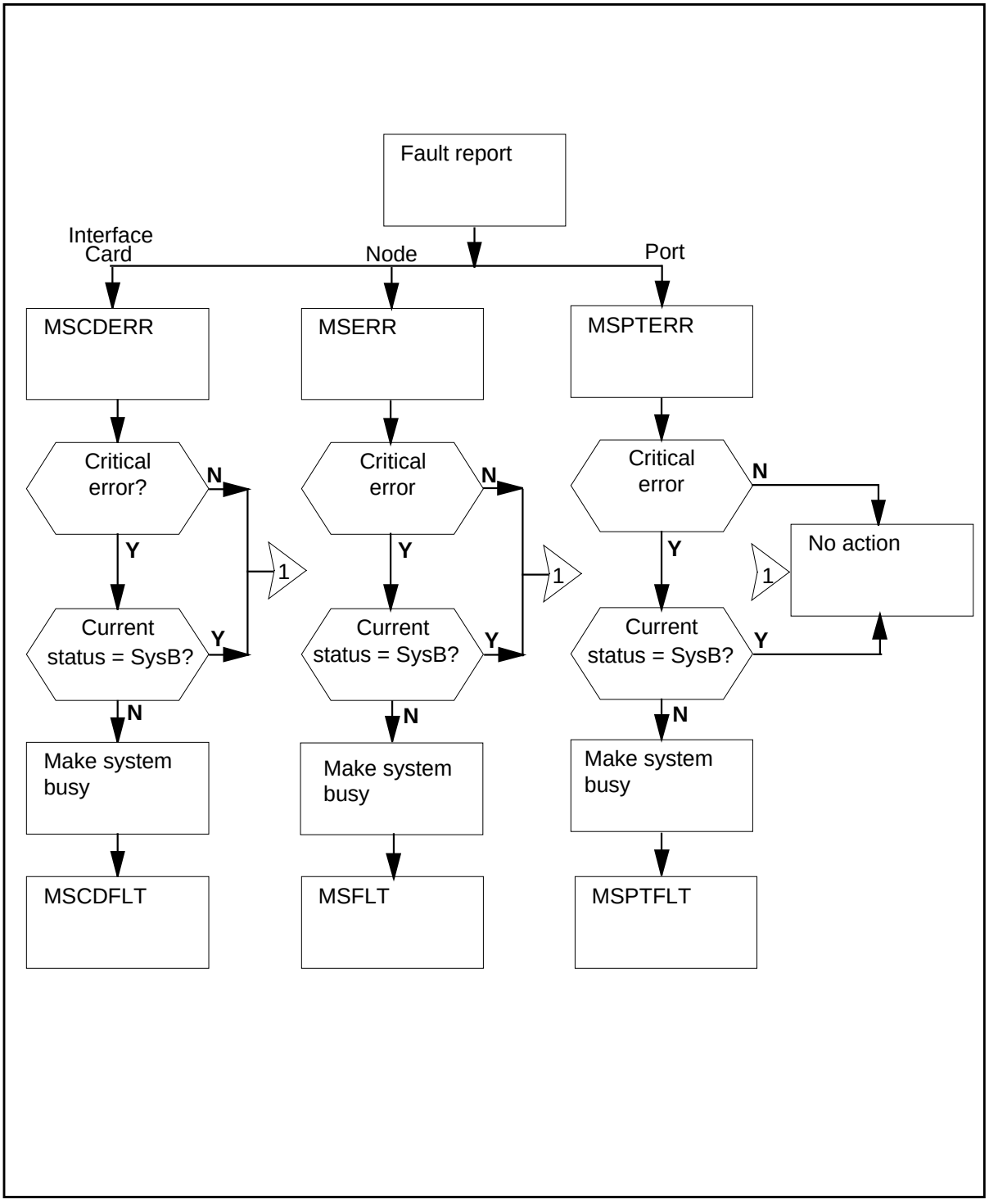
Associated functionality codes

The associated functionality codes for OM group MS appear in the following table.

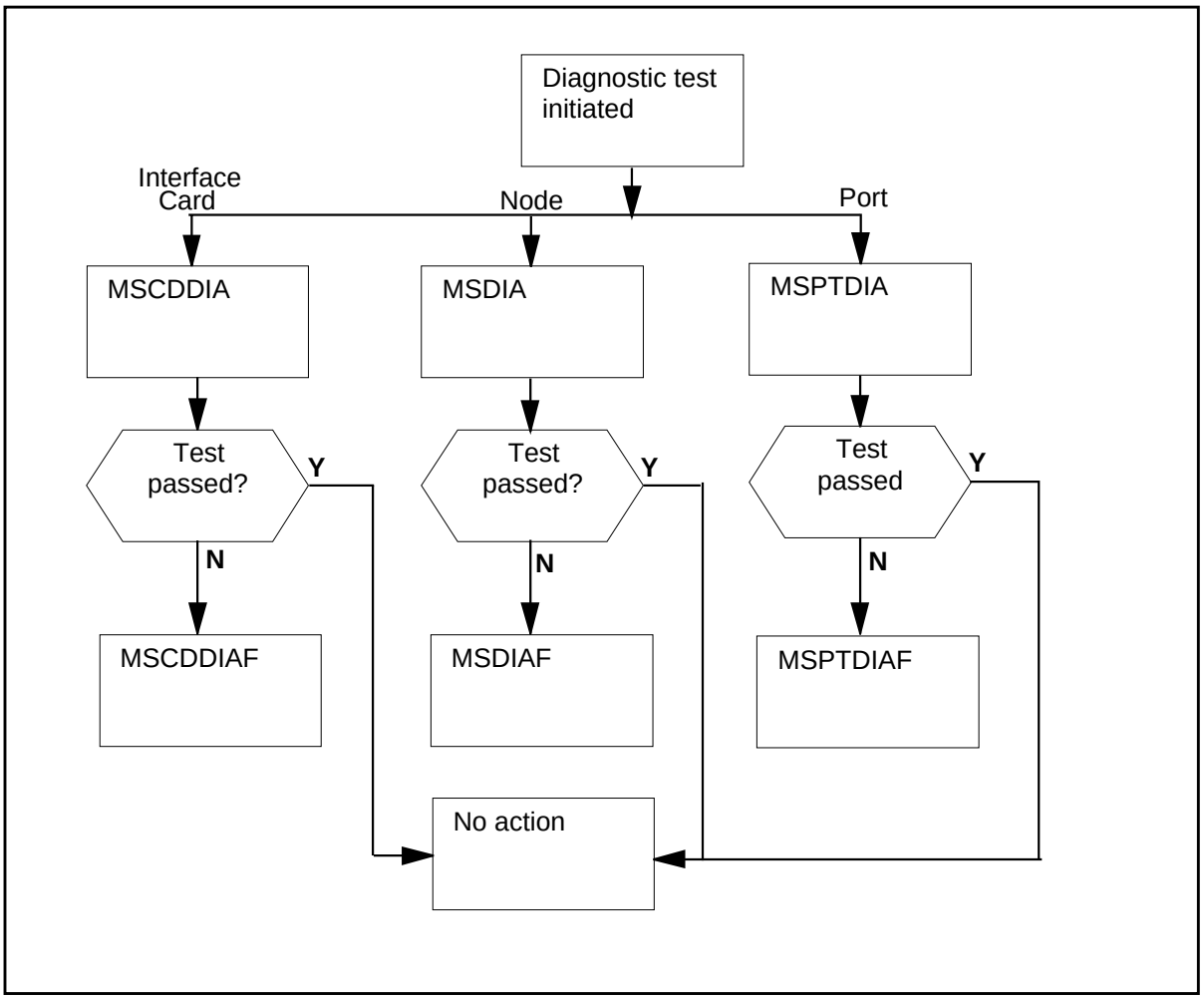
Functionality	Code
SuperNode SN 20 Processor	NTXF70AA
International Switching Center - Basic	NTX300AA
MS - Common	NTX951AA

OM group MS (continued)

OM group MS error and fault detection registers

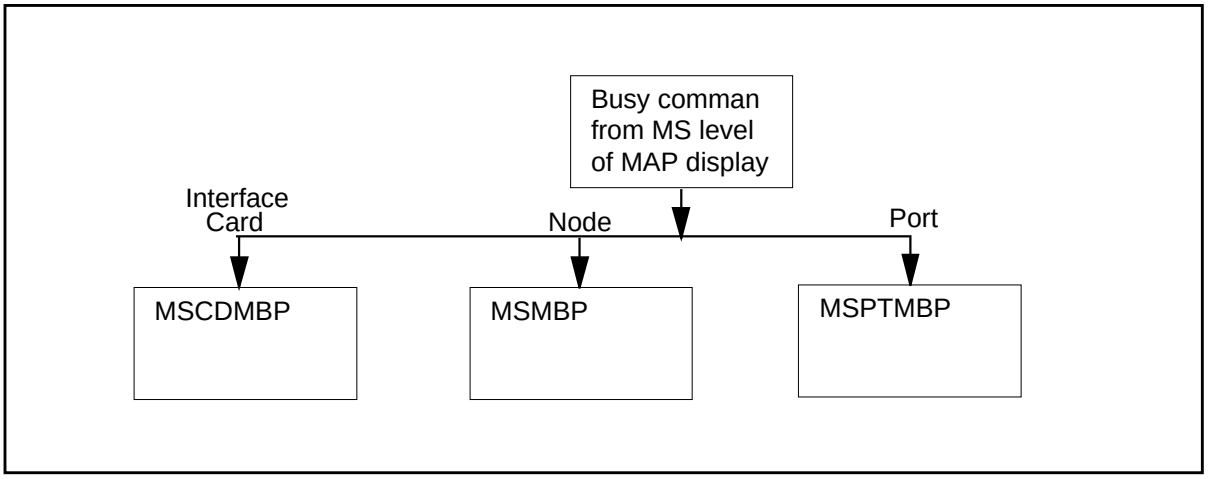


OM group MS diagnostic test registers

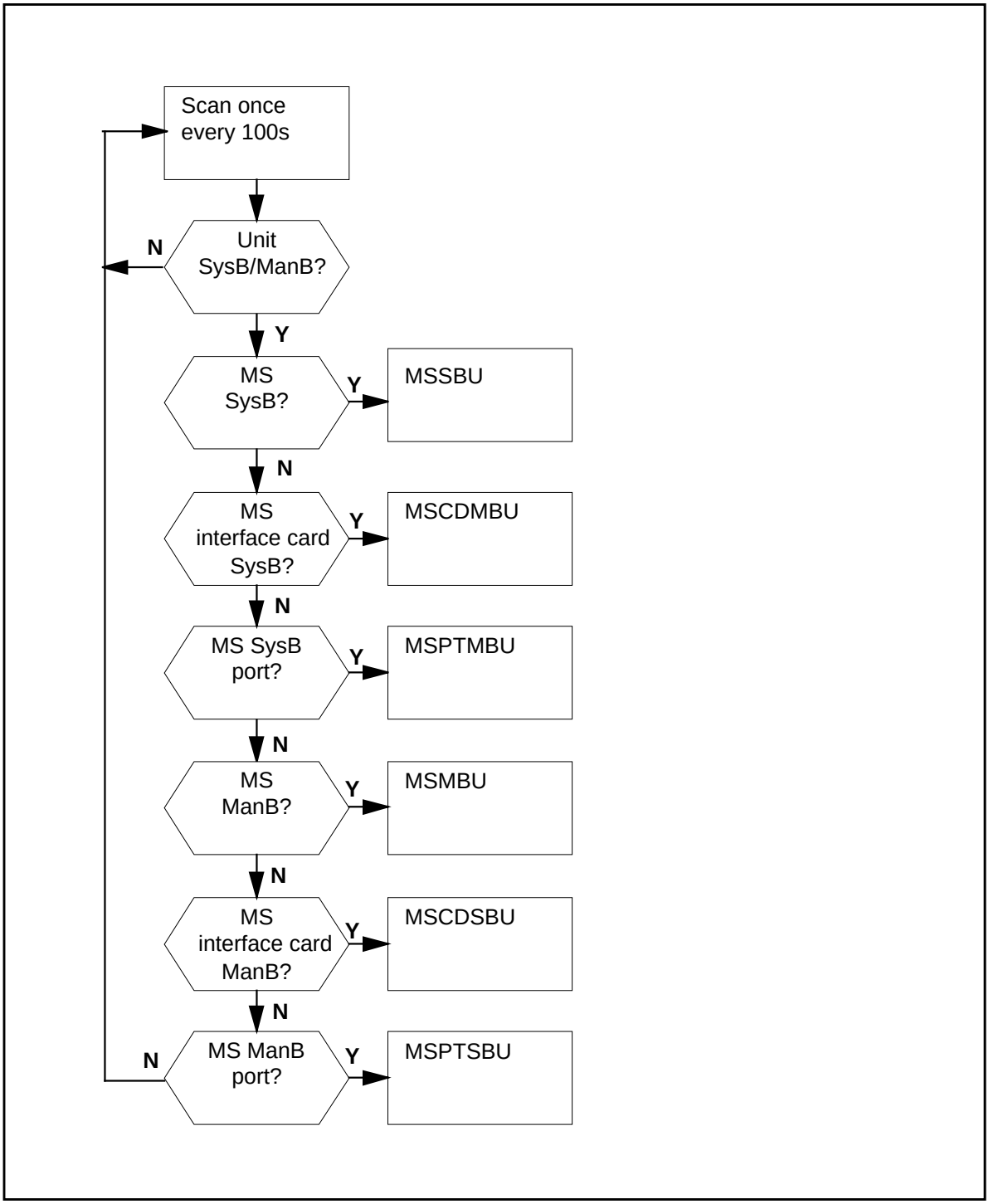


OM group MS (continued)

OM group MS change to manual busy state registers



OM group MS usage registers



OM group MS (continued)

Register MSCDDIA

Interface card diagnostic (MSCDDIA)

Register MSCDDIA counts tests on interface cards. Register MSCDDIA includes:

- test commands from the MS shelf and card levels of a MAP display
- return-to-service commands from the MS shelf and card levels of a MAP display

Register MSCDDIA release history

Register MSCDDIA introduced in BCS22.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register MSCDDIAF

Interface card diagnostic failure (MSCDDIAF)

Register MSCDDIAF counts diagnostic tests that fail. If the interface card is in service before the diagnostic test, the system removes the card from service.

Register MSCDDIA also counts the same tests.

Register MSCDDIAF release history

Register MSCDDIAF introduced in BCS22.

Associated registers

Register MSCDDIA counts tests the system initiates on the interface card.

Associated logs

There are no associated logs.

Register MSCDERR

Interface card errors (MSCDERR)

Register MSCDERR counts errors in an in-service interface card. Register MSCDERR includes:

- error reports from the MS maintenance software
- failures in in-service audit or routine exercise tests

Register MSCDERR release history

Register MSCDERR introduced in BCS22.

BCS31

Register MSCDERR increases when the system detects an error on an OOS interface card that the system returns to service. Errors the system detects include in-service trouble (ISTb) faults found during a successful card return to service. The error is a result of a system or manual action.

Associated registers

There are no associated registers.

Associated logs

The system generates MS263 when an interface card changes from in-service to system busy.

Register MSCDFLT

Interface card fault (MSCDFLT)

Register MSCDFLT counts errors that require the removal of the interface card from service. Register MSCDFLT includes:

- fault reports from the MS maintenance software
- critical failures in in-service audit or routine exercise tests

Register MSCDERR also counts these errors.

Register MSCDFLT release history

Register MSCDFLT introduced in BCS22.

Associated registers

Register MSCDERR counts errors the system detects on an in-service interface card.

Associated logs

The system generates MS263 when an interface card changes from in-service to system busy.

OM group MS (continued)

Register MSCDMBP

Interface card manual busy (MSCDMBP)

Register MSCDMBP counts changes of the interface cards from:

- in-service to manually busy
- system busy to manually busy
- from central side (C-side) busy to manually busy
- from offline to manually busy

Register MSCDMBP release history

Register MSCDMBP introduced in BCS22.

Associated registers

There are no associated registers.

Associated logs

The system generates MS261 when an interface card changes from in-service to manual busy.

The system generates MS262 when an interface card changes from system busy, C-side busy, or offline to manually busy.

Register MSCDMBU

Interface card manual busy use (MSCDMBU)

Register MSCDMBU is a usage register. The scan rate is 100 s. Register MSCDMBU records if the MS interface cards are manually busy.

Register MSCDMBU release history

Register MSCDMBU introduced in BCS22.

BCS30

Software change to provide usage counts in CCS or deci-erlangs.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register MSCDSBU

Interface card system busy usage (MSCDSBU)

Register MSCDSBU is a usage register. The scan rate is 100 s. Register MSCDSBU records if the MS interface cards are system busy.

Register MSCDSBU release history

Register MSCDSBU introduced in BCS22.

BCS30

Software changed to provide usage counts in CCS or deci-erlangs.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register MSDIA

System card diagnostic (MSDIA)

Register MSDIA counts diagnostic tests the system initiates on the system cards. These tests include:

- test commands from the MS level of a MAP display
- in-service or out-of-service audits
- routine exercise tests

Register MSDIA release history

Register MSDIA introduced in BCS22.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register MSDIAF

System card diagnostic failure

Register MSDIAF counts diagnostic tests that fail. If the MS is in service before a the diagnostic test, the system removes the MS from service.

OM group MS (continued)

Register MSDIA counts the same tests.

Register MSDIAF release history

Register MSDIAF introduced in BCS22.

Associated registers

Register MSDIA counts tests the system initiates on the system cards.

Associated logs

There are no associated logs.

Register MSERR

System card errors (MSERR)

Register MSERR counts errors the system detects on the system cards of an in-service MS. Register MSERR includes:

- error reports from computing module maintenance software
- error reports from MS maintenance software
- failures in in-service audit or routine exercise tests

Register MSERR release history

Register MSERR introduced in BCS22.

BCS31

Register MSERR increases when the system detects errors on the system cards of an out-of-service MS. The system returns the MS to service. These errors include ISTb faults the system detects during a node return-to-service, caused by a system or manual action.

Associated registers

There are no associated registers.

Associated logs

The system generates MS103 when a node changes from in service to system busy.

Register MSFLT

System card faults (MSFLT)

Register MSFLT counts errors, counted earlier in register MSERR, that requires the removal from service of the MS from service. MSFLT includes:

- fault reports from computing module maintenance software
- fault reports from MS maintenance software
- critical failures in in-service audit or routine exercise tests

Register MSFLT release history

Register MSFLT introduced in BCS22.

Associated registers

Register MSERR counts errors the system detects on the system cards of an in-service MS.

Associated logs

The system generates MS103 when a node changes from in service to system busy.

Register MSMBU

Message switch (MS) manual busy usage (MSMBU)

Register MSMBU is a usage register. The scan rate 100 seconds. Register MSMBU records if the MS is manual busy.

Register MSMBU release history

Register MSMBU introduced in BCS22.

BCS30

Software changes to provide usage counts in CCS or deci-erlangs.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register MSPTDIA

Port diagnostics (MSPTDIA)

OM group MS (continued)

Register MSPTDIA counts diagnostic tests the system initiates on MS ports. Register MSPTDIA includes:

- test port commands from the MS card level of the MAP terminal
- return to service port commands from the MS card level of the MAP terminal
- periodic in-service audits
- return to service attempts on system busy ports

Register MSPTDIA release history

Register MSPTDIA introduced in BCS 22.

BCS30

Register MSPTDIA counts maintenance actions on inter-MS ports.

BCS28

Register MSLKDIA is now called register MSPTDIA.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register MSPTDIAF

Port diagnostic failures (MSPTDIAF)

Register MSPTDIAF counts diagnostic tests that fail. If the port is in service before the diagnostic test, the system removes the port from service.

Register MSPTDIA also counts the same diagnostic tests.

Register Register MSPTDIAF release history

Register MSPTDIAF introduced in BCS22.

BCS30

Register MSPTDIAF counts maintenance actions on inter-MS ports counted by MSPTDIAF.

BCS28

Register MSLKDIAF now called MSPTDIAF.

Associated registers

Register MSPTDIA counts diagnostic tests initiated on the MS port.

Associated logs

There are no associated logs.

Register MSPTERR

Port error (MSPTERR)

Register MSPTERR counts errors on an in-service port. Register MSPTERR includes:

- error reports from P-side PM maintenance software
- error reports from MS maintenance software
- failures in in-service audit or routine exercise tests

Register MSPTERR release history

Register MSPTERR introduced in BCS22.

BCS31

Register MSPTERR increases when the system detects an error on an out-of-service port that the system returns to service. These errors include ISTb faults the system detects when the system returns a port to service. A system or manual action causes these errors.

BCS30

Register MSPTERR counts maintenance actions on inter-MS ports.

BCS28

Register MSLKERR is now called register MSPTERR.

Associated registers

There are no associated registers.

Associated logs

The system generates MS303 when a port changes from in service to system busy.

Register MSPTFLT

Port fault (MSPTFLT)

OM group MS (continued)

Register MSPTFLT counts errors, counted earlier in MSPTERR, that require the removal of the MS port from service. Register MSPTFLT includes :

- fault reports from MS maintenance software
- fault reports from computing module, input/output controller, and network maintenance software
- critical failures in in-service audit or routine exercise tests

Register MSPTFLT release history

Register MSPTFLT introduced in BCS22.

BCS30

Register MSPTFLT counts maintenance actions on inter-MS ports.

BCS28

Register MSLKFLT is now called MSPTFLT.

Associated registers

Register MSPTERR counts errors the system detects on an in-service port.

Associated logs

The system generates MS303 when a port changes from in service to system busy.

Register MSPTMBP

Port manual busy (MSPTMBP)

Register MSPTMBP counts changes of the MS ports from:

- in service to manual busy
- system busy to manual busy
- C-side busy to manual busy
- P-side busy to manual busy

Register MSPTMBP release history

Register MSPTMBP introduced in BCS22.

BCS30

Register MSPTMBP counts maintenance actions on inter-MS ports.

BCS28

Register MSLKMBP is now called MSPTMBP.

Associated registers

There are no associated registers.

Associated logs

The system generates MS301 when a port changes from in service to manual busy.

The system generates MS302 when a port changes from system busy, C-side busy, or P-side busy to manual busy.

Register MSPTMBU

Port manual busy use (MSPTMBU)

Register MSPTMBU is a usage register. The scan rate: 100 seconds.

Register MSPTMBU records if the MS ports are manually busy.

Register MSPTMBU release history

Register MSPTMBU introduced in BCS22.

BCS30

Register MSPTMBU counts maintenance actions on inter-MS ports. Software changed to provide usage counts in CCS or deci-erlangs.

BCS328

Register MSLKMBU now called register MSPTMBU.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register MSPTSBU

Port system busy (system busy) usage (MSPTSBU)

Register MSPTSBU is a usage register. The scan rate: 100 seconds. Register MSPTSBU records if the MS ports are system busy.

Register MSPTSBU release history

Register MSPTSBU introduced in BCS22.

OM group MS (continued)

BCS30
Register MSPTSBU counts maintenance actions on inter-MS ports. Software changed to provide usage counts in CCS or deci-erlangs.

BCS28
Register MSLKSBU now called register MSPTSBU.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register MSMBP

Message switch (MS) manual busy (MSMBP)

Register MSMBP counts changes of the MS from in service to manually busy and from system busy to manually busy.

Register MSMBP release history

Register MSMBP introduced in BCS22.

Associated registers

There are no associated registers.

Associated logs

The system generates MS101 when an MS changes from in service to manually busy.

The system generates MS102 when an MS changes from system busy to manually busy.

Register MSSBU

Message switch (MS) system busy usage

Register MSSBU is a usage register. The scan rate is 100 seconds. MSSBU records if the MS is system busy.

Register MSSBU release history

Register MSSBU introduced in BCS22.

BCS30
Software changed to provide usage counts in CCS or deci-erlangs.

OM group MS (end)

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group MSCHAIN

OM description

Message switch chain (MSCHAIN)

The OM group MSCHAIN monitors the performance and maintenance quality of the chains on a message switch (MS). The MS chains are interface cards connected by a bus.

MSCHAIN contains five peg registers that count:

- errors in operation
- critical or continuous faults that make MS chains system busy
- self tests that the system applies
- self tests that fail
- MS chains made manual busy

Register MSCHAIN also contains two-usage registers that record system busy and manually busy time.

Release history

The OM group MSCHAIN introduced in BCS31.

Registers

The OM group MSCHAIN registers appear on the MAP terminal as follows:

```
MSCHERR     MSCHFLT     MSCHDIA     MSCHDIAF
Register MSCHMBP        MSCHMBU     MSCHSBU
```

Group structure

The OM group MSCHAIN provides one tuple for each message switch.

Key field:
MESSAGE_SWITCH_NUMBER is 0 or 1

Info field:
There is no Info field

Associated OM groups

The OM group MS monitors the quality of the performance of the message switch.

The OM group MSCHNLK monitors the performance and maintenance quality of the channelized links on a message switch.

Associated functional groups

There are no associated functional groups.

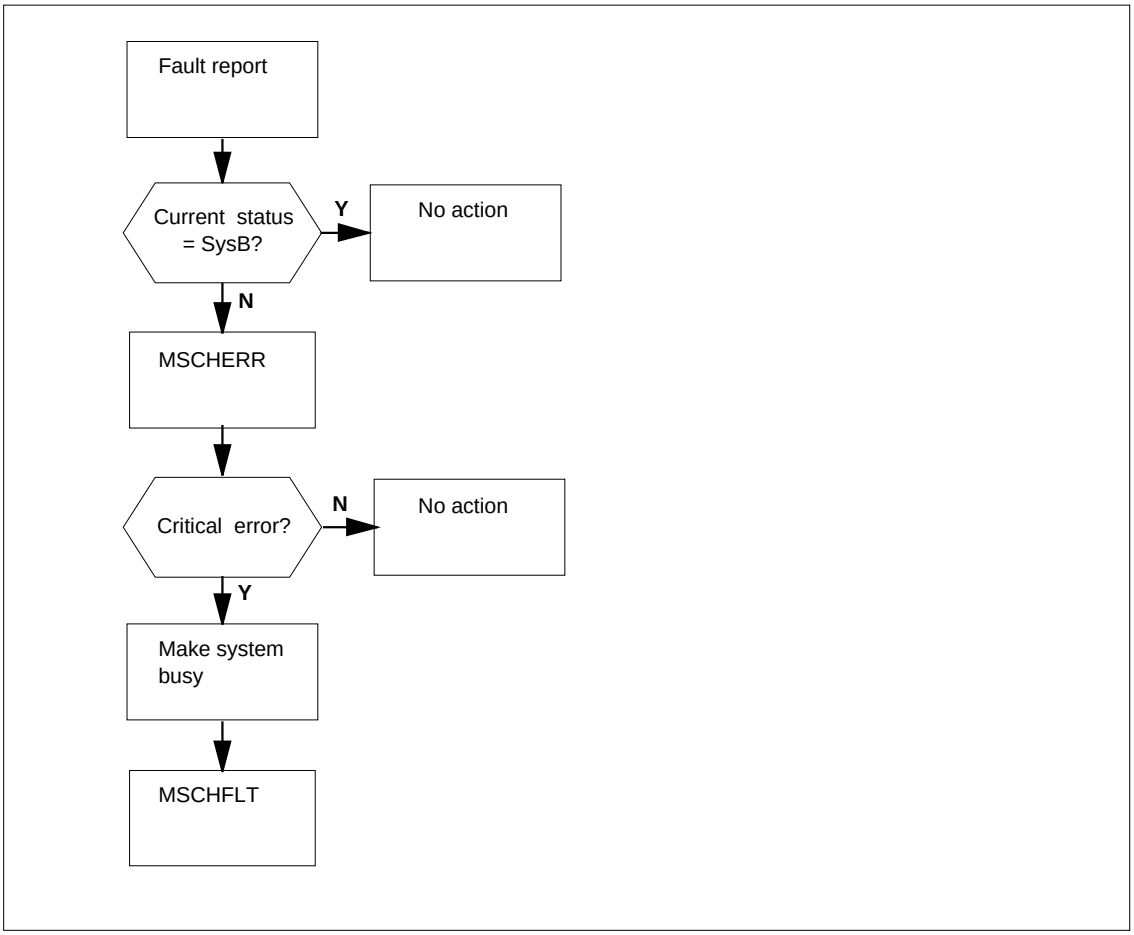
Associated functionality codes

The associated functionality codes for OM group MSCHAIN appear in the following table.

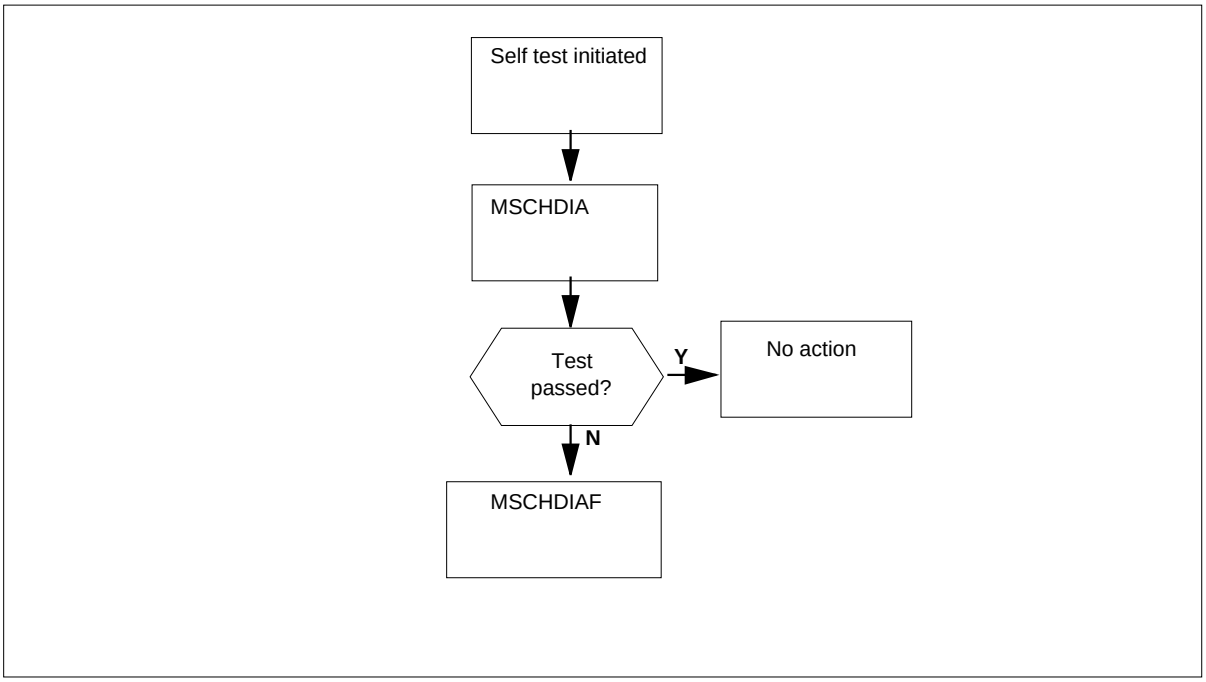
Functionality	Code
CM Common	NTX941AA
MS Common	NTX951AA

OM group MSCHAIN (continued)

OM group MSCHAIN error and fault detection registers

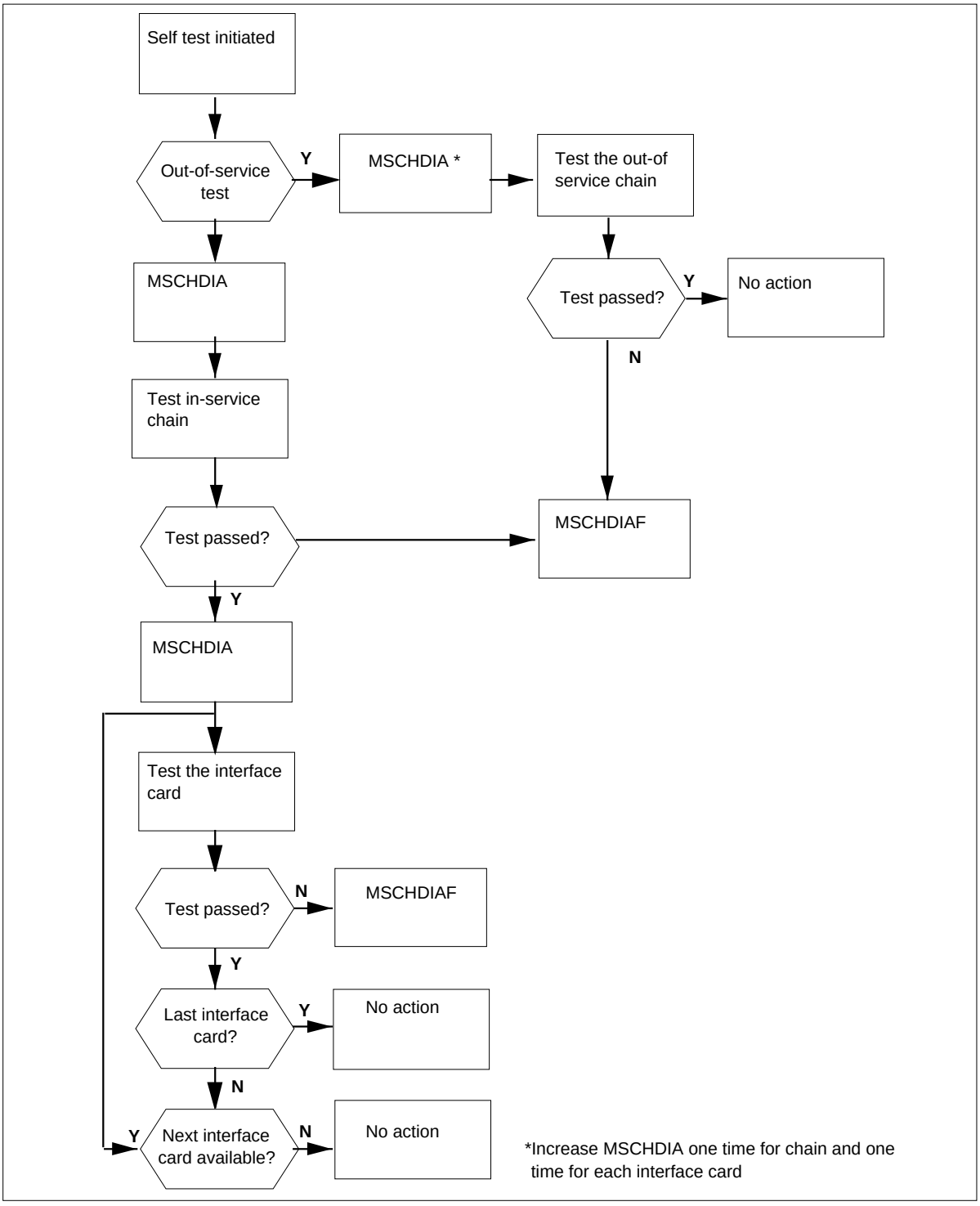


OM group MSCHAIN interface card diagnostic test registers

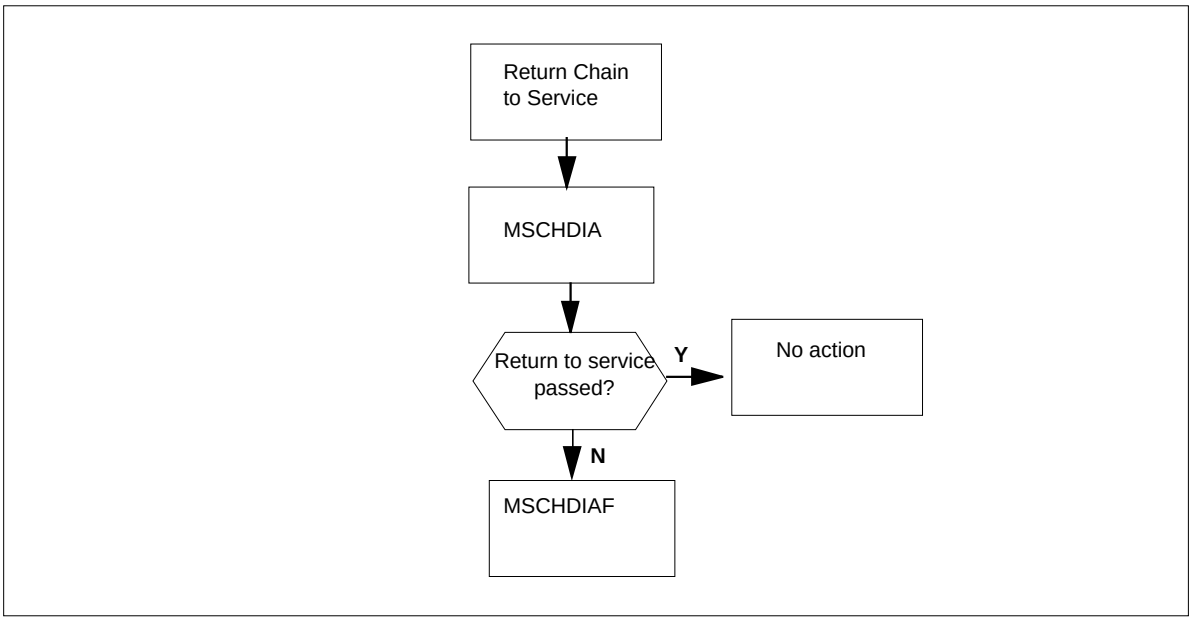


OM group MSCHAIN (continued)

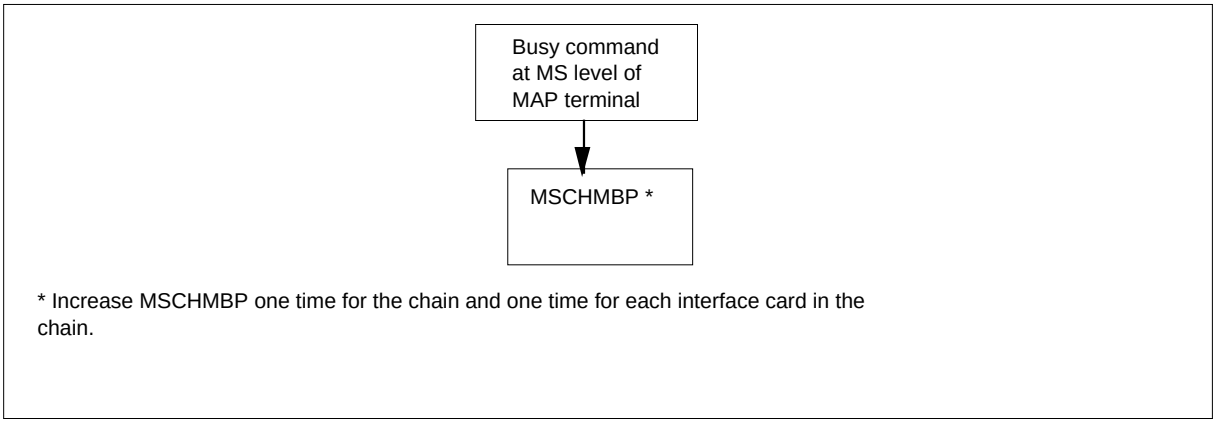
OM group MSCHAIN chain diagnostic test registers



OM group MSCHAIN return to service registers

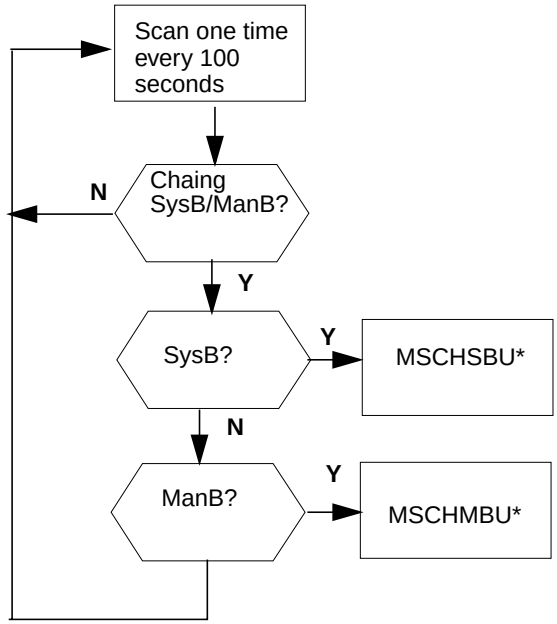


OM group MSCHAIN changes to manual busy state registers



OM group MSCHAIN (continued)

OM group MSCHAIN busy use registers



*Increase register one time for the chain and one time for each interface card in the chain.

Register MSCHDIA

Message switch chain diagnostic (MSCHDIA)

Register MSCHDIA counts tests performed on a chain or on an interface card in a chain.

Register MSCHDIA includes:

- test commands from the MS shelf, chain, and card levels
- test requests from the chain in-service audit
- return-to-service commands from the MS shelf and chain levels
- return-to-service attempts by the audit on a system busy chain

A test on an interface card on a chain causes Register MSCHDIA to increase one time for the interface card. The following conditions cause MSCHDIA to

increase one time for each chain and one time for each interface card in the chain:

- a test on an in-service chain
- an out-of-service chain
- a return to service chain

Register Register MSCHDIA release history

Register MSCHDIA introduced in BCS31.

Associated registers

Register MSCHDIAF counts self tests that fail.

Associated logs

The system generates MS150 when a chain goes from manual busy or system busy to in-service (OK). When a chain goes to OK, all cards in the chain make the same change.

Register MSCHDIAF

Message switch chain diagnostic failure (MSCHDIAF)

Register MSCHDIAF counts failed self tests that the system performs on a chain or on an interface card in a chain. If the chain is in service before the diagnostic test, the system takes the chain out of service.

A test on an interface card on a chain causes Register MSCHDIAF to increase one time for the interface card if the test fails. A test on an in-service chain causes register MSCHDIAF to increase one time for the chain if the test fails. A test on an out-of-service chain or a return to service on the chain causes MSCHDIAF to increase one time for the chain and one time for each interface card in the chain if the test fails.

Register MSCHDIA also counts the self tests.

Register MSCHDIAF release history

Register MSCHDIAF introduced in BCS31.

Associated registers

Register MSCHDIA counts diagnostic tests initiated on the chain or on an interface card in a chain.

OM group MSCHAIN (continued)

Associated logs

The system generates MS153 when a chain goes from in-service (OK) to system busy. When a chain goes system busy, all cards in the chain make the same change.

Register MSCHERR

Message switch chain error (MSCHERR)

Register MSCHERR increases when:

- the system detects errors for an in-service chain or chain interface card
- the system adds errors for an out-of-service chain or chain interface card that the system returns to service

Register MSCHERR includes:

- failure of an in-service self test
- error reports from the message switch maintenance software
- in-service trouble faults the system finds during a successful return-to-service from a system or manual action

Register MSCHERR increases one time for each fault on a chain or a chain interface card.

Register MSCHERR release history

Register MSCHERR introduced in BCS31.

Associated registers

Register MSCHFLT counts errors that cause the removal of the chain from service.

Associated logs

The system generates MS150 when a chain goes from manually busy or system busy to in-service (OK). When a chain goes to OK, all cards in the chain make the same change.

The system generates MS153 when a chain goes from OK to system busy. When a chain goes to system busy, all cards in the chain make the same change.

The system generates MS154 when a chain goes from C-side busy to system busy. When a chain goes to system busy, all cards in the chain make the same change.

The system generates MS157 when the system displays information about a chain.

The system generates MS277 generates when the system displays information about a chain card.

Register MSCHFLT

Message switch chain fault (MSCHFLT)

Register MSCHFLT counts errors that require the system to take the chain out of service.

Register MSCHFLT includes:

- fault reports from the message switch maintenance software
- critical failures of an in-service test

Register MSCHFLT increases one time for each fault on the chain or on a chain interface card, if the fault causes the chain to go to system busy.

The errors are also counted by Register MSCHERR.

Register MSCHFLT release history

Register MSCHFLT introduced in BCS31.

Associated registers

Register MSCHERR increases when:

- the system detects errors for an in-service chain or chain interface card
- the system detects errors for an out-of-service chain or chain interface card that the system brings back to service

Associated logs

The system generates MS153 when a chain goes from OK to system busy. When a chain goes to system busy, all cards in the chain make the same change.

Register MSCHMBP

Message switch chain manual busy (MSCHMBP)

Register MSCHMBP increases when commands entered from the MS level of a MAP make the chain manually busy.

OM group MSCHAIN (continued)

Register MSCHMBP includes changes from:

- in-service (OK) to manually busy
- system busy to manually busy
- central-side (C-side) busy to manually busy
- offline to manually busy

Register MSCHMBP increases one time for the chain and one for each interface card in the chain.

Register MSCHMBP release history

Register MSCHMBP introduced in BCS31.

Associated registers

There are no associated registers.

Associated logs

The system generates MS151 when a chain goes from in-service (OK) to manual busy. When a chain goes to manual busy, all cards in the chain make the same changes.

The system generates MS152 when a chain goes from an out-of-service state to manual busy. When a chain goes to manual busy, all cards in the chain make the same change.

Register MSCHMBU

Message switch chain manual busy usage (MSCHMBU)

Register MSCHMBU is a usage register. The scan rate is 100. MSCHMBU records if the chain is manual busy.

Register MSCHMBU increases one time for the chain and one time for every interface card in the chain.

Register MSCHMBU release history

Register MSCHMBU introduced in BCS31.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register MSCHSBU

Message switch chain system busy usage

Register MSCHSBU is a use register. The scan rate is slow: 100 seconds. MSCHMBU records if a chain is system busy.

Register MSCHSBU increases once for the chain and once for every interface card in the chain.

Register MSCHSBU release history

Register MSCHSBU introduced in BCS31.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group MSCHNLK

OM description

Message switch channelized link (MSCHNLK)

The OM group MSCHNLK monitors the performance and maintenance quality of the channelized links on a message switch (MS). The MS channelized links are the channelized wire links that connect MS chains to peripheral side (P-side) nodes.

The OM group MSCHNLK contains five peg registers that count:

- errors in operation
- critical or continuous faults that makes MS channelized links system busy
- diagnostics (self tests) that the system applies
- diagnostics that fail
- MS channelized links made manual busy

The OM group MSCHNLK also contains two-usage registers that record system busy and manual busy time.

Release history

The OM group MSCHNLK introduced in BCS31.

Registers

The OM group MSCHNLK registers appear on the MAP terminal as follows:

```
MSCLERR     MSCLFLT     MSCLDIA     MSCLDIAF
MSCLMBP     MSCLMBU     MSCLSBU
```

Group structure

The OM group MSCHNLK can provide one tuple for each message switch.

Key field:
MESSAGE_SWITCH_NUMBER is 0 or 1

Info field:
There is no Info field

Associated OM groups

The OM group MS monitors the quality of the performance of the message switch.

The OM group MSCHNLK monitors the performance and maintenance quality of the channelized links on a message switch.

Associated functional groups

There are no associated functional groups.

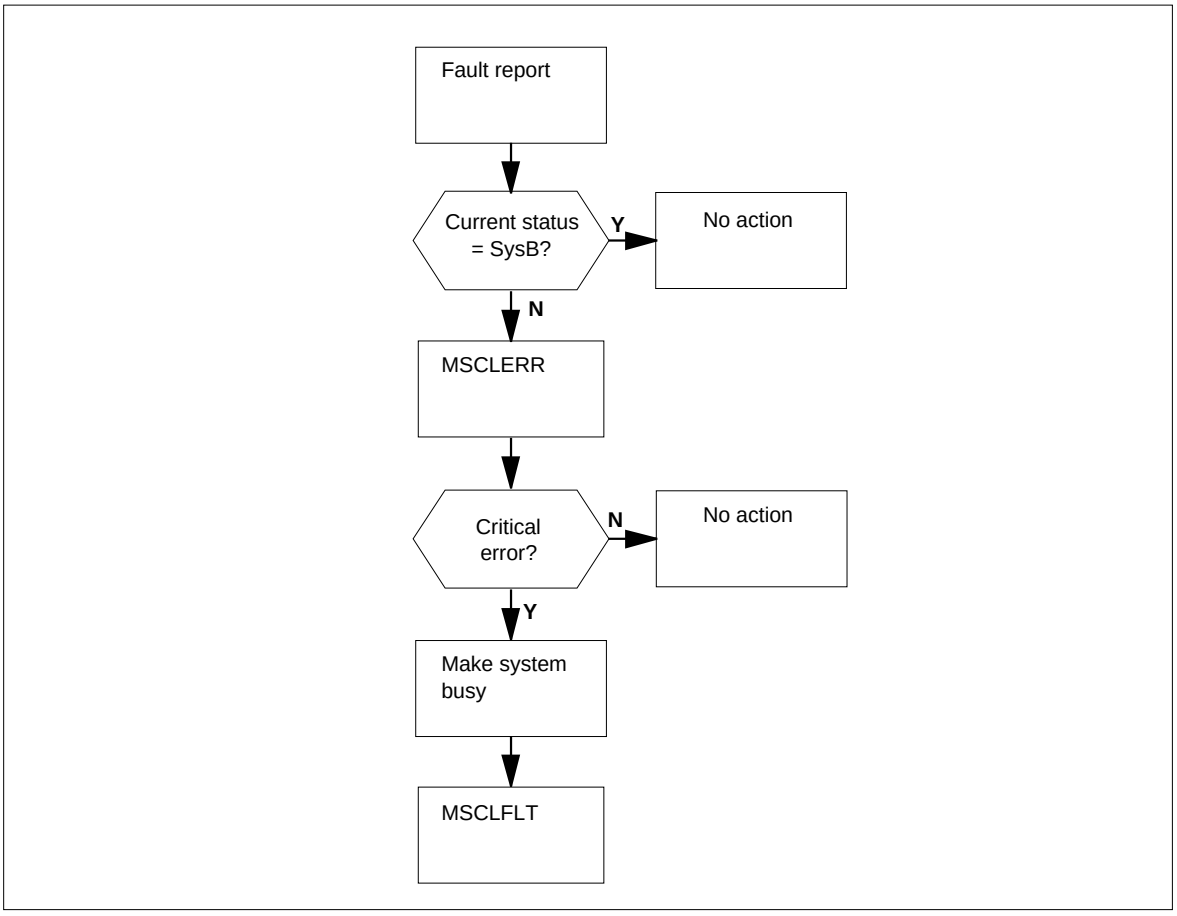
Associated functionality codes

The associated functionality codes for OM group MSCHNLK appear in the following table.

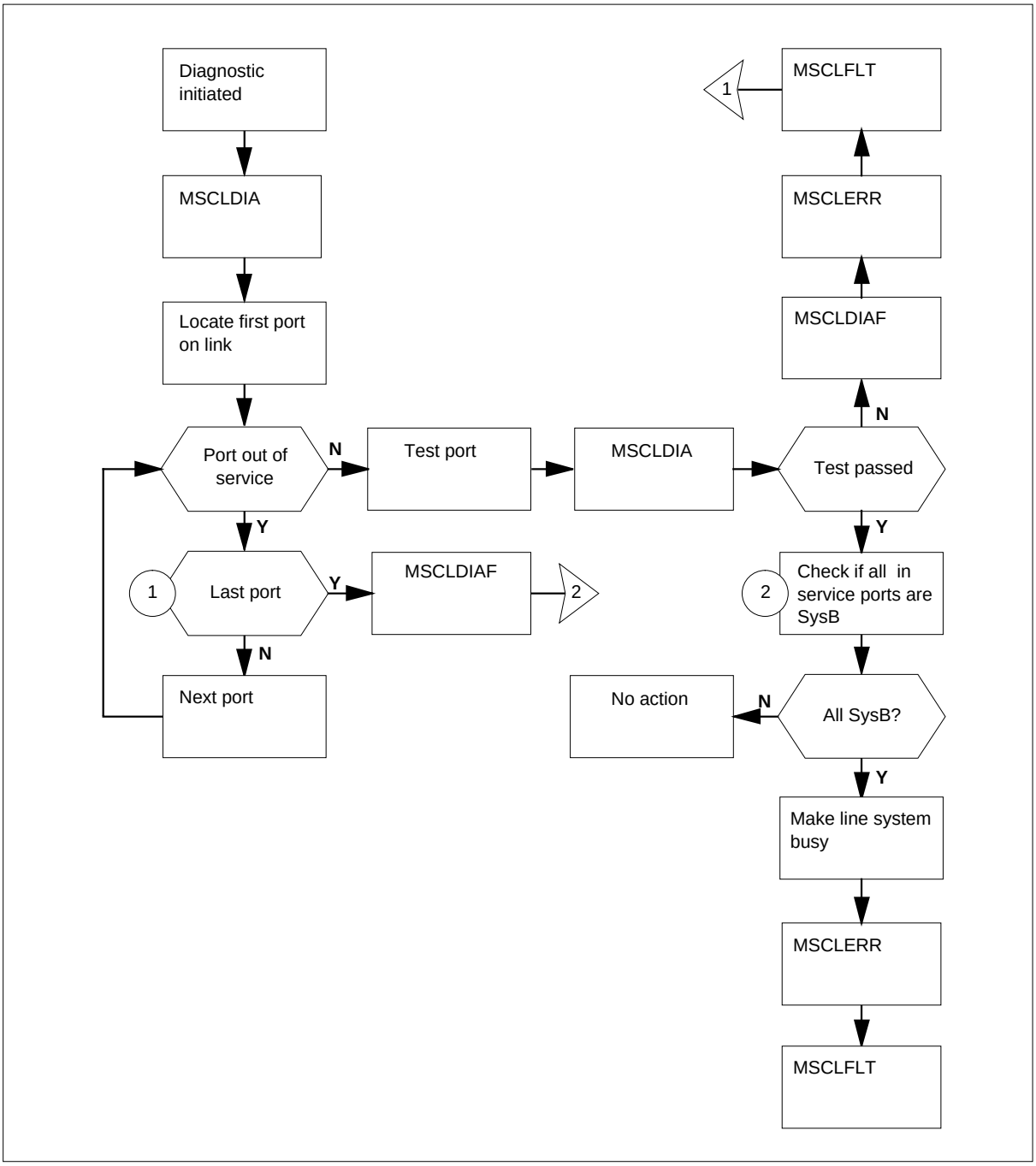
Functionality	Code
CM Common	NTX941AA
MS Common	NTX951AA

OM group MSCHNLK (continued)

OM group MSCHNLK error and fault detection registers

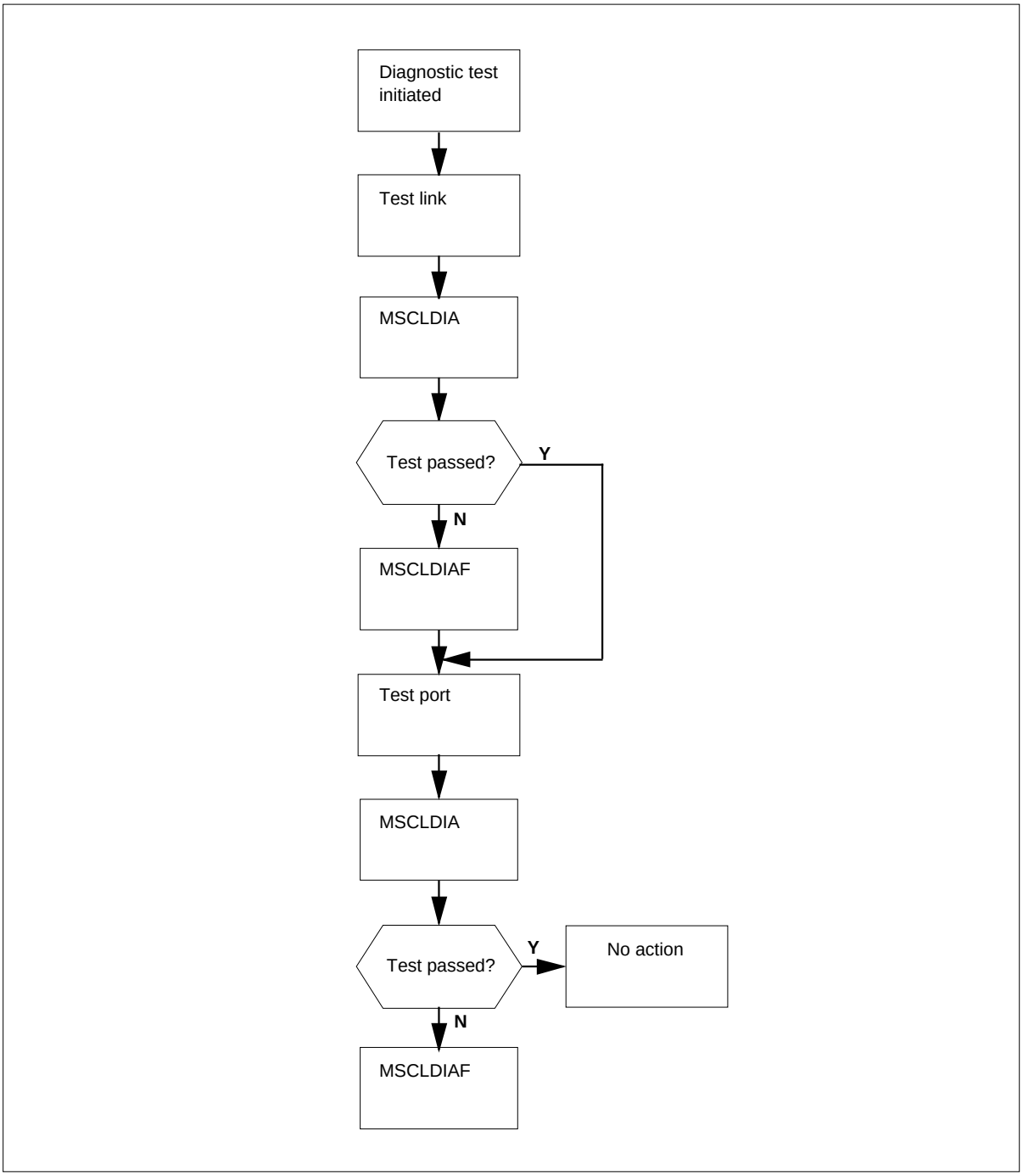


OM group MSCHNLK in-service link diagnostic registers

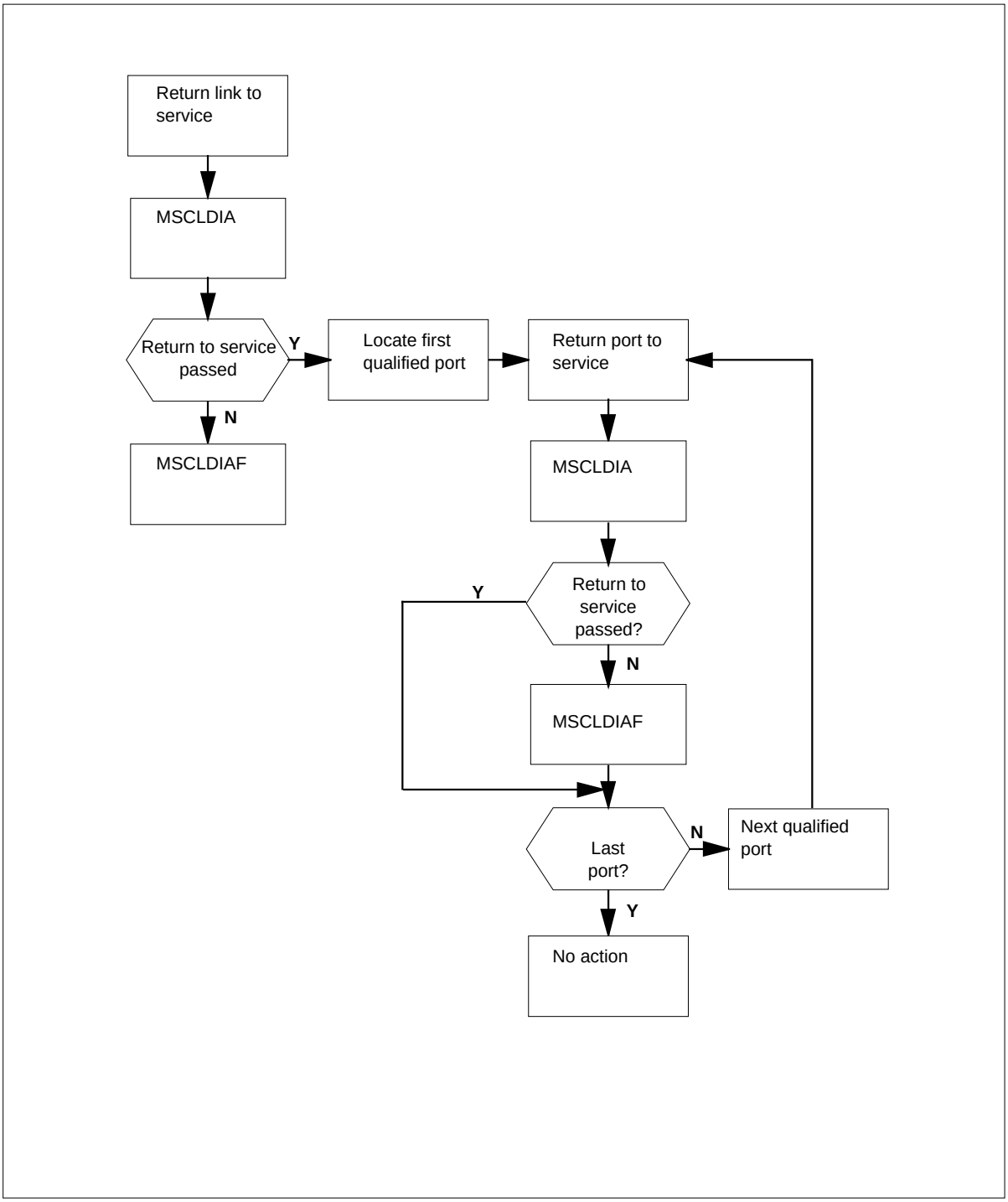


OM group MSCHNLK (continued)

OM group MSCHNLK out-of-service link diagnostic registers

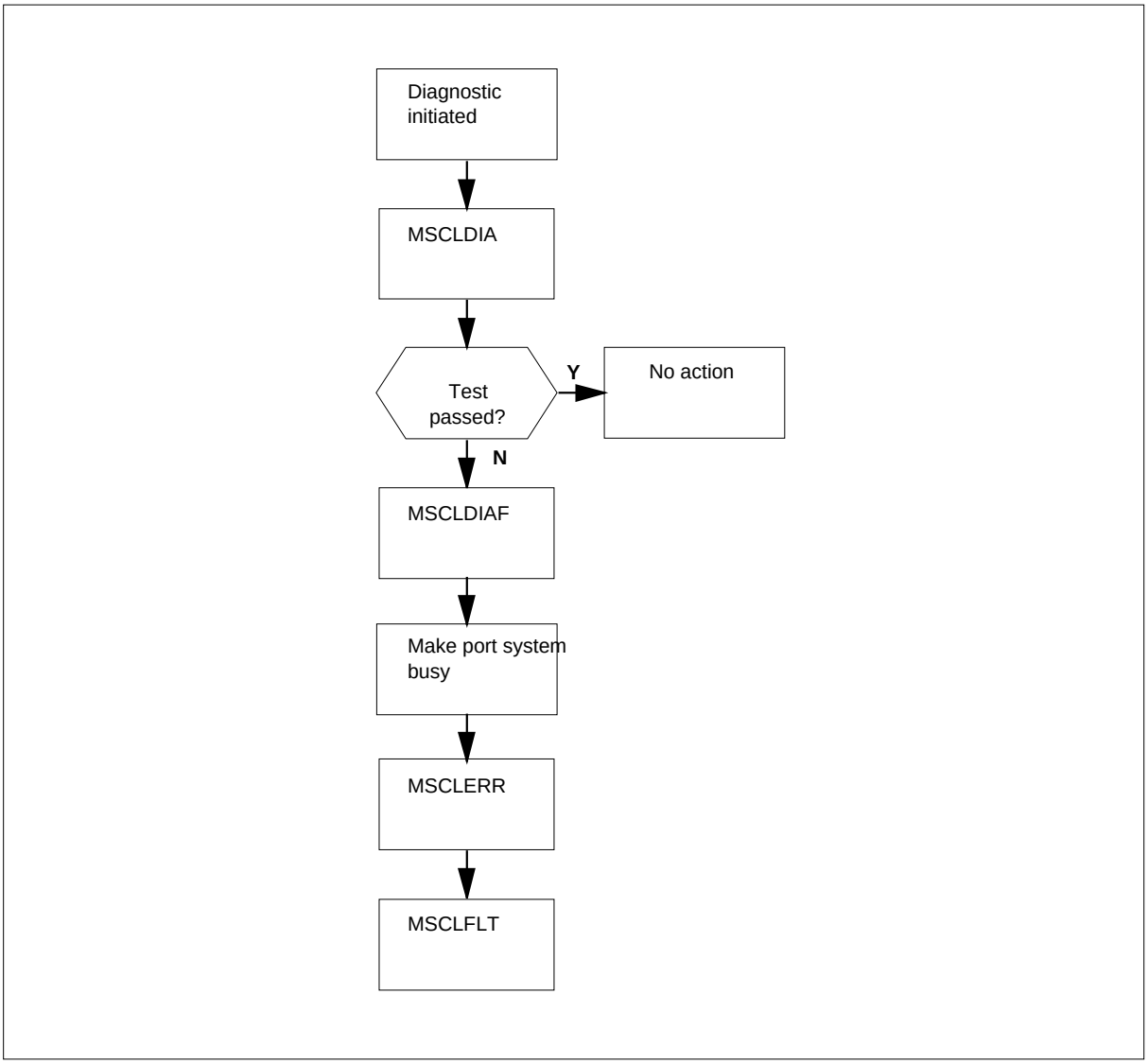


OM group MSCHNLK link return-to-service registers

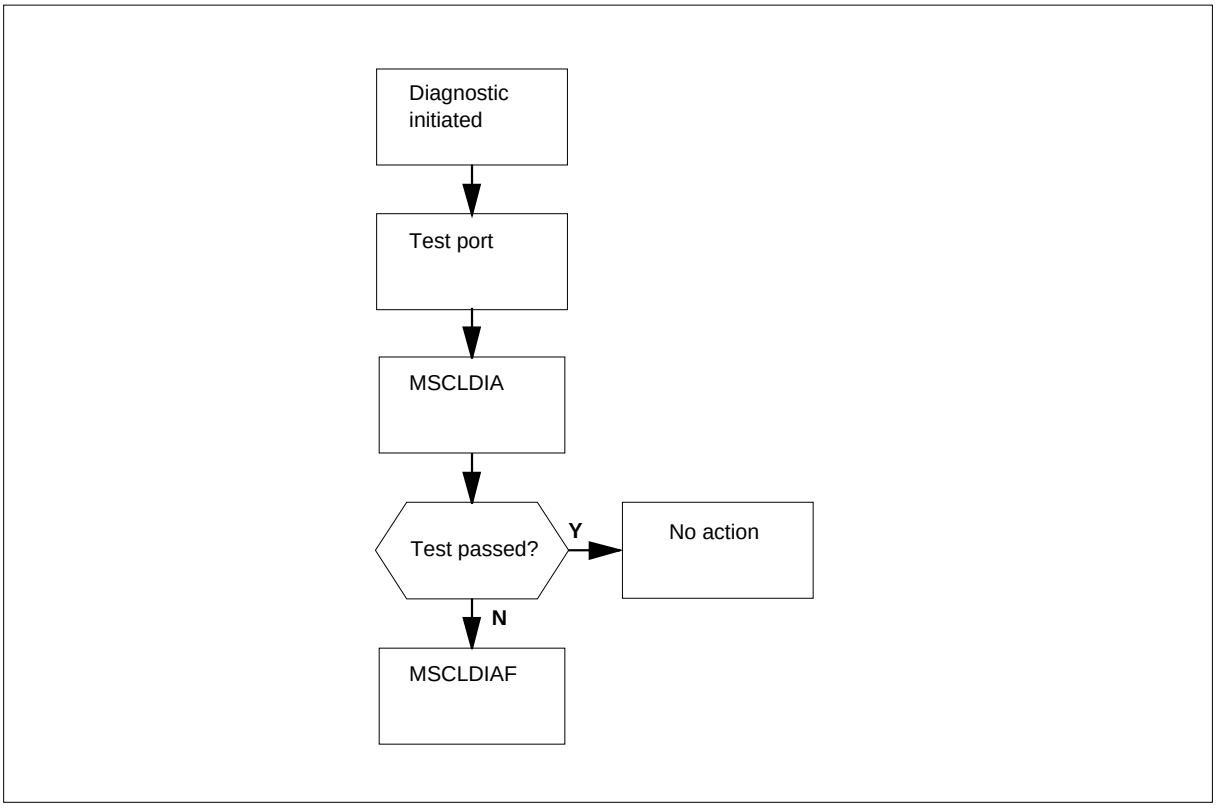


OM group MSCHNLK (continued)

OM group MSCHNLK in-service port diagnostic registers

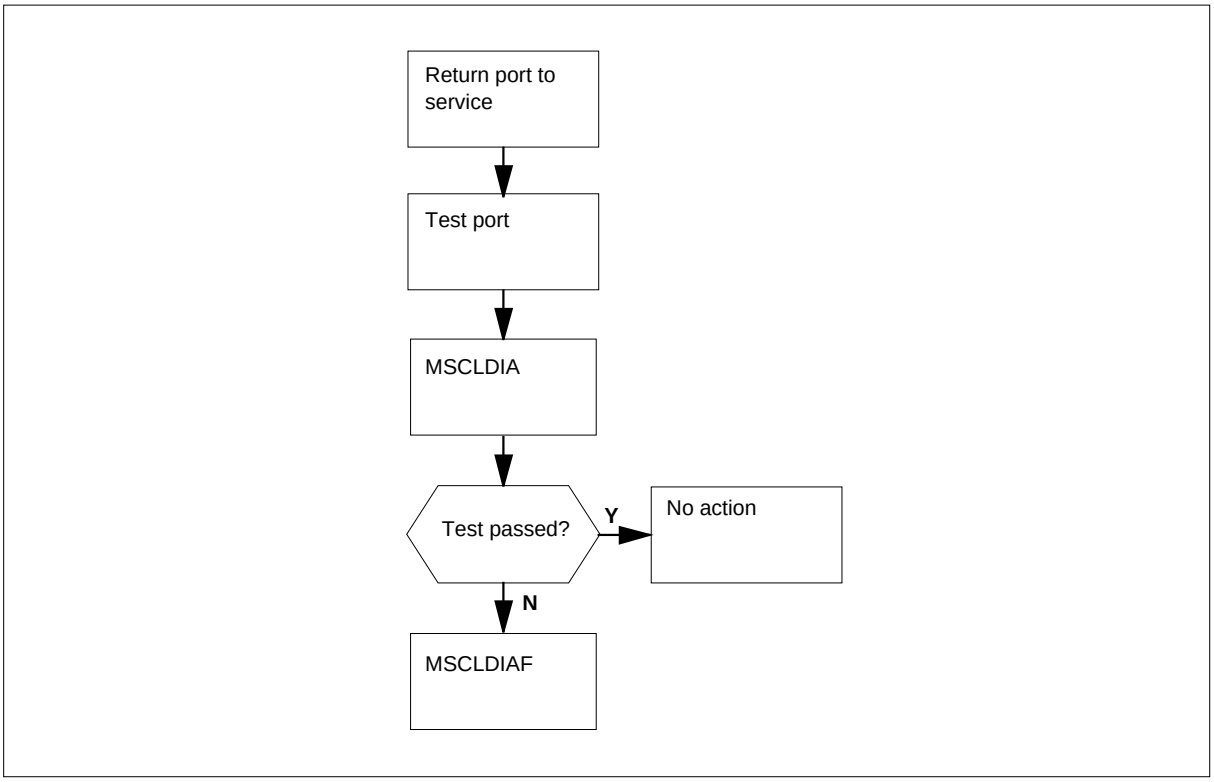


OM group MSCHNLK out-of-service port diagnostic registers

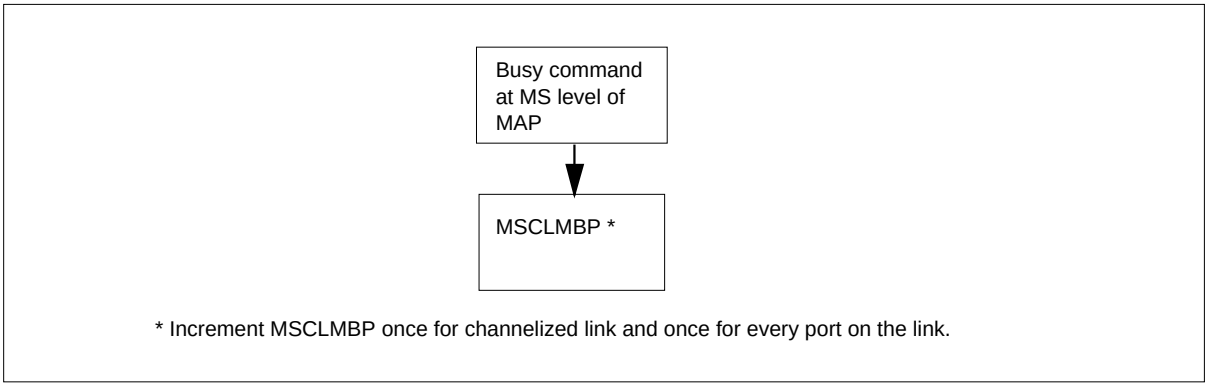


OM group MSCHNLK (continued)

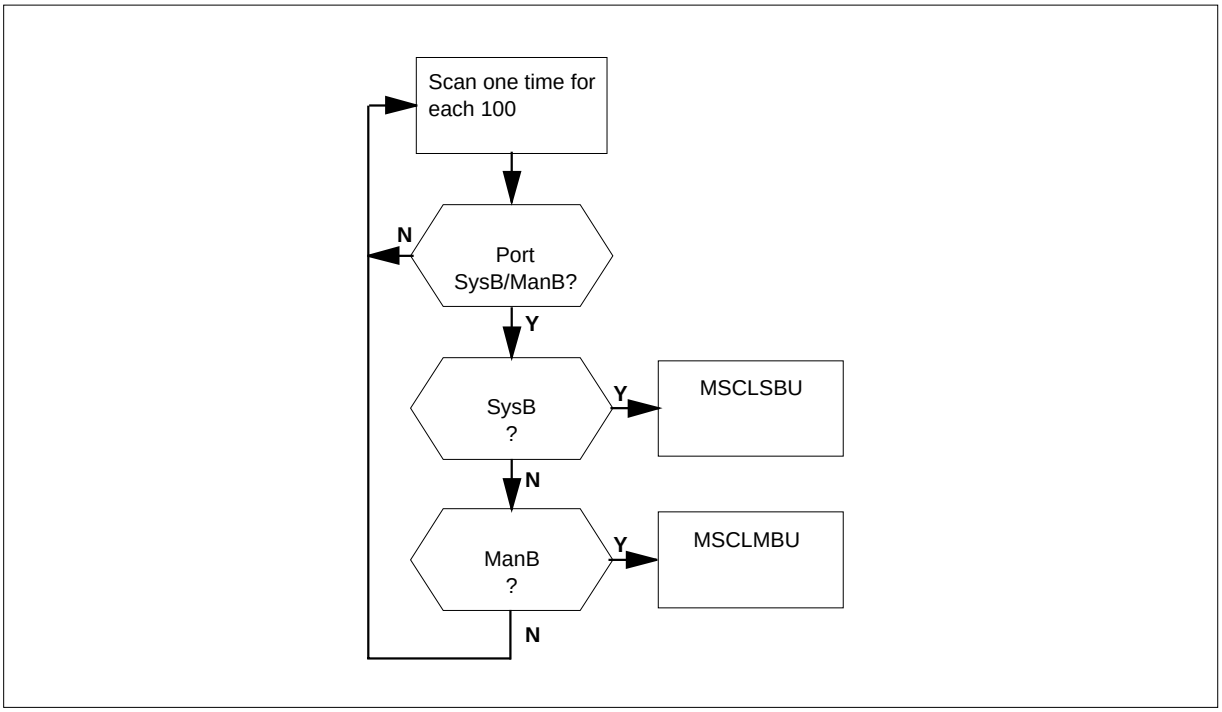
OM group MSCHNLK port return-to-service registers



OM group MSCHNLK changes to manual busy state registers



OM group MSCHNLK busy use registers



Register MSCLDIA

Message switch channelized link diagnostic (self test) (MSCLDIA)

Register MSCLDIA counts self tests performed on a channelized link or a port on a channelized link.

Register MSCLDIA includes the following:

- tests for a port on a channelized link entered at the MS chain card level of a MAP terminal
- return-to-service of a port on a channelized link entered at the MS chain card level
- test of a channelized link entered at the MS chain level
- return-to-service of a channelized link entered at the MS chain level
- periodic in-service audits
- return-to-service attempts on the system-busied link

A test or a return to service on a port on a channelized link causes MSCLDIA to increase one time for that port. A return to service on a channelized causes MSCLDIA to increases one time for the channelized link and one time for each

OM group MSCHNLK (continued)

port on the channelized link that is not P-side or C-side busy. A test on an out-of-service channelized link causes MSCLDIA to increase once for the link and one time for the ENET port on the link. A test on an in-service channelized link causes MSCLDIA to increase one time for the channelized link. A test on ports stop after the first successful test of a port on the channelized link.

Register MSCLDIA release history

Register MSCLDIA introduced in BCS31.

Associated registers

Register MSCLDIAF counts failed self tests on a channelized link or a port on a channelized link.

Associated logs

The system generates MS310 and MS280 when a channelized link goes from manually busy or system busy to in service (OK). When a channelized link goes to OK, the link attempts to return all the ports on the link to service.

Register MSCLDIAF

Message switch channelized link diagnostic (self test) failure (MSCLDIAF)

Register MSCLDIAF counts failed self tests on a channelized link or a port on a channelized link. If the port on the channelized link is in service before the self test, the system takes the link out of service.

A test or a return to service on a port on a channelized link causes MSCLDIAF to increase one time for that port, if the operation fails. A test an out-of-service channelized link causes MSCLDIAF to increase one time for the link and one time for the ENET port, if the test fails. A test on an in-service channelized link causes MSCLDIAF to increase. Register MSCLDIA increases one time for the link and one time for each port on the channelized link that fails.

Register MSCLDIA also counts the self tests.

Register MSCLDIAF release history

Register MSCLDIAF introduced in BCS31.

Associated registers

Register MSCLDIA counts self tests that the system initiates on a channelized link or a port on a channelized link.

Associated logs

The system generates MS283 when a channelized link goes from in service (OK) to system busy. When a channelized link goes to system busy, all ports on the link make the same changes.

The system generates MS313 when a port on a channelized link goes from in service (OK) to system busy, separately from the link.

Register MSCLERR

Message switch channelized link error (MSCLERR)

Register MSCLERR increases when:

- the system detects errors for an in-service channelized link or a port on a channelized link
- the system detects errors for an out-of-service channelized link. The system detects errors for a port on a channelized link that the system brings back to service

Register MSCLERR includes the following:

- failure of an in-service test
- error reports from the P-side peripherals
- error reports from the C-side
- in-service trouble faults found during a successful return-to-service, from a system or manual action

Register MSCLERR increases one time for the channelized link, when the system reports the fault on the whole link. Register MSCLERR increases one time if the system reports the fault on a port on the channelized link.

Register MSCLERR release history

Register MSCLERR introduced in BCS31.

Associated registers

Register MSCLFLT counts errors that require the system to take the channelized link or a port on the channelized link out of service.

Associated logs

The system generates MS280 when a channelized link goes from manually busy or system busy to in service (OK). When a channelized link goes to OK, the system attempts to return all the ports on the link to service.

OM group MSCHNLK (continued)

The system generates MS283 when a channelized link goes from OK to system busy. When a channelized link goes to system busy, all the ports on the link make the same changes.

The system generates MS284 when a channelized link goes from C-side busy or P-side busy to system busy. When a channelized link goes to system busy, all the ports on the link make the same changes.

The system generates MS310 when a channelized link goes from manually busy or system busy to OK.

The system generates MS313 when a port on a channelized link goes from OK to system busy, separate of the link. The busy operation applies to a separate port, not to the channelized link.

The system generates MS314 when a port on a channelized link goes from P-side busy to system busy, separate of the link.

The system generates MS317 when the system must display information about a port on a channelized link.

Register MSCLFLT

Message switch channelized link fault (MSCLFLT)

Register MSCLFLT counts errors that require the system to take the channelized link or a port on the channelized link out of service.

Register MSCLFLT includes:

- fault reports from the peripherals
- failures of an in-service test

Register MSCLFLT increases one time for the channelized link. The register increases if the system reports the fault on the whole link and makes the link system busy. Register MSCLFLT increases one time. The register increases if the system reports fault on a port on a channelized link, and makes the port system busy.

Register MSCLERR also counts the errors.

Register MSCLFLT release history

Register MSCLFLT introduced in BCS31.

Associated registers

Register MSCLERR increases when:

- the system detects errors for an in-service channelized link or a port on a channelized link
- the system detects errors for an out-of-service channelized link or a port on a channelized link that the system brings back to service

Associated logs

The system generates MS283 when a channelized link goes from in service (OK) to system busy. When a channelized link goes to system busy, all cards in the ports make the same changes.

The system generates MS313 when a port on a channelized link goes from OK to system busy separate of the link. The busy operation applies to a separate port, and not to the channelized link.

Register MSCLMBP

Message switch channelized link manual busy

Register MSCLMBP increases when the chain is made busy when the system enters commands at the MS level of a MAP.

Register MSCLMBP includes changes from the following:

- in service (OK) to manually busy
- system busy to manually busy
- C-side busy to manually busy
- P-side busy to manually busy

Register MSCLMBP increases one time if commands make a port on a channelized link busy. Register MSCLMBP increases one time for the channelized link and one time for each port on the link, if commands make the channelized link busy.

Register MSCLMBP release history

Register MSCLMBP introduced in BCS31.

Associated registers

There are no associated registers.

OM group MSCHNLK (continued)

Associated logs

The system generates MS281 when a channelized link goes from in service (OK) to manually busy. When a channelized link goes to manually busy, all ports on the link make the same changes.

The system generates MS282 when a channelized link goes from an out-of-service state to manual busy. When a channelized link goes to manually busy, all ports on the link make the same changes.

The system generates MS311 when a port on a channelized link goes from OK to manually busy, separate from the link. The manually-busy operation applies to an separate port, not to the channelized link.

The system generates MS312 when a port on a channelized link goes from an out-of-service state to manual busy separate of the link. The manually- busy operation applies to a separate port, not to the channelized link.

Register MSCLMBU

Message switch channelized link manual busy usage (MSCLMBU)

Register MSCLMBU is a usage register. The scan rate is 100. Register MSCLMBU records if the channelized link is manually busy.

Register MSCLMBU increases one time for the channelized link and one time for every port on the channelized link, when a command makes the link manually-busy. Register MSCLMBU increases when a port on the channelized link is made manual busy seperate from the link.

Register MSCLMBU release history

Register MSCLMBU introduced in BCS31.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register MSCLSBU

Message switch channelized link system busy usage

Register MSCLSBU is a usage register. The scan rate is 100. Register MSCLMBU records if a channelized link is system busy.

Register MSCLSBU increases one time for the channelized link and one time for every port on the channelized link, when the system makes the link system busy. Register MSCLSBU increases when a port on the channelized link is made manually busy. Register MSCLSBU increases when a port on the channelized links made manually busy separate from the link.

Register MSCLSBU release history

Register MSCLSBU introduced in BCS31.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group MSFBUS

OM description

Message switch frame transport bus

Register MSFBUS provides an accurate indication of the performance of the frame transport bus (F-bus) on the message switch (MS).

Release history

The OM group Register MSFBUS introduced in BCS33.

Registers

The OM group Register MSFBUS registers display on the MAP terminal as follows:

```
MSFBERR     MSFBFLT     MSFBDIA     MSFBDIAF
MSFBMBP     MSFBMBU     MSFBSBU
```

Group structure

The OM group Register MSFBUS can provide one tuple per office

Key field:
MESSAGE_SWITCH_NUMBER

Info field:
There is no Info field

Associated OM groups

There are no associated OM groups.

Associated functional groups

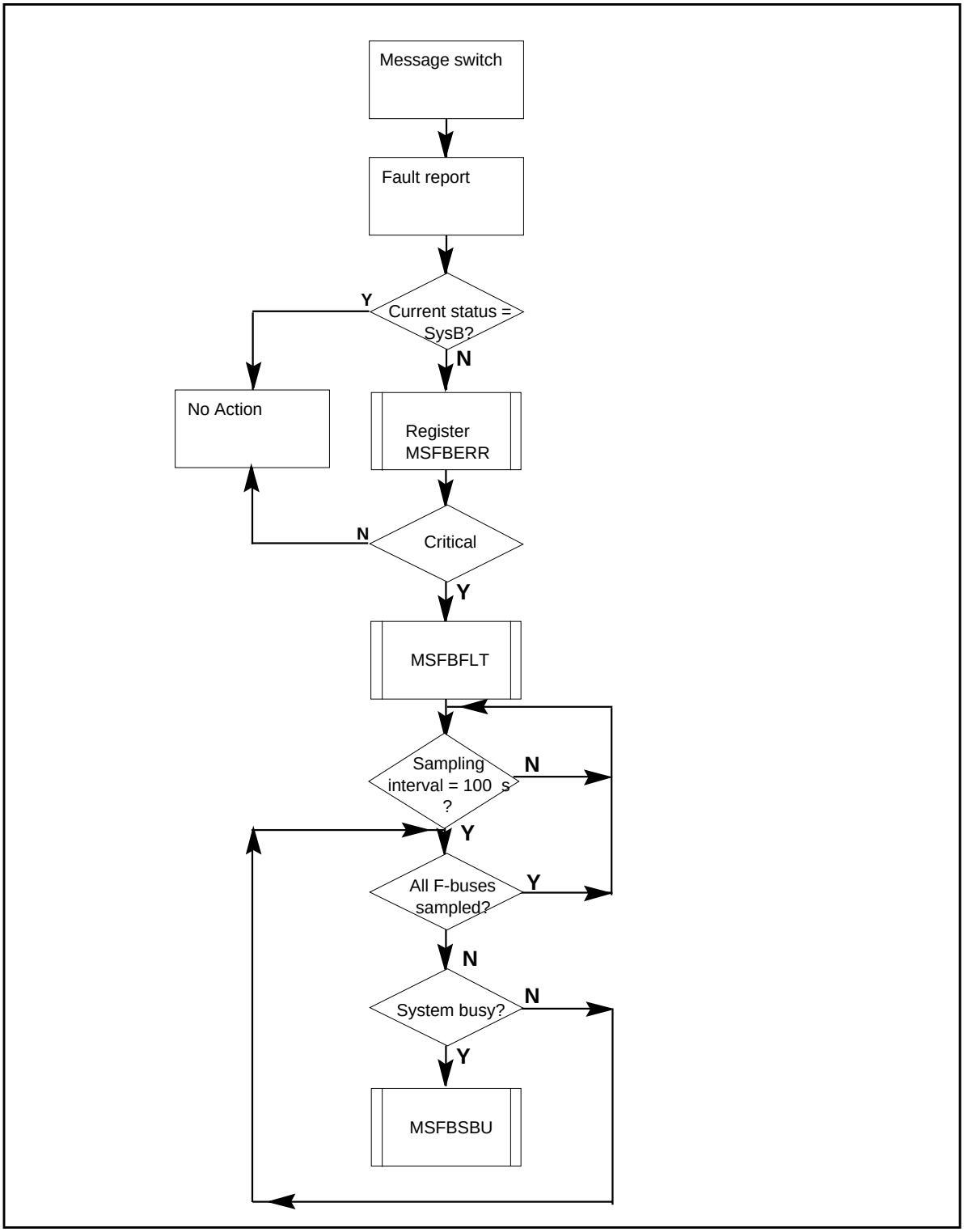
There are no associated functional groups.

Associated functionality codes

The associated functionality codes for OM group Register MSFBUS appear in the following table.

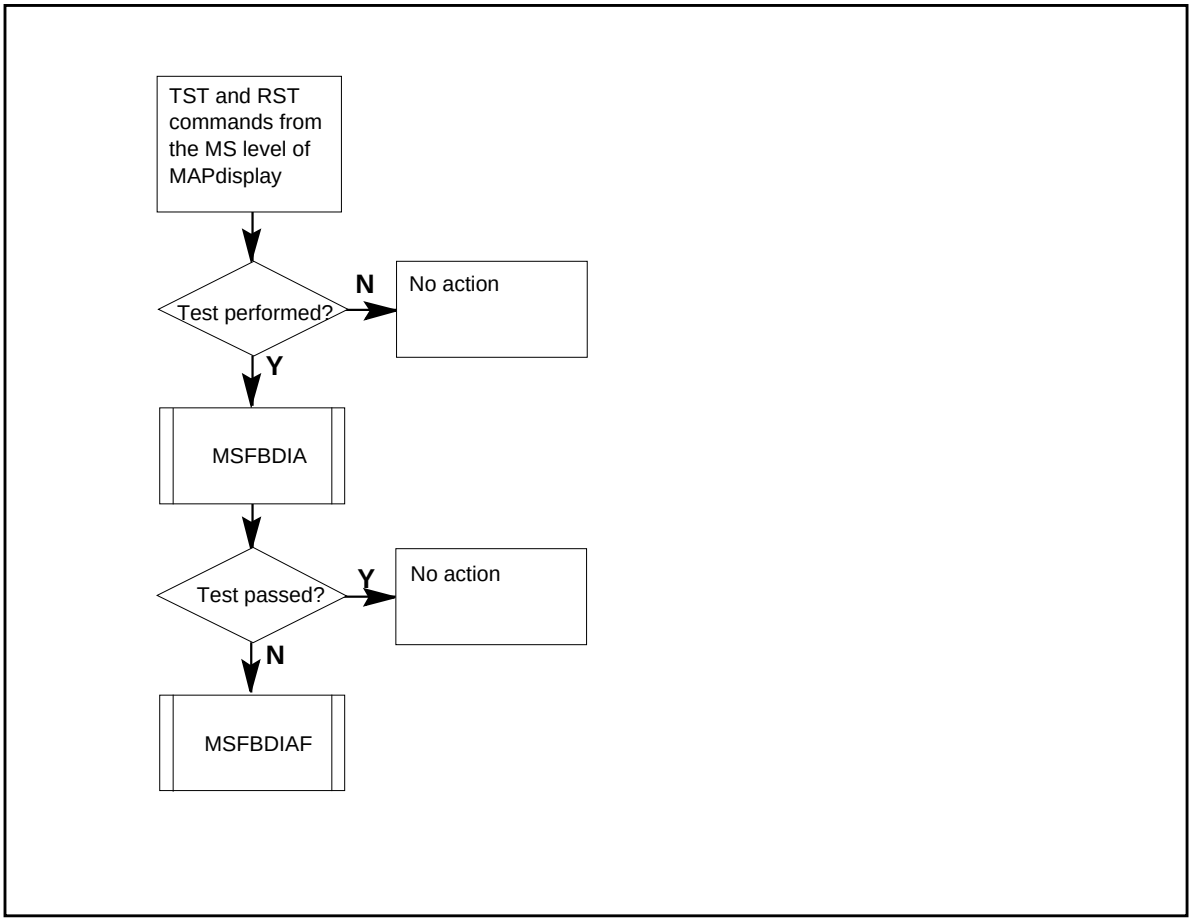
Functionality	Code
LIS Support over SR512 Interface	NTXN83AA

OM group Register MSFBUS registers

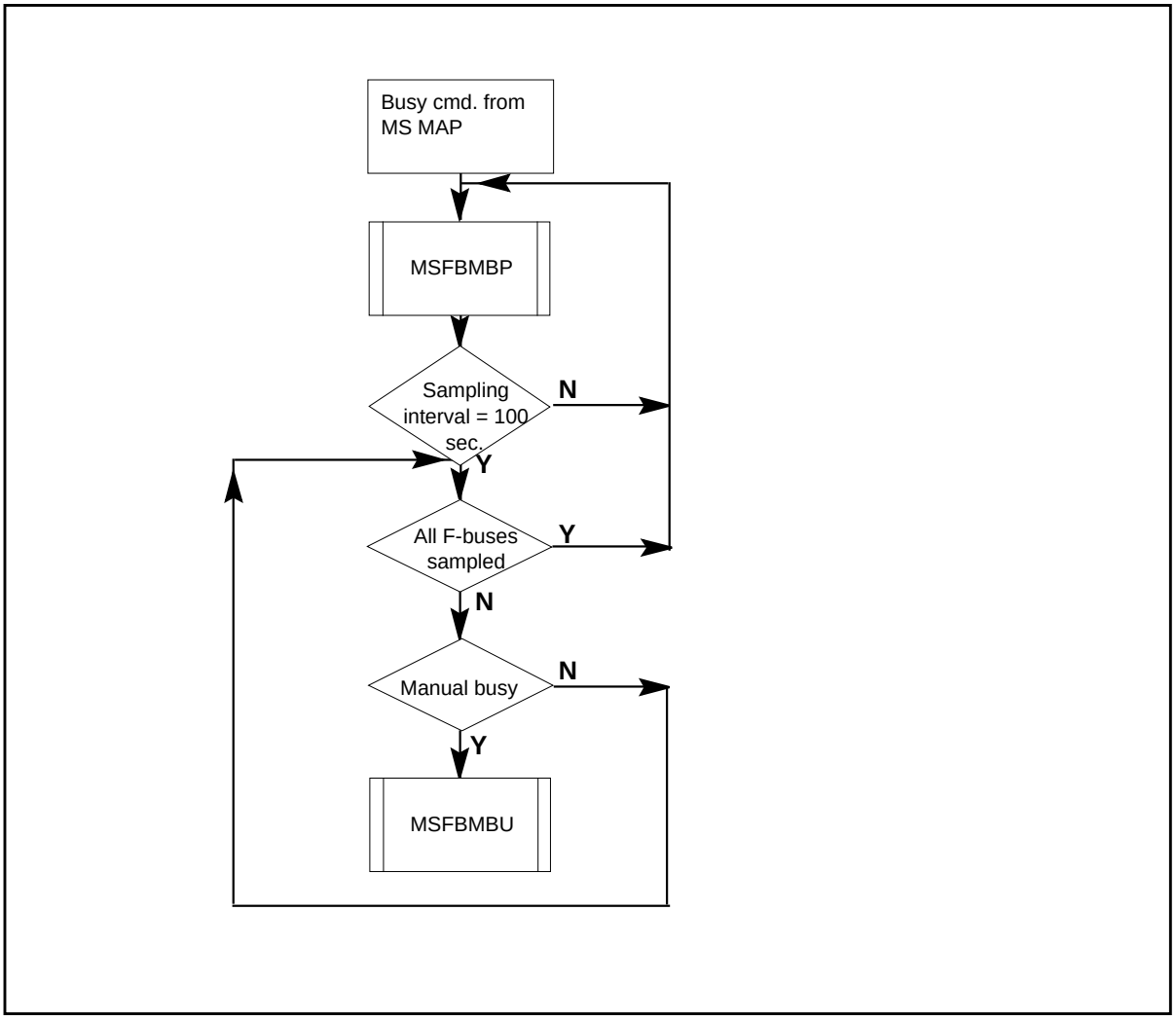


OM group MSFBUS (continued)

OM group Register MSFBUS registers (continued)



OM group Register MSFBUS registers (continued)



Register MSFBDIA

Register MS F-bus diagnostic count

Register MSFBDIA increases for each MS when the system performs a diagnostic on an MS F-bus. Register MSFBDIA increases if the diagnostic test passes or fails. These diagnostic tests include the test and the return-to-service (RTS) commands on the F-bus. This register increases one time for each test on the F-bus.

Register MSFBDIA release history

Register MSFBDIA introduced in BCS33.

OM group MSFBUS (continued)

Associated registers

MSFBDIAF

Associated logs

The system generates Log MS400 if the RTS is successful.

Register MSFBDIAF

Register MS F-bus diagnostic failure count

Register MSFBDIAF increases for each MS when a diagnostic test counted in MSFBDIA fails. If the F-bus is in service before the test, the system puts the F-bus out of service.

This register increases one time for each diagnostic test failure on the F-bus.

Register MSFBDIAF release history

Register MSFBDIAF introduced in BCS33.

Associated registers

MSFBDIA

Associated logs

The system generates Log MS403 when an F-bus goes from OK to system busy. This log indicates the detection of a critical fault on the F-bus.

Register MSFBERR

Register MS F-bus error count (MSFBERR)

Register MSFBERR increases for each MS when the system detects errors for an in-service F-bus. Additional maintenance action does not affect the register count. These errors include the failure of an in-service test and the receipt of error reports from the MS. This register increases one time for each fault on the F-bus.

Register MSFBERR release history

Register MSFBERR introduced in BCS33.

Associated registers

MSFBFLT

Associated logs

The system generates Log MS403 when an F-bus goes from OK to system busy, indicating a critical fault on the F-bus.

The system generates Log MS404 when an F-bus goes from C-side to system busy, to indicate a critical fault on the F-bus.

The system generates Log MS407 when certain information about an F-bus.

Register MSFBFLT

Register MS F-bus fault peg count (MSFBFLT)

Register MSFBFLT counts the number of errors for each MS (counted in MSFBERR) that require the system to take the MS F-bus out of service. These errors include all events that result in the change to system busy (SYSB). The events include the critical failure of an in-service test, and error reports from the MS.

This register increases one time for each fault on the F-bus if the fault causes the F-bus to become SYSB.

Register MSFBFLT release history

Register MSFBFLT introduced in BCS33.

Associated registers

MSFBERR

Associated logs

The system generates Log MS403 when an F-bus goes from OK to SYSB, to indicate the detection of a critical fault on the F-bus.

Log MS404 generates when an F-bus goes from C-side busy to SYSB, to indicate the detection of a critical fault on the F-bus.

Register MSFBMBP

Register MS F-bus manual busy peg count (MSFBMBP)

Register MSFBMBP increases for each MS when the F-bus is manually busy (ManB) as a result of commands from the MAP terminal. This register increases one time for each time the F-bus goes from:

- OK to ManB
- system busy to ManB
- C-side busy to ManB
- offline to ManB

OM group MSFBUS (end)

Register MSFBMBP release history

Register MSFBMBP introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

The system generates Log MS401 when an F-bus goes from OK to ManB.

The system generates Log MS404 when an F-bus goes from C-side busy to system busy.

Register MSFBMBU

Register MS F-bus manual busy usage count (MSFBMBU)

Register MSFBMBU counts the length of time the MS F-bus is in the manual busy (ManB) state. This register increases one time for each ManB state of the F-bus.

Register MSFBMBU release history

Register MSFBMBU introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register MSFBSBU

Register MS F-bus system busy usage count

Register MSFBSBU counts the amount of time the MS F-bus is in the system busy state.

Register MSFBSBU release history

Register MSFBSBU introduced in BCS33.

Associated registers

There are no associate registers.

Associated logs

There are no associated logs.

OM group MSFBUSTP

OM description

Message switch frame transport bus taps (MSFBUSTP)

The OM group MSFBUSTP provides an accurate indication of the performance of the frame transport bus (F-bus) taps on the message switch (MS).

Release history

The OM group MSFBUSTP introduced in BCS33.

Registers

The OM group MSFBUSTP registers appears on the MAP terminal as follows:

```
MSTPERR     MSTPFLT     MSTPDIA     MSTPDIAF
MSTPMBP     MSTPMBU     MSTPSBU
```

Group structure

The OM group MSFBUSTP can provide one tuple for each office

Key field:
MESSAGE_SWITCH_NUMBER

Info field:
There is no Info field

Associated OM groups

There are no associated OM groups.

Associated functional groups

There are no associated functional groups.

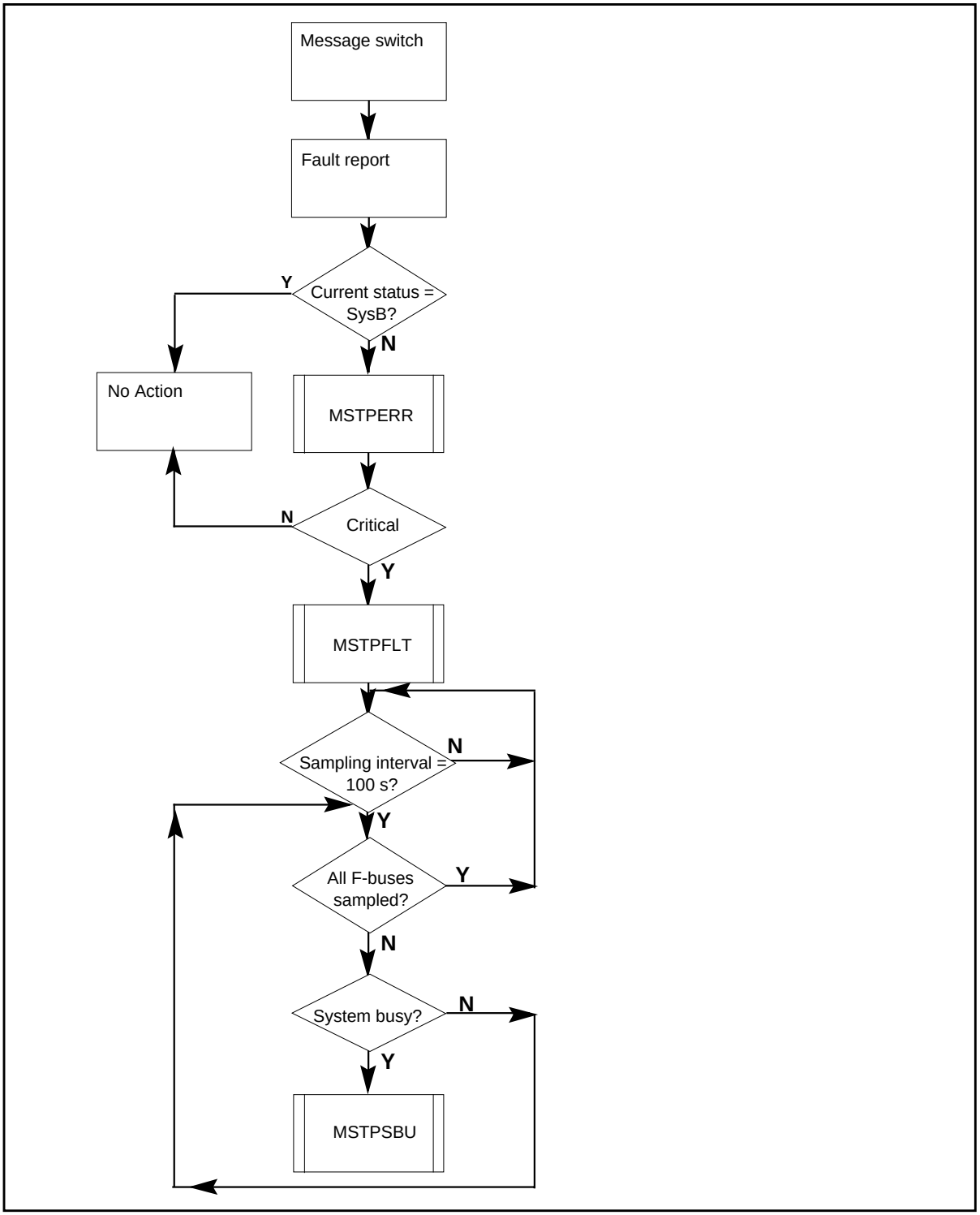
Associated functionality codes

The associated functionality codes for OM group MSFBUSTP are in the following table.

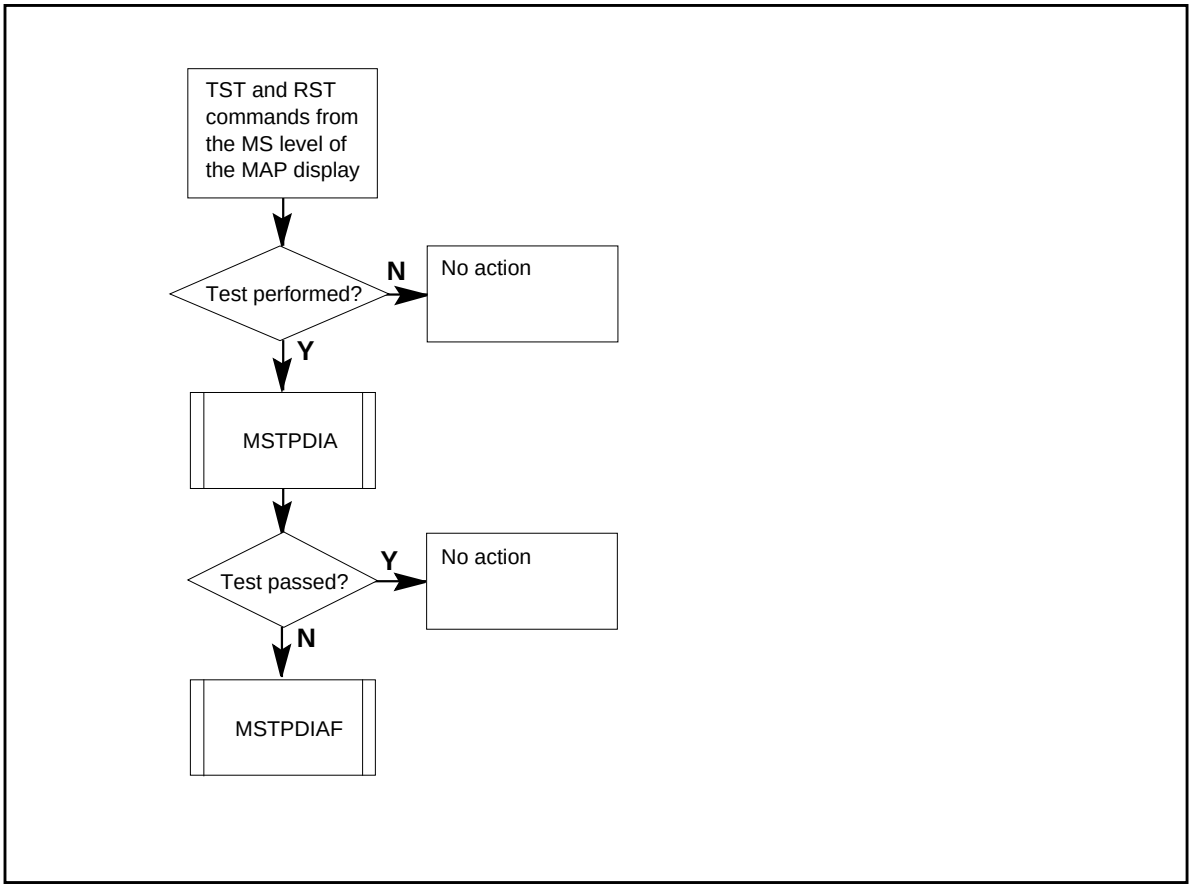
Functionality	Code
LIS Support over SR512 Interface	NTXN83AA

OM group MSFBUSTP (continued)

OM group MSFBUSTP registers

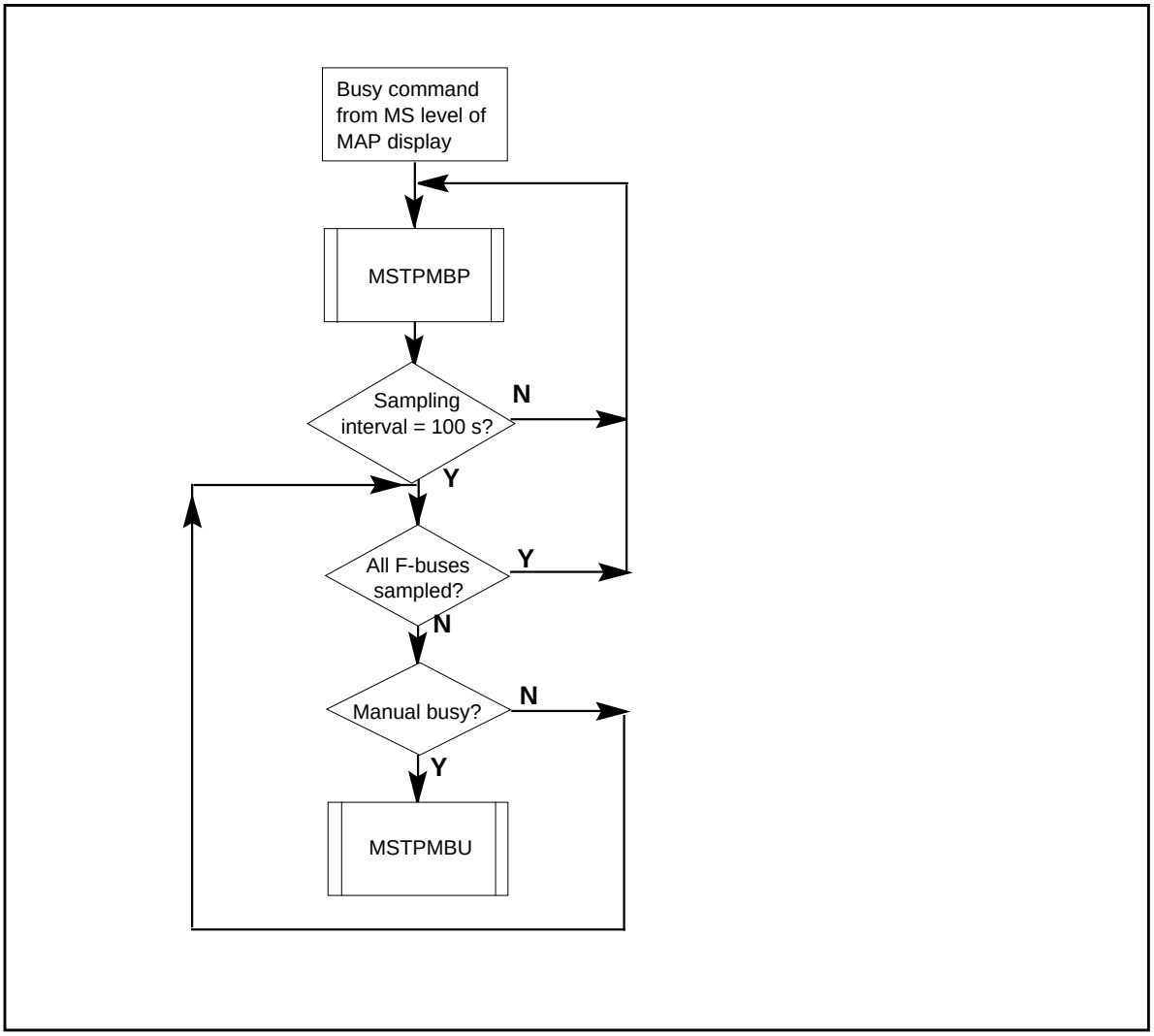


OM group MSFBUSTP registers (continued)



OM group MSFBUSTP (continued)

OM group MSFBUSTP registers (continued)



Register MSTPDIA

MS F-bus tap diagnostic count (MSTPDIA)

Register MSTPDIA increases for each MS when the system performs a diagnostic test on an MS F-bus tap. Register MSTPDIA increases even if the diagnostic test passes or fails. These diagnostic tests include the test and return-to-service (RTS) commands on an F-bus tap. This register increases one time for each test on the F-bus tap.

Register MSTPDIA release history

Register MSTPDIA introduced in BCS33.

Associated registers

MSTPDIAF

Associated logs

The system generates MS410 if the RTS passes. When the RTS passes, the F-bus tap goes from manually busy or system busy to OK.

Register MSTPDIAF

MS F-bus tap diagnostic failure count (MSTPDIAF)

Register MSTPDIAF increases for each MS when a diagnostic test counted in MSTPDIA fails. If the F-bus tap is in service before the test, the system puts the F-bus tap out of service.

This register increases one time for each diagnostic test failure on the F-bus tap.

Register MSTPDIAF release history

Register MSTPDIAF introduced in BCS33.

Associated registers

MSTPDIA

Associated logs

The system generates MS413 when an F-bus tap goes from OK to system busy. This event indicates the detection of a critical fault in an F-bus tap.

Register MSTPERR

MS F-bus tap error count (MSTPERR)

Register MSTPERR increases for each MS when the system detects errors at an in-service F-bus tap. Additional maintenance action does not affect the register count. These errors include the failure of an in-service test, and error reports from the MS. This register increases one time for each fault on an F-bus tap.

Register MSTPERR release history

Register MSTPERR introduced in BCS33.

Associated registers

MSTPFLT

OM group MSFBUSTP (continued)

Associated logs

The system generates MS413 when an F-bus tap goes from OK to system busy. This event indicates the detection of a critical fault on a F-bus tap.

The system generates MS414 each time an F-bus tap goes from C-side busy to system busy. The log indicates the detection of a critical fault on the F-bus tap.

The system generates MS417 when the system must display information about an F-bus tap.

Register MSTPFLT

MS F-bus tap fault count (MSTPFLT)

Register MSTPFLT counts the number of errors (counted in MSTPERR) that take the MS F-bus tap out of service. These errors include all events that result in the change to system busy (SYSB). These events include the critical failure of an in-service test, and error reports from the MS.

This register increases one time for each fault on the F-bus that causes the F-bus tap to become SYSB.

Register MSTPFLT release history

Register MSTPFLT introduced in BCS33.

Associated registers

MSTPERR

Associated logs

The system generates MS413 when an F-bus tap goes from OK to SYSB. This event indicates the detection of a critical fault on an F-bus tap.

Register MSTPMBP

MS F-bus tap manual busy peg count (MSTPFLT)

Register MSTPMBP increases for each MS when the F-bus tap is manually busy (ManB) as a result of commands from the MAP terminal. This register increases one time when the F-bus goes from:

- OK to ManB
- system busy to ManB
- C-side busy to ManB
- offline to ManB

Register MSTPMBP release history

Register MSTPMBP introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

The system generates MS411 each time an F-bus tap goes from OK to ManB.

The system generates MS412 when an F-bus tap goes from an out-of-service state to ManB.

Register MSTPMBU

MS F-bus tap manual busy usage count (MSTPMBU)

Register MSTPMBU counts the amount of time the MS F-bus tap is in the manually busy state. This register increases one time for each manually busy state of the F-bus tap.

Register MSTPMBU release history

Register MSTPMBU introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register MSTPSBU

MS F-bus tap system busy usage count (MSTPSBU)

Register MSTPSBU counts the amount of time the MS F-bus tap is in the system busy state.

Register MSTPSBU release history

Register MSTPSBU introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group MSGPSOC

OM description

The P-Side Messaging Occupancy OM group provides data to measure overload conditions on the P-side of a host XPM. Only SX05-based peripherals support this feature.

This OM records the number of incoming and outgoing messages every 10 seconds on each P-side data link. The XPM performs a check once a minute to determine whether the average number of messages on any data link exceeds the threshold value. If an overload condition occurs, the XPM sends a message to the CM. The switch generates a PM420 log any time the average message rate on any data link exceeds 60% of the threshold value.

To view data collection from this OM, use either the OMSHOW command at the command interpreter level or the PMDEBUG monitor interface. To turn off the data collection generated by this OM, change the value of office parameter MSGPSOC_OM_CONTROL in table OFCVAR from Y(es) to N(o).

Release history

XPM14 introduced OM group MSGPSOC.

Registers

The MAP terminal displays OM group MSGPSOC registers as follows:

MSGPSOC display group structure

```
AM_00_20   AM_20_40   AM_40_60   AM_60_80

AM_80_95   AM_OVLD    AM_MSGS
```

OM group MSGPSOC has one tuple per register.

Key field:

There is no key field.

Info field:

MSGPSOC_OM_KEY

Related OM groups:
None

Associated functional groups:
None

Related functionality codes:
None

Register AM_0_20

The average number of messages received from the corresponding P-side node is less than or equal to 20% of link capacity.

Register AM_0_20 release history
XPM14 introduced register AM_0_20.

Related registers
There are no related registers.

Related logs
There are no related logs.

Extension registers
There are no extension registers.

Register AM_20_40

The average number of messages received from the corresponding P-side node is greater than 40% and less than or equal to 60% of link capacity.

Register AM_20_40 release history
XPM14 introduced register AM_20_40.

Related registers
There are no related registers.

Related logs There are no related logs.

Extension registers There are no extension registers.

Register AM_40_60

The average number of messages received from the corresponding P-side node is greater than 40% and less than or equal to 60% of link capacity.

OM group MSGPSOC (continued)

Register AM_40_60 release history

XPM14 introduced register AM_40_60.

Related registers

There are no related registers.

Related logs

There are no related logs.

Extension registers

There are no extension registers.

Register AM_60_80

The average number of messages received from the corresponding P-side node is greater than 60% and less than or equal to 80% of link capacity.

Register AM_60_80 release history

XPM14 introduced AM_60_80.

Related registers

There are no related registers.

Related logs

There are no related logs.

Extension registers

There are no extension registers.

Register AM_80_95

The average number of messages received from the corresponding P-side node is greater than 80% and less than or equal to 95% of link capacity.

Register AM_80_95 release history

XPM14 introduced register AM_80_95.

Related registers

There are no related registers.

Related logs

There are no related logs.

Extension registers

There are no extension registers.

Register AM_OVLD

The average number of messages received from the corresponding P-side node is greater than 95% of link capacity.

Register AM_OVLD release history

XPM14 introduced register AM_OVLD.

Related registers

There are no related registers.

Related logs

There are no related logs

Extension registers

There are no extension registers.

Register AV_MSGS

The average number of messages received per second is tracked over a15-minute OM period.

Register AV_MSGS release history

XPM14 introduced register AV_MSGS

Related registers

There are no related registers.

Related logs

There are no related logs.

Extension registers

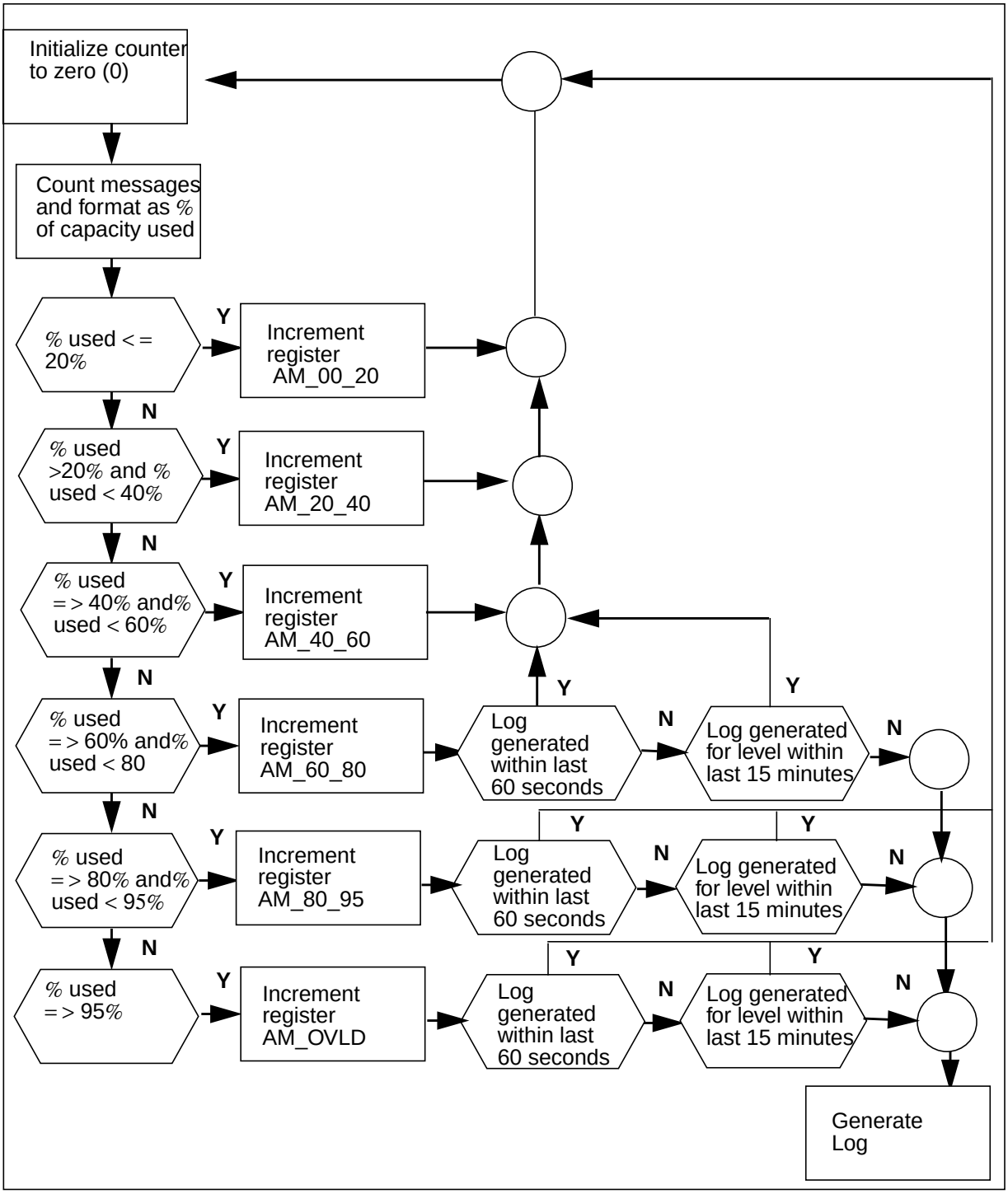
There are no extension registers.

OM group MSGPSOC registers data flow

The following chart shows the flow of data through the OM group MSGPSOC registers.

OM group MSGPSOC (end)

OM group MSGPSOC registers



OM group MTA

OM description

Metallic test access (MTA)

The OM group MTA counts seizures and failures of seizures of metallic test access (MTA) drivers. Usage registers record if MTA drivers are traffic busy or manually busy.

The OM group MTA refers to a single minibar switch of 16 horizontals and 20 verticals. The MTA card connects test equipment to line cards in a line concentrating device (LCD). Minibar drivers have a fixed CLLI, MTADRIVER, in table CLLI MTI. Measurements can be used for office provisioning and for monitoring components to determine if the components require maintenance action.

Release history

The OM group MTA introduced before BCS20.

BCS33

You can convert registers MTATRU and MTATBU from CCS to deci-erlangs before the register appears. Use the OMSHOW command on the ACTIVE class to display the registers.

BCS21

Registers MTATRU and MTAMBU modified to permit the system to provide output in deci-erlangs.

Registers

The OM group MTA registers appear on the MAP terminal as follows:

Group structure

The OM group MTA can provide one tuple for each key type.

Key field:
COMMON_LANGUAGE_NAME. This field contains a fixed CLLI, MTADRIVER.

Info field:
MTA_OM_INFO. This field contains the number of drivers assigned in table MTAMDRIVE.

OM group MTA (continued)

Associated OM groups

There are no associated OM groups.

Associated functional groups

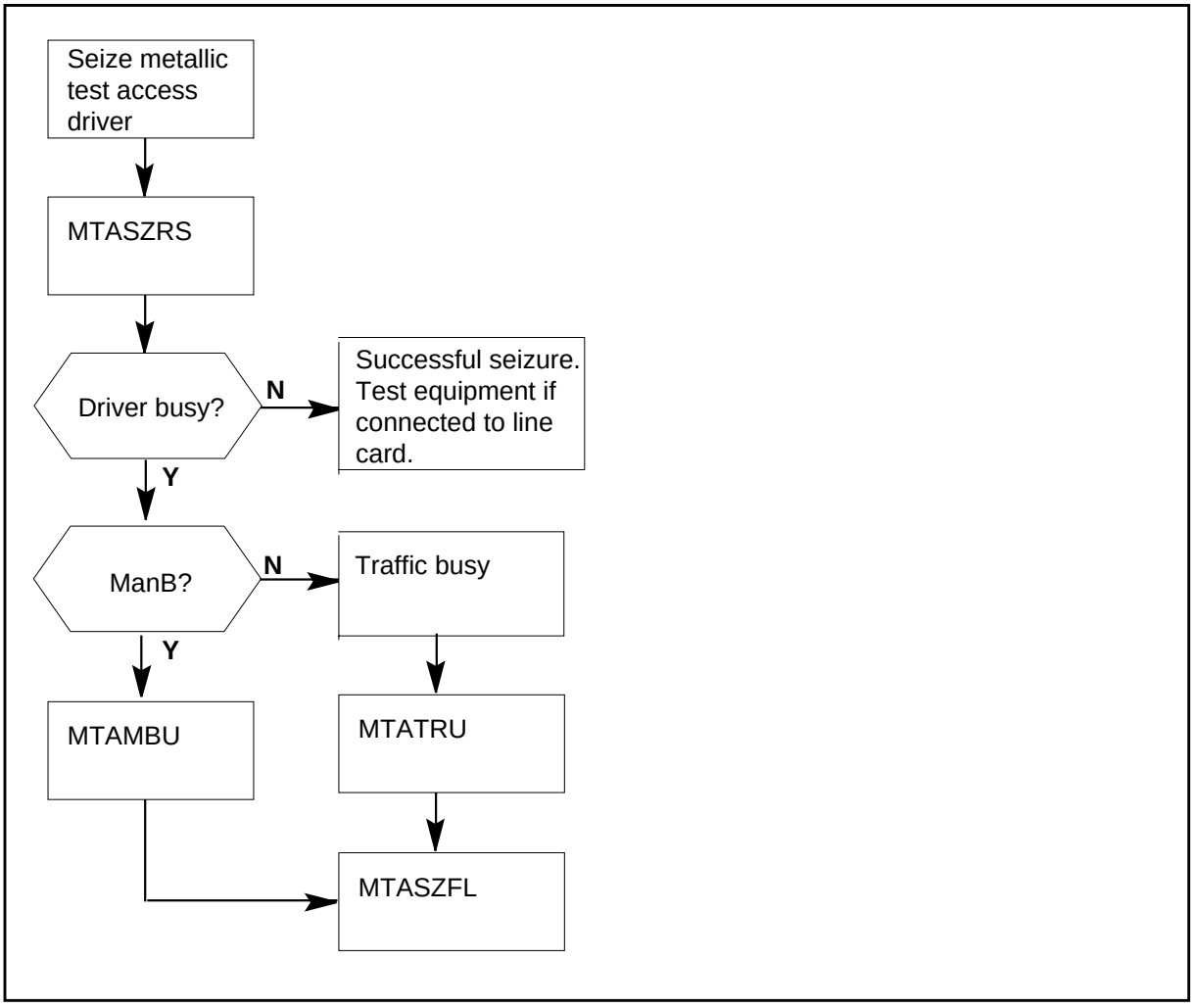
There are no associated functional groups.

Associated functionality codes

The associated functionality codes for OM group MTA appear in the following table.

Functionality	Code
Local Features I	NTX901AA

OM group MTA registers



Register MTAMBU

Metallic test access (MTA) manual busy usage (MTAMBU)

Register MTAMBU is a usage register. The scan rate is 10 s. Register MTAMBU records if MTA drivers are manually busy. This count includes call processing busy or lockout states.

If you set the office parameter OMINERLANGS to Y, counts are in deci-erlangs.

Register MTABMU release history

Register MTABMU introduced before BCS20.

OM group MTA (continued)

BCS33

When you set office parameter OMINERLANGS to Y, you convert the usage count from CCS to deci-erlangs before the count appears. Use the OMSHOW command on the ACTIVE class to display the usage count. The value in the active registers remains in CCS.

BCS21

Register modified to provide output in deci-erlangs.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register MTASZFL

Metallic test access (MTA) seizure failures (MTASZFL)

Register MTASZFL increases when the system abandons a set operation because the driver is in use or is out of service.

Register MTASZFL release history

Register MTASZFL introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

The line maintenance subsystem generates LINE118 when the system abandons a set operation.

Extension registers

There are no extension registers.

Register MTASZRS

Metallic test access (MTA) seizure attempts (MTASZRS)

Register MTASZRS increases when the MTA drive performs a set operation on an MTA.

Register MTASZRS release history

Register MTASZRS introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register MTATRU

Metallic test access (MTA) traffic busy usage (MTATRU)

Register MTATRU is a usage register. The scan rate is 10 s. Register MTATRU records if count MTA drivers are performing set operations. This count includes seized or network management busy states.

If you set the office parameter OMINERLANGS to Y, counts are in deci-erlangs.

Register MTATRU release history

Register MTATRU introduced before BCS20.

BCS33

When you set office parameter OMINERLANGS to Y, you convert the usage count from CCS to deci-erlangs before the count appears. Use the OMSHOW command on the ACTIVE class to display the usage count. The value in the active registers remains in CCS.

BCS21

Register modified to provide output in deci-erlangs.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group MTRPERF

OM description

Metering Performance (MTRPERF)

The OM group MTRPERF provides information about the performance of the DMS-100 metering system. Thirteen registers count the following occurrences:

- datafill errors
- resource not available and software problems
- mismatches during audit and recovery processes
- problems in the time of day (TOD) system

Release history

The OM group MTRPERF introduced in BCS30.

Support for OM group MTRPERF is available in APC009.1.

Registers

The OM group MTRPERF registers appear on the MAP terminal as follows:

```
DTCALLP     DTXPM       DTFEAT      TIMEST0
DURERR      COUNTERR    MTRBKERR    MTRAUDER
RECYCFND    RECYCCLR    THQOVFL     THQERR
TODXPMFL
```

Group structure

The OM group MTRPERF provides one tuple for each office.

Key field:
There is no Key field

Info field:
There is no Info field

Associated OM groups

The OM group MTRUSG provides information about the usage of the international metering system. This use includes the use of central control (CC) metering and extended peripheral module (XPM) metering.

Associated functional groups

There are no associated functional groups.

Associated functionality codes

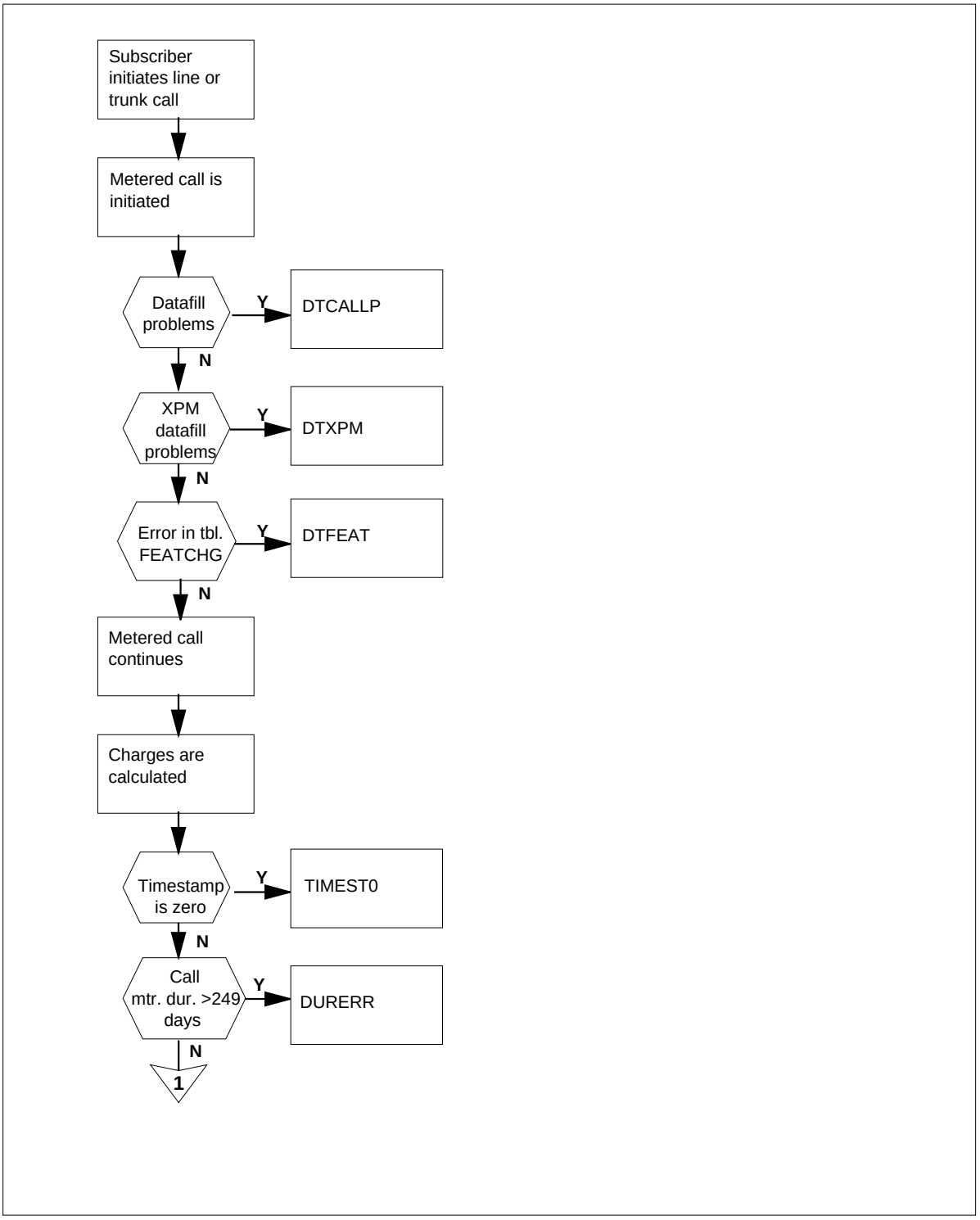
The associated functionality codes for OM group MTRPERF appear in the following table.

Functionality	Code
International Base Metering	NTX474AA

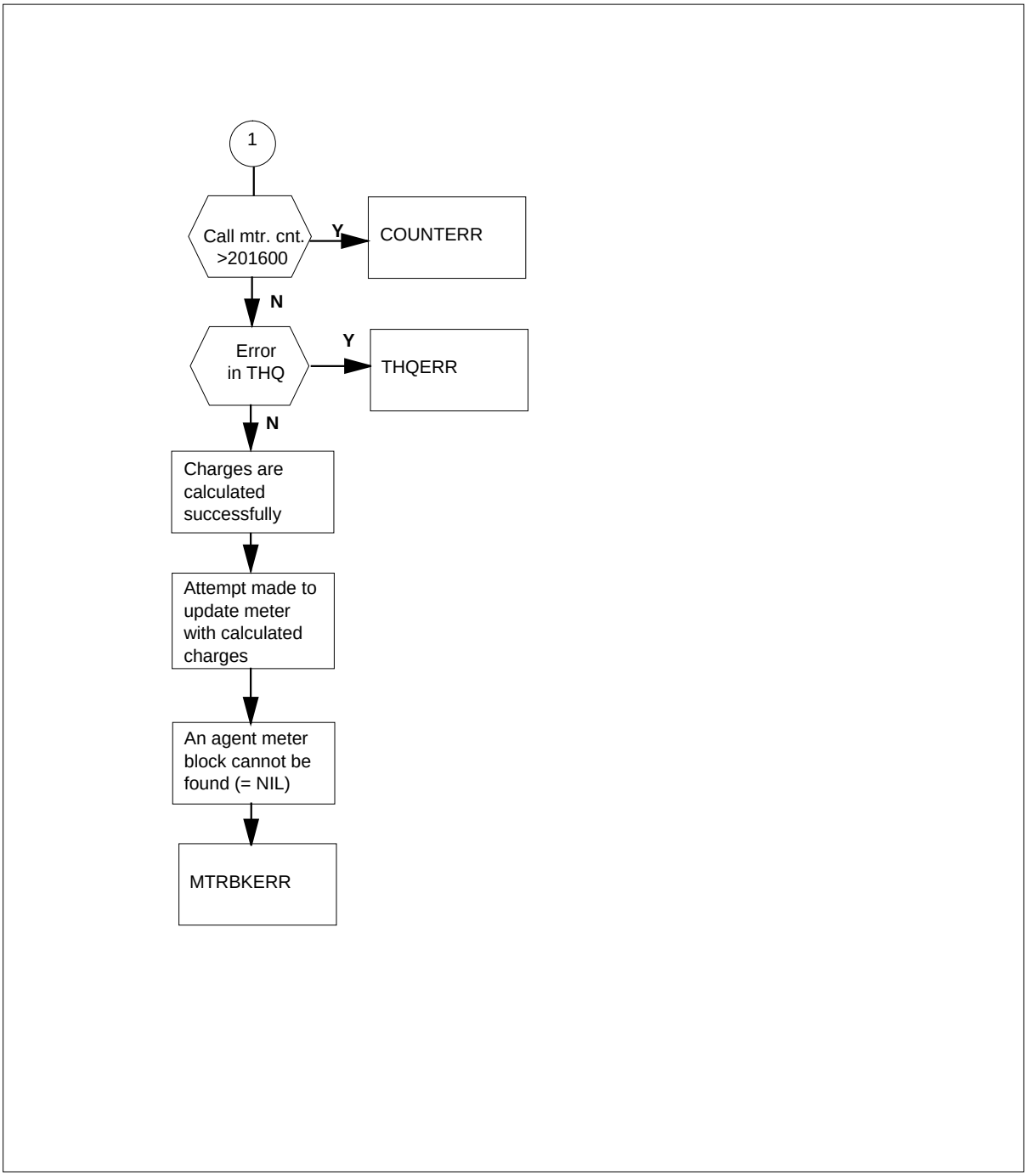
There are no associated functionality codes in APC100.

OM group MTRPERF (continued)

OM group MTRPERF registers

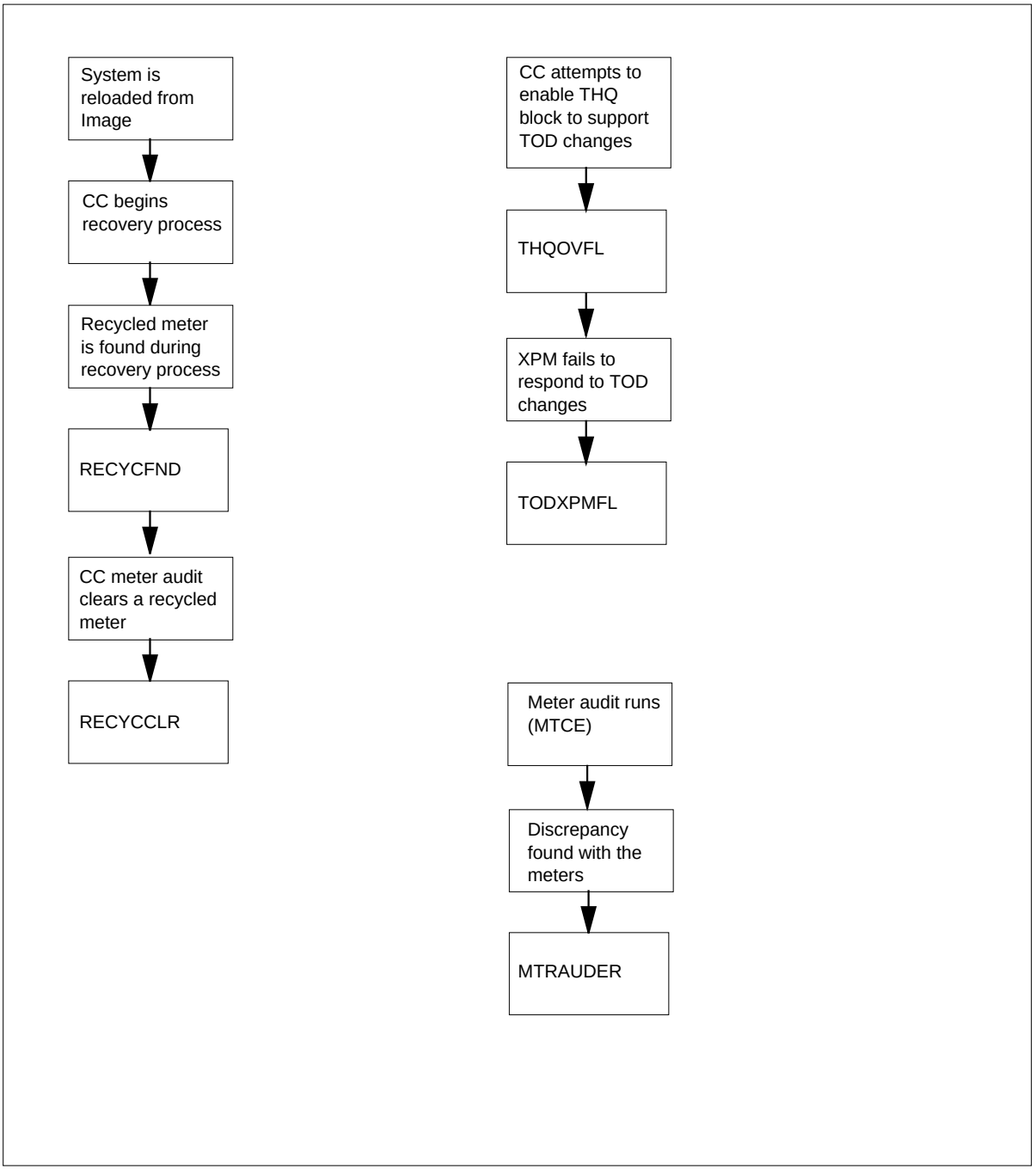


OM group MTRPERF registers (continued)



OM group MTRPERF (continued)

OM group MTRPERF registers (continued)



Register COUNTERR

Count error (COUNTERR)

Register COUNTERR increases when the system calculates a meter count greater than 201600.

Register COUNTERR release history

Register COUNTERR introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register DTCALLP

Datafill call problem (COUNTERR)

Register DTCALLP increases when the system encounters one of the following entry problems during metering of line- or trunk-originated calls:

- logical network not correct
- metering data index (MDI) not entered
- destination zone not entered
- tariff index not correct

Register DTCALLP release history

Register DTCALLP introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

The system generates log MTR113 when the system encounters an entry problem during metering of a line- or trunk-originated call.

For APC009.1, the sytem generates logs MTR113 and MTR152 when the system encounters an entry problem during metering of a line- or trunk-originated call.

Register DTFEAT

Datafill feature (DTFEAT)

Register DTFEAT increases each time the system encounters an entry error in table FEATCHG. The system encounters the error during an attempt to

OM group MTRPERF (continued)

perform metering on a call that involves a feature. The system charges the subscriber for this feature.

Register DTFEAT release history

Register DTFEAT introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

The system generates log MTR120 when an entry error occurs in table FEATCHG during an attempt to charge for a feature.

Register DTXPM

Datafill XPM (DTXPM)

Register DTXPM increases when the system encounters one of the following XPM-associated entry errors. The system encounters these errors during an attempt to perform metering on a line- or trunk-originated call:

- tariff number table (TNT) not correct
- logical network not correct
- TRFIDX not correct
- tariff number not correct
- metering signal system (MTSIGSYS) index not correct
- metering rate mismatch
- metering function mismatch

Register DTXPM release history

Register DTXPM introduced in BCS30.

Associated registers

There are no associated registers

Associated logs

The system generates logs when the system encounters one of the following XPM-related errors:

- The system generates log MTR136 when the system encounters a TNT that is not correct
- The system generates log MTR137 when the system encounters a logical network that is not correct.

- The system generates log MTR138 when the system encounters a TRFIDX that is not correct.
- The system generates log MTR139 when the system encounters a TARIFNUM that is not correct.
- The system generates log MTR140 when the system encounters an MTSIGSYS index that is not correct.
- The system generates log MTR141 when the system encounters a metering rate mismatch.
- The system generates log MTR142 when the system encounters a metering function mismatch.

The system encounters these errors during an attempt to perform metering on a line- or trunk-originated call.

Register DURERR

Duration error (DURERR)

Register DURERR increases when the system calculates a duration greater than 249 d while the system performs CC-metering.

Register DURERR release history

Register DURERR introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register MTRAUDER

Meter audit error (MTRAUDER)

Register MTRAUDER increases when the meter audit detects one of the following meter discrepancies:

- the system, in error, assigns a meter to an agent
- the system assigns an agent the wrong number of meters
- more than one agent owns a meter
- a mismatch is present between an agent and the “owner" field of the meter block

OM group MTRPERF (continued)

Register MTRAUDER release history

Register MTRAUDER introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

The system generates logs when the system detects one of the following meter discrepancies:

- The system generates log MTR103 when the system, in error, assigns a meter to an agent.
- The system generates log MTR104 when an agent has less meters assigned than the entry indicates.
- The system generates log MTR105 when an agent has more meters assigned than the entry indicates.
- The system generates log MTR116 when the system does not assign an agent the correct meters.
- The system generates log MTR118 when more than one agent owns a meter.
- The system generates log MTR123 when a mismatch is present between an agent and the “owner" field of the meter block.

Register MTRBKERR

Meter block error (MTRBKERR)

Register MTRBKERR increases each time the system cannot find the meter block of an agent. The system cannot find the meter block of an agent during an attempt to update a meter with the calculated charges.

Register MTRBKERR release history

Register MTRBKERR introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register RECYCCLR

Recycled cleared (RECYCCLR)

Register RECYCCLR increases when a meter audit clears a recycled meter after three audits in a row fail to reclaim the meter. A recycled meter is a meter that cannot link to a line during the recovery process.

This condition can occur if the journal files are not applied after a system reload from image.

Register RECYCCLR release history

Register RECYCCLR introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

The system generates log MTR119 when three meter audits in a row fail to reclaim a recycled meter.

Register RECYCFND

Recycled found (RECYCFND)

Register RECYCFND increases when the system finds a recycled meter during the recovery process that follows a system reload from image. A recycled meter is a meter that cannot link to a line during the recovery process.

Register RECYCFND release history

Register RECYCFND introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register THQERR

THQ error (THQERR)

Register THQERR increases when one of the following problems occurs with the table history queue (THQ) during a CC-metering attempt or a THQ audit:

- the THQ contains a nil value
- the head or body of the THQ has faults
- a metered call terminates before any tariff applies

OM group MTRPERF (continued)

Register THQERR release history

Register THQERR introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

The system generates log MTR127 when a meter audit detects a problem with the THQ during:

- a metering attempt
- a THQ audit

Register THQOVFL

THQ overflow (THQOVFL)

Register THQOVFL increases when table history queue (THQ) resources are not available. These resources are not available during an attempt to enable a THQ block to support metering TOD changes.

Register THQOVFL does not apply to APC100 software.

Register THQOVFL release history

Register THQOVFL introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

The system generates log MTR129 when THQ resources are not available. These resources are not available during an attempt to enable a THQ block to support metering TOD changes.

There are no associated logs in APC100.

Register TIMESTO

Timestamp 0 (TIMEST0)

Register TIMEST0 increases when a CC-metered call has an origination time that the system did not initialize (default is zero).

Register TIMESTO release history

Register TIMESTO introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register TODXPMFL

TOD XPM failure (TODXPMFL)

Register TODXPMFL increases when an extended peripheral module (XPM) fails to respond to a time of day (TOD) change. This failure can cause the XPM to use the wrong tariff to calculate metering charges.

XPM metering does not apply to APC100 software.

Register TODXPMFL release history

Register TODXPMFL introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

The system generates log MTR114 when an XPM fails to respond to a TOD change.

OM group MTRUSG

OM description

Metering usage (MTRUSG)

The OM group MTRUSG provides information about the use of the DMS-100 metering system. Call metering is a method of charging for the elapsed time of a call. To charge for the elapsed time of a call, the system adds “charging units" to the meter of a subscriber. The extended peripheral module (XPM) normally meters calls. The system converts the calls to central control (CC) metering when:

- activation of a feature occurs
- XPM software errors occur
- a long duration call occurs

Calls that continue for more than two hours have the correct meters updated by the charge update process (CUP). Free and unanswered calls are not metered.

For the APC100 market, call metering always occurs in the CC.

Release history

The OM group MTRUSG introduced in BCS30.

Support for OM group MTRUSG is available in APC009.1.

Registers

For Asia Pacific and CALA (APC) customers only, the OM group MTRUSG registers display on the MAP terminal as follows:

```
CCMATXPM    CCMATERR    CCMATCUP    LNXPMM1
LNXPMM2     TKXPMM1     TKXPMM2     LNCCM1
LNCCM2      TKCCM1      TKCCM2
```

For customers other than APC, the OM group MTRUSG registers display on the MAP terminal as follows:

```
CCMATCDV    CCMATCUP    CCATCUPS    CCMATINI
CCMATADD    CCMATTBI    CCMATCPM    CCMATXPM
CCMATERR    LNXPMM1     LNXPMM2     TKXPMM1
TKXPMM2     LNCCM1      LNCCM2      TKCCM1
TKCCM2
```

Group structure

The OM group MTRUSG can provide one tuple per office.

Key field:
There is no Key field

Info field:
There is no Info field

Associated OM groups

There are no associated OM groups.

Associated functional groups

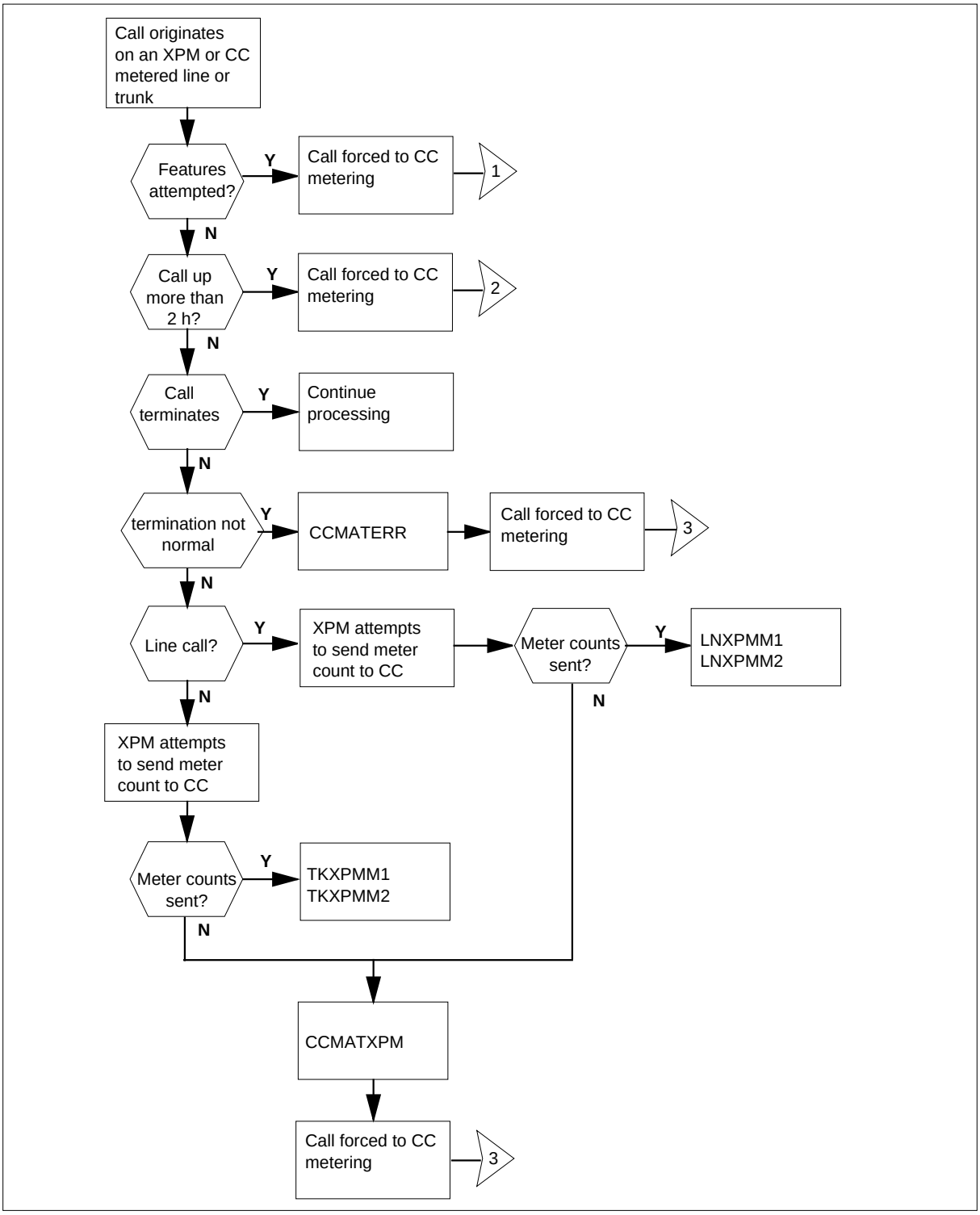
There are no associated functional groups.

Associated functionality codes

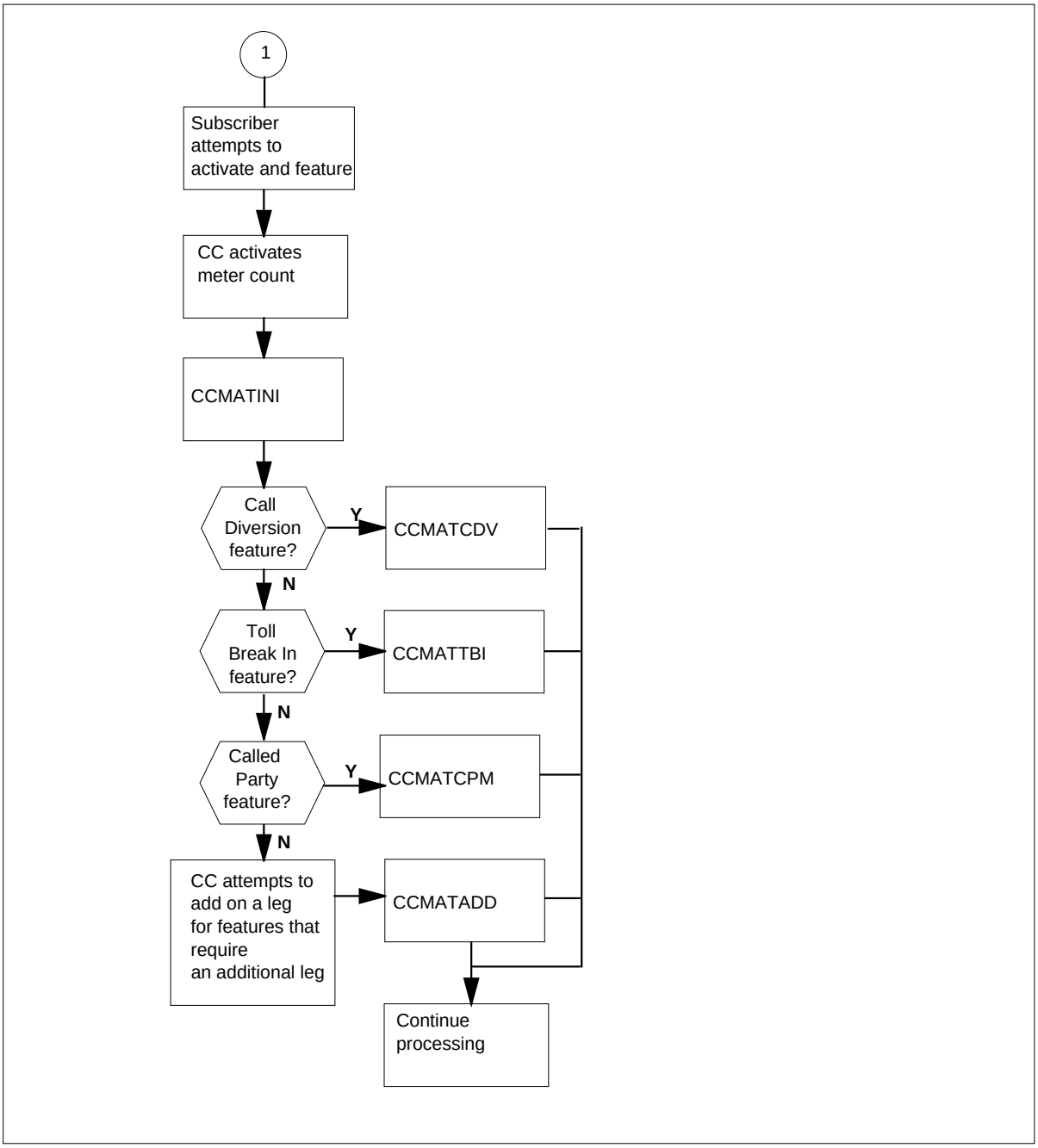
There are no associated functionality codes.

OM group MTRUSG (continued)

OM group MTRUSG XPM metering register flow chart

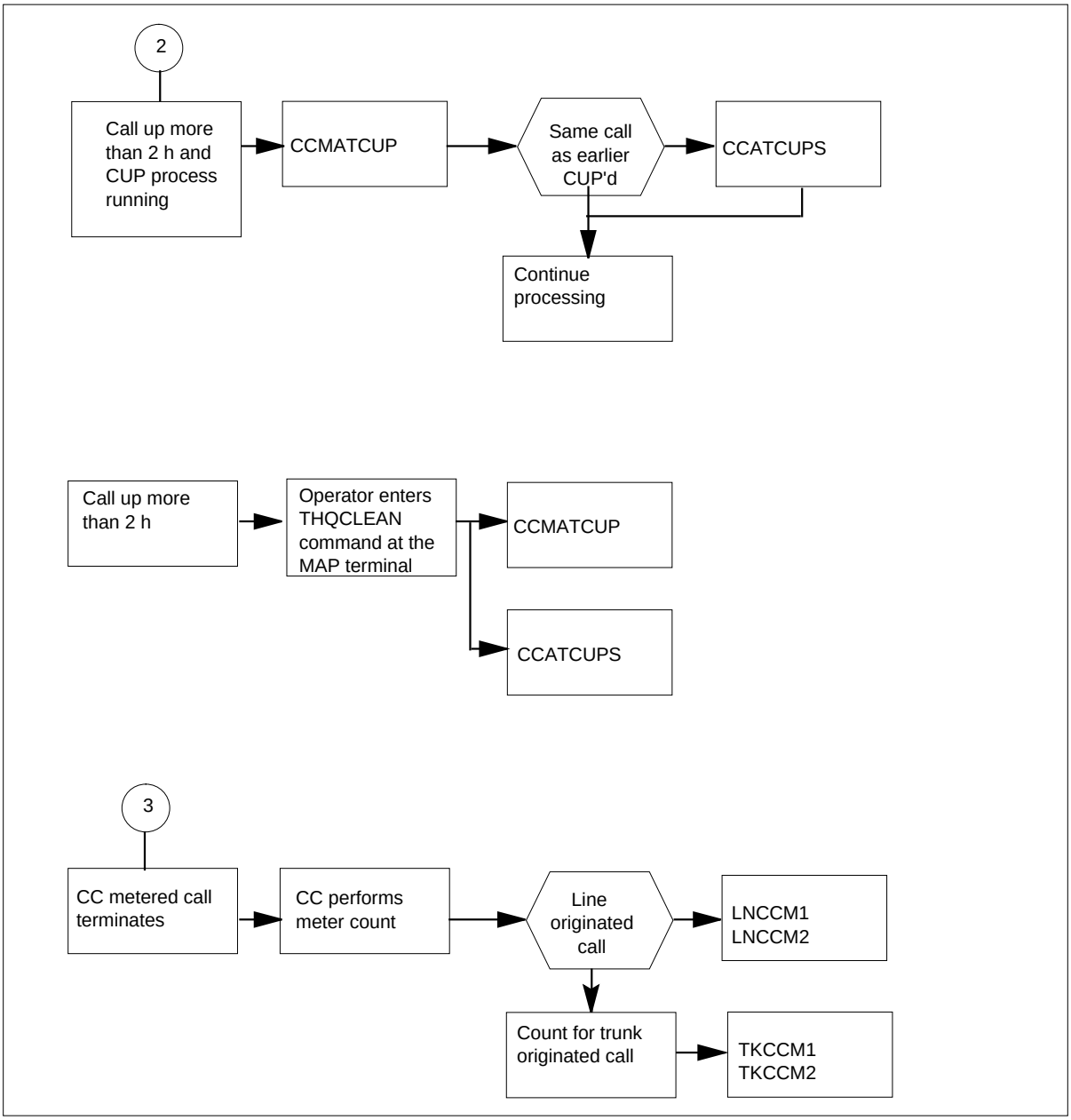


OM group MTRUSG CC metering registers (continued)



OM group MTRUSG (continued)

OM group MTRUSG CC metering registers (continued)



Register CCATCUPS

CC meter attempt CUP'd subsequently (CCATCUPS)

Register CCATCUPS counts the number of times the CUP updates the meters for more than one call. The call does not need to complete correctly for this register to increase. This register also increases when the operator executes the

table history queue cleaning process. To enter table history queue cleaning process, the operator enters the THQCLEAN command from the MAP terminal. The THQCLEAN command is for calls up longer than 2 h.

Register CCATCUPS release history

Register CCATCUPS introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register CCMATADD

CC meter attempt add-on-leg (CCMATADD)

Register CCMATADD counts the number of times the system adds another leg that requires metering to a call. The system adds another leg because the subscriber attempts to use one of the following features:

- the system attempts a Three-Way Call
- Six-Way Call
- International Call Transfer
- Call Waiting feature

Register CCMATADD release history

Register CCMATADD introduced in BCS30.

Register CCMATADD does not apply to APC100.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register CCMATCDV

CC meter attempt call diversion (CCMATCDV)

Register CCMATCDV counts the number of times the system converts a call to CC metering. The system converts a call because the system attempts to use the Call Diversion or International Do Not Disturb feature. The feature does not need to complete correctly for this register to increase.

OM group MTRUSG (continued)

Register CCMATCDV release history

Register CCMATCDV introduced in BCS30.

Register CCMATCDV does not apply to APC100.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register CCMATCPM

CC meter attempt Called Party Metering (CCMATCPM)

Register CCMATCPM counts the number of times the system converts a call to CC metering. The system converts the call because the subscriber attempts to use the Called Party Metering (CPM) feature. The feature does not need to complete correctly for this register to increase.

Register CCMATCPM release history

Register CCMATCPM introduced in BCS30.

Register CCMATCPM does not apply to APC100.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register CCMATCUP

CC meter attempt CUP'd (CCMATCUP)

Register CCMATCUP counts the number of times the system converts a call to CC metering. The system converts the call because it is up for more than 2 h and the charge update process update the meters. The call need not complete correctly for this register to increase. This register also increases when the operator enters the THQCLEAN command from the MAP terminal. The operator enters this command to execute the table history queue clearing process for calls up longer than 2 hours.

Register CCMATCUP release history

Register CCMATCUP introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register CCMATERR

CC meter attempt error (CCMATERR)

Register CCMATERR counts the number of times a call converts to CC metering because the counter is not completed correctly.

Register CCMATERR release history

Register CCMATERR introduced in BCS30.

Register CCMATERR does not apply to APC100.

Associated registers

There are no associated registers.

Associated logs

The system generates MTR136 generates when the system encounters an invalid logical network that is not correct during metering on a line- or trunk-originated call.

The system generates MTR137 when the system encounters a Trunk Tariff Tuple that is not correct during metering on a line- or trunk-originated call.

The system generates MTR138 when the system encounters a tariff index that is not correct during metering of a line- or trunk-originated call.

The system generates MTR139 when the system encounters a tariff number that is not correct during metering of a line- or trunk-originated call.

The system generates MTR140 when the system encounters an index that is not correct in table MTARFNUM during metering of a trunk-originated call.

The system generates MTR141 when a metering rate mismatch occurs. The mismatch occurs between the software rate entered in table MTARIFF and the hardware rate enterred in table MTSIGSYS, during metering of a trunk-originated call.

OM group MTRUSG (continued)

The system generates MTR142 when a metering function mismatch occurs. The mismatch occurs between the meter function enterred in tables MSRCDATA and MTSIGSYS during metering of a trunk-originated call.

Register CCMATINI

CC meter attempt initial (CCMATINI)

Register CCMATINI counts the number of times the system converts a call to CC metering because the subscriber activated a feature. The feature does not need to complete for this register to increase.

Register CCMATINI release history

Register CCMATINI introduced in BCS30.

Register CCMATINI does not apply to APC100.

Associated registers

There are no associated registers.

Associated logs

There are no associated registers.

Register CCMATTBI

CC meter attempt toll break in (CCMATTBI)

Register CCMATTBI counts the number of times the system converts a call to CC metering because the subscriber activated the Toll Break In (TBI) feature. The feature does not need to complete for this register to increase.

Register CCMATTBI release history

Register CCMATTBI introduced in BCS30.

Register CCMATTBI does not apply to APC100.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register CCMATXPM

CC meter attempt XPM (CCMATXPM)

Register CCMATXPM counts the number of times the system converts a call that terminated correctly to CC metering. The system connects the call because the XPM could not calculate a meter count because of a software error.

Register CCMATXPM release history

Register CCMATXPM introduced in BCS30.

Register CCMATXPM does not apply to APC100.

Associated registers

There are no associated registers.

Associated logs

The system generates MTR135 when a peripheral module software error occurs during metering on a line- or trunk-originated call.

Register LNCCM1

Line CC metering (LNCCM1)

Register LNCCM1 counts the number of times CC metering succeeds on a line-originated call.

Register LNCCM1 release history

Register LNCCM1 introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension register

LNCCM2

Register LNXPMM1

Line XPM metering (LNXPMM1)

Register LNXPMM1 counts the number of times XPM metering succeeds on a line-originated call. This register increases when the count received from the international line group controller (ILGC) updates a meter.

OM group MTRUSG (continued)

Register LNXPMM1 release history

Register LNXPMM1 introduced in BCS30.

Register LNXPMM1 does not apply to APC100.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension register

LNXPMM2

Register TKCCM1

Trunk CC metering (TKCCM1)

Register TKCCM1 counts the number of times CC metering succeeds on a trunk-originated call.

Register TKCCM1 release history

Register TKCCM1 introduced in BCS30.

Register TKCCM1 does not apply to APC100.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension register

TKCCM2

Register TKXPMM1

Trunk XPM metering (TKXPMM1)

Register TKXPMM1 counts the number of times XPM metering succeeds on a trunk originated call. This register increases when the count received from the international dial trunk controller (IDTC) updates a meter.

Register TKXPMM1 release history

Register TKXPMM1 introduced in BCS30.

Register TKXPMM1 does not apply to APC100.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension register

TKXPMM2

OM group MTU

OM description

Magnetic tape unit maintenance summary (MTU)

The OM group MTU counts errors on in-service magnetic tape units (MTU). The OM group MTU also counts failures of a tape unit to recover from an error. Usage registers in MTU record if magnetic tape units are manually or system busy.

Release history

The OM group MTU introduced in BCS20.

BCS33

The system can convert registers MTUSBU and MTUMBU from CCS to deci-erlangs before the registers appear. Use the OMSHOW command on the ACTIVE class to display the registers.

BCS21

Registers MTUSBU and MTUMBU modified to provide output in deci-erlangs.

Registers

The OM group MTU registers appear on the MAP terminal as follows:

```
MTUERR      MTUFLT      MTUSBU      MTUMBU
```

Group structure

OM group MTU can provide one tuple per office.

Key field:
There is no Key field

Info field:
There is no Info field

Associated OM groups

There are no associated OM groups.

Associated functional groups

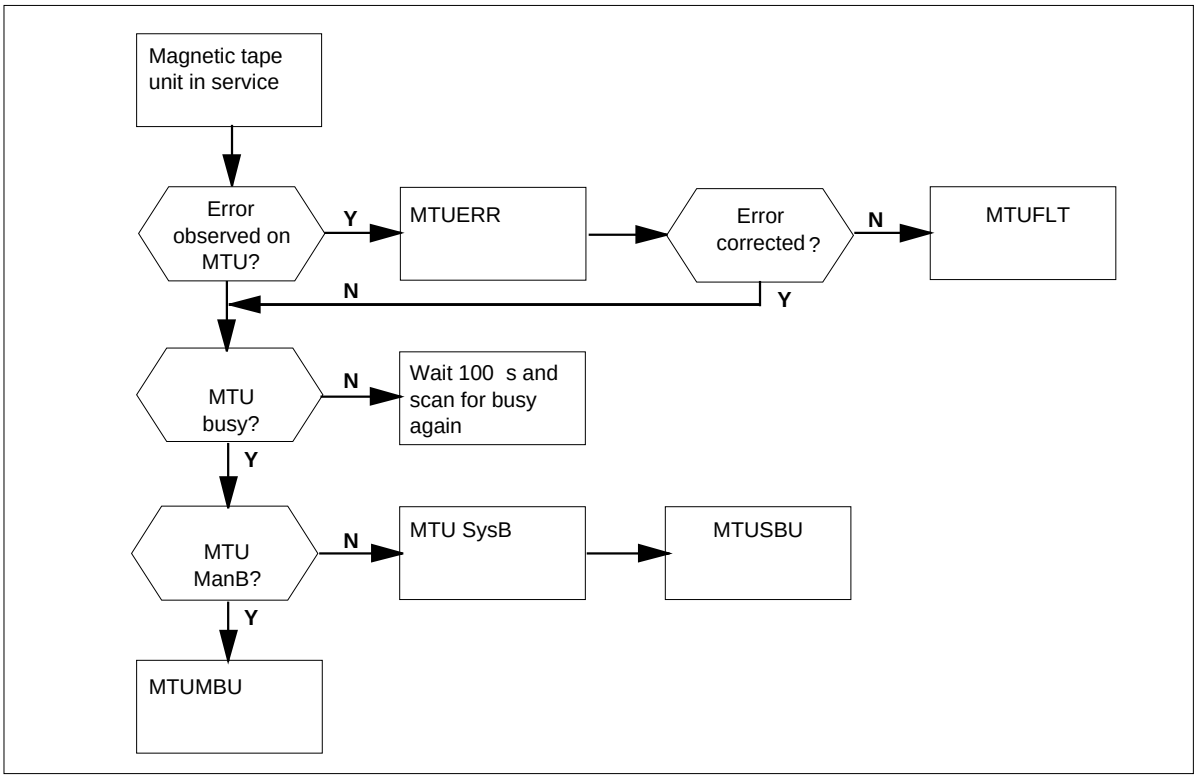
There are no associated functional groups.

Associated functionality codes

The associated functionality codes for OM group MTU appear in the following table.

Functionality	Code
Common Basic	NTX001AA

OM group MTU registers



Register MTUERR

Magnetic tape unit (MTU) errors (MTUERR)

This register counts errors on an in-service magnetic tape unit.

The count includes read errors, write errors, negative results from self-test during initialization, and no response.

OM group MTU (continued)

Register MTUERR release history

Register MTUERR introduced in BCS20.

Associated registers

There are no associated registers.

Associated logs

The I/O device (IOD) subsystem generates IOD208 when the system detects a sanity timeout on the specified magnetic tape device (MTD).

The IOD subsystem generates IOD207 when a message-related error occurs on the specified MTD.

The IOD subsystem generates IOD209 when the system detects a transient fault during the indicated read, write, and self-test operation on the MTD.

The I/O gate (IOGA) subsystem generates IOGA101 when a message-related fault report, generated by or for a certain node, is handled by the I/O handler.

The MTD subsystem generates MTD101 when the central control I/O system detects a minor incoming message overload condition on a link.

Register MTUFLT

Magnetic tape unit (MTU) faults (MTUFLT)

This register increases when a tape unit fails to recover from an error counted in MTUERR. The tape unit must remain system busy until manual interruption or a successful system-initiated recovery attempt.

Register MTUFLT release history

Register MTUFLT introduced in BCS20.

Associated registers

There are no associated registers.

Associated logs

The I/O device (IOD) subsystem generates IOD208 when the system detects a sanity timeout on the specified magnetic type device (MTD).

The IOD subsystem generates IOD210 when the system detects a fault during the indicated read, write, and selftest operation on the MTD.

The IOD subsystem generates IOD212 when the system detects an error by the file system on the specified magnetic tape device.

The IOD subsystem generates IOD213when the system tests the specified MTD and the test fails.

The IOD subsystem generates IOD214 when the system encounters 25 feet of blank tape between two consecutive tape marks. This blank tape indicates a tape drive or tape that has faults.

The IOD subsystem generates IOD215 when the block size of the tape or user buffer exceeds the maximum acceptable block size during a read/write operation on the 9-track tape.

The support operating system (SOS) generates SOS100 when a DUMP command fails. This report indicates a minor or a major failure, like a malfunctioning MTD.

The system generates MTD103 when the number of messages sent by the tape drive exceeds the threshold. The threshold is for the major incoming message overload (ICMU) condition.

Register MTUMBU

Magnetic tape unit (MTU) manual busy usage

Register MTUMBU is a usage register. The scan rate is 100.

This register records if magnetic tape units are manually busy.

Register MTUMBU release history

Register MTUMBU introduced in BCS20.

BCS33

When you set office parameter OMINERLANGS to Y, you convert the usage count from CCS to deci-erlangs before the count appears. Use the OMSHOW command on the ACTIVE class to display the usage count. The value in the active registers remains in CCS.

Associated registers

There are no associated registers.

Associated logs

The IOD subsystem generates IOD203 when the user makes an MTD manually busy.

Register MTUSBU

Magnetic tape unit (MTU) system busy usage (MTUSBU)

OM group MTU (end)

Register MTUSBU is a usage register. The scan rate is 100.

This register records if magnetic tape units are system busy.

Register MTUSBU release history

Register MTUSBU introduced in BCS20.

BCS33

When you set office parameter OMINERLANGS to Y, you convert the usage count from CCS to deci-erlangs before the count appears. Use the OMSHOW command on the ACTIVE class to display the usage count. The value in the active registers remains in CCS.

Associated registers

There are no associated registers.

Associated logs

The IOD subsystem generates IOD204 when the system makes an MTD system busy.

The system generates MTD103 when the number of messages sent by the tape drive exceeds the threshold. The threshold is for the major incoming message overload (ICMU) condition.

OM group MWICTCAP

OM description

MWICTCAP is a multiple tuple operational measurement (OM) group that collects and displays counts for transaction capabilities application part (TCAP) messages for each integrated services digital network (ISDN) primary rate interface (PRI) access interface. MWICTCAP is maintained on a 30-minute basis.

OM description

MWICTCAP is a multiple tuple operational measurement (OM) group. MWICTCAP collects and displays counts for transaction capabilities application part (TCAP) messages for each integrated services digital network (ISDN) primary rate interface (PRI) access interface that has MWI control feature provisioned. MWICTCAP is maintained on a 30-minute basis.

Release history

OM group MWICTCAP was introduced in NA011.

Registers

The following OM group MWICTCAP registers display on the MAP terminal as follows:

```
ACTATT    DEACTATT    ACTPROB    DEACTPRB
UNIDIREC  UNITDATS
```

Group structure

OM group MWICTCAP

Key field:
Logical terminal identifier (LTID) for PRI interface

Info field:
None

Associated OM groups

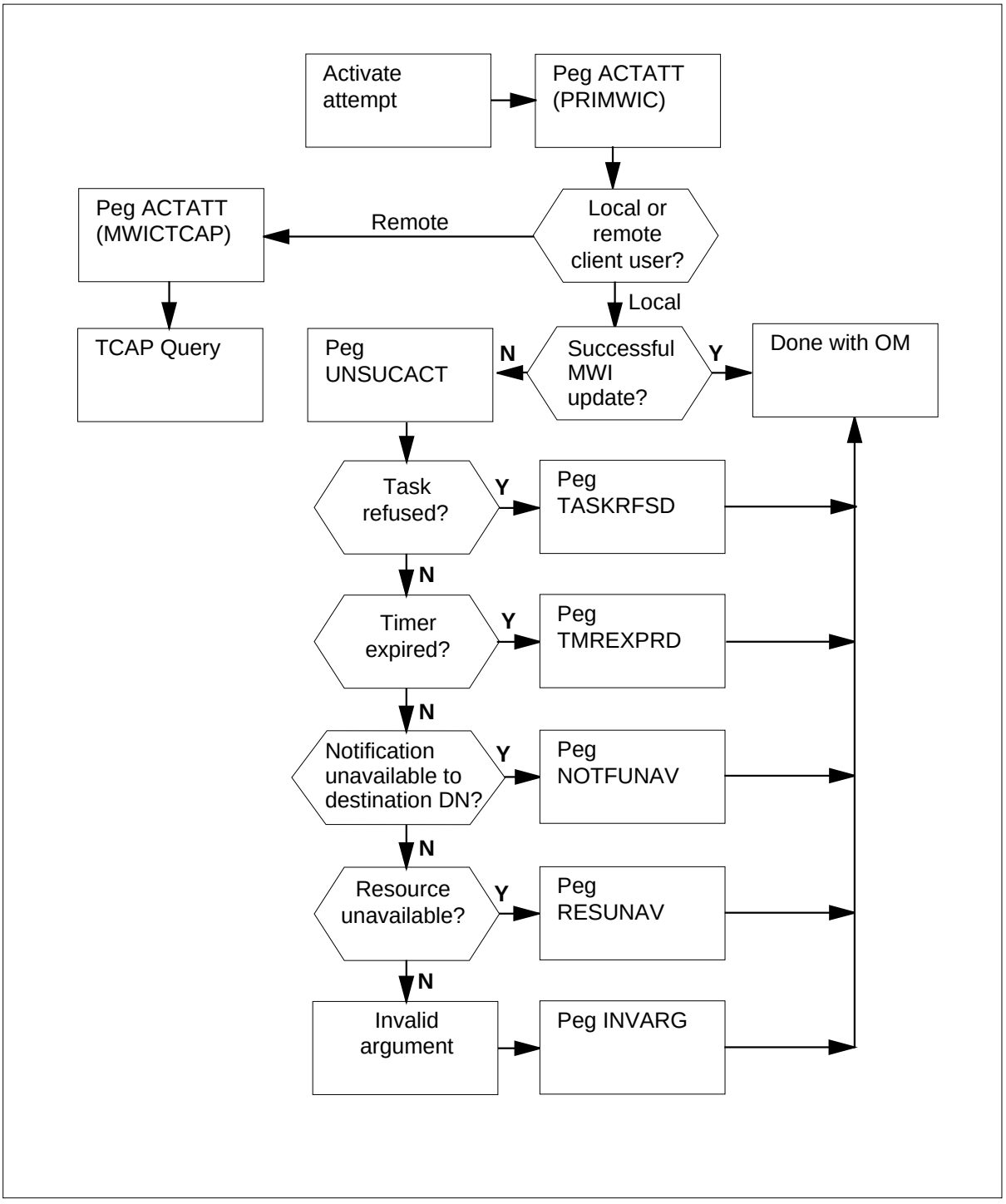
PRIMWIC OM group is associated with MWICTCAP.

Associated functional groups

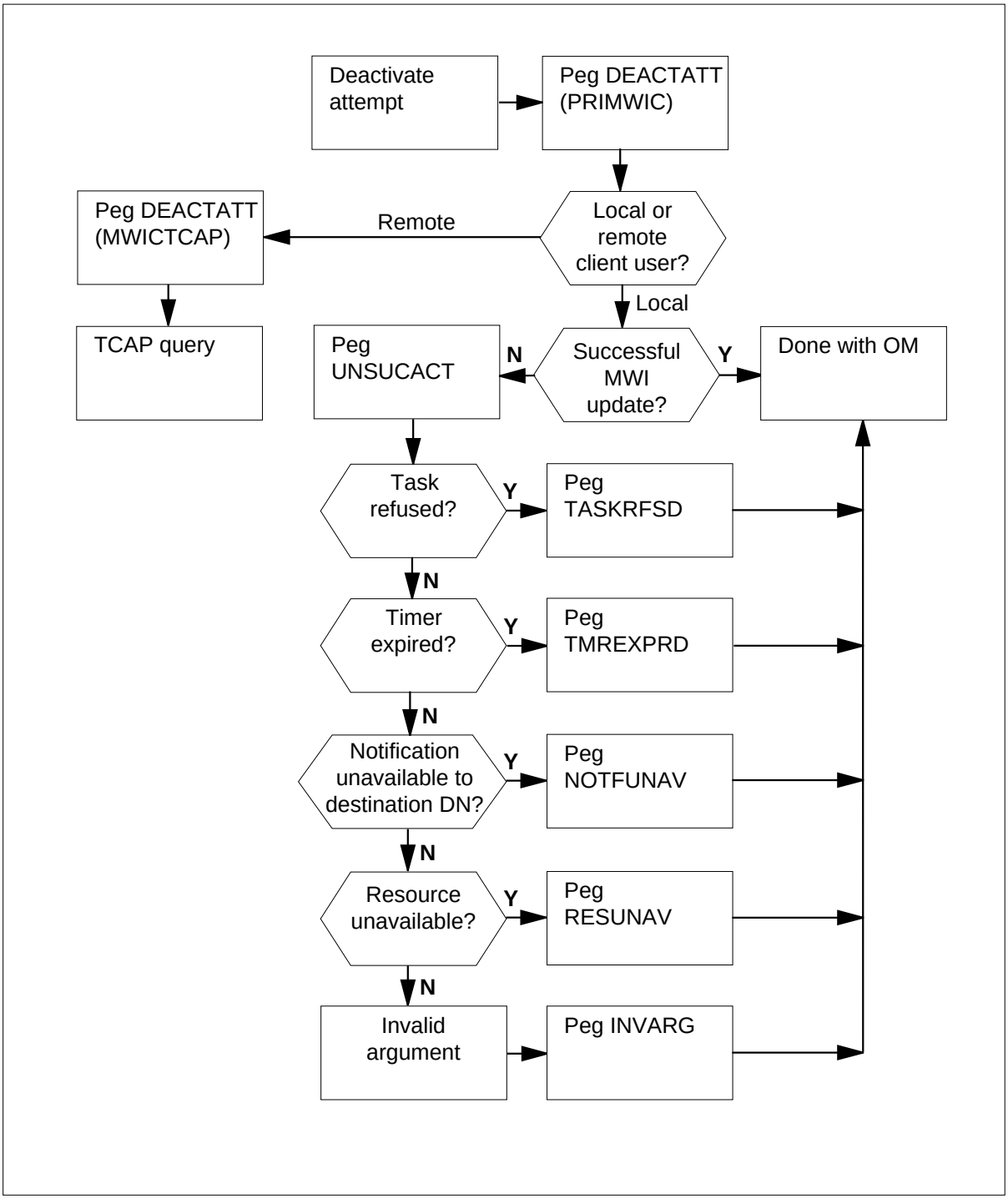
NI0-PRI Message Services (Functional Group NI-00037) is associated with OM group MWICTCAP.

OM group MWICTCAP (continued)

OM group MWICTCAP registers pegging flow - activation attempt

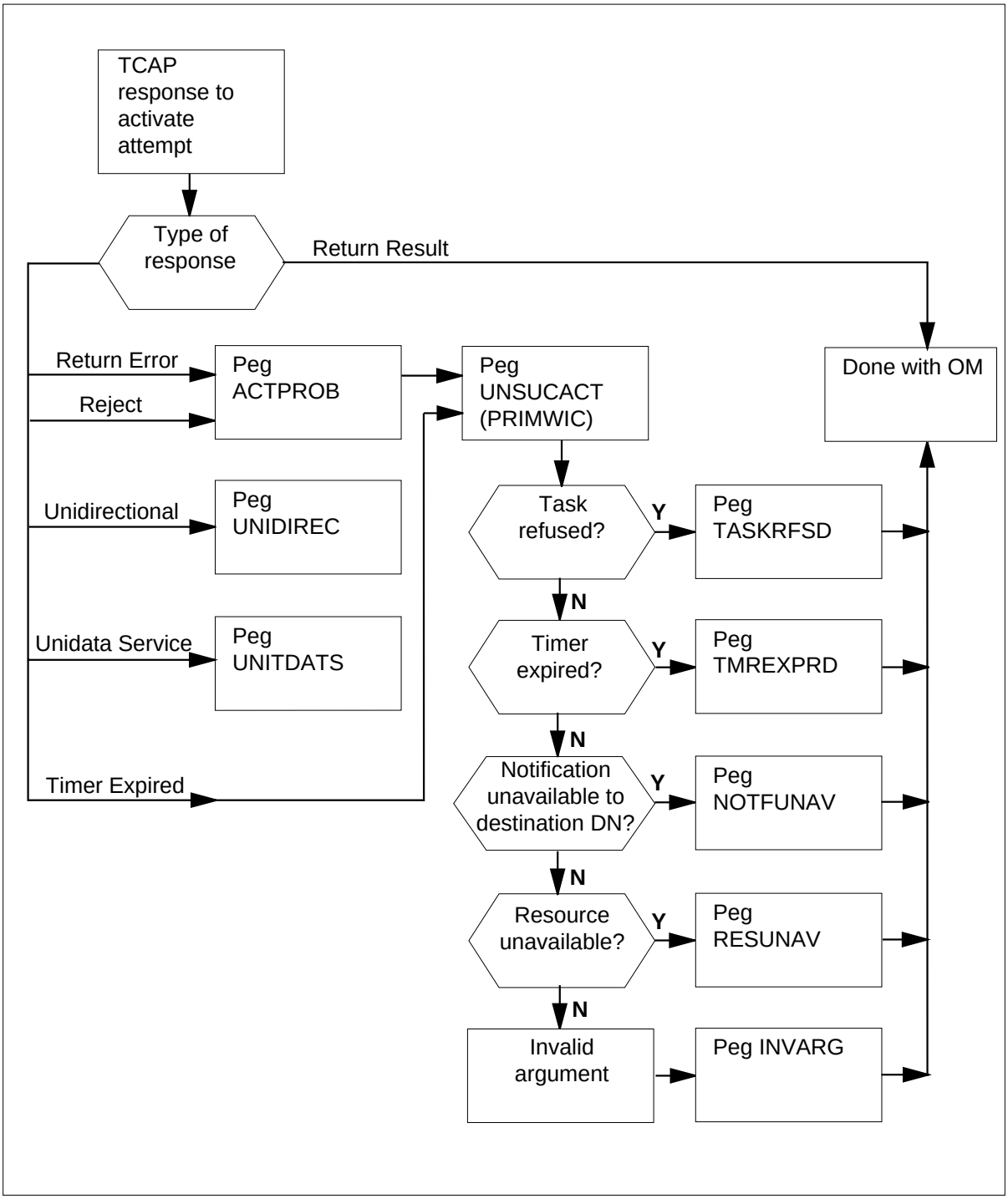


OM group MWICTCAP registers pegging flow - deactivation attempt response

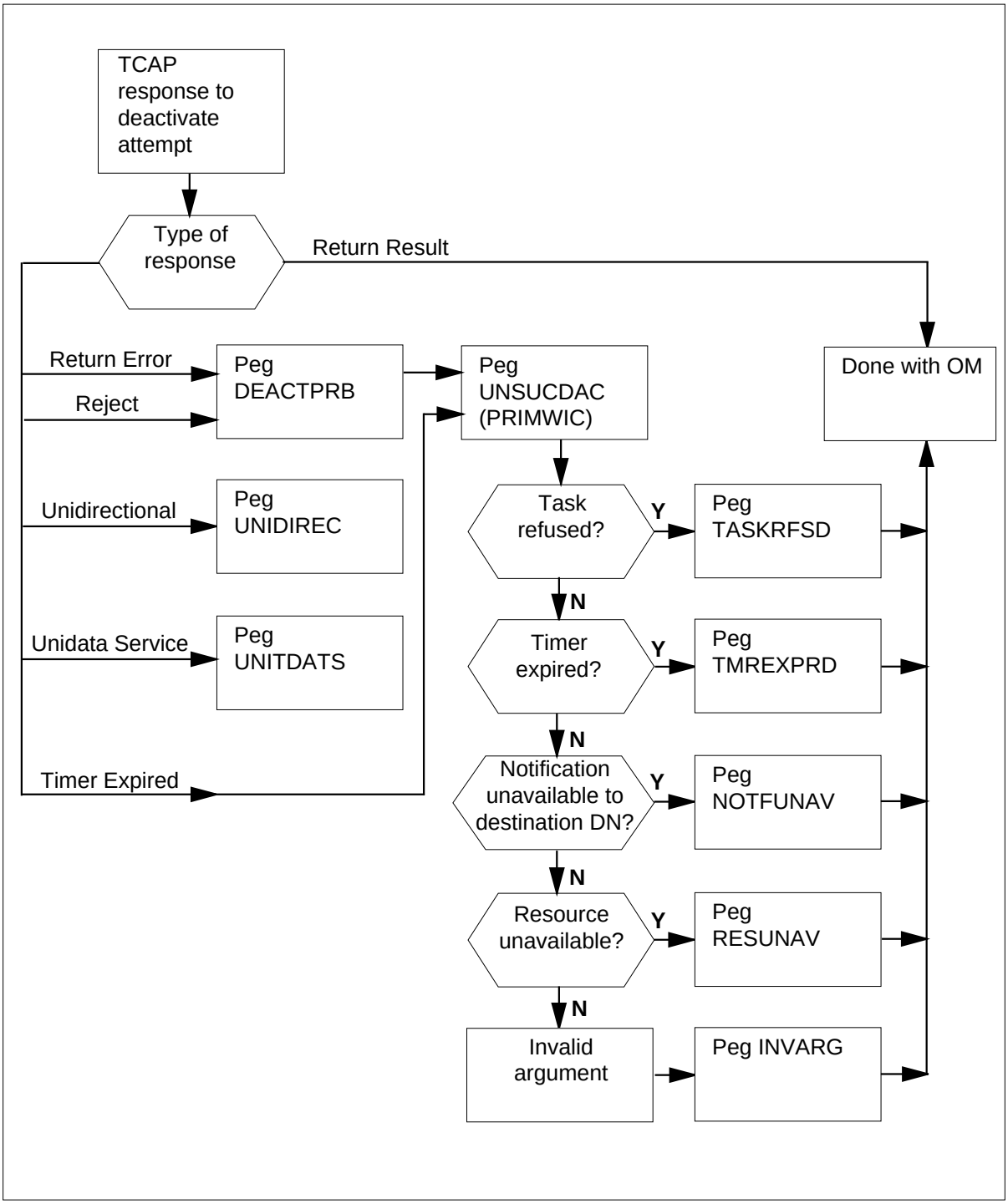


OM group MWICTCAP (continued)

OM group MWICTCAP registers pegging flow - activation attempt response



OM group MWICTCAP registers pegging flow - deactivation attempt response



OM group MWICTCAP (continued)

Register ACTATT

Register ACTATT (MWI activation TCAP attempts) is the total number of transactions capabilities application part (TCAP) queries sent in an attempt to activate message waiting indicator (MWI) for remote client use.

Register ACTATT release history

Register ACTATT was introduced in NA011.

Associated registers

None

Associated logs

None

Extension registers

None

Register DEACTATT

Register DEACTATT (MWI deactivation TCAP attempts) is the total number of TCAP queries sent in an attempt to deactivate MWI for remote client use.

Register DEACTATT release history

Register DEACTATT was introduced in NA011.

Associated registers

None

Associated logs

None

Extension registers

None

Register ACTPROB

Register ACTPROB (problems with MWI activation on TCAP attempts) is pegged when it receives TCAP responses with a reject or return error component indicating that an attempt to activate MWI is unsuccessful.

Register ACTPROB release history

Register ACTPROB was introduced in NA011.

Associated registers

None

Associated logs

None

Extension registers

None

Register DEACTPRB

Register DEACTPRB (problems with MWI deactivation TCAP attempts) is pegged when it receives TCAP Responses with a reject or return error component.

Register DEACTPRB release history

Register DEACTPRB was introduced in NA011.

Associated registers

None

Associated logs

None

Extension registers

None

Register UNIDIREC

Register UNIDIREC (unidirectional TCAP responses to MWI control attempts) is pegged when it receives TCAP messages with a package type of unidirectional and a reject component.

Register UNIDIREC release history

Register UNIDIREC was introduced in NA011.

Associated registers

None

Associated logs

None

Extension registers

None

Register UNIDATS

Register UNITDATS (unitdata service TCAP responses to MWI control attempts) is pegged when it receives unitdata services messages.

OM group MWICTCAP (end)

Register UNITDATA release history

Register UNITDATA was introduced in NA011.

Associated registers

None

Associated logs

None

Extension registers

None

OM group MWTCAR

OM description

Message waiting call request (MWTCAR)

The OM group MWTCAR provides information on feature use and traffic measurements. MWTCAR also provides information on failures that result from a lack of software and hardware resources for the following features:

- Integrated Business Network (IBN)
- Message Waiting (MWT)
- Call Request (CAR)
- Call Memory (CM)
- Call Covering (CCV)
- CLASS Message Waiting Indicator (CMWI)

The MWT feature allows a station to receive and retrieve messages from a message center. To receive and retrieve messages the station dials the message center directory number (MCDN). A lit MWT lamp or stuttering dial tone notifies the station that a message/call request waits for retrieval.

The CMWI feature allows an MWT subscriber to know if messages wait for retrieval. The subscriber must have a CLASS set with a MWT lamp and/or display device. A CLASS set is a 500- or 2500- type set that can receive and understand CLASS modem transmissions. The CLASS modem resource (CMR) card transmits the lamp/display control information to the set.

The CAR feature allows the user to make call requests against another station. The user makes the call requests when the terminating station is busy or does not answer. The system can only place one call request against a terminating station.

The Call Request Exempt (CRX) feature exempts the user from call requests against the station.

Several access codes associate with this feature:

- Call request activate (CRA) - The subscriber can encounter a busy line or a line that does not answer. To place a call request against the line, the subscriber dials the CRA access code.
- Call request retrieve (CRR) - To retrieve message waiting and call requests, the subscriber dials the CRR access code.
- Call request delete specific (CRDS) -To delete the call request for a line the requestor can dial the CRDS access code. The requestor dials the directory

OM group MWTCAR (continued)

number (DN) of the line against which the user made the call request. A confirmation tone returns to the requestor.

- Call request delete all (CRDA) - To delete all the messages waiting and call requests for a line, the requestor dials the CRDA access code. A confirmation tone returns to the requestor.

There are two ways to receive a message or call request:

- dial the MCDN - If a message waits, the attendant relays the message. You do not retrieve messages in the order that they queue. The call request retrieve (CRR) access code, defined in table IBNXLA dials if no message is present.
- dial the CRR access code and retrieve the messages or call requests in the order they queue - If the highest message in the queue is a message from the center, the retrieving station connects to the center. If the highest message in the queue is not from the center, the system rings the call request. When the station that made the request is busy or does not answer, the call request remains in the queue.

The MWT lamp or stuttered dial tone remains on until the queue does not contain message or call requests.

The CM feature allows the called party to store the identity of the calling party as a message against the line. The called party can return the call to the calling party without dialing the directory number.

The CCV feature allows a third party (covering station) to answer a call intended for the base station. CCV allows the third party to leave a message for the base station on behalf of the calling party.

Release history

The OM group MWTCAR created before BCS20.

APC005

Functionality added to support Meridian Digital Centrex (MDC) features on Global Peripheral Platform (GPP) lines for:

- Australian telephone user part (ATUP)
- ANSI ISDN user part (ANSI ISUP)
- Australian ISUP (AISUP) trunk signaling

BCS31

CMWIACT, CMWIDACT, CMWINACK, CMWITRMS, CMWIUNAV, CMWISW, CMWRACT, CMWRDACT, CMWRDNAC, and CMWRDNDA were introduced to monitor the use of the call message waiting indicator feature.

BCS29

Register CMATT, CMFAIL, CMOVFL, CCVATT, CCVFAIL, and CCVOVFL were introduced to monitor the use of the call memory and call covering features.

Registers

The following OM group MWTCAR registers appear on the MAP terminal as follows:

```
MWTATT          MWTACT          MWTDEACT        MWTOVFL
MWTQUERY        CARATT          CARFAIL         CAROVFL
CARODACT        CARTDACT        CARDOVFL        CARRETRV
CARRFAIL        CARROVFL        CMATT           CMFAIL
CMOVFL          CCVATT          CCVFAIL         CCVOVFL
CMWIACT         CMWIDACT        CMWINACK        CMWITRMS
CMWIUNAV        CMWISW          CMWRACT         CMWRDACT
CMWRDNAC        CMWRDNDA
```

Group structure

The OM group MWTCAR provides one tuple for each customer group.

Key field:

There is no key field

Info field:

OMIBNGINFO. The info field Identifies the CUSTNAME of the customer group, defined in table CUSTENG. The tuple number of MWTCAR functions as the key in the OMSHOW command.

Parameter FTRQAGENTS in table OFCENG specifies the number of agents that can have the message waiting/call request feature.

Parameter FTRQSIZE in table OFCENG specifies the size of the feature.

Parameter FTRQ2WAREAS in table OFCENG specifies the number of FTRQ 2 word areas required for the engineering interval.

OM group MWTCAR (continued)

Parameter FTRQ8WPERMS in table OFCENG specifies the number of FTRQ 8 word permanent blocks needed for the call memory and call covering features.

Parameter NO_OF_FTR_CONTROL_BLKS in table OFCENG specifies the number of control blocks required for this feature.

Parameter NO_OF_FTR_DATA_BLKS in table OFCENG specifies the number of control blocks required for this feature.

The system implements MWT when the data feature field is assigned MWT in table IBNFEAT.

The system implements CAR when you enter Y in field CAR in table IBNFEAY

The system implements CRx when you enter Y in field CRX in table IBNFEAY

Field NOTICE in table IBNFEAT allows the operating company to assign the CWMI message waiting notice to each line.

Field ENABLED in table RESOFC allows the operating company to turn on or off delivery of the message waiting indicator information. The system delivers this information to all CMWI subscribers in the office.

Field RETRSMIT in table RESOFC indicates the maximum number of attempts permitted to transmit the message waiting information. The system transmit the information to the set of the subscriber.

Field FEATURE in table IBNXLA indicates the access codes for activation and deactivation of the CMWI feature.

Associated OM groups

There are no associated OM groups.

Associated functional groups

The OM group MWTCAR associates with the Integrated business network (IBN) functional group.

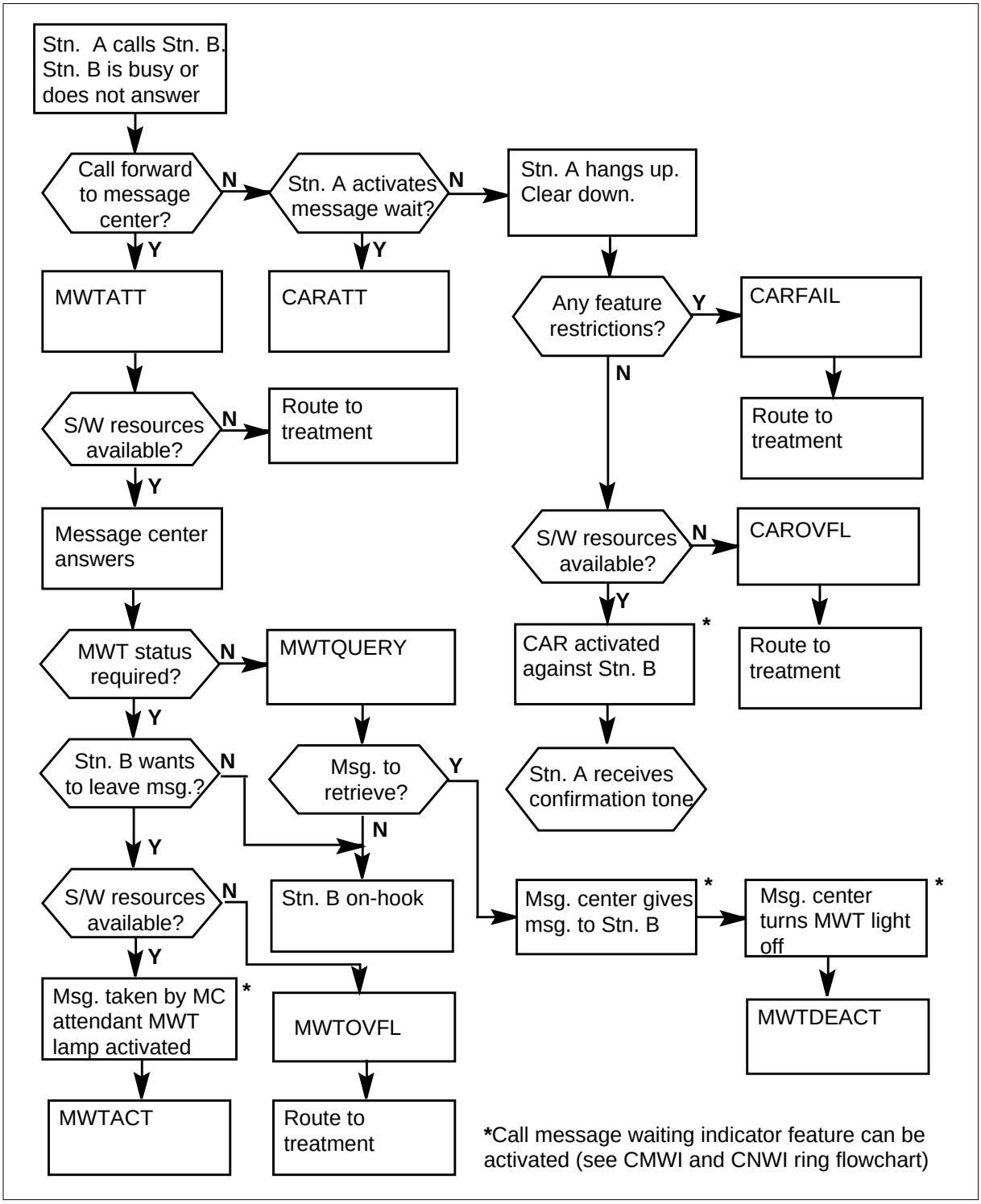
Associated functionality codes

The associated functionality codes for OM group MWTCAR are in the following table.

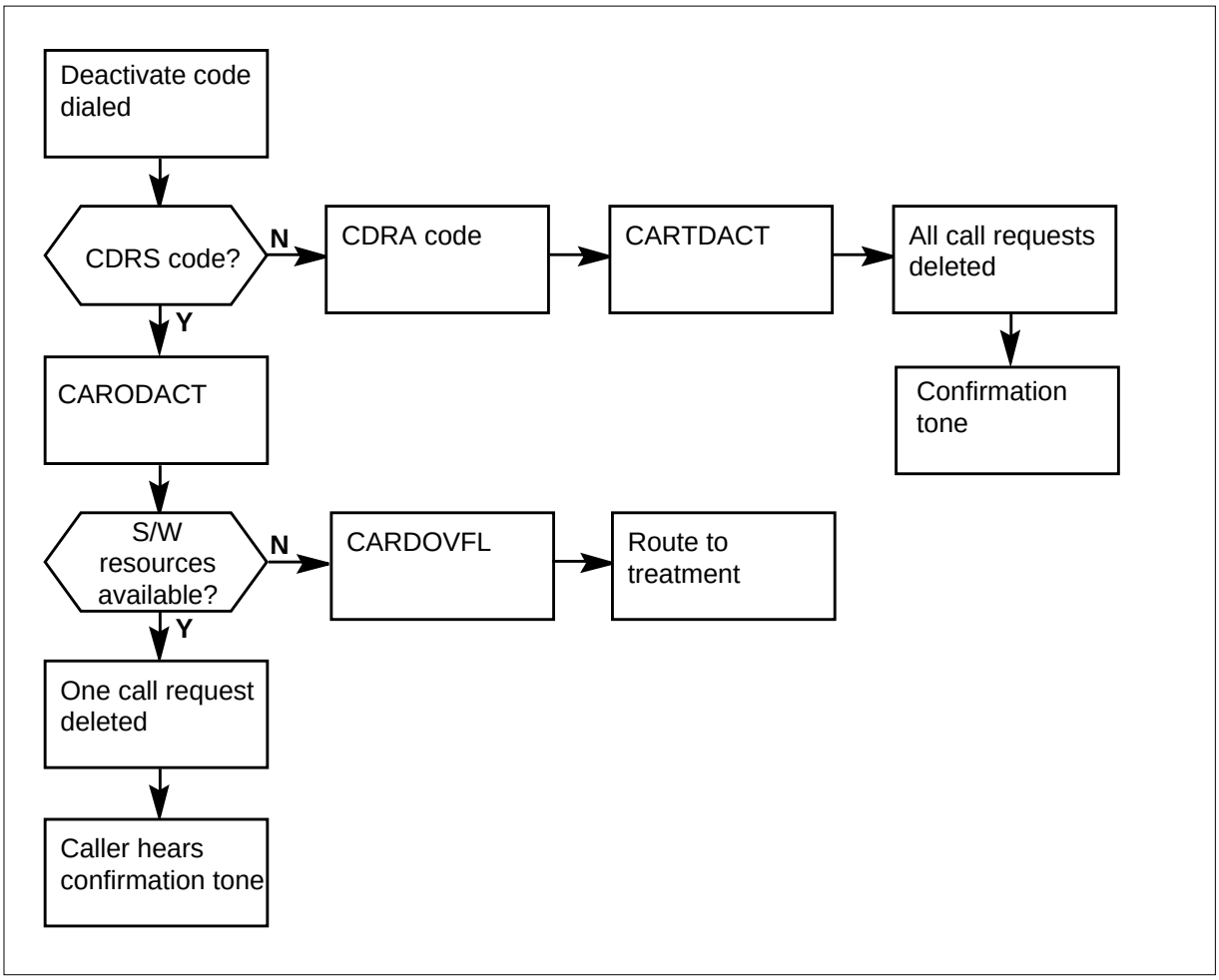
Functionality	Code
NTX119AA	IBN Message Service
NTXE47AA	Meridian Display Communications
NTXJ39AA	CLASS Visual Message Waiting Indicator

OM group MWTCAR (continued)

OM group MWTCAR registers

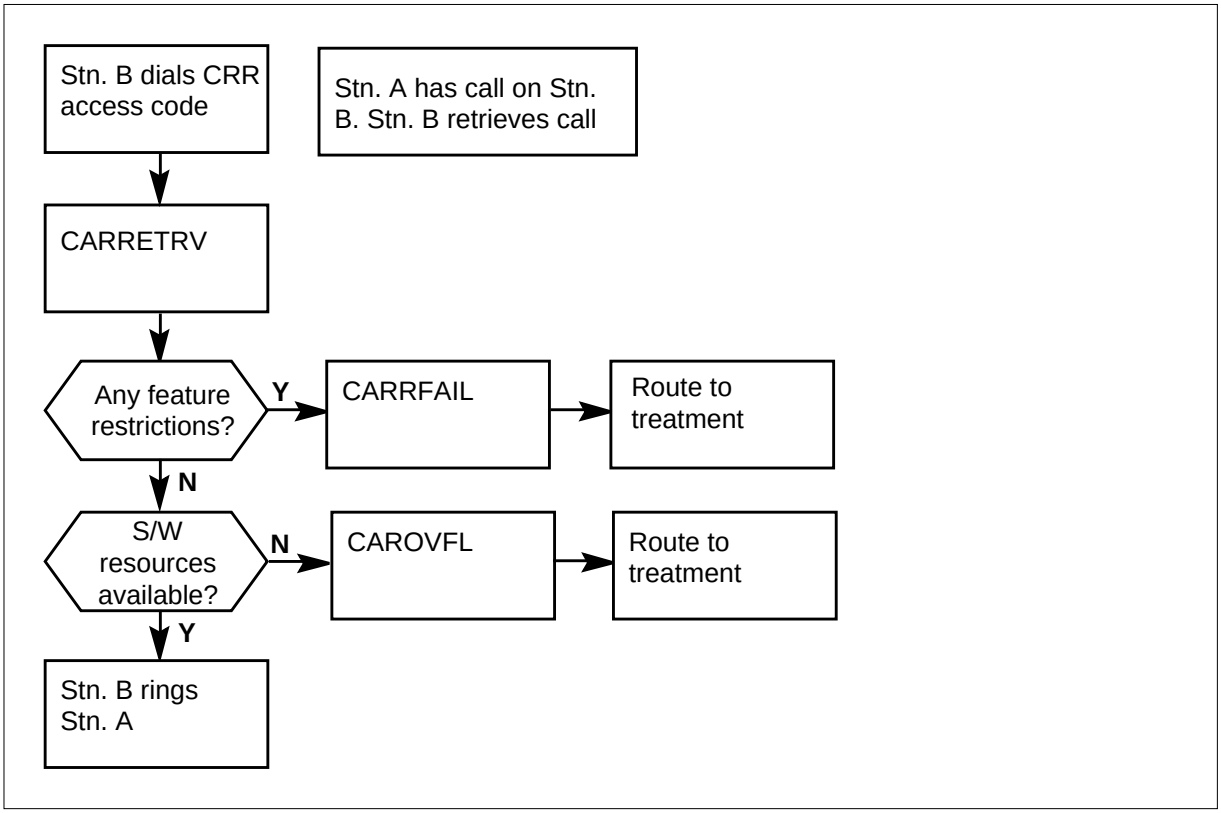


OM group MWTCAR call request deactivate registers



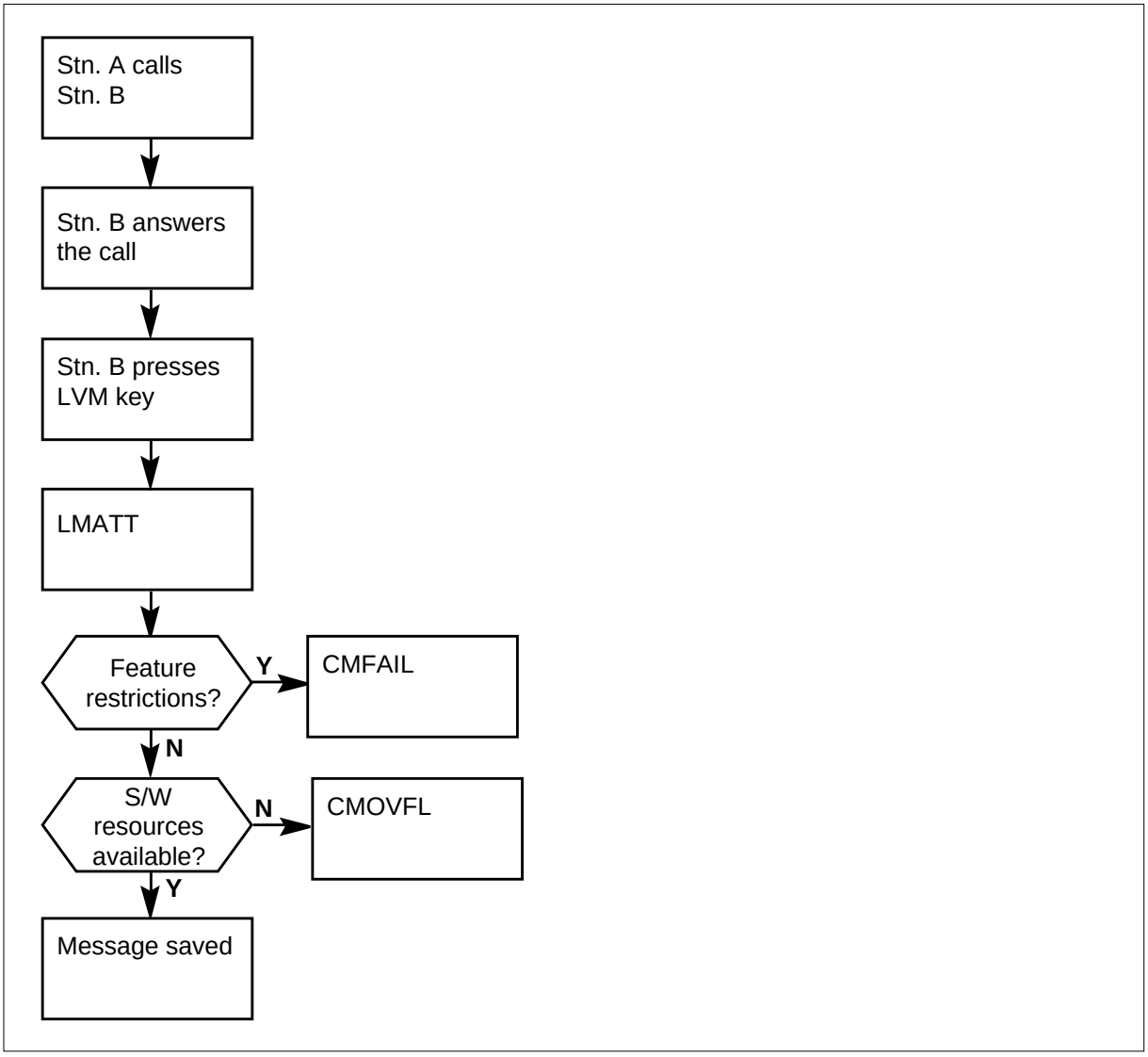
OM group MWTCAR (continued)

OM group MWTCAR call request retrieval registers



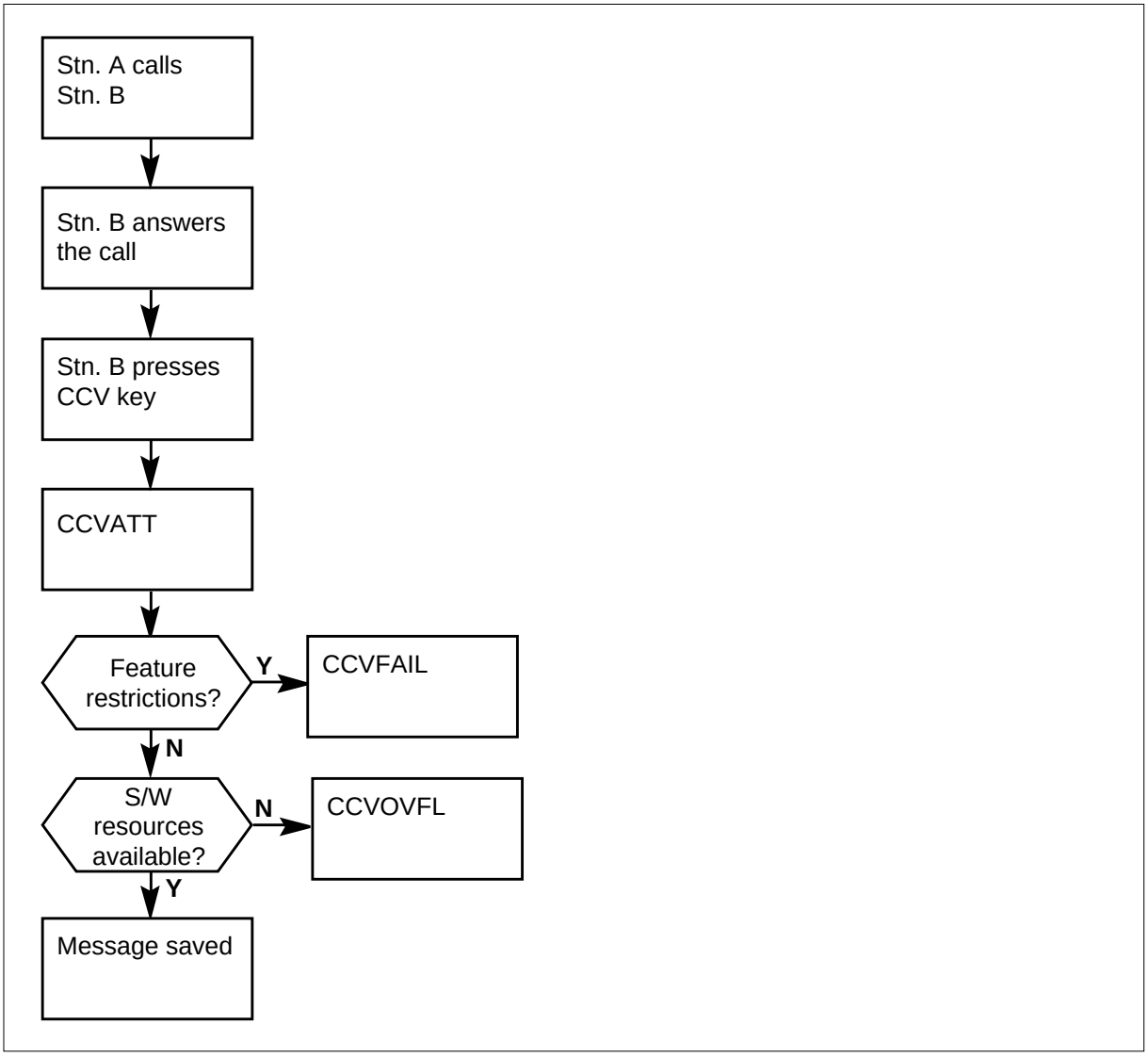
OM group MWTCAR (continued)

OM group MWTCAR call memory registers

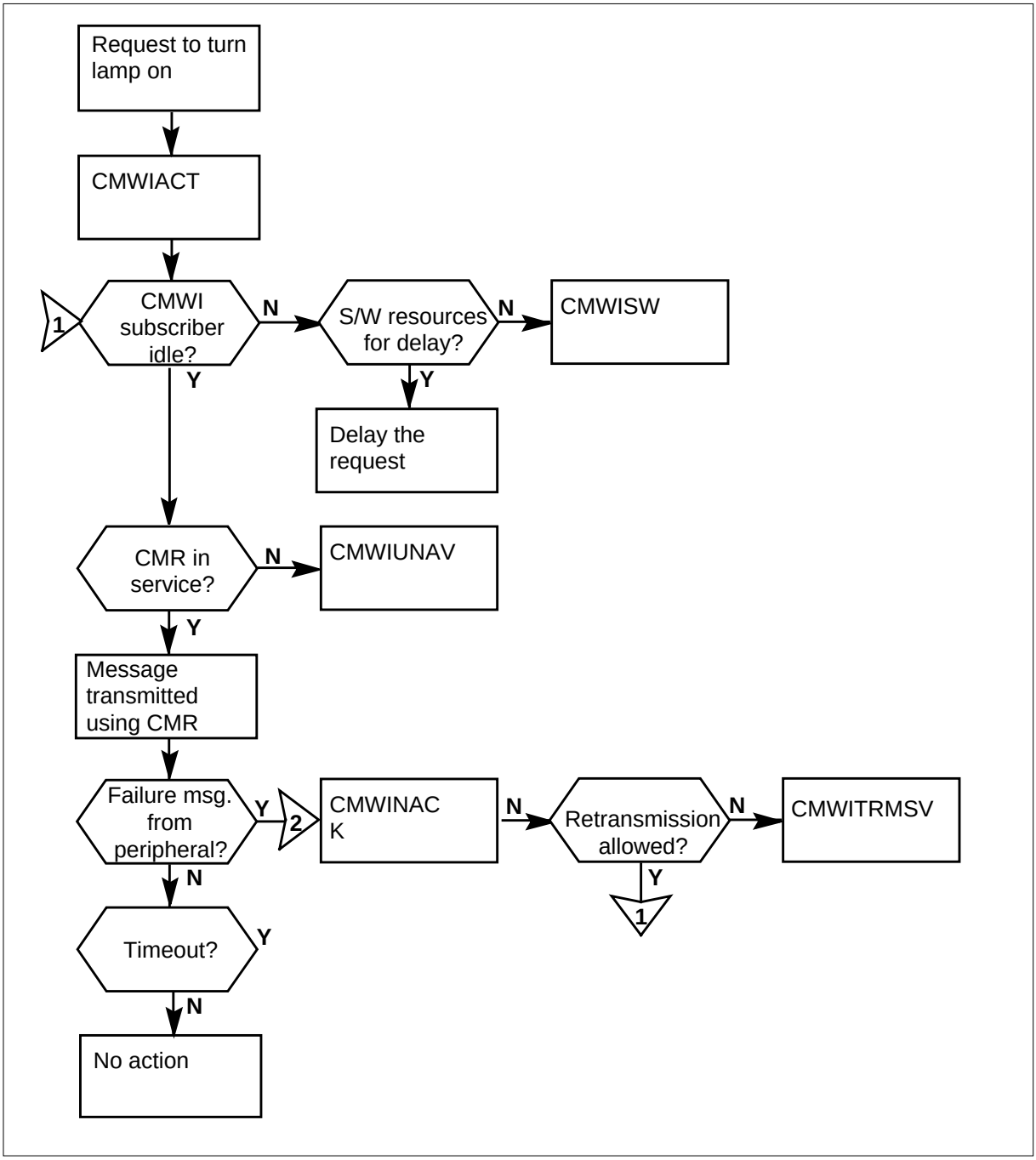


OM group MWTCAR (continued)

OM group MWTCAR call covering registers

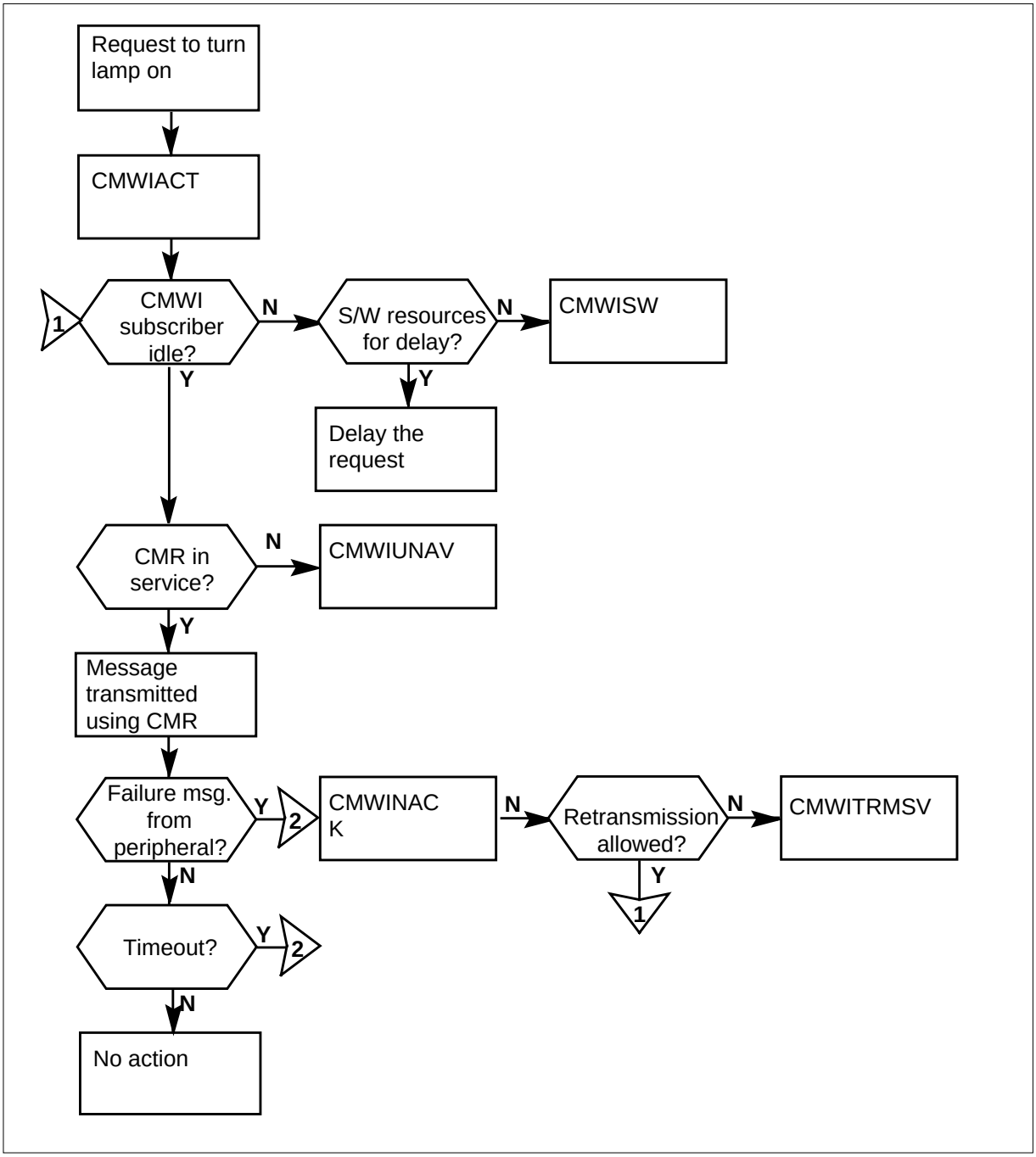


OM group MWTCAR CMWI activation registers

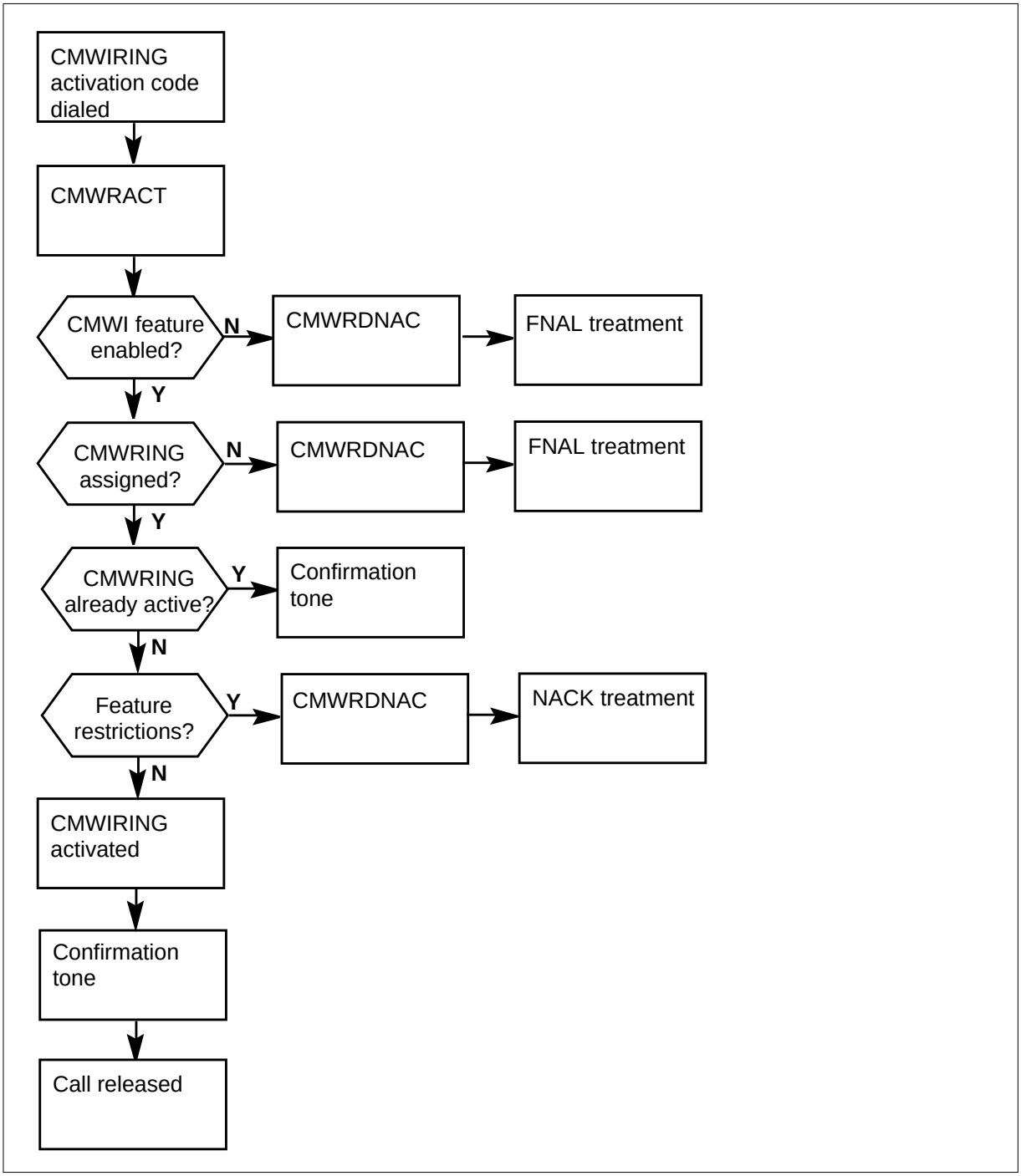


OM group MWTCAR (continued)

OM group MWTCAR CMWI deactivation registers

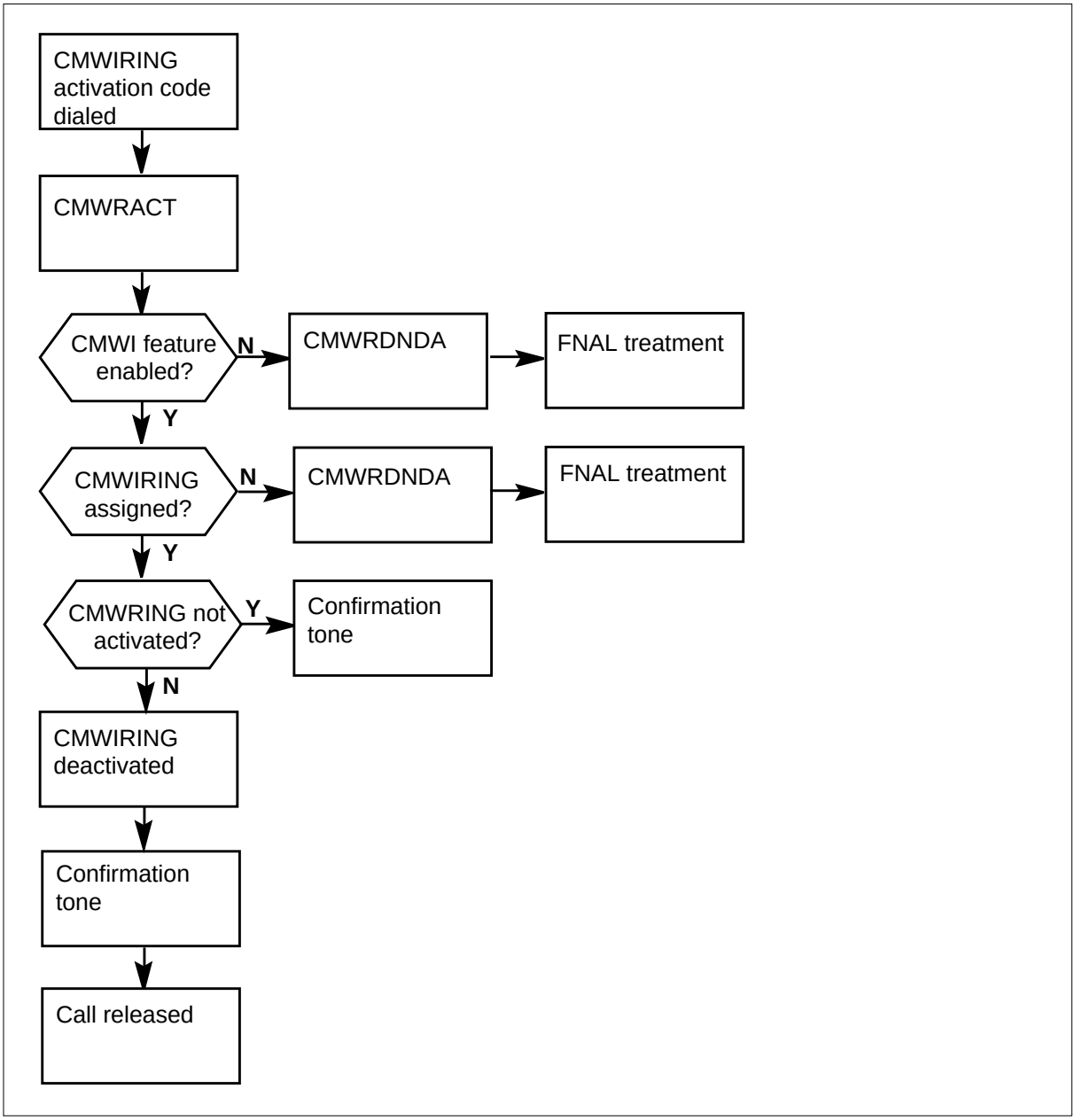


OM group MWTCAR CMWI ring activation registers



OM group MWTCAR (continued)

OM group MWTCAR CMWI ring deactivation registers



Register CARATT

Call request attempts (CARATT)

Register CARATT counts the attempts to activate message waiting (MWT). The subscriber dials the call request access (CRA) code to activate message waiting.

Register CARATT release history

Register CARATT created before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CARDOVFL

Call request delete specific overflows (CARDOVFL)

Register CARDOVFL counts attempts to deactivate a call request that fail. To deactivate a call request, the called party dials the call request delete specific access code.

Parameter NO_OF_FTR_DATA_BLKS in table OFCENG specifies a lack of software resources which cause failures.

Register CARDOVFL release history

Register CARDOVFL created before BCS20.

Associated registers

Register TRMT3_NOSR (indicating no software resources), increases when register CARDOVFL increases.

Associated logs

The system generates LINE138 when the system routes to a treatment after being call processing busy.

Extension registers

There are no extension registers.

Register CARFAIL

Call request failures (CARFAIL)

Register CARFAIL counts attempts to activate the call request feature that fail because of feature restrictions. This count includes attempts to activate call request against a station that has the call request exempt (CRX) option.

OM group MWTCAR (continued)

Register CARFAIL release history

Register CARFAIL created before BCS20.

Associated registers

There are no associated registers.

Associated logs

The system generates LINE138 when the system routes a call to a treatment after being call processing busy.

Extension registers

There are no extension registers.

Register CARODACT

Call request delete activation (CARODACT)

Register CARODACT increases when a called party dials the call request delete specific (CRDS) access code. The called party dials the code in an attempt to remove a call request.

Register CARODACT release history

Register CARODACT created before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CAROVFL

Call request overflow (CAROVFL)

Register CAROVFL counts call request attempts (code CRA) that fail because of a lack of feature data blocks.

Parameter NO_OF_FTR_DATA_BLKS in table OFCENG specifies feature data blocks.

Register CAROVFL release history

Register CAROVFL created before BCS20.

Associated registers

Register TRMT3_NOSR (which indicates the absence of software resources), increases when CAROVFL is increases.

Associated logs

The system generates LINE138 when the system routes a call to a treatment after being call processing busy.

Extension registers

There are no extension registers.

Register CARRETRV

Call request retrieval (CARRETRV)

Register CARRETRV counts attempts to retrieve a call request.

Register CARRETRV release history

Register CARRETRV created before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CARRFAIL

Call request retrieval failures (CARRFAIL)

Register CARRFAIL counts attempts to retrieve a call request that fail because of feature restrictions.

Register CARRFAIL release history

Register CARRFAIL created before BCS20.

Associated registers

TRMT3_FINAL increases when CARRFAIL increases if the reason for failure is that the system does not allow the feature.

OM group MWTCAR (continued)

Register TRMT1_BUSY increases when CARRFAIL increases. This register increases if the reason for failure is that the directory number of the requestor is busy.

Associated logs

The system generates LINE138 when the system routes a call to a treatment after being call processing busy.

Extension registers

There are no extension registers.

Register CARROVFL

Call request retrieval overflow (CARROVFL)

Register CARROVFL counts attempts to retrieve a call request that fail because of a lack of feature data blocks.

Parameter NO_OF_FTR_DATA_BLKS in table OFCENG specifies feature data blocks.

Register CARROVFL release history

Register CARROVFL created before BCS20.

Associated registers

Register TRMT3_NOSR, which indicates the absence of software resources, increases when CARROVFL increases.

Associated logs

The system generates LINE138 when the system routes a call to a treatment after being call processing busy.

Extension registers

There are no extension registers.

Register CARDTACT

Call request delete all (CARDTACT)

Register CARTDACT counts calls that a caller removes from a station. To remove calls from a station, the caller dials the call request delete all (CRDA) access code.

Register CARTDACT release history

Register CARTDACT created before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CCVATT

Call covering activation attempts (CCVATT)

Register CCVATT counts attempts to activate call covering. The subscriber presses the CCV key to activate call covering. If call covering activates, the following occur:

- the answering party receives a confirmation tone
- the EMW lamp on the set of the called party turns on
- the system saves the directory number of the calling party in a message against the line of the called party.

Register CCVATT release history

Register CCVATT introduced in BCS29.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CCVFAIL

Call covering activation failures (CCVFAIL)

Register CCVFAIL counts attempts to activate call covering that fail because of feature restrictions. This count includes attempts to activate call covering when the following occurs:

- the answering party presses the CCV key when the incoming call is not a direct call
- the primary part of the MADN group does not have EMW assigned

OM group MWTCAR (continued)

- the calling party and the MADN group are not in the same customer group family
- the answering party is not a secondary member of the MADN group

Register CCVFAIL release history

Register CCVFAIL introduced in BCS29.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CCVOVFL

Call covering software overflow (CCVOVFL)

Register CCVOVFL counts call covering attempts that fail because of a lack of FTRQ 8 word permanent (FTRQ8WPERMS) blocks.

Parameter FTRQ8WPERMS in table OFCENG specifies the number number of FTRQ 8 word permanent blocks.

Register CCVOVFL release history

Register CCVOVFL introduced in BCS29.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CMATT

Call memory activation attempts (CMATT)

Register CMATT counts attempts to activate call memory. To activate call memory, the subscriber presses the LVM key or the EMW key. If call memory activates, the called party receives a confirmation tone. The system connects

the called party and the calling party. The EMW lamp on the set of the called party turns on. The system saves the directory number of the caller in a message against the line of the called party.

Register CMATT release history

Register CMATT introduced in BCS29.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CMFAIL

Call memory activation failures (CMFAIL)

Register CMFAIL counts attempts to activate call memory that fail because of feature restrictions. This count includes attempts to activate call memory when:

- the called party presses the LVM key or the EMW key when the incoming call is not a direct call
- the base station does not have EMW assigned
- the calling party and the base station are not in the same customer group family

Register CMFAIL release history

Register CMFAIL introduced in BCS29.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CMOVFL

Call memory software resources overflow (CMOVFL)

OM group MWTCAR (continued)

Register CMOVFL counts call memory attempts that fail because of a lack of FTRQ 8 word permanent (FTRQ8WPERMS) blocks.

Parameter FTRQ8WPERMS in table OFCENG specifies the number of FTRQ 8 word permanent blocks.

Register CMOVFL release history

Register CMOVFL introduced in BCS29.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CMWIACT

CMWI activations (CMWIACT)

Register CMWIACT counts attempts to activate CLASS message waiting indicator (CMWI) on the set.

Register CMWIACT release history

Register CMWIACT introduced in BCS31.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CMWIDACT

CMWI deactivations (CMWIDACT)

Register CMWIDACT counts attempts to deactivate CLASS message waiting indicator (CMWI) on the set.

Register CMWIDACT release history

Register CMWIDACT introduced in BCS31.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CMWINACK

CMWI negative acknowledgements (CMWINACK)

Register CMWINACK counts CLASS message waiting indicator (CMWI) messages that the system cannot transmit correctly. The system cannot transmit the messages correctly because of a timeout of failure message from the peripheral module.

Register CMWINACK release history

Register CMWINACK introduced in BCS31.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CMWISW

CMWI no software resources

CMWISW counts CLASS-message waiting indicator (CMWI) requests that are discarded. CMWI requests are discarded because there are not enough software resources in the central control (CC).

Register CMWISW release history

Register CMWISW introduced in BCS31.

OM group MWTCAR (continued)

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CMWITRMS

CMWI retransmissions

Register CMWITRMS counts CLASS message waiting indicator (CMWI) the system discards. The system discards the messages because the number of retransmissions reaches the maximum.

Register CMWITRMS release history

Register CMWITRMS introduced in BCS31.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CMWIUNAV

CMWI unavailable (CMWIUNAV)

Register CMWIUNAV counts CLASS message waiting indicator (CMWI) requests the system discards because the CLASS modem resource card is not available.

Register CMWIUNAV release history

Register CMWIUNAV introduced in BCS31.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no associated logs.

Register CMWRACT

CMWIRING activations (CMWRACT)

Register CMWRACT counts attempts to ENABLE the ringing aspect of the CLASS message waiting indicator (CMWI) feature. To activate the ringing aspect of the CLASS message waiting indicator (CMWI) feature, the subscriber dials the CMWRING feature activation codes.

Register CMWRACT release history

Register CMWRACT introduces in BCS31.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CMWRDACT

CMWIRING deactivations (CMWRDACT)

Register CMWRDACT counts attempts to disable the ringing aspect of the CLASS message waiting indicator (CMWI) feature. To diable the ringing aspect, the subscriber dials the CMWIRING feature deactivation code.

Register CMWRDACT release history

Register CMWRDACT introduced in BCS31.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group MWTCAR (continued)

Register CMWRDNAC

CMWIRING activation failures (CMWRDNAC)

Register CMWRDNAC counts attempts that did not enable the ringing aspect of the CLASS-message waiting indicator (CMWI) feature. To enable the ringing aspect, the subscriber dials the CMWIRING feature activation code.

Register CMWRDNAC release history

Register CMWRDNAC introduced in BCS31.

Associated registers

There are no associated registers.

Associated logs

There are associated logs.

Extension registers

There are no extension registers.

Register CMWRDNDA

CMWIRING deactivations failures (CMWRDNDA)

Register CMWRDNDA counts attempts that did not disable the ringing aspect of the CLASS-message waiting indicator (CMWI) feature. To disable the ringing aspect, the subscriber dials the CMWIRING feature release code.

Register CMWRDNDA release history

Register CMWRDNDA introduced in BCS31.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register MWTACT

Message waiting activations (MWTACT)

Register MWTACT increases when the message center activates the message waiting lamp.

An activated message waiting lamp indicates that a call request or a message is waiting at the message center.

Register MWTACT release history

Register MWTACT introduced in BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register MWTATT

Message waiting attempts (MWTATT)

Register MWTATT counts attempts to activate message waiting. To activate message waiting the subscriber terminates at a message center.

To reach the message center a subscriber calls a line that the system forwards to the message center. To reach the message center, the subscriber can also dial the message center directory number (MCDN).

Register MWTATT release history

Register MWTATT introduced in BCS20.

Associated registers

There associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register MWTDEACT

Message waiting deactivations

Register MWTDEACT increases when the message center deactivates the message center waiting lamp.

OM group MWTCAR (continued)

A deactivated message waiting lamp indicates the number of times teh subscriber retrieves messages from the message center.

Register MWTDEACT release history

Register MWTDEACT introduced in BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register MWTOVFL

Message waiting overflow (MWTOVFL)

Register MWTOVFL increases when the message center attendant cannot activate the message waiting lamp. The attendant cannot activate the message waiting lamp because of a lack of feature data blocks.

Parameters NO_OF_FTR_DATA_BLKS and FTRQ2WAREAS in table OFCENG specific feature data blocks.

The display of the message center attendant will show “TRY AGAIN".

Register MWTOVFL release history

Register MWTOVF introduced in BCS20.

Associated registers

Register TRMT3_NOSR, which indicates a lack of software resources when MWTOVFL increases.

Associated logs

The system generates LINE138 when the system routes a call to a treatment after being call processing busy.

Extension registers

There are no extension registers.

Register MWTQUERY

Message waiting queries (MWTQUERY)

Register MWTQUERY increases when a message center attendant quiries the status of a station for messages in the queue.

Register NWTQUERY release history

Register MWTQUERY introduced in BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group MWTCAR2

OM description

Message waiting call request (MWTCAR2)

The OM group MWTCAR2 increases when a message is in the queue against a line that has the message waiting line option. The notice does not affect the OM group count. Registers in this group record the use of periodic ring notification (PRN).

Release history

The OM group MWTCAR2 introduced in BCS33.

APC005

Functionality is added to support Meridian Digital Centrex (MDC) features on Global Peripheral Platform (GPP) lines for:

- Australian telephone user part (ATUP)
- ANSI ISDN user part (ANSI ISUP)
- Australian ISUP (AISUP) trunk signaling

Registers

The OM group MWTCAR2 registers appear on the MAP terminal as follows:

PRNACT	PRNRACT	PRNRDACT

Group structure

The OM group MWTCAR2 provides one tuple for each office.

Key field:
There is no key field.

Info field:
OMIBNGINFO

Associated OM groups

MWTCAR

Associated functional groups

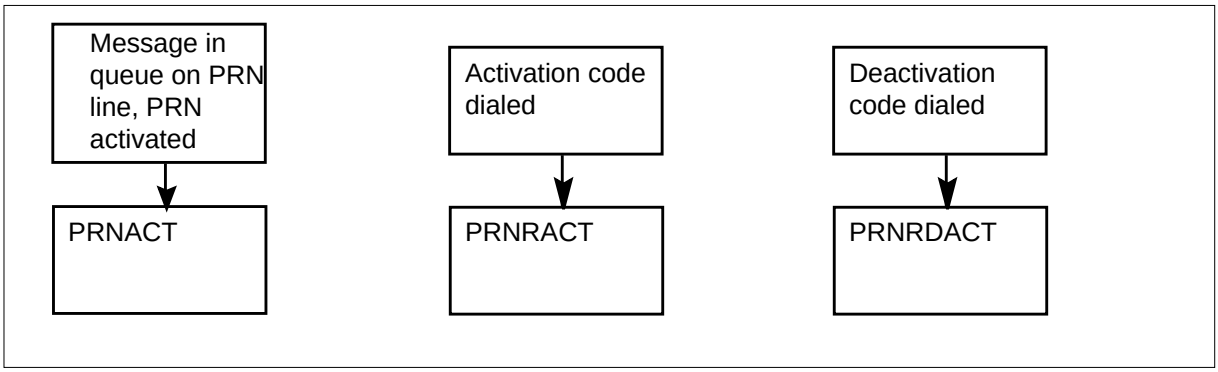
There are no associated functional groups.

Associated functionality codes

The associated functionality codes for OM group MWTCAR2 appear in the following table.

Functionality	Code
Residential Message Reminder	NTXF85AA

OM group MWTCAR2 registers



Register PRNACT

PRN activation (PRNACT)

Register PRNACT increases each time a messages is in the queue against a line that has PRN.

Register PRNACT release history

Register PRNACT introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group MWTCAR2 (end)

Register PRNRACT

PRN ringing activation (PRNRACT)

Register PRNRACT increases each time the user attempts to activate the ringing for the PRN notice. To activate the ringing, the user dials the activation code.

Register PRNRACT release history

Register PRNRACT introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register PRNRDACT

PRN ringing deactivation (PRNRDACT)

Register PRNRDACT increases each time the user attempts to deactivate the ringing for the PRN notice. To deactivate ringing, the user dials the deactivation code.

Register PRNRDACT release history

Register PRNRDACT introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group N6LINK

OM description

CCIS No. 6 signaling link management (N6LINK)

The OM group N6LINK provides information on traffic-related and maintenance-related activities on links in a CCITT No. 6 signaling (CCIS6) linkset.

Traffic-related registers count signals that links in the signaling linkset carry. A linkset is a group of links that carry signals to the same node. Each register counts certain messages so that the operating company can determine the traffic that these messages occupy. The signaling terminal stores traffic measurements. The system sends the traffic measurements from the signaling terminal to the central control complex (CC) during the OM transfer process.

Two usage registers record if maintenance occurs on the signaling linkset.

In the CCIS6 system, a common dedicated data link transmits signaling messages for trunks between two far-end offices. A common channel system transmits the signaling messages for trunks through a network to a signaling link. The common channel system sends messages by way of the message switch and buffer (MSB) and the signaling terminal (ST).

Release history

The OM group N6LINK introduced before BCS20.

BCS30

Software change to provide usage counts either in CCS or deci-erlangs.

Registers

The OM group N6LINK registers appear on the MAP terminal as follows:

```
IAMXMT      IAMRVD      ANCXMT      ANCRVD
TOTSUXMT    TOTSURVD    MUMXMT      MUMRVD
MSGOVLD     MSGOVFL     DRIFTREP    DRIFTSKP
UNDECSU     SUERROR     REXMTREQ    ANNXMT
ANNRVD      SAMXMT      LSUXMT      LSURVD
SAMRVD      BLKSYLOS    BLKRSYOK    LINKSYSB
LINKMANB
```

Group structure

OM group N6LINK

OM group N6LINK (continued)

Key field:
the link set CLLI (common language location identifier) for the CCIS6 linkset The link set CLLI is assigned in table NO6LKSET in the data schema section of the *North American DMS-100 Translations Guide*.

Info field:
the link number (zero to seven) within the link set, assigned in table NO6LINKS.

Associated OM groups

The OM group N6LK provides information on traffic-related and maintenance-related activities in a CCIS6 link that occur in a signaling terminal.

The OM group N6OFFICE counts the emergency restarts that occur on linksets at each office.

The OM group N6XR counts and records the management activities of the signaling system.

Associated functional groups

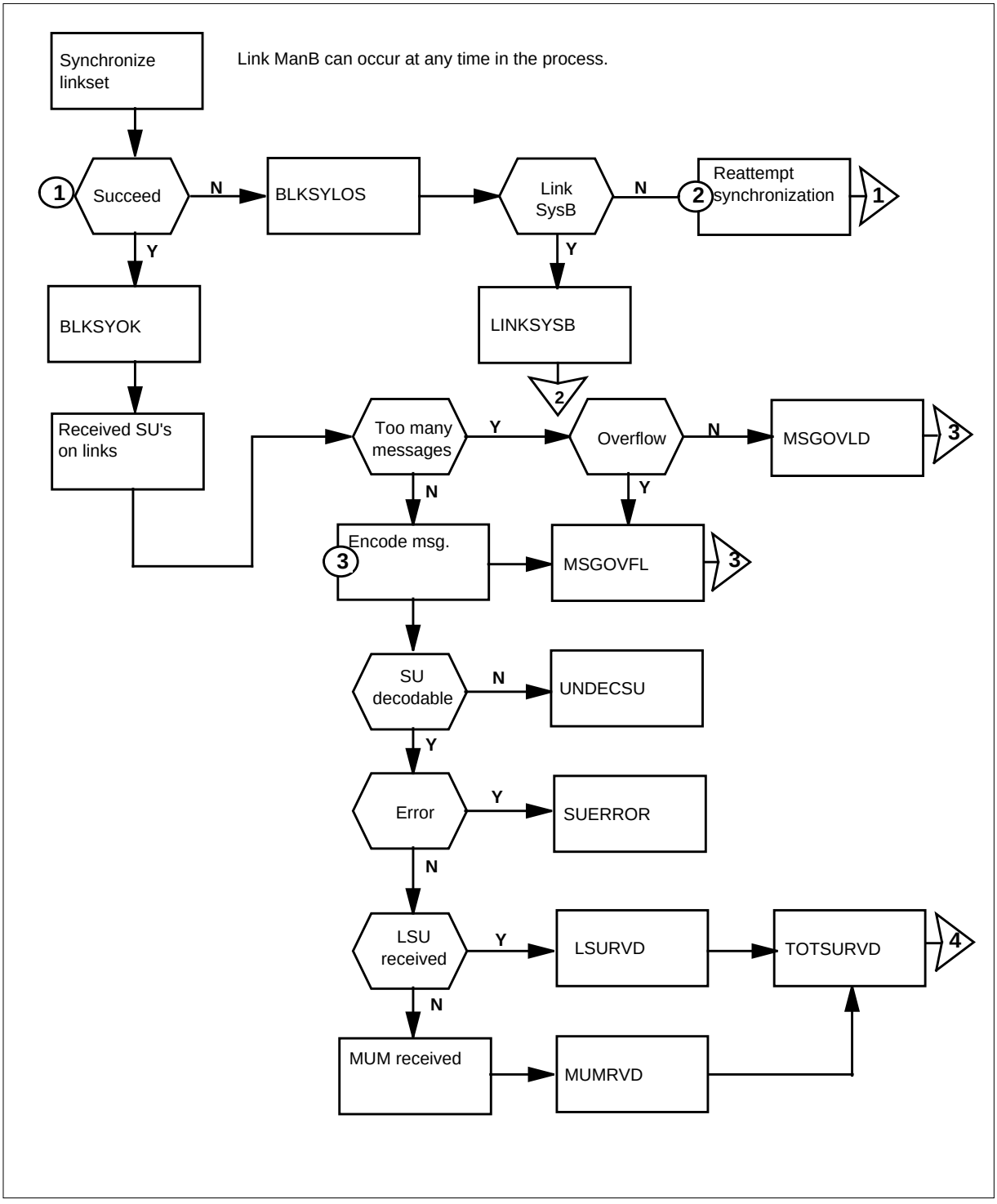
The functional group CCIS6 associates with OM group N6LINK.

Associated functionality codes

The associated functionality codes for OM group N6LINK appear in the following table.

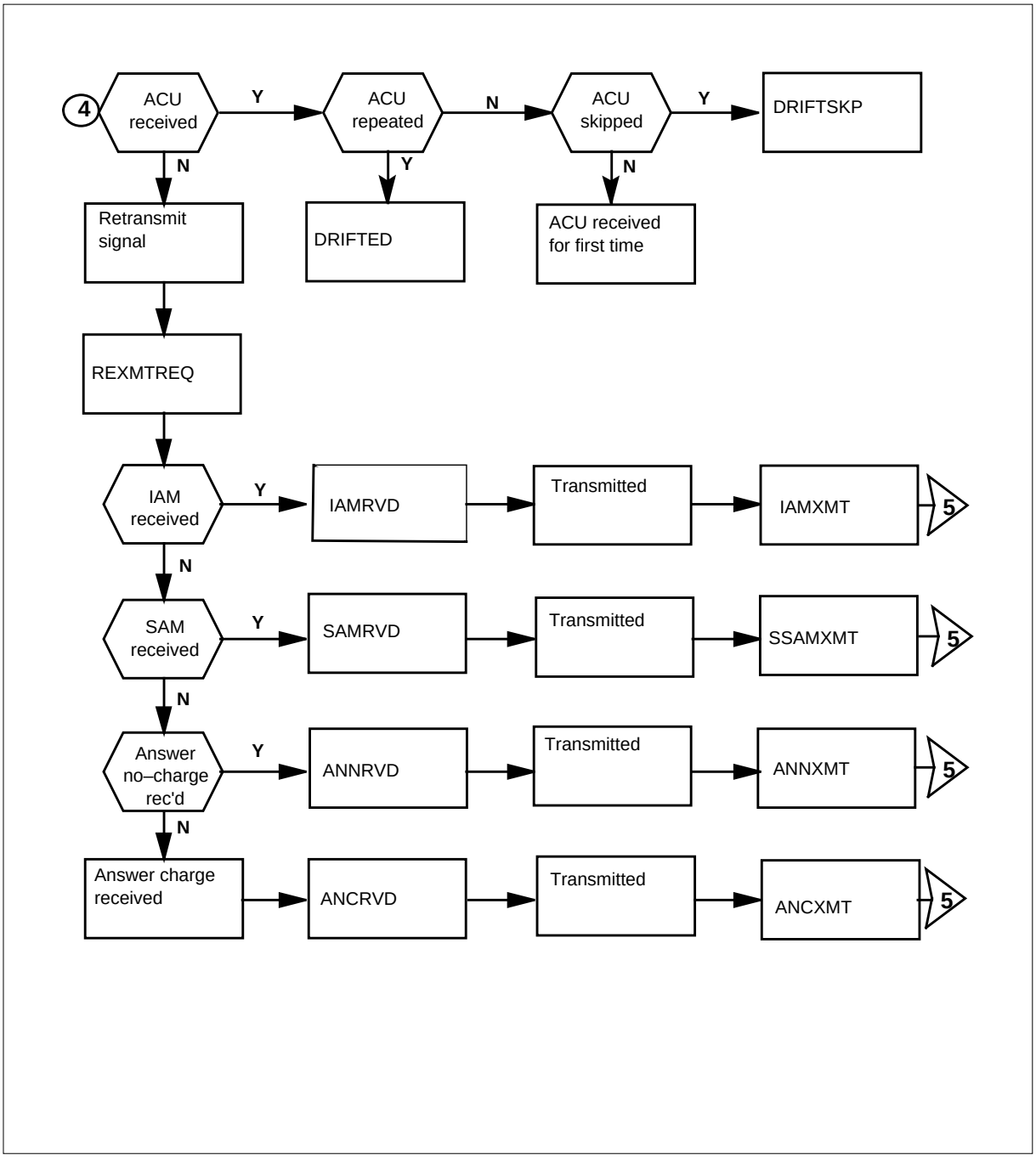
Functionality	Code
CCITT No. 6 Signaling System	NTX307AA
International Switching Center--Basic	NTX300AA

OM group N6LINK registers

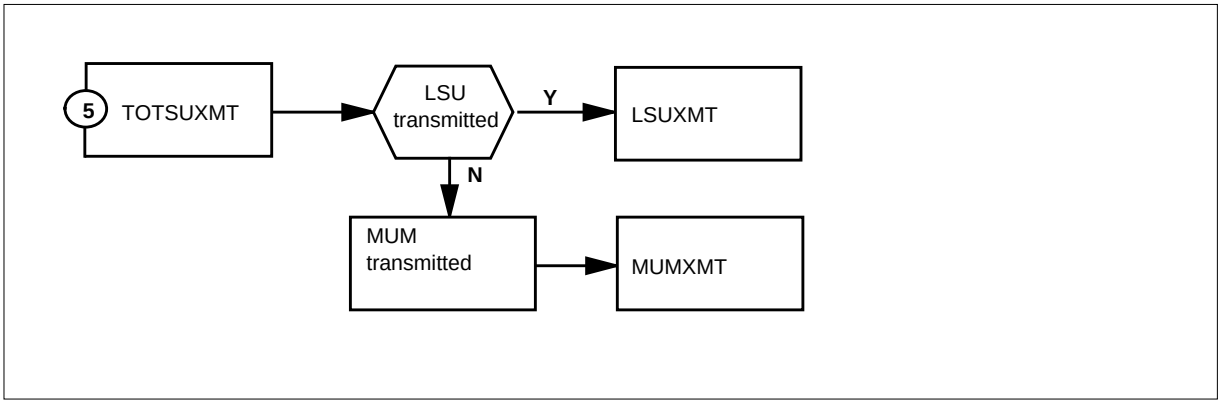


OM group N6LINK (continued)

OM group N6LINK registers (continued)



OM group N6LINK registers (continued)



Register ANCRVD

Answer-charge message received (ANCRVD)

Register ANCRVD counts answer-charge messages that a signaling link receives. Answer no-charge and answer-charge messages have priority in a multi-unit message (MUM).

Register ANCRVD release history

ANCRVD introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register ANCXMT

Answer-charge message transmitted (ANCXMT)

Register ANCXMT counts answer-charge messages that the signaling link transmits. Answer no-charge and answer-charge messages have priority in a MUM.

Register ANCXMT release history

Register ANCXMT introduced before BCS20.

Associated registers

ANCXMT + IAMXMT + SAMXMT + ANNXMT = TOTSUXMT

OM group N6LINK (continued)

Associated logs

There are no associated logs.

Register ANNRVD

Answer no-charge messages received (ANNRVD)

Register ANNRVD counts answer no-charge messages the signaling link receives. Answer no-charge and answer-charge messages have priority in an MUM.

Register ANNRVD release history

Register ANNRVD introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register ANNXMT

Answer no-charge messages transmitted (ANNXMT)

Register ANNXMT counts answer no-charge messages the signaling link transmits. Answer no-charge and answer-charge messages have priority in an MUM.

Register ANNXMT release history

Register ANNXMT introduced before BCS20.

Associated registers

ANNXMT + ANCXMT + IAMXMT + SAMXMT = TOTSUXMT

Associated logs

There are no associated logs.

Register BLKRSYOK

Block resynchronization OK (BLKRSYOK)

Register BLKRSYOK counts successful resynchronization attempts on the signaling link.

Register BLKRSYOK release history

Register BLKRSYOK introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register BLKSYLOS

Block synchronizations lost (BLKSYLOS)

Register BLKSYLOS counts block synchronization attempts on the signaling link that fail.

The synchronization procedure occurs when a bit pattern is sent down the data link. The signaling terminal (ST) keeps track of the blocks completed and blocks acknowledged. The ST monitors if signaling units are received in error and recognizes when a failure occurs.

Register BLKSYLOS release history

Register BLKSYLOS introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register DRIFTREP

Drift compensation repeated (DRIFTREP)

Register DRIFTREP counts repeated acknowledgement control units (ACU) the signaling link receives. Repeated ACUs a signaling link receives indicate that drift compensation occurs in the bit rates of the data channel of the signaling link.

Register DRIFTREP release history

Register DRIFTREP introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group N6LINK (continued)

Register DRIFTSKP

Drift compensation skipped (DRIFTSKP)

Register DRIFTSKP counts skipped acknowledgement control units (ACU) the signaling link receives. Skipped ACUs a signaling link receives indicate that drift compensation occurs in the bit rates of the data channels of the signaling link.

Register DRIFTSKP release history

Register DRIFTSKP introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register IAMRVD

Initial address message received (IAMRVD)

Register IAMRVD counts initial address messages (IAM) the signaling link receives.

Register IAMRVD release history

Register IAMRVD introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register IAMXMT

Initial address messages transmitted (IAMXMT)

Register IAMXMT counts outgoing initial address messages (IAM) on the signaling link.

Register IAMXMT release history

Register IAMXMT introduced before BCS20.

Associated registers

IAMXMT + SAMXMT + ANCXMT + ANNXMT = TOTSUXMT

Associated logs

There are no associated logs.

Register LINKMANB

Link manual busy (LINKMANB)

Register LINKMANB is a usage register. The scan rate is 100 s. Register LINKMANB records if the signaling link is out of service because of manual maintenance. Both near- and far-end initiated maintenance actions are counted.

Register LINKMANB release history

Register LINKMANB introduced before BCS20.

BCS30

Software change provides usage counts in CCS or in deci-erlangs.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register LINKSYSB

Link system busy (LINKSYSB)

Register LINKSYSB is a usage register. The scan rate is 100 s. Register LINKSYSB records if the signaling link is out of service because the system is busy.

Register LINKSYSB release history

Register LINKSYSB introduced before BCS20.

BCS30

Software change provides usage counts in CCS or in deci-erlangs.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group N6LINK (continued)

Register LSURVD

Lone signal unit received (LSURVD)

Register LSURVD counts single signal units the signaling link receives.

Register LSURVD release history

Register LSURVD introduced before BCS20.

Associated registers

LSURVD + MUMRVD = TOTSURVD

Associated logs

There are no associated logs.

Register LSUXMT

Lone signal units transmitted (LSUXMT)

Register LSUXMT counts lone signal units the signaling link transmits.

Register LSUXMT release history

Register LSUXMT introduced before BCS20.

Associated registers

LSUXMT + MUMXMT = TOTSUXMT

Associated logs

There are no associated logs.

Register MSGOVFL

Message overflow (MSGOVFL)

Register MSGOVFL increases when the signaling terminal message buffer overflows. This overflow occurs when the number of pending incoming and outgoing messages fill the buffer to a preset threshold.

Register MSGOVFL release history

Register MSGOVFL introduced in BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register MSGOVLD

Message overload (MSGOVLD)

Register MSGOVLD increases when the signaling terminal message buffer overloads. This overload occurs when the signaling terminal report buffer is full of pending messages and cannot accept another incoming message.

Register MSGOVLD release history

Register MSGOVLD introduced in BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register MUMRVD

Multi-unit messages received (MUMRVD)

Register MUMRVD counts multi-unit messages the signaling link receives.

Register MUMRVD release history

Register MUMRVD introduced before BCS20.

Associated registers

MUMRVD + LSURVD = TOTSURVD

Associated logs

There are no associated logs.

Register MUMXMT

Multi-unit messages transmitted (MUMXMT)

Register MUMXMT counts multi-unit messages (MUM) the signaling link transmits.

Register MUMXMT release history

Register MUMXMT introduced before BCS20.

Associated registers

MUMXMT + LSUXMT = TOTSUXMT

OM group N6LINK (continued)

Associated logs

There are no associated logs.

Register REXMTREQ

Retransmission required (REXMTREQ)

Register REXMTREQ counts messages that transmit again on the signaling link.

Register REXMTREQ release history

Register REXMTREQ introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register SAMRVD

Subsequent address messages received (SAMRVD)

Register SAMRVD counts subsequent address messages (SAM) the signaling link receives.

Register SAMRVD release history

Register SAMRVD introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register SAMXMT

Subsequent address messages transmitted (SAMXMT)

Register SAMXMT counts subsequent address messages (SAM) transmitted on the signaling link.

Register SAMXMT release history

Register SAMXMT introduced before BCS20.

Associated registers

SAMXMT + IAMXMT + ANNXMT + ANCXMT = TOTSUXMT

Associated logs

There are no associated logs.

Register SUERROR

Signal unit errors (SUERROR)

Register SUERROR counts signal units the signaling link receives in error. The operating company personnel can use this count to evaluate the accuracy of the signaling link.

Register SUERROR release history

Register SUERROR introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register TOTSURVD

Total signal units received (TOTSURVD)

Register TOTSURVD counts signal units the signaling link receives.

Register TOTSURVD does not count synchronization signal units (SYU) or acknowledgement units (ACU).

Register TOTSURVD release history

Register TOTSURVD introduced before BCS20.

Associated registers

TOTSURVD = MUMRVD + LSURVD

Associated logs

There are no associated logs.

Register TOTSUXMT

Total signal units transmitted (TOTSUXMT)

Register TOTSUXMT counts signal units the signaling link transmits.

OM group N6LINK (end)

Register TOTSUXMT does not count synchronization signal units (SYU) or acknowledgement signal units (ACU).

Register TOTSUXMT release history

Register TOTSUXMT introduced before BCS20.

Associated registers

TOTSUXMT = IAMXMT + SAMXMT + ANNXMT + ANCXMT

Associated logs

There are no associated logs.

Register UNDECSU

Unable to decode signal units (UNDECSU)

Register UNDECSU counts received signal units the signaling terminal cannot decode.

Register UNDECSU release history

Register UNDECSU introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group N6LK

OM description

No. 6 link (N6LK)

The OM group N6LK provides information on traffic-related and maintenance-related activities on a CCITT No. 6 link.

Traffic-related registers count the signaling messages the link carries. Each register counts specified messages so that the operating company can determine the part of the traffic these messages occupy. Traffic measurements are in the signaling terminal. The system periodically sends these messages to the central control complex (CC) during the OM transfer process.

Two usage registers record if maintenance occurs on the signaling link.

In the CCITT No. 6 system, a common dedicated data link transmits signaling messages for trunks between two far-end offices.

The CCITT No. 6 system has two modes of operation. A signaling link operates in an associated mode when the endpoints of the link correspond to the endpoints of the trunk circuits. The link operates in a quasi-associated mode when:

- the signaling path crosses a minimum of one signal transfer point (STP)
- the STPs are not associated with the current trunk circuits
- the system can route signaling traffic through an STP when a dedicated signaling link is available for a small number of trunk circuits
- an additional signaling route is required for added security

Release history

The OM group N6LK introduced before BCS20.

Registers

The following OM group N6LK registers appear on the MAP terminal as follows:

```
N6IAMXMT    N6IAMRCD    N6ANSRCD    N6TOTXMT
N6TOTRCD    N6QUAXMT    N6QUARCD    N6REXMT
N6SUCNT     N6MUMCXM    N6MUMRCD    N6SUERR
N6MSGTOU    N6MSGQOV    N6BKRSYN    N6BKSYN
N6UNRMSG    N6DRFTCP    N6LKSBU     N6LKMBU
```

OM group N6LK (continued)

Group structure

OM group N6LK

Key field:
There is no key field.

Info field:
N6LK_ADMININF from table N6LINKS. This field of administrative information is composed of four sub-fields SITE, SUFX, COUNTRY, and DETAILS. The field can contain one to 16 characters.

Associated OM groups

The OM group N6XR provides information on the management activities of the signaling system.

The OM group N6LINK provides information on traffic-related and maintenance-related activities in a CCIT signaling linkset.

The OM group N6OFFICE counts the emergency restarts that occur on linksets at each office.

Associated functional groups

The following associated functional groups associate with OM group N6LK:

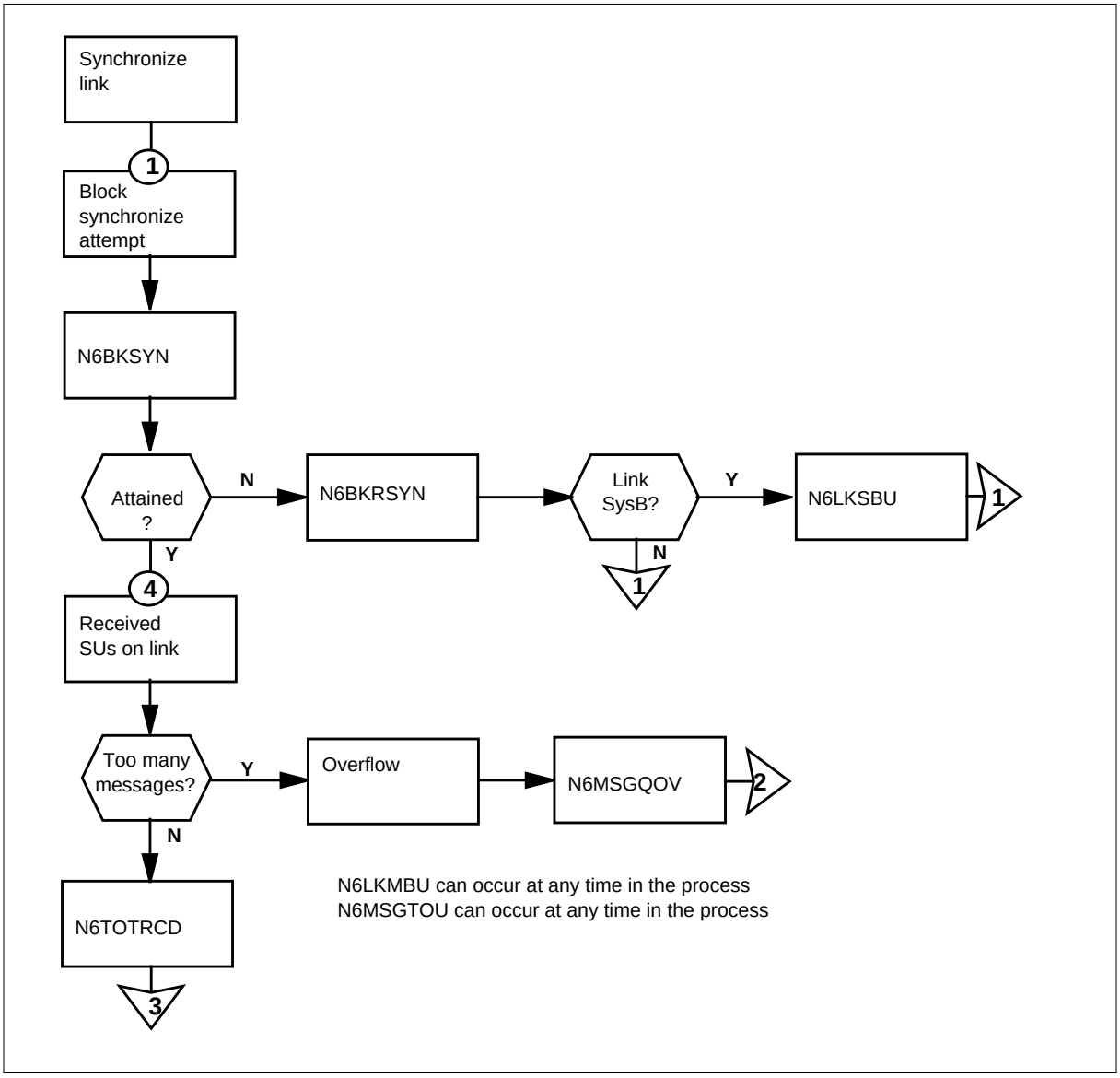
- CCITT No. 6

Associated functionality codes

The associated functionality codes for OM group N6LK appear in the following table.

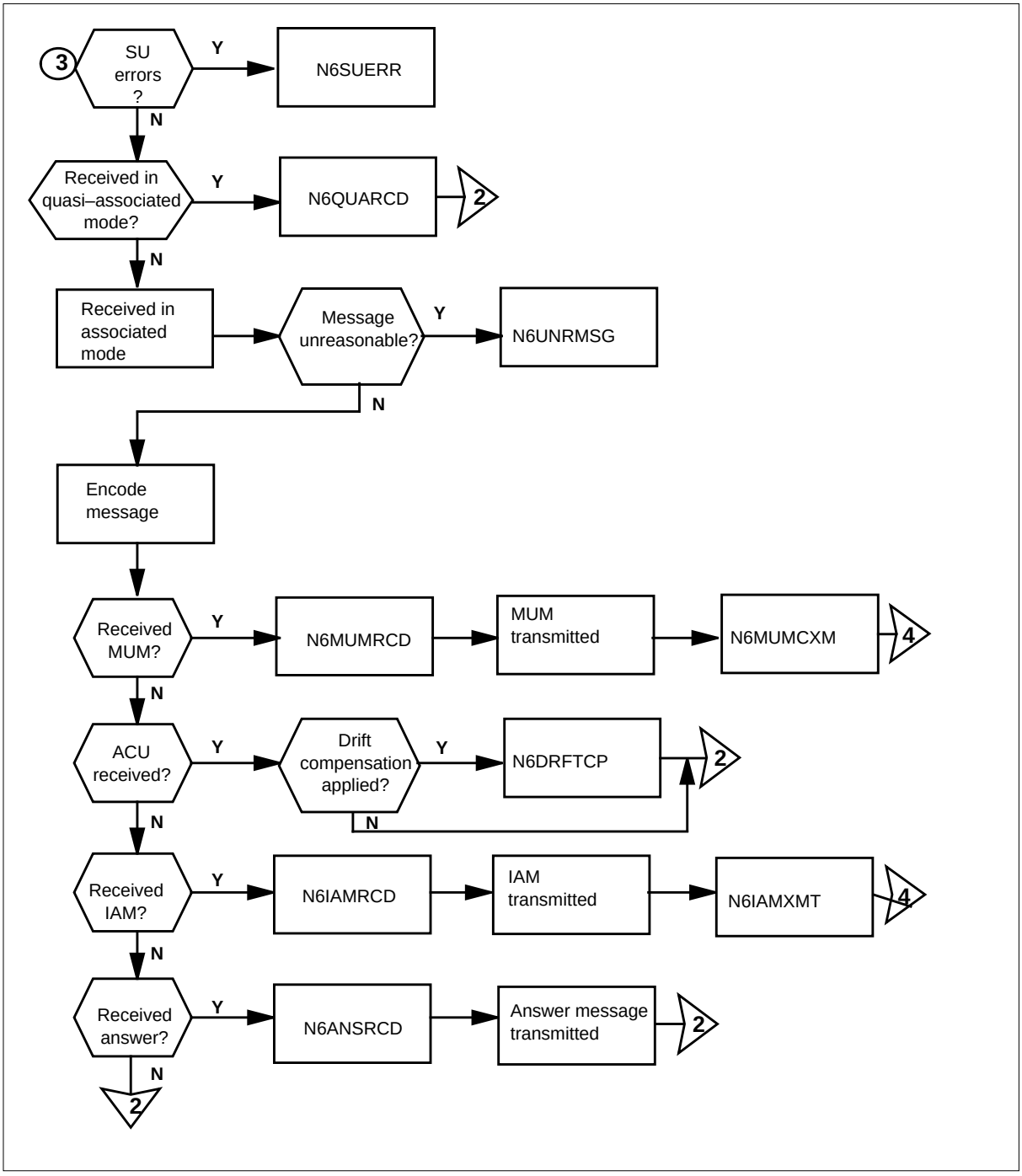
Functionality	Code
CCITT No. 6 Signaling System-Old	NTX306AA

OM group N6LK registers

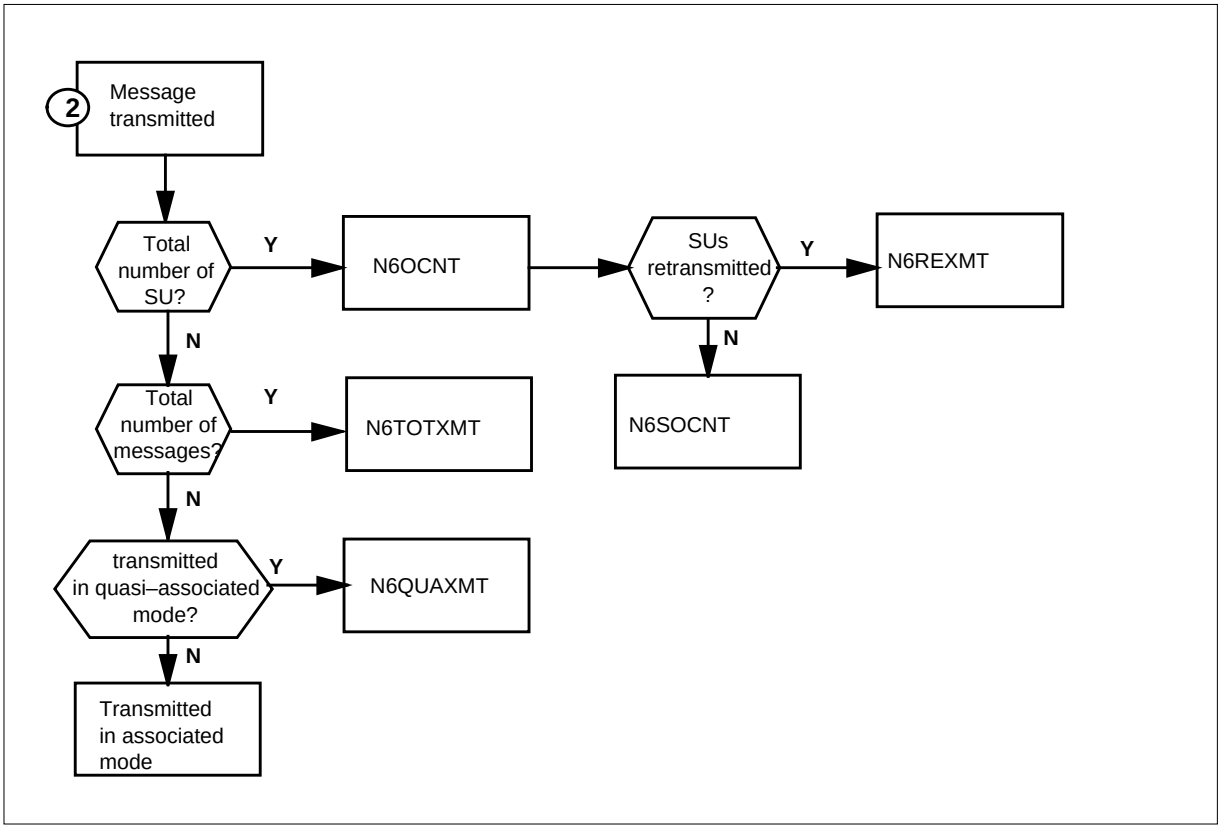


OM group N6LK (continued)

OM group N6LK registers (continued)



OM group N6LK registers (continued)



Register N6ANSRCD

No. 6 answer messages received (N6ANSRCD)

Register N6ANSRCD counts the answer messages a signaling link receives that is in the associated mode of operation.

Register N6ANSRCD release history

Register N6ANSRCD introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6BKRSYN

No. 6 block resychronizations (N6BKRSYN)

OM group N6LK (continued)

Register N6BKRSYN increases when a block resynchronization is attempted on a signaling link.

Register N6BKRSYN release history

Register N6BKRSYN introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6BKSYN

No. 6 block synchronizations (N6BKSYN)

Register N6BKSYN increases when a block synchronization is attempted on a signaling link.

Register N6BKSYN release history

N6BKSYN introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6DRFTCP

No. 6 drift compensation (N6DRFTCP)

Register N6DRFTCP increases when signaling link drift compensation is performed on the incoming link.

Drift compensation is the process of adjusting for the difference between the acknowledgement signal unit and the signal unit it acknowledges. The drift in the bit rates of the data channels cause the difference.

Register N6DRFTCP release history

Register N6DRFTCP introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6IAMRCD

No. 6 initial address messages received (N6IAMRCD)

Register N6IAMRCD counts the initial address messages a signaling link receives that is in the associated mode of operation.

Register N6IAMRCD release history

Register N6IAMRCD introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6IAMXMT

No. 6 initial address messages transmitted

Register N6IAMXMT counts the initial address messages a signaling link transmits that is in the associated mode of operation.

Register N6IAMXMT release history

Register N6IAMXMT introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6LKMBU

No. 6 link manual busy (N6LKMBU)

Register N6LKMBU is a usage register. The scan rate is 100 s. Register N6LKMBU records if a signaling link or modem is manual busy.

Register N6LKMBU release history

Register N6LKMBU introduced before BCS20.

OM group N6LK (continued)

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6LKSBU

No. 6 link system busy (N6LKSBU)

Register N6LKSBU is a usage register. The scan rate is 100 s. Register N6LKSBU records if a signaling link or modem is system busy.

Register N6LKSBU release history

Register N6LKSBU introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6MSGQOV

No. 6 message queue overflow (N6MSGQOV)

Register N6MSGQOV increases when a signaling terminal internal message queue overflows.

Register N6MSGQOV release history

Register N6MSGQOV introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6MSGTOU

No. 6 message timeouts (N6MSGTOU)

Register N6MSGTOU increases when a message timeout occurs on a signaling link that is in the associated mode of operation. A timeout checks processing messages for accuracy.

Register N6MSGTOU release history

Register N6MSGTOU introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6MUMCXM

No. 6 multi-unit messages transmitted (N6MUMCXM)

Register N6MUMCXM counts multi-unit messages (MUM) a signaling link transmits that is in the associated mode of operation.

Register N6MUMCXM release history

Register N6MUMCXM introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6MUMRCD

No. 6 multi-unit messages received (N6MUMRCD)

Register N6MUMRCD counts the multi-unit messages a signaling link receives that is in the associated mode of operation.

Register N6MUMRCD release history

Register N6MUMRCD introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6QUARCD

No. 6 quasi-associated received (N6QUARC)

OM group N6LK (continued)

Register N6QUARC counts messages a signaling link receives that is in the quasi-associated mode of operation.

Register N6QUARC does not count synchronization signal units, acknowledgement signal units, or link that has faults information.

Register N6QUARCD release history

Register N6QUARCD introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6QUAXMT

No. 6 quasi-associated transmitted (N6QUAXMT)

Register N6QUAXMT counts messages a signaling link transmits that is in the quasi-associated mode of operation.

Register N6QUAXMT does not count synchronization signal units, acknowledgement signal units, or link that has faults information.

Register N6QUAXMT release history

Register N6QUAXMT introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6REXMT

No. 6 retransmitted (N6REXMT)

Register N6REXMT counts retransmitted signal units on a signaling link used in the associated or quasi-associated modes of operation.

Register N6REXMT does not count audit signals or load transfer signals.

Register N6REXMT release history

Register N6REXMT introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6SUCNT

No. 6 signal units transmitted (N6SUCNT)

Regsiter N6SUCNT counts signal units a signaling link used in the quasi-associated or associated modes of operation transmits.

Register N6SUCNT does not count retransmitted messages, synchronization signal units, acknowledgement signal units, or link that has faults information.

Register N6SUCNT release history

Register N6SUCNT introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6SUERR

No. 6 signal unit errors (N6SUERR)

Register N6SUERR counts signal units on a signaling link used in the quasi-associated or associated mode of operation receives in error.

Register N6SUERR release history

Register N6SUERR introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6TOTRCD

No. 6 total messages received (N6TOTRCD)

OM group N6LK (continued)

Register N6TOTRCD counts lone-signal unit and multi-unit messages a signaling link receives that is in the associated mode of operation.

Register N6TOTRCD does not count synchronization signal units, acknowledgement signal units, or link that has faults information.

Register N6TOTRCD release history

Register N6TOTRCD introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6TOTXMT

No. 6 total messages transmitted (N6TOTXMT)

Register N6TOTXMT counts lone-signal unit and multi-unit messages a signaling link transmits that is in the associated mode of operation.

Register N6TOTXMT does not count retransmission, synchronization signal units (SYU), acknowledgement signal units (ACU) or link that has faults information.

Register N6TOTXMT release history

Register N6TOTXMT introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6UNRMSG

No. 6 unreasonable messages (N6UNRMSG)

Register N6UNRMSG counts unreasonable lone-signal unit and multi-unit messages a signaling link receives that is in the associated mode of operation. This register also counts superfluous messages.

This register does not count unreasonable audit or load transfer signals. An unreasonable message has one of the following characteristics:

- content that is not correct
- signal direction that is not correct
- place in signal sequence that is not correct

Register N6UNRMSG release history

Register N6UNRMSG introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group N6OFFICE

OM description

No. 6 signaling system (N6OFFICE)

The OM group N6OFFICE register EMERESTA counts emergency restarts that occur for each office, on all link sets.

Release history

The OM group N6OFFICE introduced before BCS20.

Registers ESTA

The OM group N6OFFICE registers appears on the MAP terminal as follows:

```
EMERESTA
```

Group structure

The OM group N6OFFICE

Key field:
There is no key field.

Info field:
There is no info field.

Associated OM groups

The OM group N6LINK registers count and record signaling link management activities.

The OM group N6LK registers count and record signaling terminal activities.

The OM group N6XR registers count and record signaling link activities.

Associated functional groups

CCITT 6

Associated functionality codes

The associated functionality code for OM group N6OFFICE are in the following table.

Functionality	Code
CCITT 6 Signaling System - Old	NTX307AA

Register EMERESTA

Emergency restarts (EMERESTA)

Register EMERESTA counts emergency restarts that occur for each office, on all link sets.

Register EMERESTA release history

The EMERESTA introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group N6XR

OM description

No. 6 signaling links (N6XR)

The OM group N6XR registers provide information on the CCITT No. 6 system link:

- initializations
- restarts
- transfers
- busy states
- signaling terminals or modem pool selections

The CCITT system transmits the signaling messages for trunks to a signaling link. The signaling messages go through the message switch and buffer (MSB) and the signaling terminal (ST).

If a working link fails, the ST sends link information that has faults on the failed link. Signaling is first restored on a synchronized reserve transfer link in the same link set. If this option is not available, the system restores signaling through one or more linksets using quasi-associated signaling. If this option is also not available, the system attempts to restore signaling on a reserve link that is not synchronized.

When an ST regains synchronization on a failed normal link, the link resumes normal traffic. The link resumes normal traffic when it passes the emergency proving period and the one minute proving period.

Release history

The OM group N6XR introduced before BCS20.

Registers

The OM group N6XR registers appear on the MAP terminal as follows:

```
N6AUTOTR    N6MANTR N6LKINIT        N6LKSTEM
N6MSELAT    N6MSELUN    N6MPOOLU    N6SBU
N6MBU
```

Group structure

The OM group N6XR provides one tuple for each office.

Key field:
There is no key field.

Info field:
the number of signaling terminals or modems in the office.

Associated OM groups

The OM group N6LINK provides information on signaling link management activities.

The OM group N6LK provides information on signaling terminal activities.

The OM group N6OFFICE counts signaling system emergency restarts.

Associated functional groups

The following functional groups associate with OM group N6XR:

- CCITT No. 6

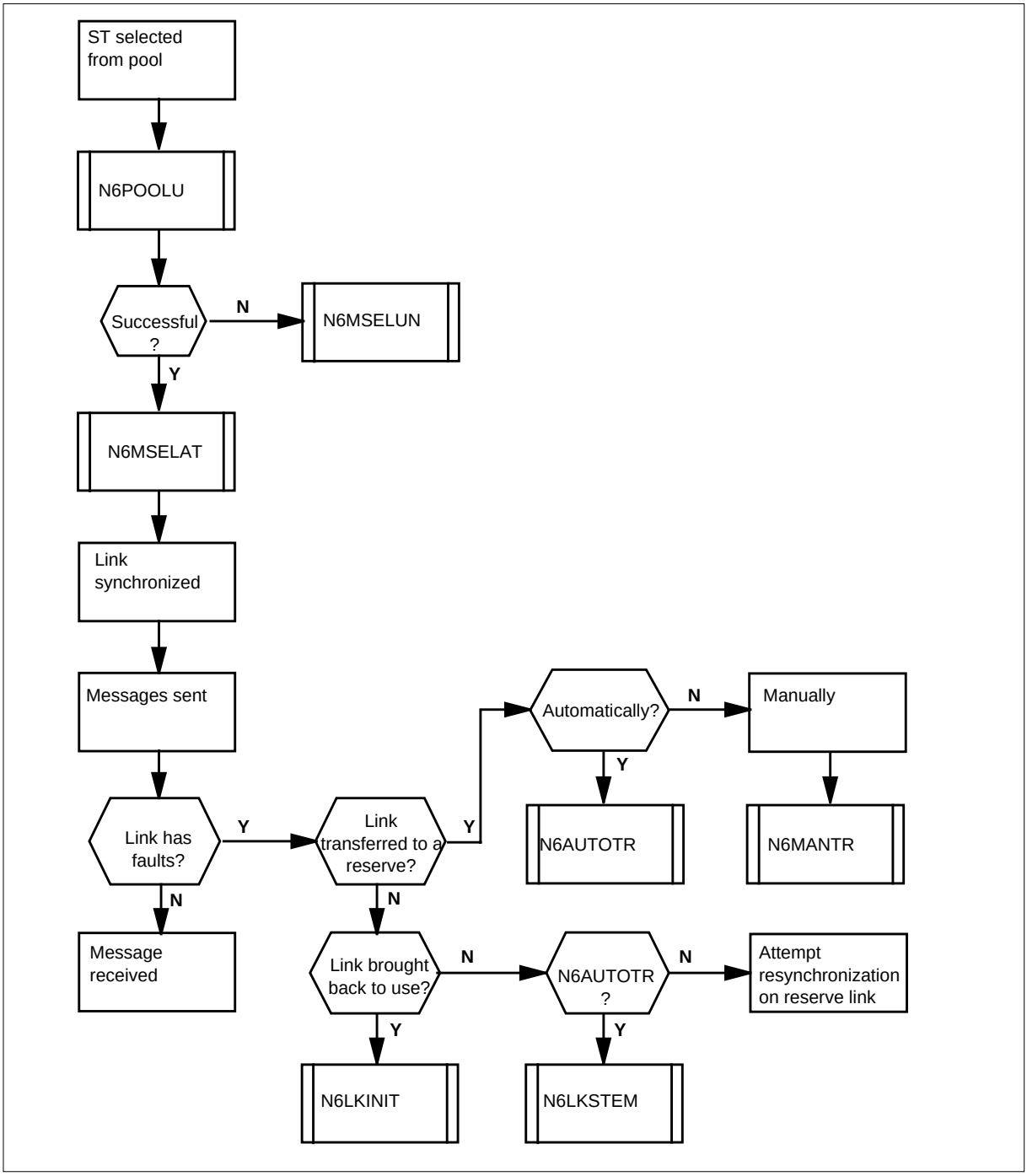
Associated functionality codes

The associated functionality codes for OM group N6XR are in the following table.

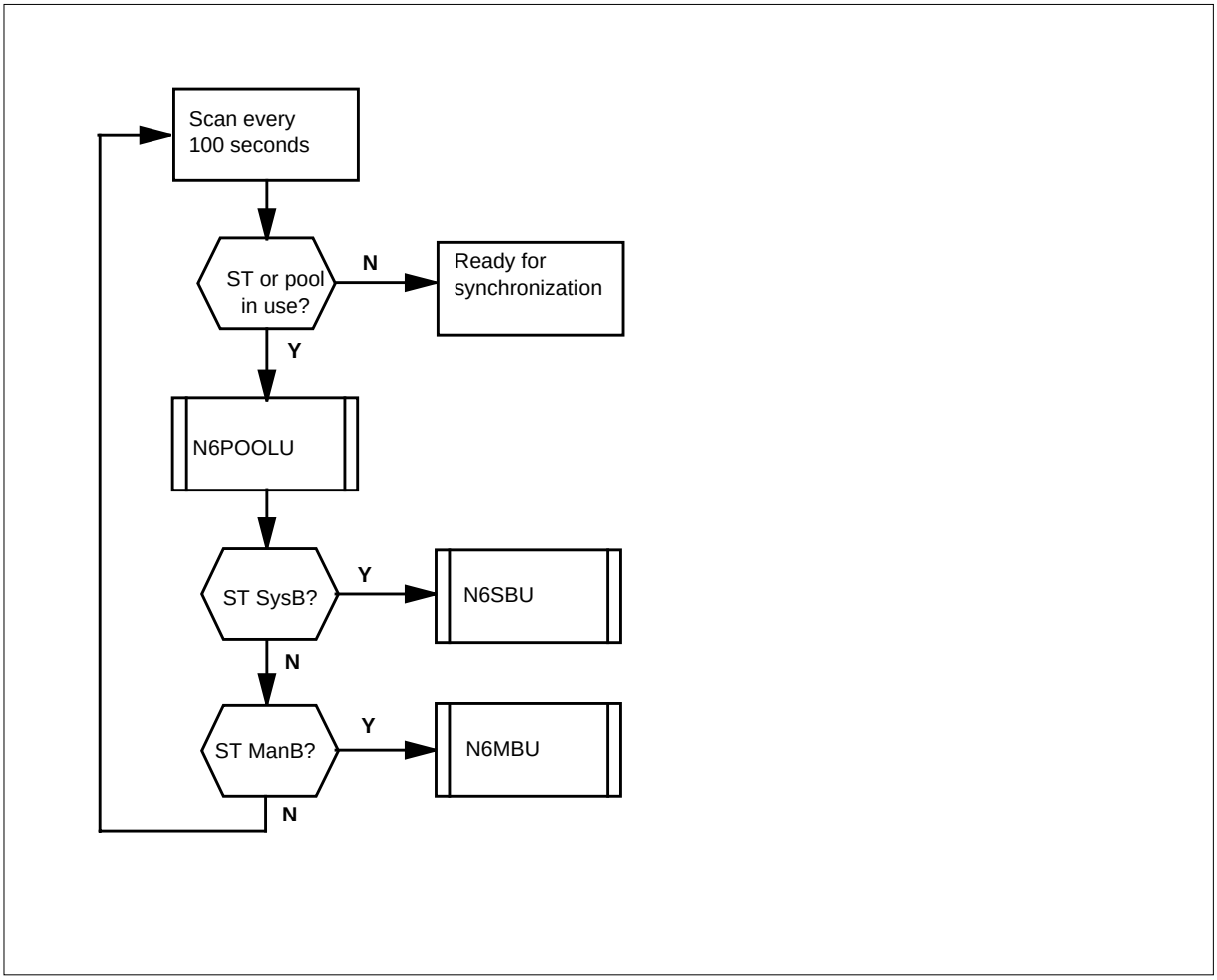
Functionality	Code
ISC-CCITT No. 6 Signaling System - Old	NTX306AA

OM group N6XR (continued)

OM group N6XR registers



OM group N6XR registers (continued)



Register N6AUTOTR

No. 6 automatic transfer (N6AUTOTR)

Register N6AUTOTR increases when signals on a link that has faults transfer automatically to a reserve link.

Register N6AUTOTR release history

Register N6AUTOTR introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group N6XR (continued)

Register N6LKINIT

No. 6 link initializations (N6LKINIT)

Register N6LKINIT increases when a link that has faults comes back into use.

Register N6LKINIT release history

Register N6LKINIT introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6LKSTEM

No. 6 link set emergency (N6LKSTEM)

Register N6LKSTEM increases when an emergency restart occurs on a link set.

Register N6LKSTEM release history

The N6LKSTEM introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6MANTR

No. 6 manual transfer (N6MANTR)

Register N6MANTR increases when signals transfer manually from a link that has faults to a reserved link.

Register N6MANTR release history

Register N6MANTR introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6MBU

No. 6 manual busy (N6MBU)

Register N6MBU is a use register. The scan rate is 100 s. Register N6MBU records if the signaling terminals are manual busy.

Register N6MBU release history

Register N6MBU introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6MPOOLU

No. 6 modem pool usage (N6MPOOLU)

Register N6MPOOLU is a use register. The scan rate is 100 s. Register N6MPOOLU records if the signaling terminal or modem pool is in use.

Register N6MPOOLU release history

Register N6MPOOLU introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6MSELAT

No. 6 select attempts (N6MSELAT)

Register N6MSELAT increases when the system tries to select a signaling terminal or modem. The system selects the signaling terminals and modems from the pool of available signaling terminals or modems.

Register N6MSELAT release history

Register N6MSELAT introduced before BCS20.

Associated registers

There are no associated registers.

OM group N6XR (end)

Associated logs

There are no associated logs.

Register N6MSELUN

No. 6 select not complete (N6MSELUN)

Register N6MSELUN counts failed attempts to select a signaling terminal or modem. The signaling terminals and modems are chosen from the pool of available signaling terminals or modems.

Register N6MSELUN release history

Register N6MSELUN introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register N6SBU

No. 6 system busy (N6SBU)

Register N6SBU is a use register. The scan rate is 100 s. Register N6SBU records if the signaling terminals are system busy.

Register N6SBU release history

The N6SBU introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group NACDGRP1

OM description

Networked automatic call distribution group 1 (NACDGRP1)

The OM group NACDGRP1 records the total ACD traffic for the NACD groups. These registers record calls that overflow from or to a NACD group because of immediate overflow or time delay overflow.

Release history

The OM group NACDGRP1 introduced in BCS34.

Registers

The OM group NACDGRP1 registers appear on the MAP terminal as follows:

IMINFLCL	IMINFREM	TMINFLCL	TMINFREM
IMOFLLCL	IMOFLREM	TMOFLLCL	TMOFLREM
IMINFQED	IMMTMOFL	LOGQLCL	PHYQLOGQ
TMANSLCL	TMANSREM	NOOFLGRP	LOGQFULL
TFAILLCL	TFAILREM	USRABNDN	

Group structure

The OM group NACDGRP1 provides one tuple for each NACD group.

Key field:
NACD_OM_INDEX

Info field:
There is no info field.

Associated OM groups

The OM group ACDGRP provides information for ACD traffic. An example is the number of calls offered to ACD agents and the number of calls transferred.

The OM group NACDGRP2 is an extension of NACDGRP1.

OM group NACDGRP1 (continued)

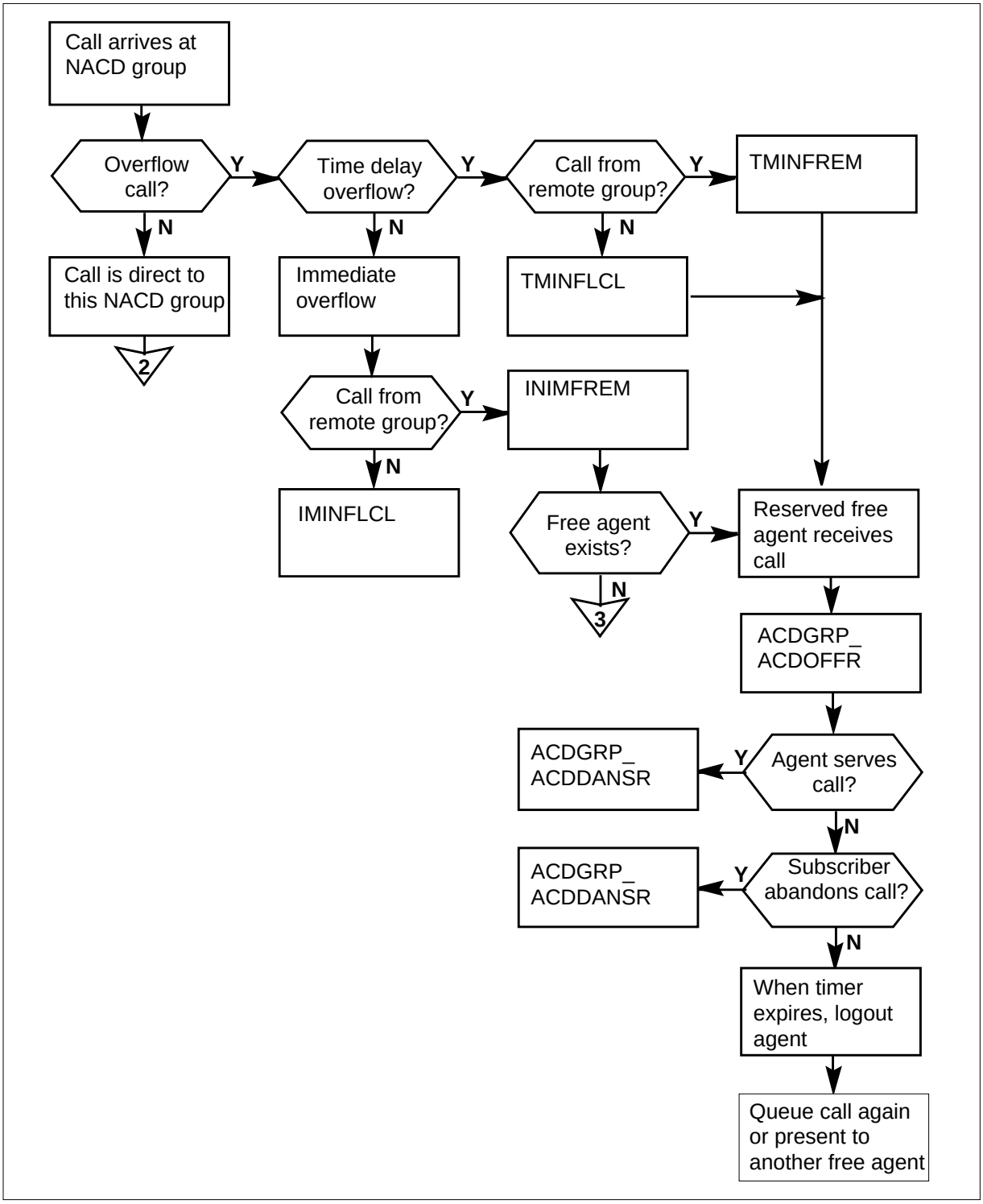
Associated functionality codes

The associated functionality codes for the OM group NACDGRP1 are in the following table.

Functionality	Code
ACD Supergroup	NTXE22AA02

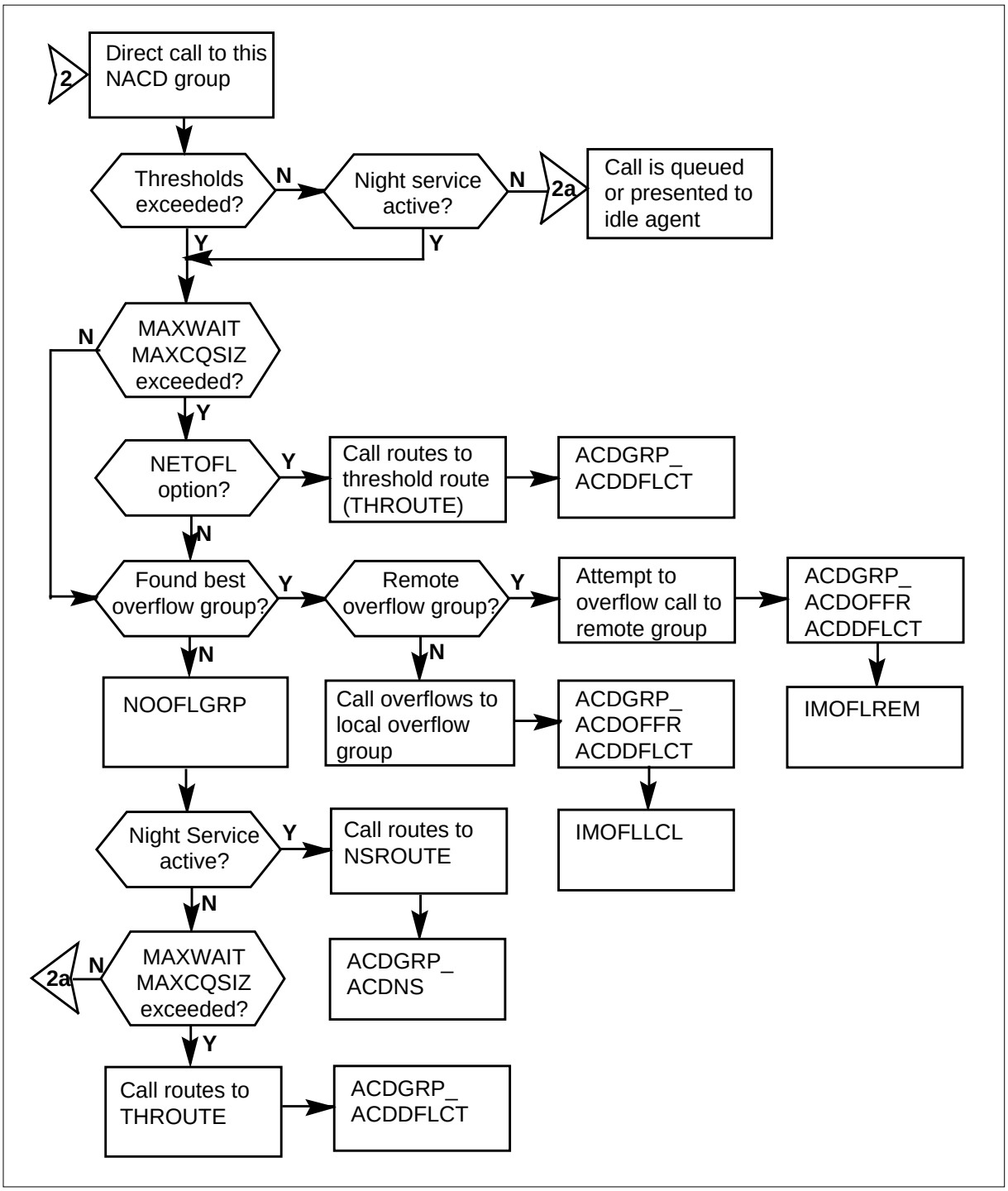
OM group NACDGRP1 (continued)

OM group NACDGRP1 registers

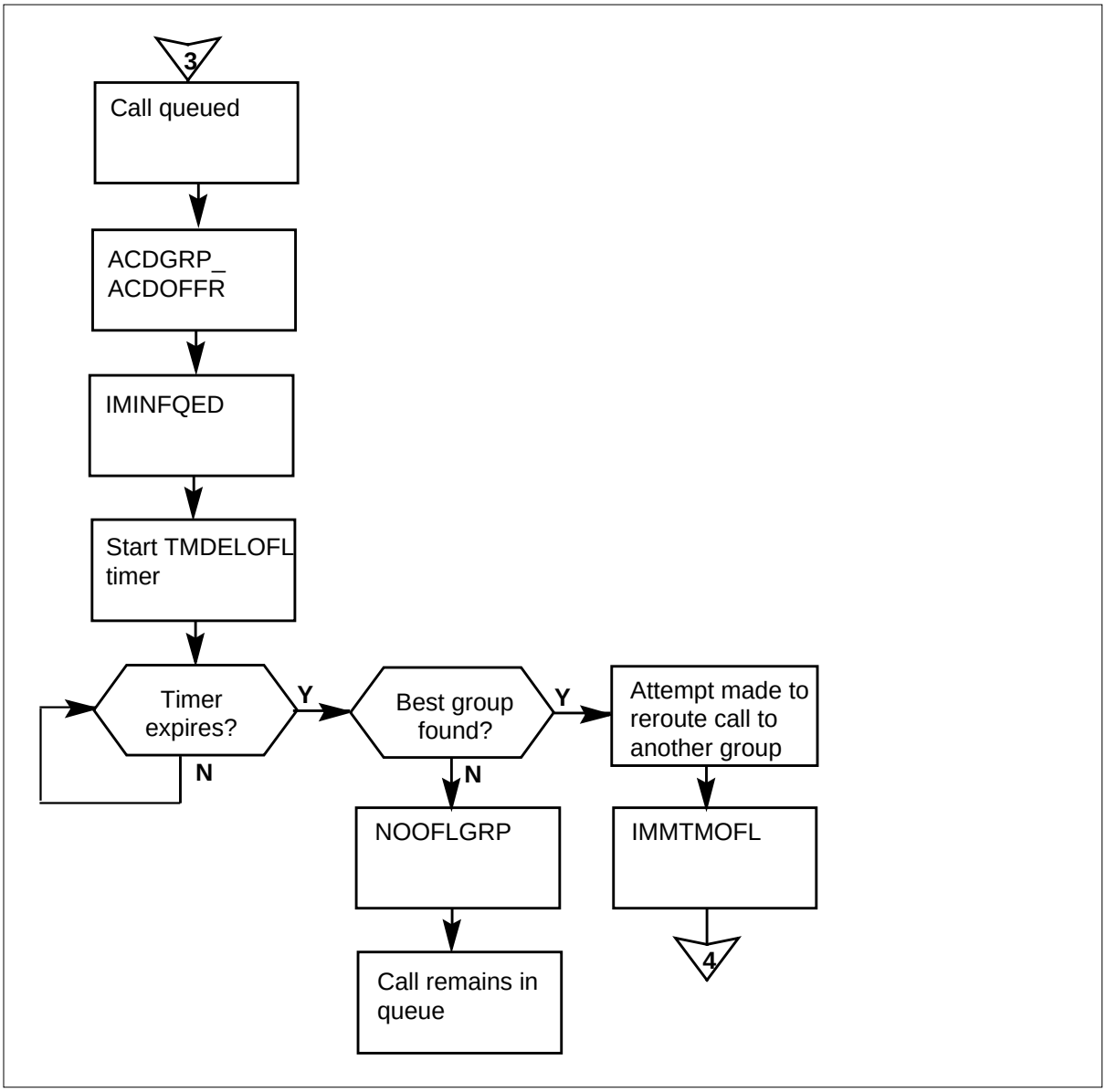


OM group NACDGRP1 (continued)

OM group NACDGRP1 registers (continued)

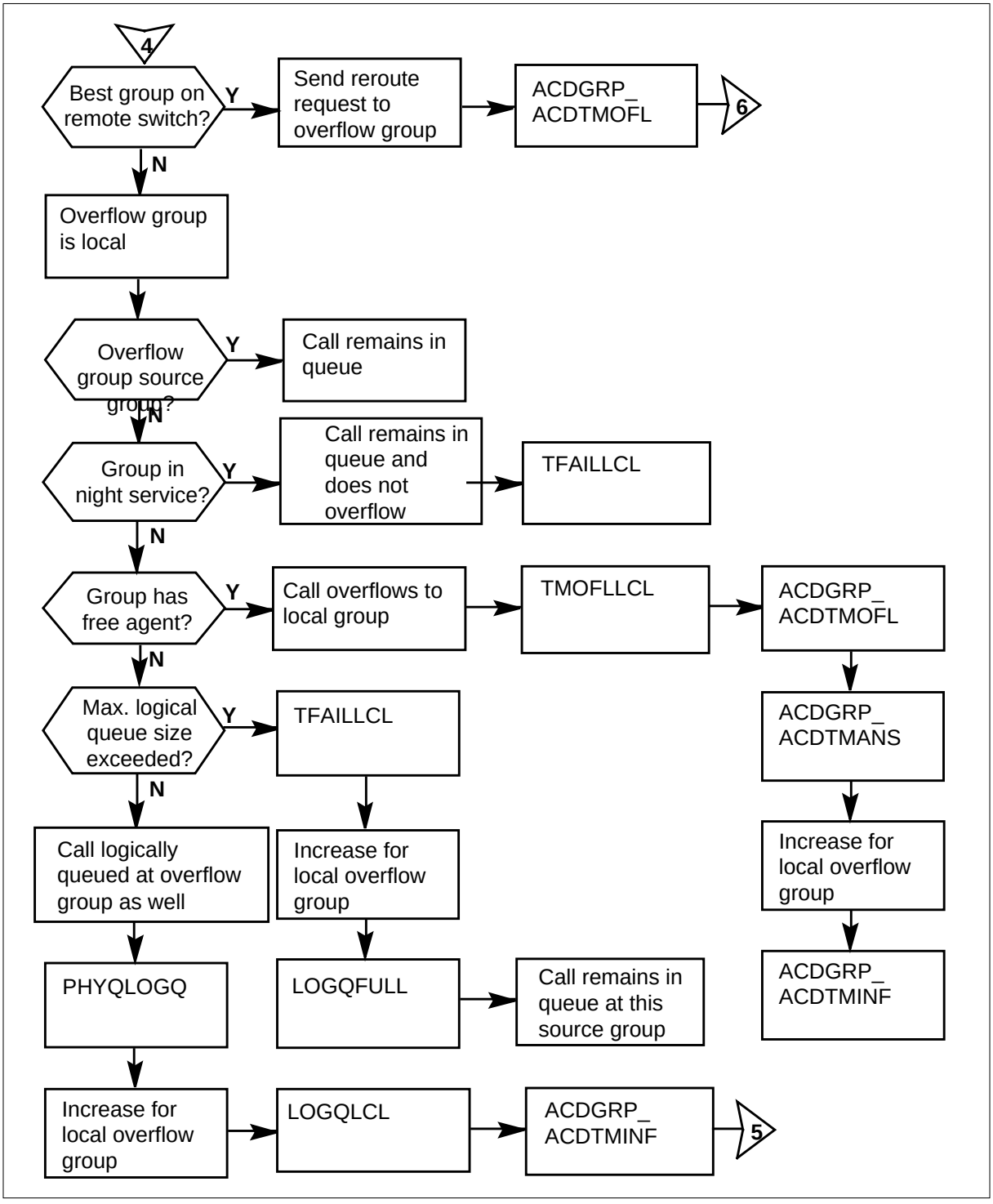


OM group NACDGRP1 registers (continued)



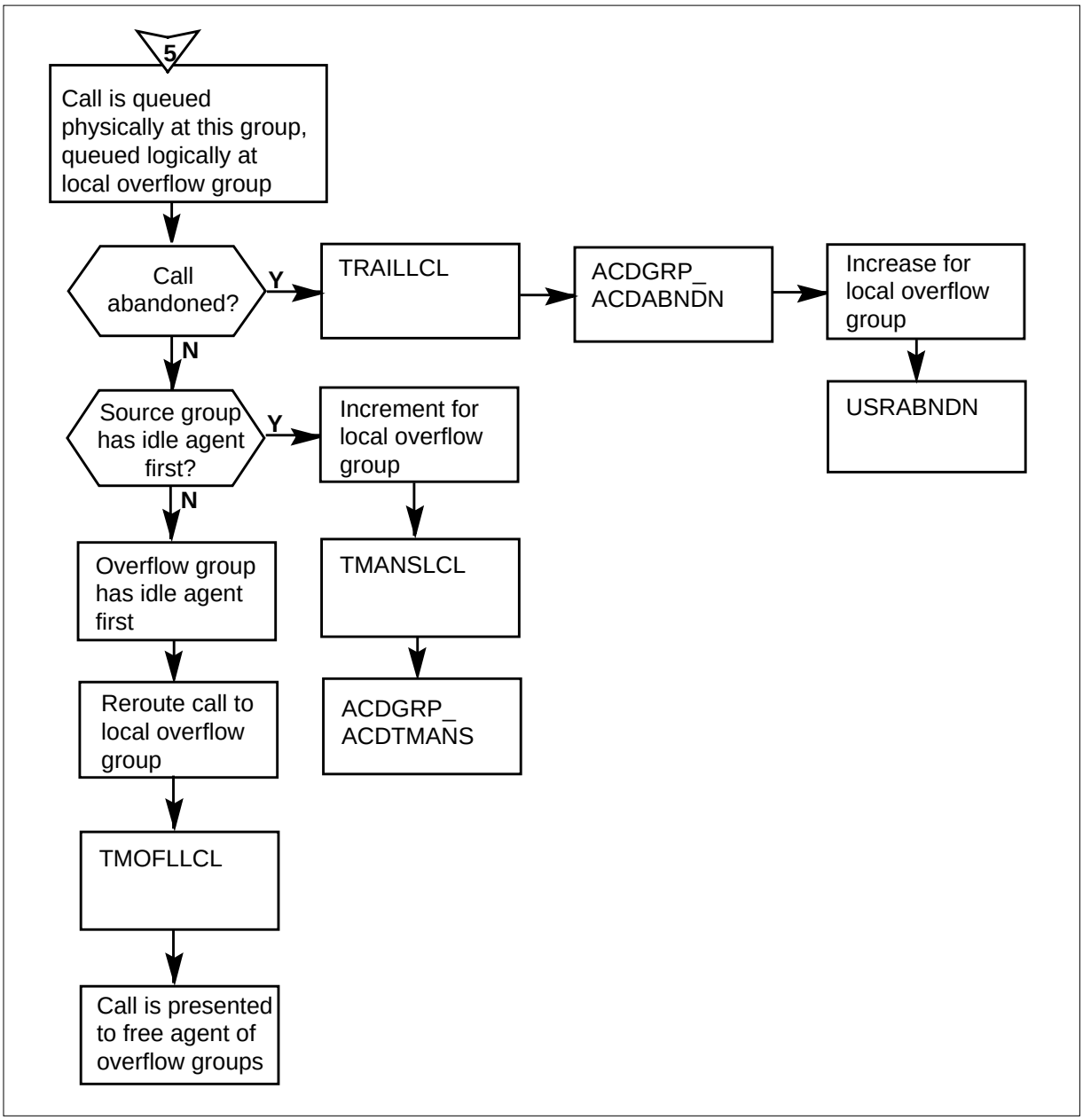
OM group NACDGRP1 (continued)

OM group NACDGRP1 registers (continued)



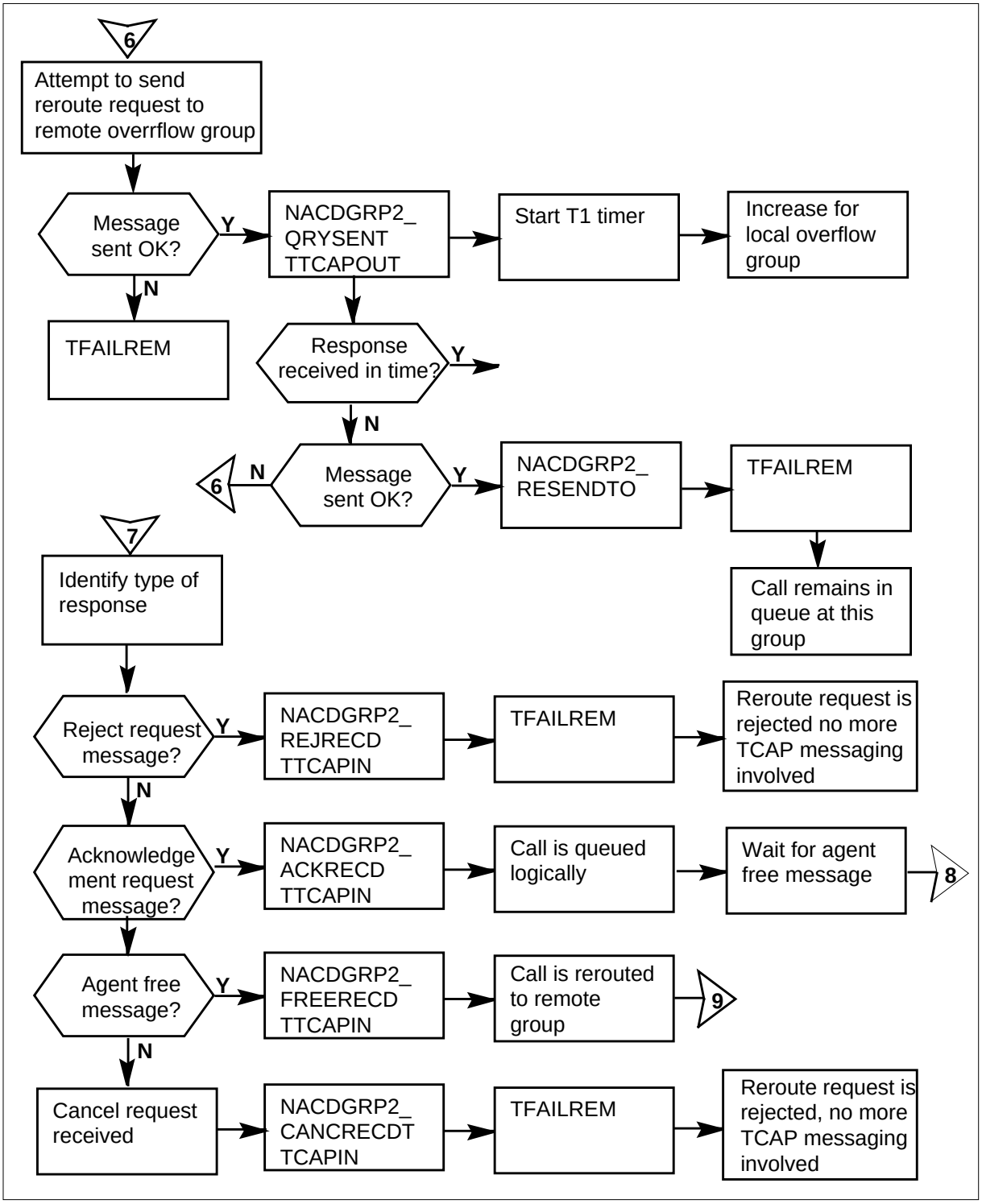
OM group NACDGRP1 (continued)

OM group NACDGRP1 registers (continued)

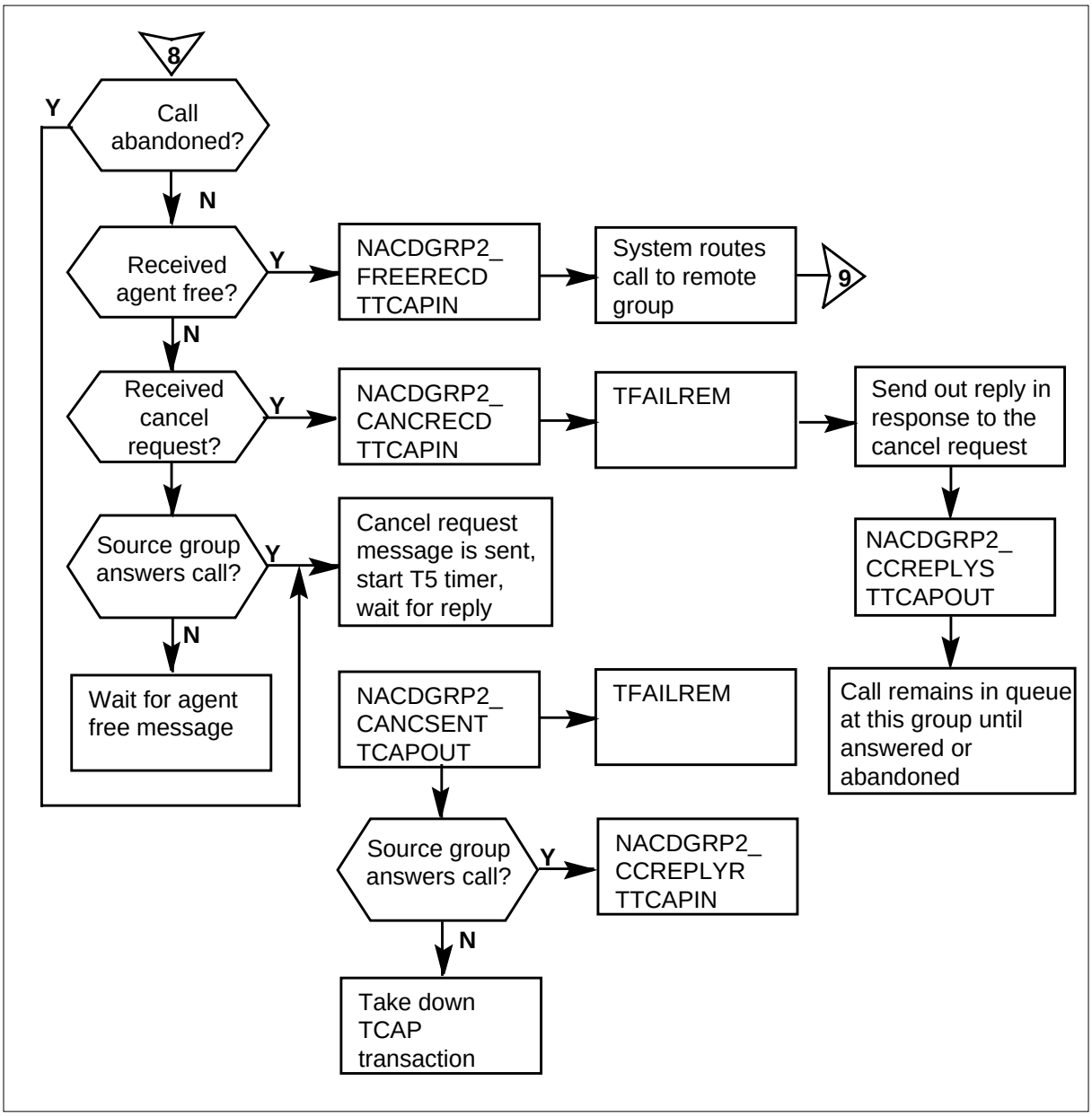


OM group NACDGRP1 (continued)

OM group NACDGRP1 registers (continued)

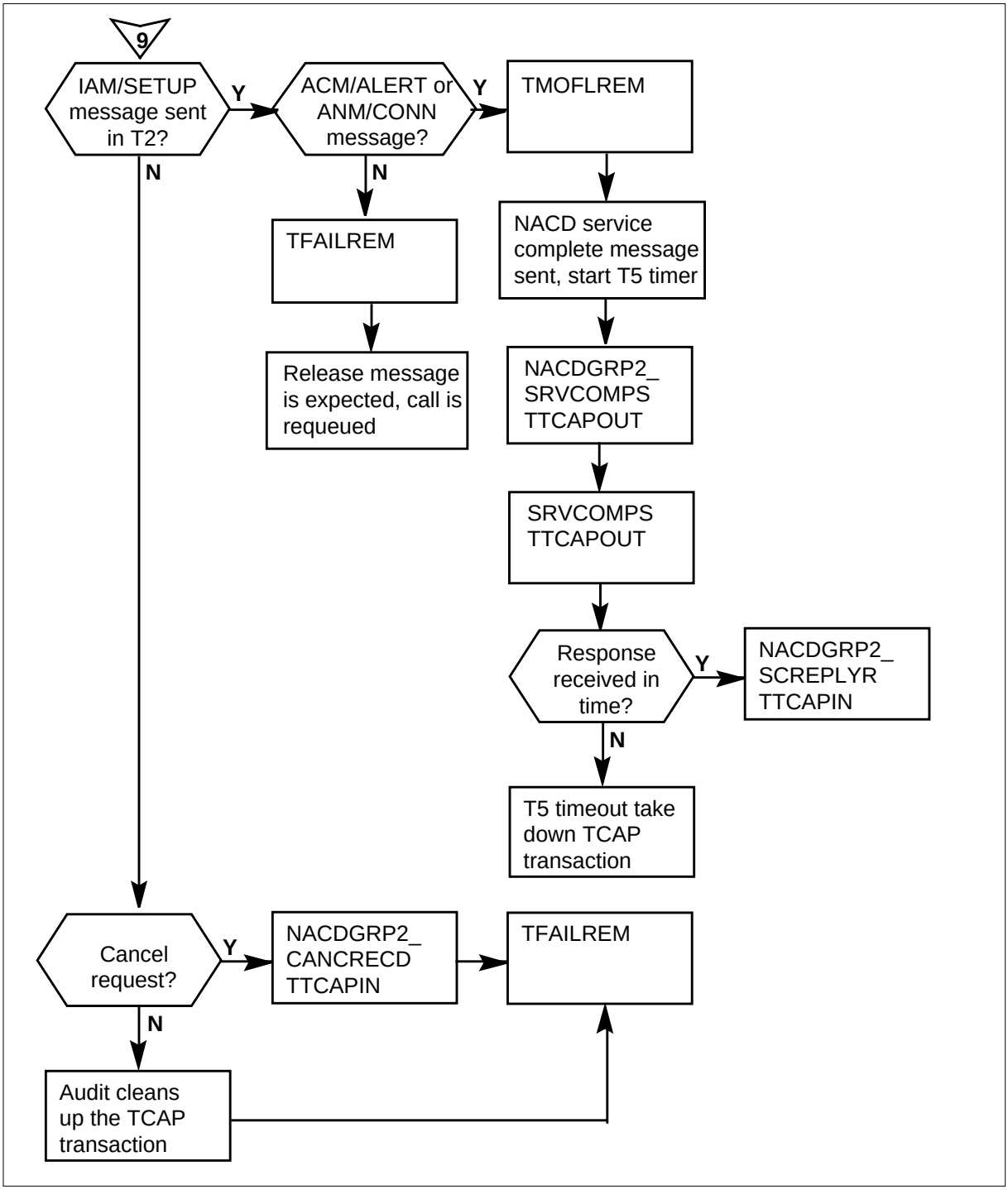


OM group NACDGRP1 registers (continued)



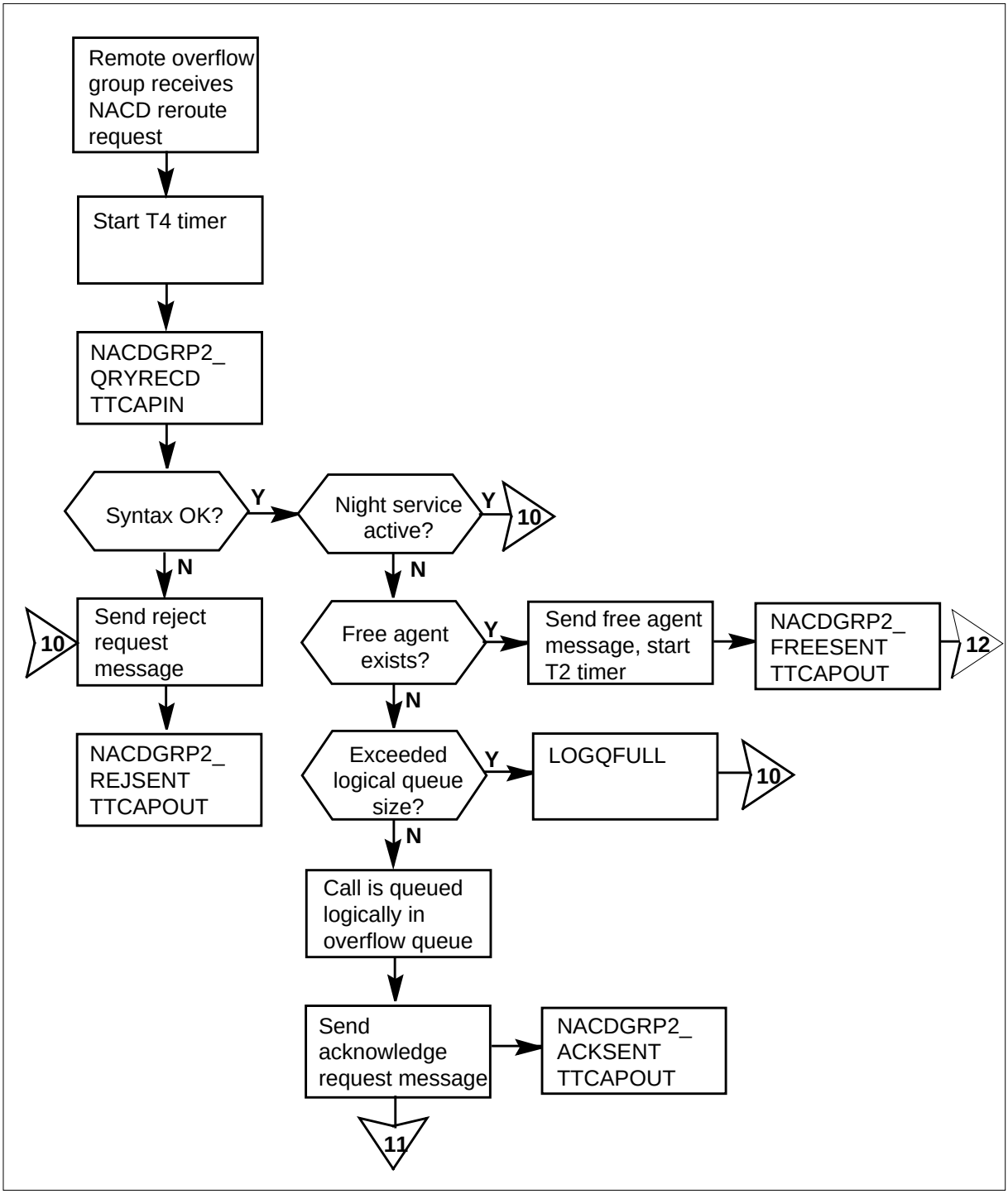
OM group NACDGRP1 (continued)

OM group NACDGRP1 registers (continued)



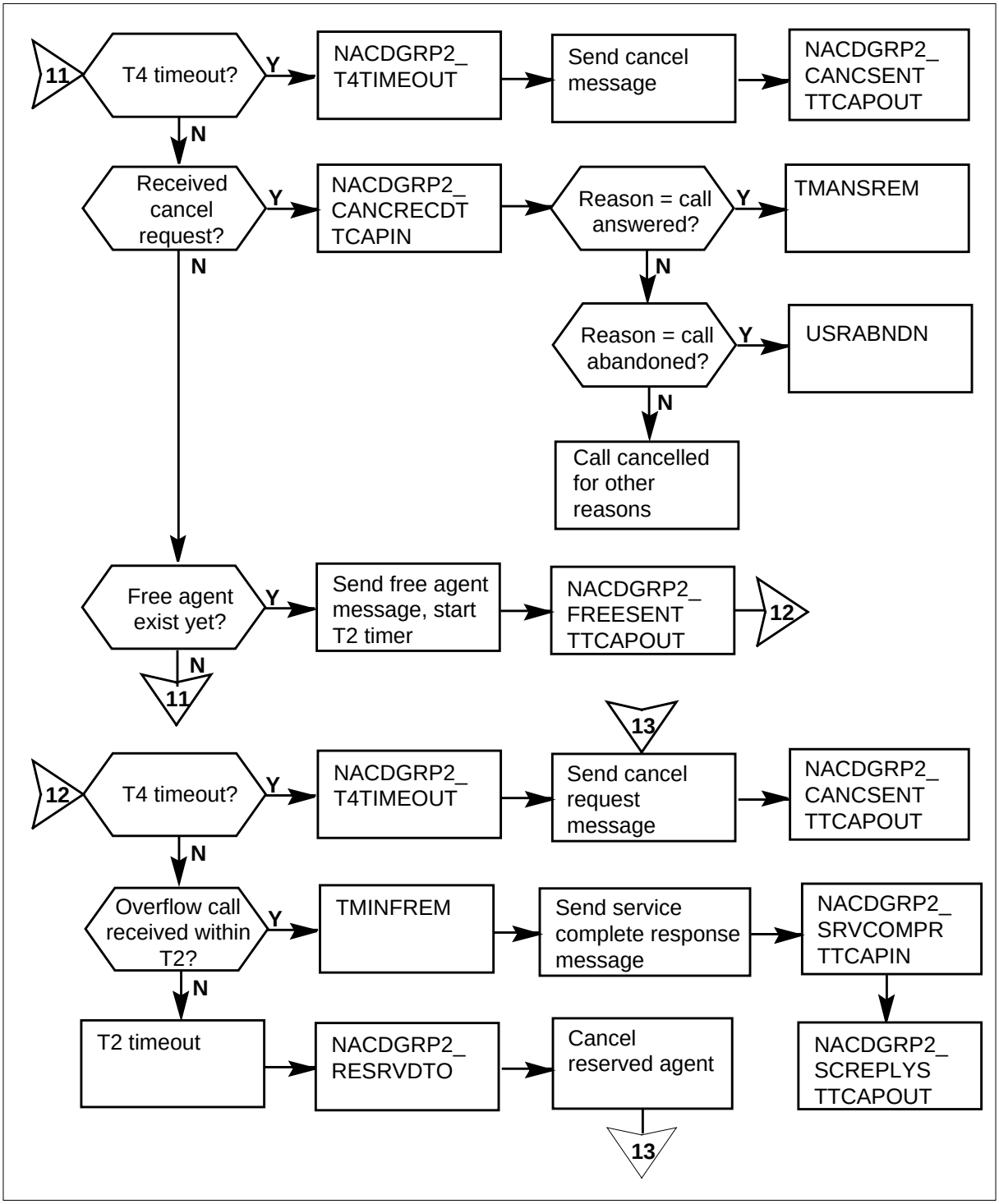
OM group NACDGRP1 (continued)

OM group NACDGRP1 registers: reroute request

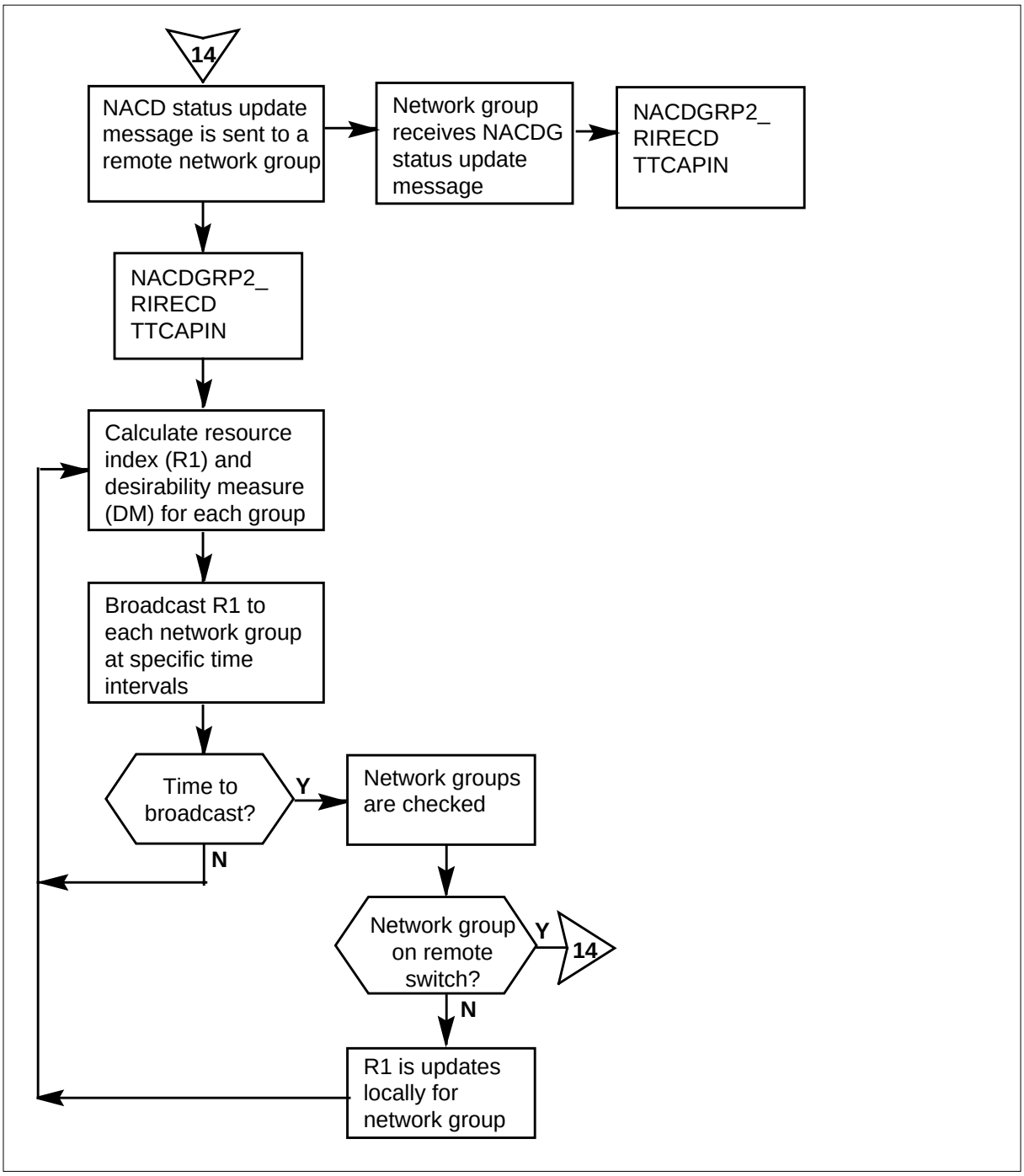


OM group NACDGRP1 (continued)

OM group NACDGRP1 registers: reroute request (continued)

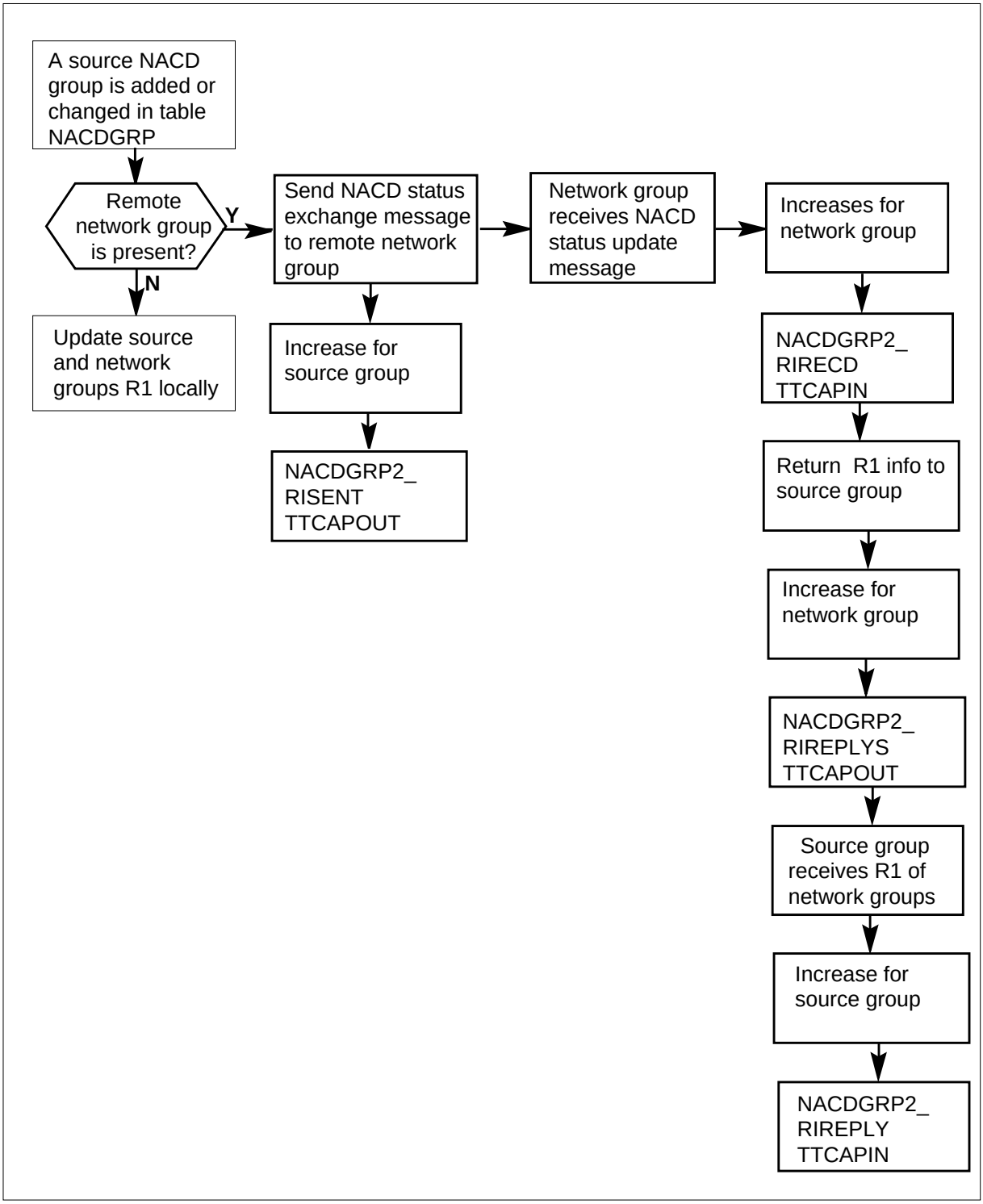


OM group NACDGRP1 registers: reroute request (continued)



OM group NACDGRP1 (continued)

OM group NACDGRP1 registers: adding a source NACD group



Register IMINFLCL

Immediate inflowed from a local group (IMINFLCL)

Register IMINFLCL increases when a call arrives at an NACD group because of the immediate overflow from a local NACD group.

Register IMINFLCL release history

Register IMINFLCL introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register IMINFQED

Immediate inflowed calls queued (IMINFQED)

Register IMINFQED increases when the system queues a call that arrived at this NACD group because of immediate overflow from a local or remote source group.

Register IMINFQED release history

Register IMINFQED introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register IMINFREM

Immediate inflowed from a remote group (IMINIFREM)

Register IMINFREM increases when a call arrives at an NACD group because of immediate overflow from a remote NACD group.

OM group NACDGRP1 (continued)

Register IMINFREM release history

The IMINFREM introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register IMMTMOFL

Immediate inflowed calls overflowed

Immediate inflowed calls overflowed (IMMTMOFL) increases each time a call arrives at this NACD group because of immediate overflow. The NACD group tries to overflow the call to a local or remote overflow group. The call queues for a period of time longer than the time delay overflow time.

Register IMMTMOFL release history

Register IMMTMOFL introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register IMOFLLCL

Immediate overflows to a local group (IMOFLLCL)

Register IMOFLLCL increases when an NACD group overflows an incoming call to a local overflow group because of exceeded queue or wait thresholds.

Register IMOFLLCL release history

Register IMOFLLCL introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register IMOFLREM

Immediate overflows to a remote group (IMOFLREM)

Register IMOFLREM increases when an attempt to overflow an incoming call to a remote overflow group occurs. The register increases when the system marks this attempt because of exceeded queue or wait thresholds.

Register IMOFLREM release history

Register IMOFLREM introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs,

Extension registers

There are no extension registers.

Register LOGQFULL

Logical queue is full (LOGQFULL)

Register LOGQFULL increases when a call fails to queue logically because the logical queue is full.

Register LOGQFULL release history

Register LOGQFULL introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group NACDGRP1 (continued)

Register LOGQLCL

Logically queued caused by request from local group (LOGQLCL)

Register LOGQLCL increases when a queued call is at this group. A call is logically queued while it remains queued at a local source NACD group.

Register LOGQLCL release history

Register LOGQLCL introduced in BCS34.

Associated registers

The ACDGRP_ACDTMINF increments each time a call is logically queued at this NACD group.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register NOOFLGRP

No overflow group (NOOFLGRP)

Register NOOFLGRP increases when the system cannot find a best overflow group to overflow:

- a new incoming call
- a queued call that waited over the time delay overflow time

Register NOOFLGRP release history

Register NOOFLGRP introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register PHYQLOGQ

Physically queued and also logically queued at a local group (PHYQLOGQ)

Register PHYQLOGQ increases when a call is physically queued at this group and logically queued at a local overflow group.

Register PHYQLOGQ release history

Register PHYQLOGQ introduced in BCS34.

Associated registers

The ACDGRP_ACDTMOFL increases each time a call is time overflowed from this NACD group to another NACD group.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers,

Register TFAILLCL

Time overflow to a local group fails (TFAILLCL)

Register TFAILLCL increases when an attempt to time overflow from this NACD group to a local overflow group fails. Register TFAILLCL increases for one of the following reasons:

- the overflow group is in Night Service or has controlled interflow (CIF) active
- all agents in the overflow group are in make set busy (MSB) mode
- the call cannot be queued logically because the logical queue exceeds the logical queue size or is set to zero
- the caller abandons the call
- the group of the call answers the call

Register TFAILLCL release history

Register TFAILLCL introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group NACDGRP1 (continued)

Register TFAILREM

Register Time overflow to a remote group fails (TFAILREM)

Register TFAILREM increases when an attempt to time overflow a call from this NACD group (source group) to a remote overflow group fails. This register TFAILREM increases when the attempt fails for one of the following reasons:

- this NACD group cannot send an NACD Reroute Request message
- no response was received in the TCAP T1 (NCAD resend timer) duration after this NACD group cannot resends an NACD Reroute Request message
- the overflow group rejects an NACD Reroute Request message, the overflow group or the source group cancels the message.

Register TFAILREM release history

Register TFAILREM introduced in BCS34.

Associated registers

Register NACDGRP2_CANCRECD increases when an NACD group receives an NACD Cancel Request message.

Register NACDGRP2_CANCSENT increases when an NACD group sends an NACD Cancel Request message to cancel an NACD Reroute Request message.

Register NACDGRP2_REJRECD increases when an NACD group receives an NACD Reject Request message.

Register NACDGRP2_QRYSENT increases when an NACD group sends out an NACD Reroute Request message.

Register TMOFLREM increases when the NACD time over flows a queued call because the call waited over time delay overflow time. The NACD time overflows the call to overwrite over flowgroup.

NACDGRP2_QRYSENT = TMOFLREM + TFAILREM

TFAILREM = NACDGRP2_CANCSENT + NACDGRP2_CANCRECD + NACDGRP2_REJRECD

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register TMANSLCL

Time overflow call answered by the local source group (TMANSLCL)

Register TMANSLCL increases when the local source NACD group answers a logically queued call.

Register TMANSLCL release history

Register TMANSLCL introduced in BCS34.

Associated registers

Register ACDGRP_ACDTMANS increases each time another NACD group answers a logically queued call at this NACD group.

Register ACDGRP_ACDTMOFL increases when this NACD group time overflows to another NACD group.

Register TMANSREM increases each time a remote source group answers a queued call logically at this NACD group.

ACDGRP_ACDTMANS = TMANSLCL + TMANSREM + ACDGRP_ACDTMOFL

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register TMANSREM

Time overflow call answered by the remote source group (TMANSREM)

Register TMANSREM increases when a remote source group answers a queued call logically at this NACD group. (Note that NACDGRP2_CANCRECD increases as well.)

Register TMANSREM release history

Register TMANSREM introduced in BCS34.

Associated registers

Register ACDGRP_ACDTMANS increases when another NACD group answers a logically overflowed call at this NACD group.

OM group NACDGRP1 (continued)

Register ACDGRP_ACDTMOFL increases when this NACD time overflows a call to another NACD group.

Register TMANSLCL increases when a local source group answers a call logically queued at this NACD group.

ACDGRP_ACDTMANS = TMANSLCL + TMANSREM + ACDGRP_ACDTMOFL

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register TMINFLCL

Time inflowed from a local group (TMINFLCL)

Register TMINFLCL increases when a call arrives at an NACD group because of time delay overflow from a local NACD group.

Register TMINFLCL release history

Register TMINFLCL introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register TMINFREM

Time inflowed from a remote group (TMINFREM)

Register TMINFREM increases when a call arrives at an NACD group. A call arrives at an NACD group because of a time delay overflow from a remote NACD group.

Register TMINFREM release history

Register TMINFREM introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register TMOFLLCL

Time overflow to a local group (TMOFLLCL)

Register TMOFLLCL increases when a queued call at this NACD group is time overflowed to a local overflow group. The register increases if the call overflows because the call waits in the queue over the time delay overflow time.

Register TMOFLLCL release history

Register TMOFLLCL introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register TMOFLREM

Time overflow to a remote group (TMOFLREM)

Register TMOFLREM increases when a queued call is time overflowed to a remote overflow group. The queued call is at the associated NACD group. A queued call is overflowed because the queued call waits in the call queue longer than the time delay overflow time.

Register TMOFLREM release history

The TMOFLREM introduced in BCS34.

Associated registers

Register NACDGRP2_QRYSENT increases each time an NACD Reroute Request message is sent out from an NACD group.

OM group NACDGRP1 (end)

Register TFAILREM increases for each failed attempt to time overflow a call from this NACD group (source group) to a remote overflow group.

NACDGRP2_QRYSENT = TMOFLREM + TFAILREM

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register USRABNDN

User abandons while the call is logically queued (USRABNDN)

Register USRABNDN increases when the caller (user) abandons a logically queued call at this group.

Register USRABNDN release history

Register USRABNDN introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group NACDGRP2

OM description

Networked automatic call distribution group 2 (NACDGRP2)

The OM group NACDGRP2 provides transaction capabilities application part (TCAP) message counts specific to Network Automatic Call Distribution (NACD) applications.

Release history

The OM group NACDGRP2 introduced in BCS34.

Registers

The OM group NACDGRP2 registers appear on the MAP terminal as follows:

TTCAPOUT	TTCAPOU2	TTCAPIN	TTCAPIN2
RISENT	RISENT2	RIRECD	RIRECD2
RIREPLYS	RIREPLYR	QRYSENT	QRYRECD
ACKSENT	ACKRECD	FREESENT	FREERECD
SRVCOMPS	SRVCOMPR	SCREPLYS	SCREPLYR
REJSENT	REJRECD	CANCSENT	CANCRECD
CCREPLYS	CCREPLYR	RESENDTO	RESRVDTO
T4TMEOUT			

Group structure

The OM group NACDGRP2 provides one tuple for each NACD group.

Key field:
NACD_OM_INDEX

Info field:
There is no info field.

Associated OM groups

ACDGRP, NACDGRP1

Associated functional groups

There are no associated functional groups.

OM group NACDGRP2 (continued)

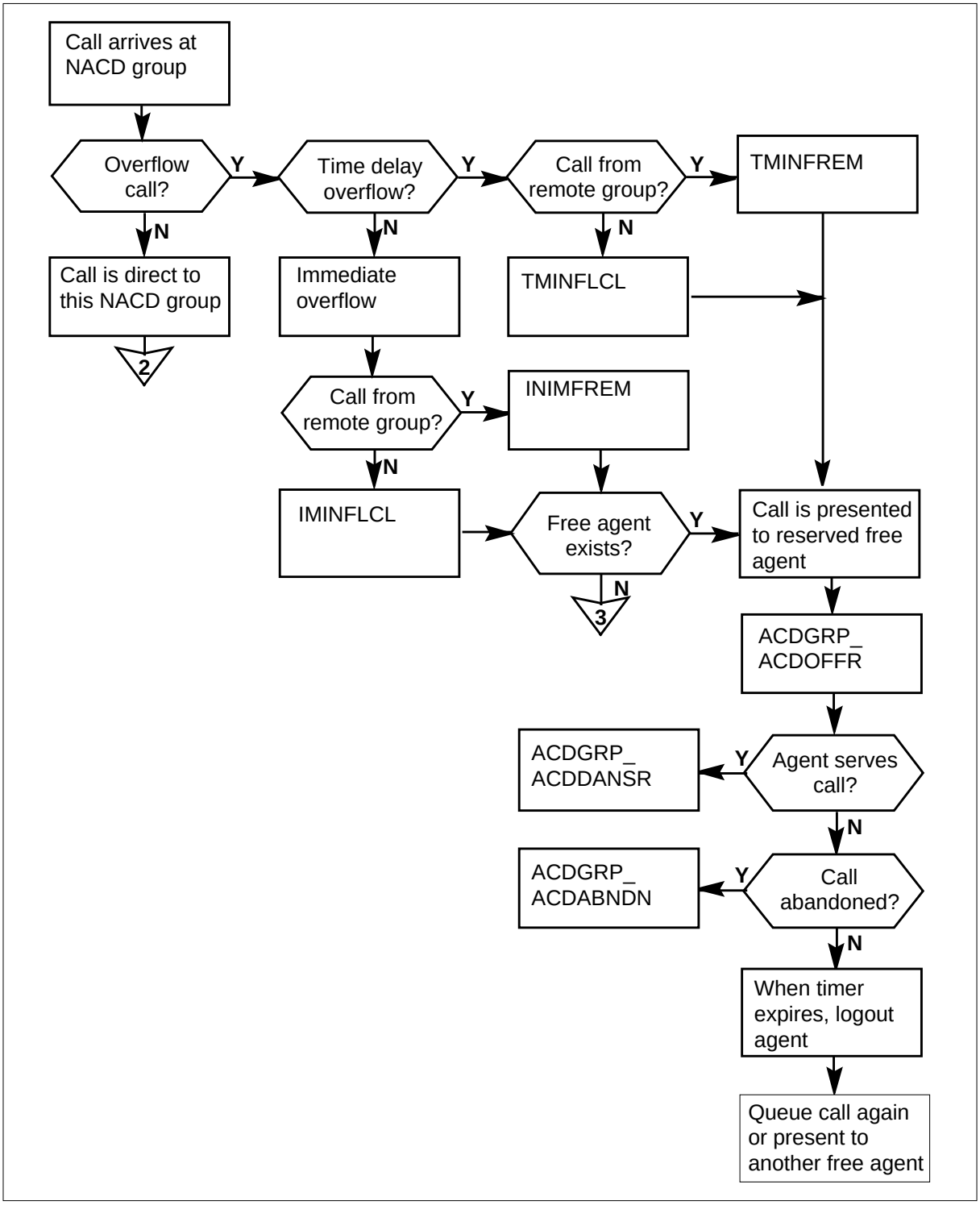
Associated functionality codes

The associated functionality code for OM group NACDGRP2 are in the following table.

Functionality	Code
ACD Supergroup	NTXE22AA02

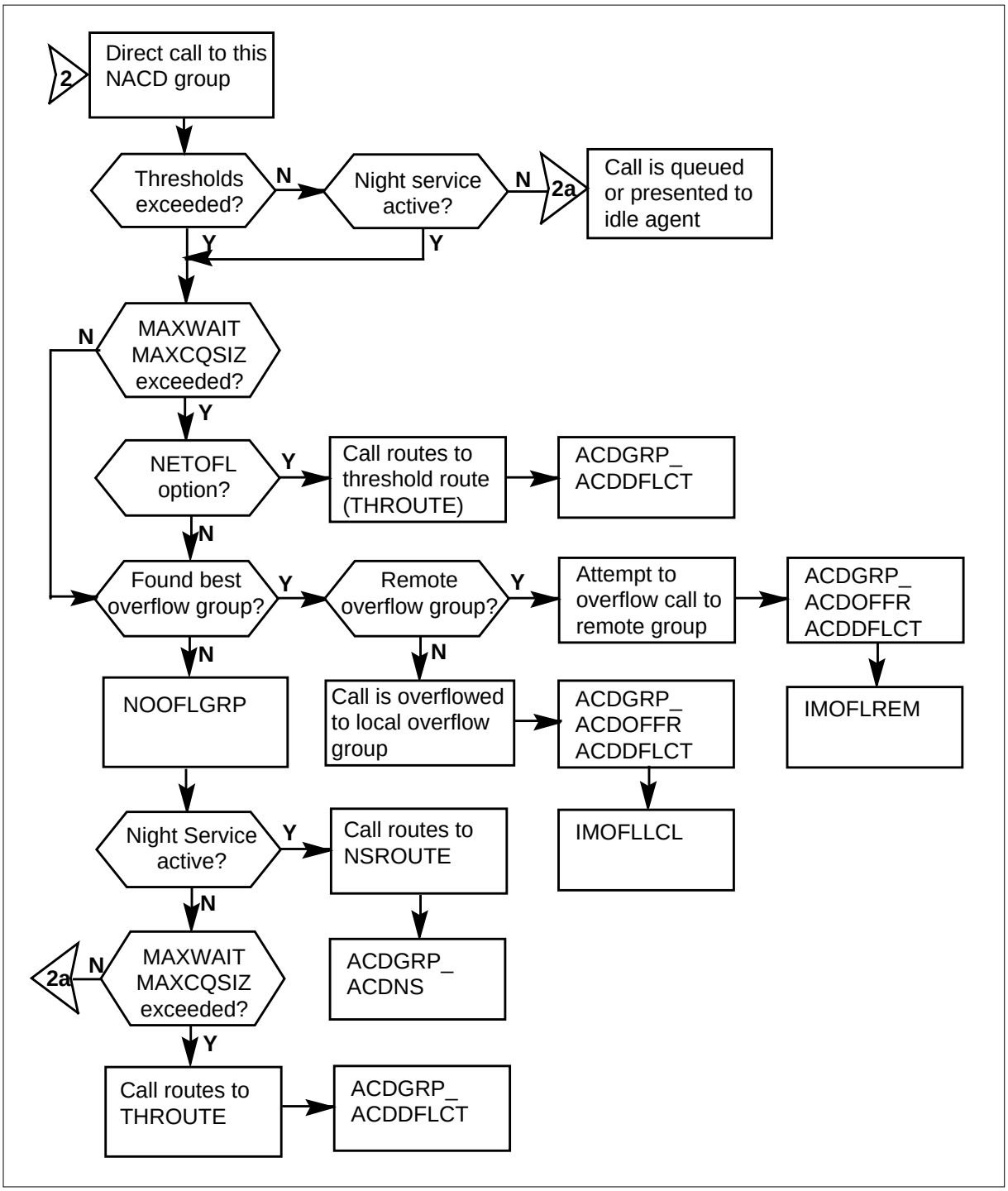
OM group NACDGRP2 (continued)

OM group NACDGRP2 registers

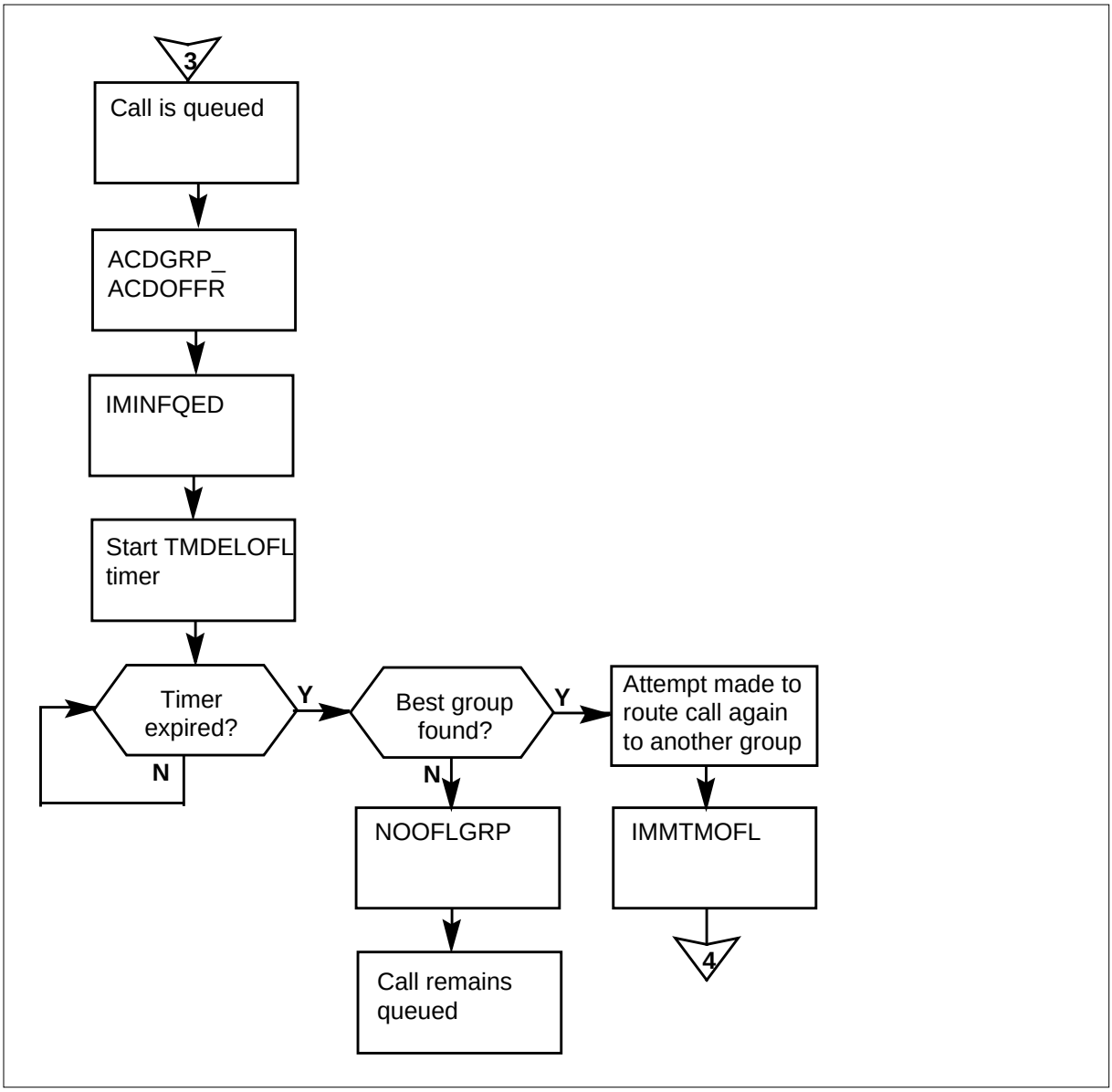


OM group NACDGRP2 (continued)

OM group NACDGRP2 registers (continued)

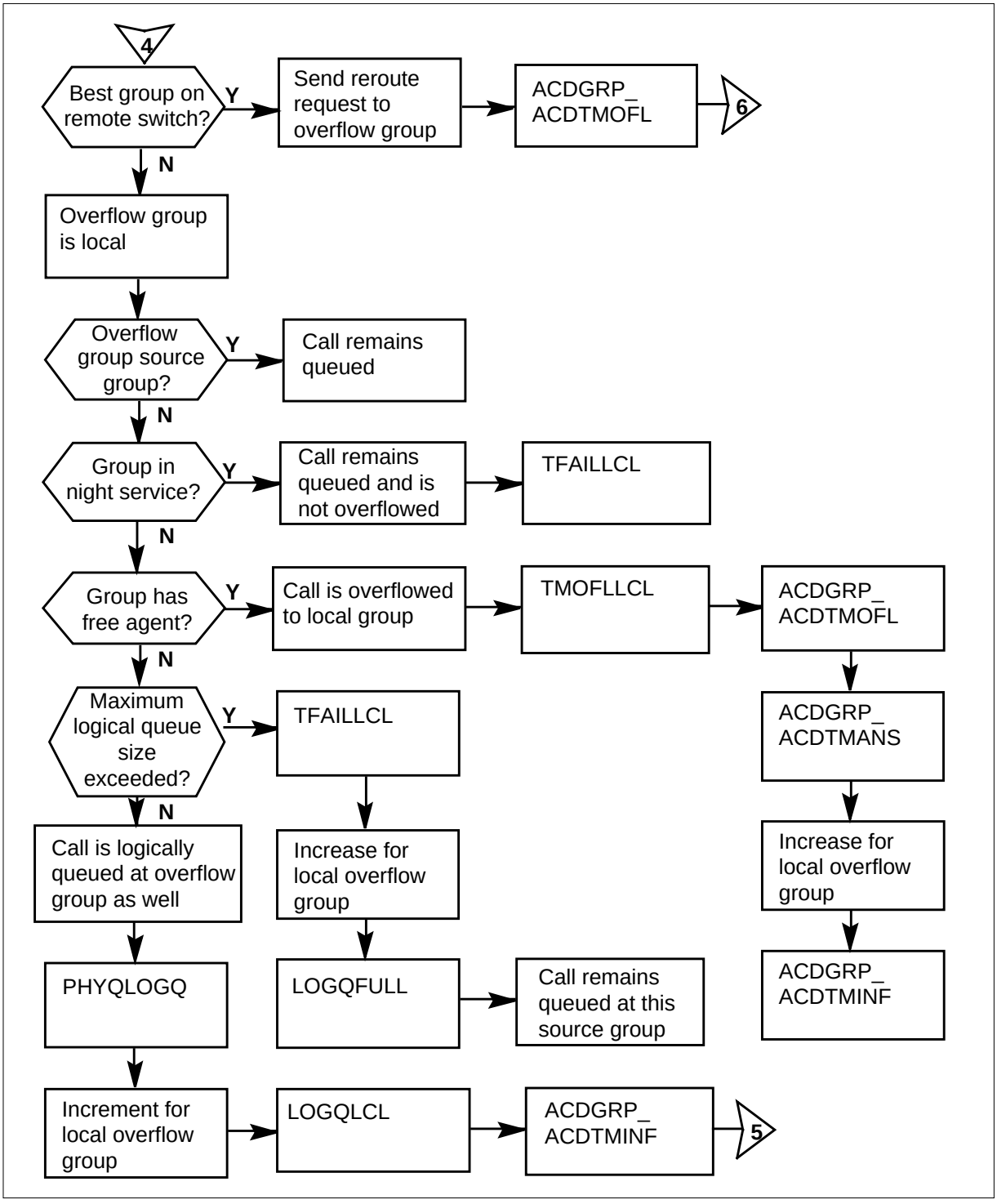


OM group NACDGRP2 registers (continued)



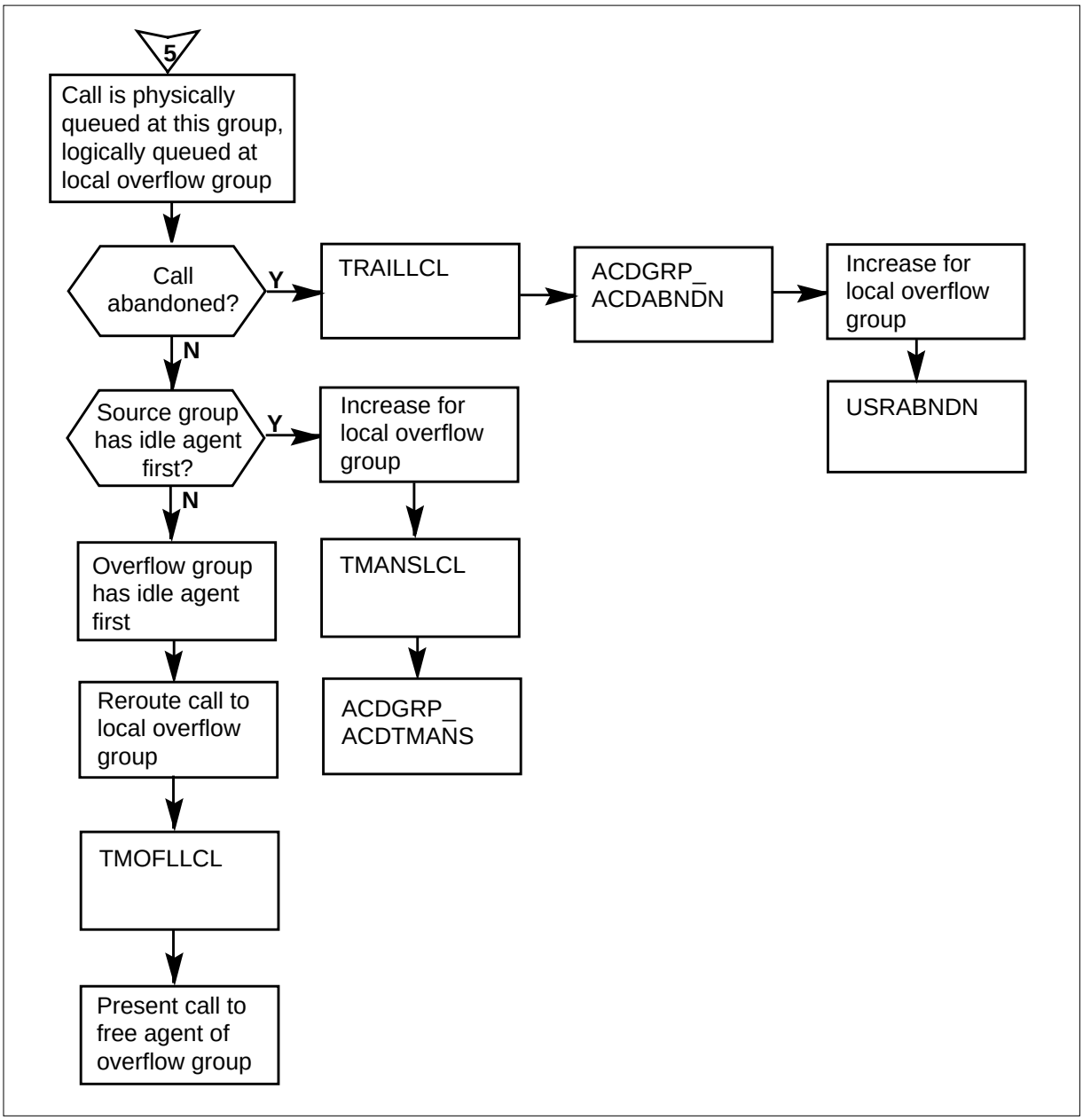
OM group NACDGRP2 (continued)

OM group NACDGRP2 registers (continued)



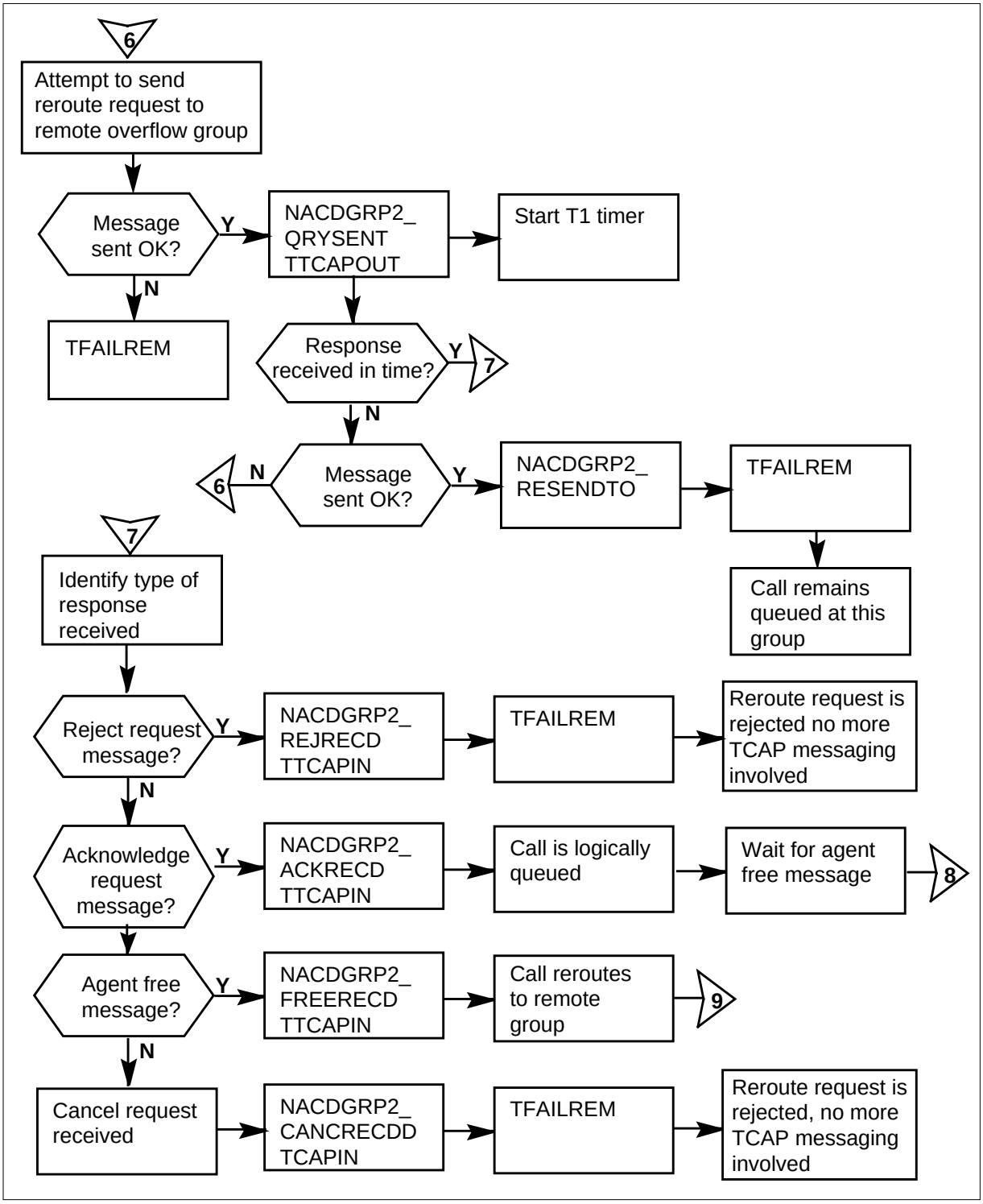
OM group NACDGRP2 (continued)

OM group NACDGRP2 registers (continued)

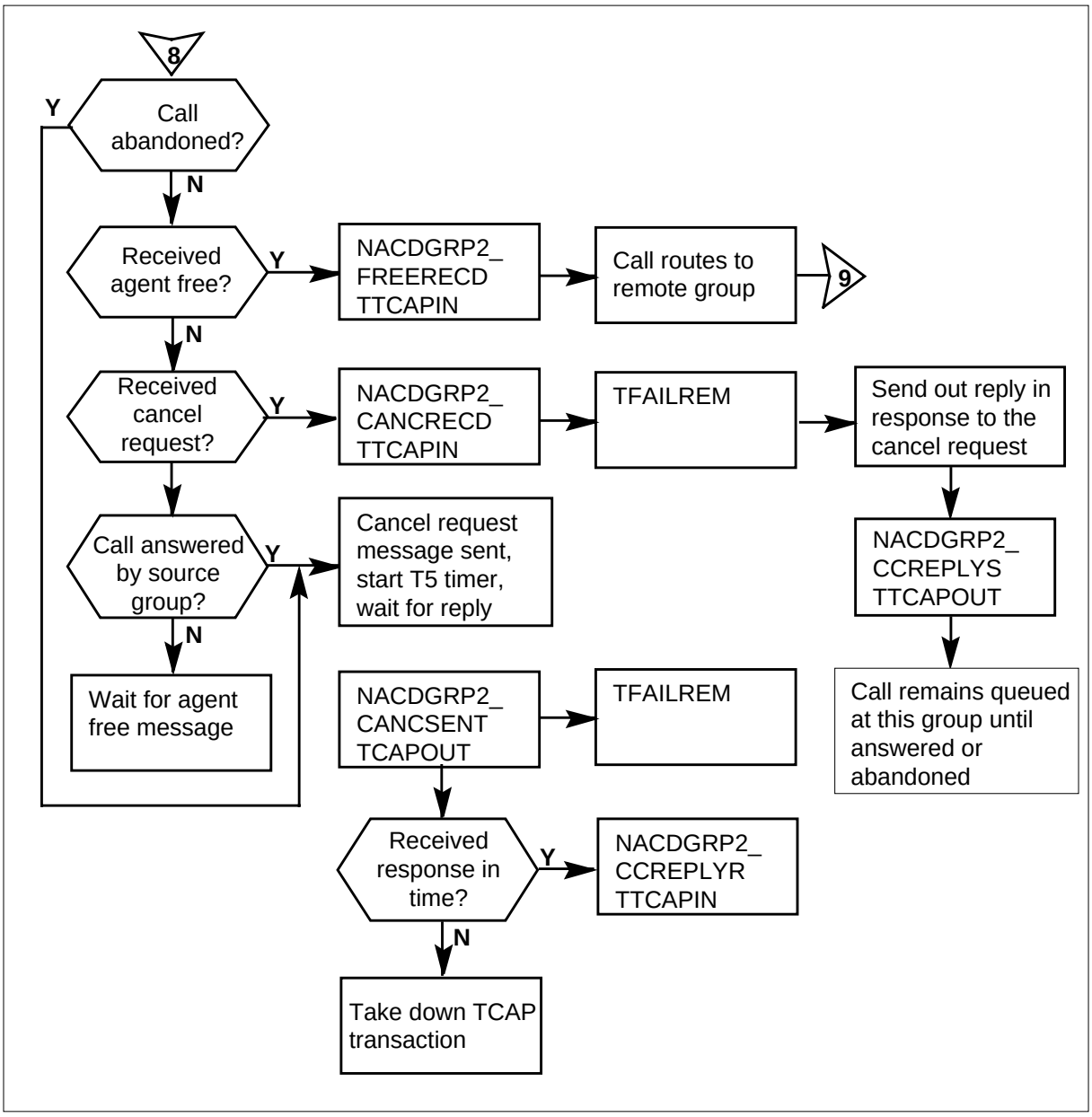


OM group NACDGRP2 (continued)

OM group NACDGRP2 registers (continued)

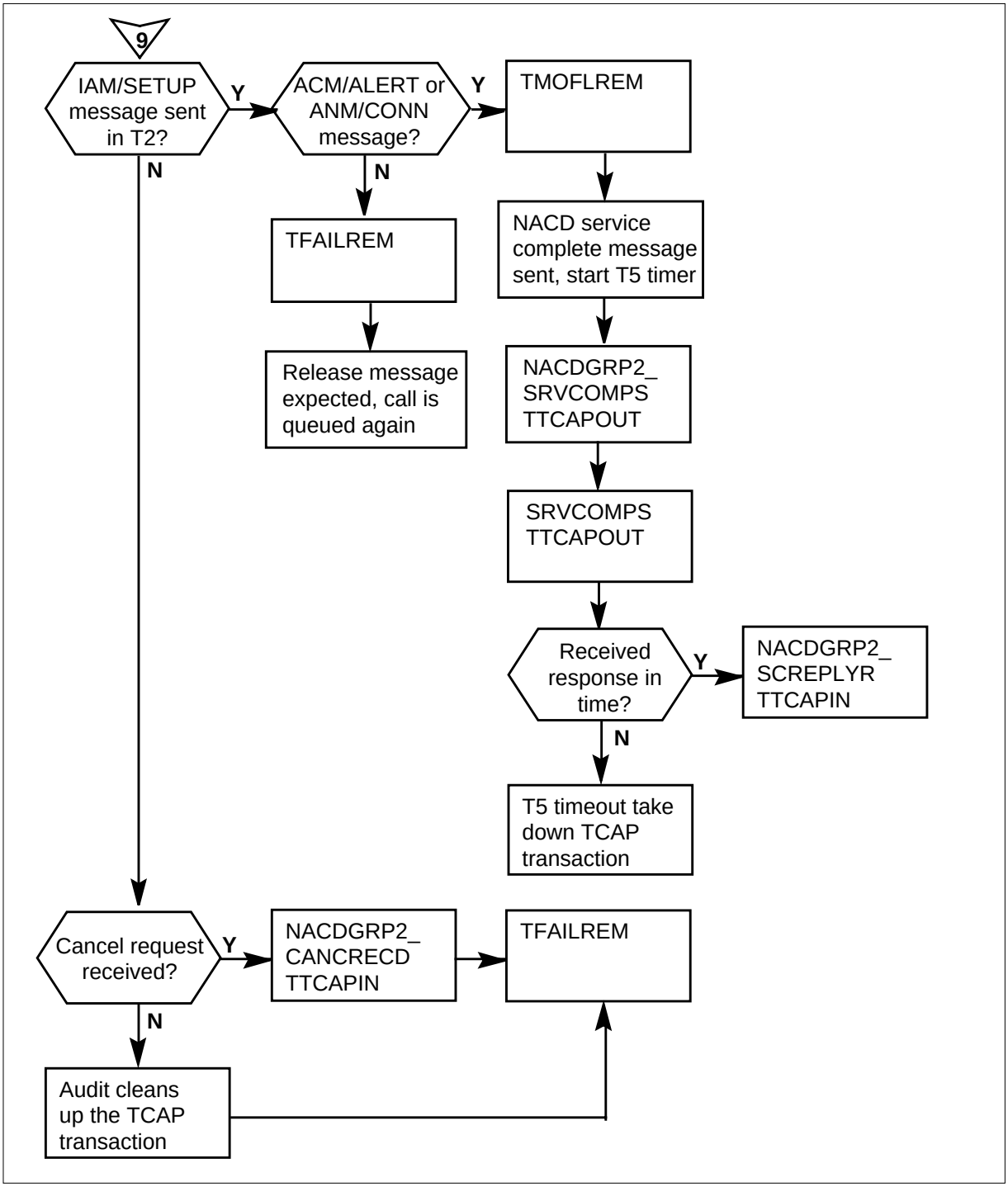


OM group NACDGRP2 registers (continued)



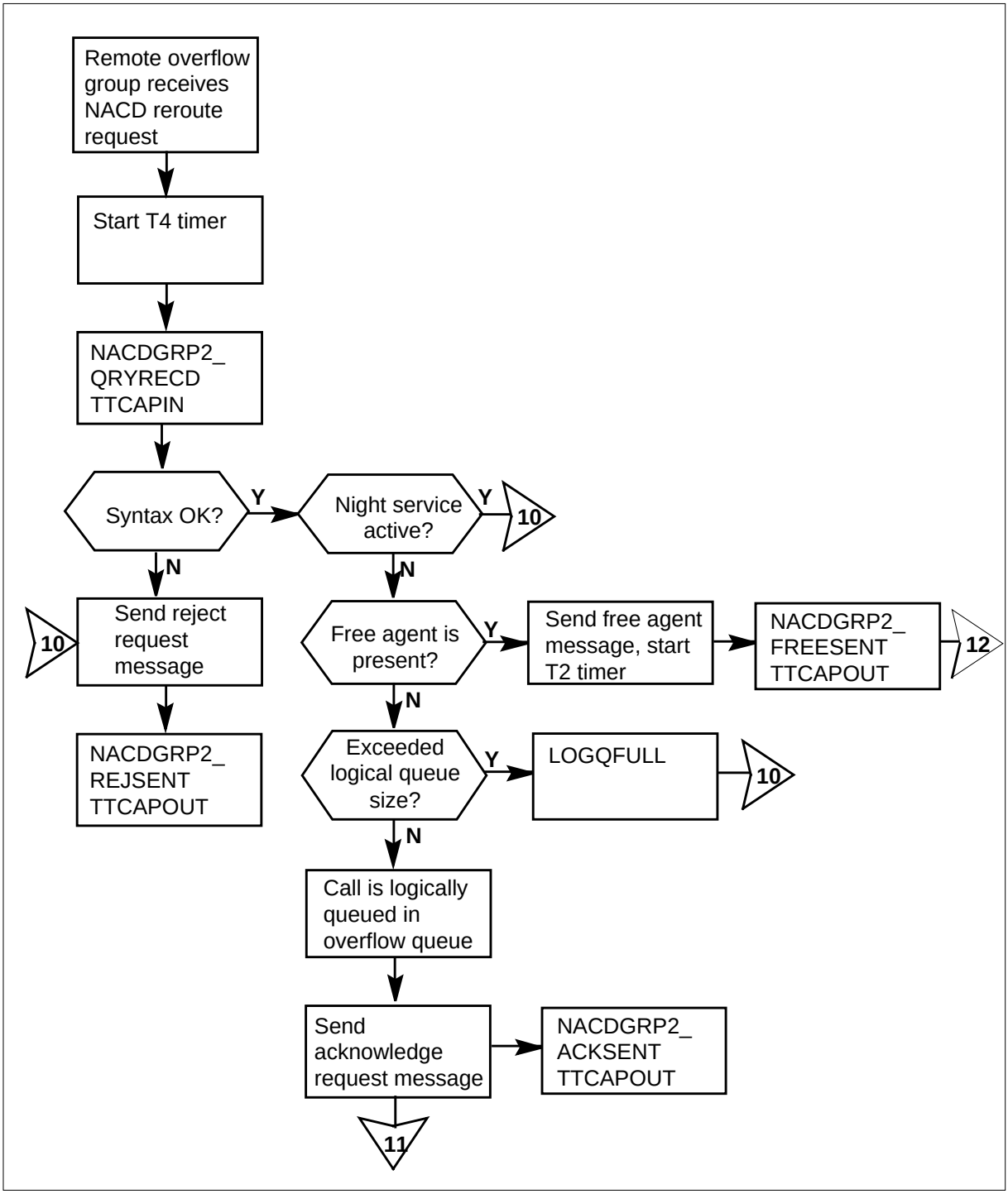
OM group NACDGRP2 (continued)

OM group NACDGRP2 registers (continued)



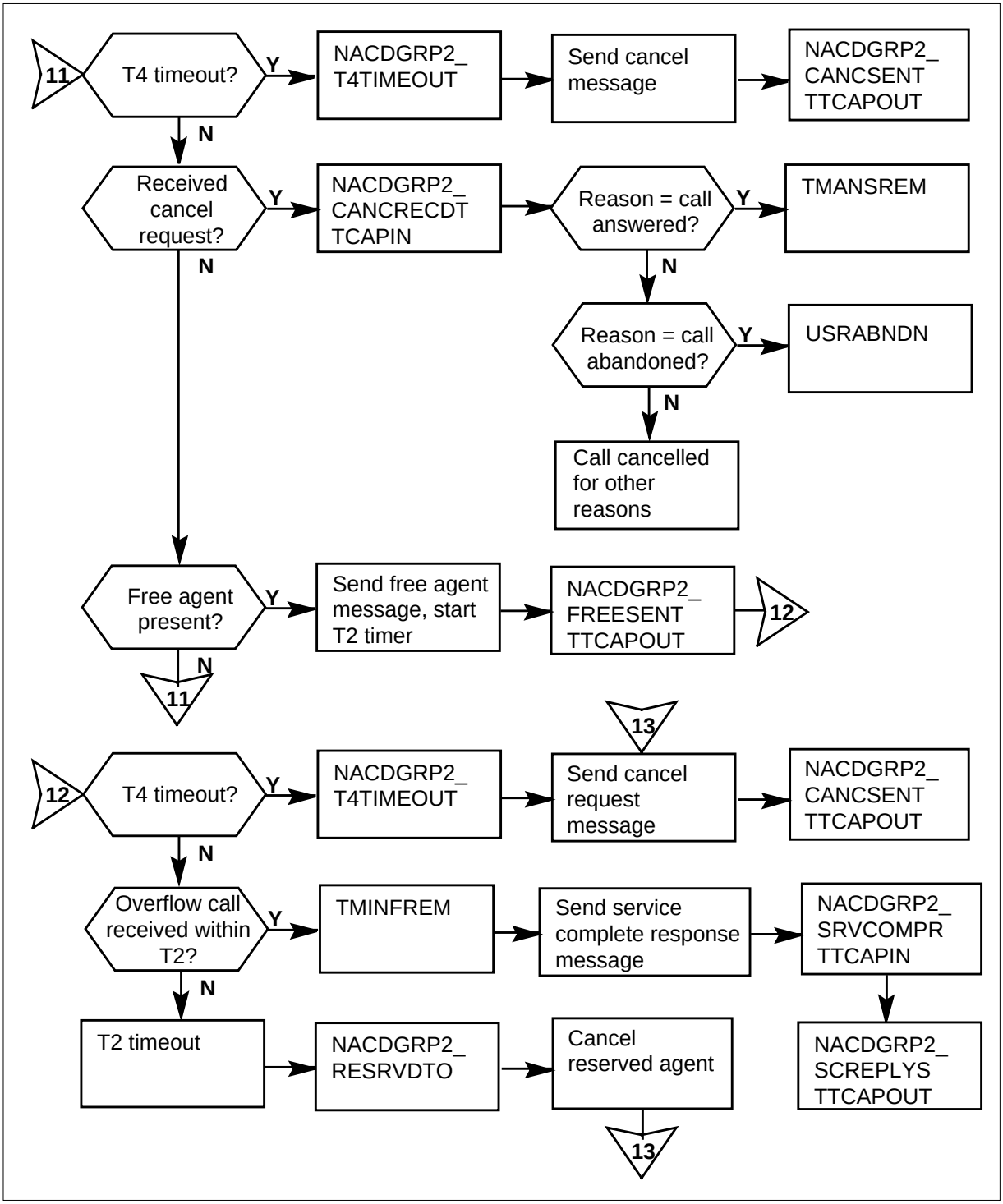
OM group NACDGRP2 (continued)

OM group NACDGRP2 registers: reroute request

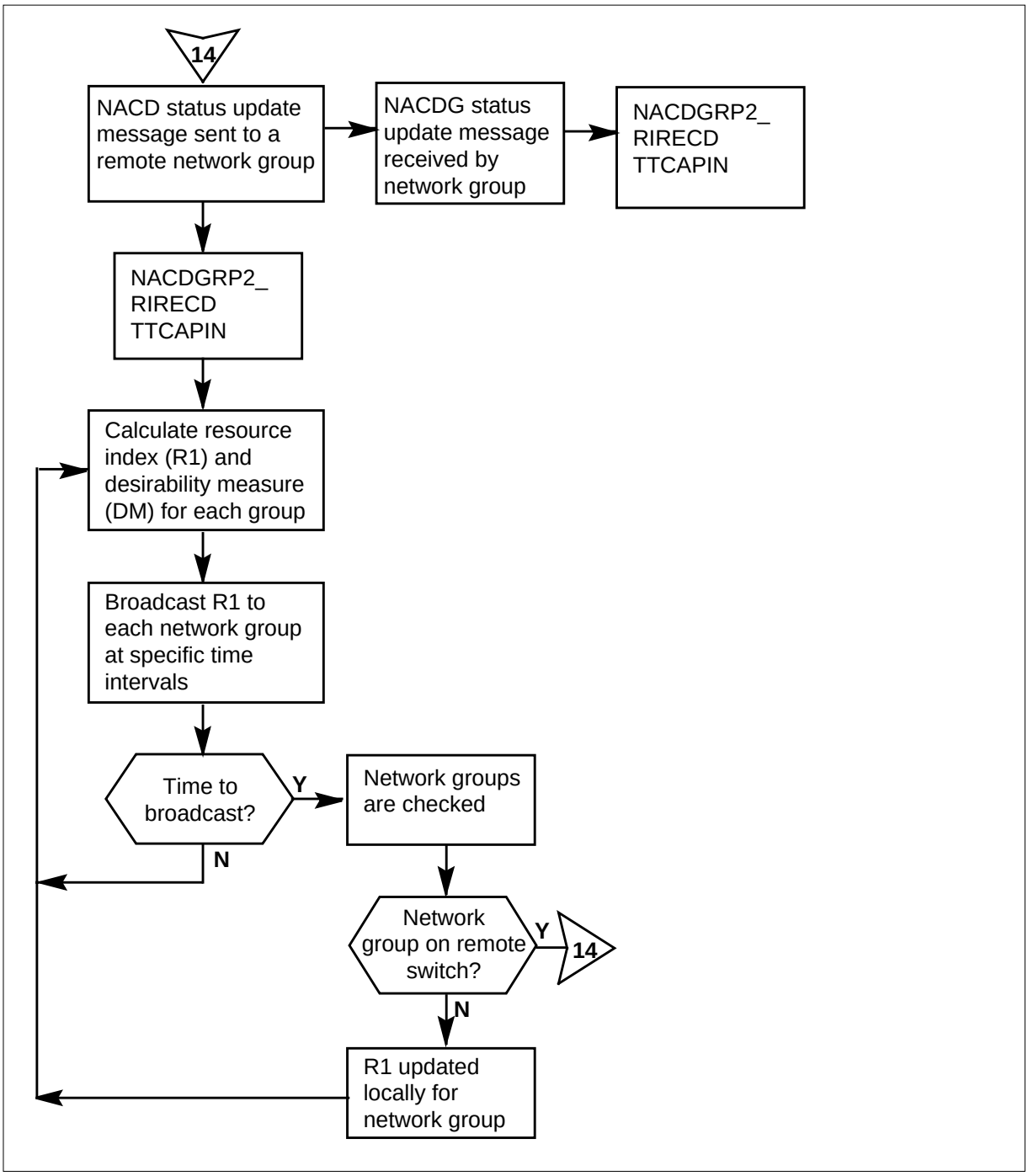


OM group NACDGRP2 (continued)

OM group NACDGRP2 registers: reroute request (continued)

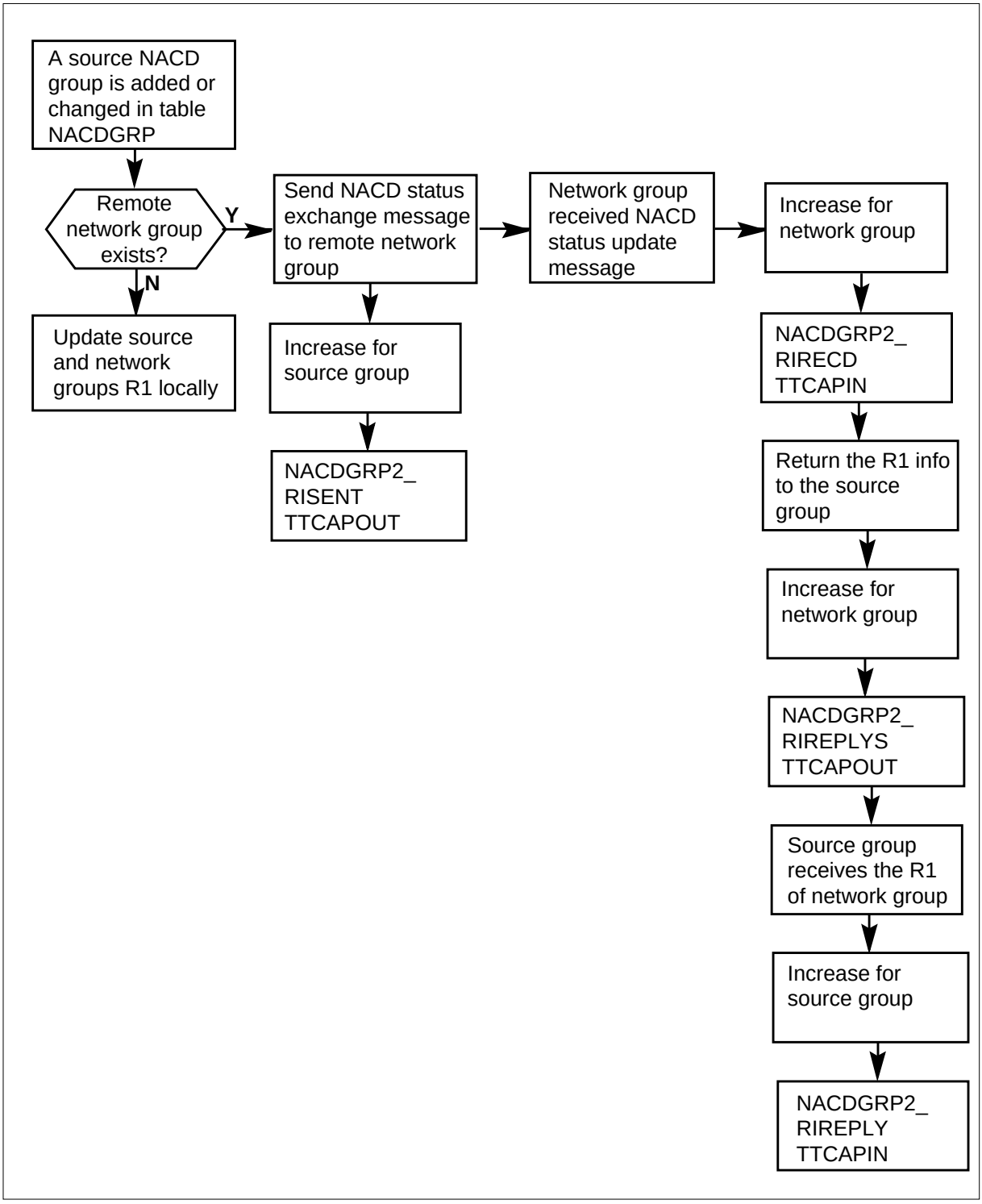


OM group NACDGRP2 registers: reroute request (continued)



OM group NACDGRP2 (continued)

OM group NACDGRP2 registers: adding a source NACD group



Register ACKRECD

Acknowledge received (ACKRECD)

Register ACKRECD increases when an NACD group receives an NACD Acknowledge Request message in response to an NACD Reroute Request message.

Register ACKRECD release history

Register ACKRECD introduced in BCS34.

Associated registers

Register ACDGRP_ACDTMOFL increases when this NACD time overflows to another NACD group.

Register NACDGRP1_PHYQLOGQ increases when a call is physically queued at this group, and logically queued at a local overflow group.

ACDGRP_ACDTMOFL = NACDGRP1_PHYQLOGQ + ACKRECD

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register ACKSENT

Acknowledge sent (ACKSENT)

Register ACKSENT increases when the NACD group sends an NACD Acknowledge Request message in response to an NACD Reroute Request message. The NACD Acknowledge Request message indicates that a call is logically queued at this NACD group.

Register ACKSENT release history

Register ACKSENT introduced in BCS34.

Associated registers

Register ACDGRP_ACDTMINF increases when a call is logically queued at this NACD group.

Register NACDGRP1_LOGQLCL increases when a call is logically queued at this group while the call remains queued at a local source NACD group.

OM group NACDGRP2 (continued)

ACDGRP_ACDTMINF = NACDGRP1_LOGQLCL + ACKSENT

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CANCRECD

Cancel message received (CANCRECD)

Register CANCRECD increases when an NACD group receives a Cancel Request message.

Register CANCRECD release history

Register CANCRECD introduced in BCS34.

Associated registers

Register CANCSENT increases when an NACD group sends a Cancel Request message to cancel an NACD Reroute Request message.

Register REJRECD increases when an NACD group receives a Reject Request message.

Register TFAILREM increases when an attempt to time overflow a call from this NACD source group to a remote overflow group fails.

TFAILREM = CANCSENT + CANCRECD + REJRECD

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CANCSENT

Cancel message sent (CANCSENT)

The CANCSENT increases when an NACD group sends a Cancel Request message to cancel an NACD Reroute Request message.

The source group cancels an NACD Reroute Request message when a caller abandons a time overflow. The source group also cancels an NACD Reroute

message when the original source group answers a time overflow. The overflow group cancels an NACD Reroute Request message when either the T4 duration timer or the T2 reservation timer expires.

Register CANCSENT release history

Register CANCSENT introduced in BCS34.

Associated registers

Register CANCRECD increases when an NACD group receives a Cancel Request message.

Register REJRECD increases when an NACD group receives a Reject Request message.

Register TFAILREM increases for each failed attempt to time overflow a call from this NACD source group to a remote overflow group.

TFAILREM = CANCSENT + CANCRECD + REJRECD

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CCREPLYR

Reply to cancel message received (CCREPLYR)

Register CCREPLYR increases when an NACD group receives a Cancel Request reply.

Register CCREPLYR release history

Register CCREPLYR introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group NACDGRP2 (continued)

Register CCREPLYS

Reply to cancel message sent (CCREPLYS)

Register CCREPLYS increases when an NACD group sends a Cancel Request reply.

Register CCREPLYS release history

Register CCREPLYS introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register FREERECD

Free agent message received (FREERECD)

Register FREERECD increases when this register receives an NACD Agent Free message.

Register FREERECD release history

Register FREERECD introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register FREESENT

Free agent message sent (FREESENT)

The FREESENT increases when an NACD group sends an NACD Free Agent message to indicate that the group reserved a free agent.

Register FREESENT release history

Register FREESENT introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register QRYRECD

Query received (QRYRECD)

The QRYRECD increases when an NACD group receives an NACD Reroute Request message.

Register QRYRECD release history

The QRYRECD introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register QRYSENT

Query sent (QRYSENT)

Register QRYSENT increases when an NACD group sends an NACD Reroute Request message.

Register QRYSENT release history

Register QRYSENT introduced in BCS34.

Associated registers

Register NACDGRP1_TFAILREM increases when a call time overflow from this NACD group (source group) to a remote overflow group fails.

OM group NACDGRP2 (continued)

The NACDGRP1_TMOFLREM increases when a queued call at this NACD group time overflows to a remote overflow group. The register increases when the queued call overflows because the call waited over the time delay overflow time.

QRYSENT = NACDGRP1_TMOFLREM + NACDGRP1_TFAILREM

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register REJRECD

Reject message received (REJRECD)

The REJRECD increases when an NACD group receives an NACD Reject Request message.

Register REJRECD release history

Register REJRECD introduced in BCS34.

Associated registers

Register CANCRECD increases when an NACD group receives an NACD Cancel Request message.

Register CANCSENT increases when an NACD group sends an NACD Cancel Request message to cancel an NACD Reroute Request message.

Register TFAILREM increases for each failed attempt to time overflow a call from this NACD source group to a remote overflow group.

TFAILREM = CANCSENT + CANCRECD + REJRECD

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register REJSENT

Rejection message sent (REJSENT)

The REJSENT increases when an NACD group sends an NACD Reject Request message to reject an NACD Reroute Request. An NACD group sends the reject message for one of the following reasons:

- the request message has protocol errors or contains invalid information
- the overflow group is in Night Service
- the logical queue of the overflow group is full
- no software resource is available

Register REJSENT release history

Register REJSENT introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register RESENDTO

Resend timer timeout (RESENDTO)

The RESENDTO increases when an NACD Reroute Request message is resent but the TCAP resend timer (T1) duration does not receive a response.

Register RESENDTO release history

Register RESENDTO introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register RESRVDTO

Reservation timer timeout (RESRVDTO)

OM group NACDGRP2 (continued)

Register RESRVDTO increases when a reservation timer (T2) expires. The T2 timer starts when a free agent reserves after an NACD Reroute Request message receives.

Register RESRVDTO release history

Register RESRVDTO introduced in BCS34.

Associated registers

There are no associated registers,

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register RIRECD

Resource index (RI) received (RIRECD)

The RIRECD increases when this register receives an NACD Status Update or Status Exchange message that contains an RI for an NACD group.

Register RIRECD release history

Register RIRECD introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

RIRECD2

Register RIREPLYR

Resource index (RI) reply received (RIREPLYR)

Register RIREPLYR increases when an NACD group receives an NACD Status Reply message that contains an RI for a NACD group.

Register RIREPLYR release history

Register RIREPLYR introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register RIREPLYS

Resource index (RI) reply sent (RIREPLYS)

Register RIREPLYS increases when this register sends an NACD Status Reply message to return the RI. The group that sent an NACD Status Exchange message receives the RI.

Register RIREPLYS release history

Register RIREPLYS introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register RISENT

Resource index (RI) sent (RISENT)

The RISENT increases when an NACD group sends an NACD Status Update or Status Exchange message. An NACD group sends a message to broadcast the RI to the remote network groups of the group.

Register RISENT release history

Register RISENT introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group NACDGRP2 (continued)

Extension registers

RISENT2

Register SCREPLYR

Service complete reply received (SCREPLYR)

The SCREPLYR increases when an NACD group receives an NACS Service Complete Reply message.

Register SCREPLYR release history

Register SCREPLYR introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

The are no associated logs.

Extension registers

There are no extension registers.

Register SCREPLYS

Service complete reply sent (SCREPLYS)

Register SCREPLYS increases when an NACD group sends an NACD Service Complete Reply message to acknowledge arrival of the NACD Service Complete message.

Register SCREPLYS release history

Register SCREPLYS introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register SRVCOMPR

Service complete message received (SRVCOMPR)

The SRVCOMPR increases when an NACD group receives an NACD Service Complete message.

Register SRVCOMPR release history

Register SRVCOMPR introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register SRVCOMPS

Service complete message sent (SRVCOMPS)

The SRVCOMPS increases when an NACD group sends an NACD Service Complete message for the following reasons:

- to show that a call is time-overflowed to a remote group
- to show that a TCAP transaction can be closed

Register SRVCOMPS release history

Register SRVCOMPS introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register T4TMEOUT

Total TCAP outgoing messages (T4TMEOUT)

The T4TMEOUT increases when a TCAP T4 timer expires. The T4 timer starts when a call is logically queued or a free agent is reserved. The T4 timer starts when the switch receives an NACD Reroute Request message.

OM group NACDGRP2 (continued)

Register T4TMEOUT release history

Register T4TMEOUT introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register TTCAPIN

Total TCAP incoming messages (TTCAPIN)

Register TTCAPIN increases when an NACD group receives an NACD TCAP message. The TTCAPIN records the number of incoming TCAP messages an NACD group receives.

Register TTCAPIN release history

Register TTCAPIN introduced in BCS34.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

TTCAPIN2

Register TTCAPOUT

Total TCAP outgoing messages (TTCAPOUT)

Register TTCAPOUT increases when an NACD group sends an NACD TCAP message. Register TTCAPOUT records the number of outgoing TCAP messages that originate from an NACD group.

Register TTCAPOUT release history

Register TTCAPOUT introduced in BCS34.

Associated registers

There are no associated registers.

OM group NACDGRP2 (end)

Associated logs

There are no associated logs.

Extension register

TTCAPOU2

OM group NARUSAGE

OM description

Network access registers usage (NARUSAGE)

The OM group NARUSAGE provides information on the use of network access registers (NAR). This OM group NARUSAGE counts attempts to use NARs and counts blocked NAR attempts. This OM group also provides a traffic use count for each NAR.

The NAR feature provides a more efficient method for “throttling" calls. This method involves regulating the ability of a Meridian Digital Centrex (MDC) call to terminate. The use of virtual facilities groups for simple call throttling requires retranslation, which increases DMS processing time for each call. The NAR feature does not require retranslation, which causes DMS processing time to improve.

The NAR feature is available at the customer group level, where default values for incoming and outgoing NAR groups are assigned. Each NAR group has a size that indicates the number of allowed simultaneous calls. The system checks the size of the group when a caller places a throttled call. If the NAR group receives the maximum number of simultaneous calls, the call does not continue.

The NAR feature also enables the assignment of incoming and outgoing NAR groups to network class of service (NCOS) groups, and translation selectors.

This feature enables the system to divert calls to an alternate route that provides throttling at the routing level. The system can divert calls to an alternate route where the NAR feature is active. The system can divert a call routed to a busy trunk group to an alternate route. The NAR on the alternate route can throttle the call.

The NAR cannot throttle all calls to and from the MDC customer group. The NAR can throttle calls that cannot terminate because the NAR does not have enough NAR resources. The path c call takes through translations and routing determines if the NAR can throttle the call.

Outgoing calls that the NAR can throttle use the following NET selector network types of tables IBNXLA and XLANAME:

- Direct Outward Dial (DOD) access
- Out WATS (OWT) access
- Electronic Switching Network (ESN) access
- Private (PVT) Network access

- General (GEN) Network access
- Multi-switched Business Group (MBG) access
- Location Code (LOC) for MBG access

Outgoing calls that the NAR can throttle use the following ROUTE selector types of tables IBNXLA and XLANAME:

- Location (L)
- Common Language Location Identifier (S)
- Table (T)

The new table NARDATA defines each NAR group. An NAR group may have 0 to 2047 units and provide 0 to 2047 simultaneous accesses. Each NAR group has an overflow route. This overflow route can be to another NAR group or to an MDC customer-defined treatment. The caller only goes to the treatment if the call is an outgoing call from the MDC customer group. The overflow NAR applies to both incoming calls to the customer group and outgoing calls from the customer group.

If the call needs to access an NAR group, the system checks the NAR group for available access. If an idle NAR unit is present, the call continues as normal. If NAR units are not present, the system checks the overflow route. If the overflow route shows an NAR name, the system checks the NAR group marked for available access.

If the overflow route shows a customer-defined treatment, the system routes the call to treatment. If the call is outgoing from the customer group, the overflow route uses the customer-defined treatment entered. If the call is incoming to the customer group, the system routes the call to customer group resource overflow (CGRO) treatment.

The system limit is five consecutive overflows when attempting access. The limit is five because an NAR group can identify another NAR group as an overflow route. When the system overflows the maximum number of times, the system routes the call to an office-wide treatment. The outgoing and incoming calls route to CGRO treatment.

The OM group NARUSAGE collects data on each NAR group defined in the office. Any access attempt on an NAR unit increases the NARTOTAL register. If all NAR part are not available, the NARBLCKD register also increases.

Release history

The OM group NARUSAGE introduced in BCS36.

OM group NARUSAGE (continued)

Registers

The OM group NARUSAGE registers appear on the MAP terminal as follows:

```
NARTOTAL        NARBLCKD        NARTRAF
```

Group structure

The OM group NARUSAGE provides 8191 tuples.

The number of tuples depends on the number of NARs defined in table NARDATA. The tuples are indexed with numbers 1 to 8191.

Key field:
NAR_NAME

The field NAR_NAME is assigned to the NAR as defined in table NARDATA. This field ranges from 1-16 characters.

Info field:
NAR_SIZE

This field NAR_SIZE is the number of units or the number of simultaneous accesses to the NAR.

Associated OM groups

There are no associated OM groups.

Associated functional groups

The following are associated functional group associates with OM group NARUSAGE:

- DMS-100 switches provisioned with Meridian Digital Centrex and the Network Access Registers (NARS) feature. The NARS is correct for

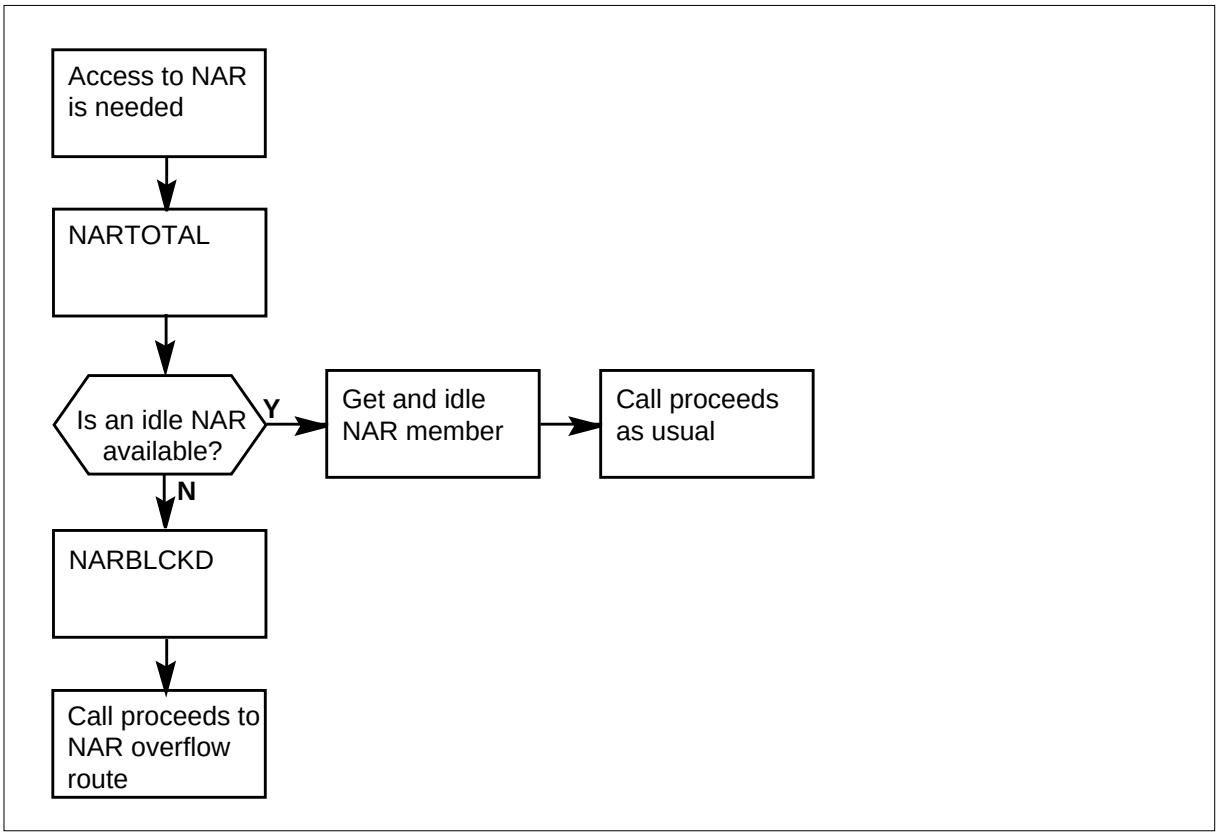
Meridian Digital Centrex (MDC), integrated services digital network (ISDN), and Residential Enhanced Services (RES) lines.

Associated functionality codes

The associated functionality code for the OM group NARUSAGE are in the following table.

Functionality	Code
Network Access Registers for DMS-100	NTXR88AA

OM group NARUSAGE registers



Register NARTOTAL

NAR total number of access attempts (NARTOTAL)

Register NARTOTAL increases when an attempt to access an NAR occurs.

OM group NARUSAGE (continued)

Register NARTOTAL release history

Register NARTOTAL introduced in BCS36.

Associated registers

NARBLCKD

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register NARBLCKD

NAR blocked attempts (NARBLCKD)

Regsiter NARBLCKD increases when the system attempts to access an NAR but units are not available.

Register NARBLCKD release history

Register NARBLCKD introduced in BCS36.

Associated registers

NARTOTAL

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register NARTRAF

NAR traffic usage count (NARTRAF)

Register NARTRAF shows the amount of traffic that uses each NAR. The register uses a 100 s scan rate to count NAR use.

Register NARTRAF release history

Register NARTRAF introduced in BCS36.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group NCMCPUST

OM description

Non-computing module node central processing unit status

The OM group NCMCPUST provides information about the CPU occupancy of the following non-computing module (CM) node types:

- application processing unit (APU)
- CCS7 link interface unit (LIU7)
- high-speed link interface unit (HLIU)
- high-speed link router (HSLR)
- CCS7 Server (SVR7)
- Ethernet interface unit (EIU)
- Ethernet link interface unit (ELIU)
- frame relay interface unit (FRIU)
- X.25/X.75 link interface unit (XLIU)
- voice processing unit (VPU)

The OM group NCMCPUST uses registers that record the following CPU occupancies:

- call processing class
- scheduler class
- scheduler SYSTEM6 and SYSTEM7 class
- maintenance class
- non-guaranteed background class
- idler class
- input/output interrupt class

The CPU occupancy values accumulate at the non-CM node. The CPU occupancy values update at 1 min intervals during the transfer period. The values are collected from the CPSTATUS data. The accumulated CPU occupancy values transfer to the CM at the end of the transfer period. The CM copies this information into the operational measurements (OM) registers.

Release history

The OM group NCMCPUST introduced in BCS31.

TL11

The non-computing module node types this OM group counts expanded to include HLIU and HSLR.

TL10

Feature SVR7 was added to the non-CM node types this register counts.

TL07

The non-computing module node types this OM group counts expanded to include the following node types:

- ELIU
- HLIU
- HSLR

TL02

The non-computing module node types this OM group counts expanded to include the following node types:

- LIU7
- APU
- VPU

STP02

The non-computing module node types this OM group counts expanded to include 8 Megabyte ASUs.

Registers

The OM group NCMCPUST registers appear on the MAP terminal as follows.

```
NCMCPOCC    NCMSCHED    NCMSYS      NCMMAINT
NCMBKG      NCMIDLE     NCMIO
```

Group structure

OM group NCMCPUST

OM group NCMCPUST (continued)

Key field:
none

Info field:
LIU_type nnn; where LIU_type is EIU, ELIU, FRIU, HLIU, HSLR, LIU7, SVR7, or XLIU; and nnn is between 0 and 750

Associated OM groups

There are no associated OM groups.

Associated functional groups

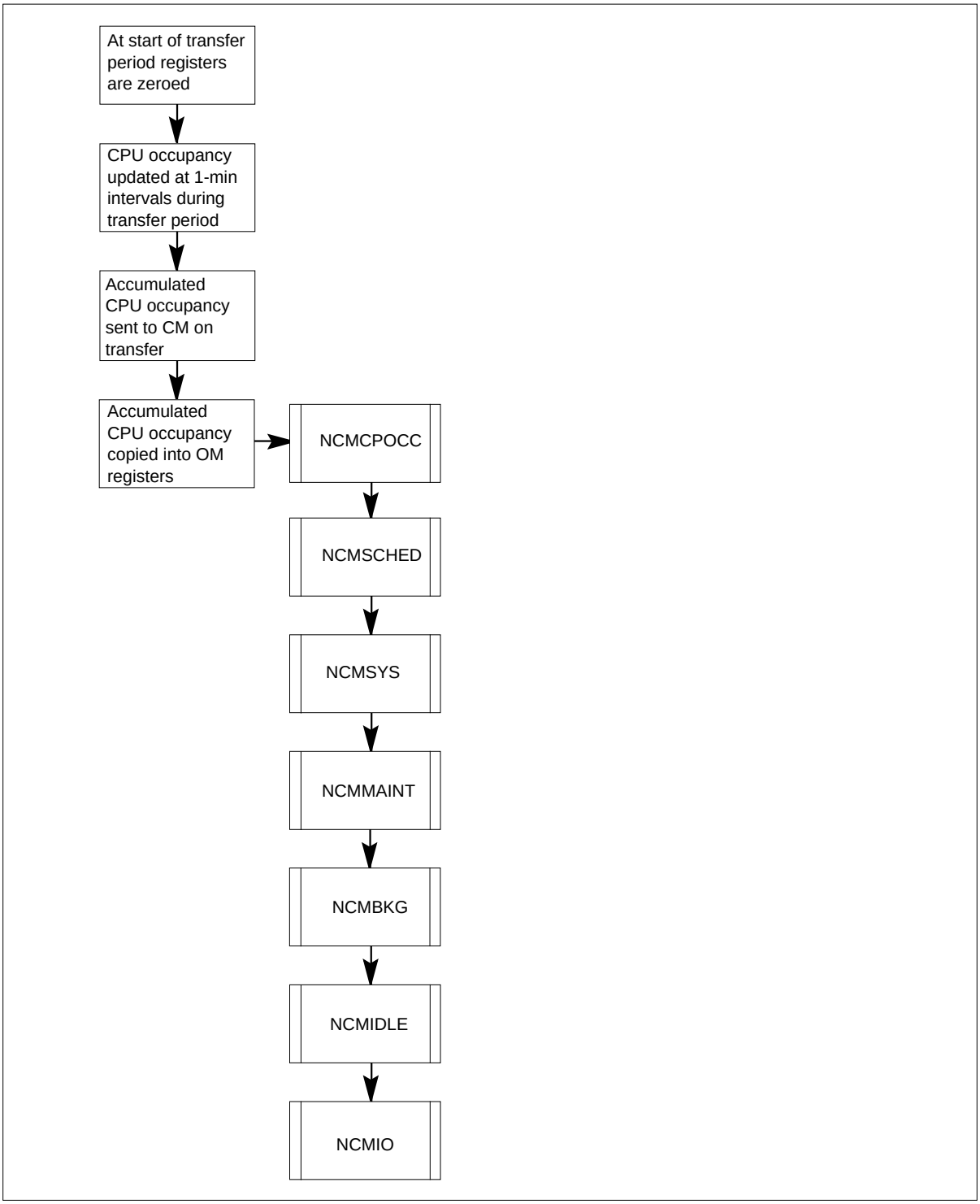
The functional group Ethernet Interface Unit is an associated functional group of OM group NCMCPUST.

Associated functionality codes

The associated functionality codes for OM group NCMCPUST appear in the following table.

Functionality	Code
Ethernet Interface Unit	NTXF05AA

OM group NCMCPUST registers



OM group NCMCPUST (continued)

Register NCMBKG

Non-CM node background class occupancy (NCMBKG)

Register NCMBKG records the CPU time its processes use and expresses the time as an integer. The processes are: the log system, audits, non-critical maintenance, OM accumulation and reporting.

The value NCMBKG records is the CPU background occupancy.

At the beginning of the transfer period, NCMBKG sets to zero. The CPU background occupancy values accumulate at the non-CM node and update at 1 min intervals during the transfer period. The values collects from the CPSTATUS data.

To obtain the average CPU background occupancy for 1 min, divide the holding register value by the transfer period (expressed in minutes).

Register NCMBKG release history

Register NCMBKG introduced in BCS31.

CSP02

The non-computing module node types that this OM group counts expanded to include the following node types: LIU7, APU, and VPU. The nodes types implement for each ASU node separately.

TL10

Feature SVR7 was added to the non-CM node types this register counts.

TL11

The non-computing module node types this OM group counts expanded to include HLIU and HSLR.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NCMCPOCC

Non-CM node call processing class occupancy (NCMCPOCC)

Register NCMCPOCC records the CPU time processing uses and expresses it as an integer.

At the beginning of the transfer period, NCMCPOCC sets to zero.

The CPU call processing occupancy values accumulate at the non-CM node. The values update at 1 min intervals during the transfer period. The system collects the values from the CPSTATUS data.

To obtain the average CPU call processing occupancy for 1 min, divide the holding register value by the transfer period (expressed in minutes).

Register NCMCPOCC release history

Register NCMCPOCC introduced in BCS31.

CSP02

The non-computing module node types the OM group NCMCPUST counts expanded to include the following node types: LIU7, APU, and VPU. The node types implement separately for each ASU node.

TL11

The non-computing module node types this OM group counts expanded to include HLIU and HSLR.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NCMIDLE

Non-CM node idler class occupancy (NCMIDLE)

Register NCMIDLE records the CPU time the idler processes use and memory checks and expresses the time as an integer. The value that NCMIDLE records is the CPU idler occupancy. The CPU idler occupancy consists of the time that the processes use in the SYSTEM0 scheduler class.

At the beginning of the transfer period, NCMIDLE sets to zero. The CPU idler occupancy values accumulate at the non-CM node. The CPU idler occupancy values update at 1-min intervals during the transfer period. The system collects the values from the CPSTATUS data.

To obtain the average CPU idler occupancy for 1 min, divide the holding register value by the transfer period (expressed in minutes).

OM group NCMCPUST (continued)

Register NCMIDLE release history

Register NCMIDLE introduced in BCS31.

CSP02

The non-computing module node types that OM group NCMCPUST counts expanded to include the following node types: LIU7, APU, and VPU. The node types implement separately for each ASU node.

TL11

The non-computing module node types this OM group counts expanded to include HLIU and HSLR.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NCMIO

Non-CM node input/output interrupt occupancy (NCMIO)

Register NCMIO records the CPU time that service input/output interrupts use and expresses the time as an integer. The value that NCMIO records is the CPU input/output interrupt occupancy.

At the beginning of the transfer period, NCMIO sets to zero. The CPU input/output interrupt occupancy values accumulate at the non-CM node. The values update at 1-min intervals during the transfer period. The system collects the values from the CPSTATUS data.

To obtain the average CPU input/output interrupt occupancy for 1 min, divide the holding register value by the transfer period.

Register NCMIO release history

Register NCMIO introduced in BCS31.

CSP02

The non-computing module node types that OM group NCMCPUST count expanded to include the following node types: LIU7, APU, and VPU. The node types implement separately for each ASU node.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NCMMAINT

Non-CM node maintenance class occupancy (NCMMAINT)

Register NCMMAINT records the CPU time that critical system maintenance processes use and expresses the time as an integer. The value that register NCMMAINT records is the CPU maintenance occupancy. The CPU maintenance occupancy consists of the time processes use in the maintenance scheduler class.

At the beginning of the transfer period, register NCMMAINT sets to zero. The CPU maintenance occupancy values accumulate at the non-CM node. The values update at 1 min intervals during the transfer period. The system collects the values from the CPSTATUS data.

To obtain the average CPU maintenance occupancy for 1 min, divide the holding register value by the transfer period.

Register NCMMAINT release history

Register NCMMAINT introduced in BCS31.

CSP02

The non-computing module node types counted by OM group NCMCPUST expanded to include the following node types: LIU7, APU, and VPU. The node types implement separately for each ASU node.

TL11

The non-computing module node types this OM group counts expanded to include HLIU and HSLR.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NCMSCHED

Non-CM node scheduler class occupancy (NCMSCHED)

Register NCMSCHED records the CPU time that the scheduler is in use and expresses the time as an integer.

OM group NCMCPUST (continued)

At the beginning of the transfer period, NCMSCHED sets to zero. The CPU scheduler occupancy values accumulate at the non-CM node. The values update at 1 min intervals during the transfer period. The system collects the values from the CPSTATUS data.

To obtain the average CPU scheduler occupancy for 1 min, divide the holding register value by the transfer period.

Register NCMSCHED release history

Register NCMSCHED introduced in BCS31.

CSP02

The non-computing module node types counted by OM group NCMCPUST expanded to include the following node types: LIU7, APU, and VPU. The values implement separately for each ASU node.

TL11

The non-computing module node types this OM group counts expanded to include HLIU and HSLR.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NCMSYS

Non-CM node system class occupancy (NCMSYS)

Register NCMSYS records the CPU time that system operations use and expresses the time as an integer. The value that NCMSYS records is the CPU system occupancy. The CPU system occupancy consists of the time processes in the SYSTEM6 and SYSTEM7 scheduler classes use.

At the beginning of the transfer period, NCMSYS sets to zero. The CPU system occupancy values accumulate at the non-CM node. The values update at 1-min intervals during the transfer period. The system collects the values from the CPSTATUS data.

To obtain the average CPU system occupancy for 1 min, divide the holding register value by the transfer period (expressed in minutes).

Register NCMSYS release history

Register NCMSYS introduced in BCS31.

CSP02

The non-computing module node types counted by OM group NCMCPUST expanded to include the following node types: LIU7, APU, and VPU. The node types implement separately for each ASU node.

TL11

The non-computing module node types this OM group counts expanded to include HLIU and HSLR.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group NDS0CARR

OM description

8-port 64-Kbps non-multiplexed digital voice/data carriers

The OM group NDS0CARR counts the errors, faults and use for each NDS0 physical carrier.

The system generates logs for error and fault conditions. These conditions indicate a change in the alarm status of the extended multiprocessor system (XMS)-based peripheral module (XPM).

Release history

The OM group NDS0CARR introduced in BCS33.

Registers

The OM group NDS0CARR registers appear on the MAP terminal as follows:

```
ERRLOS      ERRAIS      ERRCLTX     ERRCLRX
ERRBVTX     ERRBVRX     ERRSLTX     ERRSLRX
FLTLOS      FLTAIS      FLTCLTX     FLTCLRX
FLTBVTX     FLTBVRX     FLTSLTX     FLTSLRX
CARSBSY     CARMBSY     CARCSBSY
```

Group structure

The OM group NDS0CARR provides one tuple per office.

Key field:
There is no key field.

Info field:
NDS0OMINF

Enter the following fields in table CARRMTC: LOSRST, LOSOL, AISRST, AISOL, CLKLRST, CLKLOL, BPVLRST, BPVLOL, SLIPRST, and SLIPOL.

Associated OM groups

There are no associated OM groups.

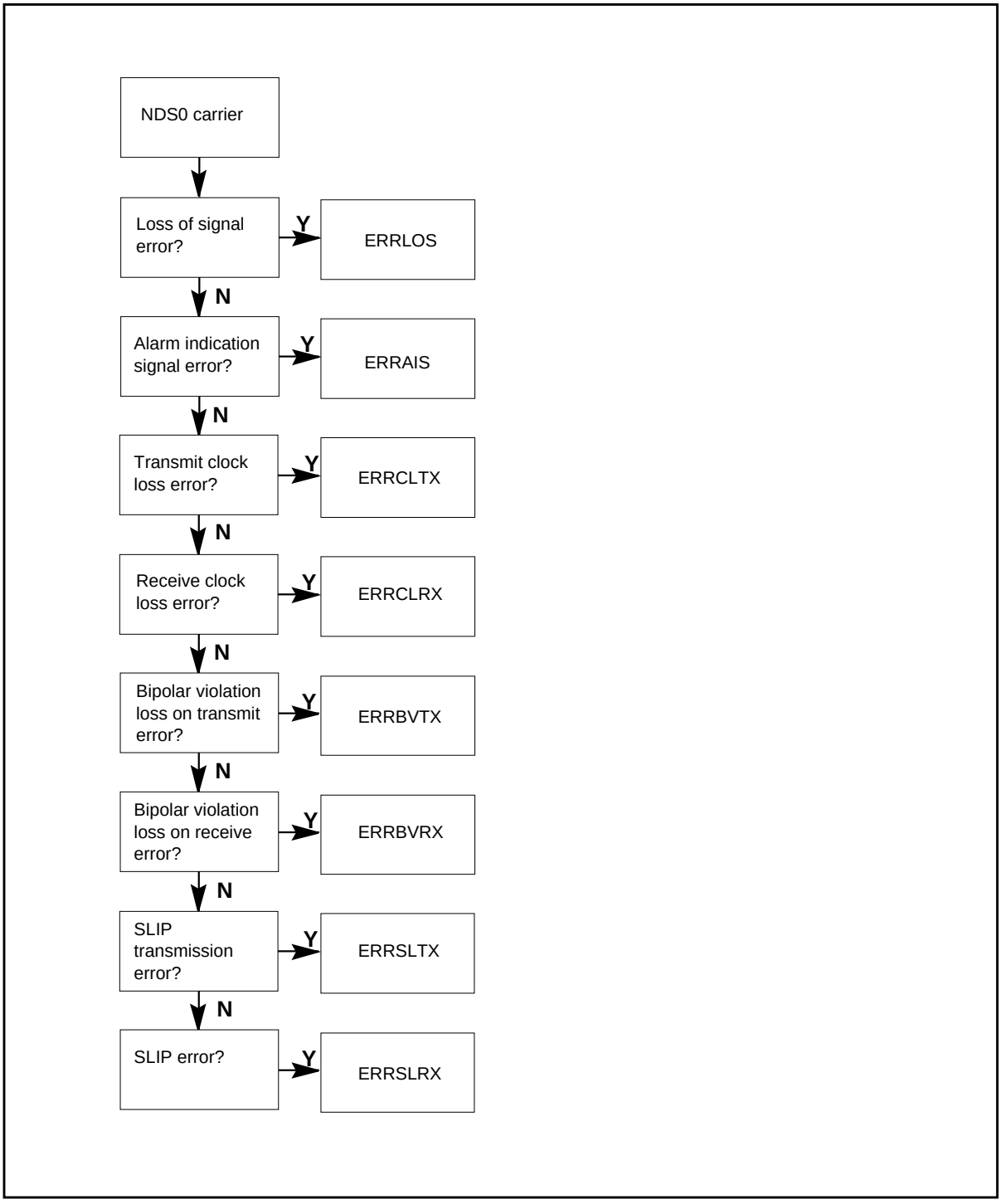
Associated functionality codes

The associated functionality codes for OM group NDS0CARR appear in the following table.

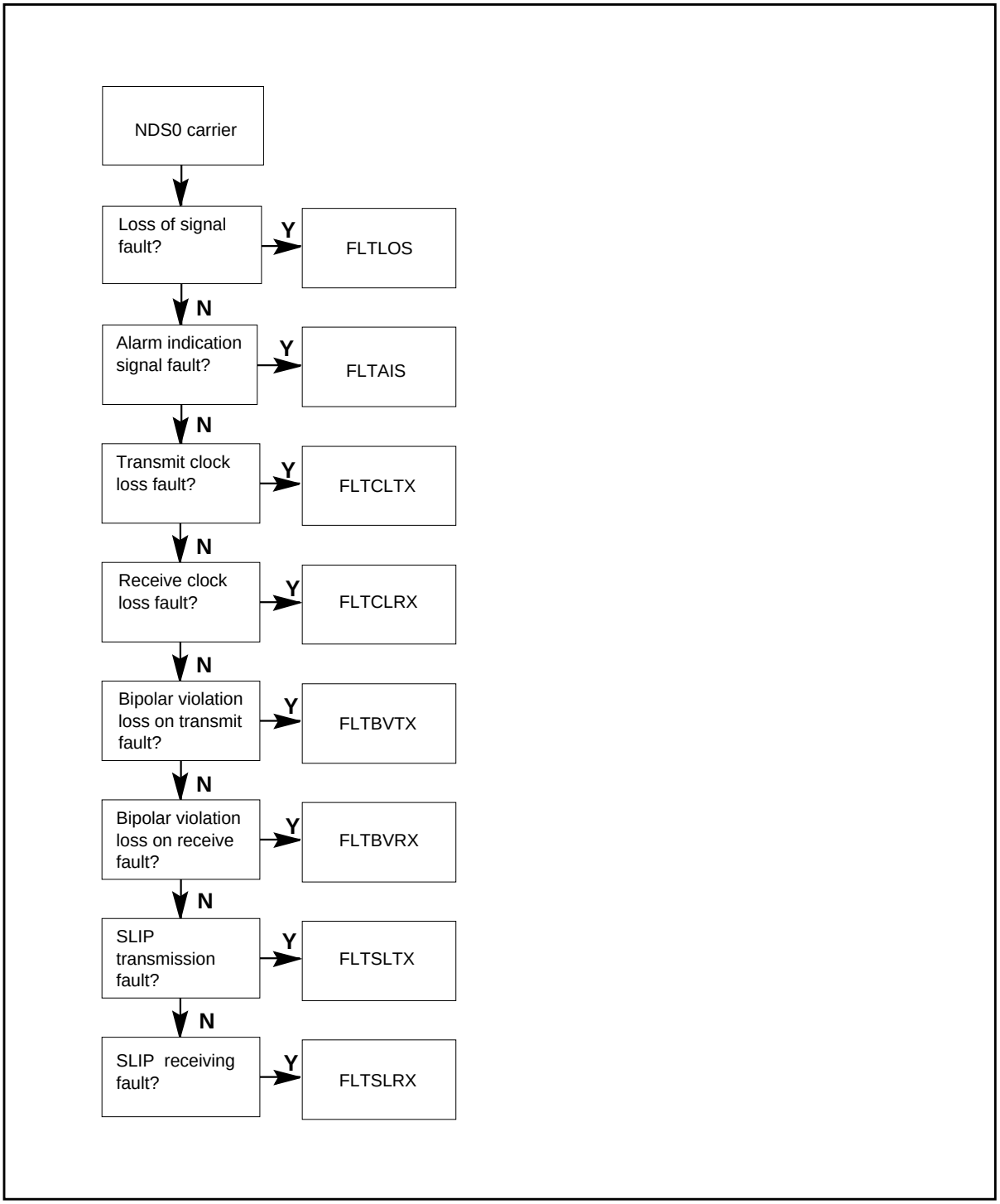
Functionality	Code
TTP—Digital Jack-Ended Trunks	NTXK50AB
Eight-Port NDS0 Carrier Maintenance	NTXK65AA

OM group NDS0CARR (continued)

OM group NDS0CARR registers: error increments

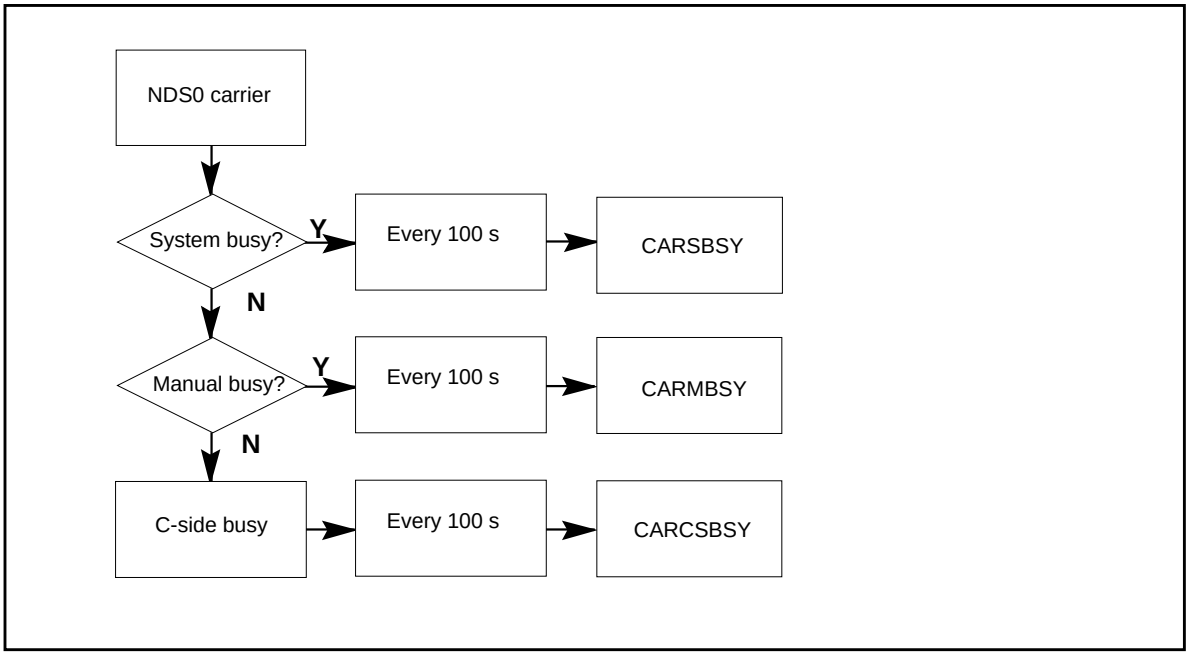


OM group NDS0CARR registers: fault increments



OM group NDS0CARR (continued)

OM group NDS0CARR registers: use



Register CARCSBSY

Register NDS0 physical carrier CBSY use count (CARCSBSY) samples the NDS0 physical carrier state every 100 s. Register CARCSBSY counts the time that the carrier is in the C-side busy (CBSY) state.

Register CARCSBSY release history

Register CARCSBSY introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register CARMBSY

Register NDS0 physical carrier ManB usage count (CARMBSY) samples the NDS0 physical carrier state every 100 s. Register CARMBSY counts the time that the carrier is in the manually busy (ManB) state.

Register CARMBSY release history

Register CARMBSY introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register CARSBSY

Register NDS0 physical carrier SYSB use count (CARSBSY) samples the NDS0 physical carrier state every 100 s. Register CARSBSY counts the time that the carrier is in the system busy (SYSB) state.

Register CARSBSY release history

Register CARSBSY introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register ERRAIS

Register AIS error count (ERRAIS) counts the number of alarm indication signal (AIS) errors that occur. An AIS error occurs if a string of ones (1) is received on the receive data input.

Register ERRAIS release history

Register ERRAIS introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register ERRBVRX

Register BPVRX error count (ERRBVRX) counts the number of bipolar violation loss on receive (BPVRX) errors that occur. The system detects a BPVRX error if a loss of 8 kHz violation occur in the clock used to receive data.

Register ERRBVRX release history

Register ERRBVRX introduced in BCS33.

OM group NDS0CARR (continued)

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register ERRBVTX

Register BPVTX error count (ERRBVTX) counts the number of bipolar violation loss on transmit (BPVTX) errors that occur. The system detects a BPVTX error if a loss of 8 kHz violation occurs in the clock used to transmit data.

Register ERRBVTX release history

Register ERRBVTX introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register ERRCLRX

Register CLKRX error count (ERRCLRX) counts the number of receive clock loss (CLKRX) errors that occur. A CLKRX error occurs if the system detects loss of clock on the clock used to receive data.

Register ERRCLRX release history

Register ERRCLRX introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register ERRCLTX

Register CLKTX error count (ERRCLTX) counts the number of transmit clock loss (CLKTX) errors that occur. A CLKTX error occurs if the system detects loss of clock on the clock used to transmit data.

Register ERRCLTX release history

Register ERRCLTX introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register ERRLOS

Register LOS error counts (ERRLOS) counts the number of loss-of-signal (LOS) errors that occur. A LOS error occurs if the system receives a stream of zeros (0) on the receive data input.

Register ERRLOS release history

Register ERRLOS introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register ERRSLRX

Register SLIPRX error count (ERRSLRX) counts the number of slip receive (SLIPRX) errors that occur. The system records an SLIPRX error. An SLIPRX error occurs when the rates at which the network transmits and receives data are different.

Register ERRSLRX release history

Register ERRSLRX introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register ERRSLTX

Register SLIPTX error count (ERRSLTX) counts the number of slip transmission (SLIPTX) errors that occur. When the system processes data at different rates, the system loses or repeats transmitted data and records a SLIPTX error. Processed data transmits or receives.

Register ERRSLTX release history

Register ERRSLTX introduced in BCS33.

OM group NDS0CARR (continued)

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register FLTAIS

Register AIS fault count (FLTAIS) counts the number of alarm indication signal (AIS) faults that occur. A fault is an error that causes the carrier to become system busy (SYSB).

Register FLTAIS increases when the associated carrier becomes SYSB or when the AIS steady alarm raises. Register FLTAIS also increases when the AIS hit-state alarm raises and the SETACTION field in table LTCPSINV is TRUE.

Register FLTAIS release history

Register FLTAIS introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

The system generates PM187 when the system takes a carrier out of service.

Register FLTBVRX

Register BPVRX fault count (FLTBVRX) counts the number of bipolar violation loss on receive (BPVRX) faults that occur.

Register FLTBVRX increases when the associated carrier becomes system busy (SYSB) or when the BPVRX steady alarm raises. Register FLTBVRX also increases when the BPVRX hit-state alarm raises and the SETACTION field in table LTCPSINV is TRUE.

Register FLTBVRX release history

Register FLTBVRX introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

The system generates PM187 when the system takes a carrier out of service.

Register FLTBVTX

Register BPVTX fault count (FLTBVTX) counts the number of bipolar violation loss on transmit (BPVTX) faults that occur.

Register FLTBVTX increases when the associated carrier becomes system busy (SYSB) or when the BPVTX steady alarm raises. Register FLTBVTX also increases when the BPVTX hit-state alarm raises and the SETACTION field in table LTCPSINV is TRUE.

Register FLTBVTX release history

Register FLTBVTX introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

The system generates PM187 when the system takes a carrier out of service.

Register FLTCLRX

Register CLKRX fault count (FLTCLRX) counts the number of receive clock loss (CLKRX) faults that occur.

Register FLTCLRX increases when the associated carrier becomes system busy (SYSB) or when the CLKRX steady alarm raises. Register FLTCLRX also increases when the CLKRX hit-state alarm raises and the SETACTION field in table LTCPSINV is TRUE.

Register FLTCLRX release history

Register FLTCLRX introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

The system generates PM187 when the system takes a carrier out of service.

Register FLTCLTX

Register CLKTX fault count (FLTCLTX) counts the number of transmit clock loss (CLKTX) faults that occur.

Register FLTCLTX increases when the associated carrier becomes system busy (SYSB) or when the CLKTX steady alarm raises. Register FLTCLTX

OM group NDS0CARR (continued)

also increases when the CLKTX hit-state alarm raises and the SETACTION field in table LTCPSINV is TRUE.

Register FLTCLTX release history

Register FLTCLTX introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

The system generates PM187 when the system takes a carrier out of service.

Register FLTLOS

Register LOS fault count (FLTLOS) counts the number of loss-of-signal (LOS) faults that occur.

Register FLTLOS increases when the associated carrier becomes system busy (SYSB) or when the LOS steady alarm raises. Register FLTLOS also increases when the LOS hit-state alarm raises and the SETACTION field in table LTCPSINV is TRUE.

Register FLTLOS release history

Register FLTLOS introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

The system generates PM187 when the system takes a carrier out of service.

Register FLTSLRX

Register SLIPRX fault count (FLTSLRX) counts the number of slip receive (SLIPRX) faults that occur.

Register FLTSLRX increases when the associated carrier becomes system busy (SYSB) or when the SLIPRX steady alarm raises. Register FLTSLRX also increases when the SLIPRX hit-state alarm raises and the SETACTION field in table LTCPSINV is TRUE.

Register FLTSLRX release history

Register FLTSLRX introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

The system generates PM187 when the system takes a carrier out of service.

Register FLTSLTX

Register SLIPTX fault count (FLTSLTX) counts the number of slip transmission (SLIPTX) faults that occur.

Register FLTSLTX increases when the associated carrier becomes system busy (SYSB) or when the SLIPTX steady alarm raises. Register FLTSLTX also increases when the SLIPTX hit-state alarm raises and the SETACTION field in table LTCPSINV is TRUE.

Register FLTSLTX release history

Register FLTSLTX introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

The system generates PM187 when the system takes a carrier out of service.

OM group NETMSG

OM description

Network message service (NETMSG)

The OM group NETMSG monitors the use of network message services (NMS).

The OM group NETMSG contains four registers that count:

- NMS transaction capability application part (TCAP) requests that time out
- NMS TCAP requests that receive a negative acknowledgement
- invalid addresses from a message service
- NMS requests for an empty subscriber directory number

Release history

The OM group NETMSG introduced in BCS30.

Registers

The OM group NETMSG registers appear on the MAP terminal as follows:

NMSTIME	NMSDENL	NMSINVAD	NMSVACT

Group structure

The OM group NETMSG provides one tuple for each office.

Key field:
There is no key field.

Info field:
There is no info field.

Associated OM groups

There are no associated OM groups.

Associated functional groups

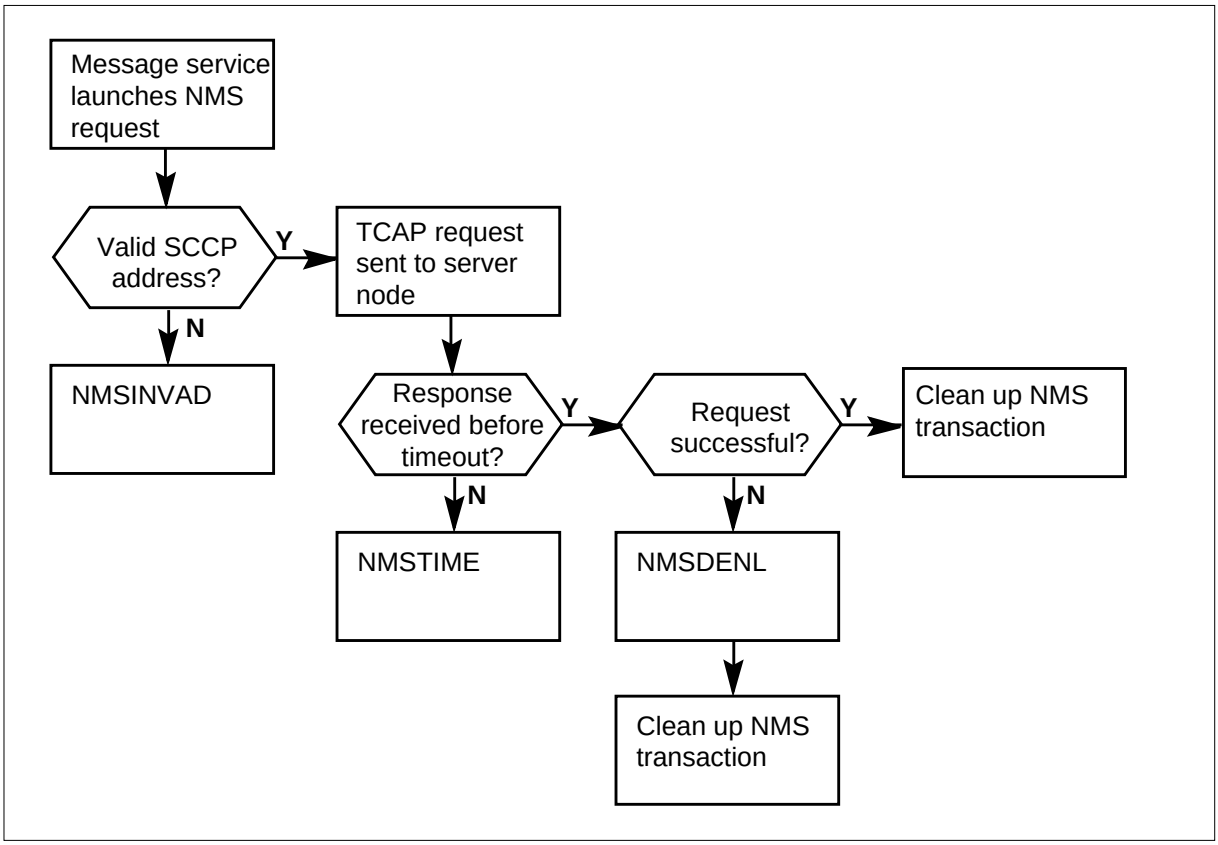
The CCS7 functional group is the associated functional group of OM group NETMSG.

Associated functionality codes

The associated functionality codes for OM group NETMSG are in the following table.

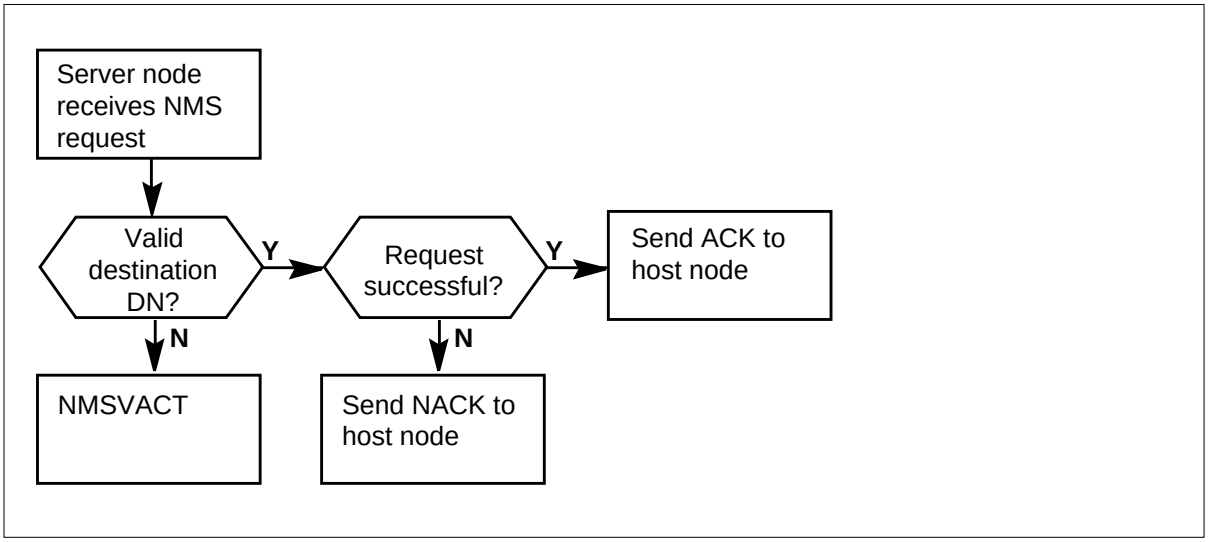
Functionality	Code
Network Message Service	NTXA68AA

OM group NETMSG registers: host node



OM group NETMSG (continued)

OM group NETMSG registers: server node



Register NMSDENL

Negative acknowledgement (NMSDENL)

Register NMSDENL counts network NMS TCAP requests that receive negative acknowledgement.

A not having enough of 32-word FTRQ blocks, available at the server node, can affect register NMSDENL. The 32-word FTRQ blocks are in office parameter FTRQ32WAREAS, in table OFCENG.

Register NMSDENL increases at the host node.

Register NMSDENL release history

Register NMSDENL introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register NMSINVAD

Invalid address (NMSINVAD)

Register NMSINVAD counts addresses received from NMS that are not correct. An error can occur for two reasons. The message service agent can enter a directory number that is not correct. The NMS can generate a directory number that is not correct.

Register NMSINVAD increases at the host node.

Register NMSINVAD release history

Register NMSINVAD introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

The system generates NMS100 at the host node when the NMS generates an address that is not correct.

Extension registers

There are no extension registers.

Register NMSTIME

Time out (NMSTIME)

Register NMSTIME counts NMS TCAP requests that time out because the TCAP instruction disappears before it reaches the server node. This register also counts NMS TCAP requests that time out. A TCAP request times out because the TCAP acknowledgement disappears before it reaches the host node.

Register NMSTIME increases at the host node.

Register NMSTIME release history

Register NMSTIME introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group NETMSG (end)

Register NMSVACT

Vacant subscriber directory number (NMSVACT)

Register NMSVACT counts NMS requests received for a empty subscriber directory number. The vacancy occurs for two reasons. The subscriber no longer exists at the server node, or the NMS generated an address that is possible but not correct.

Register NMSVACT increases at the server node.

Register NMSVACT release history

Register NMSVACT introduced in BCS30.

Associated registers

There are no associated registers.

Associated logs

The system generates NMS101 at the server node when a request for a message wait indicator change appears. A message wait indicator change can appear for a subscriber directory number that is empty.

Extension registers

There are no extension registers.

OM group NIUFBUS

OM description

Network interface unit (NIU) frame transport bus (F-bus) (NIUFBUS)

The OM group NIUFBUS monitors transmit and receive activity between the F-buses and the NIU.

The OM group NIUFBUS contains 30 two registers that count:

- number of packets an NIU transmits on each F-bus
- number of packets an NIU receives on each F-bus
- number of transmit errors an NIU makes on each F-bus
- number of receive errors an NIU makes on each F-bus
- number of octets an NIU transmits on each F-bus
- number of octets an NIU receives on each F-bus
- number of times an NIU turns on congestion on each F-bus
- number of high priority messsages an NIU transmits on each F-bus
- number of messages that require placing in queue by an NIU on each F-bus

Release history

The OM group NIUFBUS introduced in CSP04.

Registers

The following OM group NIUFBUS registers appear on the MAP terminal as follows:

```
NF0TXPK2    NF0TXPKT    NF0RXPK2    NF0RXPKT
NF1TXPK2    NF1TXPKT    NF1RXPK2    NF1RXPKT
NF0TXER2    NF0TXERR    NF0RXER2    NF0RXERR
NF0TXER2    NF1TXERR    NF1RXER2    NF1RXERR
NF0TXOC2    NF0TXOCT    NF0RXEN2    NF0RXOCT
NF1TXOC2    NF1TXOCT    NF1RXEN2    NF1RXOCT
NF0TXCON    NF0TXPRI    NF0TXEN2    NF0TXENQ
NF1TXCON    NF1TXPRI    NF1TXEN2    NF1TXENQ
```

Group structure

The OM group NIUFBUS provides two tuples for each LIM unit in table LIMINV.

OM group NIUFBUS (continued)

Key field:
There is no key field.

Info field:
pm_type: NIU

pm_number: {integer}

pm_unit: {0..1}

Associated OM groups

There are no associated OM groups.

Associated functional groups

The following functional group is an associated functional group of OM group NIUFBUS:

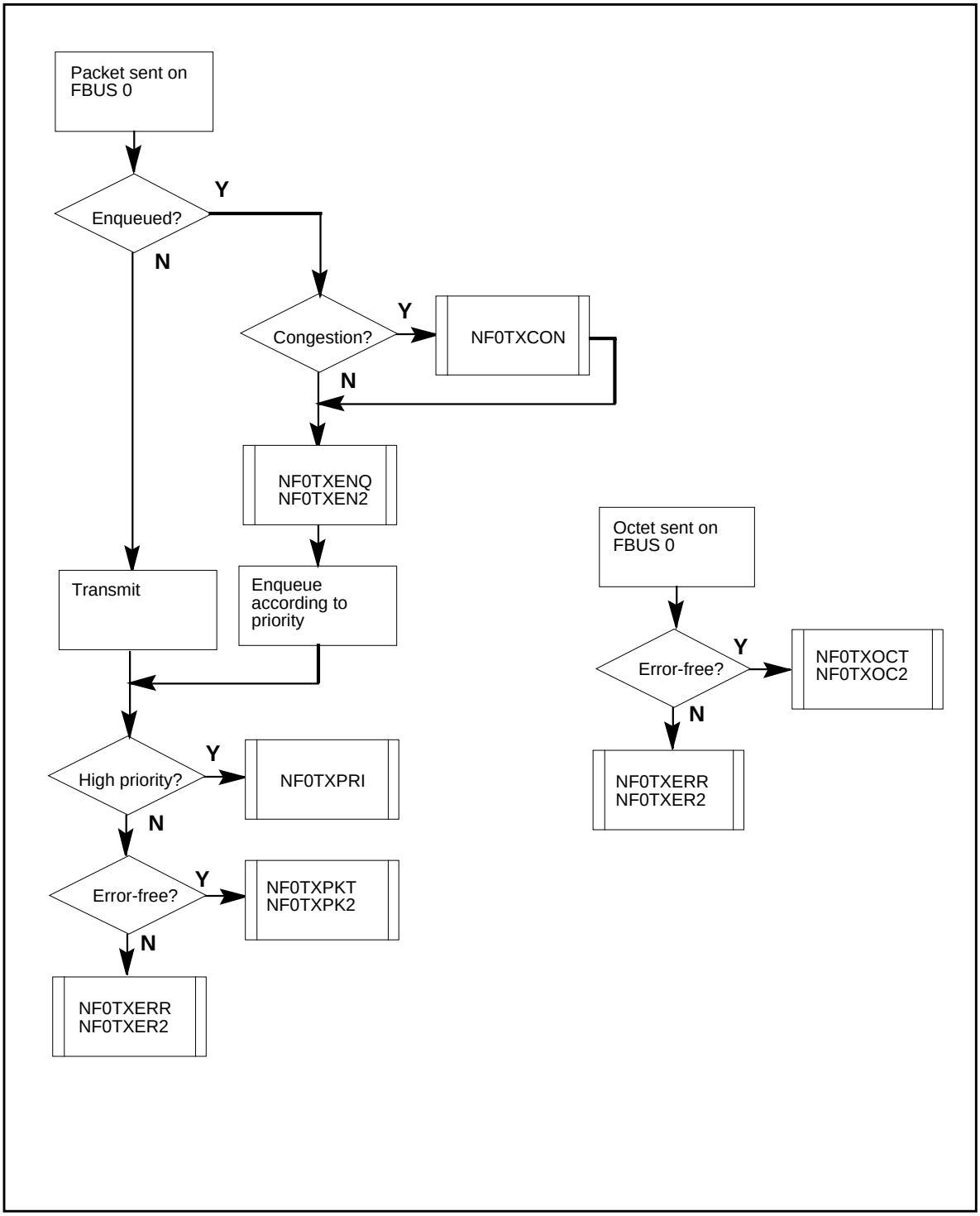
- SuperNode DMS switch

Associated functionality codes

The associated functionality codes for OM group NIUFBUS appear in the following table.

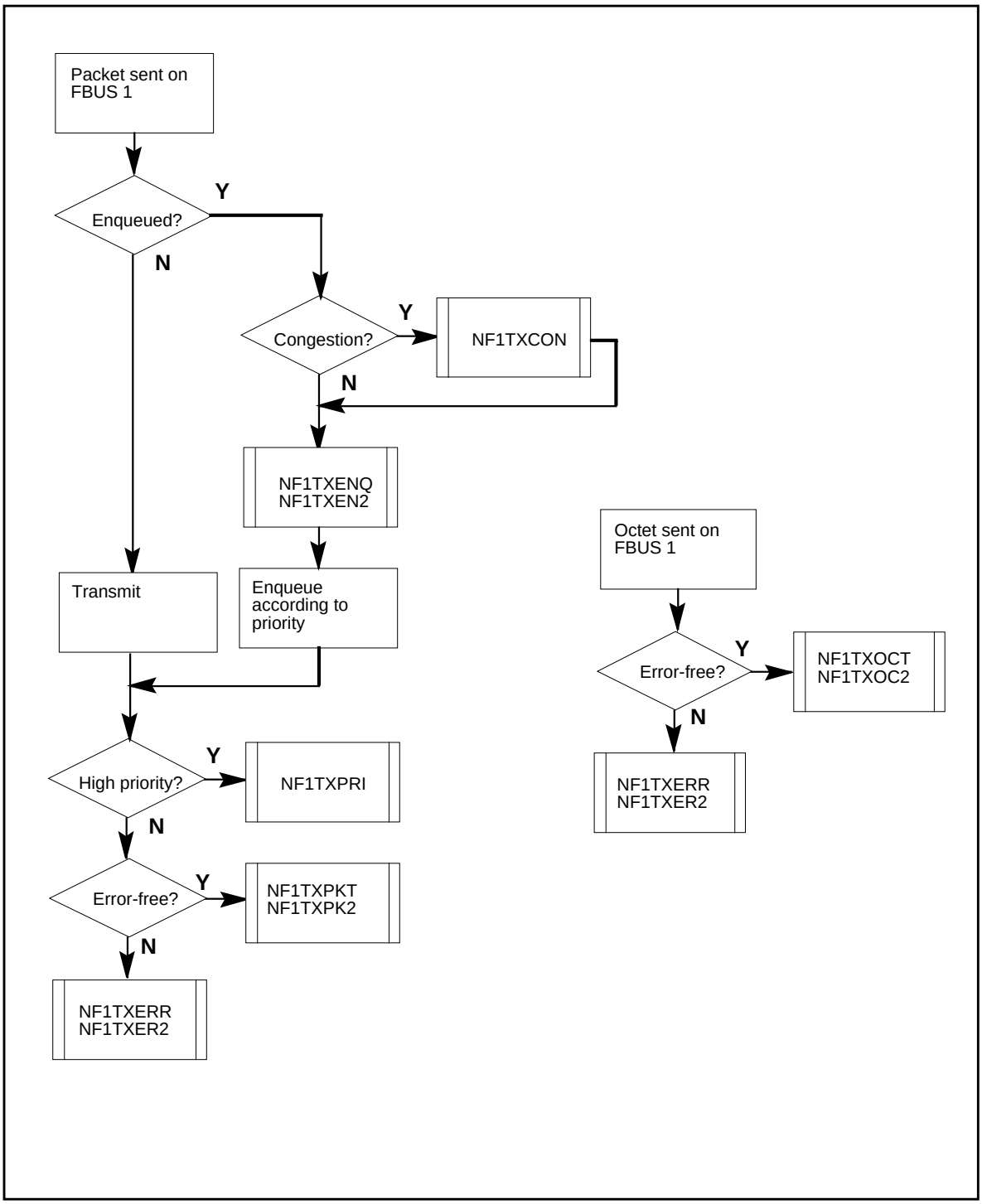
Functionality	Code
CM Common	NTX941AA
MS Common	NTX951AA

OM group NIUFBUS transmit registers on F-bus 0

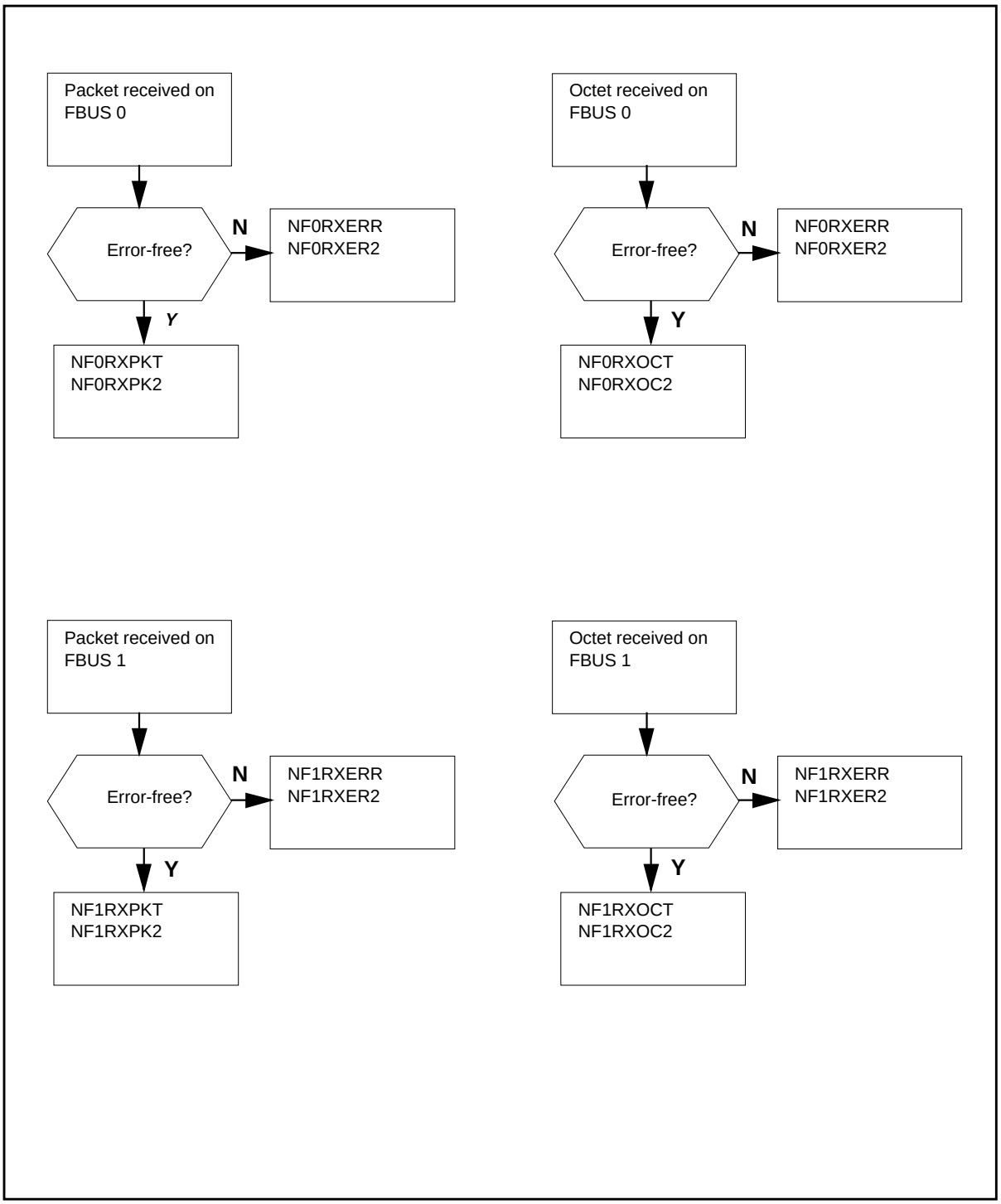


OM group NIUFBUS (continued)

OM group NIUFBUS transmit registers on F-bus 1



OM group NIUFBUS receive registers



OM group NIUFBUS (continued)

Register NF0RXERR

Frame transport bus 0 receive errors (NF0RXERR)

Register NF0RXERR increases in an audit period by the number of packets that an NIU did not receive on Fbus. The NIU did not receive the packets because of an error.

Register NF0RXERR release history

Register NF0RXERR introduced in CSP04.

Associated registers

Register NF0RXER2 is the extension register.

Associated logs

There are no associated logs.

Extension registers

NF0RXER2

Register NF0RXOCT

Frame transport bus 0 receive octets (NF0RXOCT)

Register NF0RXOCT increases by the number of octets (bytes) an NIU receives on Fbus 0.

Register NF0RXOCT release history

Register NF0RXOCT introduced in CSP04.

Associated registers

NF0RXOC2

Associated logs

There are no associated logs.

Extension registers

NF0RXOC2

Register NF0RXPKT

Frame transport bus 0 receive packets (NF0RXPKT)

Register NF0RXPKT increases in an audit period by the number of packets an NIU receives from Fbus 0.

Register NF0RXPKT release history

Register NF0RXPKT introduced in CSP04.

Associated registers

NF0RXPK2

Associated logs

There are no associated logs.

Extension registers

NF0RXPK2

Register NF0TXCON

F-bus 0 transmit congestion (NF0TXCON)

Register NF0TXCON counts the number of times the NIU turns on congestion for F-bus 0.

Register NF0TXPKT release history

Register NF0TXCON introduced in CSP06.

Associated registers

Register NF1TXCON is the congestion register for F-bus 1.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register NF0TXENQ

F-bus 0 transmit placing in queue (NF0TXENQ)

Register NF0TXENQ counts the number of messages on F-bus 0 that require placing in queue.

Register NF0TXENQ release history

Register NF0TXENQ added in CSP06.

Associated registers

Register NF1TXENQ is the placing in queue register for F-bus 1.

Register NF0TXEN2 is the extension register.

OM group NIUFBUS (continued)

Associated logs

There are no associated logs.

Extension registers

NF0TXEN2

Register NF0TXERR

Frame transport bus 0 transmit errors (NF0TXEN2)

Register NF0TXERR increases in an audit period by the number of packets an NIU could not send out on Fbus. The NIU could not send the packets because of an error.

Register NF0TXERR release history

Register NF0TXERR introduced in CSP04.

Associated registers

NF0TXER2

Associated logs

There are no associated logs.

Extension registers

NF0TXER2

Register NF0TXOCT

Frame transport bus 0 transmit octets (NF0TXOCT)

Register NF0TXOCT increases the number of octets (bytes) an NIU transmits on Fbus 0.

Register NF0TXOCT release history

Register NF0TXOCT introduced in CSP04.

Associated registers

NF0TXOC2

Associated logs

There are no associated logs.

Extension registers

NF0TXOC2

Register NF0TXPKT

Frame transport bus 0 transmit packets (NF0TXPKT)

Register NF0TXPKT increases in an audit period by the number of packets an NIU transmits on Fbus 0.

Register NF0TXPKT release history

Register NF0TXPKT introduced in CSP04.

Associated registers

NF0TXPK2

Associated logs

There are no associated logs.

Extension registers

NF0TXPK2

Register NF0TXPRI

F-bus 0 transmit priority (NF0TXPRI)

Register NF0TXPRI counts the number of high priority messages that are transmitted on F-bus 0.

Register NF0TXPRI release history

Register NF0TXPRI introduced in CSP06.

Associated registers

Register NF1TXPRI is the high priority register for F-bus 1.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register NF1RXERR

Frame transport bus 1 receive errors (NF1RXERR)

Register NF1RXERR increases in an audit period by the number of packets an NIU did not receive on Fbus 1. The NIU did not receive the packets because of an error.

OM group NIUFBUS (continued)

Register NF1RXERR release history

Register NF1RXERR introduced in CSP04.

Associated registers

NF1RXER2

Associated logs

There are no associated logs.

Extension registers

NF1RXER2

Register NF1RXOCT

Frame transport bus 1 receive octets (NF1RXOCT)

Register NF1RXOCT increases by the number of octets (bytes) an NIU receives on Fbus 1.

Register NF1RXOCT release history

Register NF1RXOCT introduced in CSP04.

Associated registers

NF1RXOC2

Associated logs

There are no associated logs.

Extension registers

NF1RXOC2

Register NF1RXPKT

Frame transport bus 1 receive packets (NF1RXPKT)

Register NF1RXPKT increases in an audit period by the number of packets an NIU receives from Fbus 1.

Register NF1RXPKT release history

Register NF1RXPKT introduced in CSP04.

Associated registers

NF1RXPK2

Associated logs

There are no associated logs.

Extension registers

NF1RXPK2

Register NF1TXCON

F-bus 1 transmit congestion (NF1TXCON)

Register NF1TXCON counts the number of times an NIU turns on congestion for F-bus 1.

Register NF1TXCON release history

Register NF1TXCON introduced in CSP06.

Associated registers

Register NF0TXCON is the congestion register for F-bus 0.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register NF1TXENQ

F-bus 1 transmit placing in queue (NF1TXENQ)

Register NF1TXENQ counts the number of messages on F-bus 1 that require placing in queue.

Register NF1TXENQ release history

Register NF1TXENQ introduced in CSP06.

Associated registers

Register NF0TXENQ is the placing in queue register for F-bus 0.

Register NF1TXEN2 is the extension register.

Associated logs

There are no associated logs.

Extension registers

NF1TXEN2

OM group NIUFBUS (continued)

Register NF1TXERR

Frame transport bus 1 transmit errors (NF1TXERR)

Register NF1TXERR increases in an audit period by the number of packets an NIU could not send out on Fbus 1. The NIU could not send the packets because of an error,

Register NF1TXERR release history

Register NF1TXERR introduced in CSP04.

Associated registers

NF1TXER2

Associated logs

There are no associated logs.

Extension registers

NF1TXER2

Register NF1TXOCT

Frame transport bus 1 transmit octets (NF1TXOCT)

Register NF1TXOCT increases the number of octets (bytes) an NIU transmits on Fbus 1.

Register NF1TXOCT release history

Register NF1TXOCT introduced in CSP04.

Associated registers

NF1TXOC2

Associated logs

There are no associated logs.

Extension registers

NF1TXOC2

Register NF1TXPKT

Frame transport bus 1 transmit packets (NF1TXPKT)

Register NF1TXPKT increases in an audit period by the number of packets an NIU transmits on Fbus 1.

Register NF1TXPKT release history

Register NF1TXPKT introduced in CSP04.

Associated registers

NF1TXPK2

Associated logs

There are no associated logs.

Extension registers

NF1TXPK2

Register NF1TXPRI

F-bus 1 transmit priority (NF1TXPRI)

Register NF1TXPRI counts the number of high priority messages that are transmitted on F-bus 1.

Register NF1TXPRI release history

Register NF1TXPRI introduced in CSP06.

Associated registers

Register NF0TXPRI is the high priority register for F-bus 0.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group NIUMEMUT

OM description

Network interface unit memory use (NIUMEMUT)

The OM group NIUMEMUT displays data and program store information for a network interface unit (NIU).

The NIUMEMUT contains four registers that:

- hold the total data store memory
- hold the free data store memory
- hold the total program store memory
- hold the free program store memory

Release history

The OM group NIUMEMUT introduced in CSP04.

Registers

The OM group NIUMEMUT registers appear on the MAP terminal as follows:

```
NIUDSTOT    NIUDSAVL    NIUPSTOT    NIUPSAVL
```

Group structure

The OM group NIUMEMUT provides two tuples for each LIM unit in table LIMINV.

Key field:
There is no key field.

Info field:
PM_TYPE: NIU

PM NUMBER:{integer}

PM_UNIT: {0..1}

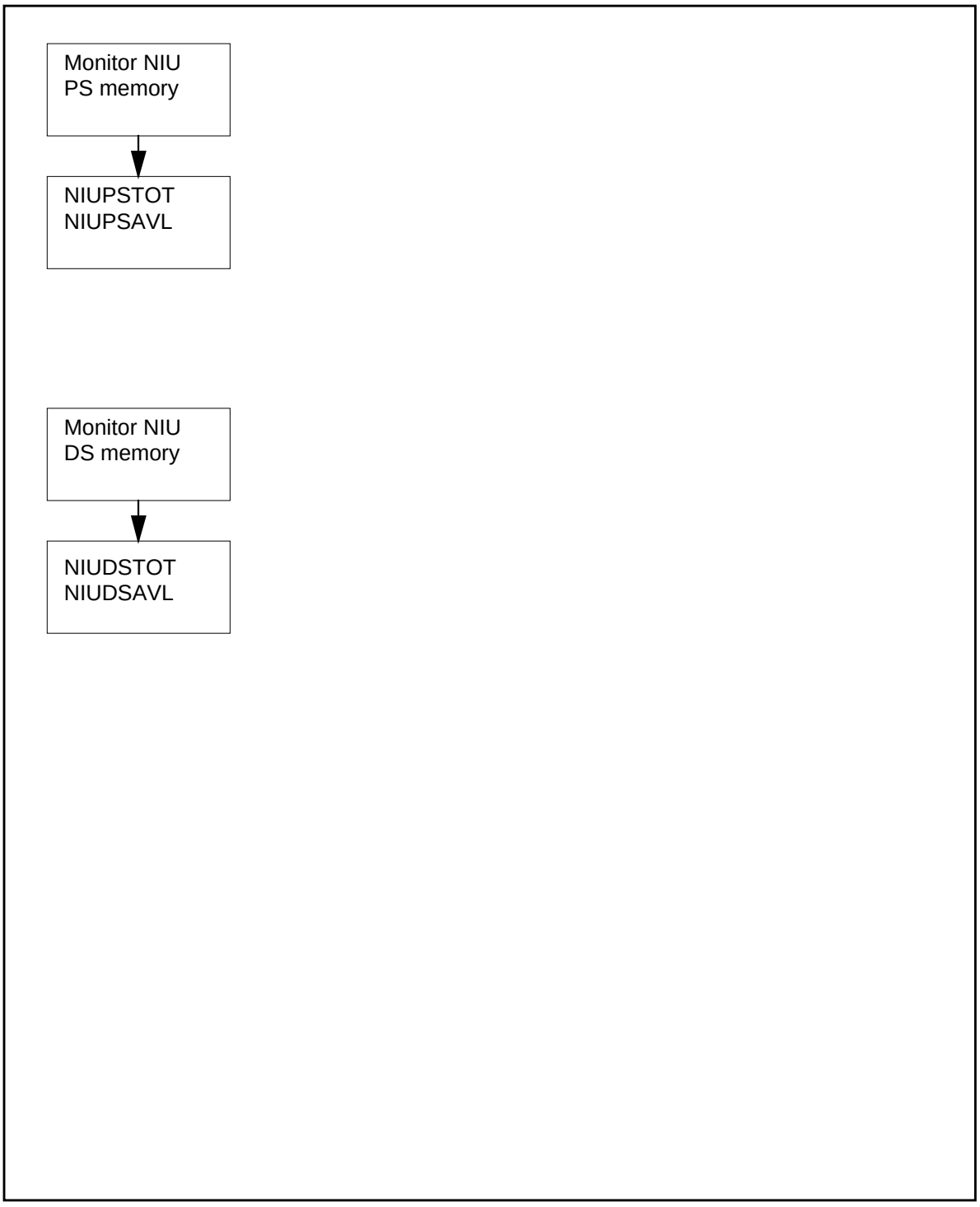
Associated OM groups

There are no associated OM groups.

Associated functional groups

NIU

OM group NIUMEMUT registers



OM group NIUMEMUT (continued)

Register NIUSTOT

Network interface unit total data store (DS) memory (NIUSTOT)

Register NIUSTOT holds the total data store memory information in Kbytes.

Register NIUSTOT release history

Register NIUSTOT introduced in CSP04.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register NIUDSAVL

Network interface unit free DS memory (NIUDSAVL)

Register NIUDSAVL holds available DS memory information in Kbytes.

Register NIUDSAVL release history

Register NIUDSAVL introduced in CSP04.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register NIUPSTOT

Network interface unit total program store (PS) memory (NIUPSTOT)

Register NIUPSTOT holds the total PS memory information in Kbytes.

Register NIUPSTOT release history

Register NIUPSTOT introduced in CSP04.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register NIUPSAVL

Network interface unit free PS memory (NIUPSAVL)

Register NIUPSAVL holds the available PS memory information in Kbytes.

Register NIUPSAVL release history

Register NIUPSAVL introduced in CSP04.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.OM group MPCFASTA provides one tuple for each application that uses MPC links.

Key field:

mpcfastapplnid. Application name datafilled in table

MPCFASTA. The maximum number of applications allowed

is 15.

Info field:

mpcfastaominfotype.

OM group NMC

OM description

Network module controller maintenance summary (NMC)

The OM group NMC counts errors and failures to recover from errors in the following:

- in-service message links between network modules and peripheral modules
- speech connections
- in-service network module controllers

The OM group NMC also records if out-of-service network modules, network module ports, and junctors are system busy or manual busy.

All the measurements in NMC refer to individual components, not paired duplicates. The failures recorded in NMC do not always indicate lost calls.

The OM group NMC contains six peg registers and six usage registers. Scan rate for the usage registers is slow: 100 seconds.

The OM group NMC used to analyze network module controller maintenance.

All DMS offices have an OM group NMC.

Release history

The OM group NMC introduced in BCS20.

BCS33

A command can convert registers NMSBU, NMMBU, NMPTSBU, NMPTMBU, NMJRSBU and NMJRMBU from CCS to deci-erlangs before display. The OMSHOW command on the ACTIVE class triggers this conversion.

BCS31

The OM group NMC removed for offices equipped with an enhanced network (ENET).

BCS21

Software changed to provide usage counts in CCS or in deci-erlangs.

Registers

The OM group NMC registers appear on the MAP terminal as follows:

```
NMMSGER     NMSPCHER    NMCERR      NMMSGFL
NMSPCHFL    NMCFLT      NMSBU       NMMBU
NMPTSBU     NMPTMBU     NMJRSBU     NMJRMBU
```

Group structure

The OM group NMC provides one tuple for each office.

Key field:
There is no key field

Info field:
There is no info field

Associated OM groups

There are no associated OM groups.

Associated functional groups

There are no associated functional groups.

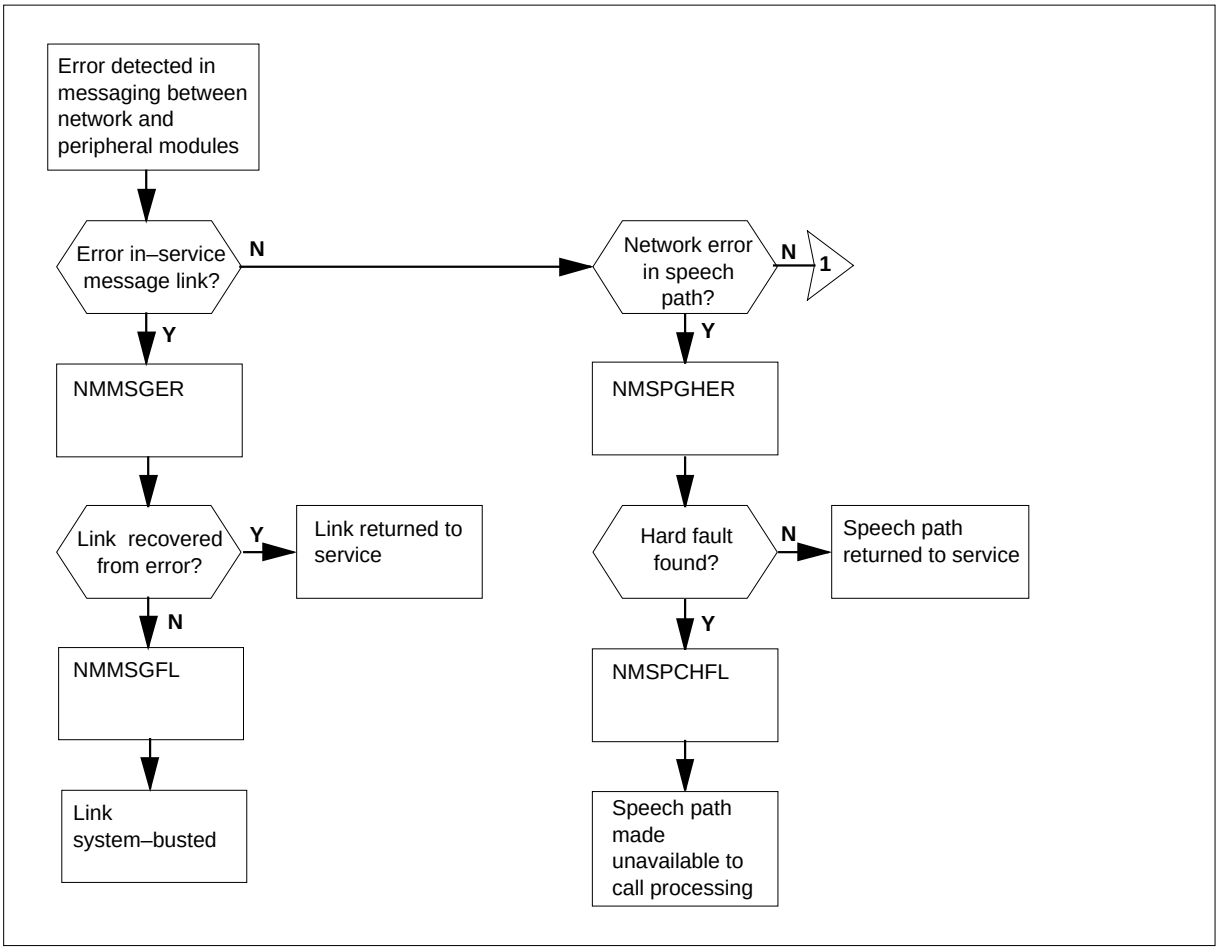
Associated functionality codes

The functionality code for OM group NMC appears in the following table.

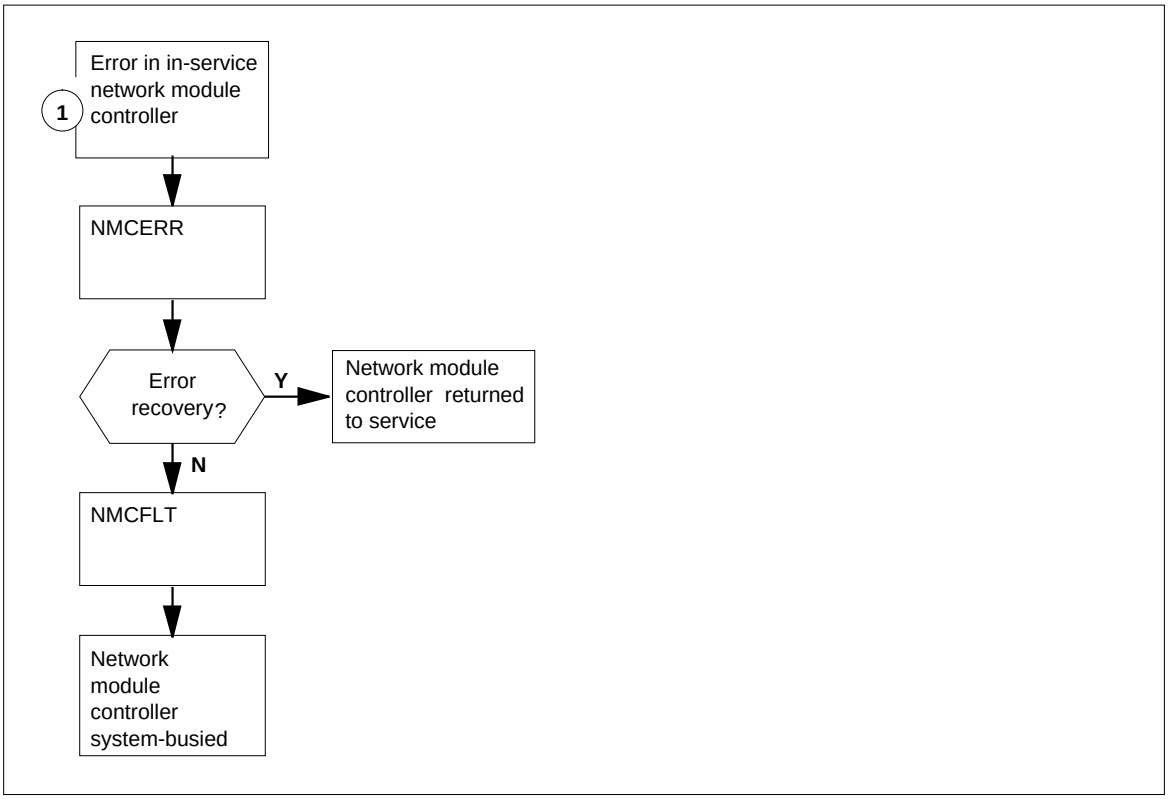
Functionality	Code
Common Basic	NTX001AA

OM group NMC (continued)

OM group NMC registers

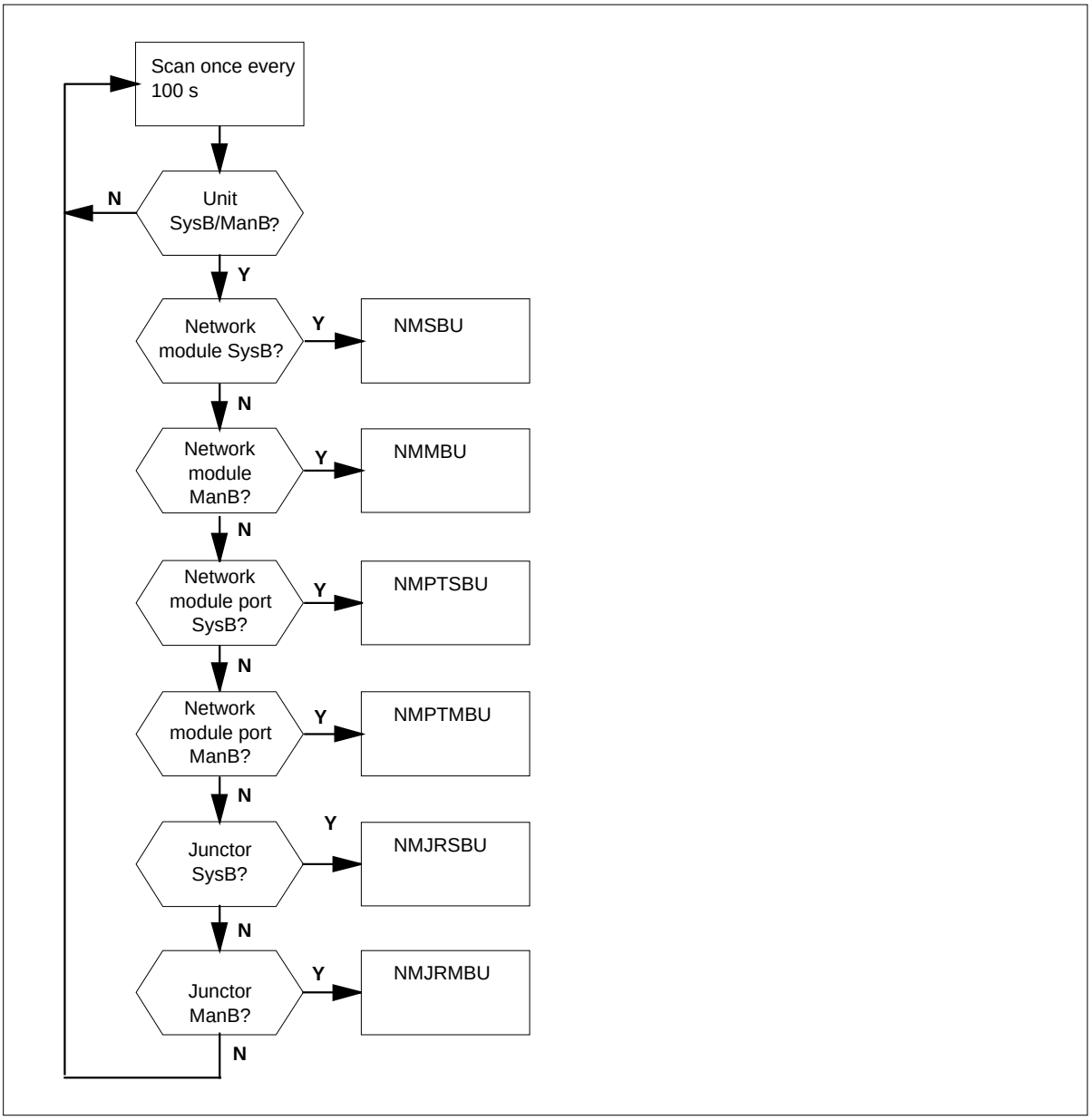


OM group NMC registers (continued)



OM group NMC (continued)

OM group NMC registers (continued)



Register NMCERR

Network module controller errors (NMCERR)

Register NMCERR counts errors that are in in-service network module controllers.

Register NMCERR release history

Register NMCERR introduced before BCS20.

Associated registers

Register NMCFLT increases when a network module controller cannot recover from an error.

Associated logs

The system generates NETM128 when the threshold of network hits is exceeded.

Register NMCFLT

Network module controller failure (NMCFLT)

Register NMCFLT increases when a network module controller cannot recover from an error. The controller remains system busy, pending manual maintenance or a successful system-initiated recovery.

Register NMCFLT release history

Register NMCFLT introduced before BCS20.

Associated registers

Register NMCERR counts errors that are in in-service network module controllers.

Associated logs

The system generates NETM112 when a test on a network module fails.

The system generates NETM128 when the threshold of network hits is exceeded.

The system generates NETM116 when a link between a network module and a peripheral module becomes system busy.

The system generates NETM120 when a test on a link between a network module and a peripheral module fails.

The system generates NETM122 when a network junctor becomes system busy.

Register NMJRMBU

Network module junctors manual busy usage (NMJRMBU)

OM group NMC (continued)

Register NMJRMBU is a usage register. The scan rate is 100 s. Register NMJRMBU records if network module junctors are manual busy.

Register NMJRMBU release history

Register NMJRMBU introduced before BCS20.

BCS33

When office parameter OMINERLANGS is set to Y, the usage count converts from CCS to deci-erlangs before display. The OMSHOW command on the ACTIVE class enables the usage count conversion from CCS to deci-erlangs to occur. The value in the active registers does not alter and remains in CCS.

BCS21

Software changed to provide usage counts in CCS or in deci-erlangs.

Associated registers

There are no associated registers.

Associated logs

The system generates NETM123 when a network junctor becomes manual busy.

The system generates NETM140 when warning that a junctor will become manual busy is manually overridden.

Register NMJRSBU

Network module junctors system busy usage (NMJRSBU)

Register NMJRSBU is a usage register. The scan rate is 100 s. Register NMJRSBU records if network module junctors are system busy.

Register NMFRSBU release history

Register NMJRSBU introduced before BCS20.

BCS33

When office parameter OMINERLANGS is set to Y, the usage count is converted from CCS to deci-erlangs before display. The OMSHOW command on the ACTIVE class enables the usage count conversion. The value in the active registers does not alter and remains in CCS.

BCS21

Software changed to provide usage counts either in CCS or in deci-erlangs.

Associated registers

There are no associated registers.

Associated logs

The system generates NETM122 when a network junctor becomes system busy.

Register NMMBU

Network module manual busy usage (NMMBU)

Register NMMBU is a usage register. The scan rate is 100 s. Register NMMBU records if out-of-service network modules are manual busy.

Register NMMBU release history

Register NMMBU introduced before BCS20.

BCS33

When office parameter OMINERLANGS is set to Y, the usage count converts from CCS to deci-erlangs before display. The OMSHOW command on the ACTIVE class enables the usage count conversion. The value in the active registers does not alter and remains in CCS.

BCS21

Software changed to provide usage counts in CCS or in deci-erlangs.

Associated registers

There are no associated registers.

Associated logs

The system generates NETM105 when a network module becomes manual busy.

The system generates NETM138 when the warning indicates that a network will become manual busy is manually overridden.

Register NMMSGER

Network module message link errors (NMMSGER)

Register NMMSGER counts errors in in-service message links between network modules and peripheral modules.

Register NMMSGER release history

Register NMMSGER introduced before BCS20.

OM group NMC (continued)

Associated registers

Register NMMSGFL increases when a link between a network module and a peripheral module cannot recover from an error.

Associated logs

The system generates NET102 when a receiving peripheral module detects an accuracy fault in the network that connects to the module.

The system generates NETM129 when five or more failures on a network port are present.

Register NMMSGFL

Network module message link failures (NMMSGFL)

Register NMMSGFL increases when a link between a network module and a peripheral module cannot recover from an error. The link remains system busy, pending manual maintenance or a successful system-initiated recovery attempt.

Register NMMSGFL release history

Register NMMSGFL introduced before BCS20.

Associated registers

Register NMMSGER counts errors in in-service message links between network modules and peripheral modules.

Associated logs

The system generates NETM120 when a test on a link between a network module and a peripheral module fails.

The system generates NETM126 when a test on the network module junctor fails.

The system generates an NETM129 when there are five or more failures on a network port.

Register NMPTMBU

Network module ports manual busy usage (NMPTMBU)

Register NMPTMBU is a usage register. The scan rate is 100 s. Register NMPTMBU records if network module ports are manual busy.

Register NMPTMBU release history

Register NMPTMBU introduced before BCS20.

BCS33

When office parameter OMINERLANGS is set to Y, the usage count converts from CCS to deci-erlangs before display. The OMSHOW command on the ACTIVE class triggers the usage count conversion. The value in the active registers does not alter and remains in CCS.

BCS21

Software changed to provide usage counts in CCS or in deci-erlangs.

Associated registers

There are no associated registers.

Associated logs

The system generates NETM117 when a link between a network module and a peripheral module becomes manual busy.

The system generates NETM139 when the warning that indicates that a link will become manual busy is manually overridden.

Register NMPTSBU

Network module ports system busy usage (NMPTSBU)

Register NMPTSBU is a usage register. The scan rate is 100 s. Register NMPTSBU records if network module ports are system busy.

Register NMPTSBU release history

Register NMPTSBU introduced before BCS20.

BCS33

When office parameter OMINERLANGS is set to Y, the usage count converts from CCS to deci-erlangs before display. The OMSHOW command on the ACTIVE class triggers this usage count conversion. The value in the active registers does not alter and remains in CCS.

BCS21

Software changed to provide usage counts in CCS or in deci-erlangs.

Associated registers

There are no associated registers.

OM group NMC (continued)

Associated logs

The system generates NETM116 when a link between a network module and a peripheral module becomes system busy.

The system generates NETM129 when five or more failures on a network port are present.

Register NMSBU

Network modules system busy usage (NMSBU)

Register NMSBU is a usage register. The scan rate is 100 s. Register NMSBU records if out-of-service network modules are system busy.

Register NMSBU release history

Register NMSBU introduced before BCS20.

BCS33

When office parameter OMINERLANGS is set to Y, the usage count converts from CCS to deci-erlangs before display. The OMSHOW command on the ACTIVE class triggers the usage count conversion. The value in the active registers does not alter and remains in CCS.

BCS21

Software changed to provide usage counts in CCS or in deci-erlangs.

Associated registers

There are no associated registers.

Associated logs

The system generates NETM103 when a network module returns to service by a manual or system request.

The system generates an NETM104 when a network module becomes system busy. The module becomes system busy because the links between the central message controller (CMC) and the specified network are busy.

Register NMSPCHER

Network module speech connection errors (NMSPCHER)

Register NMSPCHER counts errors in speech connections located in the network.

Register NMSPCHER release history

Register NMSPCHER introduced before BCS20.

Associated registers

Register NMSPCHFL counts faults in the network-resident connection memory, or in a speech path segment that is internal to the network.

Associated logs

The system generates NET102 when a receiving peripheral module detects an accuracy fault in the network that connects to the module.

Register NMSPCHFL

Network module speech connection failure (NMSPCHFL)

Register NMSPCHFL counts faults that in the network-resident connection memory, or in a speech path segment that is internal to the network. An accuracy failure that register NMSPCHFL recorded earlier trippers tests that detects the fault. The path segment affected is not available for call processing.

Register NMSPCHFL release history

Register NMSPCHFL introduced before BCS20.

Associated registers

Register NMSPCHER counts errors detected on speech connections found in the network.

Associated logs

The system generates NET102 when a receiving peripheral module detects an accuracy fault in the network that connects to the module.

The system generates NETM120 when a diagnostic test on a link between a network module and a peripheral module fails.

The system generates NETM126 when a diagnostic test on the network module junctor fails.

The system generates NETM129 when five or more failures on a network port.

The system generates NET131 when a connection is overwritten.

OM group NMTCLINK

OM description

Node maintenance link measurements (NMTCLINK)

The OM group NMTCLINK measures the performance of transport media to the node that directly affects the maintenance reliability of this node. The data indicates the number of system troubles and out-of-service occurrences.

Release history

The OM group NMTCLINK was introduced in BCS33.

This OM group is not active in BCS33.

Registers

The OM group NMTCLINK registers appear on the MAP terminal as follows:

```
NDMCHERR    NDMCHFLT    NDMCHMBP    NDMCHSBP
NDPLKERR    NDPLKFLT    NDPLKMBP    NDPLKSBP
```

Group structure

The OM group NMTCLINK provides one tuple for each node

Key field:
There is no key field

Info field:
Info field: INM_OM_LINK_INFO_T

Associated OM groups

NMTCNODE—Node maintenance node measurements

NMTCUNIT—Node maintenance unit measurements

NMTCTYPE—Node maintenance type measurements

Associated functional groups

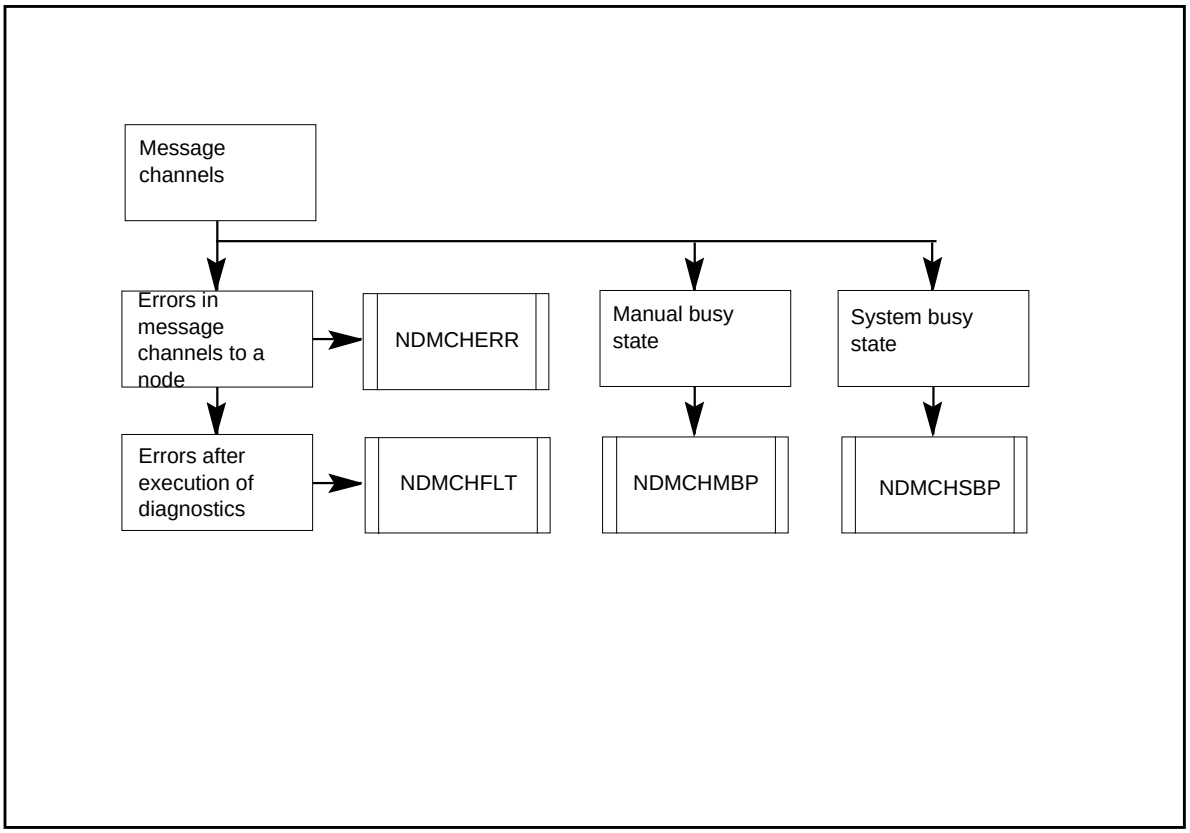
There are no associated functional groups.

Associated functionality codes

The functionality codes for OM group NMTCLINK appear in the following table.

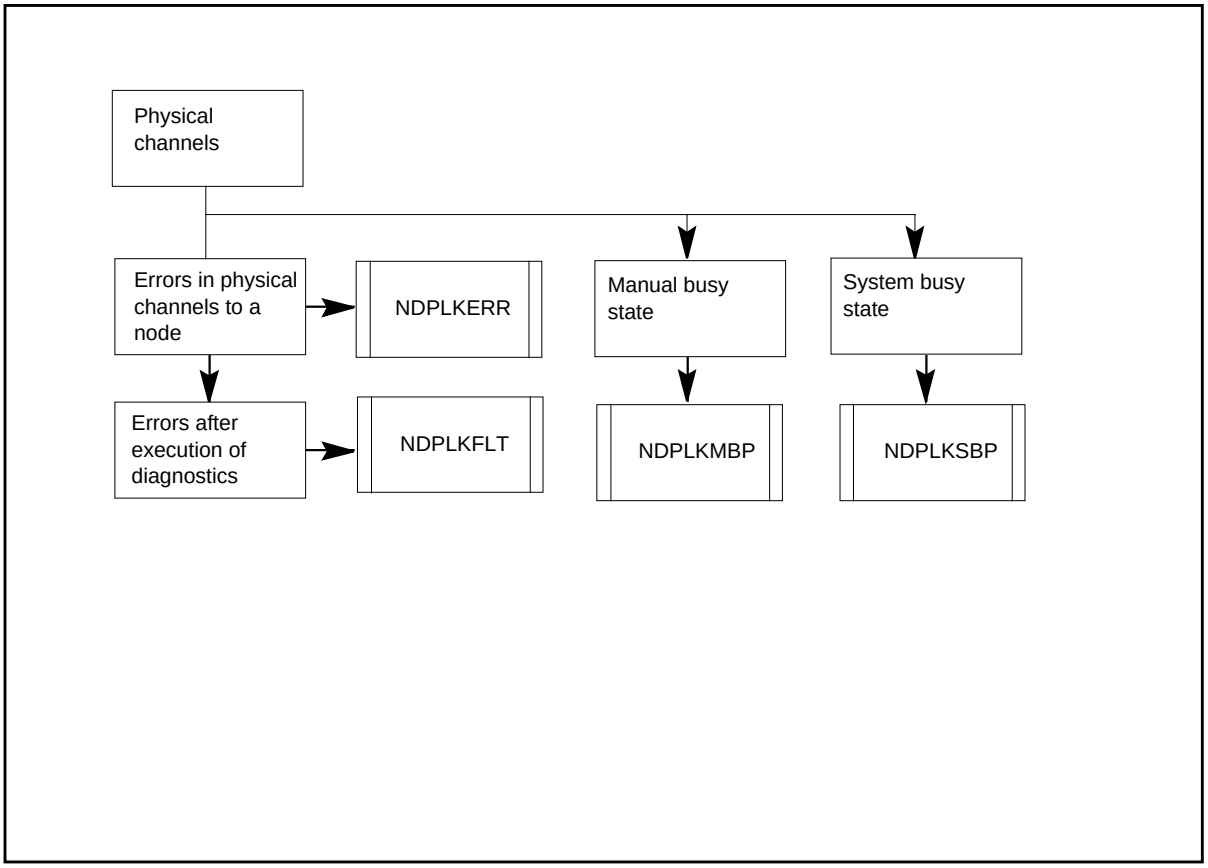
Functionality	Code
Base Node Maintenance	NTX944AA

OM group NMTCLINK registers: message channels



OM group NMTCLINK (continued)

OM group NMTCLINK registers: physical channels



Register NDMCHERR

Node maintenance message channel errors (NDMCHERR)

Register NDMCHERR counts the number of errors in all important message channels to a node.

Register NDMCHERR release history

Register NDMCHERR introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDMCHFLT

Node maintenance message channel faults (NDMCHFLT)

Register NDMCHFLT counts the number of errors that persist after execution of diagnostics on important message channels. The fault register increases if the first diagnostic attempt does not clear the error. More tests of the error condition do not increase the fault register.

Register NDMCHFLT release history

Register NDMCHFLT introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDMCHMBP

Node maintenance message channel manual busy peg (NDMCHMBP)

Register NDMCHMBP counts the times message channels become ManB.

Register NDMCHMBP release history

Register NDMCHMBP introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDMCHSBP

Node maintenance message channel SYSB peg (NDMCHSBP)

Register NDMCHSBP counts the times message channels become SYSB.

Register NDMCHSBP release history

Register NDMCHSBP introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group NMTCLINK (continued)

Register NDPLKERR

Node maintenance physical link errors (NDPLKERR)

Register NDPLKERR counts the errors detected in all important physical channels to a node.

Register NDPLKERR release history

Register NDPLKERR introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDPLKFLT

Node maintenance physical link faults (NDPLKFLT)

Register NDPLKFLT counts the errors that persist after execution of diagnostics on important physical channels. The fault register increases if the first diagnostic attempt does not clear the error. More tests of the error do not increase the fault register.

Register NDPLKFLT release history

Register NDPLKFLT introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDPLKMBP

Node maintenance physical link manual busy peg (NDPLKMBP)

Register NDPLKMBP counts the times physical channels become ManB.

Register NDPLKMBP release history

Register NDPLKMBP introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDPLKSBP

Node maintenance physical link system busy peg (NDPLKSBP)

Register NDPLKSBP counts the times physical channels become system busy.

Register NDPLKSBP release history

Register NDPLKSBP introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group NMTCNODE

OM description

Node maintenance node measurements (NMTCNODE)

The OM group NMTCNODE measures the maintenance reliability performance of a node. The data provides an indication of the number of system troubles and out-of-service occurrences.

This group is only valid for sync-matched node design where the nodes operate in synchronous mode. An example of this design is file processors on an SCPII. While the simplex mode is not in sync, consider the simplex mode of operation is in a in-service trouble state. Registers in this group measure the amount of time the node spends in this state.

Release history

The OM group NMTCNODE was introduced in BCS33.

Registers

The OM group NMTCNODE registers appear on the MAP terminal as follows:

NDNERR	NDNFLT	NDNLRP	NDNLRU
NDNNAP	NDNNAU	NDNMBP	NDNMBU
NDNMCXFR	NDNMCRST	NDNMWRST	NDNMRRST
NDNSBP	NDNSBU	NDNSCXFR	NDNSCRST
NDNSWRST	NDNSRRST	NDNSUXFR	NDNSWERR
NDNTRAP			

Group structure

The OM group NMTCNODE can provide one tuple for each node.

Key field:
There is no Key field

Info field:
INM_OM_NODE_INFO_T

Associated OM groups

The following OM groups are associated OM groups for OM group NMTCNODE:

- NMTCUNIT—Node maintenance unit measurements
- NMTCTYPE—Node maintenance type measurements
- NMTCLINK—Node maintenance link measurements

Associated functional groups

There are no associated functional groups.

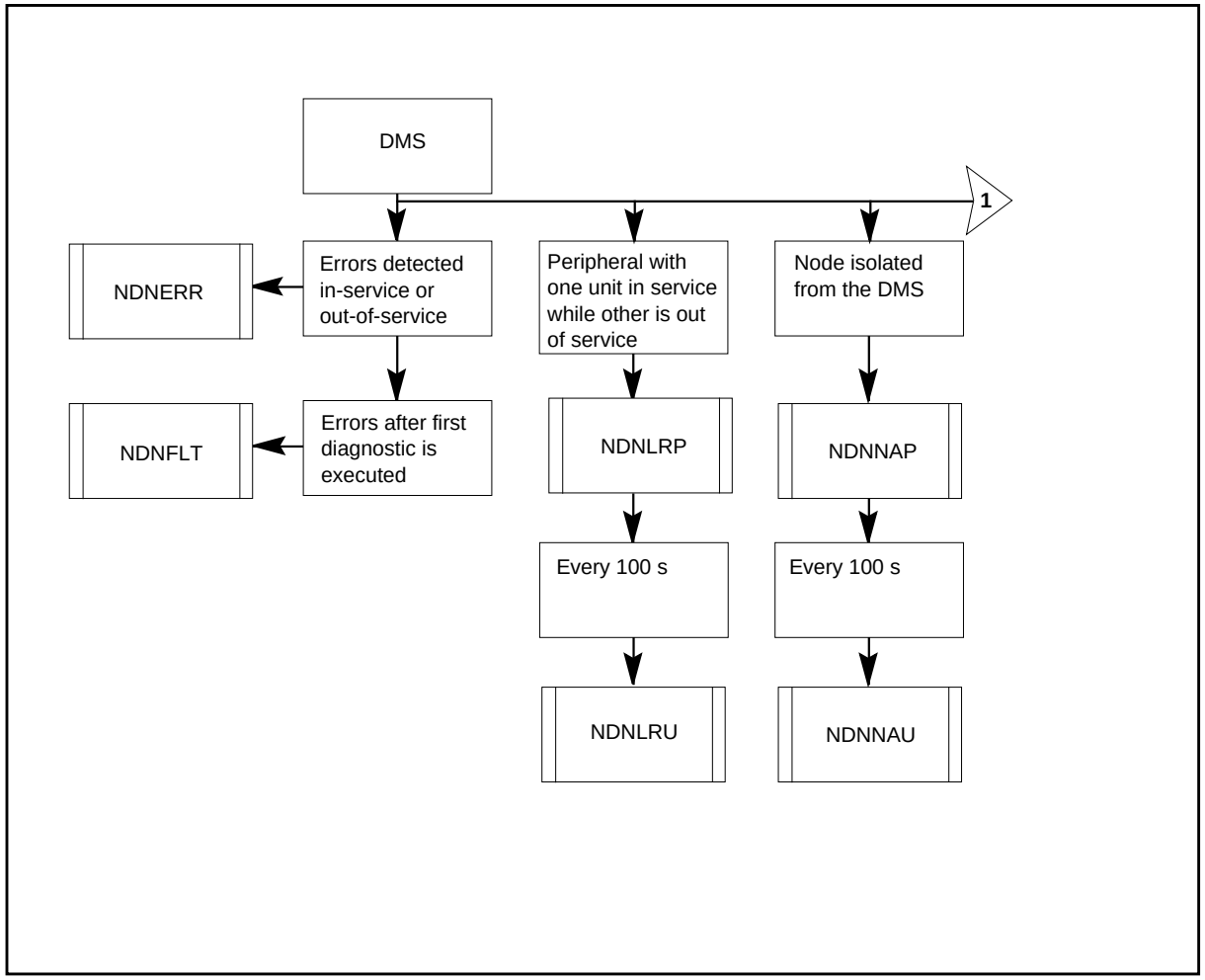
Associated functionality codes

The associated functionality codes for OM group NMTCNODE appear in the following table.

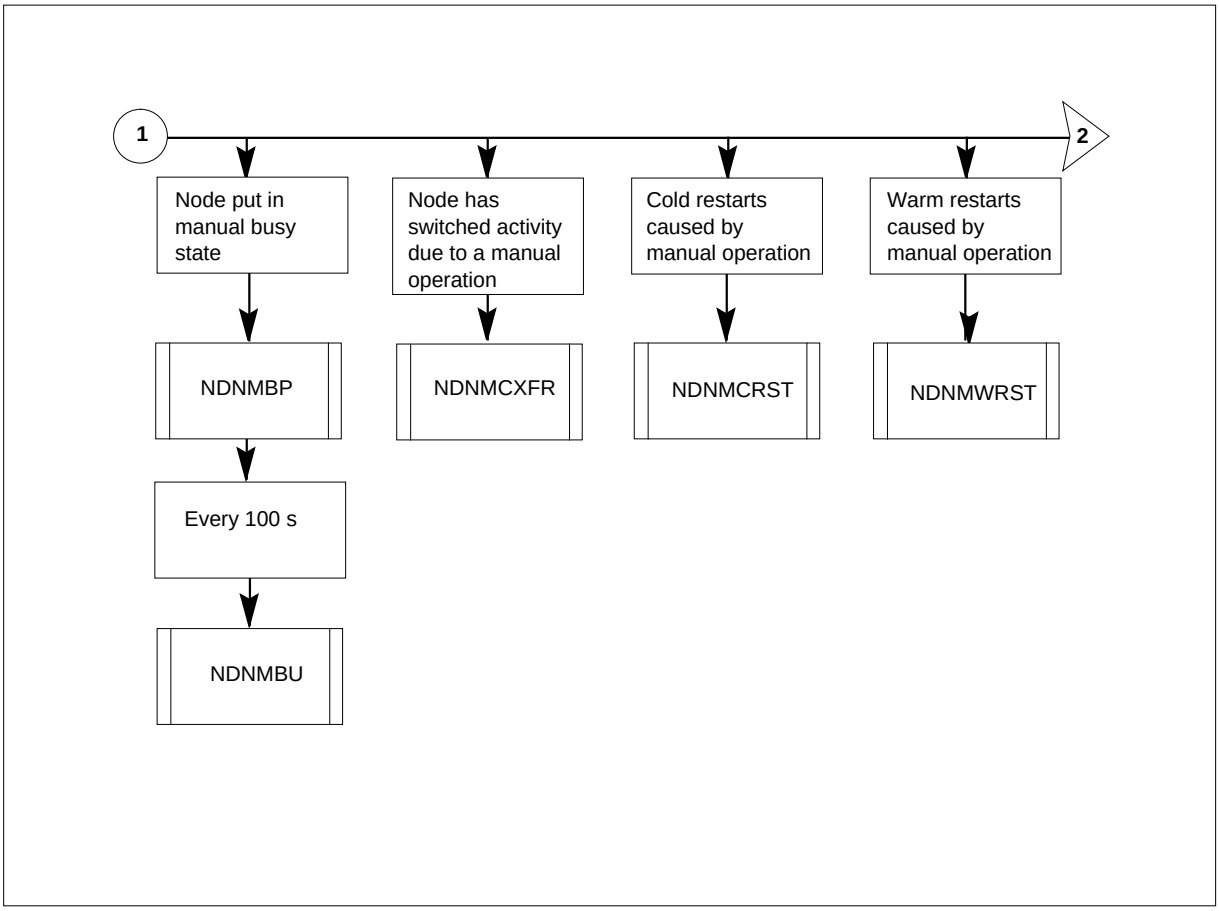
Functionality	Code
Base Node Maintenance	NTX944AA

OM group NMTCNODE (continued)

OM group NMTCNODE registers

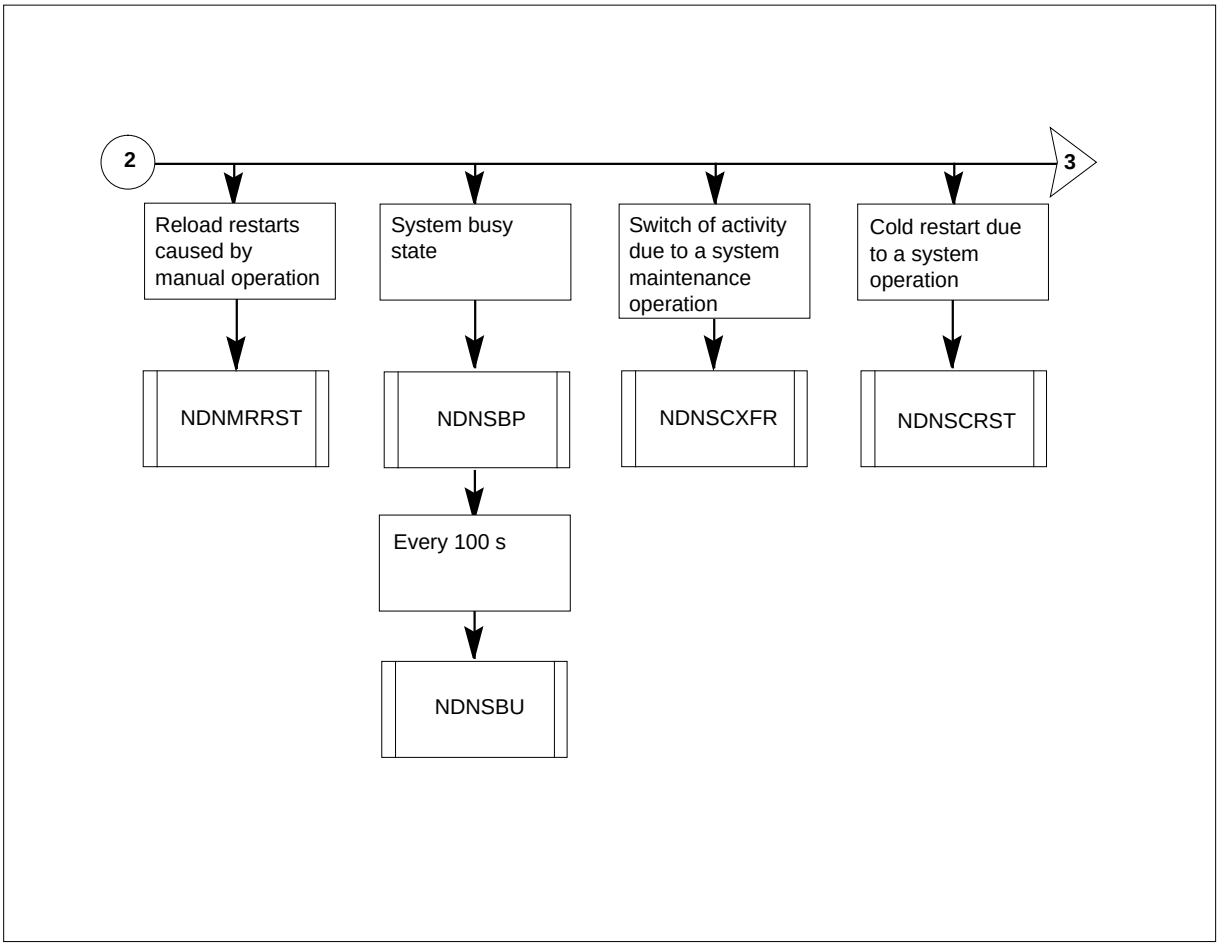


OM group NMTCNODE registers (continued)

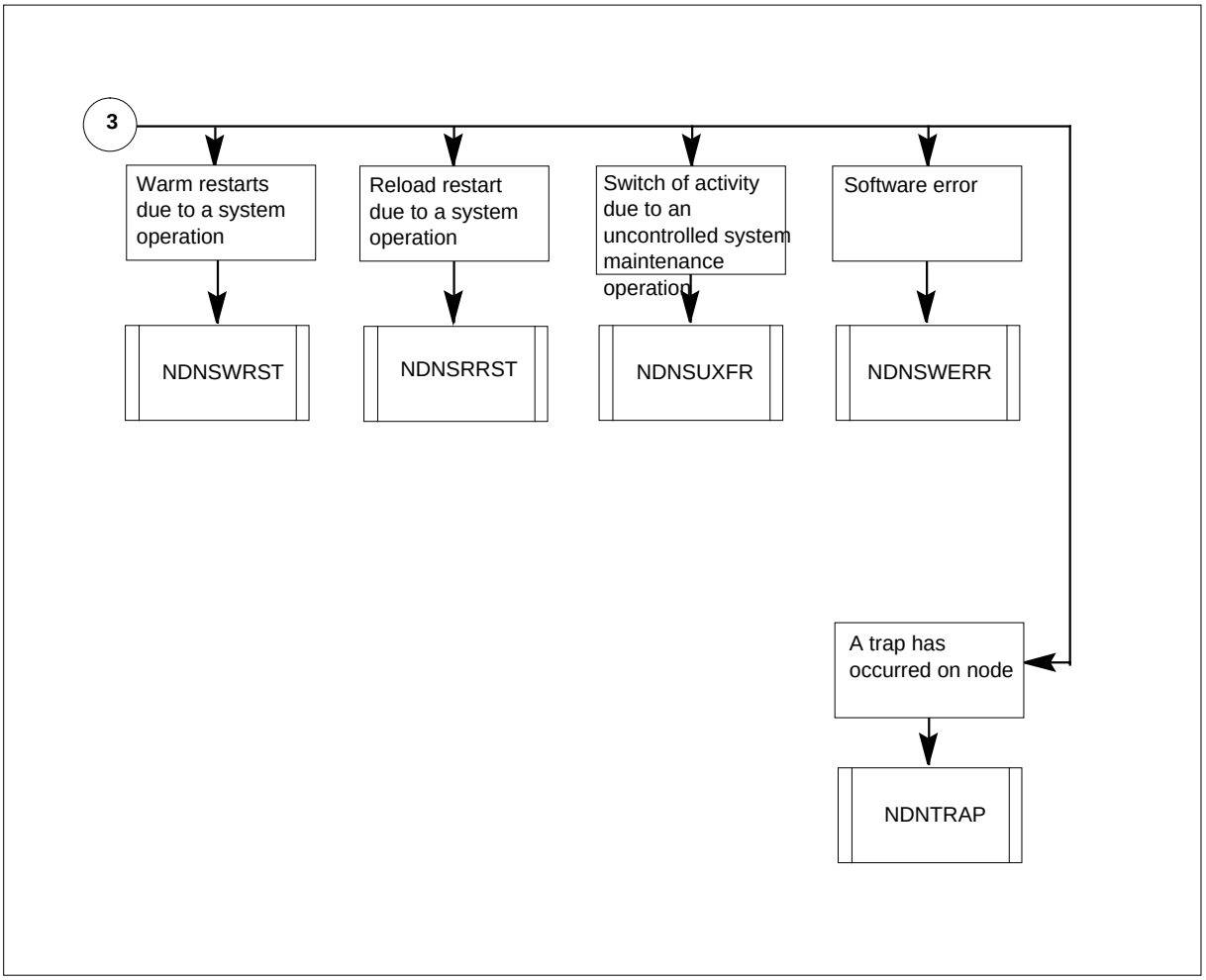


OM group NMTCNODE (continued)

OM group NMTCNODE registers (continued)



OM group NMTCNODE registers (continued)



Register NDNERR

Node maintenance node errors (NDNERR)

Register NDNERR counts the number of errors the system detects in an in-service or out-of-service node. Register NDNERR counts errors if further action is or is not taken on these errors. The events counted can range from one-time hits to total failures.

This register increases when an application on the node reports an error that is a result of one of the following:

- results from a manual maintenance action
- a system maintenance action

OM group NMTCNODE (continued)

Register NDNERR release history

Register NDNERR was introduced in BCS33.

Associated registers

Register NDNSWERR counts the number of times a software error occurs on a node.

Register NDNTRAP counts the number of times a trap occurs on a node.

Associated logs

There are no associated logs.

Register NDNFLT

Node maintenance node faults (NDNFLT)

Register NDNFLT counts the number of errors that persist after diagnostics are executed. The fault register only increases when the first diagnostic attempt does not clear the error. Additional tests of the error condition do not increase the fault register.

Register NDNFLT release history

Register NDNFLT was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDNLRP

Node maintenance node loss of redundancy peg (NDNLRP)

Register NDNLRP counts the number of peripherals that have one unit in service while another unit goes out of service. A count of zero occurs in NDNLRP if all units of the node are in service.

Register NDNLRP release history

Register NDNLRP was introduced in BCS33.

Associated registers

NDNLRU

Associated logs

There are no associated logs.

Register NDNLRU

Node maintenance node loss of redundancy usage (NDNLRU)

Register NDNLRU counts the length of time that the node has one unit in service while another unit is out of service. The count is based on a sample of the node that the system takes every 100 s.

Register NDNLRU release history

Register NDNLRU was introduced in BCS33.

Associated registers

NDNLRP

Associated logs

There are no associated logs.

Register NDNMBP

Node maintenance node ManB peg (NDNMBP)

Register NDNMBP counts the number of times that a node goes into the manual busy (ManB) state.

Register NDNMBP release history

Register NDNMBP was introduced in BCS33.

Associated registers

NDNMBU

Associated logs

There are no associated logs.

Register NDNMBU

Node maintenance node ManB usage (NDNMBU)

Register NDNMBU counts the length of time that the node is in the manual busy (ManB) state. The count is based on a sample of the node that the system takes every 100 s.

Register NDNMBU release history

Register NDNMBU was introduced in BCS33.

OM group NMTCNODE (continued)

Associated registers

NDNMBP

Associated logs

There are no associated logs.

Register NDNMCRST

Node maintenance node manual cold restarts (NDNMCRST)

Register NDNMCRST counts the number of cold restarts that occur on a node as the result of manual operations.

Register NDNMCRST release history

Register NDNMCRST was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDNMCXFR

Node maintenance node manual-controlled transfers (NDNMCXFR)

Register NDNMCXFR counts the number of times that a node switches activity due to a manual operation. A manual transfer is a controlled switch.

The count is correct for sync-matched node designs only. Other node designs have a count that is always zero.

Register NDNMCXFR release history

Register NDNMCXFR was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDNMRRST

Node maintenance node manual reload restarts (NDNMRRST)

Register NDNMRRST counts the number of reload restarts that occur on a node as a result of manual operations.

Register NDNMRRST release history

Register NDNMRRST was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDNMWRST

Node maintenance node manual warm restarts (NDNMWRST)

Register NDNMWRST counts the number of warm restarts that occur on a node as a result of manual operations.

Register NDNMWRST release history

Register NDNMWRST was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDNNAP

Node maintenance node not-available peg (NDNNAP)

Register NDNNAP counts the number of times a node is isolated from the DMS.

Register NDNNAP release history

Register NDNNAP was introduced in BCS33.

Associated registers

NDNNAP

Associated logs

There are no associated logs.

OM group NMTCNODE (continued)

Register NDNNAU

Node maintenance node not-available usage (NDNNAU)

Register NDNNAU counts the length of time the node is isolated from the DMS. The count is based on a sample of the node that the system takes every 100 s.

Register NDNNAU release history

Register NDNNAU was introduced in BCS33.

Associated registers

NDNNAP

Associated logs

There are no associated logs.

Register NDNSBP

Node maintenance node SYSB peg (NDNSBP)

Register NDNSBP counts the number of times a node goes into the system busy (SYSB) state.

Register NDNSBP release history

Register NDNSBP was introduced in BCS33.

Associated registers

NDNSBU

Associated logs

There are no associated logs.

Register NDNSBU

Node maintenance node SYSB usage (NDNSBU)

Register NDNSBU counts the length of time that a node is in the system busy (SYSB) state.

Register NDNSBU release history

Register NDNSBU was introduced in BCS33.

Associated registers

NDNSBP

Associated logs

There are no associated logs.

Register NDNSCRST

Node maintenance node system-controlled restarts (NDNSCRST)

Register NDNSCRST counts the number of times a cold restart occurs on a node as the result of a system operation.

Register NDNSCRST release history

Register NDNSCRST was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDNSCXFR

Node maintenance node system-controlled transfers (NDNSCXFR)

Register NDNSCXFR counts the number of times a node switches activity as the result of a controlled system maintenance operation. “Controlled" means that the node maintenance system is able to prepare for the switch of activity before it occurs.

The count is correct for sync-matched node designs only. Other node designs have a count that is always zero.

Register NDNSCXFR release history

Register NDNSCXFR was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDNSRRST

Node maintenance node system reload restarts (NDNSRRST)

Register NDNSRRST counts the number of reload restarts that occur on a node as the result of system operations.

OM group NMTCNODE (continued)

Register NDNSRRST release history

Register NDNSRRST was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDNSUXFR

Node maintenance node system uncontrolled transfers (NDNSUXFR)

Register NDNSUXFR counts the number of times a node switches activity as the result of uncontrolled system maintenance operations. “Uncontrolled" means that the node maintenance cannot prepare for the switch of activity before it happens.

The count is correct for sync-matched node designs only. Other node designs have a count that is always zero.

Register NDNSUXFR release history

Register NDNSUXFR was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDNSWERR

Node maintenance node software errors (NDNSWERR)

Register NDNSWERR counts the number of times a software error occurs on a node.

Register NDNSWERR release history

Register NDNSWERR was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDNSWRST

Node maintenance node system warm restarts (NDNSWRST)

Register NDNSWRST counts the number of warm restarts that occur on a node as the result of system operations.

Register NDNSWRST release history

Register NDNSWRST was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDNTRAP

Node maintenance node trap errors (NDNTRAP)

Register NDNTRAP counts the number of trap errors that occur on a node.

Register NDNTRAP release history

Register NDNTRAP was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group NMTCTYPE

OM description

Node maintenance type measurements (NMTCTYPE)

The OM group NMTCTYPE measures the performance of the nodes in each node type. The data provides an indication of the number of system problems and out-of-service occurrences. The system uses register values in the NMTCNODE group to generate the values in the NMTCTYPE group.

This group is only correct for sync-matched node design where the nodes operate in synchronous mode. An example of this design is file processors on an SCPII. While the simplex mode is not in sync:

- consider the simplex mode of operation to be an in-service trouble state
- the registers in this group measure the amount of time the node spends in this state

Release history

The OM group NMTCTYPE was introduced in BCS33.

Registers

The OM group NMTCTYPE registers appear on the MAP terminal as follows:

```
NDTERR      NDTFLT      NDTLRP      NDTLRU
NDTNAP      NDTNAU      NDTMBP      NDTMBU
NDTMCXFR    NDTMCRST    NDTMWRST    NDTMRRST
NDTSBP      NDTSBU      NDTSCXFR    NDTSCRST
NDTSWRST    NDTSRRST    NDTSUXFR    NDTSWERR
NDTTRAP
```

Group structure

The OM group NMTCTYPE provides one tuple for each node type (maximum 1023).

Key field:
INM_NODE_CLASS_T

Info field:
INM_OM_TYPE_INFO_T

Associated OM groups

The following OM groups associate with OM group NMTCTYPE:

- NMTCUNIT—Node maintenance unit measurements
- NMTCNODE—Node maintenance node measurements
- NMTCLINK—Node maintenance link measurements

Associated operational groups

There are no associated operational groups.

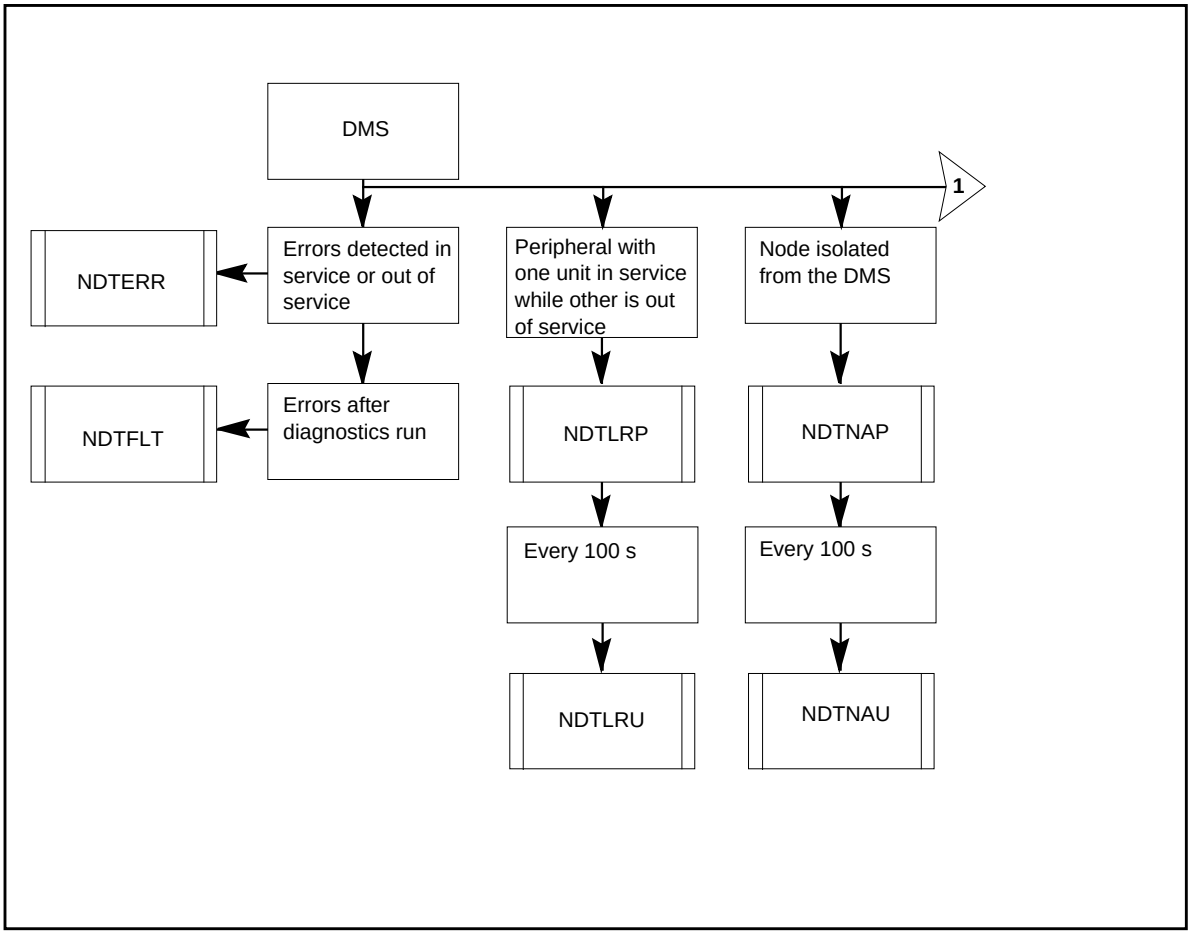
Associated functionality codes

The associated functionality codes for OM group NMTCTYPE are in the following table.

Functionality	Code
Base Node Maintenance	NTX944AA

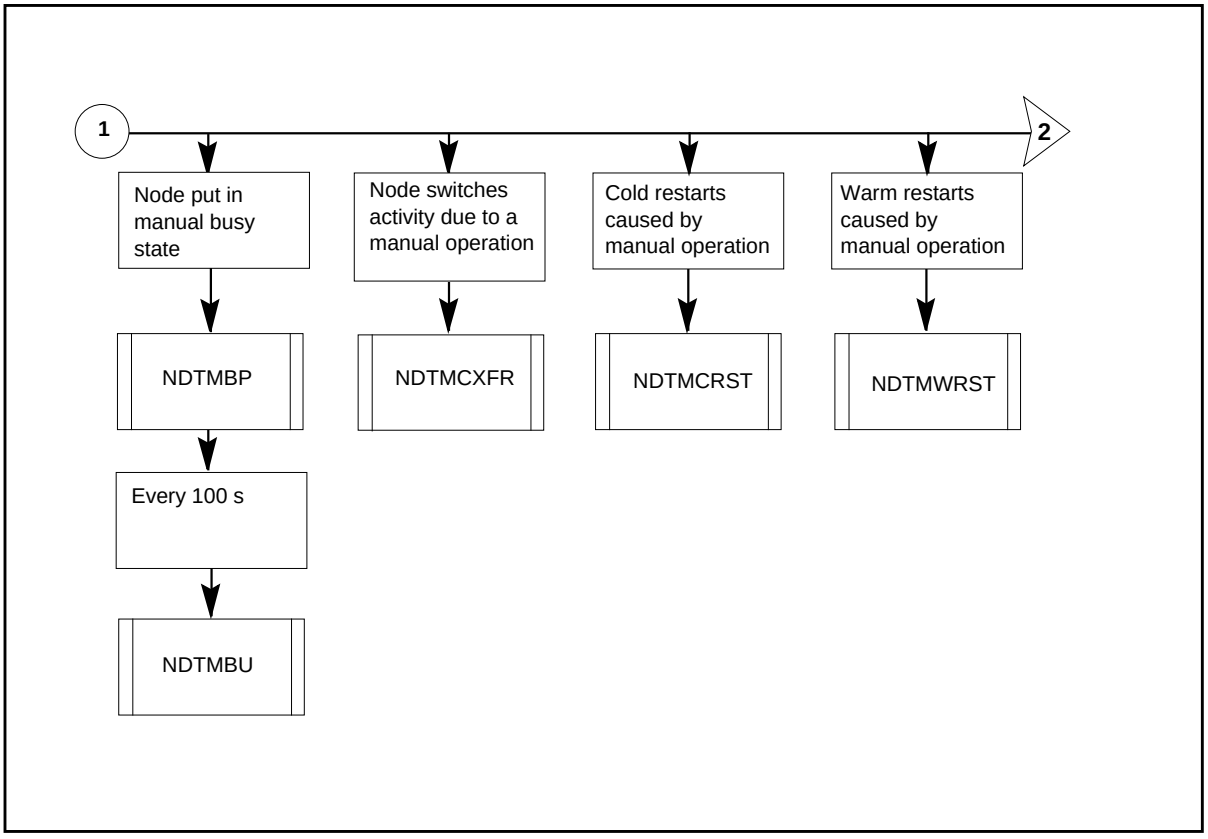
OM group NMTCTYPE (continued)

OM group NMTCTYPE registers



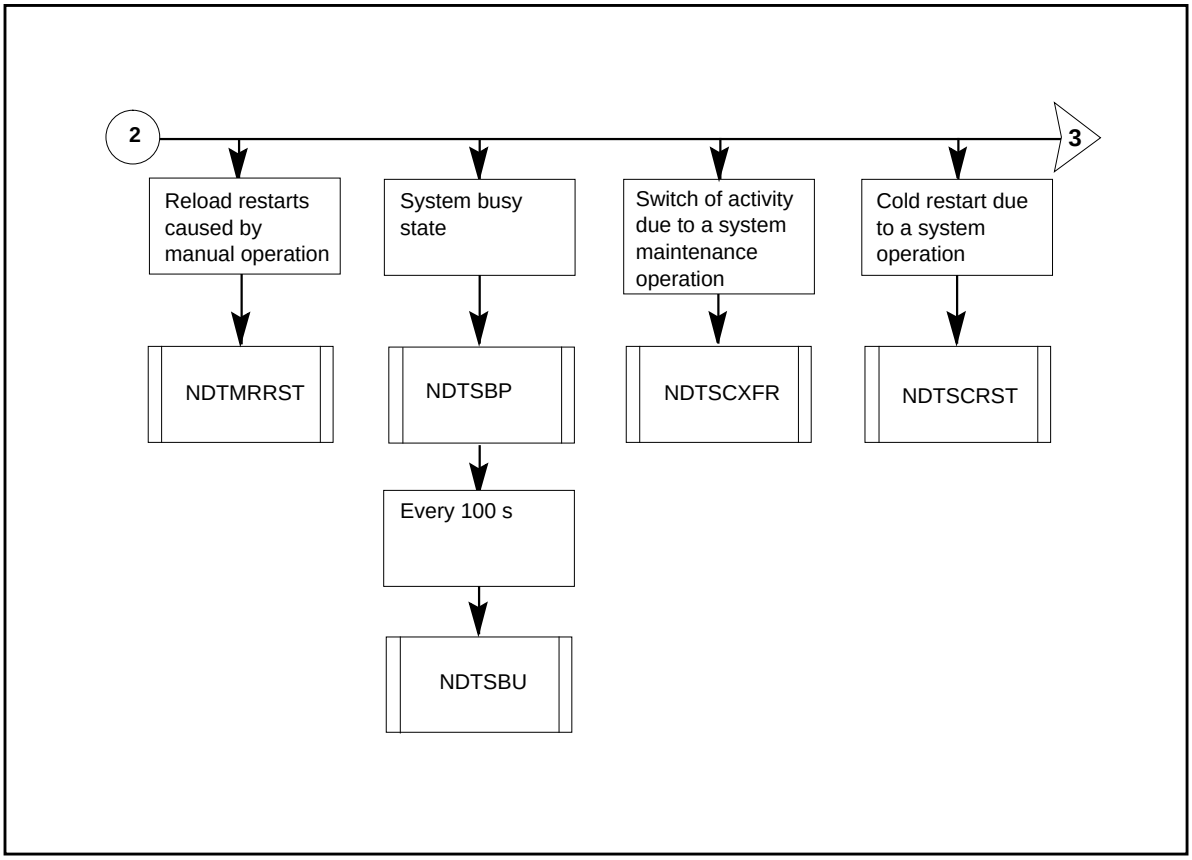
OM group NMTCTYPE (continued)

OM group NMTCTYPE registers (continued)

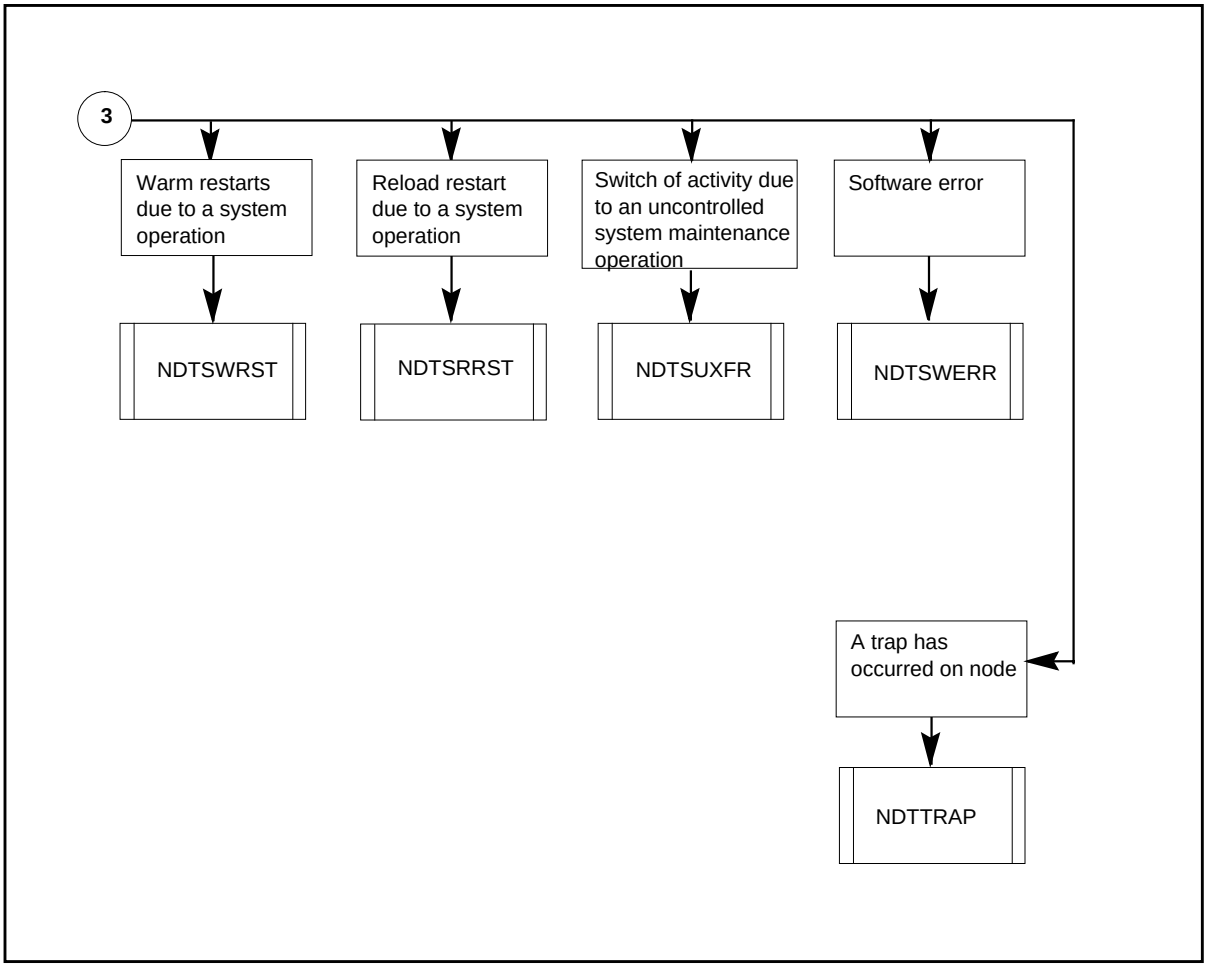


OM group NMTCTYPE (continued)

OM group NMTCTYPE registers (continued)



OM group NMTCTYPE registers (continued)



Register NDTERR

Node maintenance type errors (NDNERR)

Register NDNERR counts the number of errors detected in in-service or out-of-service nodes for each node type. Register NDTERR counts errors if the errors receive or do not receive additional action. The errors counted range from one-time hits to total failures.

Register NDNERR increases when an application on a node reports an error that results from:

- a manual maintenance action
- a system maintenance action

OM group NMTCTYPE (continued)

Register NDTERR release history

Register NDTERR was introduced in BCS33.

Associated registers

Register NDTSWERR counts the number of times a software error occurs on each node type.

Register NDTTRAP counts the number of times a trap occurs on each node type.

Associated logs

There are no associated logs.

Register NDTFLT

Node maintenance type faults (NDTFLT)

Register NDTFLT counts the number of errors that remain after diagnostics run. The register increases if the first diagnostic attempt does not clear the error. Additional tests on the error condition does not cause the register to increase.

Register NDTFLT release history

Register NDTFLT was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDTLRP

Register Node maintenance type loss of redundancy peg (NDTLRP)

Register NDTLRP counts the number of peripherals that have one unit in service while another unit goes out of service. This register counts zero if all units of the node type are in service.

Register NDTLRP release history

Register NDTLRP was introduced in BCS33.

Associated registers

NDTLRU

Associated logs

There are no associated logs.

Register NDTLRU

Node maintenance type loss of redundancy usage (NDTLRU)

Register NDTLRU counts the length of time that each type of node has one unit in service while another unit is out of service. The count is based on node samples the system takes every 100 s.

Register NDTLRU release history

Register NDTLRU was introduced in BCS33.

Associated registers

NDTLRP

Associated logs

There are no associated logs.

Register NDTMBP

Node maintenance type ManB peg (NDTMBP)

Register NDTMBP counts the number of times that each type of node goes into the manual busy (ManB) state.

Register NDTMBP release history

Register NDTMBP was introduced in BCS33.

Associated registers

NDTMBU

Associated logs

There are no associated logs.

Register NDTMBU

Node maintenance type ManB usage (NDTMBU)

Register NDTMBU counts the length of time that each type of node is in the manual busy (ManB) state. The count is based on node samples taken every 100 s.

Register NDTMBU release history

Register NDTMBU was introduced in BCS33.

OM group NMTCTYPE (continued)

Associated registers

NDTMBP

Associated logs

There are no associated logs.

Register NDTMCRST

Node maintenance type manual cold restarts (NDTMCRST)

Register NDTMCRST counts the number of cold restarts that occur on each type of node because of manual operations.

Register NDTMCRST release history

Register NDTMCRST was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDTMCXFR

Node maintenance type manual-controlled transfers (NDTMCXFR)

Register NDTMCXFR counts the number of times that each type of node switches activity because of manual operations. The register always classifies a manual transfer as a controlled switch.

The count is correct for sync-matched node designs only. For other node designs the count is zero.

Register NDTMCXFR release history

Register NDTMCXFR was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDTMRRST

Node maintenance type manual reload restarts (NDTMRRST)

Register NDTMRRST counts the number of reload-restarts that occur on each type of node because of manual operations.

Register NDTMRRST release history

Register NDTMRRST was introduced in BCS33.

Associated registers

There are no associated register.

Associated logs

There are no associated logs.

Register NDTMWRST

Node maintenance type manual warm restarts (NDTMWRST)

Register NDTMWRST counts the number of warm restarts that occur on each type of node because of manual operations.

Register NDTMWRST release history

Register NDTMWRST was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDTNAP

Node maintenance type not-available peg (NDTNAP)

Register NDTNAP counts the number of times the system isolates each type of node from the DMS.

Register NDTNAP release history

Register NDTNAP was introduced in BCS33.

Associated registers

NDTNAU

Associated logs

There are no associated logs.

OM group NMTCTYPE (continued)

Register NDTNAU

Node maintenance type not-available usage (NDTNAU)

Register NDTNAU counts the length of time that the system isolates each type of node from the DMS. The count is based on node samples the system takes every 100 s.

Register NDTNAU release history

Register NDTNAU was introduced in BCS33.

Associated registers

NDTNAP

Associated logs

There are no associated logs.

Register NDTSBP

Node maintenance type SYSB peg (NDTSBP)

Register NDTSBP counts the number of times each type of node goes into the system busy (SYSB) state.

Register NDTSBP release history

Register NDTSBP was introduced in BCS33.

Associated registers

NDTSBU

Associated logs

There are no associated logs.

Register NDTSBU

Node maintenance type SYSB usage (NDTSBU)

Register NDTSBU counts the length of time each type of node is in the system busy (SYSB) state.

Register NDTSBU release history

Register NDTSBU was introduced in BCS33.

Associated registers

NDTSBP

Associated logs

There are no associated logs.

Register NDTSCRST

Node maintenance type system cold restart (NDTSCRST)

Register NDTSCRST counts the number of times a cold restart occurs on each type of node because of a system operation.

Register NDTSCRST release history

Register NDTSCRST was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDTSCXFR

Node maintenance type system-controlled transfers (NDTSCXFR)

Register NDTSCXFR counts the number of times each type of node switches activity because of a controlled system maintenance operation. “Controlled" means that node maintenance can prepare for the switch of activity before it occurs.

The count is correct for sync-matched node only. For other node designs the count is zero.

Register NDTSCXFR release history

Register NDTSCXFR was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDTSRRST

Node maintenance type system reload restarts (NDTSRRST)

Register NDTSRRST counts the number of reload restarts that occur on each type of node because of system operations.

OM group NMTCTYPE (continued)

Register NDTSRRST release history

Register NDTSRRST was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDTSUXFR

Node maintenance type system uncontrolled transfers (NDTSUXFR)

Register NDTSUXFR counts the number of times each type of node switches activity because of an uncontrolled system maintenance operation. “Uncontrolled" means that node maintenance cannot prepare for the switch of activity before it occurs.

The count is correct for sync-matched node designs. For other node designs the count is zero.

Register NDTSUXFR release history

Register NDTSUXFR was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDTSWERR

Node maintenance type software errors (NDTSWERR)

Register NDTSWERR counts the number of times a software error occurs on each type of node.

Register NDTSWERR release history

Register NDTSWERR was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDTSWRST

Node maintenance type system warm restarts (NDTSWRST)

Register NDTSWRST counts the number of warm restarts that occur on each type of node because of system operations.

Register NDTSWRST release history

Register NDTSWRST was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDTTRAP

Node maintenance type trap errors (NDTTRAP)

Register NDTTRAP counts the number of traps that occur on each type of node.

Register NDTTRAP release history

Register NDTTRAP was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group NMTCUNIT

OM description

Node maintenance unit measurements (NMTCUNIT)

Register NMTCUNIT measures the maintenance reliability performance of one unit of a node. The data provides an indication of the number of system problems and out-of-service occurrences.

This group is not correct for sync-matched node design where the nodes operate in sychronous mode. File processors on an SCPII are examples of sync-matched node design.

Release history

The OM group NMTCUNIT was introduced in BCS33.

Registers

The OM group NMTCUNIT registers appear on the MAP terminal as follows:

NDUERR	NDUFLT	NDUNAP	NDUNAU
NDUMBP	NDUMBU	NDUMCRST	NDUMWRST
NDUMRRST	NDUSBP	NDUSBU	NDUSCRST
NDUSWRST	NDUSRRST	NDUSWERR	NDUTRAP

Group structure

The OM group NMTCUNIT provides two tuples for each node.

Key field:
There is no Key field

Info field:
INM_OM_UNIT_INFO_T

Associated OM groups

The following OM groups associate with OM group NMTCUNIT:

- NMTCTYPE—Node maintenance type measurements
- NMTCNODE—Node maintenance node measurements
- NMTCLINK—Node maintenance link measurements

Associated functional groups

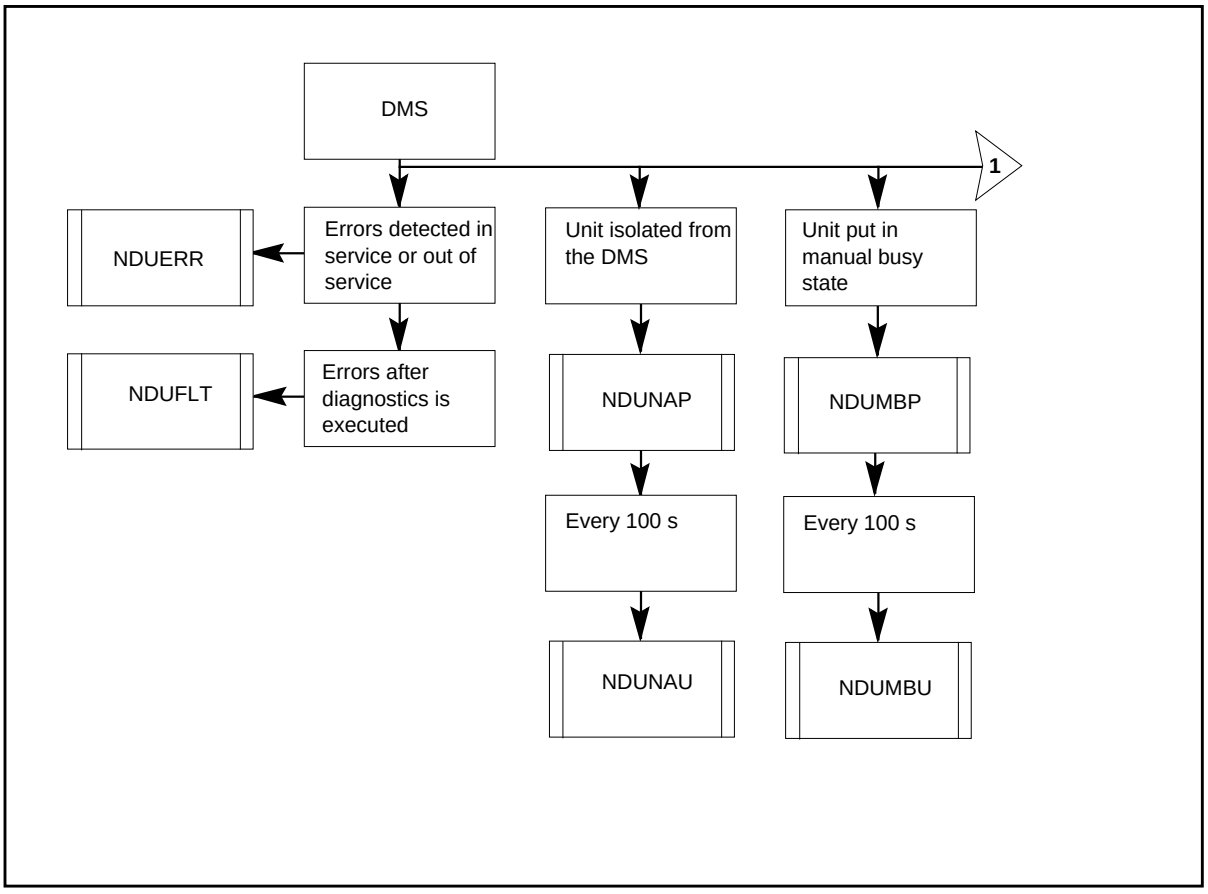
There are no associated functional groups.

Associated functionality codes

The associated functionality codes for OM group NMTCUNIT are in the following table.

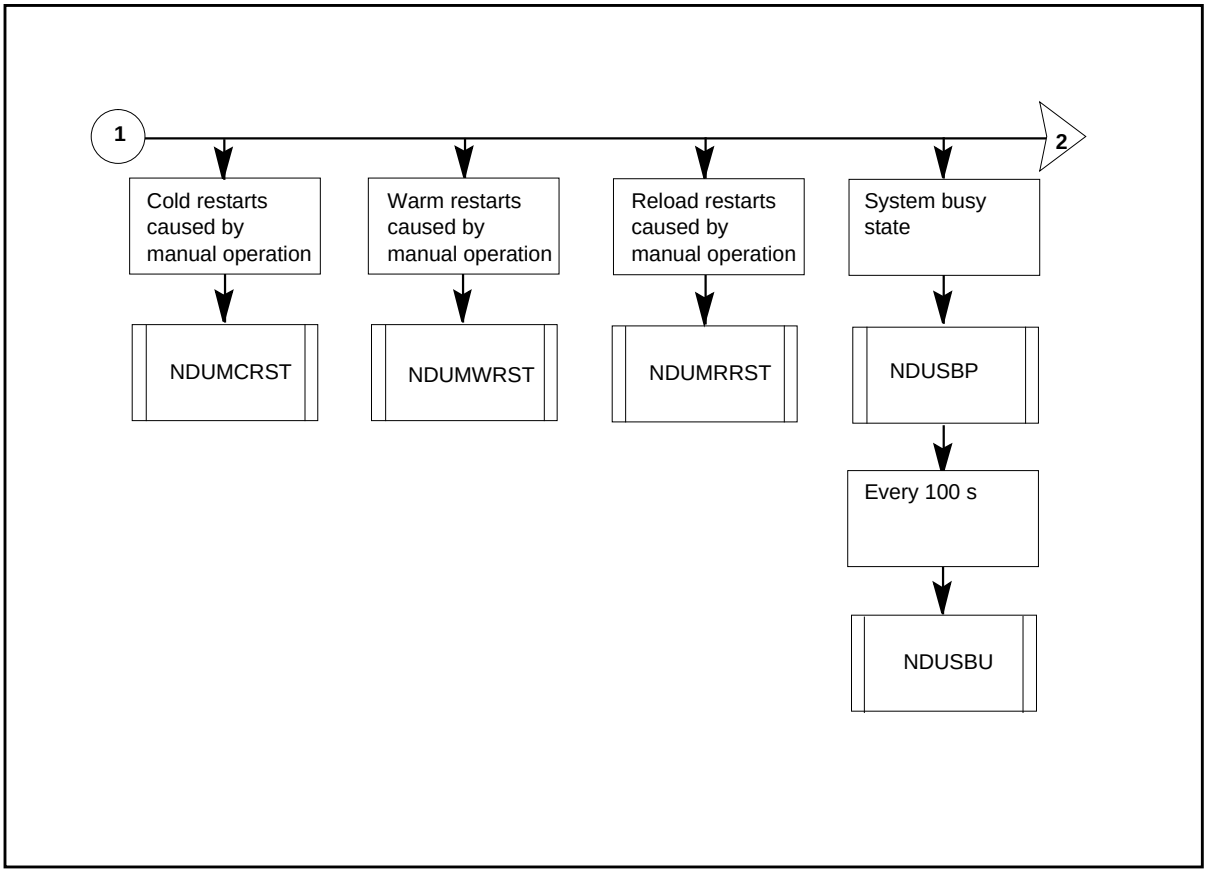
Functionality	Code
Base Node Maintenance	NTX944AA

OM group NMTCUNIT registers

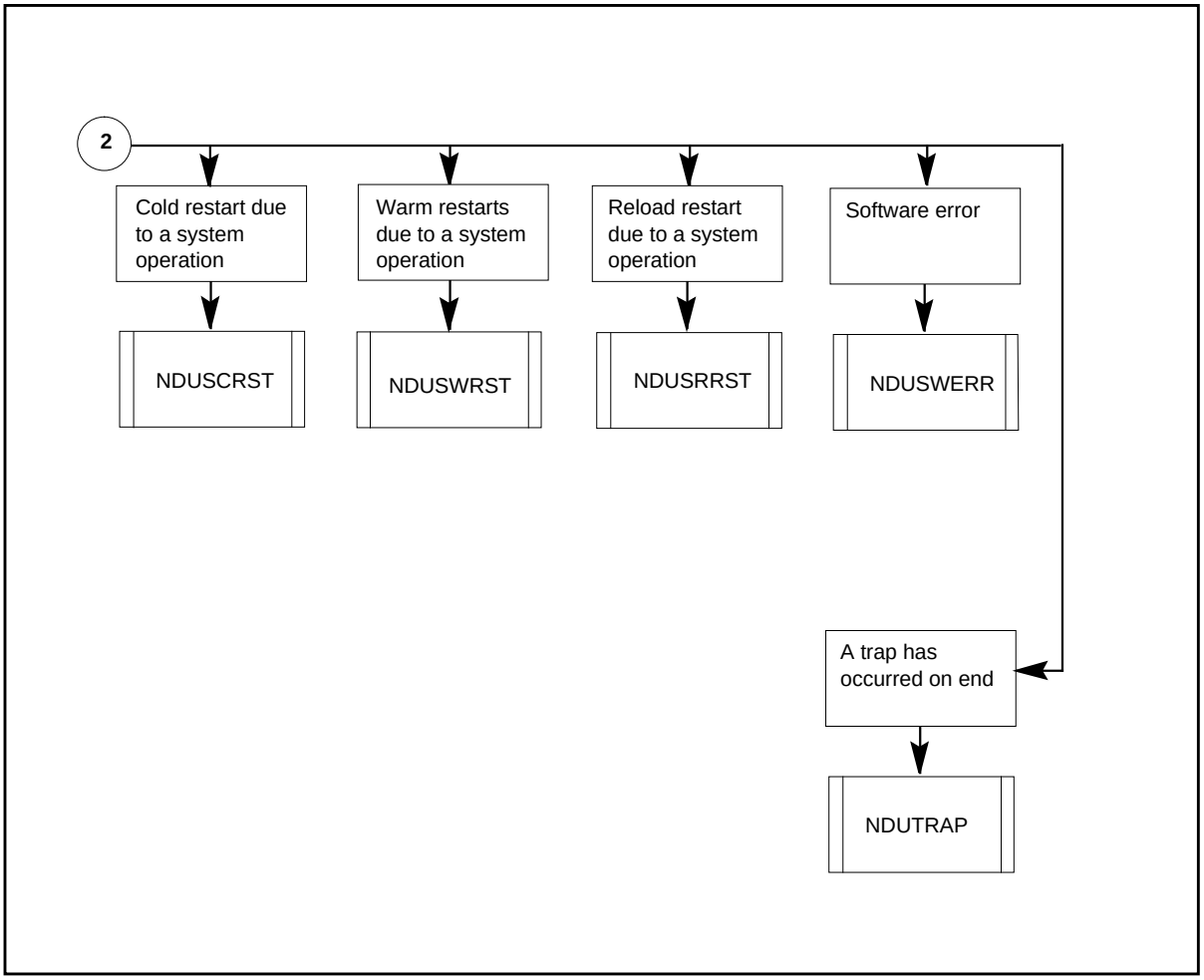


OM group NMTCUNIT (continued)

OM group NMTCUNIT registers (continued)



OM group NMTCUNIT registers (continued)



Register NDUERR

Node maintenance unit errors (NDUERR)

Register NDUERR counts the number of errors in an in-service or out-of-service unit of a node. The register counts errors even if the system performs additional action on these errors. The events counted range from one-time hits to total failures.

This register increases when an application on the unit of a node reports an error. The error results from either a manual maintenance action or a system maintenance action.

Register NDUERR release history

Register NDUERR was introduced in BCS33.

OM group NMTCUNIT (continued)

Associated registers

Register NDUSWERR counts the number of software errors that occur on a unit of a node.

Register NDUTRAP counts the number of traps that occur on a unit of a node.

Associated logs

There are no associated logs.

Register NDUFLT

Node maintenance unit faults (NDUFLT)

Register NDUFLT counts the errors that remain after diagnostics run. The fault register increases when the first diagnostic attempt does not clear the error. Additional tests of the error condition do not increase the fault register.

Register NDUFLT release history

Register NDUFLT was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDUMBP

Node maintenance unit ManB peg (NDUMBP)

Register NDUMBP counts the number of times the unit goes into the manual busy (ManB) state.

Register NDUMBP release history

Register NDUMBP was introduced in BCS33.

Associated registers

NDUMBU

Associated logs

There are no associated logs.

Register NDUMBU

Node maintenance unit ManB usage (NUTMBU)

Register NUTMBU counts the length of time that a unit is in the manual busy (ManB) state. This count is based on a sample the system takes every 100 s.

Register NDUMBU release history

Register NDUMBU was introduced in BCS33.

Associated registers

NDUMBP

Associated logs

There are no associated logs.

Register NDUMCRST

Node maintenance unit manual cold restarts (NDUMCRST)

Register NDUMCRST counts the number of cold restarts that occur on a unit of a node because of manual operations.

Register NDUMCRST release history

Register NDUMCRST was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDUMRRST

Node maintenance unit manual reload restarts (NDUMRRST)

Register NDUMRRST counts the number of reload restarts that occur on a unit because of manual operations.

Register NDUMRRST release history

Register NDUMRRST was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group NMTCUNIT (continued)

Register NDUMWRST

Node maintenance unit manual warm restarts (NDUMWRST)

Register NDUMWRST counts the number of warm restarts that occur on a unit because of manual operations.

Register NDUMWRST release history

Register NDUMWRST was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDUNAP

Node maintenance unit not-available peg (NDUNAP)

Register NDUNAP counts the number of times the system isolates a unit from the DMS.

Register NDUNAP release history

Register NDUNAP was introduced in BCS33.

Associated registers

NDUNAU

Associated logs

There are no associated logs.

Register NDUNAU

Node maintenance unit not-available usage (NDUNAU)

Register NDUNAU counts the length of time the system isolates a unit from the DMS. The count is based on a sample the system takes every 100 s.

Register NDUNAU release history

Register NDUNAU was introduced in BCS33.

Associated registers

NDUNAP

Associated logs

There are no associated logs.

Register NDUSBP

Node maintenance unit SYSB peg (NDUSBP)

Register NDUSBP counts the number of times that the system puts a unit into the system busy (SYSB) state.

Register NDUSBP release history

Register NDUSBP was introduced in BCS33.

Associated registers

NDUSBU

Associated logs

There are no associated logs.

Register NDUSBU

Node maintenance unit SYSB usage (NDUSBU)

Register NDUSBU counts the length of time a unit is in the system busy (SYSB) state.

Register NDUSBU release history

Register NDUSBU was introduced in BCS33.

Associated registers

NDUSBP

Associated logs

There are no associated logs.

Register NDUSCRST

Node maintenance unit system-controlled restarts (NDUSCRST)

Register NDUSCRST counts the number of cold restarts that occur on a unit because of system operations.

Register NDUSCRST release history

Register NDUSCRST was introduced in BCS33.

OM group NMTCUNIT (continued)

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDUSRRST

Node maintenance unit system reload restarts (NDUSRRST)

Register NDUSRRST counts the number of reload restarts that occur on a unit because of system operations.

Register NDUSRRST release history

Register NDUSRRST was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDUSWERR

Node maintenance unit software errors (NDUSWERR)

Register NDUSWERR counts the number of software errors that occur on a unit.

Register NDUSWERR release history

Register NDUSWERR was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDUSWRST

Node maintenance unit system warm restarts (NDUSWRST)

Register NDUSWRST counts the number of warm restarts that occur on a unit because of system operations.

Register NDUSWRST release history

Register NDUSWRST was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Register NDUTRAP

Node maintenance unit trap errors (NDUTRAP)

Register NDUTRAP counts the number of traps that occur on a unit.

Register NDUSRRST release history

Register NDUTRAP was introduced in BCS33.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group NRS

OM description

Network resource selector (NRS)

The OM group NRS provides information on the use of network resource selectors (NRS). The modem pools (MP) are the only NRS type that the system monitors.

Release history

The OM group NRS was introduced in BCS20.

BCS29

These features are registers that already exist and count attempts by ISDN terminals to access modem pools.

BCS25

This feature has NRSNMP added.

BCS22

These features are registers modified to add definition for maintenance modem pools.

Registers

The OM group NRS registers appear on the MAP terminal as follows:

NRSRES	NRSFRES	NRSCON	NRSFCON
NRSOVFL	NRSRESU	NRSCONU	NRSMBU
NRSSBU	NRSNMP		

Group structure

The OM group NRS provides one tuple for each resource CLLI.

Key field:
Resource CLLI

Info field:
Resource type. The only correct resource type for NRS isMP.

Associated OM groups

There are no associated OM groups.

Associated functional groups

There are no associated functional groups.

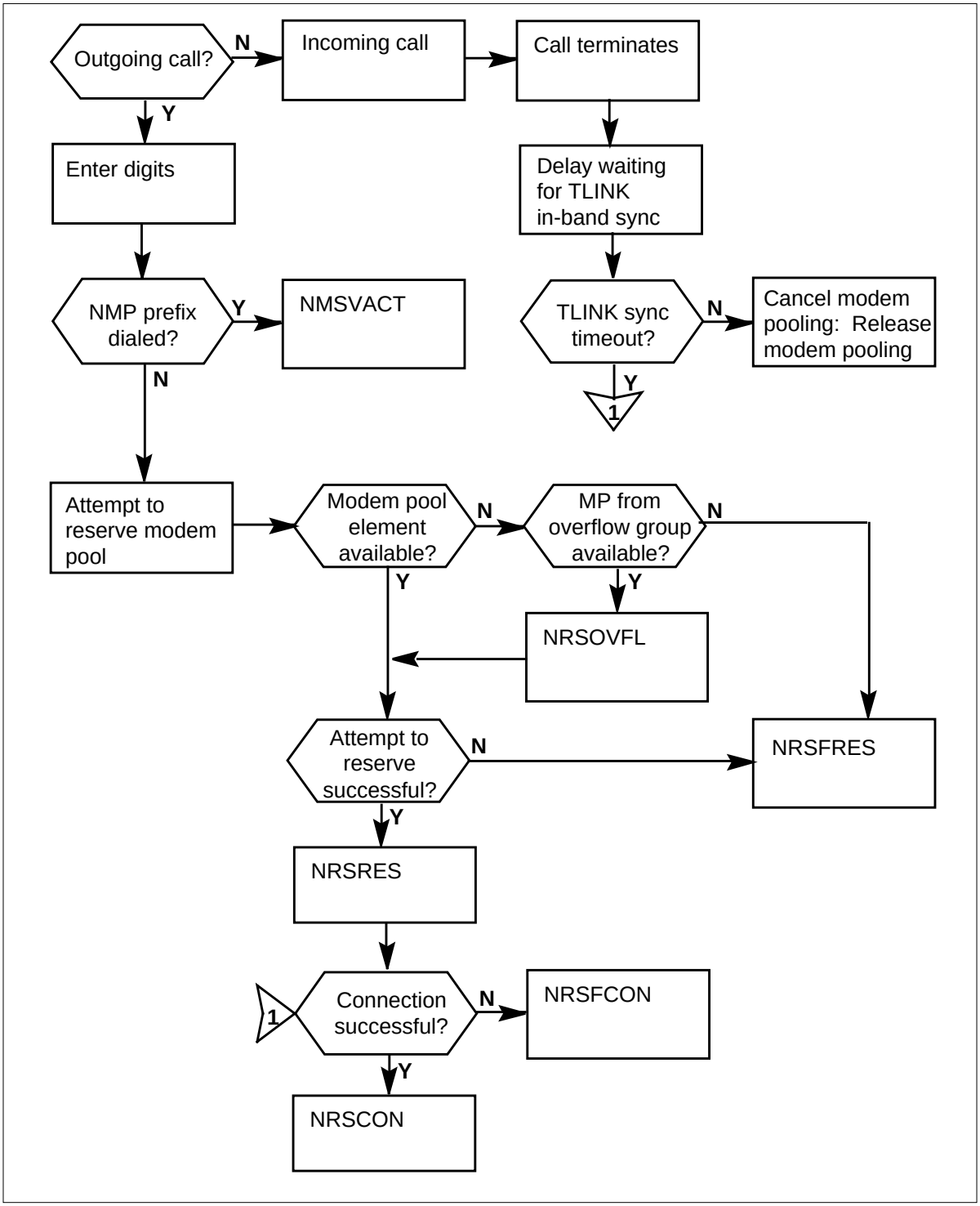
Associated functionality codes

The associated functionality codes for OM group NRS are in the following table.

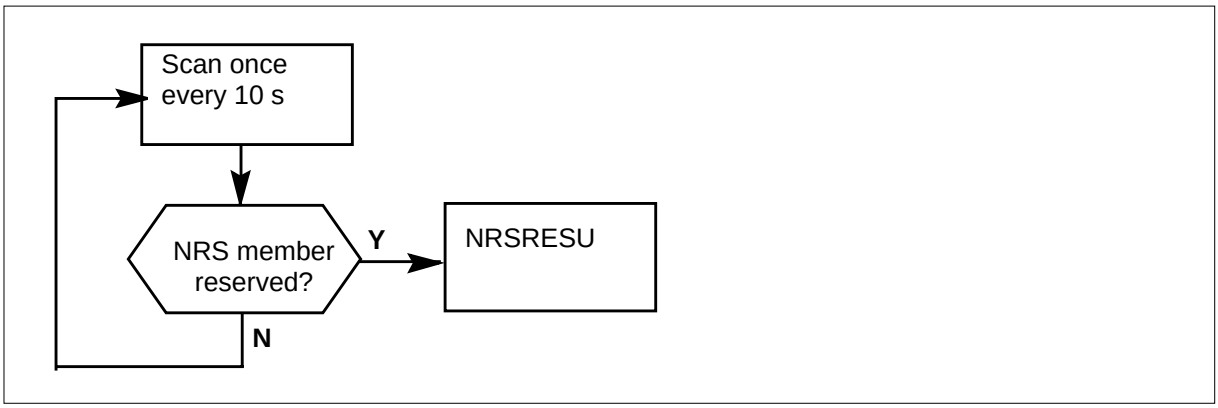
Functionality	Code
Datapath-Modem Pooling	NTX251AA

OM group NRS (continued)

OM group NRS registers

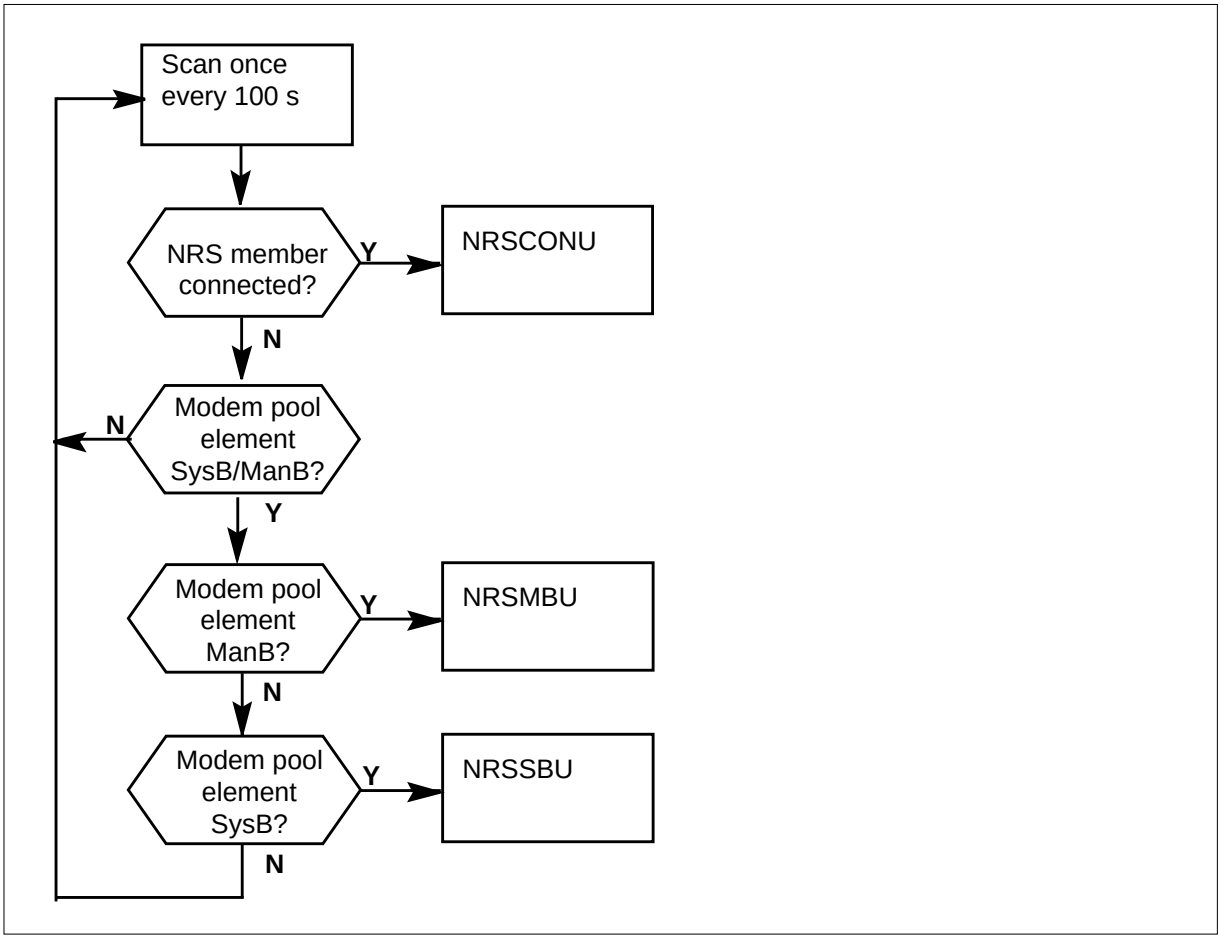


OM group NRS reserved use registers



OM group NRS (continued)

OM group NRS use registers



Register NRSCON

Successful connections by network resource selectors (NRSCON)

Register NRSCON counts successful connections made by the network resource selector.

An attempt to connect a network resource selector is successful if a modem pool connects when a call process sets up. The attempt is also successful if a maintenance modem pool connects to the modem pool under test.

Register NRSCON release history

Register NRSCON was introduced in BCS20.

BCS22

Register modified to add definition for maintenance modem pools.

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NRSCONU

Connected usage (NRSCONU)

Register NRSCONU is a use register. The scan rate is 100 s. Register NRSCONU records if the units of a network resource selector group are correct.

Modem pools connect when a call is in progress. Maintenance modem pools (MMP) connect when the network connection between the MMP and the modem pool under test establishes.

Register NRSCONU release history

Register NRSCONU was introduced before BCS20.

BCS22

Register modified to add definition for maintenance modem pools.

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NRSFCON

Not complete attempts to connect a network resource selector (NRSFCON)

Register NRSFCON counts attempts to connect a network resource selector that are not successful.

OM group NRS (continued)

An attempt to connect a network resource selector is not successful if a modem pool fails to connect during a call setup. The attempt is also unsuccessful if a maintenance modem pool fails to connect to the modem pool under test.

Register NRSFCON release history

Register NRSFCON was introduced before BCS20.

BCS22

Register modified to add definition for maintenance modem pools.

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NRSFRES

Not complete attempts to reserve network resource selector (NRSFRES)

Register NRSFRES counts attempts to reserve a network resource selector that are not successful.

An attempt to reserve a network resource selector is not successful if a modem pool or maintenance modem pool is not correctly removed from the free queue.

Register NRSFRES release history

NRSFRES was introduced before BCS20.

BCS22

Register modified to add definition for maintenance modem pools.

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NRSMBU

Manual busy usage (NRSMBU)

Register NRSMBU is a usage register. The scan rate is 100 s. Register NRSMBU records if units of a network resource selector group are manual busy.

Register NRSMBU release history

Register NRSMBU was introduced before BCS20.

BCS22

Register modified to add definition for maintenance modem pools.

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NRSNMP

No modem pool prefix dial attempts (NRSNMP)

Register NRSNMP increases when a data unit in a network resource selector group dials the entry no modem pool (NMP) prefix. The data unit contains NRS default Outbound.

Register NRSNMP release history

Register NRSNMP was introduced before BCS25.

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NRSOVFL

Network resource selector overflow (NRSOVFL)

OM group NRS (continued)

Register NRSOVFL increases when an NRS does not have any free units. The NRS overflows to another group to find a free unit.

Register NRSOVFL release history

Register NRSOVFL was introduced before BCS20.

BCS22

This feature is a register modified to add definition for maintenance modem pools.

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NRSRES

Successful attempts to reserve network resource selector (NRSRES)

Register NRSRES counts successful attempts to reserve a unit of a network resource selector.

An attempt to reserve a unit of a network resource selector is successful if the system removes a modem from the free queue. The system uses the modem for call processing or maintenance.

Register NRSRES release history

Register NRSRES was introduced before BCS20.

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NRSRESU

Reserved usage (NRSRESU)

Register NRSRESU is a usage register. The scan rate is 10 s. Register NRSRESU records if units of a network resource selector group are reserved.

The system reserves modem pools and maintenance modem pools when the system takes these pools off the free queue.

Register NRSRESU release history

Register NRSRESU was introduced in BCS20.

BCS22

This feature is a register modified to add definition for maintenance modem pools.

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NRSSBU

System busy usage (NRSSBU)

Register NRSSBU is a usage register. The scan rate is 100 s. Register NRSSBU records if units of a network resource selector group are system busy.

Register NRSSBU release history

Register NRSSBU was introduced in BCS20.

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

OM group NSC

OM description

Number services code call summary (NSC)

The OM group NSC provides summary information on number services code (NSC) calls. The NSC calls require access to service control point (SCP) databases. The OM group NSC indicates the grade of service provided by a service switching point (SSP).

Release history

OM group NSC was introduced in BCS21.

BCS36

Register NSCEIGHT increases for all E008 free phone service (FPS) calls that originate with any FPS service access code. Register NSCEIGHT only increases if a change indicator is present in the service control point response.

BCS34

Value MAPHLR was introduced to the key field for the NSC service MAP home location register (MAPHLR). Current registers NSCQUERY, NSCFPRIQ, NSCABNBS, NSCSFLTO, and NSCTIOVF increase for MAPHLR queries.

BCS32

Enhanced 800 Service (E800) for the Australian Intelligent Network requires a different understanding of the following registers:

- NSCSFLEA
- NSCQUERY
- NSCINVY
- NSCFPRIQ
- NSCNSNPA
- NSCEIGHT
- NSCT2TO
- NSCIVCAR

BCS31

Current registers increase for E800 and 800 Plus Service (800+) calls that originate from private exchange (PX) trunks.

BCS27

Software changed to include counts of incoming intertoll Signaling System 7 (SS7) calls to an access tandem. The access tandem requires an 800-database query.

BCS26

Private virtual network (PVN) was introduced to counts in current registers and two new registers that were introduced.

BCS22

Nine registers were introduced to count 800 calls.

Registers

The OM group NSC registers appear on the MAP terminal as follows:

```
NSCORIG         NSCATIN         NSCTIOVF        NSCSFLTO
NSCFLICM        NSCFLICS        NSCABNBS        NSCABNAS
NSCSFLEA        NSCQUERY        NSCINVY         NSCFPRIQ
NSCVACDR        NSCNSNPA        NSCDBOVL        NSCOUTSV
NSCUNSOR        NSCEIGHT        NSCT2TO         NSCIVCAR
```

Group structure

The OM group NSC provides one tuple for each key.

Key field:
Defines NSCORIG (NSC) code in table NSCDEFS.

Info field:
There is no Info field.

The TIMEOUT and OPTIONS information fields in NSCDEFS must contain NSC codes for NSCT2TO increases.

Associated OM groups

NSCACG

Associated functional groups

The following functional groups associated the OM group NSC:

- 800+
- E800
- E008

OM group NSC (continued)

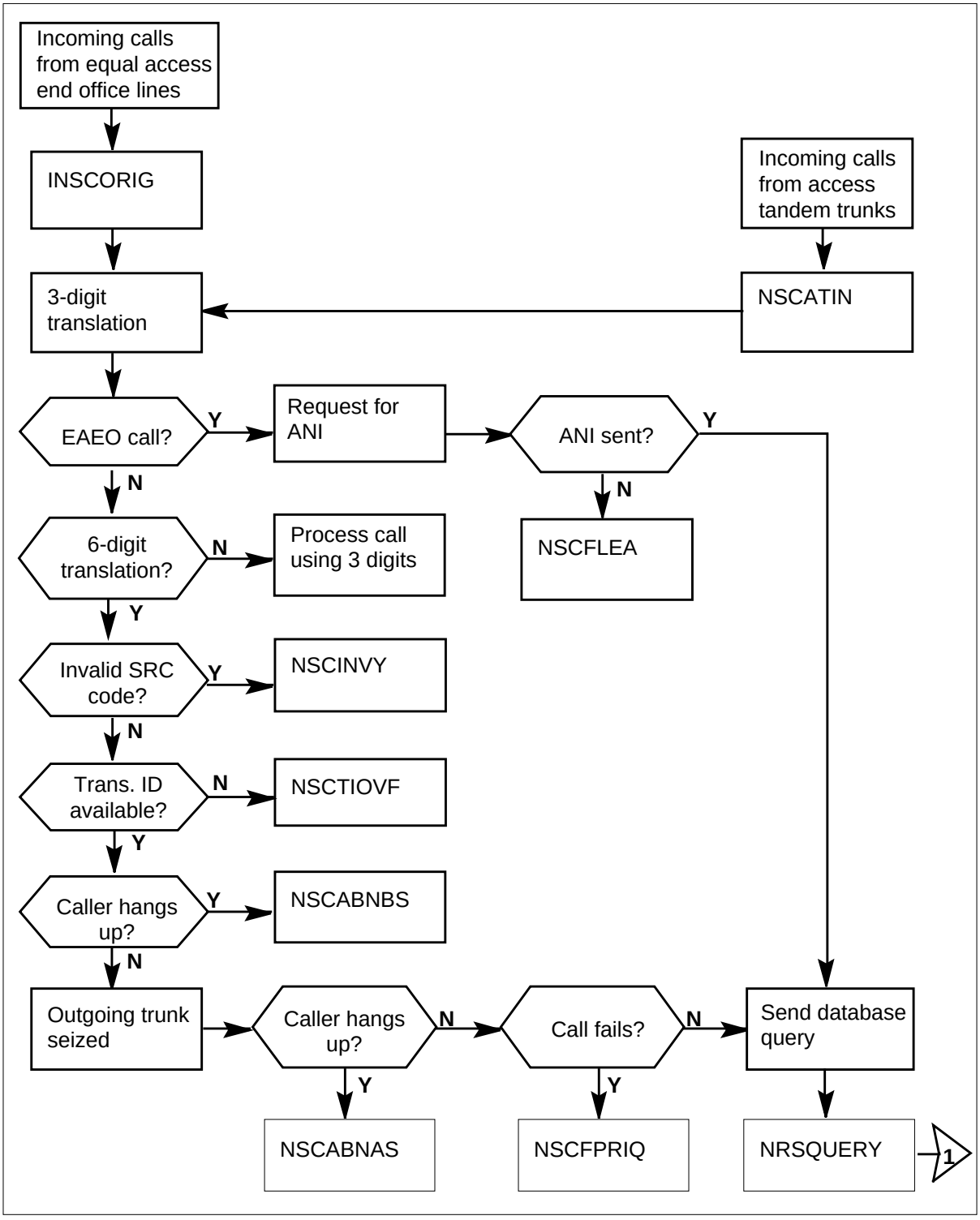
- PVN
- Common Channel Signaling 7 (CCS7)

Associated functionality codes

The associated functionality codes for OM group NSC are in the following table.

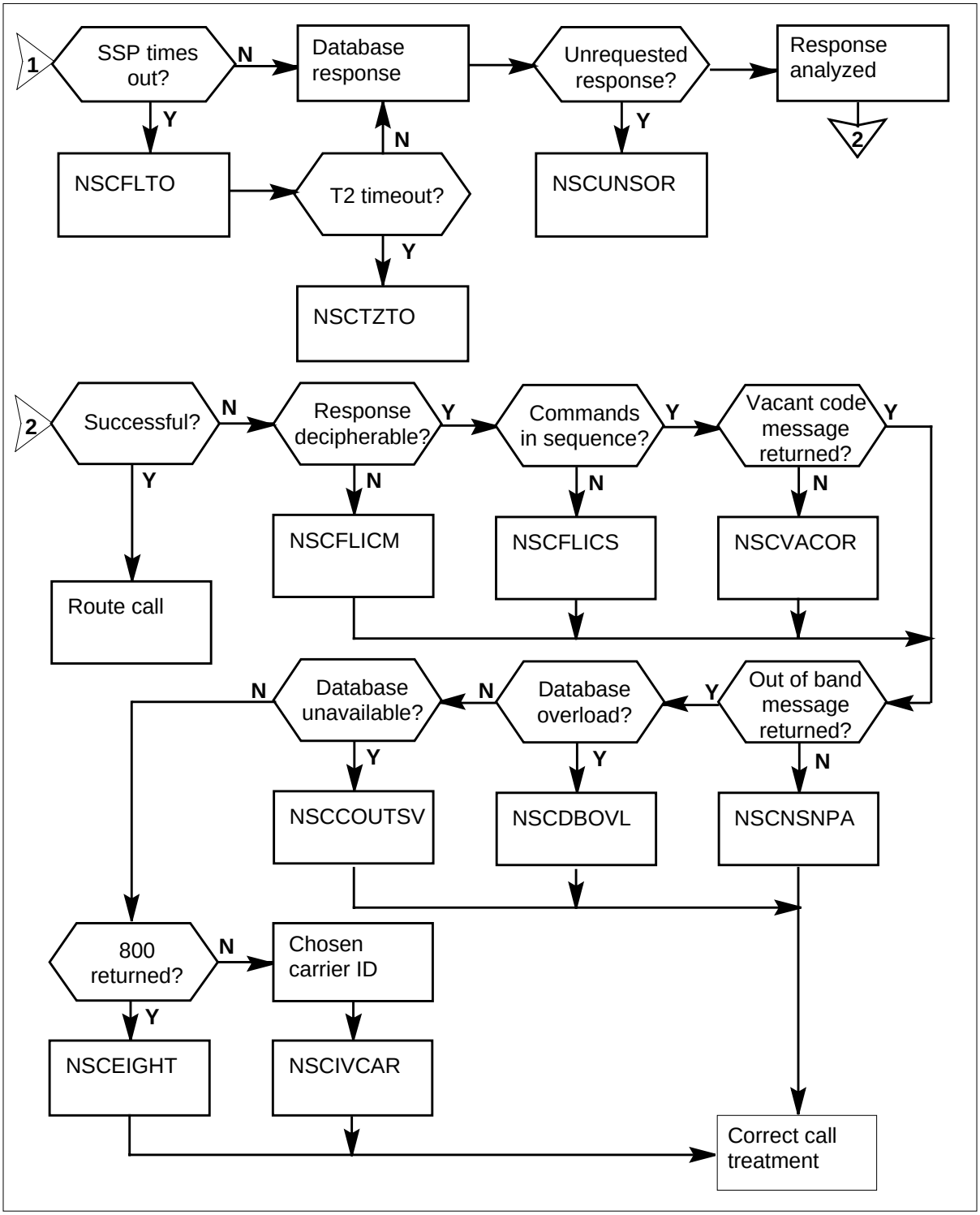
Functionality	Code
CCS7 ISDN User Part (ISUP) Inter-Local Access and Transport Area (InterLATA) Connections	NTXE14AA
E800	NTX554AA
800+	NTX555AB
Local Features I	NTX901AA
SSP PVN	NTX983AA
Enhanced 008	NTXH84AA

OM group NSC registers



OM group NSC (continued)

OM group NSC registers (end)



Register NSCABNAS

NSC call abandon before answered (NSCABNAS)

Register NSCABNAS increases when the system receives an on-hook message from the calling party. The system receives this message after an SSP seizes an outgoing trunk and before the user answers the call.

Register NSCABNAS release history

Register NSCABNAS was introduced in BCS21.

BCS31

Register NSCABNAS increases for E800 and 800+ calls from PX trunks.

BCS26

PVN applies

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCABNBS

NSC call abandon before the seizure of an outgoing trunk (NSCABNBS)

Register NSCABNBS increases when the system receives an on-hook message from the calling party before an SSP seizes an outgoing trunk.

Register NSCABNBS release history

Register NSCABNBS was introduced in BCS21.

BCS34

Register NSCQUERY increases for MAP home location register (MAPHLR) queries.

BCS31

Register NSCABNBS increases for E800 and 800+ calls from PX trunks.

BCS26

PVN applies

OM group NSC (continued)

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCATIN

NSC access tandem trunk incoming (NSCATIN)

Register NSCATIN counts NSC calls that the system receives from other offices (trunk calls) in:

- E800

  Register NSCATIN counts NSC calls that the system receives from other offices (trunk calls) in an access tandem/SSP system. This count increases for calls that originate from toll trunks. Examples of toll trunks are Intertoll, Supercama, and TOPS.

  In an equal access end office (EAEO)/SSP system, the count is zero.

  Register NSCATIN counts PVN calls on super-centralized automatic message accounting (Supercama) and inter-toll trunks. Register NSCATIN counts PVN calls even if the application of Automatic Call Gapping occurs.

- 800PLUS

  Register NSCATIN counts NSC calls that the system receives from other offices (trunk calls) in a DMS-200 or DMS-100/200 system. This count increases for calls that originate from toll trunks. Examples of toll trunks are Intertoll, Supercama, and TOPS.

  In a DMS-100 system, the count is zero.

- E008

  In a DMS system that uses E008, the count is zero.

Register NSCATIN release history

Register NSCATIN was introduced in BCS21.

BCS26

PVN applies

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCDBOVL-Canada only

NSC database overload response (NSCDBOVL)

Register NSCDBOVL increases if a database returns the subsystem congestion diagnostic to an SSP. The return indicates a database overload.

The call routes to reorder (RODR) treatment.

When the system launches a query to a database using CCS7, part of the signaling-connection control part (SCCP) information specified in the query is an option field. If this option is set to RETURN TO ERROR, the database query launched by an SSP may return to the SSP by the SCP database when a routing failure occurs.

For all 800+ calls, the SCCP option is set to return a message to the database if an error occurs. Part of the message returned to the database is a diagnostic field. Possible values for the diagnostic field are subsystem failure, unequipped user, and subsystem congestion.

In a PVN, the NSCDBOVL count is zero.

Register NSCDBOVL release history

NSCDBOVL is added to BCS22.

BCS31

NSCDBOVL increases for E800 and 800+ calls from PX trunks.

BCS26

PVN applies

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group NSC (continued)

Extension Registers

There are no extension register.

Register NSCEIGHT-Canada only

NSC 800 number returned

NSC 800 number returned (NSCEIGHT) increases when an 800 number returns from the SCP database. This action indicates that the 800 number does not switch over to the SSP for 800+. The number is translated again using the INWATS tables.

In a PVN system, the NSCEIGHT count is zero.

For E008 FPS, this register indicates the number of times that the response from the SCP contains the special routing parameter set to a movement number in a routing component returned from the SCP. The call continues based on non-E008 translations.

Register NSCEIGHT release history

NSCEIGHT is added to BCS22.

BCS36

NSCEIGHT increases for all E008 free phone service (FPS) calls that originate with any FPS service access code provided that a change indicator is present in the service control point response.

BCS32

NSCEIGHT understands in a different way for E800 for the Australian Intelligent Network.

BCS31

NSCEIGHT increases for E800 and 800+ calls from PX trunks.

BCS26

PVN applies

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCFLICM

NSC invalid command message

NSC invalid command message (NSCFLICM) increases when the SSP receives an undecipherable response from the SCP.

The call routes to reorder (RODR) treatment.

Register NSCFLICM release history

NSCFLICM is added to BCS21.

BCS31

NSCFLICM increases for E800 and 800+ calls from PX trunks.

BCS26

PVN applies

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCFLICS

NSC invalid command sequence

NSC invalid command sequence (NSCFLICS) increases when the SSP receives a response from the SCP that contains not complete or not-in-sequence commands.

The call routes to reorder (RODR) treatment.

Register NSCFLICS release history

NSCFLICS is added to BCS21.

BCS31

NSCFLICS increases for E800 and 800+ calls from PX trunks.

BCS26

PVN applies

OM group NSC (continued)

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCFPRIQ-Canada only

NSC failure before query

- NSC failure query (NSCFPRIQ) counts 800+ calls that fail before a database query is launched, including calls that fail for one of the following reasons:
- invalid called number digits
- 800+ subsystem out of service (OOS)
- there are no transaction identifiers available

PVN calls that fail before a database query launches are also counted by NSCFPRIQ, including calls that fail for one of the following reasons:

- PVN subsystem OOS
- wrong PVN transaction identification
- invalid calling number digits
- global title cannot be formatted
- invalid local access and transport area (LATA) number digits
- invalid dial call type for PVN in encode data
- invalid digits in originating number on remote access call
- wrong number of digits in originating number remote access call
- invalid digits in authorization code or personal identification number (PIN)
- package encoding fails on transaction capabilities application part (TCAP) message

Register NSCFPRIQ release history

NSCFPRIQ is added to BCS22.

BCS34
NSCQUERY increases for MAP home location register (MAPHLR) queries.

BCS32
NSCFPRIQ understands in a different way for E800 for the Australian Intelligent Network.

BCS31
NSCFPRIQ increases for E800 and 800+ calls from PX trunks.

BCS26
PVN applies

Associated Registers

There are no association registers.

Associated logs

There are no association logs.

Extension Registers

There are no extension registers.

Register NSCINVY-Canada only

NSC invalid special routing code (SRC)/00Y code

NSC invalid special routing code (SRC)/00Y code (NSCINVY) counts invalid SRC/00Y codes received by the SSP from the end office. An end office may substitute an SRC/00Y code for the 800 code in the 800 + NXX + XXXX number to indicate the originating numbering plan area to the SSP. The code is considered invalid if it is not entered in table NSCSNPA.

The call routes to vacant code treatment.

Register NSCINVY release history

NSCINVY is added to BCS22.

BCS32
NSCINVY understands in a different way for E800 for the Australian Intelligent Network: always set to zero.

BCS31
NSCINVY increases for E800 and 800+ calls from PX trunks.

OM group NSC (continued)

BCS26
SRC added

Associated Registers

There are no associated registers.

Associated logs

NSC100 generates to indicate that a call made on an E800 network cannot be completed.

Extension Registers

There are no extension registers.

Register NSCIVCAR

NSC call invalid carrier identification

NSC call invalid carrier identification (NSCIVCAR) increases when the database returns an invalid carrier identification in the response message. A carrier identification is invalid if it is not datafilled in a correct office table of correct carrier identifiers for the number service call service.

The call routes to CCS7 application failure treatment.

Register NSCIVCAR release history

NSCIVCAR is added to BCS26.

BCS32
NSCIVCAR understands in a different way for E800 for the Australian Intelligent Network: always set to zero.

BCS31
NSCIVCAR increases for E800 and 800+ calls from PX trunks.

Associated Registers

There are no associated registers.

Associated logs

NSC100 generates to indicate that a call made on an E800 network cannot complete.

Extension Registers

There are no extension registers.

Register NSCNSNPA-Canada only

NSC number of non-subscribed numbering plan area (NPA) responses

NSC number of non-subscribed numbering plan area (NPA) responses (NSCNSNPA) increases if the database returns out of band (out of zone) as a special routing in the database response.

Use this register for the 800+ feature. In an SSP E800 office and in a PVN, the NSCNSNPA count is zero.

Register NSCNSNPA release history

NSCNSNPA is added to BCS22,

BCS32

NSCNSNPA understands in a different way for E800 for the Australian Intelligent Network.

BCS31

NSCNSNPA increases for E800 and 800+ calls from PX trunks.

BCS26

PVN applies

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCORIG

NSC originated

NSC originated (NSCORIG) counts NSC line calls that reach the dial complete stage. NSC includes all NSC calls that originate from lines, attendant consoles, and PX type trunks. In addition, all NSC calls that result from call redirection (e.g. call forwarding, ACD/UCD on night service to 800, etc.) are included in this OM.

E800

In an EAEO/SSP system, the count is the total number of NSC calls from lines. This count includes NSC calls that result from call redirection. In a

OM group NSC (continued)

DMS-100/200 combined access tandem/SSP office, the count is the total number of NSC calls originated by collocated stations (line calls) plus NSC calls that result from call redirection.In a DMS-200 access tandem/SSP office, the count is zero.

PVN calls on integrated business network (IBN) trunks and lines, consoles, IBNT1 trunks, and IBNT2 trunks are counted by this register.

800PLUS

In a DMS-100 end office, SSP or DMS-100/200 SSP, the count is the total number of NSC calls from lines or collocated stations (line calls) plus NSC calls that result from call redirection.In a DMS-200, the count is zero.

PVN calls on integrated business network (IBN) trunks and lines, consoles, IBNT1 trunks, and IBNT2 trunks are counted by this register.

E008

In a DMS-100 end office, SSP or DMS-100/200 SSP, the count is the total number of NSC calls originated by lines or collocated stations (line calls) plus NSC calls that result from call redirection plus calls originated over AISUP and ATUP (IBN type) trunks.In a DMS-200, the count is zero.

Register NSCORIG release history

NSCORIG is added to BCS21.

BCS31

NSCORIG increases for E800 and 800+ calls from PX trunks.

BCS26

PVN applies

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCOUTSV-Canada only

NSC out-of-service responses

NSC out-of-service responses (NSCOUTSV) increases if a database returns the subsystem failure diagnostic and indicates that the database is not available.

The call routes to reorder (RODR) treatment.

When a query launches to a database using CCS7, part of the signaling connection control part (SCCP) information specified in the query is an option field. If this option is set to RETURN ON ERROR, the database query launched by an SSP may return to the SSP by the SCP database when a routing failure occurs.

For all 800+ calls, the SCCP option is set to RETURN ON ERROR. Part of the message returned to the database is a diagnostic field. Possible values for the diagnostic field are subsystem failure, unequipped user, and subsystem congestion.

In a PVN, the NSCOUTSV count is zero.

Register NSCOUTSV release history

NSCOUTSV is added to BCS22.

BCS31

NSCOUTSV increases for E800 and 800+ calls from PX trunks.

BCS26

PVN applies

Associated Registers

There are no associated registers

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCQUERY-Canada only

NSC query

The NSC query (NSCQUERY) that counts 800 database queries and are sent by call processing uses the transaction capabilities application part (TCAP). This register also counts database queries required for PVN calls.

OM group NSC (continued)

Register NSCQUERY release history

NSCQUERY is added to BCS22.

BCS34
NSCQUERY increases for MAP home location register (MAPHLR) queries.

BCS32
NSCQUERY understands in a different way for E800 for the Australian Intelligent Network.

BCS31
NSCQUERY increases for E800 and 800+ calls from PX trunks.

BCS26
PVN applies

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCSFLEA

NSC failure to receive second signaling stage on equal access trunk

NSC failure to receive second signaling stage on equal access trunk (NSCSFLEA) increases when the first stage of signaling (KP + OZZ + XXX + ST) from the EAEO indicates an NSC call or a PVN call, but either no second-stage signaling is received or the second stage is incomplete.

Register NSCSFLEA release history

NSCSFLEA is added to BCS21.

BCS32
NSCSFLEA understands in a different way for E800 for the Australian Intelligent Network: always set to zero.

BCS31
NSCSFLEA increases for E800 and 800+ calls from PX trunks.

BCS26
PVN applies

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCSFLTO

NSC signaling failure timeout

NSC signaling failure timeout (NSCSFLTO) increases when a reply is not sent back to the SSP from the SCP within the time interval specified in table NSCDEFS.

The call routes to reorder (RODR) treatment.

This register also applies to calls on the PVN.

Register NSCSFLTO release history

NSCSFLTO is added to BCS21.

BCS34
NSCSFLTO increases for MAP home location register (MAPHLR) queries.

BCS26
PVN applies

Associated Registers

There are no associated registers.

Associated logs

There are no associated registers.

Extension Registers

There are no extension registers.

Register NSCT2TO

NSC T2 timeout

OM group NSC (continued)

NSC T2 timeout (NSCT2TO) increases when the SSP sends a query to the SCP and does not receive a response message from the SCP within the T2 time interval specified in table NSCDEFS.

The T2 time interval is an optional parameter of table NSCDEFS. NSCT2TO will always be zero for keys where the corresponding tuples in table NSDEFS are not entered with the T2 timeout option.

Register NSCT2TO release history

NSCT2TO is added to BCS26.

BCS32

NSCT2TO understands in a different way for E800 for the Australian Intelligent Network: always set to zero.

BCS31

NSCT2TO is increases for E800 and 800+ calls from PX trunks.

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension register.

Register NSCTIOVF

NSC transaction identification not available before initial query

NSC transaction identification not available before initial query (NSCTIOVF) increases when an SSP NSC call fails because the NSC transaction identification is not available in the SSP. This register also applies to PVN calls.

The call routes to reorder (RODR) treatment.

The office parameter uses NO_OF_TRANSACTION_IDS in table OFCENG to allocate the number of transaction identifiers available to the SSP for launching database queries to an SCP database.

Register NSCTIOVF release history

NSCTIOVF is added to BCS21.

BCS34
NSCSFLTO increases for MAP home location register (MAPHLR) queries.

BCS31
NSCSFLTO increases for E800 and 800+ calls from PX trunks.

BCS26
PVN applies

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCUNSOR-Canada only

NSC unsolicited responses

NSC unsolicited responses (NSCUNSOR) counts not requested responses that are received by an SSP from an SCP. Not requested responses from the database do not have a corresponding query.

Examples of not requested responses are those in which

- the transaction identification in the response is out of range (greater than the maximum number of queries)
- the transaction identification does not have a corresponding call connected to it
- a response to a database query returns after the database query has timed out

It is not correct to wait for every response beyond the timeout period, because all the transaction identifiers could be lost during the wait. The database timeout value should be set so that all normal responses (that is, the responses not involving database or network problems) can be received from the database within the timeout period. This register will generally indicate how many responses take too long.

NSCUNSOR counts false responses and late responses. The two are not distinguishable. This register also applies to the PVN system.

OM group NSC (end)

Register NSCUNSOR release history

NSCUNSOR is added to BCS22.

BCS31

NSCUNSOR is increases for E800 and 800+ calls from PX trunks.

BCS26

PVN applies

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCVACDR-Canada only

NSC vacant database responses

NSC vacant database responses (NSCVACDR) increases if the database response indicates a vacant code. In a PVN system, the NSCVACDR count is zero.

The call is routes to vacant code (VACT) treatment.

NSCVACDR release history

NSCVACDR is added to BCS22.

BCS31

NSCVACDR increases for E800 and 800+ calls from PX trunks.

BCS26

PVN applies

Associated Registers

There are no associated registers

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

OM group NSCACG

OM description

Number services code automatic call gapping (NSCACG)

The OM group NSCACG provides information on the performance of automatic call gapping (ACG) for number services code (NSC) calls. The Service Management System (SMS) uses ACG to implement network management controls.

The ACG helps to control the flow of NSC calls that require access to service control point (SCP) databases. Registers in NSCACG count the number of calls attempted, and the number of calls the ACG blocks. The registers in NSCAGG also count the number of calls that the ACG cannot block because of control list overflows.

Release history

The OM group NSCACG was introduced in BCS21.

BCS35

The SMS originated code control (SOCC) calls added to the count in existing registers.

BCS32

Registers NSCBKVC, NSCBKMCC, and NSCCOTVC interpreted in a different way for Enhanced 800 (E800) service for the Australian Intelligent Network.

BCS27

Software change to include counts of incoming intertoll Signaling System 7 (SS7) calls to an access tandem. These intertoll SS7 calls require an 800-database query.

BCS26

Private virtual network (PVN) calls added to counts in existing registers.

Registers

The OM group NSCACG registers appear on the MAP terminal as follows:

```
NSCATMPT        NSCBKVC         NSCBKSOC        NSCBKMCC
NSCBKSIC        NSCCOSVC        NSCCOTVC        NSCCONPN
NSCCOSCP        NSCCOMC         NSCCOSI
```

OM group NSCACG (continued)

Group structure

The OM group NSCACG can provide one tuple for each NSC.

Table NSCDEFS defines NSC.

Key field:
NSC_INDEX

Info field:
There is no info field.

Associated OM groups

The OM group NSC provides summary information on NSC calls.

Associated functional groups

The associated functional for OM group NSCACG are:

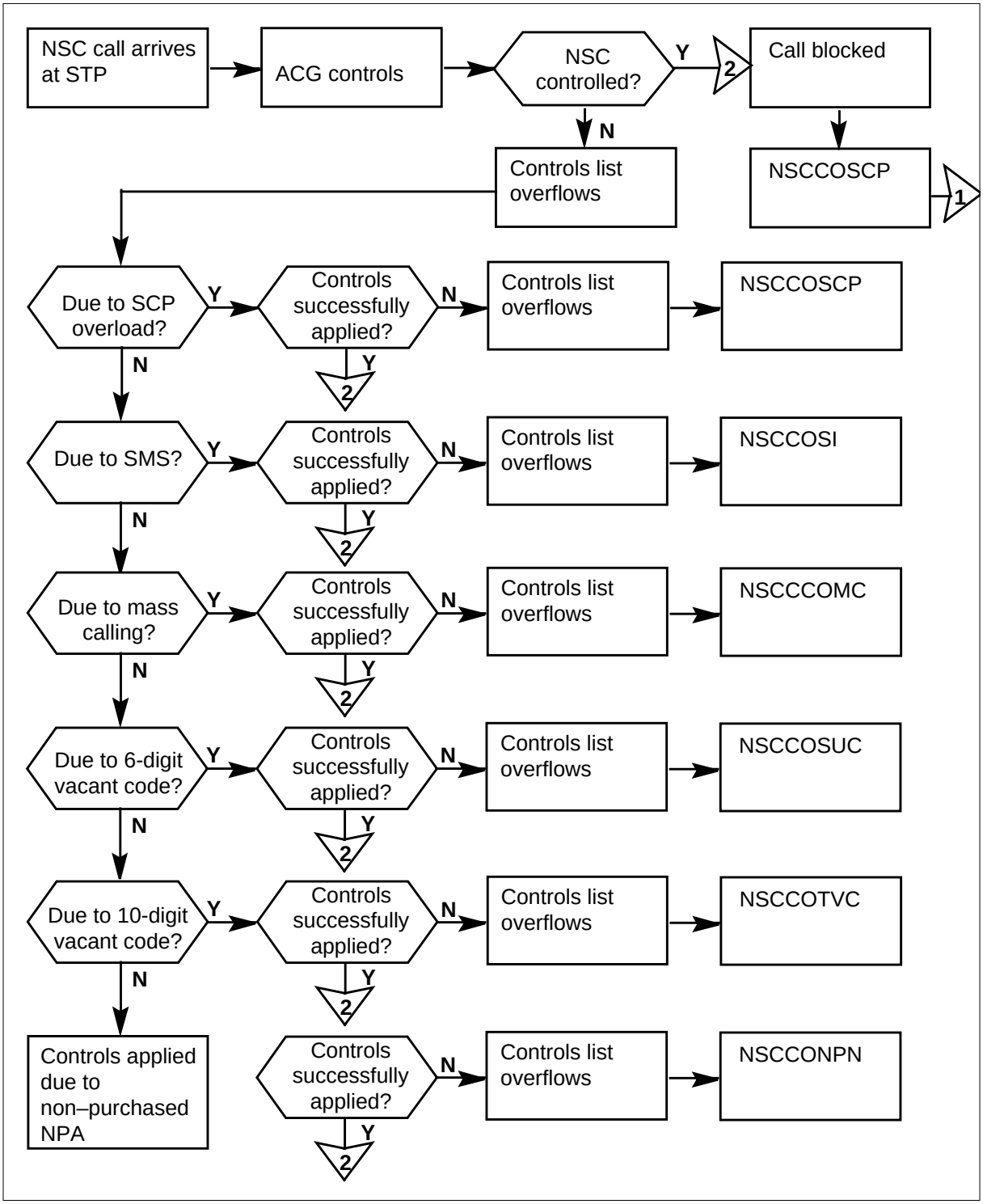
- Common Channel Signaling 7 (CCS7)
- 800 Plus (800+) Service
- E800 Service
- PVN

Associated functionality codes

The associated functionality codes for OM group NSCACG appear in the following table.

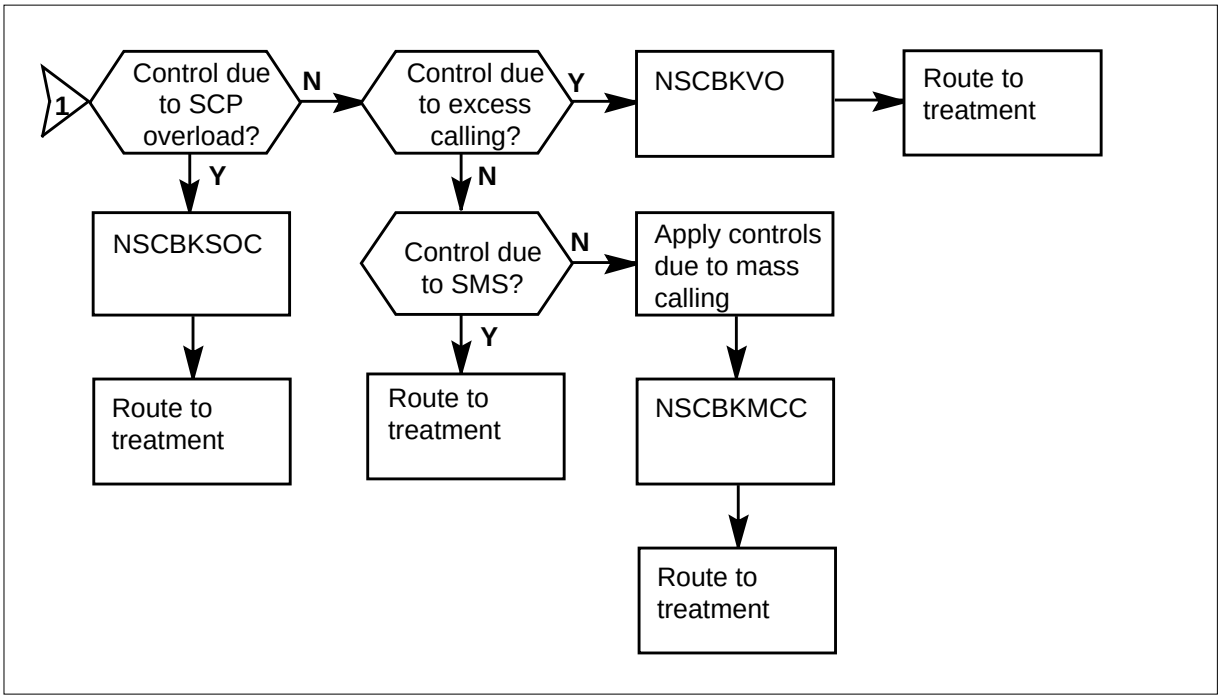
Functionality	Code
CCS7 ISDN User Part (ISUP) Inter Local Access and Transport Area (InterLATA) Connections	NTXE14AA
SSP PVN	NTX983AA
800+	NTX555AB
E800	NTX554AA

OM group NSCACG registers



OM group NSCACG (continued)

OM group NSCACG registers (end)



Register NSCATMPT

NSC attempts (NSCATMPT)

Register NSCATMPT counts line and trunk originating E800 calls that reach the SSP. The calls contain OM Registers: NSC_NSCORIG, NSC_NSCATIN, NSCACG_NSCBKVC, NSCACG_NSCBKSOC, NSCACG_NSCBKMCC, and NSCACG_NSCBKSIC.

Register NSCATMPT release history

Register NSCATMPT was introduced in BCS21

Associated Registers

Register NSXACG_NSCATMPT counts registers NSC_NSCORIG, NSC_NSCATIN, NSCACG_NSCBKVC, NSCACG_NSCBKSOC, NSCACG_NSCBKMCC, and NSCACG_NSCBKSIC.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCBKMCC

NSC blocked mass calling controls (NSCBKMCC)

Register NSCBKMCC counts NSC calls that ACG controls for ten-digit mass calling controls block.

The system routes NSC calls blocked for mass calling controls to busy line (BUSY) treatment.

Register NSCBKMCC release history

Register NSCBKMCC was introduced in BCS21.

BCS32

Register NSCBKMCC interpreted in a different way for E800 for the Australian Intelligent Network. The register is always zero for E800.

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCBKSIC

NSC blocked by Service Management System (SMS) (NSCBKSIC)

Register NSCBKSIC counts NSC calls that ACG controls block. The SMS initiates ACGs and forwards them through a service control point to the correct service switching point.

The system routes the NSC calls that ACG-initiated controls block to reorder (RODR) treatment.

Register NSCBKSIC release history

Register NSCBKSIC was introduced in BCS21.

BCS35

Register activated for the SOCC feature.

OM group NSCACG (continued)

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCBKSOC

NSC blocked SCP overload controls (NSCBKSOC)

Register NSCBKSOC counts NSC calls that ACG controls for SCP overloads block.

NSC calls blocked by SCP overload controls route to general no circuit (GNCT) treatment.

Register NSCBKSOC release history

Register NSCBKSOC was introduced in BCS21.

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCBKVC

NSC blocked vacant (VACT) codes (NSCBKVC)

Register NSCBKVC counts calls that ACG controls block. The system applies ACG controls when one of the following occurs: VACT codes receive too many calls, or too many calls are made from numbering plan areas (NPA) that are not purchased for NSCs.

The NSC calls blocked for greater than necessary calling to VACT codes that the system routes to VACT code treatment. The system routes NSC calls blocked for greater than necessary calling. The systems routes the calls that come from non-purchased NPAs and go to not authorized INWATS (UNIN) call treatment.

Register NSCBKVC release history

Register NSCBKVC was introduced in BCS21.

BCS32

Register NSCBKVC interpreted in a different way for E800 for the Australian Intelligent Network.

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCCOMC

NSC mass calling control list overflow (NSCCOMC)

Register NSCCOMC increases when an ACG control cannot apply to a code for an 800 number because the control list is full.

Register NSCCOMC release history

Register NSCCOMC was introduced in BCS21.

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCCONPN

NSC non-purchased NPA control list overflow (NSCCONPN)

Register NSCCONPN increases when an ACG control on a code is not placed because the control list for calls is full. The calls come from NPAs that are not purchased for NSC use.

The DMS-100 can control a maximum of 64 ten-digit NSCs and 256 six-digit NSCs.

OM group NSCACG (continued)

Register NSCCONPN release history

Register NSCCONPN was introduced in BCS21.

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCCOSCP

NSC service control point (SCP) control list overflow (NSCCOSCP)

Register NSCCOSCP increases when a required ACG control that SCP overloads is not placed on a code. The SCP overload is not placed on a code because the control list is full.

The DMS-100 can control a maximum of 64 ten-digit NSCs and 256 six-digit NSCs.

Register NSCCOSCP release history

Register NSCCOSCP was introduced in BCS21.

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCCOSI

NSC service management system (SMS)-initiated control list overflow (NSCCOSI)

Register NSCCOSI increases when an ACG control that the SMS initiates is not placed on a code because the control list is full.

The DMS-100 can control a maximum of 64 ten-digit NSCs and 256 six-digit NSCs.

Register NSCCOSI release history

Register NSCCOSI was introduced in BCS21.

BCS35

Register activated for the SOCC feature.

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCCOSVC

NSC six-digit vacant (VACT) code control list overflow (NSCCOSVC)

Register NSCCOSVC increases when an ACG control is not placed on a VACT six-digit code. The ACG control is not placed on a code because the control list for six-digit codes is full. The ACG control is also not placed on a code because the control list is full.

The DMS-100 can control a maximum of 64 ten-digit NSCs and 256 six-digit NSCs.

Register NSCCOSVC release history

Register NSCCOSVC was introduced in BCS21.

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

Register NSCCOTVC

NSC ten-digit vacant (VACT) code control list overflow (NSCCOTVC)

OM group NSCACG (end)

Register NSCCOTVC increases when an ACG control is not placed on a VACT ten-digit code. An ACG is not placed on a code because the control list for ten-digit codes is full.

The DMS-100 can control a maximum of 64 ten-digit NSCs and 256 six-digit NSCs.

Register NSCCOTVC release history

Register NSCCOTVC was introduced in BCS21.

BCS32

Register NSCCOTVC understands in a different way for E800 for the Australian Intelligent Network. Register NSCCOTVC is always zero for E800.

Associated Registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension Registers

There are no extension registers.

OM group NSSTCAP

OM description

Network services system transaction capabilities application part (TCAP) messaging (NSSTCAP)

The OM group NSSTCAP measures events that occur:

- in network services software (NSS) database control point (DBCP)
- when processing a response
- when processing queries at the NSS DBCP

The measurements are used to indicate signaling trouble between the Service Switching Point (SSP) and the DBCP.

Release history

The OM group NSSTCAP was introduced in BCS33.

Register

The OM group NSSTCAP register appears on the MAP terminal as follows:

```
NTWKPROB    NORESRCE    QRYPROCD    TIMEREXP
QERYSENT    INVDIGIT    TCNFREEC
```

Group structure

The OM group NSSTCAP can provide two tuples per office.

Key field:
NSS_TC_AP_NAME {REPLDIGS, NSSTCN}

Info field:
There is no Info field.

Associated OM groups

There are no associated OM groups.

OM group NSSTCAP (continued)

Associated functional groups

The following are associated functional groups for the OM group NSSTCAP:

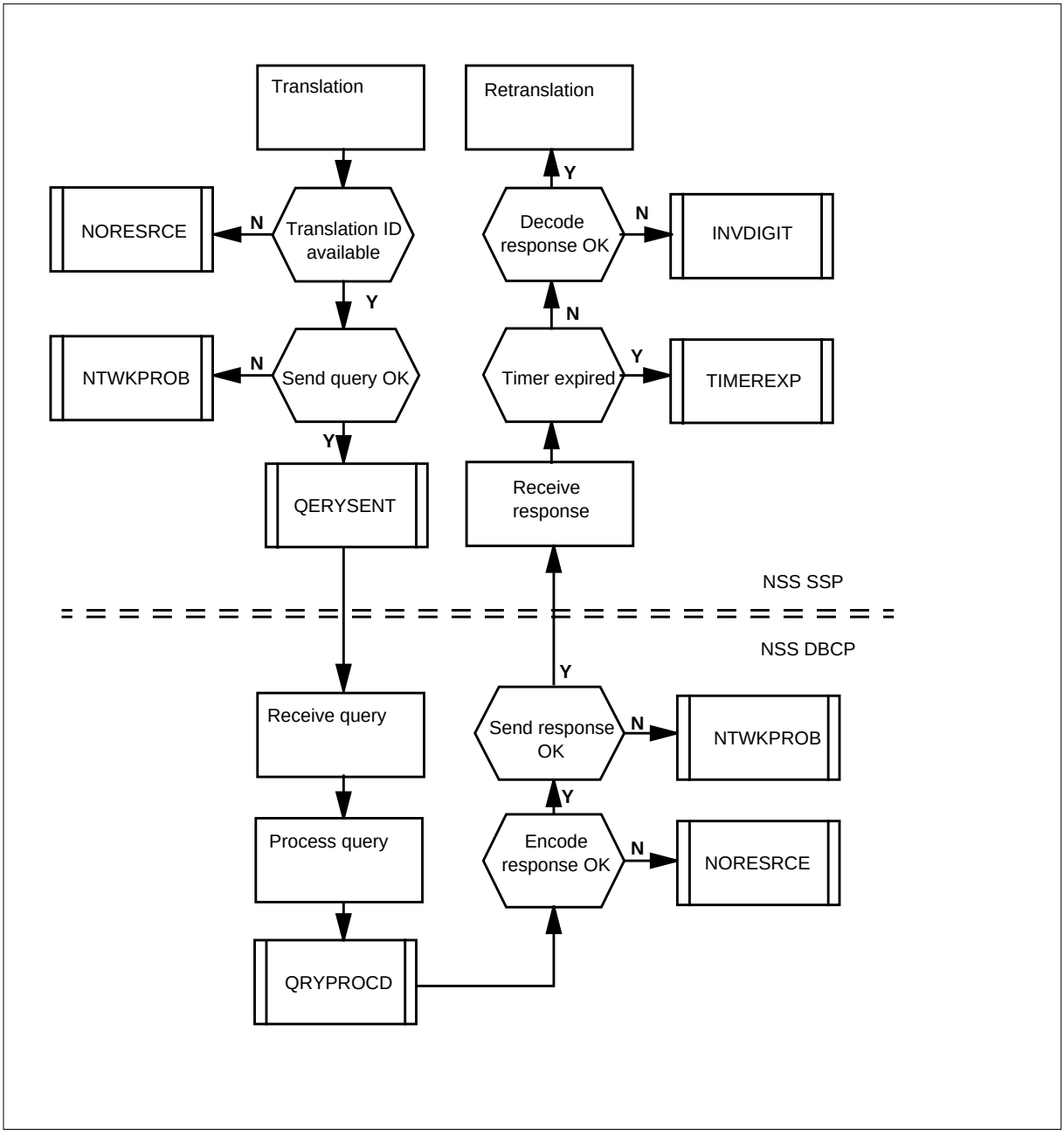
- Network services system database control point

Associated functionality codes

The associated functionality codes for the OM group NSSTCAP are in the following table.

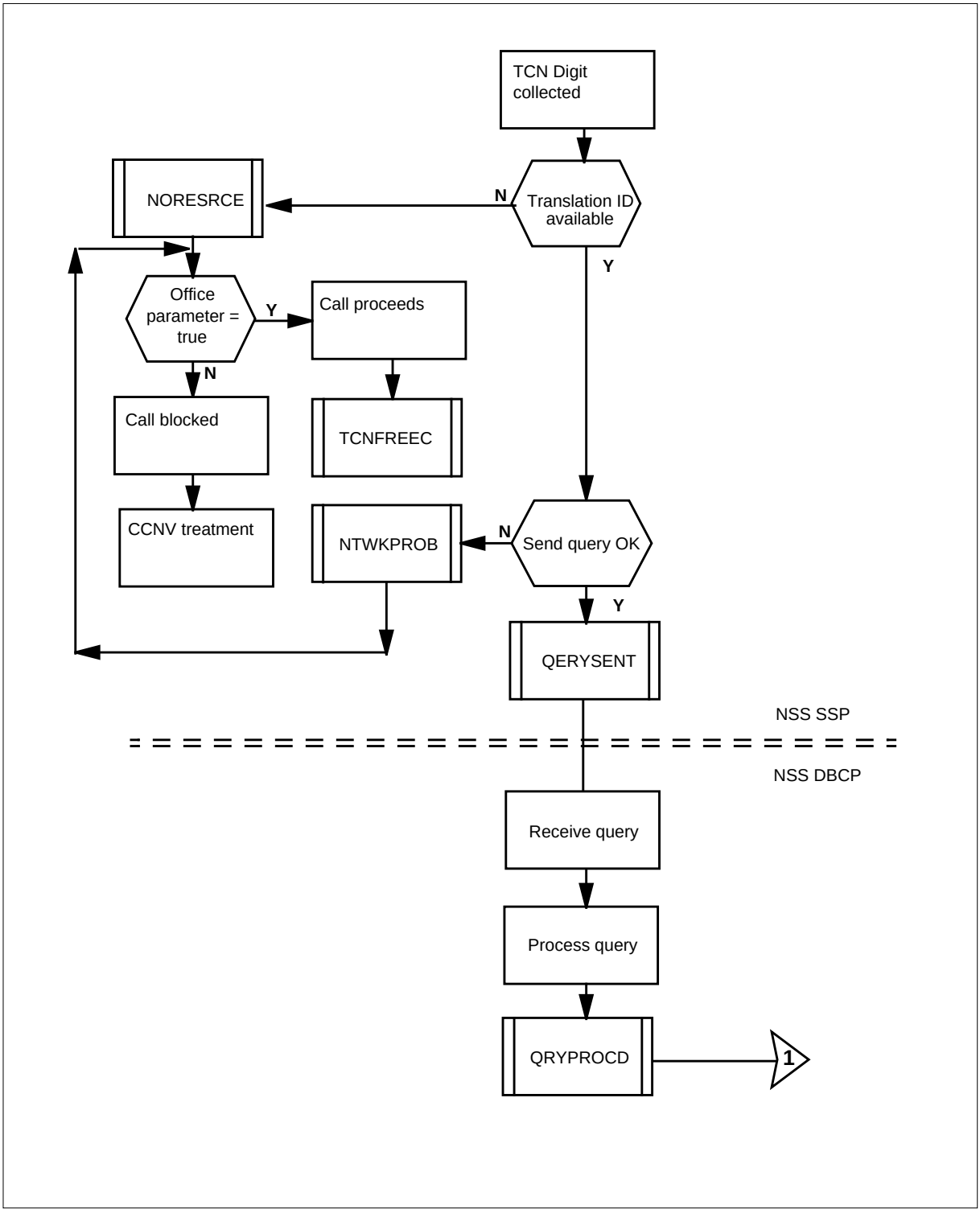
Functionality	Code
700/800/900 Service	NTXE77AA
NSS NOO DECP Call Processing	NTXQ77AA
NSS NOO DECP Database	NTXQ78AA

OM group NSSTCAP: replaced dialed digits register

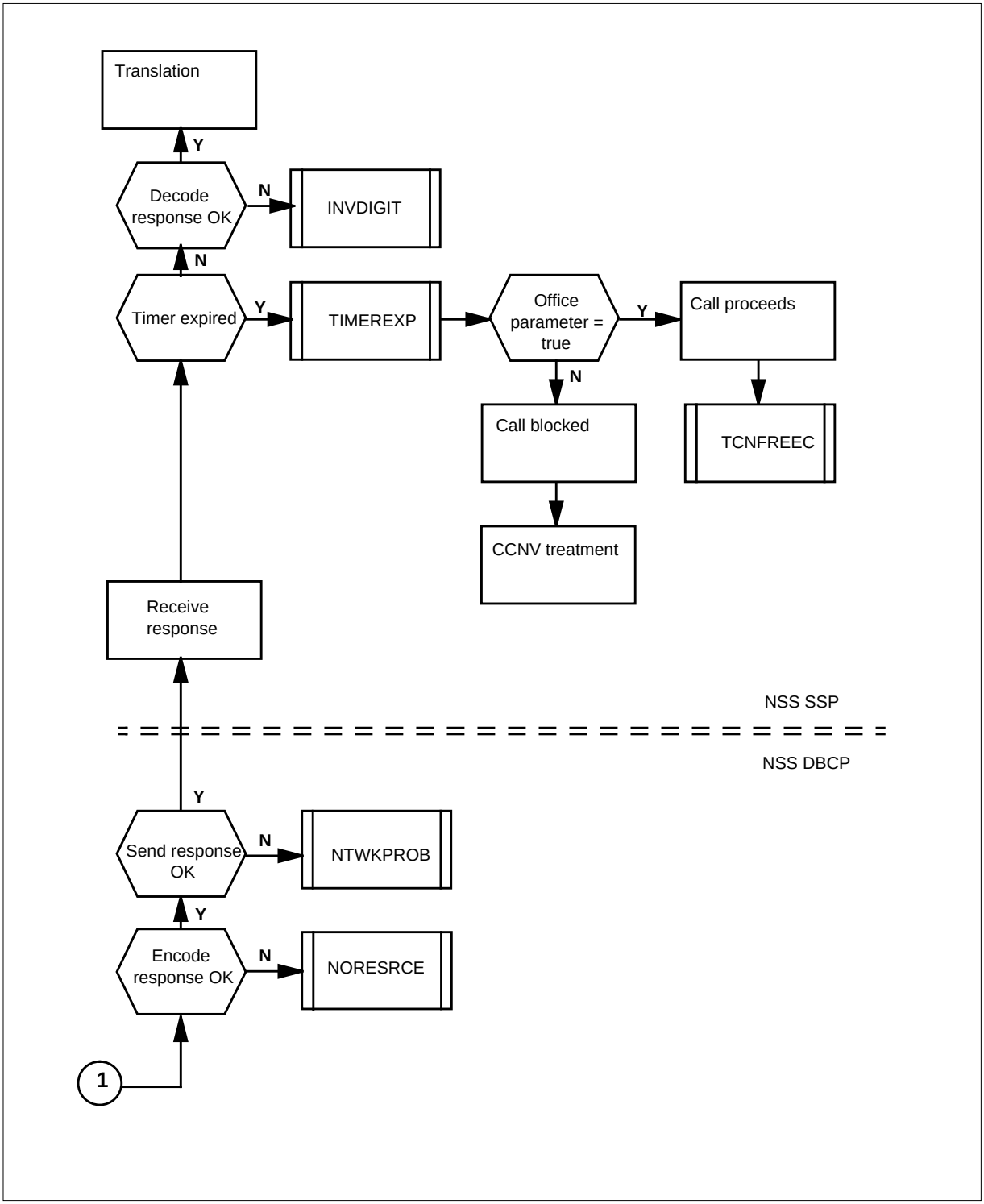


OM group NSSTCAP (continued)

OM group NSSTCAP: TCN register



OM group NSSTCAP: TCN register (continued)



OM group NSSTCAP (continued)

Register INVDIGIT

Invalid digits (INVDIGIT)

Register INVDIGIT increases on the service switching point (SSP) when the SSP receives a replace dialed digits return error message. This message is from the DBCP. The message indicates that the system did not find the dialed digits sent in the database query. The database query is in table REPLDATA on the NSS DBCP.

Register INVDIGIT release history

Register INVDIGIT was introduced in BCS33.

Associated Register

There are no associated registers.

Associated logs

The system generates NSS107 every time the SSP receives a return error response from the NSS DBCP. The return error response specifies that the system did not find dialed digits in table REPLDATA.

The system generates NSS103 when the node that originates receives a return error response from the DBCP. The return error response indicates that the TCN digits are not allowed or are not correct.

Register NORESRCE

There are no resources (NORESRCE)

Register NORESRCE increases when a no-resource problem occurs on the DBCP. Conditions include when transaction identifications (IDs) are not available and software resource blocks cannot be located.

This register also increases when a no-resource problem occurs on the service switching point (SSP).

Register NORESRCE release history

Register NORESRCE was introduced in BCS33

Associated Register

There are no associated registers.

Associated logs

There are no associated logs.

Register NTWKPROB

Network problems (NTWKPROB)

Register NTWKPROB counts the number of times the NSS replace dialed digits application (on the DBCP) has problems.

The NSS replace dialed digits application has the following problems:

- sending the REPLDIGS response message because of network problems
- sending the query message and the uni-directional message because of network problems

Register NTWKPROB release history

Register NTWKPROB was introduced in BCS33.

Associated Register

There are no associated registers.

Associated logs

There are no associated logs.

Register QERYSENT

Queries sent (QERYSENT)

Register QERYSENT counts the number of REPLDIGS query messages sent to the DBCP on the service switching point (SSP).

Register QERYSENT release history

Register QERYSENT was introduced in BCS33.

Associated Register

There are no associated registers.

Associated logs

There are no associated logs.

Register QRYPROCD

Queries processed

Register QRYPROCD counts the number of REPLDIGS queries processed on the DBCP.

OM group NSSTCAP (continued)

QRYPROCD release history

Register QRYPROCD was introduced in BCS33.

Register QRYPROCD release history

Register TCNFREEC was introduced in BCS33.

Associated Register

There are no associated registers.

Associated logs

There are no associated logs.

Register TCNFREEC

NSS TCN free calls (TCNFREEC)

Register TCNFREEC counts NSS travel card number (TCN) application calls. This register only counts the calls that the system allows to proceed even while the TCN digits are not validated.

Register TCNFREEC release history

Register TCNFREEC was introduced in BCS33.

Associated Register

There are no associated registers.

Associated logs

There are no associated logs.

Register TIMEREXP

Timer expired (TIMEREXP)

Register TIMEREXP increases when the REPLDIGS response timer expires before the system receives a response from the DBCP. The operating company uses this information to determine if the expiration time of the timer must increase.

Register TIMEREXP release history

Register TIMEREXP was introduced in BCS33.

Associated Register

There are no associated registers.

OM group NSSTCAP (end)

Associated logs

There are no associated logs.

OM group NSSTCN

OM description

Network services software travel card number (NSSTCN)

The OM group NSSTCN monitors the use of the network services software (NSS) database to validate travel card numbers (TCN).

The OM group NSSTCN contains seven registers. At the originating node, six registers count:

- failures to send the TCN query message or uni-directional message because of network problems
- failures to validate a TCN because there are no software resources available
- TCN response time-outs
- TCN calls the system allows to proceed, even if the TCN digits are not validated
- TCN query messages that send to the database control point (DBCP)
- TCN error messages received from the DBCP that indicate the TCN digits are not correct

At the database control point (DBPC), three registers count:

- failures to send the TCN response message because of network problems
- TCN queries that the system processes
- failures to validate a TCN because there are no software resources available

Release history

The OM group NSSTCN was introduced in BCS31.

BCS33

All registers in this group are deactivated.

Registers

The OM group NSSTCN registers appear on the MAP terminal as follows:

```
NSSTCNNP        NSSTCNQP        NSSTCNNR        NSSRCNTE
NSSTCNFC        NSSTCNQS        NSSTCNIV
```

OM group NSSTCN (continued)

Group structure

The OM group NSSTCN provides one tuple for each office.

Key field:
There is no key field.

Info field:
There is no info field.

Associated OM groups

There are no associated OM groups.

Associated functional groups

There are no associated functional groups.

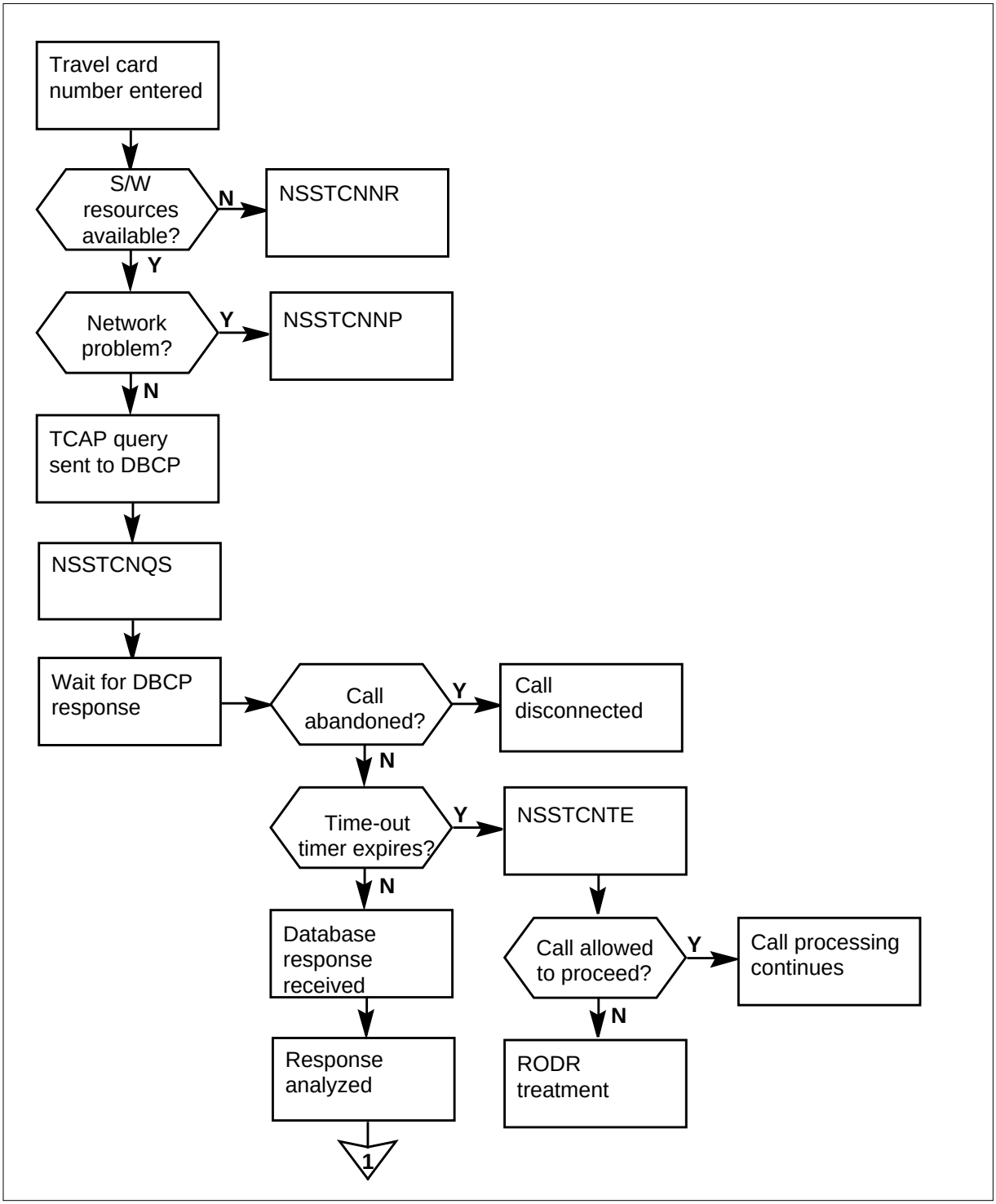
Associated functionality codes

The associated functionality codes for OM group NSSTCN appear in the following table.

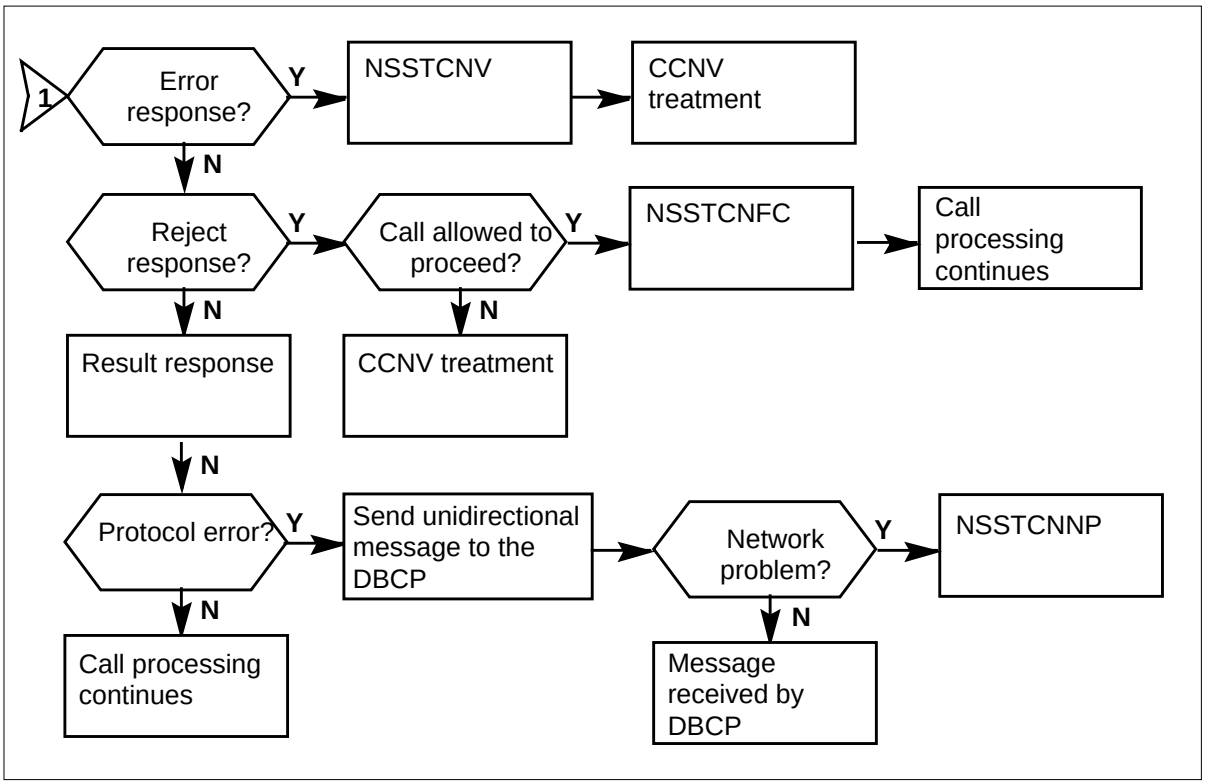
Functionality	Code
NSS Travel Card Number Validation	NTXN33AA

OM group NSSTCN (continued)

OM group NSSTCN registers: originating node

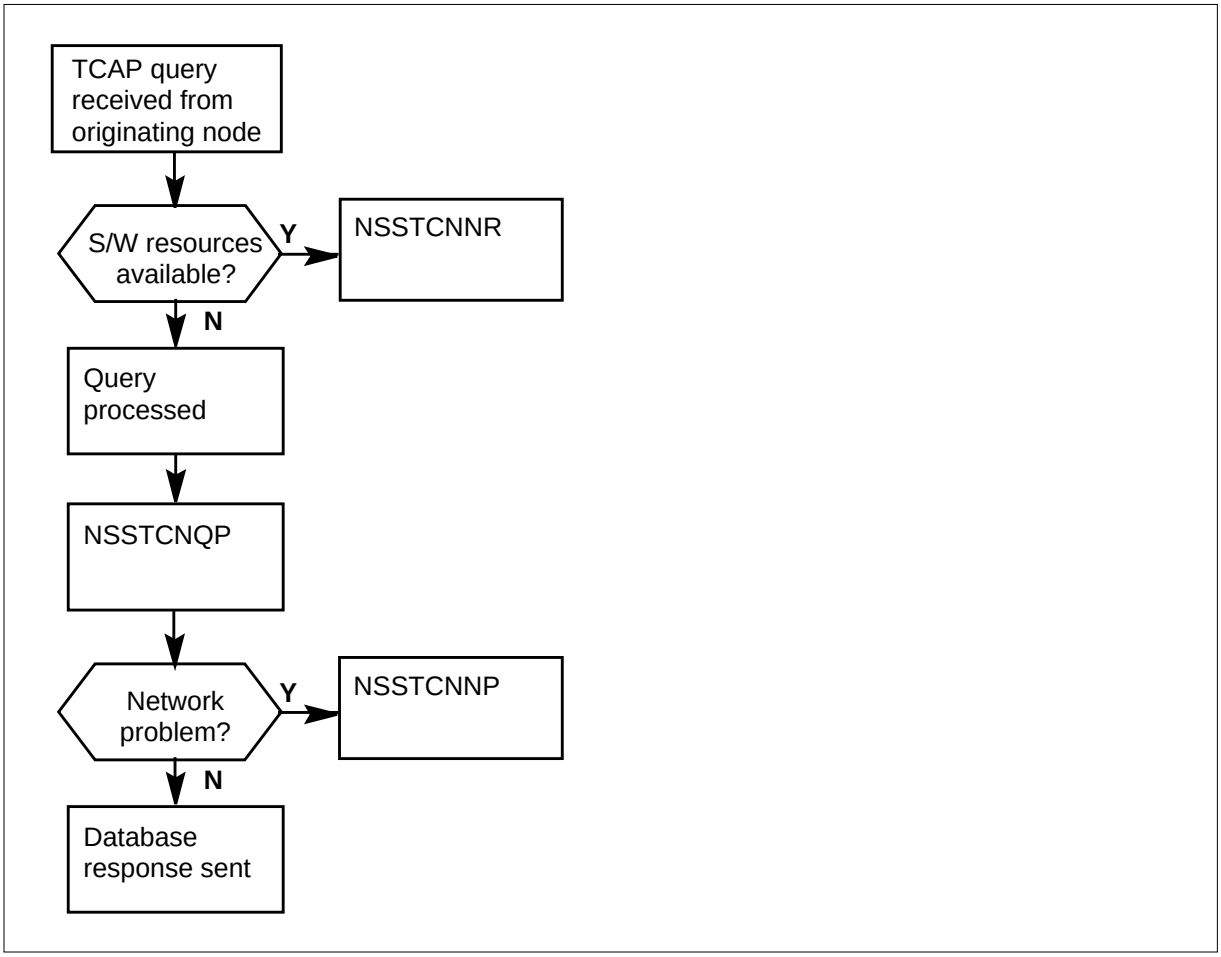


OM group NSSTCN registers: originating node (continued)



OM group NSSTCN (continued)

OM group NSSTCN registers: database control point



Register NSSTCNFC

NSS TCN free calls (NSSTCNFC)

At the originating node, NSSTCNFC counts travel card number (TCN) calls. This register counts the calls that the system allows to proceed when the TCN digits are not validated.

If office parameter NSS_DBCP_TCN_BLOCK_CALL in table OFCVAR is set to N (no), the system allows the TCN call to proceed The call proceeds even when the TCN digits are not validated for one of the following reasons:

- network problem
- no software resources available
- response time out period expires

If the call is not allowed to proceed, the system routes the call to calling card not correct (CCNV) treatment.

Register NSSTCNFC release history

Register NSSTCNFC was introduced in BCS31.

BCS33

The register is set to zero.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register NSSTCNIV

NSS TCN invalid (NSSTCNIV)

At the originating node, NSSTCNIV counts return error reponses. The responses come from the database control point (DBPC). The DBPC indicates if the travel card number (TCN) is correct.

Register NSSTCNIV release history

Register NSSTCNIV was introduced in BCS31.

BCS33

The register is set to zero.

Associated registers

There are no associated registers.

Associated logs

The system generates NSS103 when the originating node receives a return error response from the DBPC. The log only records the responses that indicate that the TCN digits are not allowed or are not correct.

Extension registers

There are no extension registers.

OM group NSSTCN (continued)

Register NSSTCNNP

NSS TCN network problems (NSSTCNNP)

At the originating node, NSSTCNNP counts failures and sends messages to the database control point (DBCP). The NSSTCNNP sends either the travel card number (TCN) query message, or the uni-directional message if network problems occur.

At the DBCP, NSSTCNNP counts failures to send the TCN response message to the originating node because of network problems.

Register NSSTCNNP release history

Register NSSTCNNP was introduced in BCS31.

BCS33

The system zeros the register.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register NSSTCNNR

NSS TCN no resource (NSSTCNNR)

At the originating node and the DBCP, NSSTCNNR counts failures to validate a TCN. This register counts the failures that occur when software resources available, like extension blocks, or transaction identifiers, are not available.

The system enters the number of extension blocks and transaction identifiers allocated for TCN validation in field NUMTRIDS in table TCAPTRID.

Register NSSTCNNR release history

Register NSSTCNNR was introduced in BCS31.

BCS33

The register is set to zero.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register NSSTCNQP

NSS TCN queries processed (NSSTCNQP)

At the DBCP, register NSSTCNQP counts TCN queries that the system processes.

Register NSSTCNQP release history

Register NSSTCNQP was introduced in BCS31.

BCS33

The register is set to zero.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register NSSTCNQS

NSS TCN queries sent (NSSTCNQS)

At the originating node, register NSSTCNQS counts query messages that are sent to the DBCP.

Register NSSTCNQS release history

Register NSSTCNQS was introduced in BCS31.

BCS33

The register is set to zero.

OM group NSSTCN (end)

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register NSSTCNTE

NSS TCN timer expired (NSSTCNTE)

At the originating node, register NSSTCNTE counts TCN response time-outs.

Office parameter NSS_DBCP_TCN_RESP_TIMEOUT in table OFCVAR specifies the wait time for a response message from the DBCP.

Register NSSTCNTE release history

Register NSSTCNTE was introduced in BCS31.

BCS33

The register is set to zero.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group NWMFRRCT

OM description

Network management flexible reroute

Network management flexible reroute (NWMFRRCT) counts calls that are rerouted, and rerouted calls that fail to find an idle VIA route. The counts are made for each switch.

Calls are rerouted from an in-chain route to a VIA route. In-chain routes are trunk groups that carry calls according to the rules for routing in a hierarchical network. VIA routes are trunk groups that carry rerouted calls for which the network routing rules for the hierarchical network are ignored.

Release history

OM group NWMFRRCT was introduced in BCS23.

Registers

OM group NWMFRRCT Registers display on the MAP terminal as follows:

```
FRRATTCT          FRRFLCT
```

Group structure

OM group NWMFRRCT office parameters: None

Key field:
None

Info field:
None

Associated OM groups

NWMFRRTG counts calls that are rerouted, and calls that fail to find an idle VIA route. The counts are made for each trunk group.

Associated functional groups

None

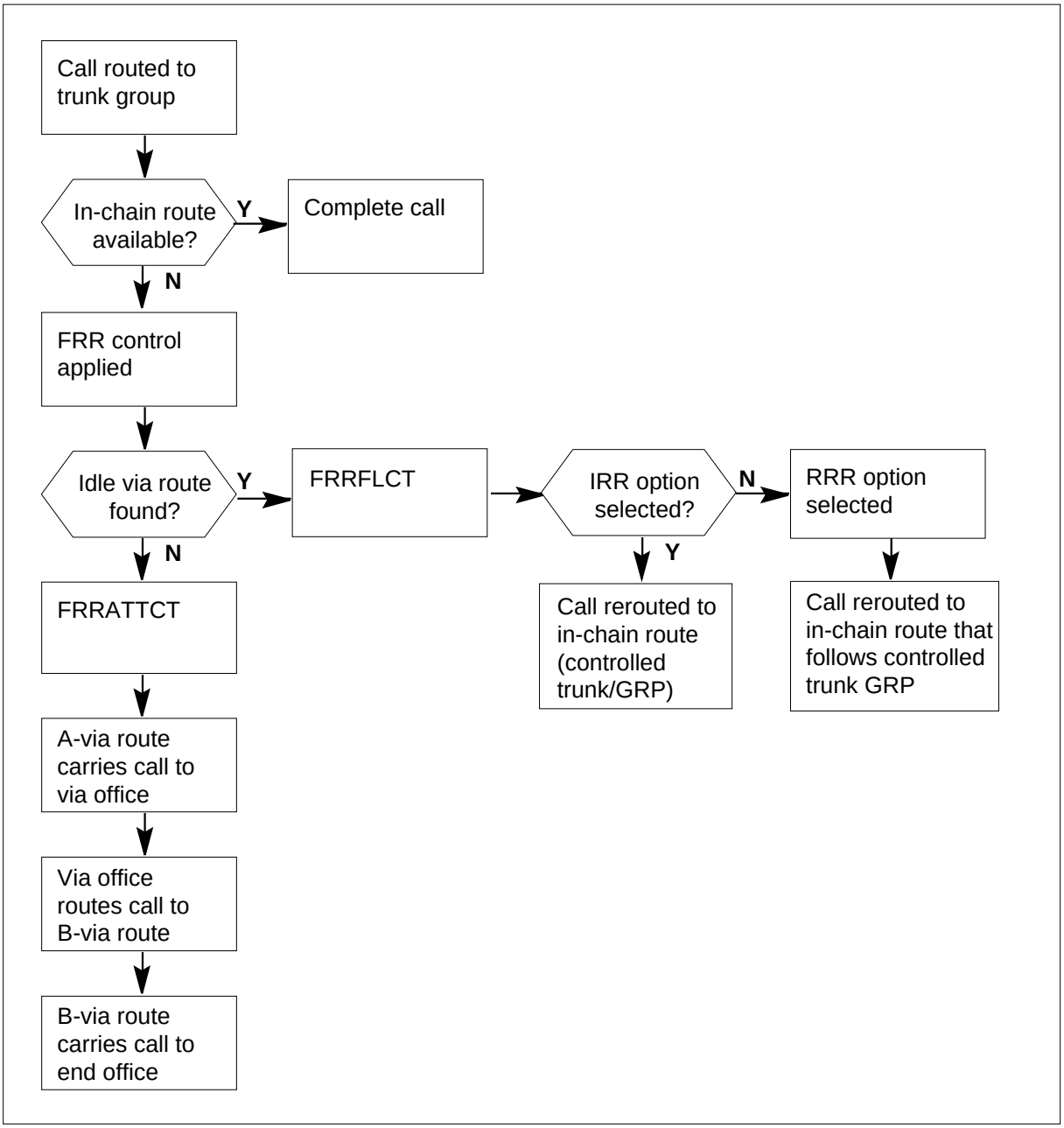
OM group NWMFRRCT (continued)

Associated functionality codes

The functionality codes associated with OM group NWMFRRCT are shown in the following table.

Functionality	Code
Network Management Enhancement	NTX060BB

OM group NWMFRRCT registers



Register FRRATTCT

Flexible reroutes attempt control

Flexible reroutes attempt control (FRRATTCT) counts calls that are rerouted to a VIA route list.

OM group NWMFRRCT (end)

Register FRRATTCT release history

FRRATTCT was introduced in BCS23.

Associated registers

None

Associated logs

None

Extension registers

None

Register FRRFLCT

Flexible reroutes failed control

Flexible reroutes failed control (FRRFLCT) counts rerouted calls that fail to find an idle VIA route list.

Register FRRFLCT release history

FRRFLCT was introduced in BCS23.

Associated registers

None

Associated logs

None

Extension registers

None

OM group NWMFRRCT

OM description

Network management flexible reroute

Network management flexible reroute (NWMFRRCT) counts calls that are rerouted, and rerouted calls that fail to find an idle VIA route. The counts are made for each switch.

Calls are rerouted from an in-chain route to a VIA route. In-chain routes are trunk groups that carry calls according to the rules for routing in a hierarchical network. VIA routes are trunk groups that carry rerouted calls for which the network routing rules for the hierarchical network are ignored.

Release history

OM group NWMFRRCT was introduced in BCS23.

CSP18/SN05

Extension registers FRRATTC2 and FRRFLCT2 were introduced.

Registers

OM group NWMFRRCT Registers display on the MAP terminal as follows:

Group structure

OM group NWMFRRCT office parameters: None

Key field:
None

Info field:
None

Associated OM groups

NWMFRRTG counts calls that are rerouted, and calls that fail to find an idle VIA route. The counts are made for each trunk group.

Associated functional groups

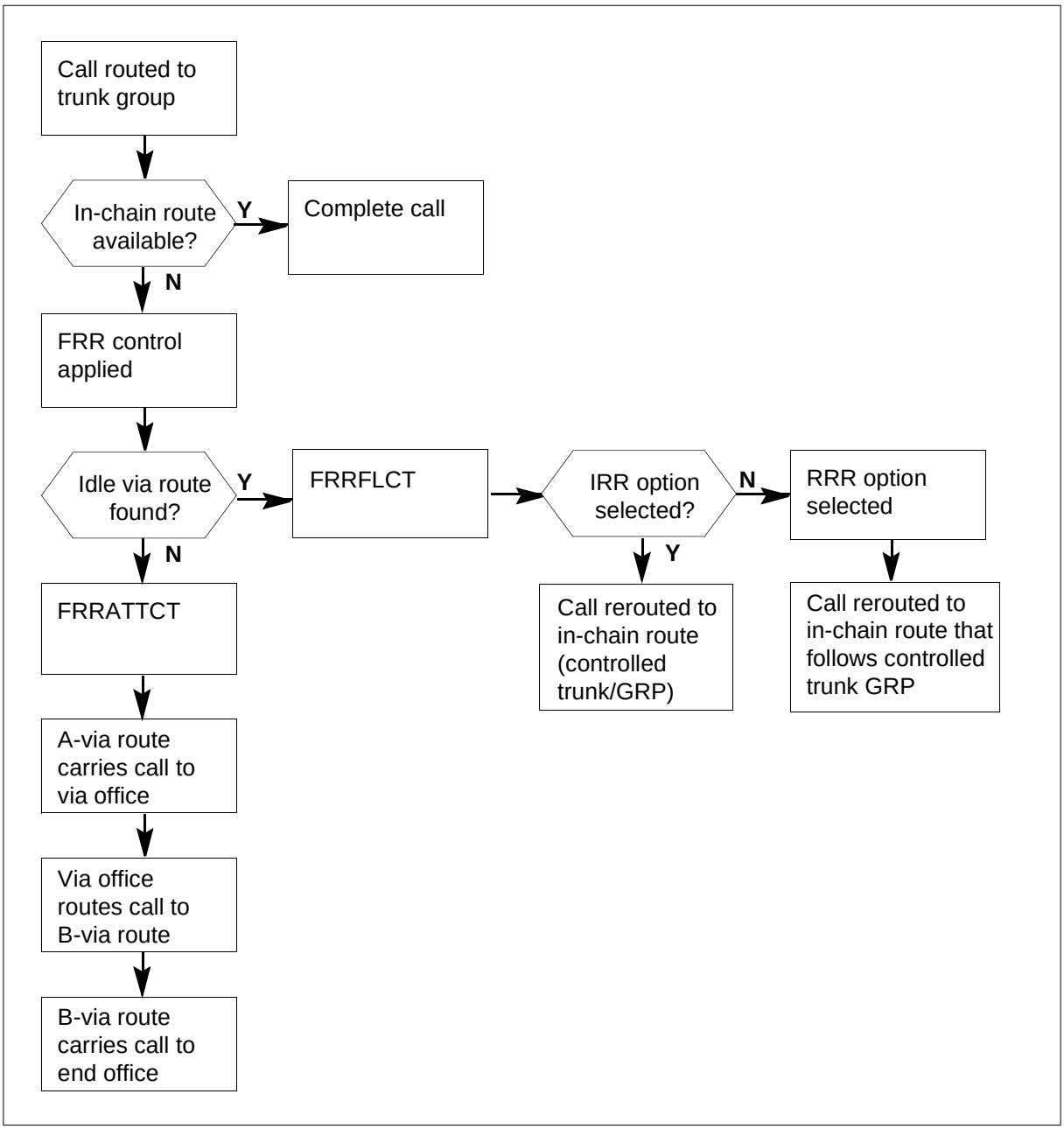
None

Associated functionality codes

The functionality codes associated with OM group NWMFRRCT are shown in the following table.

Functionality	Code
Network Management Enhancement	NTX060BB

OM group NWMFRRCT registers



Register FRRATTCT

Flexible reroutes attempt control

Flexible reroutes attempt control (FRRATTCT) counts calls that are rerouted to a VIA route list.

Register FRRATTCT release history

FRRATTCT was introduced in BCS23.

Associated registers

None

Associated logs

None

Extension registers

FRRATTC2

Register FRRFLCT

Flexible reroutes failed control

Flexible reroutes failed control (FRRFLCT) counts rerouted calls that fail to find an idle VIA route list.

Register FRRFLCT release history

FRRFLCT was introduced in BCS23.

Associated registers

None

Associated logs

None

Extension registers

FRRFLCT2

OM group NWMSILC

OM description

Network management selective incoming load control

The OM group NWMSILC counts calls that the network management selective-incoming load control (SILC) blocks.

The SILC permits incoming and two-way trunk groups to limit incoming calls according to preset rate, percentage values, or both. The preset rate and percentage value are in Table NWMIDOC.

When the SILC blocks a call, the system sends a start dial signal to permit the far-end sender to out-pulse digits. The system ignores the digits and connects a tone in the peripheral module to warn the caller that the call failed. This action makes the trunk available for normal call processing after the caller disconnects.

Release history

The OM group NWMSILC was introduced in BCS20.

BCS23

Table NWMSILC deleted. The IDOC levels now in table NWMIDOC.

Registers

The OM group NWMSILC registers appear on the MAP terminal as follows:

```
TRKSILC
```

Group structure

The OM group NWMSILC can provide one tuple for each office.

Key field:
CLLI for the trunk group. The CLLI is the external identifierfor the trunk group.

Info field:
There is no info field.

Associated OM groups

There are no associated OM groups.

Associated functional groups

There are no associated functional groups.

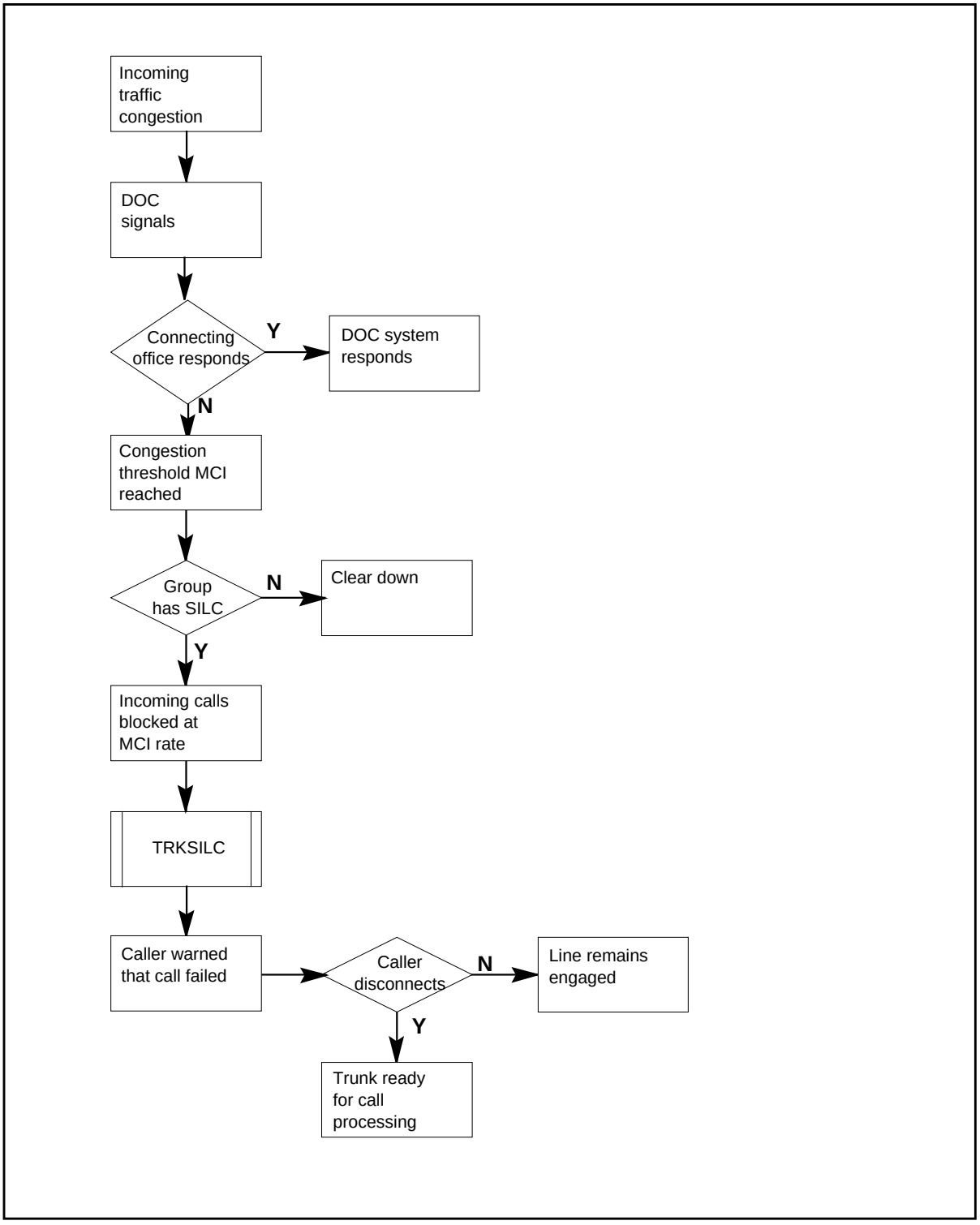
OM group NWMSILC (continued)

Associated functionality codes

The associated functionality codes for OM group NWMSILC are in the following table.

Functionality	Code
Network Management Enhancements	NTX060BA

OM group NWMSILC registers



OM group NWMSILC (end)

Register TRKSILC

Trunk selective incoming load control (TRKSILC)

Register TRKSILC increases when the selective incoming load control blocks a trunk group. Load controls block a trunk group when the trunk group receives too many calls.

Register TRKSILC release history

Register TRKSILC was introduced in BCS20.

BCS23

Table NWMSILC deleted. Table NWMSILC included in table NWMIDOC.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

OM group NWMTGCNT

OM description

Network management trunk group control

Network management trunk group control (NWMTGCNT) counts calls that are encountered and affected by each type of network management trunk group (NWM TG) control.

NWM TG controls are classified as either expansive or protective. Expansive trunk group controls modify the available routes a call can take, thereby increasing the likelihood that a call will reach its proper destination when a network is congested. Protective trunk group controls protect the network when it is congested by preventing calls from entering the network.

The following are examples of protective trunk groups and their purpose:

- Directional reservation (DRE) gives priority to incoming calls on a controlled trunk group, rather than outgoing calls.
- Protective reservation (PRE) gives priority to direct routed calls offered to a controlled trunk group.
- Cancel-to (CANT) blocks calls that access a controlled trunk group.
- SKIP prevents calls from being offered to a controlled trunk group, thereby causing those calls to advance to the next trunk group in a route list.
- Cancel-from (CANT) blocks calls that overflow a controlled trunk group.
- Incoming trunk busy (ITB) restricts the number of incoming calls on a controlled trunk group that has the remote-make-busy capability (assigned in table TRKSGRP). This control removes from service a percentage of the trunks in a trunk group if the number of idle trunks falls below a predefined threshold.
- Selective trunk reservation (STR) blocks outgoing calls if the number of idle trunks in a trunk group falls below a predefined threshold.
- Bidirectional trunk group reservation control (BRC) blocks outgoing calls under the following condition: the number of idle trunks falls below the number of trunks reserved for incoming calls, the number of outgoing calls is greater than or equal to the number of trunks reserved for outgoing calls, and the number of priority calls is greater than or equal to the number of trunks reserved for priority calls.

Release history

OM group NWMTGCNT was introduced in BCS23.

OM group NWMTGCNT (continued)

APC010

Registers NWMTGAFF and NWMTGATT increase when BRC is active on a trunk group selected for an outgoing call.

BCS35

BRC added to key field entries to include bidirectional trunk group reservation controls (BRC) as part of the NWM TG controls.

BCS34

ITO added to key field entries to include international trunk override (ITO) control as part of the NWM TG controls.

BCS33

BSSKIP added to the key field entries.

Registers

The following OM group NWMTGCNT Registers display on the MAP terminal as follows:

```
NWMTGATT        NWMTGAFF
```

Group structure

OM group NWMTGCNT provides one tuple for each type of NWM TG control.

Key field:

NWM_GRP_CONTROL. The names of the NWM TG controls make up the key to this group.

Info field:

None

Associated OM groups

None

Associated functional groups

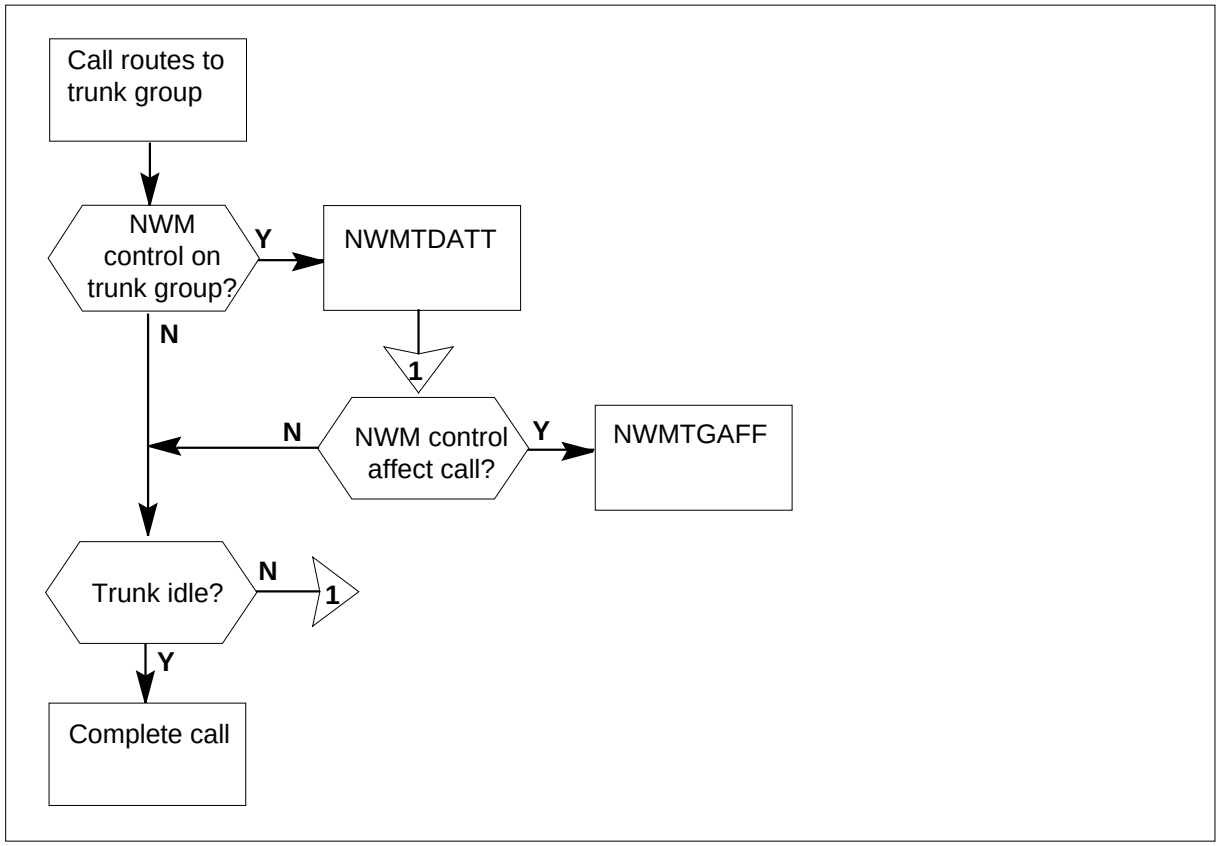
None

Associated functionality codes

The functionality codes associated with OM group NWMTGCNT are shown in the following table.

Functionality	Code
Network Management	NTX060AB

OM group NWMTGCNT registers



Register NWMTGAFF

NWM TG affected

NWM TG affected (NWMTGAFF) counts calls that are directly affected by an NWM TG control. Depending on the control type, affected calls may be blocked, or may skip to the next trunk group in the route list.

OM group NWMTGCNT (continued)

ITB messages cannot be recorded. The entry corresponding to ITB is always zero.

Register NWMTGAFF increases when BRC prevents a call from accessing the trunk group to which it is routed.

Register NWMTGAFF release history

NWMTGAFF was introduced in BCS23.

Associated registers

None

Associated logs

None

Extension registers

None

Register NWMTGATT

NWM TG attempts

NWM TG attempts (NWMTGATT) counts calls that encounter the NWM TG control type.

ITB messages cannot be recorded. The entry corresponding to ITB is always zero.

Register NWMTGATT increases when BRC is active on a trunk group selected for an outgoing call.

Register NWMGATT release history

NWMTGATT was introduced in BCS23..

Associated registers

None

Associated logs

None

Extension registers

None

Register BSSKIP

Register Bearer Service Skip

Measures the number of trunkgroups that have been skipped over during routing procedure, because they have had BSSKIP control active.

Register BSSKIP release history

Register BSSKIP was introduced in EUR006.

Associated register

None

Associated logs

None

Action

None

EXT register

None

Register BSSNSPCH

BSS No capacity or speech

Counts how many No capacity for speech signals have been received from DCME.

PEG: Y

USAGE: N

HIGH WATER: N

OTHER: N/A

Register BSSNSPCH release history

Register BSSNSPCH was introduced in EUR006.

Associated register

None

Associated logs

Log number: DCME105

OM group NWMTGCNT (continued)

Registered when the peg count exceeds the predetermined threshold in a specified time.

Action

None

EXT register

None

Register BSSN3K1

Register BSS No channels available for 3.1kHz

Counts how many no channels available for 3.1 kHz signals have been received from DCME.

PEG: Y

USAGE: N

HIGH WATER: N

OTHER: N/A

Register BSSN3K1 release history

Register BSSN3KI was introduced in EUR006.

Associated register

None

Associated logs

Log number: DCME105

When the peg count exceeds the predetermined threshold in a specified time in table DCMEMTC.

Action

None.

EXT register

None.

Register BSSN64K

Register BSS No 64kbit/s unrestricted capacity available

This usage count is accumulated as a result of a 10 sec scan of `No 64kbit/s unrestricted capacity available' signal.

PEG: N

USAGE: Y

HIGH WATER: N

OTHER: N/A

Register BSSN64K release history

Register BSSN64K was introduced in EUR006.

Associated register

None

Associated logs

Log number: DCME105

When the peg count exceeds the predetermined threshold in a specified time in table DCMEMTC.

Action

None

EXT register

None

Register BSSNSPCU

Register BSS No capacity for speech

This usage count is accumulated as a result of a 10 sec scan of `No capacity for speech' signal.

PEG: N

USAGE: Y

HIGH WATER: N

OTHER: N/A

OM group NWMTGCNT (continued)

Register BSSNSPCU release history

Register BSSNSPCU was introduced in EUR006.

Associated register

None

Associated logs

None

Action

None

EXT register

None

Register BSSN3K1U

Register BSS No channels available for 3.1kHz

This usage count is accumulated as a result of a 10 sec scan of `No channels available for 3.1kHz' signal.

PEG: Y

USAGE: N

HIGH WATER: N

OTHER: N/A

Register BSSN3K1U release history

Register BSSN3K1U was introduced in EUR006.

Associated register

None

Associated logs

Log number: DCME105

When the peg count exceeds the predetermined threshold in a specified time in table DCMEMTC.

Action

None

EXT register

None

Register BSSN64KU

Register BSS No channels available for 3.1kHz

This usage count is accumulated as a result of a 10 sec scan of `No 64kbit/s unrestricted capacity available' signal.

PEG: N

USAGE: Y

HIGH WATER: N

OTHER: N/A

Register BSSN64KU release history

Register BSSN64KU was introduced in EUR006.

Associated register

None

Associated logs

None

Action

None

EXT register

None

OM group OADATCOM

OM description

Operator Services System Advanced Intelligent Network (OSSAIN) Data Communications

OADATCOM (OSSAIN Data Communications) is created for data communications operational measurements. The following OM groups are also created for data communications operational measurements:

- OANODEDC - OSSAIN Node Data Communications
- OASNPLDC - OSSAIN Session Pool Data Communications

OM group OADATCOM provides peg counts for OSSAIN data communications messaging events. It provides counts for the total number of messages sent from the CM to other nodes and the total number of messages received by the CM from other nodes. Counts of messages are broken down into successful counts and failure counts.

Release history

OM group OADATCOM was introduced in NA006.

New info field TCP is added in NA010 by feature AF7439.

Registers

OM group OADATCOM registers display on the MAP terminal as follows:

```
OMSHOW OADATCOM ACTIVE

OADATCOM

CLASS: ACTIVE
START:1997/11/21 10:30:00 TUES;STOP:1997/11/2 11:40:23 TUES;
SLOWSAMPLES:       7 ; FASTSAMPLES           62 ;

0 UDP
   OMSGSND     OMSGSND2     OMSGRCV       OMSGRV2
   OMSGSNSC    OMSGSNS2     OMSGRCSC      OMSGRCS2
   OMSGSNFL    OMSGRCFL     OSNDRTFL      ORCVRTFL

    36033       3            36001         3
    36031       3            35099         3
    0           2            0             2


1 TCP
   OMSGSND     OMSGSND2     OMSGRCV       OMSGRV2
   OMSGSNSC    OMSGSNS2     OMSGRCSC      OMSGRCS2
   OMSGSNFL    OMSGRCFL     OSNDRTFL      ORCVRTFL

    2517        0            0             0
    2485        0            0             0
    32          0            0             0
```

Group structure

OM group OADATCOM provides two tuples for each office.

Key field:
0 to 1

Info field:
UDP or TCP - associated with the protocol used by theOSSAIN application. Currently call processing and maintenance use UDP, and QMS MIS uses TCP.

Associated OM groups

OASNPLDC: This OM group pegs data communications events on a per session pool basis.

OANODEDC: This OM group pegs data communications events on a per node basis.

OM group OADATCOM (continued)

Associated functional groups

NA006

Functional group Enhanced Services (ENSV0001) is associated with OM group OADATCOM. In release NA009, the group is changed to OSSAIN (OSAN0001).

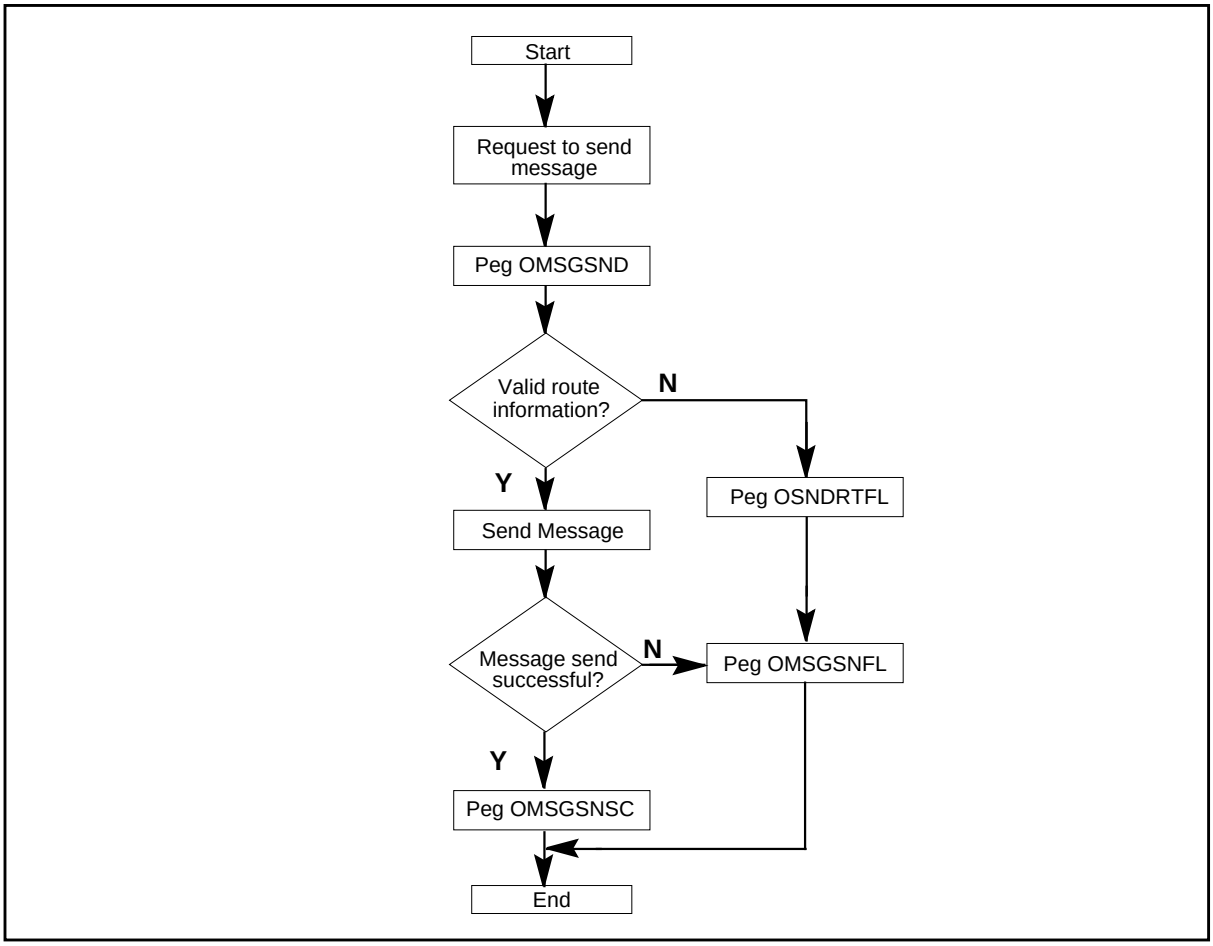
Associated functionality codes

The functionality codes associated with OM group OADATCOM are shown in the following table.

Functionality	Code
OSSAIN Initial Release	OSAN0002 (NA06)
OSSAIN 10 Enhancements	OSAN0005 (NA10)

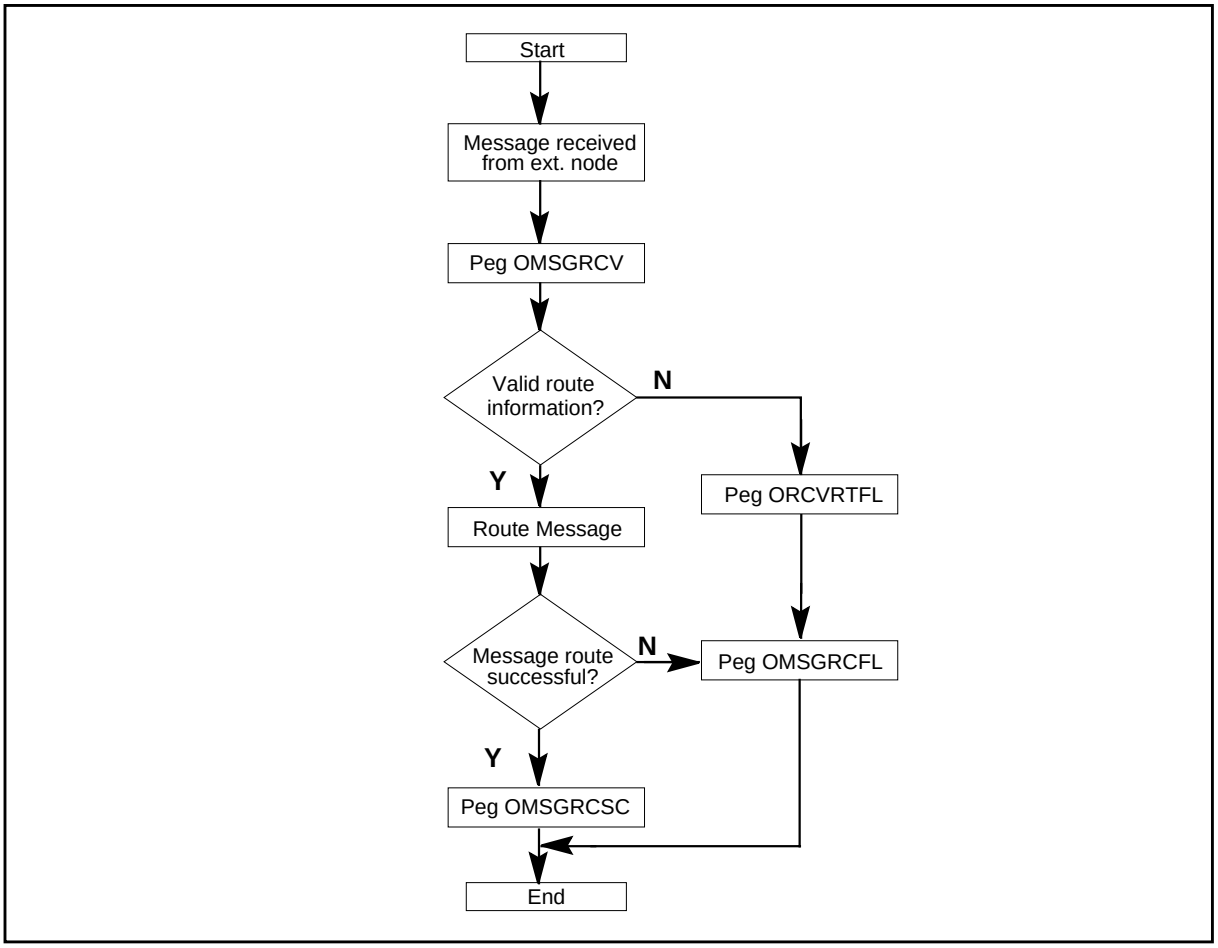
OM group OADATCOM (continued)

OM group OADATCOM registers: OM's pegged while sending a message



OM group OADATCOM (continued)

OM group OADATCOM registers: OM's pegged while receiving a message



Test case

For parameter QMS_MIS_OAIN_XMIT_TIMEOUT in table OAINPARM, enter 1 second, before bringing the MIS node into service. Then RTS the MIS node, and allow the TCP connection to be established. OMSGSND and OMSGSNSC should then each be pegged. Busying the EIU connecting the DMS switch to the MIS node, with a small value still in QMS_MIS_OAIN_XMIT_TIMEOUT when the TCP connection to the MIS node has been established, will cause OMSGSNFL to be pegged.

Register OMSGRCFL

OSSAIN message receive failure

This register is pegged each time data communications encounters an error while attempting to forward an external node originated message to the destination DMS process. This can be caused by a failure in the DMS switch

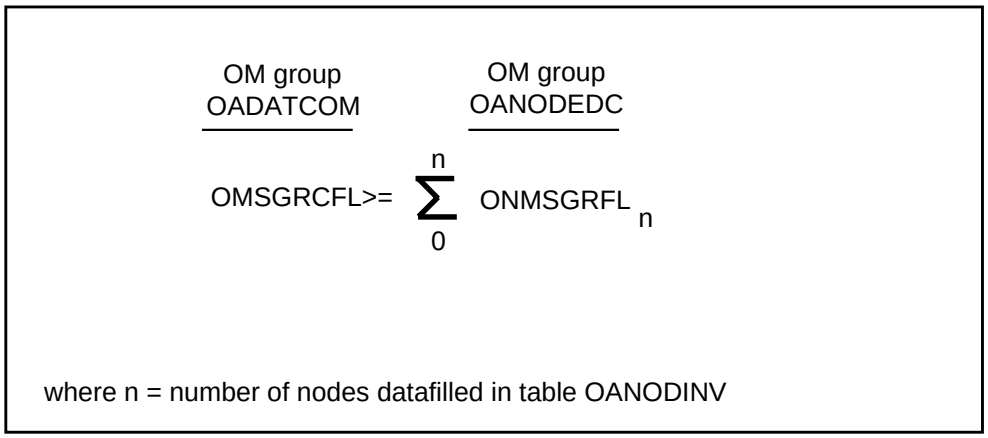
internal messaging system or data transport interface. This register is pegged also during failures indicated by register ORCVRTFL.

Note: This register can be validated by summing the receive failed counts, register ONMSGRFL, of each node datafilled in table OANODINV.

OMSGRCFL = OMSGRCV - OMSGRCSC

OMSGRCFL >= ORCVRTFL

This register is related to OM group OANODEDC register ONMSGRFL as follows: OMSGRCFL is equal or greater than the value of ONMSGRFL for each node, added over all nodes in table OANODINV. This calculation is represented also as follows:



Register OSMGRCFL release history

Register OSMGRCFL was introduced in NA006.

Associated registers

OMSGRCV, OMSGRCSC, ORCVRTFL, and ONMSGRFL

Associated logs

Log numbers: OAIN605 and OAIN606

Extension registers

None

OM group OADATCOM (continued)

Register OMSGRCSC

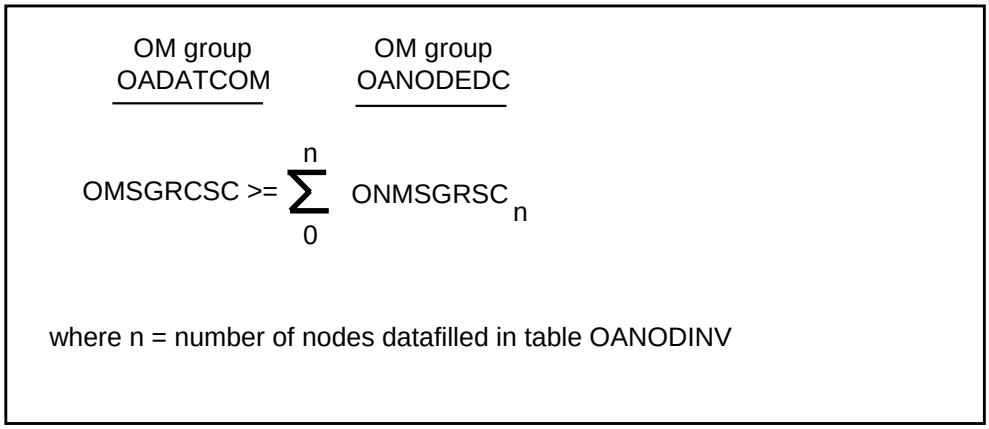
OSSAIN message receive success

This register is pegged when the CM's data communications software is able to successfully process an incoming message.

Note: This register can be validated by summing the successful message receives, register ONMSGRSC, of each node datafilled in table OANODINV.

OMSGRCSC = OMSGRCV - OMSGRCFL

This register is related to OM group OANODEDC as follows:



Register OSMGRCSC release history

Register OSMGRCSC was introduced in NA006.

Associated registers

OMSGRCV, OMSGRCFL, and ONMSGRSC

Associated logs

None

Extension registers

OMSGRCS2

Register OMSGRCV

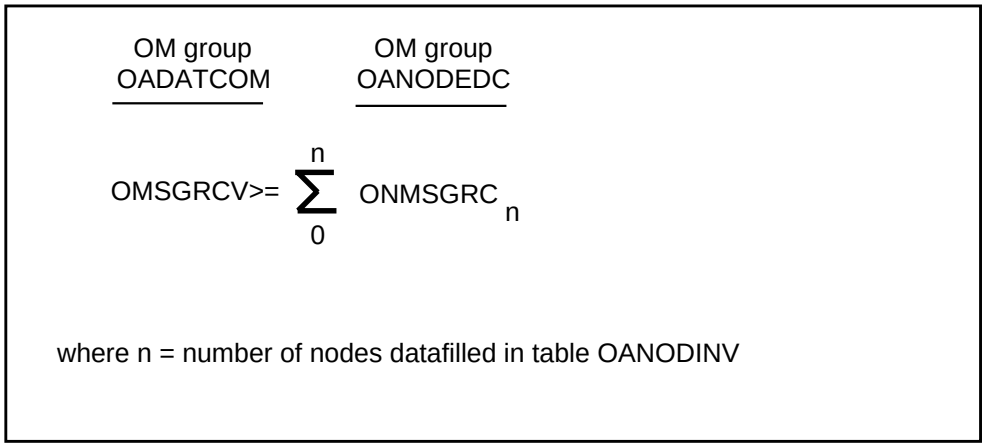
OSSAIN message received

This register is pegged for a specific node each time an incoming message, originating from an external node, is received from that node. This includes both call processing and maintenance messages.

Note: This register can be validated on a per node basis by adding the message receive success register and the message receive failure register that apply to the node of interest.

OMSGRCV = OMSGRCSC + OMSGRCFL

This register is related to OM group OANODEDC as follows:



Register OMSGRCV release history

Register OMSGRCV was introduced in NA006.

Associated registers

OMSGRCSC, OMSGRCFL, and ONMSGRC

Associated logs

None

Extension registers

OMSGRCV2

Register OMSGSND

OSSAIN message send requested

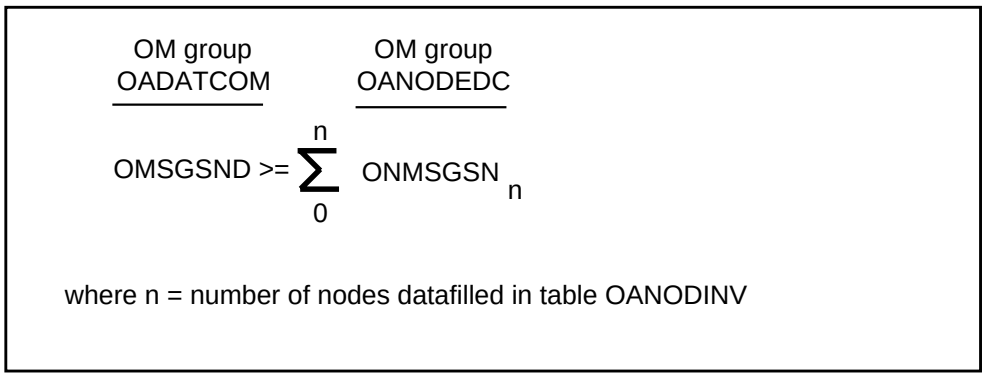
OM group OADATCOM (continued)

This register is pegged each time the data communications software is requested to send a message. This includes requests from call processing, maintenance, and Ethernet based QMS MIS messages.

Note: This register can be validated by adding the message send success register and the message send failure register.

OMSGSND = OMSGSNSC + OMSGSNFL

This register is related to OM group OANODEDC as follows:



Register OMSGSND release history

Register OMSGSND was introduced in NA006.

QMS MIS reference in register description added in NA010 by feature AF739.

Associated registers

OMSGSNSC, OMSGSNFL, and ONMSGSND

Associated logs

None

Extension registers

OMSGSND2

Register OMSGSNFL

OSSAIN message send failure

This register is pegged each time data communications encounters an error while attempting to send an outgoing message. This can be caused by a data

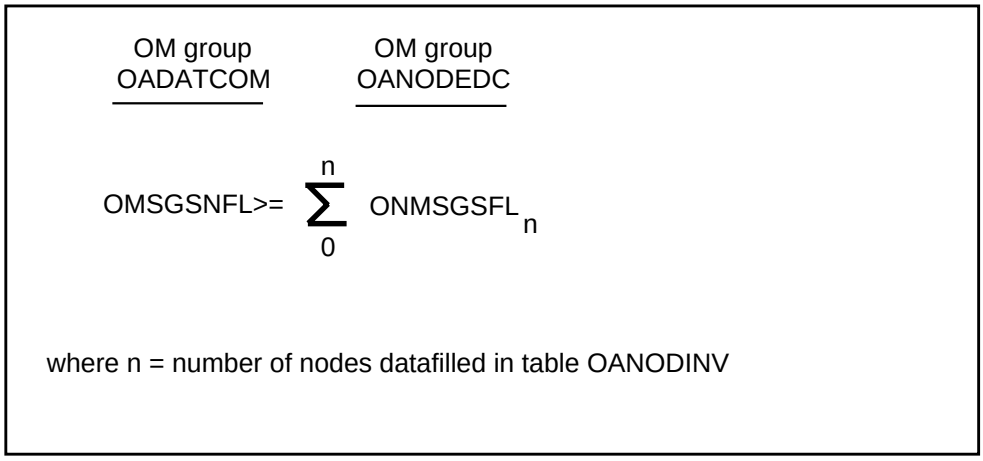
transport layer failure. This register is pegged also for reasons indicated by register OMSGSRTFL.

Note: This register can be validated by summing the failed message sends, register ONMSGSFL, of each node datafilled in table OANODINV.

OMSGSNFL = OMSGSND - OMSGSNSC

OMSGSNFL >= OSNDRTFL

This register is related to OM group OANODEDC as follows:



Register OSMGSNFL release history

Register OSMGSNFL was introduced in NA006.

Associated registers

OMSGSND, OMSGSNSC, OSNDRTFL, and ONMSGSFL

Associated logs

Log number: OAIN607

Extension registers

None

Register OMSGSNSC

OSSAIN message send success

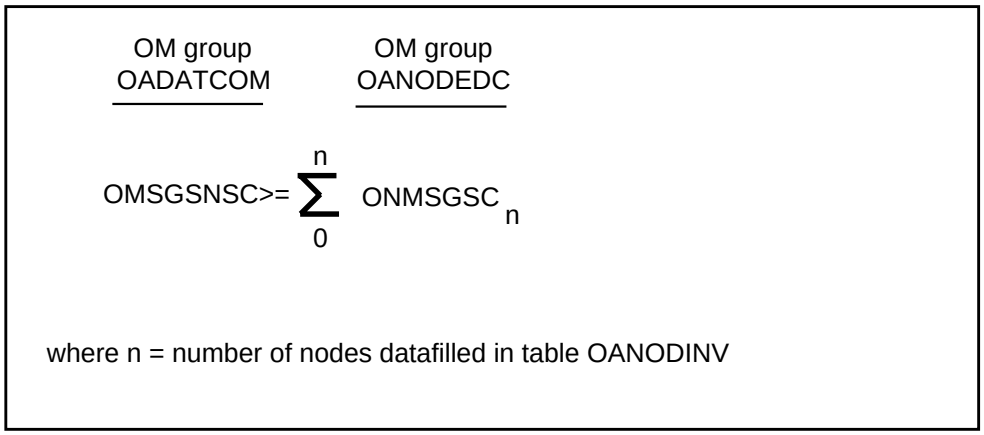
OM group OADATCOM (continued)

This register is pegged when the CM's data communications software is able to successfully process an outgoing message. Note that call processing and maintenance under OSSAIN uses unguaranteed messaging, while QMS MIS uses TCP for guaranteed' messaging. Pegging this register does not indicate that the message actually arrived at the destination node.

Note: This register can be validated by summing the successful message sends, register ONMSGSSC, of each node datafilled in table OANODINV.

OMSGSNSC = OMSGSND - OMSGSNFL

This register is related to OM group OANODEDC as follows:



Register OMSGSNSC release history

Register OMSGSNSC was introduced in NA006.

TCP reference added to register description in NA010 by feature AF7439.

Associated registers

OMSGSND, OMSGSNFL, and ONMSGSSC

Associated logs

None

Extension registers

OMSGSNS2

Register ORCVRTFL

OSSAIN message receive route failure

This register is pegged each time the data communications software is unable to determine the destination of an external node originated message. This can be caused by a variety of reasons including:

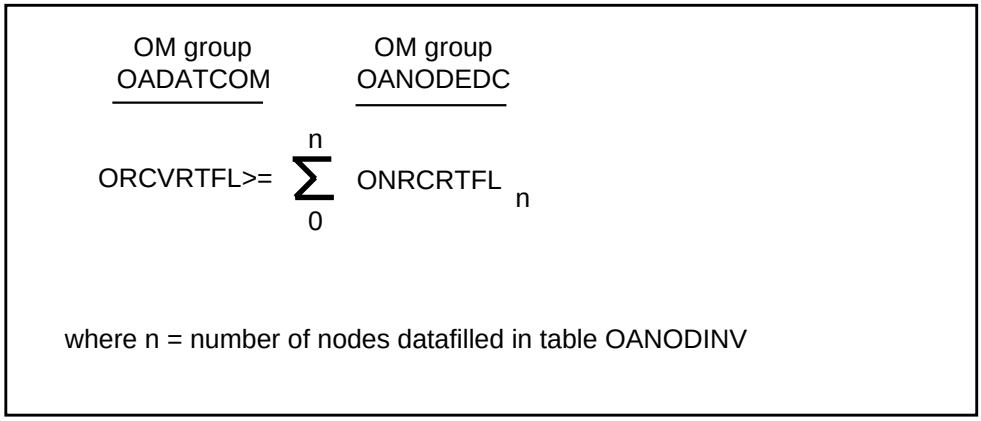
- invalid protocol version
- invalid class header identifier
- invalid operation offset
- invalid message length
- invalid node identifier
- invalid session pool identifier
- invalid session identifier
- invalid network address
- invalid session pool state
- invalid node pool state
- invalid message size
- pool / node identifier mis-match
- corrupted message

Note: This register can be validated by summing the receive route failed counts, register ONRCRTFL, of each node datafilled in table OANODINV.

ORCVRTFL <= OMSGRCFL

This register is related to OM group OANODEDC as follows:

OM group OADATCOM (continued)



Register ORCVRTFL release history

Register ORCVRTFL was introduced in NA006.

Associated registers

OMSGRCFL and ONRCRTFL

Associated logs

Log number: OAIN605 and OAIN606

Extension registers

None

Register OSNDRTFL

OSSAIN message send route failure

This register is pegged each time the data communications software is unable to determine the destination of an outgoing message. This can be caused by the following reasons.

- invalid node identifier
- invalid session pool identifier
- invalid session identifier
- pool / node identifier mis-match
- corrupted message

Note: This register can be validated by summing the message send route failures, register ONSNRTFL, of each node datafilled in table OANODINV.

OSNDRTFL <= OMSGSNFL

This register is related to OM group OANODEDC as follows:

OM group OADATCOM — OM group OANODEDC

$$OSNDRTFL >= \sum_{0}^{n} ONSNRTFL_{n}$$

where n = number of nodes datafilled in table OANODINV

Register OSNDRTFL release history

Register OSNDRTFL was introduced in NA006.

Associated registers

OMSGSNFL and ONSNRTFL

Associated logs

None

Extension registers

None

OM group OAFLTRIG

OM description

Operator Services System Advanced Intelligent Network (OSSAIN) Float Triggers

The OSSAIN OM group OAFLTRIG provides peg counts for actions related to OSSAIN float trigger processing. These measurements cover float trigger processing causing call control to transfer to an OSSAIN function or control list.

The OSSAIN call float trigger tables (OACNNPRF, OADSCPRF, OATLKPRF, OACAUPRF, and OADTFPRF) must be datafilled with trigger events and actions, and a datafilled trigger event must occur for these registers to be pegged.

Release history

OM group OAFLTRIG was introduced in NA006.

Registers

OM group OAFLTRIG registers display on the MAP terminal as follows:

```
OMSHOW OAFLTRIG ACTIVE

OAFLTRIG

CLASS:  ACTIVE
START:1996/12/03 06:30:00 MON; STOP:1996/12/03 06:46:18 MON;
SLOWSAMPLES:          9 ; FASTSAMPLES:         97

          OAFLTFUN   OAFLTCTL  OATRIGFL
0              319         21         0
```

Group structure

OM group OAFLTRIG provides one tuple for each office.

Key field:
None

Info field:
None

Associated OM groups

OAINQMS

Associated functional groups

NA006

Functional group ENSV Enhanced Services (ENSV0001) is associated with OM group OAFLTRIG.

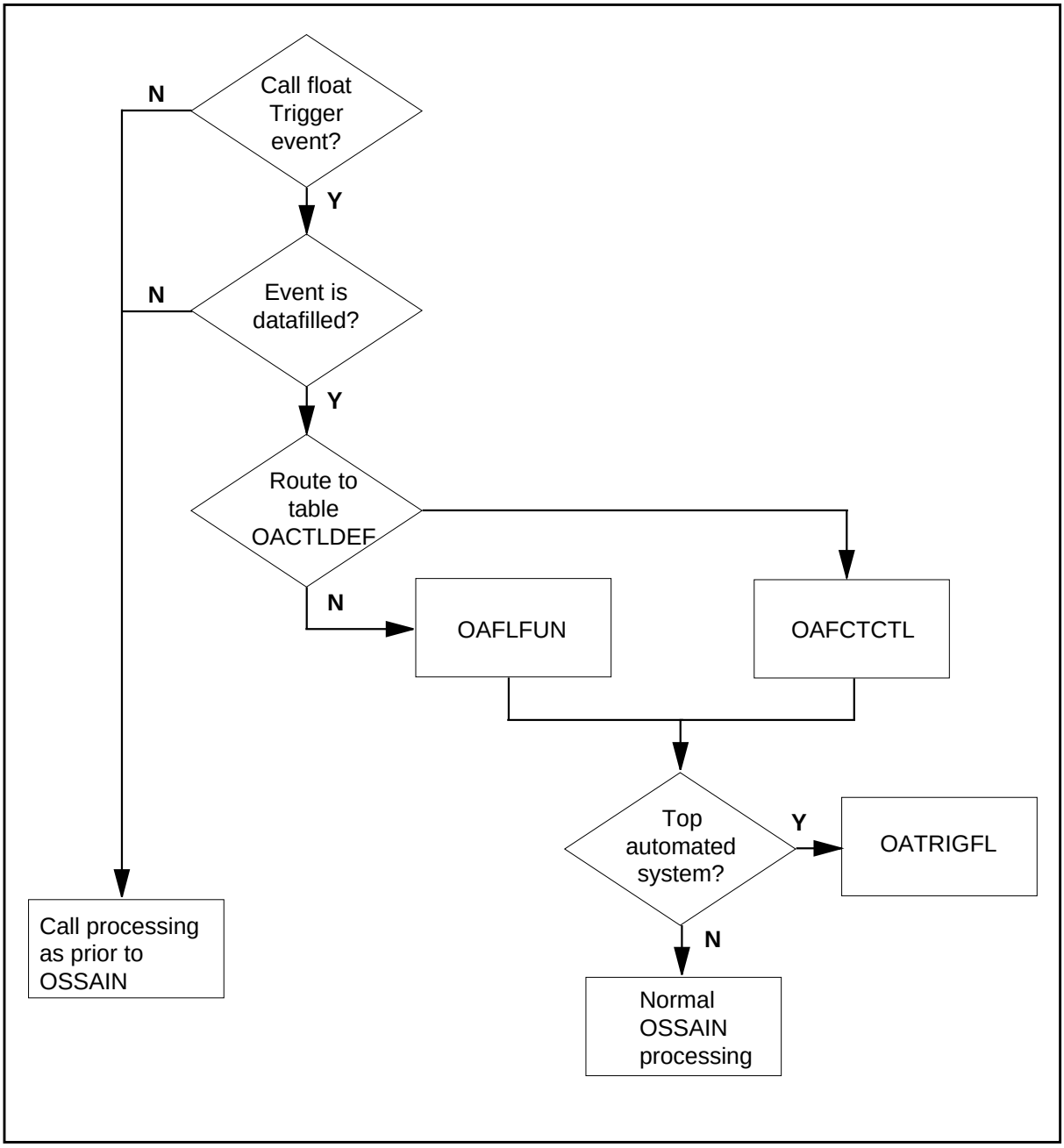
Associated functionality codes

The functionality codes associated with OM group OAFLTRIG are shown in the following table.

Functionality	Code
Operator Services AIN	ENSV0014 (NA006)

OM group OAFLTRIG (continued)

OM group OAFLTRIG registers



Register OAFLTCTL

OSSAIN Float to a Control List

Calls in the floated state that trigger causing call control to be successfully passed to an OSSAIN Control List (in table OACTLDEF).

Note: For test case(s), make an OSSAIN call that performs float trigger processing to an OSSAIN Control List.

Register OAFLTCTL release history

Register OAFLTCTL was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

None

Register OAFLTFUN

OSSAIN Float to a Function

Calls in the floated state that triggered causing call control to be successfully passed to an OSSAIN Function (in table OAFUNDEF).

Note: For test case(s), make an OSSAIN call that performs float trigger processing to an OSSAIN Function.

Register OAFLTFUN release history

Register OAFLTFUN was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

None

Register OATRIGFL

OSSAIN Trigger Failure

OM group OAFLTRIG (end)

This register indicates a trigger failure due to calls in the floated state that trigger and attempt to pass control to a Traffice Operator Position System (TOPS) automated system. Passing call control to a TOPS automated system via trigger processing is not allowed. This can occur as a result of 1) passing control to an OSSAIN Function which is a TOPS automated system or 2) passing control to an OSSAIN Control List in which the first OSSAIN Function is a TOPS automated system.

Note: For test case(s), make an OSSAIN call that performs float trigger processing to an OSSAIN Function datafilled as a TOPS automated system.

Register OATRIGFL release history

Register OATRIGFL was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAIN303

Extension registers

None

OM group OAINNODE

OM description

OSSAIN Node Maintenance

This OM group pegs state changes for all Operator Services System Advanced Intelligent Network (OSSAIN) nodes including Operator Services Node-Maintenance (OSNM), Operator Services Node (OSN), and Operator Services Systems Advanced Intelligent Network Centralization (OSAC) nodes.

Release history

OM group OAINNODE was introduced in TOPS07.

Registers

OM group OAINNODE registers display on the MAP terminal as follows:

```
CLASS: ACTIVE
START:1991/05/19 16:30:00 WED; STOP:1995/05/19 16:33:00 WED;
SLOWSAMPLES:    2: FASTSAMPLES:     18 ;

INFO (OAINNODE_INDEX_OMINFO)
   NDINSV          NDISTB         NDSYSB           NDMANB
   NRTSFAIL        NTSTFAIL       NAUDFAIL

3 DEBIT_3
    1               1               0              1
    0               0               0

6 DEBIT_6
    1               0               0              1
    0               0               0
```

Group structure

OM group OAINNODE provides up to 768 tuples per office.

Key field:

OAINNODE can be indexed by either of the following:NODEID {0 to 767}: Key field for OANODINV.NODENAME: Name associated with NODEID.

Info field:

OAINNODE_INDEX_OMINFO - This name can be up to 16 characters long.

OM group OAINNODE (continued)

Associated OM groups

None

Associated functional groups

Functional group Enhanced Services (ENSV0001) is associated with OM group OAINNODE.

Associated functionality codes

The functionality codes associated with OM group OAINNODE are shown in the following table.

Functionality	Code
OSSAIN Enhancements	ENSV0020

Register NAUDFAIL

Register Node Audit Fail

Register NAUDFAIL is pegged when the node goes system busy due to audit failure.

Register NAUDFAIL release history

Register NAUDFAIL was introduced in TOPS07.

Associated registers

NDSYSB

Associated logs

Log PM102 is generated when an OSSAIN node goes SysB.

Extension registers

None

Register NDINSV

Register Node in Service

Register NDINSV is pegged when the node is brought into service.

Register NDINSV release history

Register NDINSV was introduced in TOPS07.

Associated registers

None

Associated logs

Log PM106 is generated when an OSSAIN node goes in service.

Extension registers

None

Register NDISTB

Register Node in Service Trouble

Register NDISTB is pegged when the node goes ISTB due to the session pool going out of service.

Register NDISTB release history

Register NDISTB was introduced in TOPS07.

Associated registers

None

Associated logs

Log PM128 is generated when an OSSAIN node goes ISTB.

Extension registers

None

Register NDMANB

Register Node Manual Busy

Register NDMANB is pegged when the node is manually busied from the MAP.

Register NDMANB release history

Register NDMANB was introduced in TOPS07.

Associated registers

None

Associated logs

Log PM105 is generated when an OSSAIN node goes MANB.

OM group OAINNODE (continued)

Extension registers

None

Register NDSYSB

Register Node System Busy

Register NDSYSB is pegged under the following conditions:

- The node goes system busy due to audit failure.
- The node goes system busy due to RTS failure.
- The node goes system busy due to a request from the remote node.

Register NDSYSB release history

Register NDSYSB was introduced in TOPS07.

Associated registers

NAVDFAIL, NRTSFAIL

Associated logs

Log PM102 is generated when an OSSAIN node goes SysB.

Extension registers

None

Register NRTSFAIL

Register Node RTS Fail

Register NRTSFAIL is pegged when the node goes system busy due to RTS failure.

Register NRTSFAIL release history

Register NRTSFAIL was introduced in TOPS07.

Associated registers

NDSYSB

Associated logs

Log PM102 is generated when an OSSAIN node goes SysB.

Extension registers

None

Register NTSTFAIL

Register Node Test Fail

Register NTSTFAIL is pegged when the node fails a manual test.

Register NTSTFAIL release history

Register NTSTFAIL was introduced in TOPS07.

Associated registers

None

Associated logs

Log PM100 is generated when an OSSAIN node fails a Manual Test.

Extension registers

None

OM group OAINQMS

OM description

Operator Services System Advanced Intelligent Network (OSSAIN) Queue Management System (QMS)

OM group OAINQMS provides peg counts for OSSAIN calls on a per queue basis. It provides counts for calls that request an OSSAIN session from the QMS call agent and manager (CAM) and also counts on the action taken by the CAM in response to the request.

Release history

OM group OAINQMS was introduced in NA006.

Registers

OM group OAINQMS registers display on the MAP terminal as follows:

```
OMSHOW OAINQMS ACTIVE

OAINQMS

CLASS:   ACTIVE
START:1995/04/03 06:30:00 MON; STOP: 1995/04/03 06:46:18 MON;
SLOWSAMPLES:        9 ; FASTSAMPLES:          97 ;

   INFO (OQMS_QUEUEINDEX_REGISTERINFO)
    SESRQSTD        SESRQST2        QUEUEDC         QUEUEDC2
    GOTSESIM        GOTSESI2        DEFLCTCQ        OVFLMXCQ
    OVFLMXAP        DENIEDCQ        ABANDONC

0  CQ0

    59              0               21              0
    38              0               0               0
    0               0               1
```

Group structure

OM group OAINQMS provides one tuple for each office.

Key field:
OSSAIN Call Queue (CQ0 - CQ254)

Info field:
None

Associated OM groups

None

Associated functional groups

NA006

Function group ENSV Enhanced Services (ENSV0001) is associated with OM group OAINQMS:

Associated functionality codes

The functionality codes associated with OM group OAINQMS are shown in the following table.

Functionality	Code
Operator Services AIN	ENSV0014 (NA006)

Register ABANDONC

Call Abandoned while in queue

Pegged when an OSSAIN call is abandoned by a subscriber while the call is in queue for a session.

Note: For test case(s), make an OSSAIN call when no sessions to a service node are available and have the calling line go on hook while the call is queued.

Register ABANDONC release history

Register ABANDONC was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

None

OM group OAINQMS (continued)

Register DEFLCTCQ

Call Deflected

Pegged when a call destined for a call queue is deflected by the QMS CAM because no agent is available to serve the call, and the projected wait time for the call exceeds CDTIME datafilled for the queue in table QMSCQDEF.

Note: For test case(s), make an OSSAIN call when no sessions to a service node are available, and ensure that the predicted wait time for the queue exceeds the CDTIME value datafilled in table QMSCQDEF for the queue.

Note: To validate a particular call queue, use the following formula:

SESRQSTD = QUEUEDC + GOTSESIM + DEFLCTCQ + OVFLMXCQ + OVFLMXAP + DENIEDCQ

Register DEFLCTCQ release history

Register DEFLCTCQ was introduced in NA006.

Associated registers

The following registers are associated with register DEFLCTCQ:

- SESRQSTD
- QUEUEDC
- GOTSESIM
- OVFLMXCQ
- OVFLMXAP
- DENIEDCQ

Associated logs

None

Extension registers

None

Register DENIEDCQ

Call Queuing Denied

Pegged when a call destined for a call queue is deflected by the QMS CAM because no agent is available to serve the call, and the QMS CAM is unable to queue the call for reasons other than those described for registers DEFLCTCQ, OVFLMXCQ, and OVFLMXAP.

Note: There are no test case(s) for this register.

Note: To validate a particular call queue, use the following formula:

SESRQSTD = QUEUEDC + GOTSESIM + DEFLCTCQ + OVFLMXCQ + OVFLMXAP + DENIEDCQ

Register DENIEDCQ release history

Register DENIEDCQ was introduced in NA006.

Associated registers

The following registers are associated with register DENIEDCQ:

- SESRQSTD
- QUEUEDC
- GOTSESIM
- DEFLCTCQ
- OVFLMXCQ
- OVFLMXAP

Associated logs

None

Extension registers

None

Register GOTSESIM

Got Session Immediately

Pegged when a session is obtained immediately from the QMS CAM on request.

OM group OAINQMS (continued)

Note: For test case(s), make an OSSAIN call and ensure that a session is immediately obtained.

Note: To validate a particular call queue, use the following formula:

SESRQSTD = QUEUEDC + GOTSESIM + DEFLCTCQ + OVFLMXCQ + OVFLMXAP + DENIEDCQ

Register GOTSESIM release history

Register GOTSESIM was introduced in NA006.

Associated registers

The following registers are associated with register GOTSESIM:

- SESRQSTD
- QUEUEDC
- DEFLCTCQ
- OVFLMXCQ
- OVFLMXAP
- DENIEDCQ

Associated logs

None

Extension registers

GOTSESI2

Register OVFLMXAP

Call Overflowed (No Call Queue Elements)

Pegged when a call destined for a call queue is overflowed by the QMS CAM because no agent is available to serve the call, and the call queuing elements for the application have been exhausted (as specified by datafill in table QAPLNDEF).

Note: For test case(s), make an OSSAIN call when no sessions to a service node are available. Ensure that the number of calls in queue for the OSSAIN application equals the value datafilled by field CQELEMS, in table QAPLNDEF.

Note: To validate a particular call queue, use the following formula:

SESRQSTD = QUEUEDC + GOTSESIM + DEFLCTCQ + OVFLMXCQ + OVFLMXAP + DENIEDCQ

Register OVFLMXAP release history

Register OVFLMXAP was introduced in NA006.

Associated registers

The following registers are associated with register OVFLMXAP:

- SESRQSTD
- QUEUEDC
- GOTSESIM
- DEFLCTCQ
- OVFLMXCQ
- DENIEDCQ

Associated logs

None

Extension registers

None

Register OVFLMXCQ

Call Overflowed (MAXSIZE exceeded)

Pegged when a call destined for a call queue is overflowed by the QMS CAM because no agent is available to serve the call, and the number of calls in the call queue that the call was destined for exceeds the MAXSIZE value datafilled for the queue in table QMSCQDEF.

OM group OAINQMS (continued)

Note: For test case(s), make an OSSAIN call when no sessions to a service node are available. Ensure that the number of calls in queue for the OSSAIN application equals the value datafilled by field CQELEMS, in table QAPLNDEF.

Note: To validate a particular call queue, use the following formula:

SESRQSTD = QUEUEDC + GOTSESIM + DEFLCTCQ + OVFLMXCQ + OVFLMXAP + DENIEDCQ

Register OVFLMXCQ release history

Register OVFLMXCQ was introduced in NA006.

Associated registers

The following registers are associated with register OVFLMXCQ:

- SESRQSTD
- QUEUEDC
- GOTSESIM
- DEFLCTCQ
- OVFLMXAP
- DENIEDCQ

Associated logs

None

Extension registers

None

Register QUEUEDC

Call Queued

Pegged when an OSSAIN call is queued for a session by the QMS CAM.

Note: For test case(s), make an OSSAIN call that must be queued for connectivity to a service node.

Note: To validate a particular call queue, use the following formula:

SESRQSTD = QUEUEDC + GOTSESIM + DEFLCTCQ + OVFLMXCQ + OVFLMXAP + DENIEDCQ

Register QUEUEDC release history

Register QUEUEDC was introduced in NA006.

Associated registers

The following registers are associated with register QUEUEDC:

- POSREQSTD
- GOTSESIM
- DEFLCTCQ
- OVFLMXCQ
- OVFLMXAP
- DENIEDCQ

Associated logs

None

Extension registers

QUEUEDC2

Register SESRQSTD

Session Requested for OSSAIN call

Pegged when a session is requested by an OSSAIN call from the QMS CAM.

Note: For test case(s), make an OSSAIN call that requires connectivity to a service node.

Note: To validate a particular call queue, use the following formula:

SESRQSTD = QUEUEDC + GOTSESIM + DEFLCTCQ + OVFLMXCQ + OVFLMXAP + DENIEDCQ

OM group OAINQMS (end)

Register SESRQSTD release history

Register SESRQSTD was introduced in NA006.

Associated registers

The following registers are associated with register SESRQSTD:

- QUEUEDC
- GOTSESIM
- DEFLCTCQ
- OVFLMXCQ
- OVFLMXAP
- DENIEDCQ

Associated logs

None

Extension registers

SESRQST2

OM group OAINRTE

OM description

OSSAIN Route

This OM group provides peg counts for obtaining sessions from session pools used for host-remote sessions or trigger event informs.

Release history

OM group OAINRTE was introduced in TOPS07.

Registers

OM group OAINRTE registers display on the MAP terminal as follows:

```
>OMSHOW OAINRTE ACTIVE
CLASS: ACTIVE
START:1991/05/19 16:30:00 WED; STOP:1995/05/19 16:33:00 WED;
SLOWSAMPLES:    2: FASTSAMPLES:     18 ;

INFO (OAINRTE_INDEX_REGISTERINFO)
OSCSESQ          OSCSESQ2         OSCGOTS          OSCGOTS2
OSCOVFL          TRGSESQ          TRGSESQ2         TRGGOTS
TRGGOTS2         TRGOVFL

3 SESNPL_3
  120                0                120           0
  16                 84               0             84
  0                  0
6 SESNPL_6
  120                0                120           0
  16                 84               0             84
  0                  0
```

Group structure

OM group OAINRTE provides up to 4095 tuples per office.

Key field:

OAINRTE can be indexed by the following:

SESNPLNM: Name associated with SESNPLID.

Info field:

OAINRTE_INDEX_REGISTERINFO - This name can be up to 16 characters long.

OM group OAINRTE (continued)

Associated OM groups

None

Associated functional groups

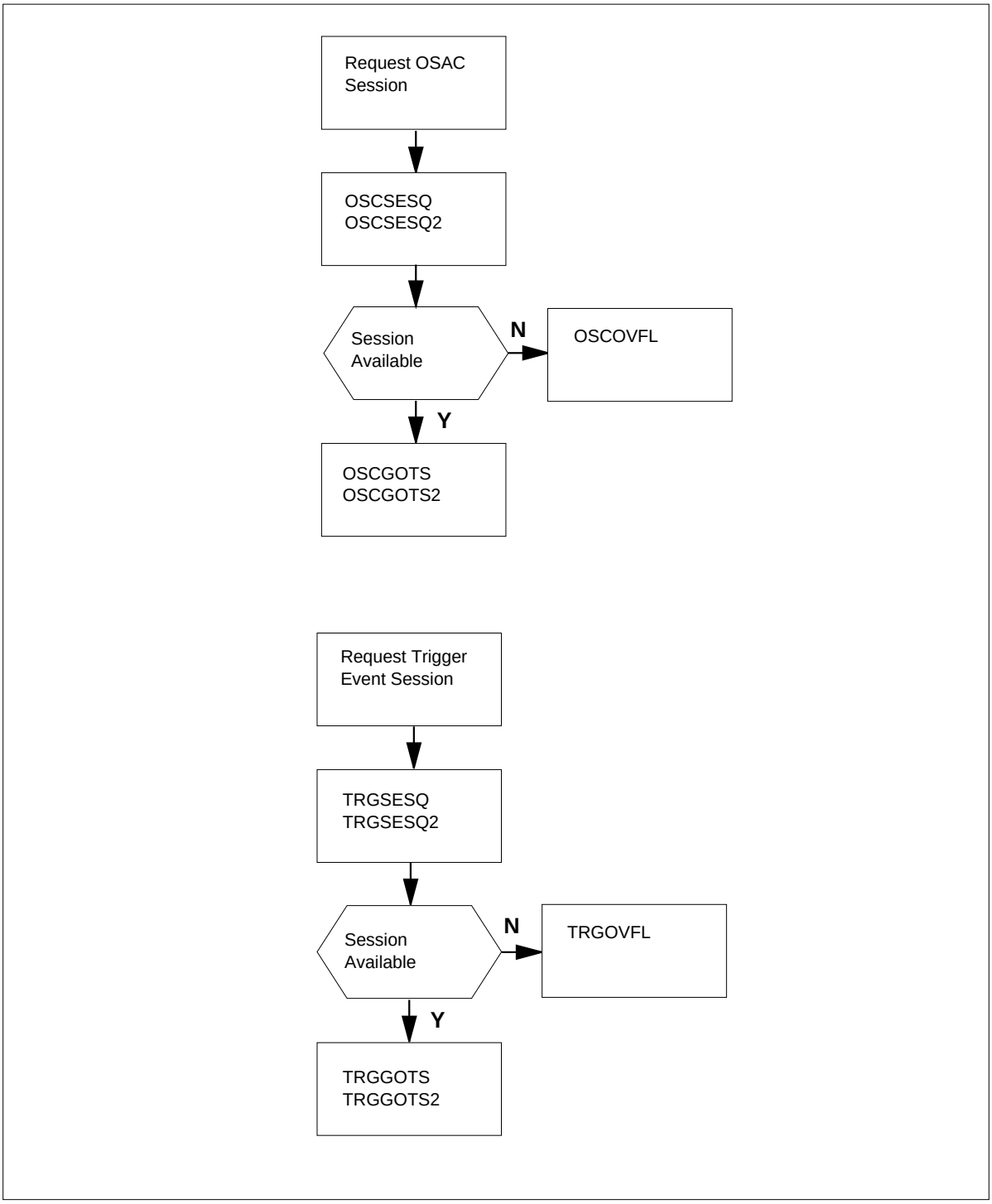
Functional group Enhanced Services (ENSV0001) is associated with OM group OAINRTE.

Associated functionality codes

The functionality codes associated with OM group OAINRTE are shown in the following table.

Functionality	Code
OSSAIN Enhancements	ENSV0020

OM group OAINRTE registers



OM group OAINRTE (continued)

Register OSCGOTS

Register OSAC Got Session

This register is pegged each time a host-remote session is obtained.

Register OSCGOTS release history

Register OSCGOTS was introduced in TOPS07.

Associated registers

OSCSESQ, OSCOVFL

Associated logs

None

Extension registers

OSCGOTS2

Register OSCOVFL

Register OSAC Session Overflow

This register is pegged each time a host-remote session is requested but there are no sessions available.

Register OSCOVFL release history

Register OSCOVFL was introduced in TOPS07.

Associated registers

OSCSESQ, OSCGOTS

Associated logs

None

Extension registers

None

Register OSCSESQ

Register OSAC Session Request

This register is pegged each time a host-remote session is requested.

Register OSCSESQ release history

Register OSCSESQ was introduced in TOPS07.

Associated registers

OSCGOTS, OSCOVFL

Associated logs

None

Extension registers

OSCSESQ2

Register TRGGOTS

Register Trigger Event Inform Got Session

This register is pegged each time a session for a trigger event inform is obtained.

Register TRGGOTS release history

Register TRGGOTS was introduced in TOPS07.

Associated registers

TRGSESQ, TRGOVFL

Associated logs

None

Extension registers

TRGGOTS2

Register TRGOVFL

Register Trigger Event Inform Session Overflow

This register is pegged each time a session for a trigger event is requested but there are no sessions available.

Register TRGOVFL release history

Register TRGOVFL was introduced in TOPS07.

Associated registers

TRGSESQ, TRGGOTS

Associated logs

None

OM group OAINRTE (end)

Extension registers

None

Register TRGSESQ

Register Trigger Event Inform Session Request

This register is pegged each time a session is requested from a session pool used only for trigger event informs.

Register TRGSESQ release history

Register TRGSESQ was introduced in TOPS07.

Associated registers

TRGGOTS, TRGOVFL

Associated logs

None

Extension registers

TRGSESQ2

OM group OANODEDC

OM description

Operator Services System Advanced Intelligent Network (OSSAIN) Node Data Communications

OANODEDC is created for data communications operational measurements. The following OM groups are also created for data communications operational measurements:

- OADATCOM - OSSAIN Data Communications
- OASNPLDC - OSSAIN Session Pool Data Communications

OM group OANODEDC provides peg counts for OSSAIN data communications messaging events on a per node basis. It provides counts for the total number of messages sent from the CM to a each external node and the total number of messages received by the CM from each external node. Counts of messages are broken down into successful and failure counts.

Release history

OM group OANODEDC was introduced in NA006.

Registers

OM group OANODEDC registers display on the MAP terminal as follows:

```
OMSHOW OANODEDC ACTIVE

OANODEDC

CLASS: ACTIVE
START:1995/03/21 10:30:00 TUES;STOP:1995/03/21 11:40:23 TUES;
SLOWSAMPLES:       7 ; FASTSAMPLES           62 ;

          ONMSGSND    ONMSGSND2    ONMSGRCV      ONMSGRC2
          ONMSGSSC    ONMSGSS2     ONMSGRSC      ONMSGRS2
          ONMSGSFL    ONMSGRFL     ONSNRTFL      ONRCRTFL

0 NODE_1  17620        0            17620         0
          17620        0            17620         0
          0            0            0             0
1 NODE_2  17300        0            18560         0
          17228        0            18556         0
          1            4            0             4
```

OM group OANODEDC (continued)

Group structure

OM group OANODEDC provides one tuple for each key.

Key field:
NODEID {0 - 31}: Key field from table OANODINV

Info field:
OSSAIN_NODE_DATACOM_OMINFO

Associated OM groups

OADATCOM: This OM group pegs all data communications events.

OASNPLDC: This OM group pegs data communications events on a per session pool basis.

Associated functional groups

NA006

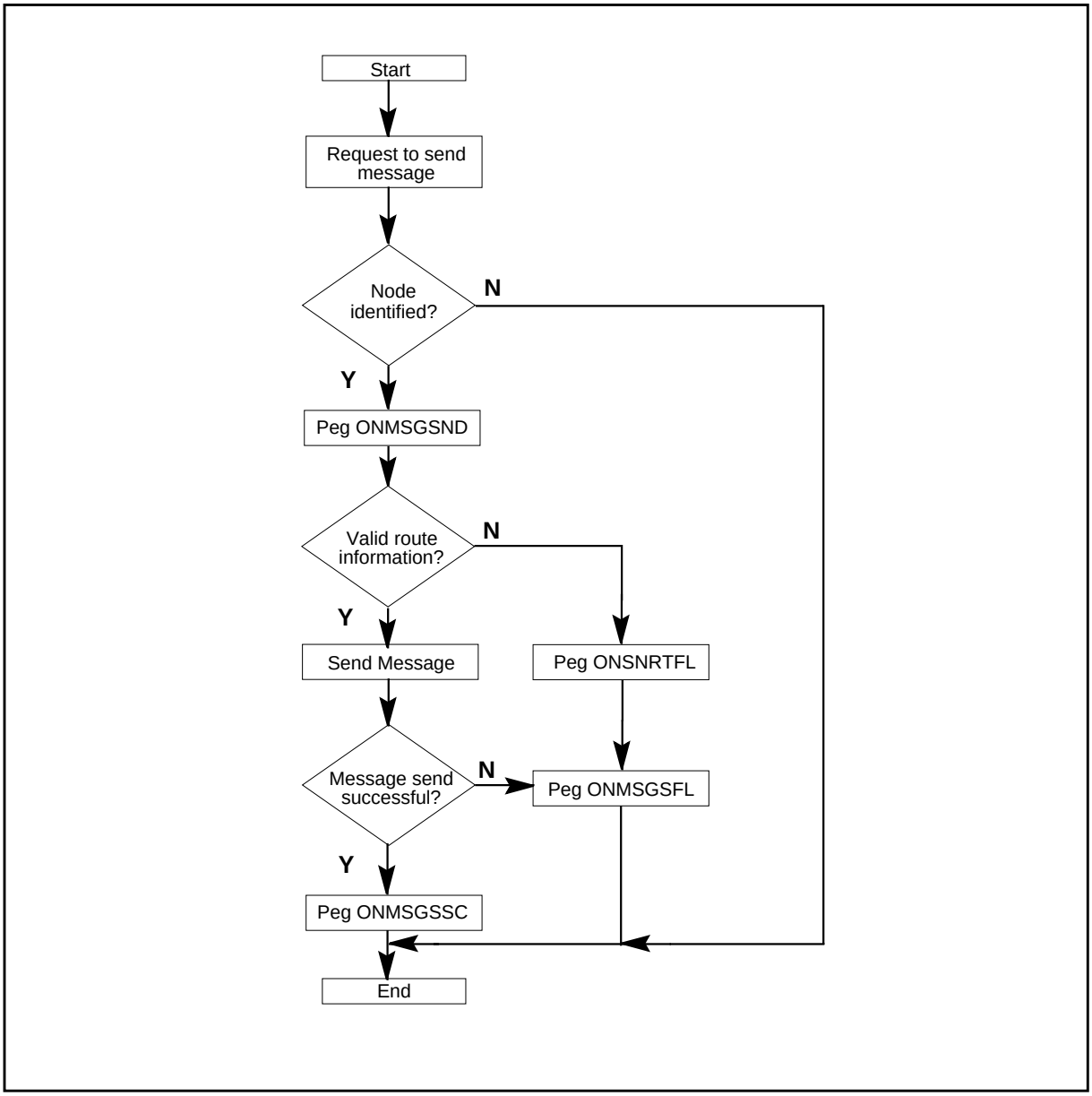
Functional group ENSV Enhanced Services (ENSV0001) is associated with OM group OANODEDC.

Associated functionality codes

The functionality codes associated with OM group OANODEDC are shown in the following table.

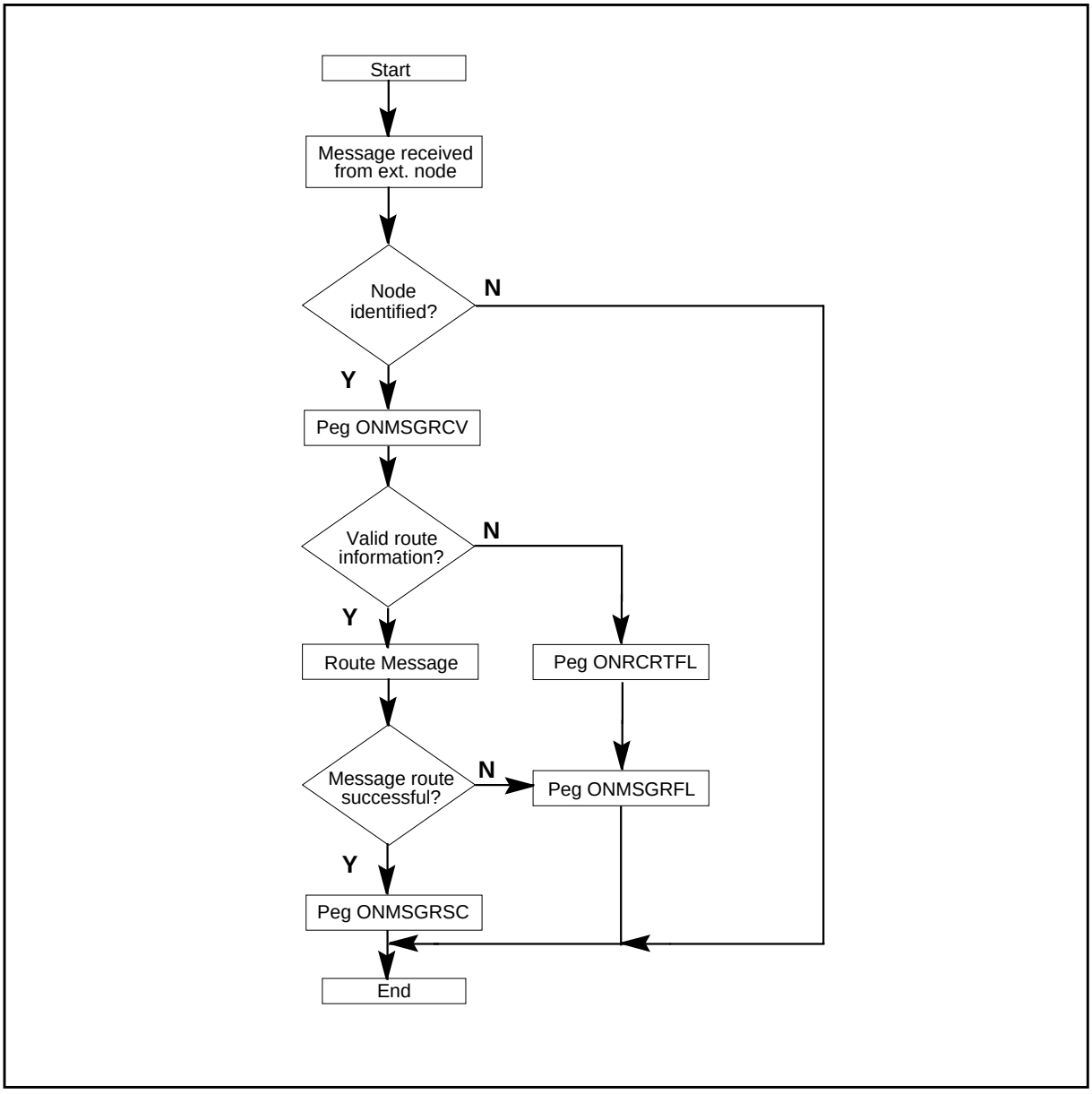
Functionality	Code
Operator Services AIN	ENSV0014 (NA006)

OM group OANODEDC registers: OM's pegged while sending a message



OM group OANODEDC (continued)

OM group OANODEDC registers: OM's pegged while receiving a message



Register ONMSGRCV

OSSAIN message received per node

This register is pegged for a specific node each time an incoming message, originating from an external node, is received from that node. This includes both call processing and maintenance messages.

Note: This register can be validated on a per node basis by adding the message receive success register and the message receive failure register that apply to the node of interest.

ONMSGRCV = ONMSGRSC + ONMSGRFL

Register ONMSGRCV release history

Register ONMSGRCV was introduced in NA006.

Associated registers

ONMSGRSC, ONMSGRFL, and OSMSGRC

Associated logs

None

Extension registers

ONMSGRC2

Register ONMSGRFL

OSSAIN message receive failure per node

This register is pegged for a specific node each time data communications encounters an error while attempting to forward a message originated from that node to the destination DMS process. This can be caused by a failure in the DMS internal messaging system or data transport interface. This register is also pegged during failures indicated by register ONRCRTFL.

Note: This register can be validated by summing the receive failed counts, register OSMSGRFL, of each session pool supported by the node.

ONMSGRFL = ONMSGRCV - ONMSGRS

ONMSGRFL >= ONRCRTFL

Register ONMSGRFL release history

Register ONMSGRFL was introduced in NA006.

Associated registers

ONMSGRCV, ONMSGRSC, ONRCRTFL, and OSMSGRFL

OM group OANODEDC (continued)

Associated logs

Log number: OAIN605 and OAIN606

Extension registers

None

Register ONMSGRSC

OSSAIN message receive success per node

This register is pegged for a specific node when the CM's data communications software is able to successfully process an incoming message from the node.

Note: This register can be validated by summing the successful message receives, register OSMSGRSC, of each session pool supported by the node.

ONMSGRSC = ONMSGRCV - ONMSGRFL

Register ONMSGRSC release history

Register ONMSGRSC was introduced in NA006.

Associated registers

ONMSGRCV, ONMSGRFL, and OSMSGRSC

Associated logs

None

Extension registers

ONMSGRS2

Register ONMSGSFL

OSSAIN message send failure per node

This register is pegged for a specific node each time data communications encounters an error while attempting to send an outgoing message to the node. This can be caused by a transport layer failure. This register is also pegged for reasons indicated by register ONSNRTFL.

Note: This register can be validated by summing the failed message sends, register OSMSGSFL, of each session pool supported by the node.

ONMSGSFL = ONMSGSND - ONMSGSSC

ONMSGSFL >= ONSNRTFL

Register ONMSGSFL release history

Register ONMSGSFL was introduced in NA006.

Associated registers

ONMSGSND, ONMSGSSC, ONSNRTFL, and OSMSGSFL

Associated logs

Log number: OAIN607

A single OAIN706 log will be generated when OMs ONMSGSFL and ONSNRTFL are pegged.

Extension registers

None

Register ONMSGSND

OSSAIN message send requested per node

This register is pegged for a specific node each time the data communications software is requested to send a message. This includes requests from call processes and maintenance processes.

Note: This register can be validated on a per node basis by adding the message send success register and the message send failure register that apply to the node of interest.

ONMSGSND = ONMSGSSC + ONMSGSFL

Register ONMSGSND release history

Register ONMSGSND was introduced in NA006.

Associated registers

ONMSGSSC, ONMSGSFL, and OSMSGSN

Associated logs

None

OM group OANODEDC (continued)

Extension registers

ONMSGSN2

Register ONMSGSSC

OSSAIN message send success per node

This register is pegged for a specific node when the CM's data communications software is able to successfully process an outgoing message destined for that node. Note that OSSAIN uses unguaranteed messaging. Pegging this register does not indicate that the message actually arrived at the destination node.

Note: This register can be validated by summing the successful message sends, register OSMSGSSC, of each session pool supported by the node.

ONMSGSSC = ONMSGSND - ONMSGSFL

Register ONMSGSSC release history

Register ONMSGSSC was introduced in NA006.

Associated registers

ONMSGSND, ONMSGSFL, and OSMSGSSC

Associated logs

None

Extension registers

ONMSGSS2

Register ONRCRTFL

OSSAIN message receive route failure per node

This register is pegged for a specific node each time the data communications software is unable to determine the destination of a message originating from that node. This can be caused by a variety of reasons including:

- invalid protocol version
- invalid session pool identifier
- invalid session identifier
- invalid network address
- invalid session pool state

- invalid node state
- pool / node identifier mis-match
- corrupted message

Note: This register can be validated by summing the receive route failed counts, register OSRCRTFL, of each session pool supported by the node.

ONRCRTFL <= ONMSGRFL

Register ONRCRTFL release history

Register ONRCRTFL was introduced in NA006.

Associated registers

ONMSGRFL and OSRCRTFL

Associated logs

Log number: OAIN605 and OAIN606

Extension registers

None

Register ONSNRTFL

OSSAIN message receive route failure per node

This register is pegged for a specific node each time the data communications software is unable to determine the destination of an outgoing message. This can be caused by the following reasons:

- invalid session pool identifier
- invalid session identifier
- pool/node identifier mis-match
- corrupted data

Note: This register can be validated by summing the message send route failures, register OSSNRTFL, of each session pool supported by the node.

ONSNRTFL< = ONMSGSFL

OM group OANODEDC (end)

Register ONSNRTFL release history

Register ONSNRTFL was introduced in NA006.

Associated registers

ONMSGSFL and OSSNRTFL

Associated logs

None

Extension registers

None

OM group OAPCALP1

OM description

Open Automated Protocol (OAP) Call Processing 1

OAPCALP1 contains a register for each call processing and non-call processing operation and response message defined in the OAP protocol. The purpose of the registers in this OM group is to track usage of the operations and responses. These OM registers are pegged on a per session pool basis for call processing and session pool operations and are pegged on a per node basis for node maintenance operations.

Release history

OM group OAPCALP1 was introduced in NA006.

Registers

OM group OAPCALP1 registers display on the MAP terminal as follows:

OM group OAPCALP1 (continued)

```
>OMSHOW OAPCALP1 ACTIVE

OAPCALP1

CLASS: ACTIVE
START:1991/05/19 16:30:00 WED;STOP:1995/05/19 16:33:00 WED;
SLOWSAMPLES:      2:FASTSAMPLES:      18;

  APNDAMA         APNDAMA2         APDAMAS         APDAMAS2
  APDAMAE         APDAMAE2         GENAMA          GENAMA2
  GENAMAS         GENAMAS2         GENAMAE         GENAMAE2
  BLNGNUM         BLNGNUM2         BILNUMS         BILNUMS2
  BILNUME         BILNUME2         CLSCHRG         CLSCHRG2
  CLSCHGS         CLSCHGS2         CLSCHGE         CLSCHGE2
  CALLDET         CALLDET2         CALDETS         CALDETS2
  CALDETE         CALDETE2         CALLEND         CALLEND2

0 SESNPL_0
     12              0               11              0
     1               0               20              0
     20              0               0               0
     23              0               23              0
     0               0               13              0
     13              0               0               0
     33              0               30              0
     3               0              102              0
1 SESNPL_1
     12              0               11              0
     1               0               20              0
     20              0               0               0
     23              0               23              0
     0               0               13              0
     13              0               0               0
     33              0               30              0
     3               0              102              0
```

Group structure

OM group OAPCALP1 provides one tuple for each key.

Key field:

SESNPLID {0 to 4094}: Key field for table OASESNPL

Info field:

None

Associated OM groups

OAPCALP2, OAPCALP3, OAPCALP4 - These OM groups peg call processing operations and responses that are not pegged by this OM group.

OAPMTYPS - This OM group pegs a register each time a call processing operation or response is sent or received by the switch.

Associated functional groups

NA006

Functional group ENSV Enhanced Services (ENSV0001) is associated with OM group OAPCALP1.

Associated functionality codes

The functionality codes associated with OM group OAPCALP1 are shown in the following table.

Functionality	Code
Operator Services AIN	ENSV0014 (NA006)

Register APDAMAE

Append AMA Module Error Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register APDAMAE release history

Register APDAMAE was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

APDAMAE2

OM group OAPCALP1 (continued)

Register APDAMAS

Append AMA Module Success Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register APDAMAS release history

Register APDAMAS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

APDAMAS2

Register APNDAMA

Append AMA Module Request

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register APNDAMA release history

Register APNDAMA was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

APNDAMA2

Register BILNUME

Billing Number Error Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register BILNUME release history

Register BILNUME was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

BILNUME2

Register BILNUMS

Billing Number Success Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register BILNUMS release history

Register BILNUMS was introduced in NA006.

Associated registers

None

OM group OAPCALP1 (continued)

Associated logs
None

Extension registers
BILNUMS2

Register BLNGNUM
Billing Number Request

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register BLNGNUM release history
Register BLNGNUM was introduced in NA006.

Associated registers
None

Associated logs
None

Extension registers
BLNGNUM2

Register CALDETE
Call Details Error Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register CALDETE release history
Register CALDETE was introduced in NA006.

Associated registers
None

Associated logs
None

Extension registers
CALDETE2

Register CALDETS
Call Details Success Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register CALDETS release history
Register CALDETS was introduced in NA006.

Associated registers
None

Associated logs
None

Extension registers
CALDETS2

Register CALLDET
Call Details Request

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

OM group OAPCALP1 (continued)

Register CALLDET release history

Register CALLDET was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

CALLDET2

Register CALLEND

Call End Inform

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register CALLEND release history

Register CALLEND was introduced in NA006.

Associated registers

None

Associated log

None.

Extension registers

CALLEND2

Register CLSCHGE

Class Change Error Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register CLSCHGE release history

Register CLSCHGE was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

CLSCHGE2

Register CLSCHGS

Class Charge Success Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register CLSCHGS release history

Register CLSCHGS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

CLSCHGS2

Register CLSCHRG

Class Charge Request

OM group OAPCALP1 (continued)

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register CLSCHRG release history

Register CLSCHRG was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

CLSCHRG2

Register GENAMA

Generate AMA Record

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register GENAMA release history

Register GENAMA was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

GENAMA2

Register GENAMAE

Generate AMA Record Error Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register GENAMAE release history

Register GENAMAE was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

GENAMAE2

Register GENAMAS

Generate AMA Record Success Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register GENAMAS release history

Register GENAMAS was introduced in NA006.

Associated registers

None

Associated logs

None

OM group OAPCALP1 (end)

Extension registers

GENAMAS2

OM group OAPCALP2

OM description

Open Automated Protocol (OAP) Call Processing 2

OAPCALP2 contains a register for each call processing and non-call processing operation and response message defined in the OAP protocol. The purpose of the registers in this OM group is to track usage of the operations and responses. These OM registers are pegged on a per session pool basis for call processing and session pool operations and are pegged on a per node basis for node maintenance operations.

Release history

OM group OAPCALP2 was introduced in NA006.

Registers

OM group OAPCALP2 registers display on the MAP terminal as follows:

OM group OAPCALP2 (continued)

```
>OMSHOW OAPCALP2 ACTIVE

OAPCALP2

CLASS: ACTIVE
START:1995/05/19 16:30:00 WED;STOP:1995/05/19 16:33:00 WED;
SLOWSAMPLES:      2;FASTSAMPLES:      18;

  CALLFLT        CALLFLT2        CALFLTS         CALFLTS2
  CALFLTE        CALFLTE2        DIRNUM          DIRNUM2
  DIRNUMS        DIRNUMS2        DIRNUME         DIRNUME2
  ENDCALL        ENDCALL2        ENDCALS         ENDCALS2
  ENDCALE        ENDCALE2        CONDN           CONDN2
  CONDNS         CONDNS2         CONDNE          CONDNE2
  RELSDN         RELSDN2         RELSDNS         RELSDNS2
  RELSDNE        RELSDNE2        CONSTAT         CONSTAT2

0 SESNPL_0
     42              0              40              0
     2               0              12              0
     12              0              0               0
     10              0              10              0
     0               0              1               0
     10              0              0               0
     3               0              3               0
     0               0              23              0
0 SESNPL_0
     42              0              40              0
     2               0              12              0
     12              0              0               0
     10              0              10              0
     0               0              1               0
     10              0              0               0
     3               0              3               0
     0               0              23              0
```

Group structure

OM group OAPCALP2 provides one tuple for each key.

Key field:

SESNPLID {0 to 4094}: Key field for table OASESNPL

Info field:

None

Associated OM groups

OAPCALP1, OAPCALP3, OAPCALP4 - These OM groups peg call processing operations and responses that are not pegged by this OM group.

OAPMTYPS - This OM group pegs a register each time a call processing operation or response is sent or received by the switch.

Associated functional groups

NA006

Functional group ENSV Enhanced Services (ENSV0001) is associated with OM group OAPCALP2.

Associated functionality codes

The functionality codes associated with OM group OAPCALP2 are shown in the following table.

Functionality	Code
Operator Services AIN	ENSV0014 (NA006)

Register CALFLTE

Call Float Error Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register CALFLTE release history

Register CALFLTE was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

CALFLTE2

OM group OAPCALP2 (continued)

Register CALFLTS

Call Float Success Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register CALFLTS release history

Register CALFLTS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

CALFLTS2

Register CALLFLT

Call Float Request

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register CALLFLT release history

Register CALLFLT was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

CALLFLT2

Register CONDN

Connect DN Request

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register CONDN release history

Register CONDN was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

CONDN2

Register CONDNE

Connect DN Error Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register CONDNE release history

Register CONDNE was introduced in NA006.

Associated registers

None

OM group OAPCALP2 (continued)

Associated logs

None

Extension registers

CONDNE2

Register CONDNS

Connect DN Success Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register CONDNS release history

Register CONDNS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

CONDNS2

Register CONSTAT

Connection Status Inform

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register CONSTAT release history

Register CONSTAT was introduced in NA006.

Associated registers
None

Associated logs
None

Extension registers
CONSTAT2

Register DIRNUM
Directory Number Request

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register DIRNUM release history
Register DIRNUM was introduced in NA006.

Associated registers
None

Associated logs
None

Extension registers
DIRNUM2

Register DIRNUME
Directory Number Error Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

OM group OAPCALP2 (continued)

Register DIRNUME release history

Register DIRNUME was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

DIRNUME2

Register DIRNUMS

Directory Number Success Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register DIRNUMS release history

Register DIRNUMS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

DIRNUMS2

Register ENDCALE

End Call Error Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register ENDCALE release history

Register ENDCALE was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

ENDCALE2

Register ENDCALL

End Call Request

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register ENDCALL release history

Register ENDCALL was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

ENDCALL2

Register ENDCALS

End Call Success Response

OM group OAPCALP2 (continued)

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register ENDCALS release history

Register ENDCALS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

ENDCALS2

Register RELSDN

Release DN Request

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register RELSDN release history

Register RELSDN was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

RELSDN2

Register RELSDNE

Release DN Error Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register RELSDNE release history

Register RELSDNE was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

RELSDNE2

Register RELSDNS

Release DN Success Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register RELSDNS release history

Register RELSDNS was introduced in NA006.

Associated registers

None

Associated logs

None

OM group OAPCALP2 (end)

Extension registers

RELSDNS2

OM group OAPCALP3

OM description

Open Automated Protocol (OAP) Call Processing 3

OAPCALP3 contains a register for each call processing and non-call processing operation and response message defined in the OAP protocol. The purpose the registers in this OM group is to track usage of the operations and responses. These OM registers are pegged on a per session pool basis for call processing and session pool operations and are pegged on a per node basis for node maintenance operations.

Release history

OM group OAPCALP3 was introduced in NA006.

Registers

OM group OAPCALP3 registers display on the MAP terminal as follows:

OM group OAPCALP3 (continued)

```
>OMSHOW OAPCALP3 ACTIVE

OAPCALP3

CLASS: ACTIVE
START:1995/05/19 16:30:00 WED;STOP:1995/05/19 16:33:00 WED;
SLOWSAMPLES:      2;FASTSAMPLES:      18;

  SESNBEG        SESNBEG2        TRGEVT        TRGEVT2
  SESNINI        SESNINI2        SESNINS       SESNINS2
  SESNINE        SESNINE2        SPCHPTH       SPCHPTH2
  SPCHPTS        SPCHPTS2        SPCHPTE       SPCHPTE2
  TXTOPR         TXTOPR2         TXTOPRS       TXTOPRS2
  TXTOPRE        TXTOPRE2        XFRCTRL       XFRCTRL2
  XFRCTRS        XFRCTRS2        XFRCTRE       XFRCTRE2

0 SESNPL_0
     53             0              10             0
     43             0              40             0
     3              0              17             0
     17             0              0              0
     7              0              7              0
     0              0              15             0
     15             0              0              0

1 SESNPL_1
     53             0              10             0
     43             0              40             0
     3              0              17             0
     17             0              0              0
     7              0              7              0
     0              0              15             0
     15             0              0              0
```

Group structure

OM group OAPCALP3 provides one tuple for each key.

Key field:

SESNPLID {0 to 4094}: Key field for table OASESNPL

Info field:

None

Associated OM groups

OAPCALP1, OAPCALP2, OAPCALP4 - These OM groups peg call processing operations and responses that are not pegged by this OM group.

OAPMTYPS - This OM group pegs a register each time a call processing operation or response is sent or received by the switch.

Associated functional groups

NA006

Functional group ENSV Enhanced Services (ENSV0001) is associated with OM group OAPCALP3.

Associated functionality codes

The functionality codes associated with OM group OAPCALP3 are shown in the following table.

Functionality	Code
Operator Services AIN	ENSV0014 (NA006)

Register SESNBEG

Session Begin Inform

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register SESNBEG release history

Register SESNBEG was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

SESNBEG2

OM group OAPCALP3 (continued)

Register SESNINE

Session Initiation Error Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register SESNINE release history

Register SESNINE was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

SESNINE2

Register SESNINI

Session Initiation Request

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register SESNINI release history

Register SESNINI was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

SESNINI2

Register SESNINS

Session Initiation Success Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register SESNINS release history

Register SESNINS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

SESNINS2

Register SPCHPTE

Speech Path Error Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register SPCHPTE release history

Register SPCHPTE was introduced in NA006.

Associated registers

None

OM group OAPCALP3 (continued)

Associated logs

None

Extension registers

SPCHPTE2

Register SPCHPTH

Speech Path Request

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register SPCHPTH release history

Register SPCHPTH was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

SPCHPTH2

Register SPCHPTS

Speech Path Success Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register SPCHPTS release history

Register SPCHPTS was introduced in NA006.

Associated registers
None

Associated logs
None

Extension registers
SPCHPTS2

Register TRGEVT
Trigger Event Inform

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register TRGEVT release history
Register TRGEVT was introduced in NA006.

Associated registers
None

Associated logs
None

Extension registers
TRGEVT2

Register TXTOPR
Text to Operator Request

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

OM group OAPCALP3 (continued)

Register TXTOPR release history

Register TXTOPR was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

TXTOPR2

Register TXTOPRE

Text to Operator Error Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register TXTOPRE release history

Register TXTOPRE was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

TXTOPRE2

Register TXTOPRS

Text to Operator Success Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register TXTOPRS release history

Register TXTOPRS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

TXTOPRS2

Register XFRCTRE

Transfer to Control List Error Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register XFRCTRE release history

Register XFRCTRE was introduced in NA006.

Associated registers

None

Associated logs

Log OAIN203 “Bad OACTLDEF Datafill" is generated when register XFRCTRE is pegged.

Extension registers

XFRCTRE2

Register XFRCTRL

Transfer to Control List Request

OM group OAPCALP3 (end)

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register XFRCTRL release history

Register XFRCTRL was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

XFRCTRL2

Register XFRCTRS

Transfer to Control List Success Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register XFRCTRS release history

Register XFRCTRS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

XFRCTRS2

OM group OAPCALP4

OM description

Open Automated Protocol (OAP) Call Processing 4

OAPCALP4 contains a register for each call processing and non-call processing operation and response message defined in the OAP protocol. The purpose of the registers in this OM group is to track usage of the operations and responses. These OM registers are pegged on a per session pool basis for call processing and session pool operations and are pegged on a per node basis for node maintenance operations.

Release history

OM group OAPCALP4 was introduced in NA006.

Registers

OM group OAPCALP4 registers display on the MAP terminal as follows:

OM group OAPCALP4 (continued)

```
>OMSHOW OAPCALP4 ACTIVE

OAPCALP4

CLASS: ACTIVE
START:1995/05/19 16:30:00 WED; STOP: 1995/05/19 16:33:00 WED;
SLOWSAMPLES:        2; FASTSAMPLES:         18 ;

   VCECON           VCECON2          VCECONS          VCECONS2
   VCECONE          VCECONE2         VCERLS           VCERLS2
   VCERLSS          VCERLSS2         VCERLSE          VCERLSE2
   RELRCVR          RELRCVR2         RELRCVS          RELRCVS2
   RELRCVE          RELRCVE2         DTMFDIG          DTMFDIG2
   CARASGN          CARASGN2         CARASNS          CARASNS2
   CARASNE          CARASNE2         RTETRMT          RTETRMT2
   RTETRMS          RTETRMS2         RTETRME          RTETRME2

0 SESNPL_0
   107                 0               105              0
   2                   0               105              0
   105                 0               0                0
   14                  0               14               0
   0                   0               12               0
   5                   0               5                0
   0                   0               0                0
   0                   0               0                0

1 SESNPL_1
   107                 0               105              0
   2                   0               105              0
   105                 0               0                0
   14                  0               14               0
   0                   0               12               0
   5                   0               5                0
   0                   0               0                0
   0                   0               0                0
```

Group structure

OM group OAPCALP4 provides one tuple for each key.

Key field:

SESNPLID {0 to 4094}: Key field for table OASESNPL

Info field:
None

Associated OM groups

OAPCALP1, OAPCALP2, OAPCALP3 - These OM groups peg call processing operations and responses that are not pegged by this OM group.

OAPMTYPS - This OM group pegs a register each time a call processing operation or response is sent or received by the switch.

Associated functional groups

NA006

Functional group ENSV Enhanced Services (ENSV0001) is associated with OM group OAPCALP4.

Associated functionality codes

The functionality codes associated with OM group OAPCALP4 are shown in the following table.

Functionality	Code
Operator Services AIN	ENSV0014 (NA006)

Register CARASGN

Carrier Assignment Request

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register CARASGN release history

Register CARASGN was introduced in NA006.

Associated registers

None

Associated logs

None

OM group OAPCALP4 (continued)

Extension registers

CARASGN2

Register CARASNE

Carrier Assignment Error Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register CARASNE release history

Register CARASNE was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

CARASNE2

Register CARASNS

Carrier Assignment Success Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register CARASNS release history

Register CARASNS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

CARASNS2

Register DTMFDIG

DTMF Digit Detected Inform

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register DTMFDIG release history

Register DTMFDIG was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

DTMFDIG2

Register RELRCVE

Release Receiver Error Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register RELRCVE release history

Register RELRCVE was introduced in NA006.

OM group OAPCALP4 (continued)

Associated registers
None

Associated logs
None

Extension registers
RELRCVE2

Register RELRCVR
Release Receiver Request

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register RELRCVR release history
Register RELRCVR was introduced in NA006.

Associated registers
None

Associated logs
None

Extension registers
RELRCVR2

Register RELRCVS
Release Receiver Success Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register RELRCVS release history

Register RELRCVS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

RELRCVS2

Register RTETRMT

Route To Treatment Request

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register RTETRMT release history

Register RTETRMT was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

RTETRMT2

Register RTETRME

Route To Treatment Error Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

OM group OAPCALP4 (continued)

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register RTETRME release history

Register RTETRME was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

RTETRME2

Register RTETRMS

Route To Treatment Success Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register RTETRMS release history

Register RTETRMS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

RTETRMS2

Register VCECON

Voice Connect Request

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register VCECON release history

Register VCECON was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

VCECON2

Register VCECONE

Voice Connect Error Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register VCECONE release history

Register VCECONE was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

VCECONE2

OM group OAPCALP4 (continued)

Register VCECONS

Voice Connect Success Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register VCECONS release history

VCECONS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

VCECONS2

Register VCERLS

Voice Release Request

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register VCERLS release history

Register VCERLS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

VCERLS2

Register VCERLSE

Voice Release Error Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register VCERLSE release history

Register VCERLSE was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

VCERLSE2

Register VCERLSS

Voice Release Success Response

This register is pegged each time the corresponding call processing operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding call processing operation or response.

Register VCERLSS release history

Register VCERLSS was introduced in NA006.

Associated registers

None

OM group OAPCALP4 (end)

Associated logs

None

Extension registers

VCERLSS2

OM group OAPCALP5

OM description

Open Automated Protocol (OAP) Call Processing 5 (OAPCALP5)

In TOPS06, OM group OAPCALP5 is added to the set of OAP message OMs. This OM group contains registers that track call processing operations and responses used with the Operator Services Systems Advanced Intelligent Network (OSSAIN) Enhancements feature.

The OSSAIN Enhancements feature provides the following capabilities:

- OSSAIN transition to Traffic Operator Position System Multipurpose (TOPS MP) position - provides Text to Operator information to a TOPS MP operator.
- OSSAIN Equal Access (EA) Enhancements - provide additional EA handling capability when the call is at an OSSAIN service node (SN).
- Open Automated Protocol Enhancements
  - — pass additional carrier information to the SN
  - — provide support for transfer to the interLATA carrier functionality
- Custom Automatic Message Accounting (AMA) Enhancements - allow custom AMA modules to be appended to the AMA record for the TOPS Charge Adjust service.
- AABS Replacement - allows the automation of 0+ 3rd, collect, and credit card calls on the OSSAIN SN platform utilizing OAP.

Note: For more information about the OSSAIN Enhancements feature, please refer to the “OSSAIN" section of the Translations Guide.

In TOPS07, the following features add registers to OM group OAPCALP5:

- TOPS Local Number Portability (LNP) Call Processing - adds registers LNPREQ, LNPREQE, and LNPREQS with their respective extension registers. These registers track OAP Local Number Portability (LNP) request and response messages. For more information about the TOPS LNP Call Processing feature, please refer to the “TOPS LNP" section of the Translations Guide.
- OSSAIN Enhancements II - adds registers CONVTM, CONVTMS, CONVTME, RESUME, RESUMEE, and RESUMES with their respective extension registers. For more information about the OSSAIN Enhancements II feature, please refer to the “OSSAIN Enhancements" section of the Translations Guide.

OM group OAPCALP5 (continued)

Registers CONVTM, CONVTME, and CONVTMS track OAP request and response messages relative to conversation timing information for calls. Registers RESUME, RESUMES, and RESUMEE track OAP request and response messages relative OSSAIN preprocessing.

- Branding for TOPS via SPID - adds registers SPDREQ, SPDREQS, and SPDREQE. These registers are pegged for Call Processing class message operations on a per session pool basis and adds the necessary registers for the SPID assignment request, success response, and error response messages.

Release history

OM group OAPCALP5 was introduced in TOPS06.

TOPS07

The following changes were made:

- Functional group Operator Services Equal Access (OSEA0001) adds registers LNPREQ, LNPREQE, and LNPREQS to OM group OAPCALP5 through the TOPS LNP (OSEA0008) functionality.
- Functional group Enhanced Services (ENSV0001) adds registers CONVTM, CONVTME, CONVTMS, RESUME, RESUMEE, and RESUMES to OM group OAPCALP5 through the OSSAIN Enhancements II (ENSV0020) functionality.
- Functional group Enhanced Services (ENSV0001) adds registers SPDREQ, SPDREQS, and SPDREQE through Branding for TOPS via SPID (ENSV0017) functionality.

TOPS06

Functional group Enhanced Services (ENSV0001) introduces OM group OAPCALP5 through the OSSAIN functionality (ENSV0014).

Registers

OM group OAPCALP5 registers display on the MAP terminal as follows:

```
>OMSHOW OAPCALP5 ACTIVE

OAPCALP5

CLASS: ACTIVE
START:1996/12/19 15:30:00 WED;STOP:1996/12/19 15:51:25 WED;
SLOWSAMPLES:        2 ; FASTSAMPLES:       18 ;
      INFO (OAP_SP_INDEX_REGISTERINFO)
         XFRCAR     XFRCAR2     XFRCARS     XFRCARS2
         XFRCARE    XFRCARE2    RESUME      RESUME2
         RESUMES    RESUMES2    RESUMEE     RESUMEE2
         CONVTM     CONVTM2     CONVTMS     CONVTMS2
         CONVTME    COMVTME2    LNPREQ      LNPREQ2
         LNPREQS    LNPREQS2    LNPREQE     LNPREQ2
         SPDREQ     SPDREQ2     SPDREQS     SPDREQS2
         SPDREQE    SPDREQE2

   0 SESNPL_0
                12          0          0         11
                 1          0          1          0
                12          0          0         11
                 1          0          1          0
                12          0          0         11
                 1          0          1          0
                12          0         11          0
                 1          0
   1 SESNPL_1
                12          0          0         11
                 1          0          1          0
                12          0          0         11
                 1          0          1          0
                12          0          0         11
                 1          0          1          0
                12          0         11          0
                 1          0
```

Group structure

OM group OAPCALP5 provides up to 4095 tuples per office.

Key field:

SESNPLID (0-4094) - This field corresponds to the key field SESNPLID in table OASESNPL.

OM group OAPCALP5 (continued)

Info field:

OAP_SP_INDEX_REGISTERINFO - This field contains the name associated with the SESNPLID field in table OASESNPL. This name can be up to 16 characters long.

Note: The DMS switch adds one tuple to this OM group for each SESNPLID datafilled in table OASESNPL.

Associated OM groups

The following OM groups are associated with OM group OAPCALP5:

- OAPCALP1
- OAPCALP2
- OAPCALP3
- OAPCALP4
- OAPCALP6

  Note: The DMS switch pegs registers in these OM groups for call processing operations and responses other than those associated with OM group OAPCALP5.

- OAPMTYPS
- OAPMTYPN

  Note: The DMS switch pegs registers in these OM groups each time the DMS switch receives a call processing operation or sends a response.

Associated functional groups

The following functional groups are associated with OM group OAPCALP5:

- Enhanced Services (ENSV0001)
- Operator Services Equal Access (OSEA0001)

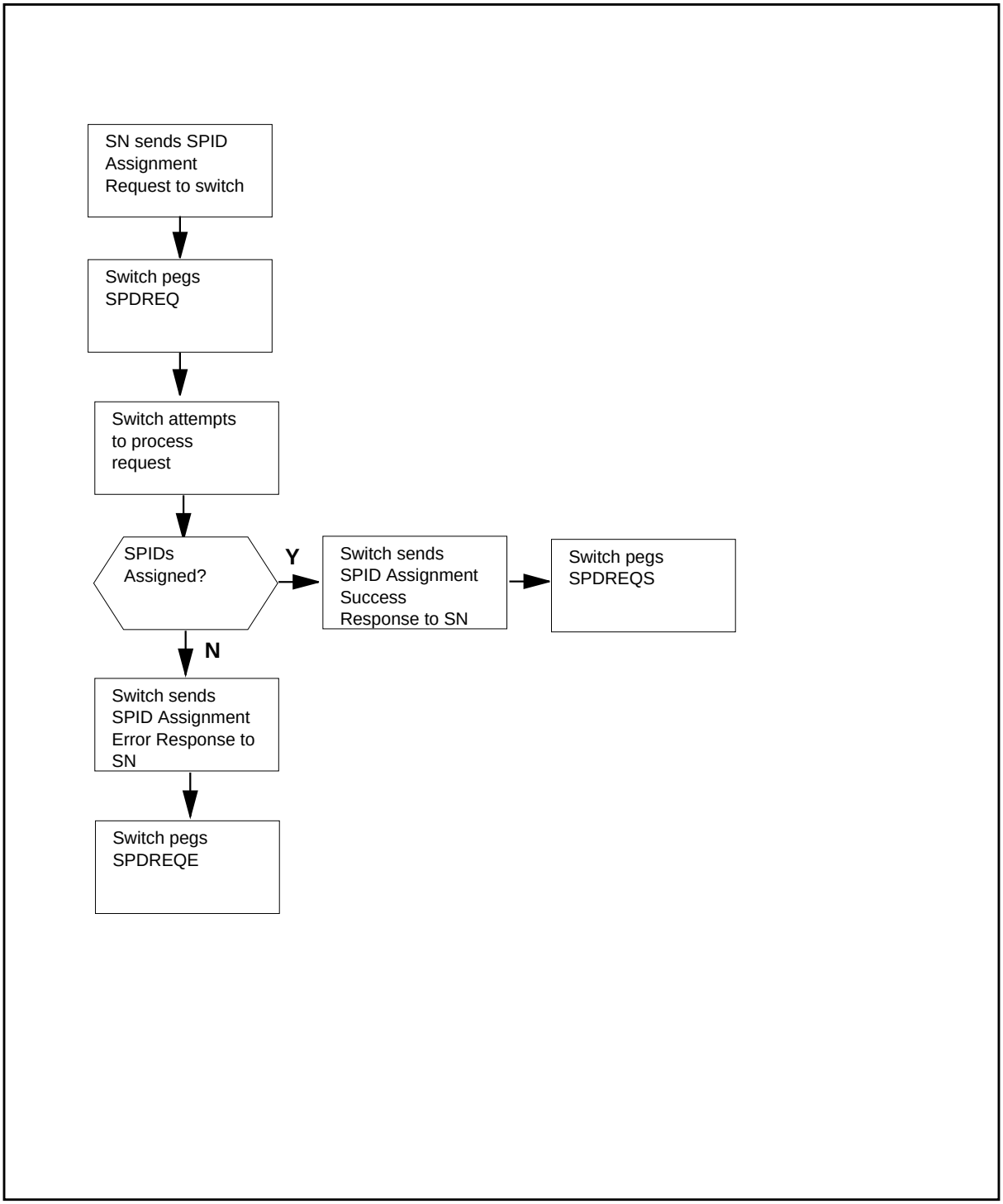
Associated functionality codes

The functionality codes associated with OM group OAPCALP5 are shown in the following table.

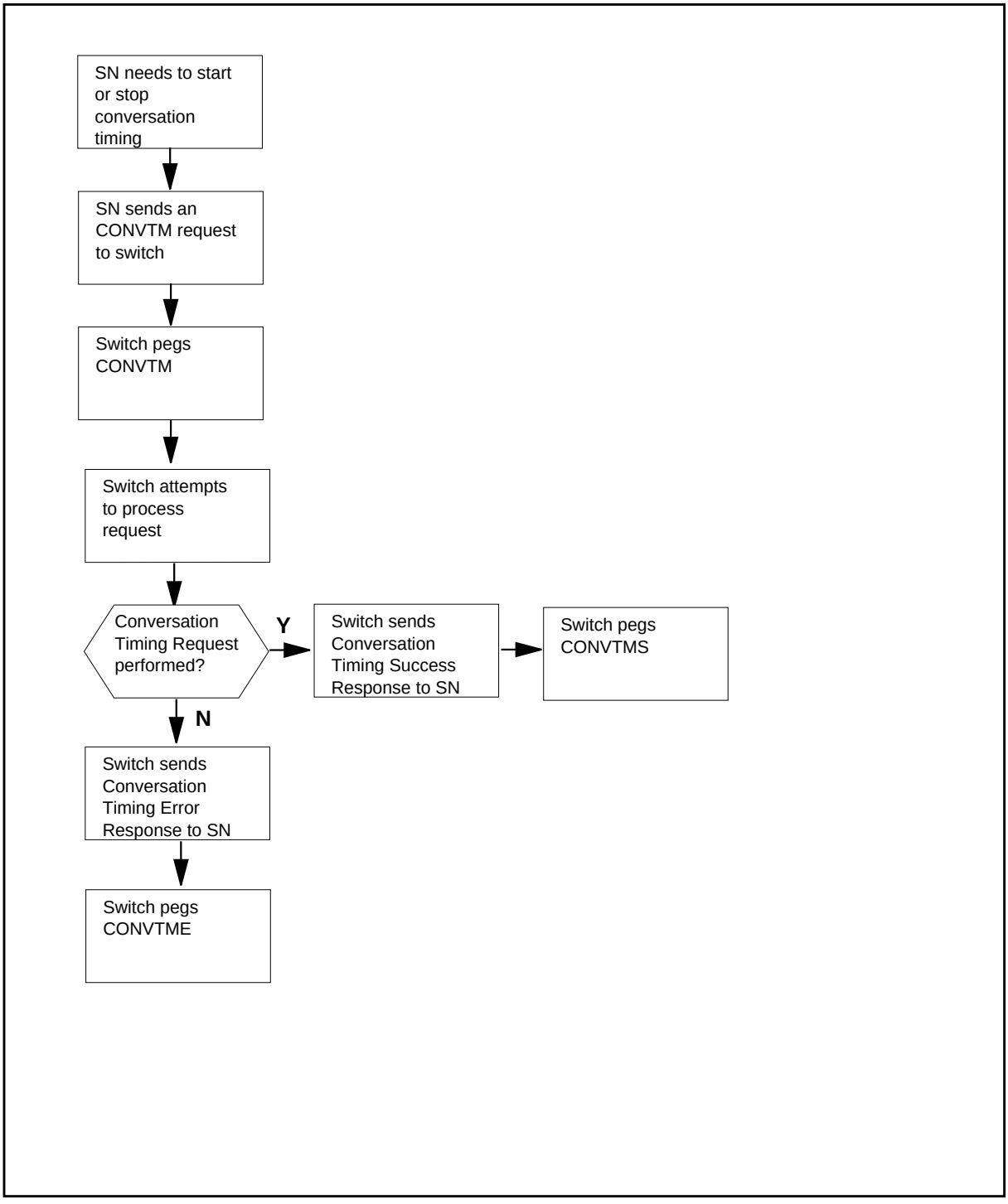
Functionality	Code
OSSAIN	ENSV0014
OSSAIN Enhancements	ENSV0020
TOPS LNP	OSEA0008
Branding via SPID	ENSV0017

OM group OAPCALP5 (continued)

OM group OAPCALP5 registers—SPID assignment registers

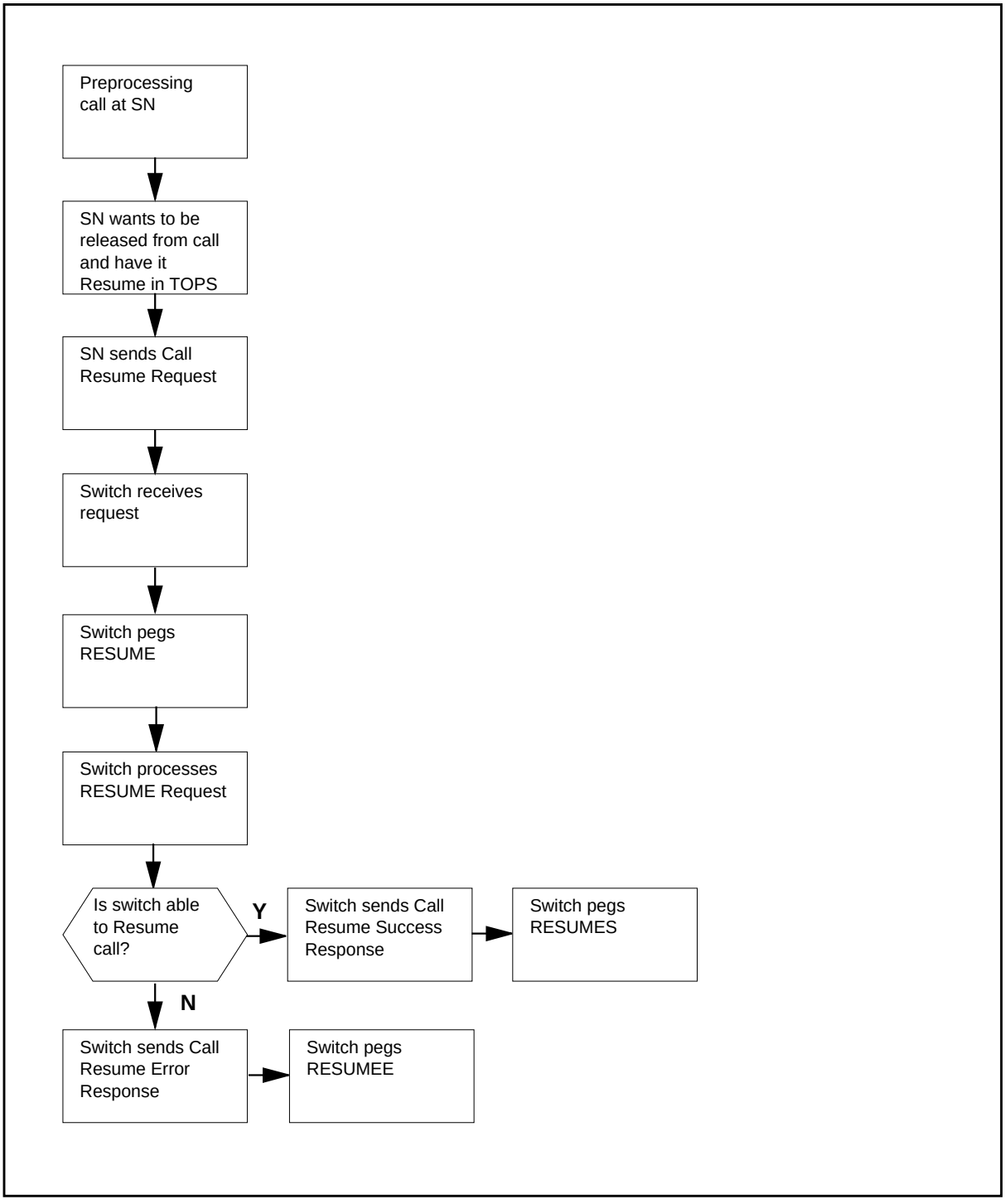


OM group OAPCALP5 registers—Conversation timing registers

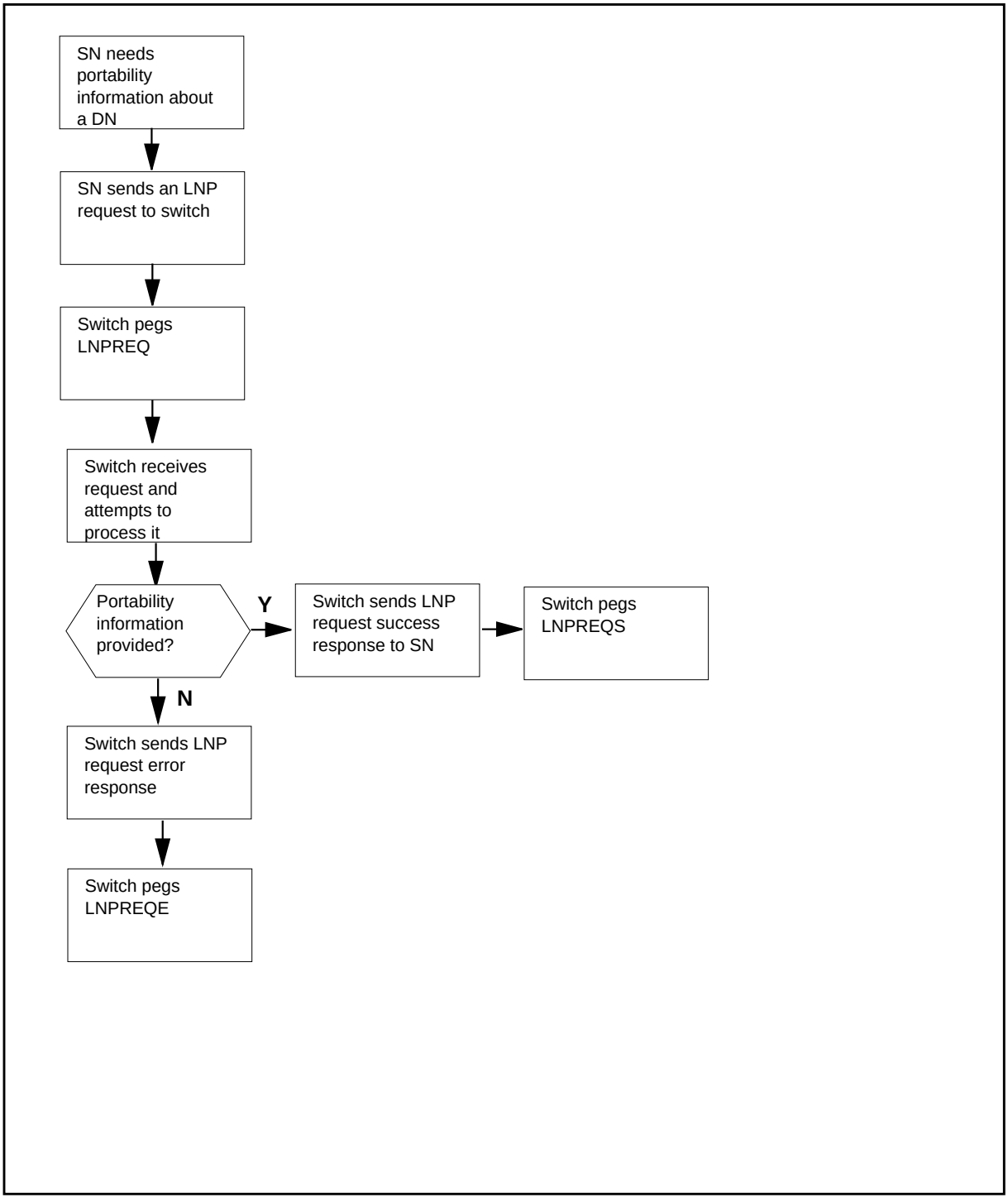


OM group OAPCALP5 (continued)

OM group OAPCALP5 registers—Call resume registers

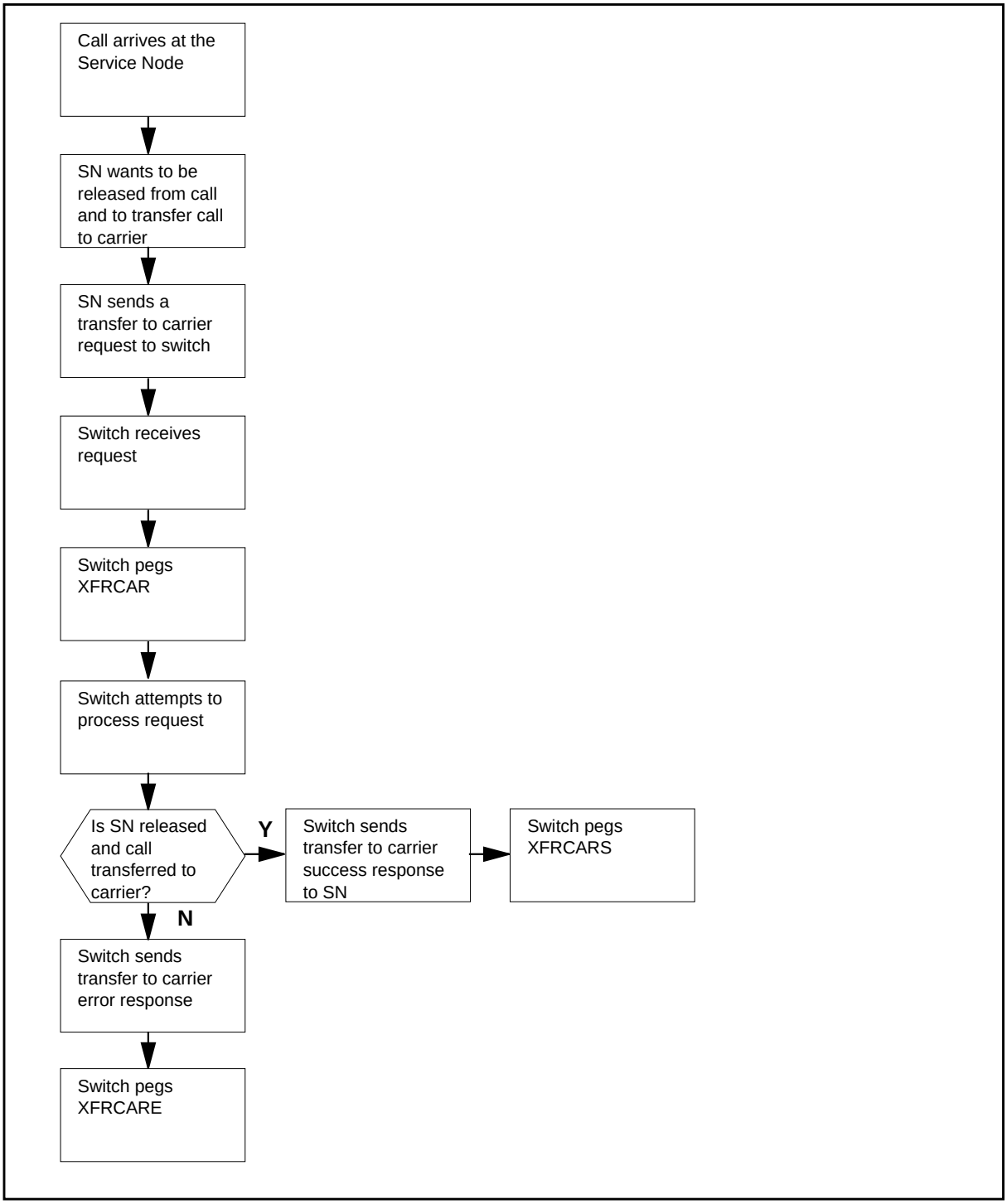


OM group OAPCALP5 registers—TOPS Local Number Portability registers



OM group OAPCALP5 (continued)

OM group OAPCALP5 registers—Transfer to carrier registers



Register CONVTM

Register Conversation Timing Request (CONVTM)

The DMS switch pegs register CONVTM each time it receives a conversation timing request from an active SN. An active SN initiates this request when it wants the DMS switch to start or stop conversation timing for a call.

Register CONVTM release history

Register CONVTM was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

CONVTM2

Register CONVTME

Register Conversation Timing Error Response (CONVTME)

The DMS switch pegs register CONVTME each time it sends a conversation timing error response to an active SN. This call processing response informs the active SN that the DMS switch could not process the conversation timing request; nor could it start or stop conversation timing for a call.

Register CONVTME release history

Register CONVTME was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

CONVTME2

Register CONVTMS

Register Conversation Timing Success Response (CONVTMS)

OM group OAPCALP5 (continued)

The DMS switch pegs register CONVTMS each time it sends a conversation timing success response to an active SN. This call processing response informs the active SN that the DMS switch successfully processed the conversation timing request and that call timing can be successfully started or stopped.

Register CONVTMS release history

Register CONVTMS was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

CONVTMS2

Register LNPREQ

Register LNP Request (LNPREQ)

The DMS switch pegs register LNPREQ each time it receives a LNP request from an active SN. An active SN initiates this request when it needs portability information about a directory number (DN).

Register LNPREQ release history

Register LNPREQ was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

LNPREQ2

Register LNPREQE

Register LNP Request Error Response (LNPREQE)

The DMS switch pegs register LNPREQE each time it sends an LNP request error response to an active SN. This response informs the active SN that the LNP request failed.

Register LNPREQE release history

Register LNPREQE was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

LNPREQE2

Register LNPREQS

Register LNP Request Success Response (LNPREQS)

The DMS switch pegs register LNPREQS each time it sends an LNP request success response to an active SN. This call processing response informs the active SN that the LNP request was processed successfully. Portability information is returned to the active SN.

Register LNPREQS release history

Register LNPREQS was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

LNPREQS2

Register RESUME

Register Call Resume Request (RESUME)

The DMS switch pegs register RESUME each time it receives a call resume request from an active SN. An active SN initiates this request when it wants to release itself and its resources from an OSSAIN preprocessing call session, without terminating the call such that the DMS switch resumes control of the call.

Register RESUME release history

Register RESUME was introduced in TOPS07.

OM group OAPCALP5 (continued)

Associated registers

None

Associated logs

None

Extension registers

RESUME2

Register RESUMEE

Register Call Resume Request Error Response (RESUMEE)

The DMS switch pegs register RESUMEE each time it sends a call resume error response to an active SN. This call processing response informs the active SN that the DMS switch could not process the call resume request; nor could it resume control of the OSSAIN call.

Register RESUMEE release history

Register RESUMEE was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

RESUMEE2

Register RESUMES

Register Call Resume Request Response (RESUMES)

The DMS switch pegs register RESUMES each time it sends a call resume success response to an active SN. This call processing response informs the active SN that the DMS switch has successfully processed the call resume request and has successfully resumed control of the OSSAIN preprocessed call.

Register RESUMES release history

Register RESUMES was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

RESUMES2

Register SPDREQ

Register SPID Assignment Request (SPDREQ)

This register is pegged each time the SPID Assignment Request operation is received by the switch.

Register SPDREQ release history

Register SPDREQ was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

SPDREQ2

Register SPDREQE

Register SPID Assignment Error Response (SPDREQE)

This register is pegged each time the SPID Assignment Error Response is sent by the switch.

Register SPDREQE release history

Register SPDREQE was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

SPDREQE2

OM group OAPCALP5 (continued)

Register SPDREQS

Register SPID Assignment Success Response (SPDREQS)

This register is pegged each time the SPID Assignment Success Response is sent by the switch.

Register SPDREQS release history

Register SPDREQS was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

SPDREQS2

Register XFRCAR

Register Transfer to Carrier Request (XFRCAR)

The DMS switch pegs register XFRCAR each time it receives a transfer to carrier request from an active SN. An active SN initiates this request to request that the DMS switch release it from the call and transfer the call to the carrier.

Register XFRCAR release history

Register XFRCAR was introduced in TOPS06.

Associated registers

None

Associated logs

None

Extension registers

XFRCAR2

Register XFRCARE

Register Transfer to Carrier Error Response (XFRCARE)

The DMS switch pegs register XFRCARE each time it sends a transfer to carrier error response to an active SN. This call processing response informs the active SN that the DMS switch could not process the transfer to carrier

request; nor could it transfer the call to the carrier or release the SN from the call.

Register XFRCARE release history

Register XFRCARE was introduced in TOPS06.

Associated registers

None

Associated logs

None

Extension registers

XFRCARE2

Register XFRCARS

Register Transfer to Carrier Success Response (XFRCARS)

The DMS switch pegs register XFRCARS each time it sends a transfer to carrier success response to an active SN. This call processing response informs the active SN that the DMS switch has successfully processed the transfer to carrier request, released the active SN from the call, and has transferred the call to the carrier.

Register XFRCARS release history

Register XFRCARS was introduced in TOPS06.

Associated registers

None

Associated logs

None

Extension registers

XFRCARS2

OM group OAPCALP6

OM description

Open Automated Protocol (OAP) Call Processing 6 (OAPCALP6)

In TOPS07, OM group OAPCALP6 is added to the set of OAP message OMs. This OM group contains registers that track call processing operations and responses used with the Operator Services Systems Advanced Intelligent Network (OSSAIN) simultaneous interactions feature.

The OSSAIN simultaneous interactions feature allows the attachment of two OSSAIN function providers (service node or TOPS operator) to a call simultaneously. The attachment configurations are as follows:

- service node and service node
- service node and a TOPS operator

During simultaneous interactions of a call, only one function provider may control the call. This function provider is the active agent. The other function provider is the passive agent.

Note 1: In an OSSAIN simultaneous interaction, a service node must always be the active agent. An operator can never be the active agent when it is engaged in a simultaneous interaction with a service node.

Note 2: For more information about OAP, refer to the *OSSAIN Open Automated Protocol Specification*, NIS: Q235-1

Release history

OM group OAPCALP6 was introduced in TOPS07.

TOPS09

Adds three new registers SESRECL, SESRECLS, and SESRECLE.

TOPS07

Functional group Enhanced Services (ENSV0001) introduces OM group OAPCALP6 through the OSSAIN Enhancements functionality (ENSV0020).

Registers

OM group OAPCALP6 registers display on the MAP terminal as follows:

```
>OMSHOW OAPCALP6 ACTIVE

OAPCALP6

CLASS: ACTIVE
START:1991/05/19 16:30:00 WED;STOP:1995/05/19 16:33:00 WED;
SLOWSAMPLES:        2 ; FASTSAMPLES:       18 ;
       INFO (OAP_SP_INDEX_REGISTERINFO)

          PASSTAT    PASSTAT2    RELNOD     RELNOD2
          RELNODS    RELNODS2    RELNODE    RELNODE2
          NODEREL    NODEREL2    PASCNTL    PASCNTL2
          PASCNTS    PASCNTS2    PASCNTE    PASCNTE2
          ACPCNTL    ACPCNTL2    PASTHRU    PASTHRU2
          PASSREQ    PASSREQ2    PASREQS    PASREQS2
          PASREQE    PASREQE2    SESRECL    SESRECL2
          SESRECLS   SESRECS2    SESRECLE   SESRECE2

   0 SESNPL_0
               12          0         11          0
                1          0         10          0
                3          0          5          0
                9          0          8          0
                7          0          5          0
                4          0         10          0
               11          0          0          0
                0          0          0          0

   1 SESNPL_1
              10          0         10          0
               7          0         15          0
               2          0          4          0
               8          0          9          0
               1          0          1          0
               6          0          1          0
              10          0          0          0
               0          0          0          0
```

Group structure

OM group OAPCALP6 provides up to 4095 tuples per office.

Key field:

SESNPLID (0-4094) - This field corresponds to the key field SESNPLID in table OASESNPL.

OM group OAPCALP6 (continued)

Info field:

OAP_SP_INDEX_REGISTERINFO - This field corresponds to the SESNPLNM field in table OASESNPL. The name can be up to 16 characters long.

Note: The DMS switch adds one tuple to this OM group for each SESNPLID datafilled in table OASESNPL.

Associated OM groups

The following OM groups are associated with OM group OAPCALP6:

- OAPCALP1
- OAPCALP2
- OAPCALP3
- OAPCALP4
- OAPCALP5

  Note: The DMS switch pegs registers in these OM groups for other call processing operations and responses than those associated with OM group OAPCALP6.

- OAPMTYPS
- OAPMTYPN

  Note: The DMS switch pegs registers in these OM groups each time it sends or receives a call processing operation or response.

Associated functional groups

Functional group Enhanced Services (ENSV0001) is associated with OM group OAPCALP6.

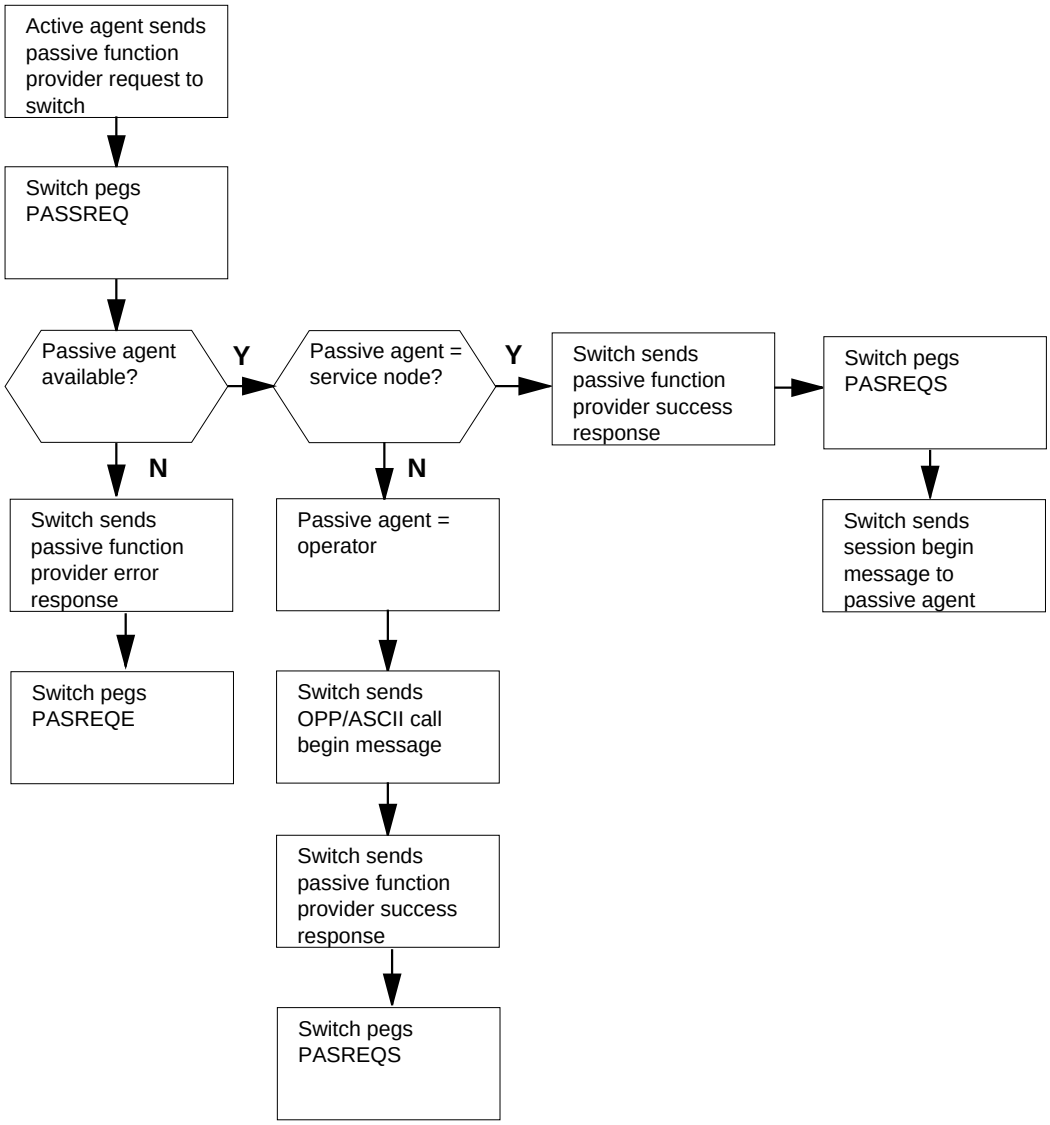
Associated functionality codes

The functionality codes associated with OM group OAPCALP6 are shown in the following table.

Functionality	Code
OSSAIN 07 Enhancements	OSAN0003
OSSAIN 09 Enhancements	OSAN0004

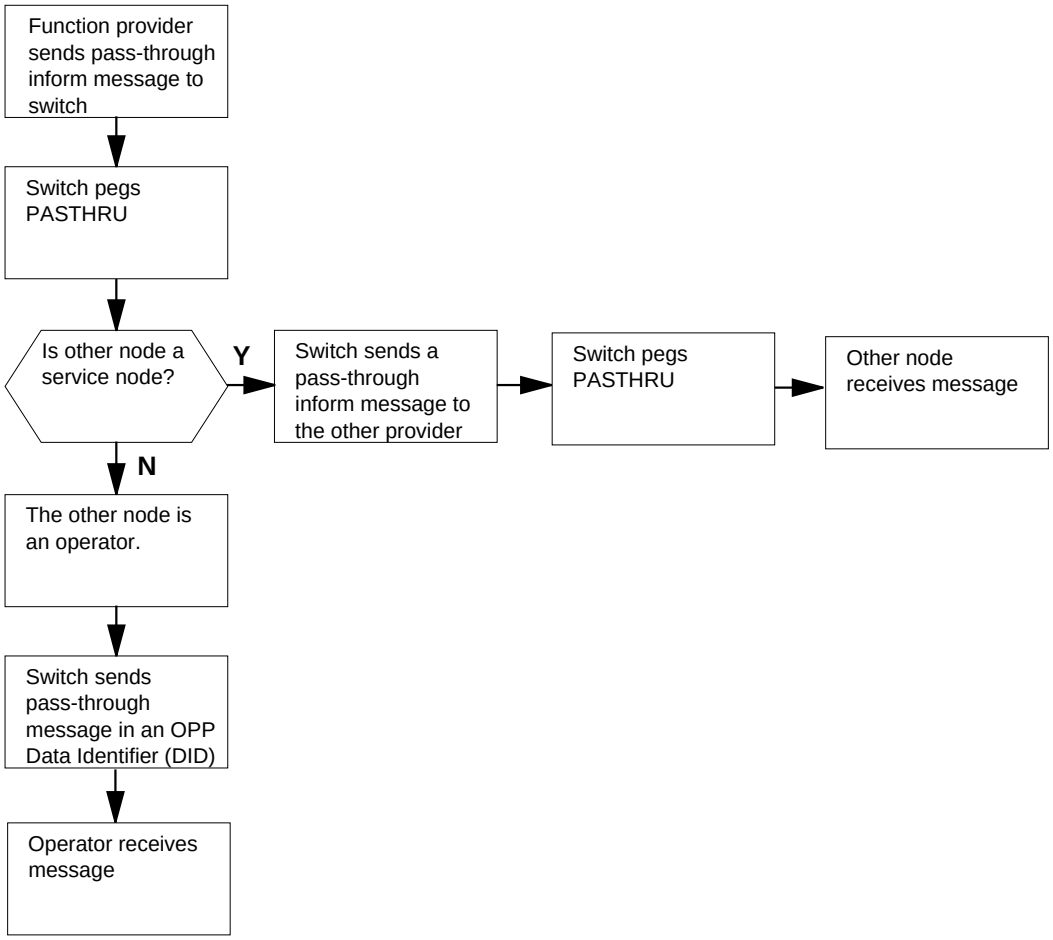
OM group OAPCALP6 (continued)

OM group OAPCALP6 registers—initiating a simultaneous interaction



Note: If the requested function provider is not immediately available, the DMS switch queues the request. The DMS switch replies with a passive function provider success response indicating that the request is queued. When the requested node becomes available, the DMS switch sends a session begin message if the passive node is a service node or an Open Position Protocol (OPP)/American Standard Code for Information Interchange (ASCII) call begin message if the passive agent is an operator.

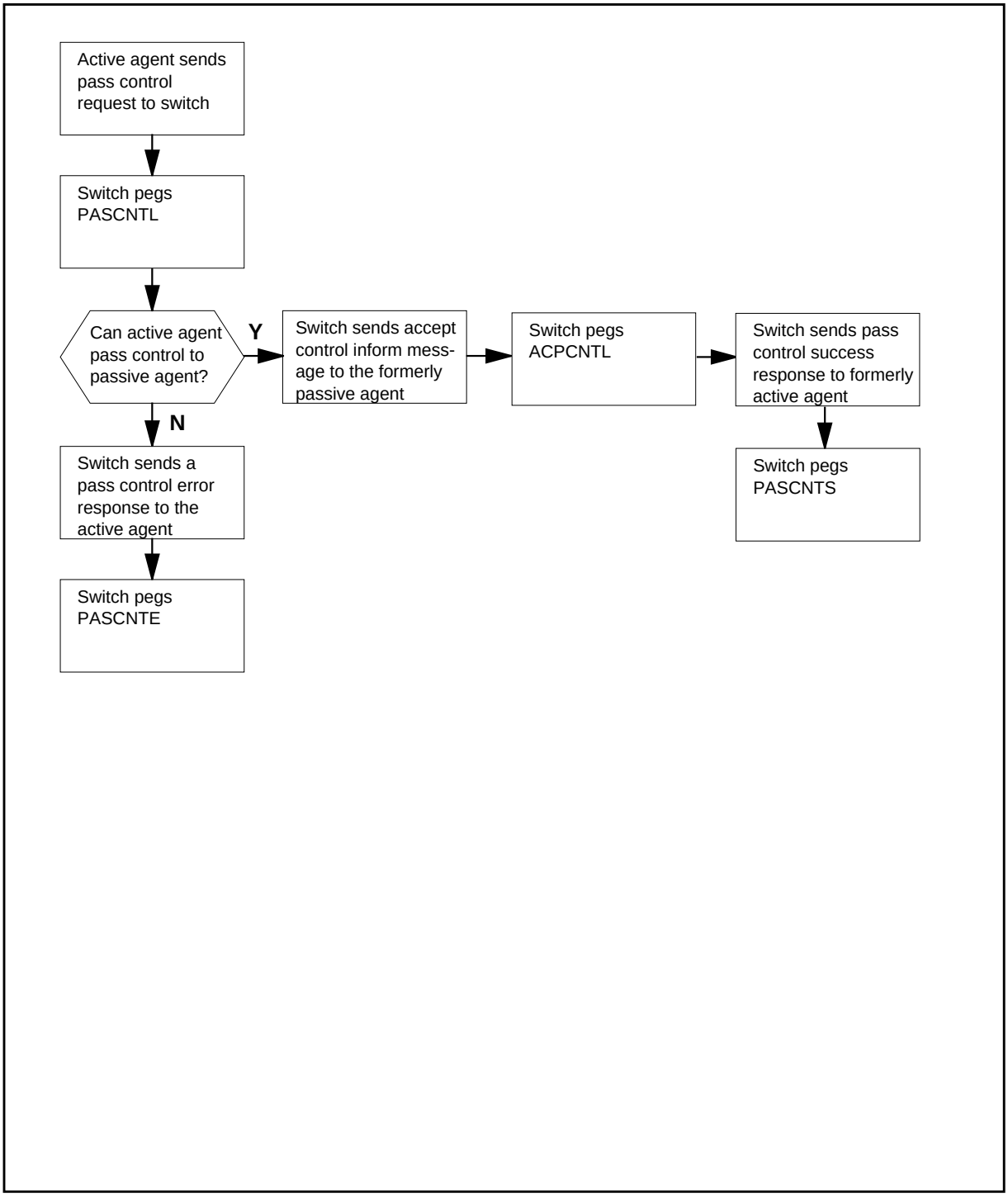
OM group OAPCALP6 registers—pass-through messaging



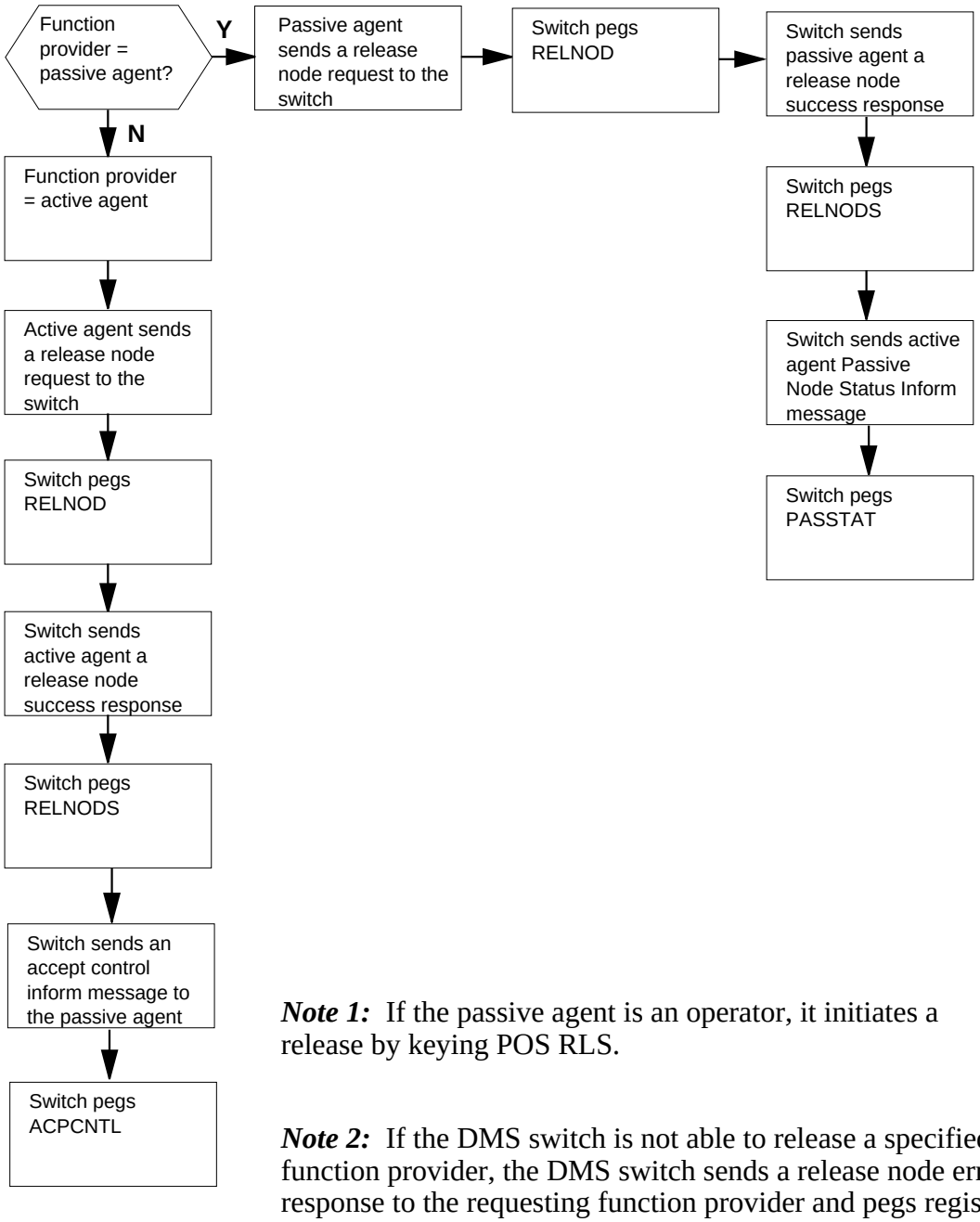
Note: An operator sends pass-through messages to the DMS switch through OPP Action Identifier (ActID) messages. It receives pass-through messages from the DMS switch through OPP DID messages.

OM group OAPCALP6 (continued)

OM group OAPCALP6 registers—passing call control



OM group OAPCALP6 registers—function provider releasing itself from a call

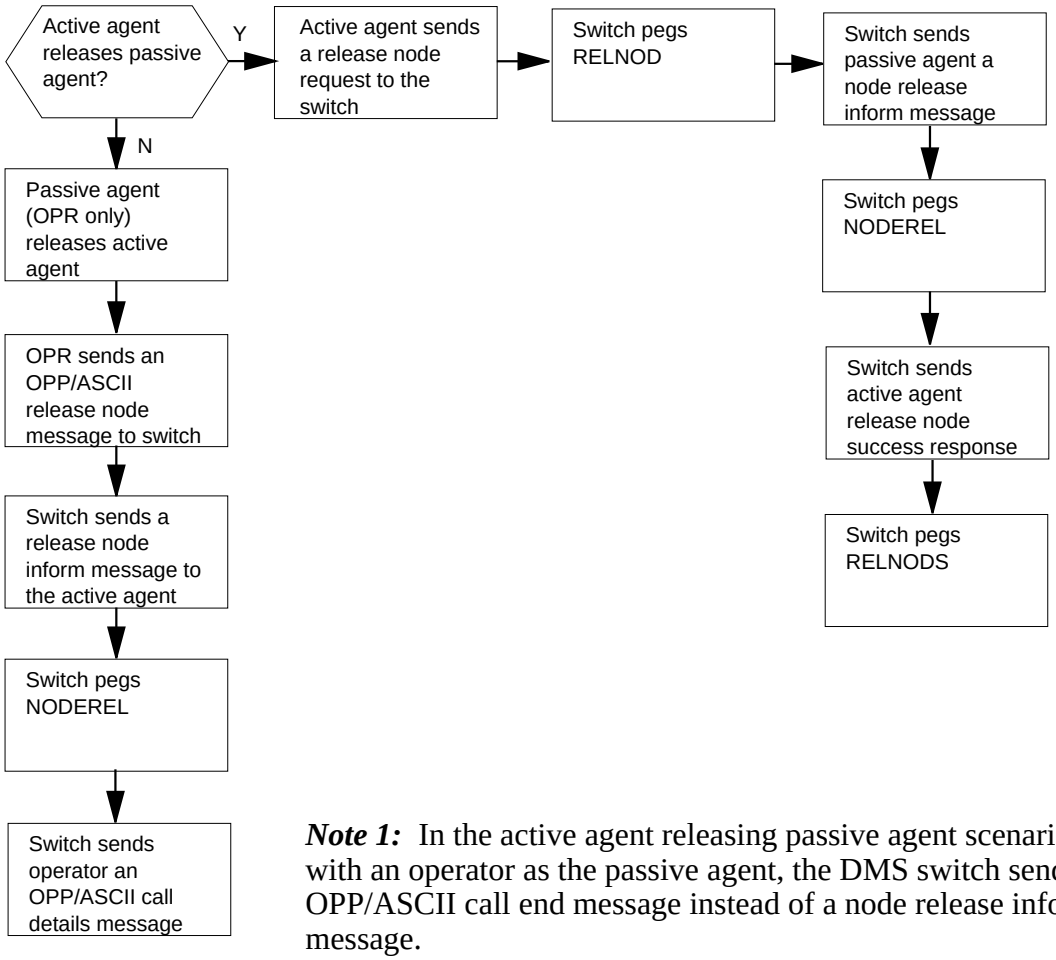


Note 1: If the passive agent is an operator, it initiates a release by keying POS RLS.

Note 2: If the DMS switch is not able to release a specified function provider, the DMS switch sends a release node error response to the requesting function provider and pegs register RELNODE.

OM group OAPCALP6 (continued)

OM group OAPCALP6 registers—function provider releasing another function provider



Note 1: In the active agent releasing passive agent scenario, with an operator as the passive agent, the DMS switch sends an OPP/ASCII call end message instead of a node release inform message.

Note 2: In the passive agent releasing active agent scenario, only an operator can release an active agent. The operator initiates the release of the active agent by keying the release node function.

Note 3: If the DMS switch is not able to release a specified function provider, the DMS switch sends a release node error response to the requesting function provider and pegs register RELNODE.

Register ACPCNTL

Register Accept Control Inform (ACPCNTL)

The DMS switch pegs register ACPCNTL each time it sends an accept control inform message to a passive agent. This call processing message informs the passive agent that it has become the active service agent for a call.

Register ACPCNTL release history

Register ACPCNTL was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

ACPCNTL2

Register NODEREL

Register Node Release Inform (NODEREL)

The DMS switch pegs register NODEREL each time it sends a node release inform message to a function provider. This call processing message informs a function provider that it is released from the call. The DMS switch sends this message under the following circumstances:

- the active agent requests release of the passive agent

  Note: If the passive agent is an operator, the DMS switch sends an OPP/ASCII call end message.

- an operator requests release of the active agent (by keying the release node function)

Register NODEREL release history

Register NODEREL was introduced in TOPS07.

Associated registers

None

Associated logs

None

OM group OAPCALP6 (continued)

Extension registers

NODEREL2

Register PASCNTE

Register Pass Control Error Response (PASCNTE)

The DMS switch pegs register PASCNTE each time it sends a pass control error response to the active agent that initiated the pass control request. This call processing response informs the active agent that it cannot pass call control to the passive agent.

Register PASCNTE release history

Register PASCNTE was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

PASCNTE2

Register PASCNTL

Register Pass Control Request (PASCNTL)

The DMS switch pegs register PASCNTL each time an active agent sends a pass control request to the DMS switch. This call processing request informs the DMS switch that the active agent wants to pass call control to the passive agent.

Note: An operator can never be the active agent while engaged in a simultaneous interaction; therefore, the pass control capability only applies when two service nodes are attached to a call simultaneously.

Register PASCNTL release history

Register PASCNTL was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

PASCNTL2

Register PASCNTS

Register Pass Control Success Response (PASCNTS)

The DMS switch pegs register PASCNTS each time it sends a pass control success response to the active agent that initiated the pass control request. This call processing response indicates that the active agent has passed call control to the passive agent, thus swapping the roles of the function providers.

Register PASCNTS release history

Register PASCNTS was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

PASCNTS2

Register PASREQE

Register Passive Function Provider Error Response (PASREQE)

The DMS switch pegs register PASREQE each time it sends a passive function provider error response to the active agent that initiated the passive function provider request. This call processing response informs the active agent that no passive function provider could be obtained for the call.

This call processing response indicates one of the following:

- A passive agent is not connected to the call.
- The call was not queued for connection to a passive agent.

Register PASREQE release history

Register PASREQE was introduced in TOPS07.

OM group OAPCALP6 (continued)

Associated registers

None

Associated logs

None

Extension registers

PASREQE2

Register PASREQS

Register Passive Function Provider Success Response (PASREQS)

The DMS switch pegs register PASREQS each time it sends a passive function provider success response to the active agent that initiated the passive function provider request. This call processing response indicates one of the following:

- A passive agent is connected to the call.
- The call is in queue, waiting for the attachment of a passive agent.

Register PASREQS release history

Register PASREQS was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

PASREQS2

Register PASSREQ

Register Passive Function Provider Request (PASSREQ)

The DMS switch pegs register PASSREQ each time it receives a passive function provider request from the active agent. The active agent uses this call processing message to request that a passive function provider be connected to the call.

Register PASSREQ release history

Register PASSREQ was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

PASSREQ2

Register PASSTAT

Register Passive Node Status Inform (PASSTAT)

The DMS switch pegs register PASSTAT each time it sends a passive node status inform message to the active agent. This call processing message informs the active agent of changes in the status of the passive agent.

Register PASSTAT release history

Register PASSTAT was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

PASSTAT2

Register PASTHRU

Register Pass-Through Inform (PASTHRU)

The DMS switch pegs register PASTHRU each time it sends/receives a pass-through inform message to/from a function provider. This call processing message allows the active and passive agents to communicate. These message can be initiated/received by the active agent or the passive agent. The DMS switch routes these messages between the function providers.

Register PASTHRU release history

Register PASTHRU was introduced in TOPS07.

Associated registers

None

OM group OAPCALP6 (continued)

Associated logs

None

Extension registers

PASTHRU2

Register RELNOD

Register Release Node Request (RELNOD)

The DMS switch pegs register RELNOD each time it receives a release node request from a function provider. A function provider uses this call processing request to request either the release of itself or another function provider from a call.

Register RELNOD release history

Register RELNOD was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

RELNOD2

Register RELNODE

Register Release Node Request Error Response (RELNODE)

The DMS switch pegs register RELNODE each time it sends a release node error response to a function provider that either requested to release itself or another function provider from a call. This call processing response informs the requesting function provider that the DMS switch could not release the function provider specified in the release node request.

Register RELNODE release history

Register RELNODE was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

RELNODE2

Register RELNODS

Register Release Node Success Response (RELNODS)

The DMS switch pegs register RELNODS each time it sends a release node success response to a function provider that is either requesting to release itself or another function provider from a call. This call processing response alerts the requesting function provider that the release was successful.

This call processing response indicates one of the following:

- The specified node was released.
- The call was taken out of the queue if it was queued for a passive agent, and the release node request specified that the passive node was to be released.

Register RELNODS release history

Register RELNODS was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

RELNODS2

Register SESRECL

Register Session Recall Request

The DMS switch pegs register SESRECL each time a session recall request is sent or received by the DMS switch. This exchange occurs between an OSSAIN node.

Register SESRECL release history

Register SESRECL was introduced in TOPS09 by feature AF7154.

Associated registers

None

OM group OAPCALP6 (end)

Associated logs
None

Extension registers
SESRECL2

Register SESRECLE
Register Session Recall Return Error

The DMS switch pegs register SESRECLE each time a session recall return error is sent or received by the DMS switch. This exchange occurs between the switch and an OSSAIN node.

Register SESRECLE release history
Register SESRECLE was introduced in TOPS09 by feature AF7154.

Associated registers
None

Associated logs
None

Extension registers
SESRECLE2

Register SESRECLS
Register Session Recall Return Result

The DMS switch pegs register SESRECLS each time a session recall return result is sent or received by the DMS switch. This exchange occurs between the switch and an OSSAIN node.

Register SESRECLR release history
Register SESRECLR was introduced in TOPS09 by feature AF7154.

Associated registers
None

Associated logs
None

Extension registers
SESRECLR2

OM group OAPCALP7

OM description

Open Automated Protocol (OAP) Call Processing 7 (OAPCALP7)

In TOPS09, OM group OAPCALP7 is added to the set of OAP message OMs. This OM group contains registers that track call processing operations and responses used with the Operator Services Systems Advanced Intelligent Network (OSSAIN) simultaneous interactions feature.

The OSSAIN simultaneous interactions feature allows the attachment of two OSSAIN function providers (service node or TOPS operator) to a call simultaneously. The attachment configurations are as follows:

- service node and service node
- service node and a TOPS operator

During simultaneous interactions of a call, only one function provider may control the call. This function provider is the active agent. The other function provider is the passive agent.

Note 1: In an OSSAIN simultaneous interaction, a service node must always be the active agent. An operator can never be the active agent when it is engaged in a simultaneous interaction with a service node.

Note 2: For more information about OAP, refer to the *OSSAIN Open Automated Protocol Specification*, NIS: Q235-1

Release history

OM group OAPCALP7 was introduced in TOPS09.

TOPS09

Adds fifteen new registers.

Registers

OM group OAPCALP7 registers display on the MAP terminal as follows:

OM group OAPCALP7 (continued)

```
>OMSHOW OAPCALP6 ACTIVE

OAPCALP7

CLASS: ACTIVE
START:1991/05/19 16:30:00 WED;STOP:1995/05/19 16:33:00 WED;
SLOWSAMPLES:        2 ; FASTSAMPLES:       18 ;
       INFO (OAP_SP_INDEX_REGISTERINFO)

   CNFCRET   CNFCRET2   CNFCRETS  CNFCRES2
   CNFCRETE  CNFCREE2   CNFREMV   CNFREMV2
   CNFREMVS  CNFREMS2   CNFREMVE  CNFREME2
   CNFADD    CNFADD2    CNFADDS   CNFADDS2
   CNFADDE   CNFADDE2   CNFREL    CNFREL2
   CNFRELS   CNFRELS2   CNFRELE   CNFRELE2
   CNFDETL   CNFDETL2   CNFDETLS  CNFDETS2
   CNFDETLE  CNFDETLE2

   0 SESNPL_0
                12          0         11          0
                 1          0         10          0
                 3          0          5          0
                 9          0          8          0
                 7          0          5          0
                 0          0          0          0
                 4          0         10          0
                11          0
   1 SESNPL_1
               10          0         10          0
                7          0         15          0
                2          0          4          0
                8          0          9          0
                1          0          1          0
                0          0          0          0
                6          0          1          0
               10         0
```

Group structure

OM group OAPCALP7 provides up to 4095 tuples per office.

Key field:

SESNPLID (0-4094) - This field corresponds to the key field SESNPLID in table OASESNPL.

Info field:

OAP_SP_INDEX_REGISTERINFO - This field corresponds to the SESNPLNM field in table OASESNPL. The name can be up to 16 characters long.

Note: The DMS switch adds one tuple to this OM group for each SESNPLID datafilled in table OASESNPL.

Associated OM groups

The following OM groups are associated with OM group OAPCALP7:

- OAPCALP1
- OAPCALP2
- OAPCALP3
- OAPCALP4
- OAPCALP5
- OAPCALP6
- OAPCALP8

Note: The DMS switch pegs registers in these OM groups for other call processing operations and responses than those associated with OM group OAPCALP7.

- OAPMTYPS
- OAPMTYPN

Note: The DMS switch pegs registers in these OM groups each time it sends or receives a call processing operation or response.

Associated functional groups

Functional group Enhanced Services (ENSV0001) is associated with OM group OAPCALP7.

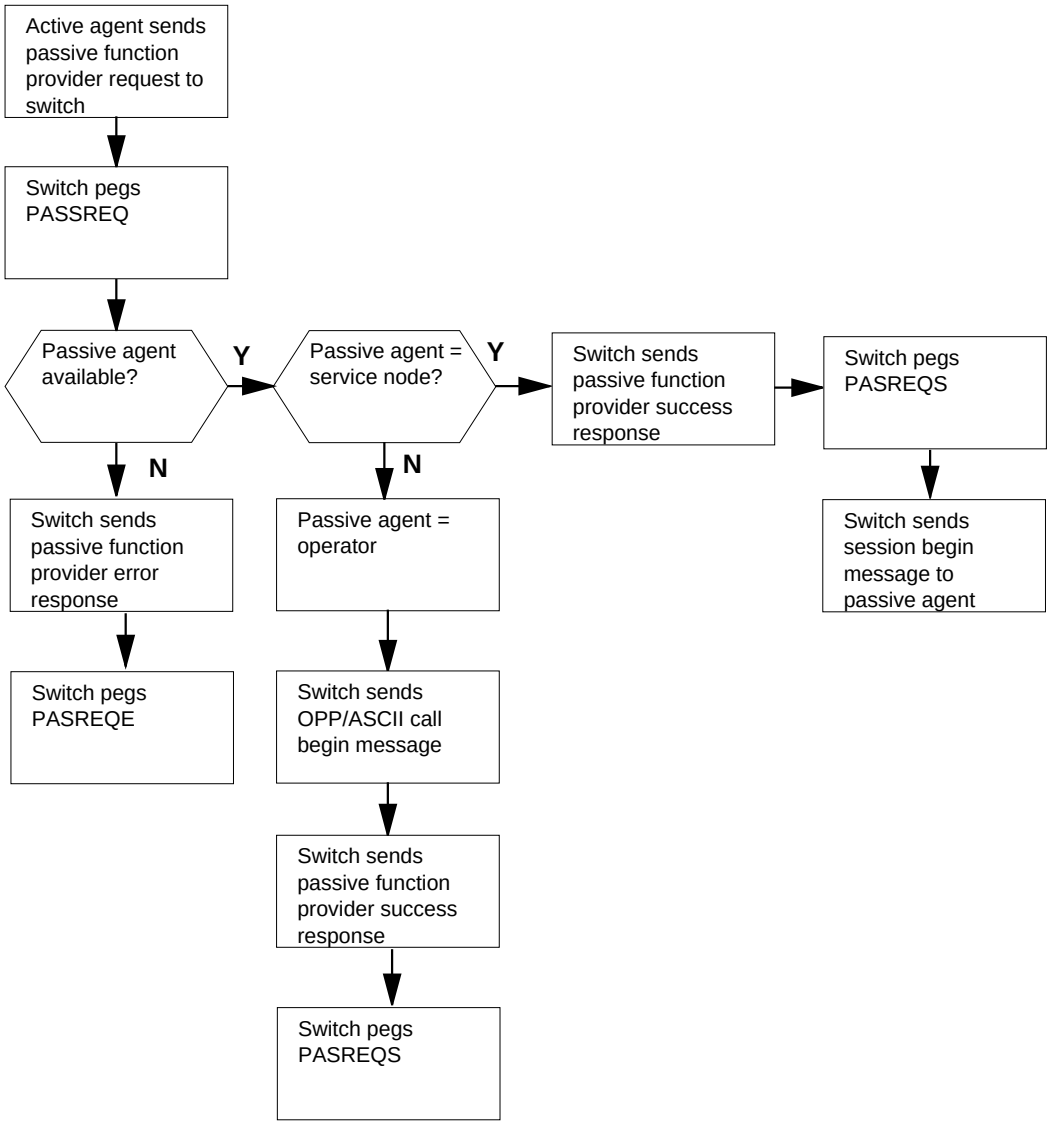
OM group OAPCALP7 (continued)

Associated functionality codes

The functionality codes associated with OM group OAPCALP7 are shown in the following table.

Functionality	Code
OSSAIN 07 Enhancements	OSAN0003
OSSAIN 09 Enhancements	OSAN0004

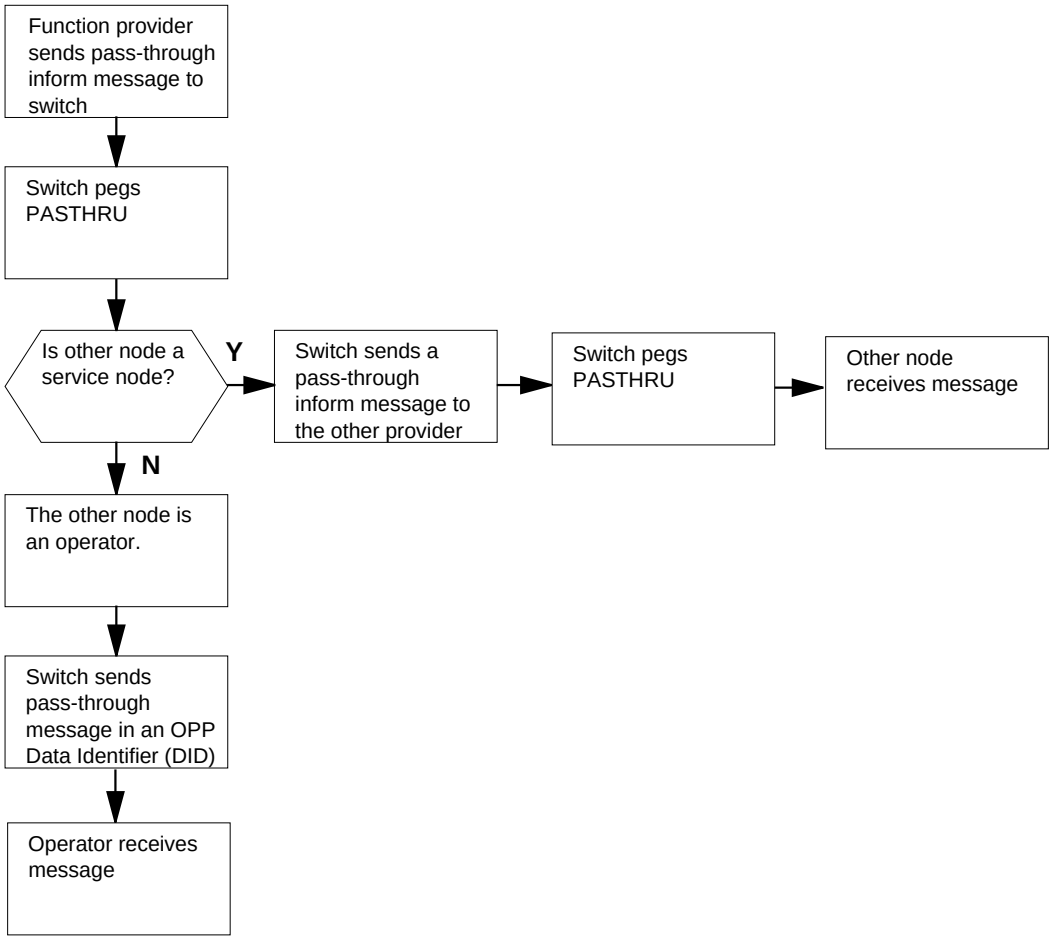
OM group OAPCALP7 registers—initiating a simultaneous interaction



Note: If the requested function provider is not immediately available, the DMS switch queues the request. The DMS switch replies with a passive function provider success response indicating that the request is queued. When the requested node becomes available, the DMS switch sends a session begin message if the passive node is a service node or an Open Position Protocol (OPP)/American Standard Code for Information Interchange (ASCII) call begin message if the passive agent is an operator.

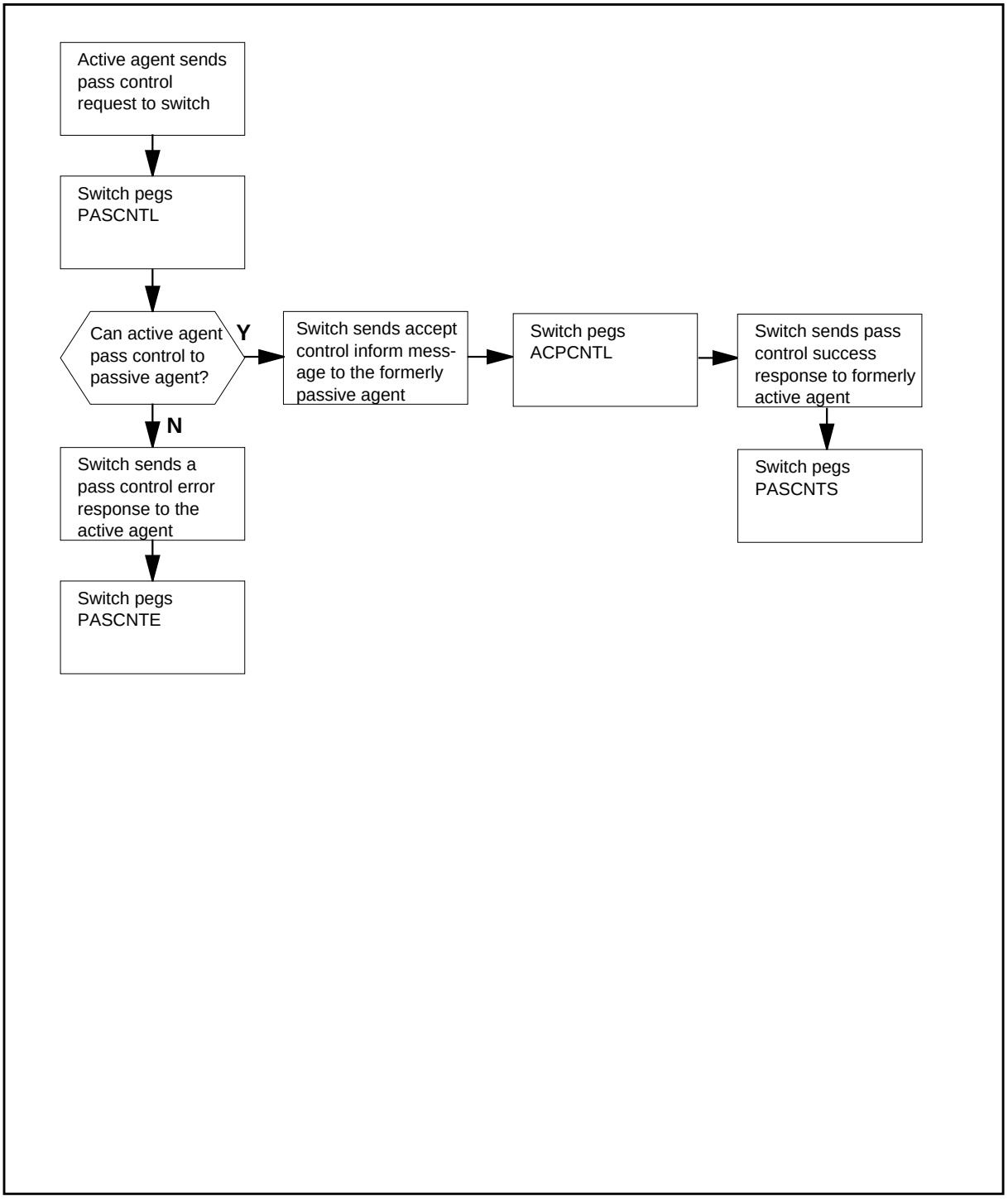
OM group OAPCALP7 (continued)

OM group OAPCALP7 registers—pass-through messaging



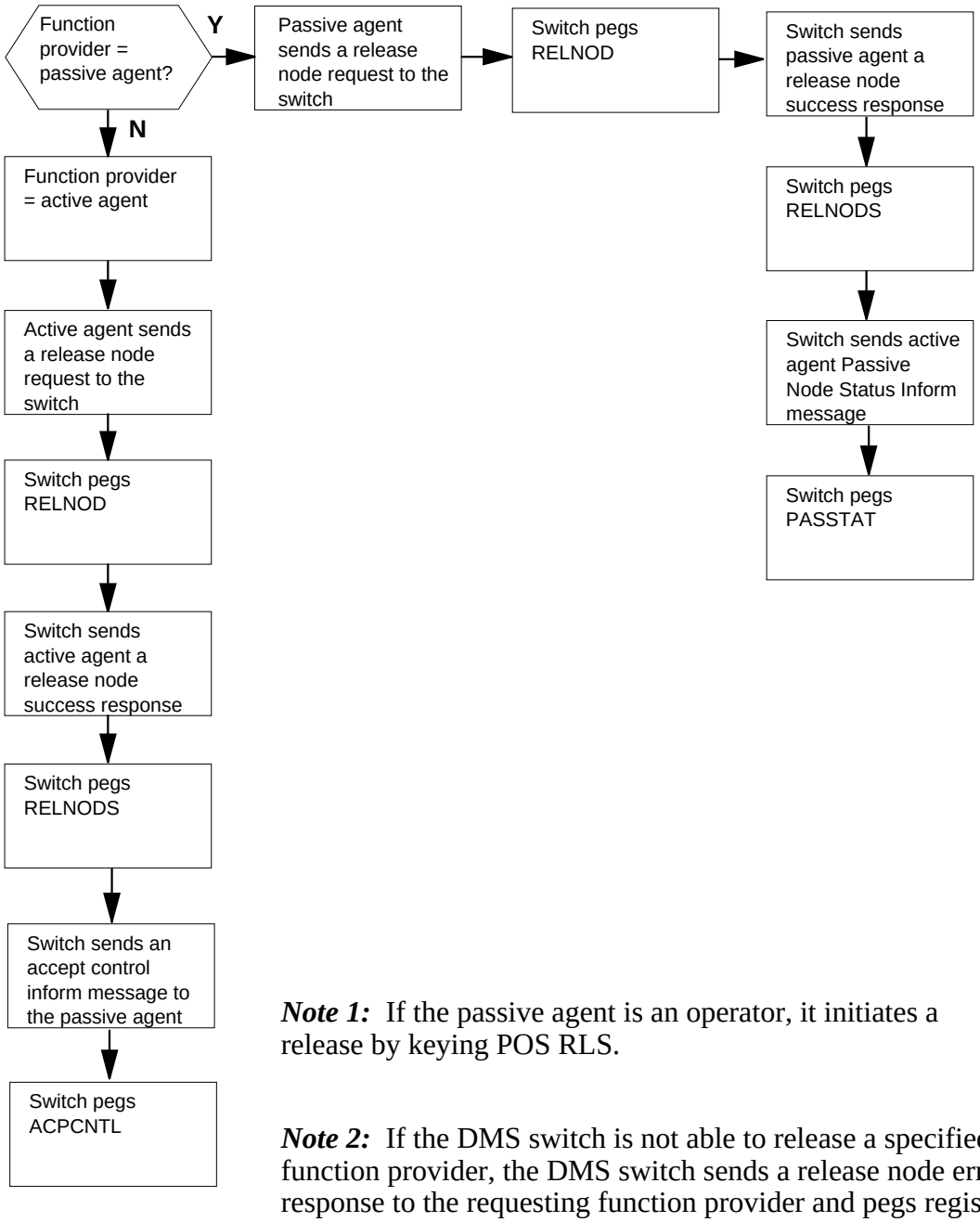
Note: An operator sends pass-through messages to the DMS switch through OPP Action Identifier (ActID) messages. It receives pass-through messages from the DMS switch through OPP DID messages.

OM group OAPCALP7 registers—passing call control



OM group OAPCALP7 (continued)

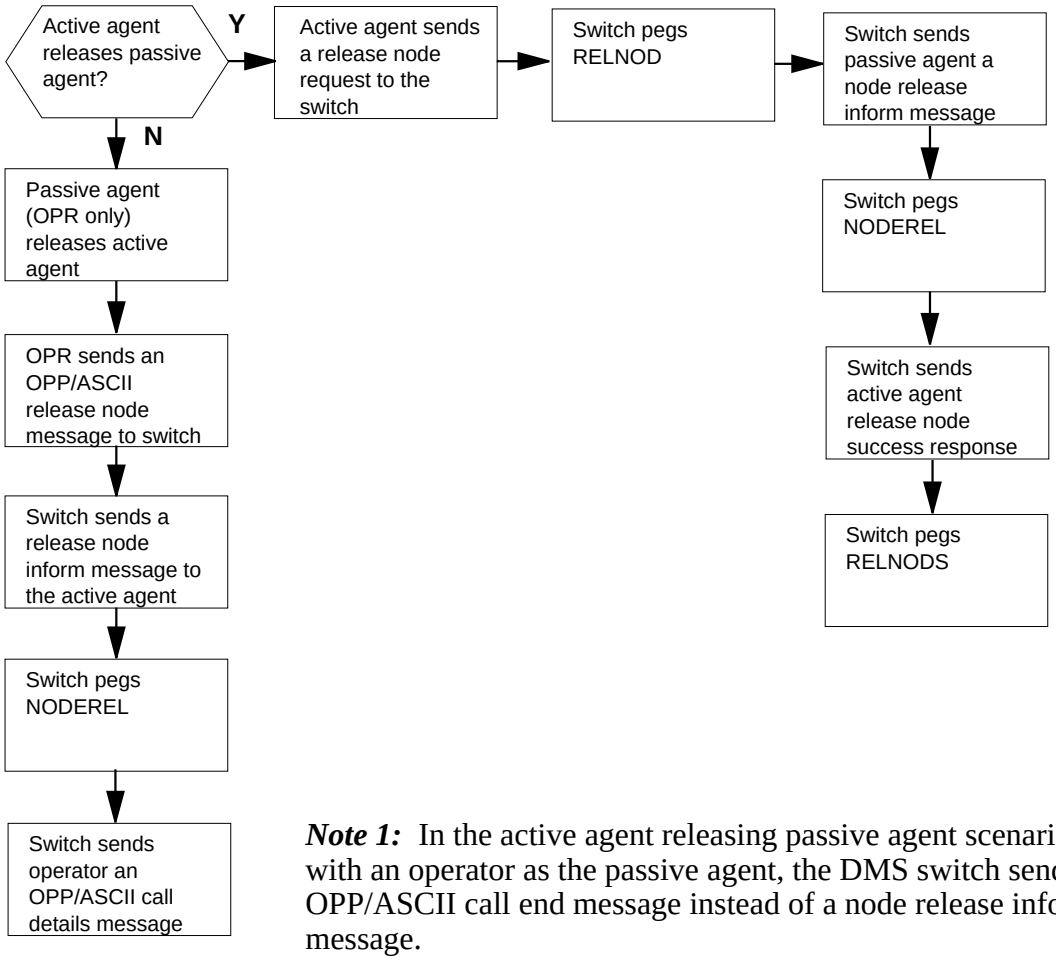
OM group OAPCALP7 registers—function provider releasing itself from a call



Note 1: If the passive agent is an operator, it initiates a release by keying POS RLS.

Note 2: If the DMS switch is not able to release a specified function provider, the DMS switch sends a release node error response to the requesting function provider and pegs register RELNODE.

OM group OAPCALP7 registers—function provider releasing another function provider



Note 1: In the active agent releasing passive agent scenario, with an operator as the passive agent, the DMS switch sends an OPP/ASCII call end message instead of a node release inform message.

Note 2: In the passive agent releasing active agent scenario, only an operator can release an active agent. The operator initiates the release of the active agent by keying the release node function.

Note 3: If the DMS switch is not able to release a specified function provider, the DMS switch sends a release node error response to the requesting function provider and pegs register RELNODE.

OM group OAPCALP7 (continued)

Register CNFADD

Conference Add Request (CNFADD)

The register is pegged each time the corresponding operation or response is sent or received by the switch.

Register CNFADD release history

Register CNFADD was introduced in TOPS09.

Associated registers

None

Associated logs

None

Extension registers

CNFADD2

Register CNFADDE

Conference Add Return Error (CNFADDE)

The register is pegged each time the corresponding operation or response is sent or received by the switch.

Register CNFADDE release history

Register CNFADDE was introduced in TOPS09.

Associated registers

None

Associated logs

None

Extension registers

CNFADDE2

Register CNFADDS

Conference Add Return Result (CNFADDS)

The register is pegged each time the corresponding operation or response is sent or received by the switch.

Register CNFADDS release history

Register CNFADDS was introduced in TOPS09.

Associated registers

None

Associated logs

None

Extension registers

CNFADDS2

Register CNFCREMV

Conference Remove Request (CNFCREMV)

The register is pegged each time the corresponding operation or response is sent or received by the switch.

Register CNFCREMV release history

Register CNFCREMV was introduced in TOPS09.

Associated registers

None

Associated logs

None

Extension registers

CNFCREMV2

Register CNFCREMVE

Conference Remove Request Error (CNFCREMVE)

The register is pegged each time the corresponding operation or response is sent or received by the switch.

Register CNFCREMVE release history

Register CNFCRET was introduced in TOPS09.

Associated registers

None

OM group OAPCALP7 (continued)

Associated logs

None

Extension registers

CNFCREMVE2

Register CNFCREMVS

Conference Remove Request Result (CNFCREMVS)

The register is pegged each time the corresponding operation or response is sent or received by the switch.

Register CNFCREMVS release history

Register CNFCREMVS was introduced in TOPS09.

Associated registers

None

Associated logs

None

Extension registers

CNFCREMVS2

Register CNFCRET

Conference Create Request (CNFCRET)

The register is pegged each time the corresponding operation or response is sent or received by the switch.

Register CNFCRET release history

Register CNFCRET was introduced in TOPS09.

Associated registers

None

Associated logs

None

Extension registers

CNFCRET2

Register CNFCRETE

Conference Create Request Result Error (CNFCRETE)

The register is pegged each time the corresponding operation or response is sent or received by the switch.

Register CNFCRETE release history

Register CNFCRETE was introduced in TOPS09.

Associated registers

None

Associated logs

None

Extension registers

CNFCRETE2

Register CNFCRETS

Conference Create Request Result (CNFCRETS)

The register is pegged each time the corresponding operation or response is sent or received by the switch.

Register CNFCRETS release history

Register CNFCRETS was introduced in TOPS09.

Associated registers

None

Associated logs

None

Extension registers

CNFCRETS2

Register CNFDELT

Conference Details Request (CNFDELT)

The register is pegged each time the corresponding operation or response is sent or received by the switch.

OM group OAPCALP7 (continued)

Register CNFCRET release history

Register CNFDELT was introduced in TOPS09.

Associated registers

None

Associated logs

None

Extension registers

CNFDELT2

Register CNFDELTE

Conference Details Return Error (CNFDELTE)

The register is pegged each time the corresponding operation or response is sent or received by the switch.

Register CNFCRET release history

Register CNFDELTE was introduced in TOPS09.

Associated registers

None

Associated logs

None

Extension registers

CNFDELTE2

Register CNFDELTS

Conference Details Return Request (CNFDELTS)

The register is pegged each time the corresponding operation or response is sent or received by the switch.

Register CNFCRET release history

Register CNFDELTS was introduced in TOPS09.

Associated registers

None

Associated logs

None

Extension registers

CNFDELTS2

Register CNFREL

Conference Release Request (CNFREL)

The register is pegged each time the corresponding operation or response is sent or received by the switch.

Register CNFREL release history

Register CNFREL was introduced in TOPS09.

Associated registers

None

Associated logs

None

Extension registers

CNFREL2

Register CNFRELE

Conference Release Return Error (CNFRELE)

The register is pegged each time the corresponding operation or response is sent or received by the switch.

Register CNFREL release history

Register CNFRELE was introduced in TOPS09.

Associated registers

None

Associated logs

None

Extension registers

CNFRELE2

OM group OAPCALP7 (end)

Register CNFRELS

Conference Release Return Result (CNFRELS)

The register is pegged each time the corresponding operation or response is sent or received by the switch.

Register CNFREL release history

Register CNFRELS was introduced in TOPS09.

Associated registers

None

Associated logs

None

Extension registers

CNFRELS2

OM group OAPCALP8

OM description

Open Automated Protocol (OAP) Call Processing 8 (OAPCALP8)

In TOPS09, OM group OAPCALP8 is added to the set of OAP message OMs. This OM group contains registers that track call processing operations and responses used with the Operator Services Systems Advanced Intelligent Network (OSSAIN) simultaneous interactions feature.

The OSSAIN simultaneous interactions feature allows the attachment of two OSSAIN function providers (service node or TOPS operator) to a call simultaneously. The attachment configurations are as follows:

- service node and service node
- service node and a TOPS operator

During simultaneous interactions of a call, only one function provider may control the call. This function provider is the active agent. The other function provider is the passive agent.

Note 1: In an OSSAIN simultaneous interaction, a service node must always be the active agent. An operator can never be the active agent when it is engaged in a simultaneous interaction with a service node.

Note 2: For more information about OAP, refer to the *OSSAIN Open Automated Protocol Specification*, NIS: Q235-1

Release history

OM group OAPCALP8 was introduced in TOPS09 by feature AF7155.

TOPS09

Add eight registers.

Registers

OM group OAPCALP8 registers display on the MAP terminal as follows:

OM group OAPCALP8 (continued)

```
>OMSHOW OAPCALP8 ACTIVE
CLASS: ACTIVE
START:1991/05/19 16:30:00 WED;STOP:1995/05/19 16:33:00 WED;
SLOWSAMPLES:        2: FASTSAMPLES  18 ;

CGPNRQ      CGPNRQ2     CGPNRQS     CGPNRQS2
CGPNRQE     CGPNRQE2    SVCCHG      SVCCHG2
SVCCHGS     SVCCHGS2    SVCCHGE     SVCCHGE2
VCERLSI     VCERLSI2

0 SESNPL_0
   12           0           11          0
   1            0           10          0
   3            0            5          0
   9    0

1 SESNPL_1
   10           0           10          0
   7            0           15          0
   2            0            4          0
   8            0
```

Group structure

OM group OAPCALP8 provides up to 4095 tuples per office. The DMS switch adds one tuple to this OM group for each SESNPLID datafilled in table OASESNPL.

Key field:

SESNPLID (0-4094) - This field corresponds to the key field SESNPLID in table OASESNPL.

Info field:

OAP_SP_INDEX_REGISTERINFO - This field corresponds to the SESNPLNM field in table OASESNPL. The name can be up to 16 characters long.

Associated OM groups

The following OM groups are associated with OM group OAPCALP8:

- OAPCALP1
- OAPCALP2
- OAPCALP3

- OAPCALP4
- OAPCALP5
- OAPCALP6
- OAPCALP7

  Note: The DMS switch pegs registers in these OM groups for other call processing operations and responses than those associated with OM group OAPCALP8.

- OAPMTYPS
- OAPMTYPN

  Note: The DMS switch pegs registers in these OM groups each time it sends or receives a call processing operation or response.

Associated functional groups

Functional group Enhanced Services (ENSV0001) is associated with OM group OAPCALP8.

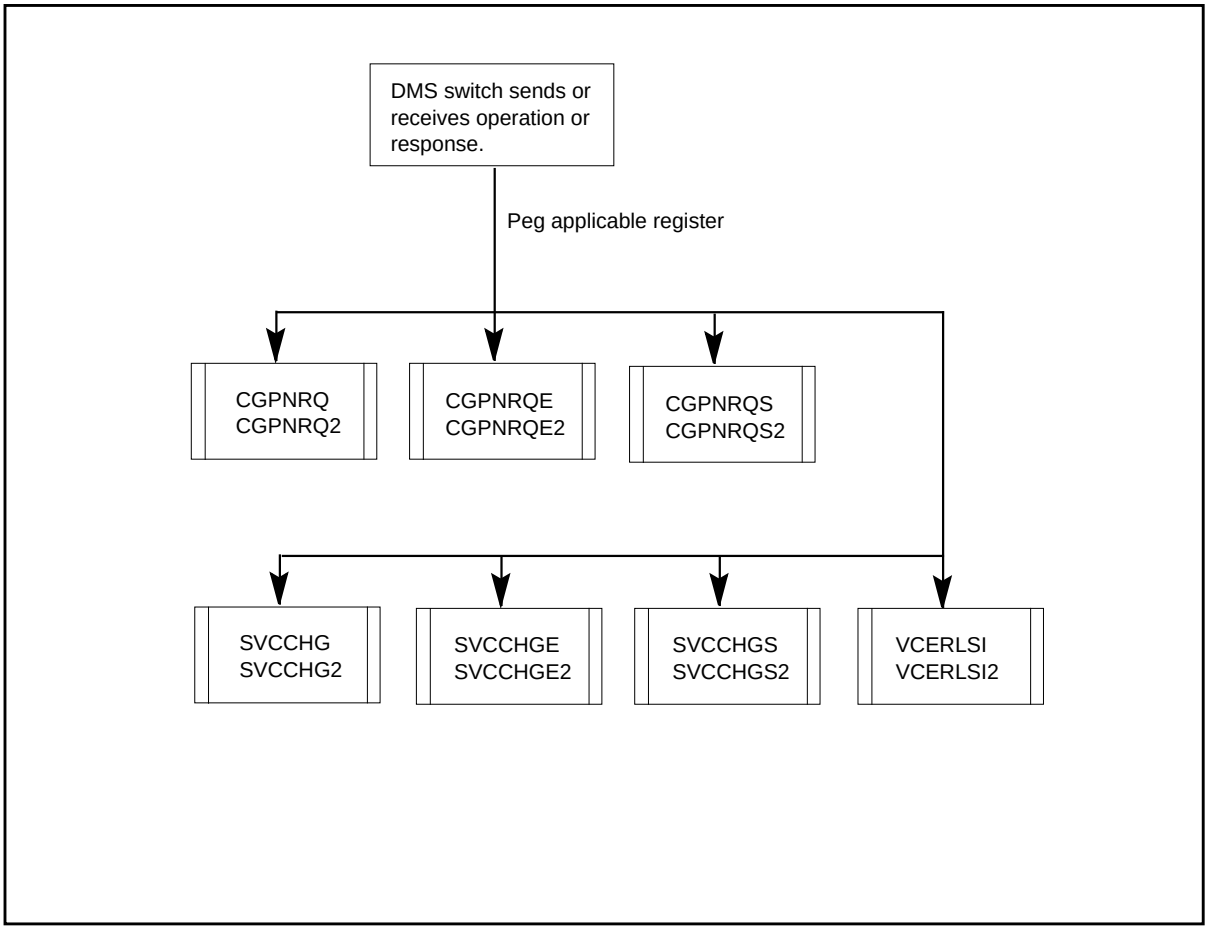
Associated functionality codes

The functionality codes associated with OM group OAPCALP8 are shown in the following table.

Functionality	Code
OSSAIN 07 Enhancements	OSAN0003
OSSAIN 09 Enhancements	OSAN0004

OM group OAPCALP8 (continued)

OM group OAPCALP8 registers



Register CGPNRQ

Integrated Services Digital Network User Part (ISUP) calling party number update request (CGPNRQ)

The register is pegged each time this operation or response is sent or received by the switch.

Register CGPNRQ release history

Register CGPNRQ was introduced in TOPS09.

Associated registers

None

Associated logs

None

Extension registers

CGPNRQ2

Register CGPNRQE

ISUP Calling Party Number Update Request Error Response (CGPNRQE)

The register is pegged each time this operation or response is sent or received by the switch.

Register CGPNRQE release history

Register CGPNRQE was introduced in TOPS09.

Associated registers

None

Associated logs

None

Extension registers

CGPNRQE2

Register CGPNRQS

ISUP Calling Party Number Update Request Success Response (CGPNRQS)

The register is pegged each time this operation or response is sent or received by the switch.

Register CGPNRQS release history

Register CGPNRQS was introduced in TOPS09.

Associated registers

None

Associated logs

None

Extension registers

CGPNRQS2

Register SVCCHG

Service Change Request (SVCCHG)

OM group OAPCALP8 (continued)

The register is pegged each time this operation or response is sent or received by the switch.

Register SVCCHG release history

Register SVCCHG was introduced in TOPS09.

Associated registers

None

Associated logs

None

Extension registers

SVCCHG2

Register SVCCHGE

Service Change Reqeust Error Response (SVCCHGE)

The register is pegged each time this operation or response is sent or received by the switch.

Register SVCCHGE release history

Register SVCCHGE was introduced in TOPS09.

Associated registers

None

Associated logs

None

Extension registers

SVCCHGE2

Register SVCCHGS

Service Change Request Success Response (SVCCHGS)

The register is pegged each time this operation or response is sent or received by the switch.

Register SVCCHGS release history

Register SVCCHGS was introduced in TOPS09.

Associated registers

None

Associated logs

None

Extension registers

SVCCHGS2

Register VCERLSI

Voice Release Inform (VCERLSI)

Register VCERLSI release history

Register VCERLSI was introduced in TOPS09.

The register is pegged each time this operation or response is sent or received by the switch.

Associated registers

None

Associated logs

None

Extension registers

VCERLSI2

OM group OAPCALP9

OM description

Open Automated Protocol (OAP) Call Processing 9 (OAPCALP9)

This OM group contains registers that track call processing message operations and responses on an Operator Services Systems Advanced Intelligent Network (OSSAIN) session pool basis. A register is pegged each time the corresponding open automated protocol (OAP) message is sent or received by the DMS switch.

Note: For more information about OAP, refer to the *OSSAIN Open Automated Protocol Specification*, NIS: Q235-1

Release history

OM group OAPCALP9 was introduced in TOPS11 by features AF7826, AF7712, and AF705.

TOPS13 feature 59011611 updated OM group OAPCALP9.

Registers

OM group OAPCALP9 registers display on the MAP terminal as follows:

```
>OMSHOW OAPCALP9 ACTIVE
CLASS: ACTIVE
START:1998/07/10 16:30:00 FRI;STOP:1995/05/19 16:33:00 WED;
SLOWSAMPLES:        2: FASTSAMPLES  18 ;

 ESTCHG      ESTCHG2    ESTCHGS     ESTCHGS2
ESTCHGE     ESTCHGE2    PASTHRQ     PASTHRQ2
PASTHRS     PASTHRS2    PASTHRE     PASTHRE2
 CNTTMT      CNTTMT2    CNTTMTS     CNTTMTS2
CNTTMTE     CNTTMTE2    SACTINF     SACTINF2

0 SESNPL_0
   12           0           11          0
   1            0           10          0
   10           0           10          0
   0            0           10          0
   0            0
```

Group structure

OM group OAPCALP9 provides up to 4095 tuples per office. The DMS switch adds one tuple to this OM group for each SESNPLID (session pool identifier) datafilled in table OASESNPL.

Key field:

The key field can be indexed by either of the following:

SESNPLID (0-4094) - This field corresponds to the key field SESNPLID in table OASESNPL.

SESNPLNM (up to 16 characters) - This field corresponds to field SESNPLNM in table OASESNPL. This field is a name associated with SESNPLID.

OM group OAPCALP9 (continued)

Info field:
Call processing class message operations on a per session pool basis.

Associated OM groups

The following OM groups are associated with OM group OAPCALP9:

- OAPCALP1
- OAPCALP2
- OAPCALP3
- OAPCALP4
- OAPCALP5
- OAPCALP6
- OAPCALP7
- OAPCALP8

Note: The DMS switch pegs registers in these OM groups for other call processing operations and responses than those associated with OM group OAPCALP9.

- OAPMTYPS
- OAPMTYPN

Note: The DMS switch pegs registers in these OM groups each time it sends or receives a call processing operation or response.

Associated functional groups

The following functional groups are associated with OM group OAPCALP9:

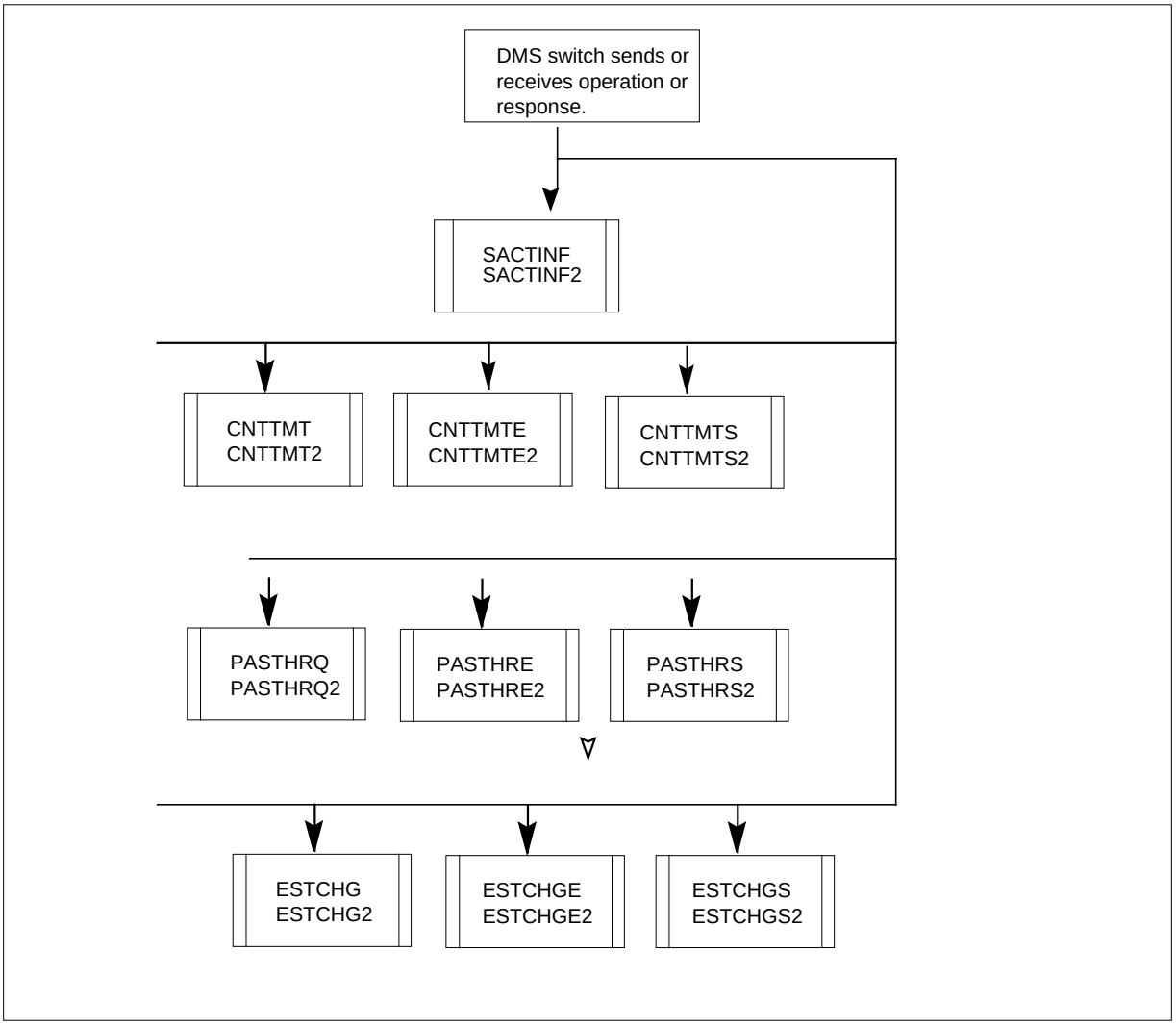
- Enhanced Services, ENSV0001
- OSSAIN, OSAN0001

Associated functionality codes

The functionality codes associated with OM group OAPCALP9 are shown in the following table.

Functionality	Code
OSSAIN Global	OSAN0001
OSSAIN 11 Enhancements	OSAN0006
OSSAIN 07 Enhancements	OSAN0003

OM group OAPCALP9 registers



OM group OAPCALP9 (continued)

Register CNTTMT

Register Connect To Treatment Request

This register is pegged each time an OAP Connect To Treatment Request operation or response is sent or received by the switch.

To test this register, send or receive the OAP message associated with this register and verify that the register is pegged.

Register CNTTMT release history

Register CNTTMT was introduced in TOPS11 by feature AF7712 in functionality OSSAIN 11 Enhancements, OSAN0006.

Associated registers

none

Associated logs

none

Extension registers

CNTTMT2

Register CNTTMTE

Register Connect To Treatment Error

This register is pegged each time an OAP Connect To Treatment Error operation or response is sent or received by the switch.

To test this register, send or receive the OAP message associated with this register and verify that the register is pegged.

Register CNTTMTE release history

Register CNTTMTE was introduced in TOPS11 by feature AF7712 in functionality OSSAIN 11 Enhancements, OSAN0006.

Associated registers

none

Associated logs

none

Extension registers

CNTTMTE2

Register CNTTMTS

Register Connect To Treatment Success

This register is pegged each time an OAP Connect To Treatment Success operation or response is sent or received by the switch.

To test this register, send or receive the OAP message associated with this register and verify that the register is pegged.

Register CNTTMTS release history

Register CNTTMTS was introduced in TOPS11 by feature AF7712 in functionality OSSAIN 11 Enhancements, OSAN0006.

Associated registers

none

Associated logs

none

Extension registers

CNTTMTS2

Register ESTCHG

Estimate of Call Charges

This register is pegged each time an estimate of charge operation or response is sent or received by the switch.

To test this register, send an estimate of charges to the switch and ensure that this register is pegged.

Register ESTCHG release history

Register ESTCHG was introduced in TOPS11 by feature AF7826 in functionality OSSAIN Global, OSAN0001.

Associated registers

none

Associated logs

none

Extension registers

ESTCHG2

OM group OAPCALP9 (continued)

Register ESTCHGE

Estimate of Call Charges Error

This register is pegged each time the estimate of charges error operation or response is sent or received by the switch.

To test this register, send an estimate of charges error operation to the switch and ensure that this register is pegged.

Register ESTCHGE release history

Register ESTCHGE was introduced in TOPS11 by feature AF7826 in functionality OSSAIN Global, OSAN0001.

Associated registers

none

Associated logs

none

Extension registers

ESTCHGE2

Register ESTCHGS

Estimate of Call Charges Success

This register is pegged each time the estimate of charges success operation or response is sent or received by the switch.

To test this register, send an estimate of charges success operation to the switch and ensure that this register is pegged.

Register ESTCHGS release history

Register ESTCHGS was introduced in TOPS11 by feature AF7826 in functionality OSSAIN Global, OSAN0001.

Associated registers

none

Associated logs

none

Extension registers

ESTCHGS2

Register PASTHRE

Register Pass Through Error Response

This register is pegged when an OAP Pass Through Error Response is sent to a service node.

To test this register, send this OAP message and verify that the register is pegged.

SOC OSAN0003 must be on for this OAP message.

Register PASTHRE release history

Register PASTHRE was introduced in TOPS11 by feature AF7805 in functionality IN Fall Back, ENSV0023.

Associated registers

none

Associated logs

none

Extension registers

PASTHRE2

Register PASTHRQ

Register Pass Through Request

This register is pegged when an OAP Pass Through Request is received.

To test this register, receive this OAP message and verify that the register is pegged.

SOC OSAN0003 must be on for this OAP message.

Register PASTHRQ release history

Register PASTHRQ was introduced in TOPS11 by feature AF7805 in functionality IN Fall Back, ENSV0023.

Associated registers

none

Associated logs

none

OM group OAPCALP9 (end)

Extension registers

PASTHRQ2

Register PASTHRS

Register Pass Through Success Response

This register is pegged when an OAP Pass Through Success Response is sent to a service node.

To test this register, send this OAP message and verify that the register is pegged.

SOC OSAN0003 must be on for this OAP message.

Register PASTHRS release history

Register PASTHRS was introduced in TOPS11 by feature AF7805 in functionality IN Fall Back, ENSV0023.

Associated registers

none

Associated logs

none

Extension registers

PASTHRS2

Register SACTINF

Register Service Active Inform

This register is pegged when a Session Active Inform OAP message is received from an OSSAIN service node.

Register SACTINF release history

TOPS13 feature 59011611 introduced register SACTINF. The feature is part of functionality OSSAIN 12 Enhancements, OSAN0007.

Associated registers

none

Extension registers

SACTINF2

OM group OAPCP10

OM description

Open Automated Protocol (OAP) Call Processing group 10

This OM group contains registers that track call processing message operations and responses on an Operator Services Systems Advanced Intelligent Network (OSSAIN) session pool basis. A register is pegged each time the corresponding open automated protocol (OAP) message is sent or received by the DMS switch.

Note: For more information about OAP, refer to the *OSSAIN Open Automated Protocol Specification*, NIS: Q235-1

Release history

TOPS12 introduced OM group OAPCP10.

Registers

OM group OAPCP10 registers display on the MAP terminal as follows.

```
>omshow oapcp10 active
CLASS: ACTIVE
START:1999/05/17 00:30:00 MON; STOP:1999/05/17 00:44:38 MON;
SLOWSAMPLES: 9 ; FASTSAMPLES: 88;

       INFO (OAP_SP_INDEX_REGISTERINFO)
          RETANRQ  RETANRQ2  RETANRS  RETANRS2
          RETANRE  RETANRE2  CBNSQRQ  CBNSQRQ2
          CBNSQRS  CBNSQRS2  CBNSQRE  CBNSQRE2
          RNUPDRQ  RNUPDRQ2  RNUPDRS  RNUPDRS2
          RNUPDRE  RNUPDRE2

  30 EBAS22_1
                0         0        0         0
                0         0        0         0
                0         0        0         0
                0         0        0         0
                0         0
```

Group structure

OM group OAPCP10 provides one tuple for some OAP CallP operations

OM group OAPCP10 (continued)

Key field:
SESNPLID (0-4096) - This field corresponds to the key field SESNPLID in table OASESNPL

Info field:
none

Related OM groups

The following OM groups are associated with OM group OAPCP10:

- OAPCALP1
- OAPCALP2
- OAPCALP3
- OAPCALP4
- OAPCALP5
- OAPCALP6
- OAPCALP7
- OAPCALP8
- OAPCALP9

Note: The DMS switch pegs registers in these OM groups for other call processing operations and responses than those associated with OM group OAPCP10.

- OAPMTYPS
- OAPMTYPN

Note: The DMS switch pegs registers in these OM groups each time it sends or receives a call processing operation or response.

Related functional groups

The functional groups that follow are related to OM group OAPCP10:

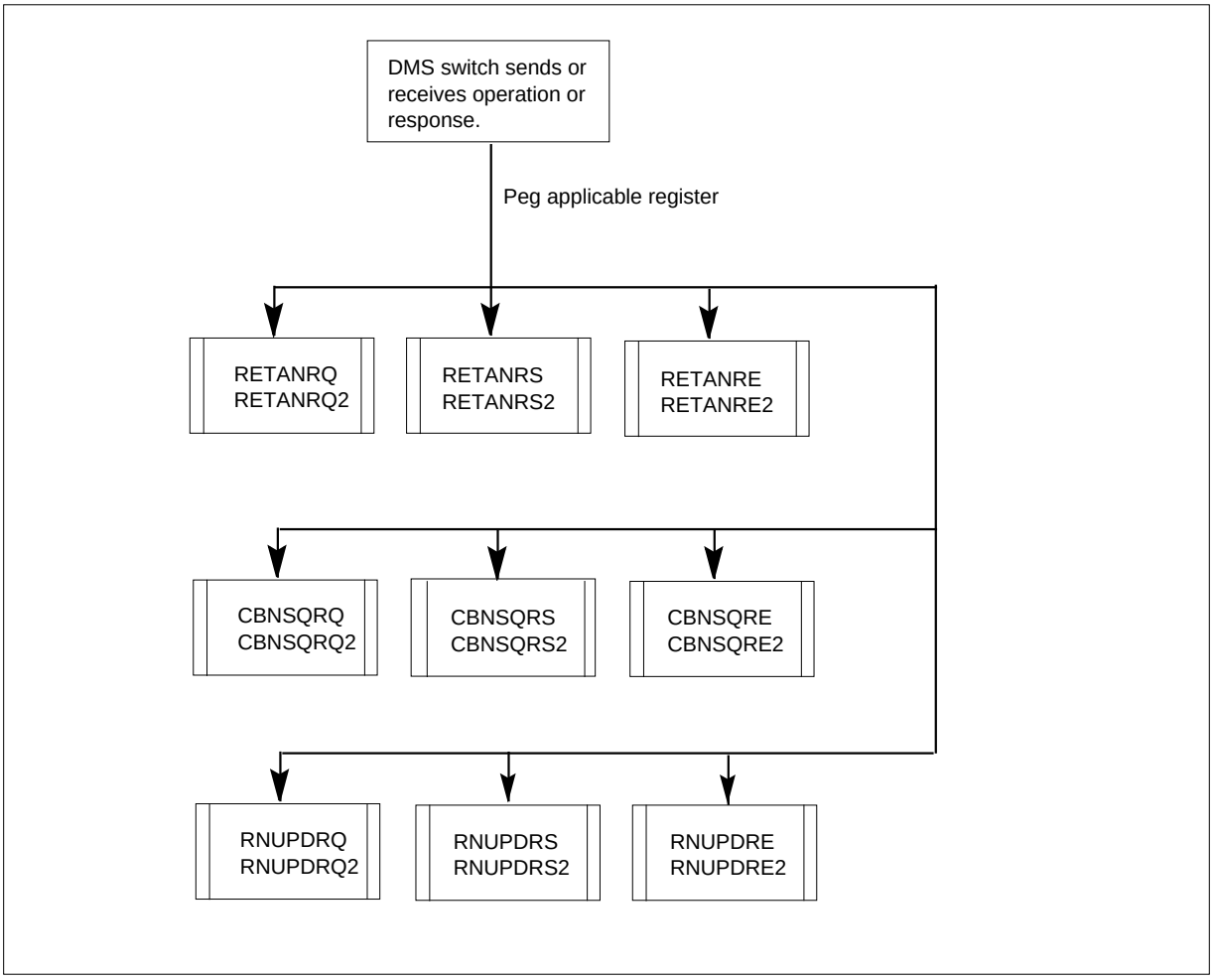
- OSSAIN, OSAN0001

Related functionality codes

The table that follows lists the functionality name and codes related to OM group OAPCP10.

Functionality	Code
OSSAIN 12 Enhancements	OSAN0007

OM group OAPCP10 registers



OM group OAPCP10 (continued)

Register CBNSQRE

Register calling party billed number screening (BNS) query request error

This register is pegged when an error is received on an OAP operation from a service node to perform a BNS query on the callling number.

To test this register, receive the OAP message associated with this register and verify that the register is pegged.

Register CBNSQRE release history

TOPS12 introduced register CBNSQRE.

Related registers

None

Related logs

None

Extension registers

CBNSQRE2

Register CBNSQRQ

Register calling party billed number screening (BNS) query request

This register is pegged when a request is received in an OAP operation from a service node to perform a BNS query on the callling number.

To test this register, receive the OAP message associated with this register and verify that the register is pegged.

Register CBNSQRQ release history

TOPS12 introduced register CBNSQRQ.

Related registers

None

Related logs

None

Extension registers

CBNSQRQ2

Register CBNSQRS

Register calling party billed number screening (BNS) query request success

This register is pegged when an OAP operation from a service node for a BNS query on the calling number is successfully processed.

To test this register, receive the OAP message associated with this register and verify that the register is pegged.

Register CBNSQRS release history

TOPS12 introduced register CBNSQRS.

Related registers

None

Related logs

None

Extension registers

CBNSQRS2

Register RETANRE

Register return answer request error

This register is pegged when an error is received in a Return Answer operation from a service node..

To test this register, receive the message associated with this register and verify that the register is pegged.

Register RETANRE release history

TOPS12 introduced register RETANRE.

Related registers

None

Related logs

None

Extension registers

RETANRE2

OM group OAPCP10 (continued)

Register RETANRQ

Register return answer request

This register is pegged when the Return Answer operation is received from a service node..

To test this register, receive the message associated with this register and verify that the register is pegged.

Register RETANRQ release history

TOPS12 introduced register RETANRQ.

Related registers

None

Related logs

None

Extension registers

RETANRQ2

Register RETANRS

Register return answer request success

This register is pegged when the Return Answer operation is received successfully from a service node..

To test this register, receive the message associated with this register and verify that the register is pegged.

Register RETANRS release history

TOPS12 introduced register RETANRS.

Related registers

None

Related logs

None

Extension registers

RETANRS2

Register RNUPDRE

Register location rouing number (LRN) update request error

This register is pegged when an error is received on an OAP operation to assign an LRN as requested by a service node.

To test this register, receive the OAP message associated with this register and verify that the register is pegged.

Register RNUPDRE release history

TOPS12 introduced register RNUPDRE.

Related registers

None

Related logs

None

Extension registers

RNUPDRE2

Register RNUPDRQ

Register location rouing number (LRN) update request

This register is pegged when the Assign LRN operation is received from a service node..

To test this register, receive the OAP message associated with this register and verify that the register is pegged.

Register RNUPDRQ release history

TOPS12 introduced register RNUPDRQ.

Related registers

None

Related logs

None

Extension registers

RNUPDRQ2

OM group OAPCP10 (end)

Register RNUPDRS

Register location rouing number (LRN) update request success

This register is pegged when an OAP operation to assign an LRN is successfully processed from a service node..

To test this register, receive the OAP message associated with this register and verify that the register is pegged.

Register RNUPDRS release history

TOPS12 introduced register RNUPDRS.

Related registers

None

Related logs

None

Extension registers

RNUPDRS2

OM group OAPMERRN

OM description

Open Automated Protocol (OAP) Message Error - Node

OAPMERRN contains a register for the different types of errors that OAP messages can have. Each register in OM group OAPMERRN is pegged on a per node basis (OAP Node Maintenance class messages).

Release history

OM group OAPMERRN was introduced in NA006.

Registers

OM group OAPMERRN registers display on the MAP terminal as follows:

```
>OMSHOW OAPMERRN ACTIVE

OAPMERRN

CLASS: ACTIVE
START:1995/05/19 16:30:00 WED;STOP:1995/05/19 16:33:00 WED;
SLOWSAMPLES:      2;FASTSAMPLES:      18;

 NINVOPHD       NINVOPH2        NINVKER         NINVKER2
 NRESLTER       NRESLTE2        NERRORER        NERRORE2
 NREJCTE        NREJCTE2        NUNKNOP         NUNKNOP2
 NUNKNDB        NUNKNDB2        NMSNGDB         NMSNGDB2
 NINVDFD        NINVDFD2

0 NODEID_0
   5               0               3               0
   0               0               0               0
   0               0               0               0
   5               0               6               0
   3               0

1 NODEID_1
   5               0               3               0
   0               0               0               0
   0               0               0               0
   5               0               6               0
   3               0
```

OM group OAPMERRN (continued)

Group structure

OM group OAPMERRN provides one tuple for each key.

Key field:
NODEID {0 to 96}: Key field for table OANODINV

Info field:
None

Associated OM groups

None

Associated functional groups

NA006

Functional group ENSV Enhanced Services (ENSV0001) is associated with OM group OAPMERRN.

Associated functionality codes

The functionality codes associated with OM group OAPMERRN are shown in the following table.

Functionality	Code
Operator Services AIN	ENSV0014 (NA006)

Register NERRORER

Node Return Error Error

This register is pegged each time the switch receives an invalid value in the Return Error Operation Header for a node maintenance message.

Note: For test case(s), receive an error response with an error for a node maintenance request.

Register NERRORER release history

Register NERRORER was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP600

This log is generated when an invalid value is received in the Operation Header.

Extension registers

NERRORE2

Register NINVDFD

Node Invalid Field Value

This register is pegged each time the switch receives a node maintenance message which has a field with an invalid value.

Note: For test case(s), receive an OAP for a node maintenance message with an invalid value in a field.

Register NINVDFD release history

Register NINVDFD was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP600

This log is generated when an invalid value is received in an OAP message field.

Extension registers

NINVDFD2

Register NINVKER

Node Invoke Error

This register is pegged each time the switch receives an invalid value in a field and in a node maintenance Invoke Operation Header.

OM group OAPMERRN (continued)

Note: Currently, this register is not testable. Register NINVKER may be pegged in a future release.

Register NINVKER release history

Register NINVKER was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP600

The OAP600 log is generated when an invalid value is received in an OAP message.

Extension registers

NINVKER2

Register NINVOPHD

Node Invalid Operation Header ID

This register is pegged each time the switch receives a node maintenance message which has an invalid Operation Header ID.

Note: For test case(s), receive a node maintenance message from a service node with an invalid operation header ID.

Register NINVOPHD release history

Register NINVOPHD was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP600

This log is generated when an invalid value is received in the Operation Header.

Extension registers

NINVOPH2

Register NMSNGDB

Node Missing Data Block

This register is pegged each time the switch receives a node maintenance operation or response with a missing mandatory data block.

Note: For test case(s), receive a node maintenance response with a missing mandatory data block.

Register NMSNGDB release history

Register NMSNGDB was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP602

This log is generated when the switch receives an operation or response with missing data blocks.

Extension registers

NMSNGDB2

Register NREJCTE

Node Reject Error

This register is pegged each time the switch receives an invalid value in the Reject Operation Header for a node maintenance message.

Note: For test case(s), send a message with an invalid operation ID to the service node.

Register NREJCTE release history

Register NREJCTE was introduced in NA006.

OM group OAPMERRN (continued)

Associated registers

None

Associated logs

Log number: OAP600

This log is generated when an invalid value is received in the Operation Header.

Extension registers

NREJCTE2

Register NRESLTER

Node Return Result Error

This register is pegged each time the switch receives an invalid value in a node maintenance Return Result Operation Header.

Note: For test case(s), receive a success response with an invalid value in a field, in the Return Result Operation Header for a node maintenance request.

Register NRESLTER release history

Register NRESLTER was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP600

This log is generated when an invalid value is received in the Operation Header.

Extension registers

NRESLTE2

Register NUNKNDB

Node Unknown Data Block

This register is pegged each time the switch receives an operation or response with an unknown data block from a service node.

Note: For test case(s), receive a node maintenance message response with an unknown data block.

Register NUNKNDB release history

Register NUNKNDB was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP602

This log is generated when the switch receives an operation or response with an unrecognized data block.

Extension registers

NUNKNDB2

Register NUNKNOP

Node Unknown Operation ID

This register is pegged each time the switch receives a node maintenance message which has an operation ID that the switch does not recognize.

Note: Currently, this register is not testable. Register NINVKER may be pegged in a future release.

Register NUNKNOP release history

Register NUNKNOP was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP601

OM group OAPMERRN (end)

This log is generated when an unrecognized operation is requested by a service node.

Extension registers

NUNKNOP2

OM group OAPMERRS

OM description

Open Automated Protocol (OAP) Message Error - Session Pool

OAPMERRS contains a register for the different types of errors that OAP messages can have. Each register in OM group OAPMERRS is pegged on a per session pool basis (for example, OAP Call Processing class and OAP Session Pool Maintenance class messages).

Release history

OM group OAPMERRS was introduced in NA006.

Registers

OM group OAPMERRS registers display on the MAP terminal as follows:

OM group OAPMERRS (continued)

```
>OMSHOW OAPMERRS ACTIVE

OAPMERRS

CLASS: ACTIVE
START:1995/05/19 16:30:00 WED;STOP:1995/05/19 16:33:00 WED;
SLOWSAMPLES:      2;FASTSAMPLES:      18;

  INVLFN          INVLFN2         INVLCLL         INVLCLL2
  SEQERRH         SEQERRH2        SEQERRL         SEQERRL2
  INVLOPHD        INVLOPH2        INVKERR         INVKERR2
  RRESLTER        RRESLTE2        RERRORER        RERRORE2
  REJECTER        REJECTE2        UNKWNOP         UNKWNOP2
  UNKWNDB         UNKWNDB2        MISNGDB         MISNGDB2
  INVDFLD         INVDFLD2

0 SESNPL_0
     5               0               3               0
     7               0               0               0
     0               0               0               0
     0               0               5               0
     6               0               3               0
     1               0               6               0
     3               0
1 SESNPL_1
     5               0               3               0
     7               0               0               0
     0               0               0               0
     0               0               5               0
     6               0               3               0
     1               0               7               0
     3               0
```

Group structure

OM group OAPMERRS provides one tuple for each key.

Key field:

SESNPLID {0 to 4094}: Key field for table OASESNPL

Info field:

None

Associated OM groups

None

Associated functional groups

NA006

Functional group ENSV Enhanced Services (ENSV0001) is associated with OM group OAPMERRS.

Associated functionality codes

The functionality codes associated with OM group OAPMERRS are shown in the following table.

Functionality	Code
Operator Services AIN	ENSV0014 (NA006)

Register INVDFLD

Invalid Field Value

This register is pegged each time the switch receives a call processing or session pool maintenance message which has a field with an invalid value.

Note: For test case(s), receive an OAP message with an invalid value in a field.

Register INVDFLD release history

Register INVDFLD was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP600

This log is generated when an invalid value is received in an OAP message field.

Extension registers

INVDFLD2

OM group OAPMERRS (continued)

Register INVKERR

Invoke Error

This register is pegged each time the switch receives an invalid value in the Invoke Operation Header of a call processing or session pool maintenance message.

Note: For test case(s), receive an operation request from a service node that has an invalid value in the Invoke Operation Header.

Register INVKERR release history

Register INVKERR was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP600

The OAP600 log is generated when an invalid value is received in an OAP message.

Extension registers

INVKERR2

Register INVLCLL

Invalid Call ID

This register is pegged each time the switch receives a call processing class message with an invalid call ID. Session pool maintenance does not peg this register.

Note: For test case(s), receive a message from a service node with an invalid call ID.

Register INVLCLL release history

Register INVLCLL was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

INVLCLL2

Register INVLFN

Invalid Function ID

This register is pegged each time the switch receives a call processing class message with an invalid function ID. The function ID is either out of the valid range or inconsistent with prior messages sent for this session. Session pool maintenance does not peg this register.

Note: For test case(s), receive a message from a service node with an invalid function ID.

Register INVLFN release history

Register INVLFN was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP600

This log is generated when an invalid value is received in an OAP message field.

Extension registers

INVLFN2

Register INVLOPHD

Invalid Operation Header ID

This register is pegged each time the switch receives a message which has an invalid operation header ID.

OM group OAPMERRS (continued)

Note: For test case(s), receive a message from a service node with an invalid operation header ID.

Register INVLOPHD release history

Register INVLOPHD was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP600

This log is generated when an invalid value is received in the Operation Header.

Extension registers

INVLOPH2

Register MISNGDB

Missing Data Block

This register is pegged each time the switch receives a call processing, session pool maintenance message operation, or response with a missing mandatory data block.

Note: For test case(s), receive an operation request with a missing mandatory data block.

Register MISNGDB release history

Register MISNGDB was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP602

This log is generated when the switch receives an operation or response with missing data blocks.

Extension registers

MISNGDB2

Register REJECTER

Reject Error

This register is pegged each time the switch receives an invalid value in the Reject Operation Header of a call processing or session pool maintenance message.

Note: For test case(s), send a message with an invalid operation ID to the service node.

Register REJECTER release history

Register REJECTER was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP600

This log is generated when an invalid value is received in the Operation Header.

Extension registers

REJECTE2

Register RERRORER

Return Error Error

This register is pegged each time the switch receives an invalid value in the Return Error Operation Header of a call processing or session pool maintenance message.

Note: For test case(s), receive an error response with an error for a session pool maintenance request.

OM group OAPMERRS (continued)

Register RERRORER release history

Register RERRORER was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP600

This log is generated when an invalid value is received in the Operation Header.

Extension registers

RERRORE2

Register RRESLTER

Return Result Error

This register is pegged each time the switch receives an invalid value in the Return Result Operation Header of a call processing or session pool maintenance message.

Note: For test case(s), receive a success response with an error for a session pool maintenance request.

Register RRESLTER release history

Register RRESLTER was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP600

This log is generated when an invalid value is received in the Operation Header.

Extension registers

RRESLTE2

Register SEQERRH

Out of Sequence - High

This register is pegged each time the switch receives a call processing class message that is out of sequence and the sequence number is higher than what the switch is expecting. Session pool maintenance does not peg this register.

Note: For test case(s), receive an out of sequence message from a service node with a higher sequence number than what the switch is expecting.

Register SEQERRH release history

Register SEQERRH was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

SEQERRH2

Register SEQERRL

Out of Sequence - Low

This register is pegged each time the switch receives a call processing class message that is out of sequence and the sequence number is lower than what the switch is expecting. Session pool maintenance does not peg this register.

Note: For test case(s), receive an out-of-sequence message from a service node with a lower sequence number than what the switch is expecting.

Register SEQERRL release history

Register SEQERRL was introduced in NA006.

Associated registers

None

OM group OAPMERRS (continued)

Associated logs

None

Extension registers

SEQERRL2

Register UNKWNDB

Unknown Data Block

This register is pegged each time the switch receives a call processing, session pool maintenance message operation, or response with an unknown data block from a service node.

Note: For test case(s), receive an operation request with an unknown data block.

Register UNKWNDB release history

Register UNKWNDB was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP602

This log is generated when the switch receives an operation or response with an unrecognized data block.

Extension registers

UNKWNDB2

Register UNKWNOP

Unknown Operation ID

This register is pegged each time the switch receives a call processing or session pool maintenance message that has an operation ID the switch does not recognize.

Note: For test case(s), receive an operation request from a service node with an unknown operation ID.

Register UNKWNOP release history

Register UNKWNOP was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP601

This log is generated when an unrecognized operation is requested by a service node.

Extension registers

UNKWNOP2

OM group OAPMTYPN

OM description

Open Automated Protocol (OAP) Message Type - Node

OAPMTYPN contains a register for each incoming and outgoing OAP message type. OM group OAPMTYPN registers are pegged for node based messages (for example, Node Maintenance class messages) on a per node basis.

Release history

OM group OAPMTYPN was introduced in NA006.

Registers

OM group OAPMTYPN registers display on the MAP terminal as follows:

```
>OMSHOW OAPMTYPN ACTIVE

OAPMTYPN

CLASS: ACTIVE
START:1995/05/19 16:30:00 WED;STOP:1995/05/19 16:33:00 WED;
SLOWSAMPLES:      2;FASTSAMPLES:      18;

NIINVOK        NIINVOK2        NOINVOK        NOINVOK2
NIRESLT        NIRESLT2        NORESLT        NORESLT2
NIERROR        NIERROR2        NOERROR        NOERROR2
NIREJCT        NIREJCT2        NOREJCT        NOREJCT2

0 NODEID_0
     110            0              0             0
     0              0            102             0
     0              0              5             0
     0              0              3             0

1 NODEID_1
     110            0              0             0
     0              0            102             0
     0              0              5             0
     0              0              3             0
```

Group structure

OM group OAPMTYPN provides one tuple for each key.

Key field:
NODEID {0 to 96}: Key field for table OANODINV

Info field:
None

Associated OM groups

OAPNMTC - These OM groups contain registers for each node maintenance operation and related responses for the operation.

Associated functional groups

NA006

Functional group ENSV Enhanced Services (ENSV0001) is associated with OM group OAPMTYPN.

Associated functionality codes

The functionality codes associated with OM group OAPMTYPN are shown in the following table.

Functionality	Code
Operator Services AIN	ENSV0014 (NA006)

Register NIERROR

Node Incoming Error

This register is pegged each time the switch receives a node maintenance error response on a per node level basis.

Note: For test case(s), receive a node maintenance response for a busy request (for example, a busy error response).

Register NIERROR release history

Register NIERROR was introduced in NA006.

Associated registers

None

Associated logs

None

OM group OAPMTYPN (continued)

Extension registers

NIERROR2

Register NIINVOK

Node Incoming Invoke

This register is pegged each time the switch receives an incoming node maintenance inform or request operation on a per node level basis.

Note: Currently, this register is not testable. Register NINVOK may be pegged in a future release.

Register NIINVOK release history

Register NIINVOK was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

NIINVOK2

Register NIREJCT

Node Incoming Reject

This register is pegged each time the switch receives a node maintenance protocol violation on a per node level basis.

Note: For test case(s), send a message to a service node with an invalid operation ID.

Register NIREJCT release history

Register NIREJCT was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP603

This log is generated when a Reject message is received.

Extension registers

NIREJCT2

Register NIRESLT

Node Incoming Result

This register is pegged each time the switch receives a node maintenance success response on a per node level basis.

Note: For test case(s), receive a response for a node maintenance request (for example, a busy success response).

Register NIRESLT release history

Register NIRESLT was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

NIRESLT2

Register NOERROR

Node Outgoing Error

This register is pegged each time the switch sends an error response for a node maintenance operation request on a per node level basis.

Note: Currently, this register is not testable. Register NOERROR may be pegged in a future release.

OM group OAPMTYPN (continued)

Register NOERROR release history

Register NOERROR was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

NOERROR2

Register NOINVOK

Node Outgoing Invoke

This register is pegged each time the switch sends a node maintenance inform or request operation on a node level basis.

Note: For test case(s), send a maintenance request to a node (for example, a node busy).

Register NOINVOK release history

Register NOINVOK was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

NOINVOK2

Register NOREJCT

Node Outgoing Reject

This register is pegged each time the switch sends a node maintenance protocol violation on a per node level basis.

Note: For test case(s), receive a message with an invalid operation ID.

Register NOREJCT release history

Register NOREJCT was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP600, OAP601, OAP602

One of the above logs will be generated when an outgoing Reject is sent.

OAP600 is pegged if there was an invalid value for a field.

OAP601 is pegged if the operation ID is unrecognized.

OAP602 is pegged if a data block is missing or there is an unrecognized data block.

Extension registers

NOREJCT2

Register NORESLT

Node Outgoing Result

This register is pegged each time the switch sends a success response for a node maintenance operation request on a per node level basis.

Note: Currently, this register is not testable. Register NOERROR may be pegged in a future release.

Register NORESLT release history

Register NORESLT was introduced in NA006.

Associated registers

None

Associated logs

None

OM group OAPMTYPN (end)

Extension registers

NORESLT2

OM group OAPMTYPS

OM description

Open Automated Protocol (OAP) Message Type - Session Pool

OAPMTYPS contains a register for each incoming and outgoing OAP message type. OM group OAPMTYPS registers are pegged for session pool based messages (for example, OAP Call Processing class and OAP Session Pool Maintenance class messages) on a per session pool basis.

Release history

OM group OAPMTYPS was introduced in NA006.

Registers

OM group OAPMTYPS registers display on the MAP terminal as follows:

```
>OMSHOW OAPMTYPS ACTIVE

OAPMTYPS

CLASS: ACTIVE
START:1995/05/19 16:30:00 WED; STOP: 1995/05/19 16:33:00 WED;
SLOWSAMPLES:        2 ; FASTSAMPLES:            18 ;

   ININVOK      ININVOK2        OGINVOK         OGINVOK2
   INRESLT      INRESLT2        OGRESLT         OGRESLT2
   INERROR      INERROR2        OGERROR         OGERROR2
   INREJCT      INREJCT2        OGREJCT         OGREJCT2

0 SESNPL_0
   110              0               0               0
   0                0               102             0
   0                0               5               0
   0                0               3               0

1 SESNPL_1
   110              0               0               0
   0                0               102             0
   0                0               5               0
   0                0               3               0
```

Group structure

OM group OAPMTYPS provides one tuple for each key.

OM group OAPMTYPS (continued)

Key field:
SESNPLID {0 to 4094}: Key field for table OASESNPL

Info field:
None

Associated OM groups

OAPCALP1, OAPCALP2, OAPCALP3, OAPCALP4, OAPSPMTC - These OM groups contain registers for each call processing or session pool maintenance operation and related responses for the operation.

Associated functional groups

NA006

Functional group ENSV Enhanced Services (ENSV0001) is associated with OM group OAPMTYPS.

Associated functionality codes

The functionality codes associated with OM group OAPMTYPS are shown in the following table.

Functionality	Code
Operator Services AIN	ENSV0014 (NA006)

Register INERROR

Incoming Error

This register is pegged each time the switch receives a call processing or session pool maintenance error response from a session pool.

Note: For test case(s), receive a response for a busy request (for example, a busy error response).

Register INERROR release history

Register INERROR was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

INERROR2

Register ININVOK

Incoming Invoke

This register is pegged each time the switch receives an incoming call processing, session pool maintenance request, or inform operation from a session pool.

Note: For test case(s), make a call to a service node that requires the service node to request a voice connection.

Register ININVOK release history

Register ININVOK was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

ININVOK2

Register INREJCT

Incoming Reject

This register is pegged each time the switch receives a call processing or session pool maintenance protocol violation from a session pool.

Note: For test case(s), send a message to a service node with an invalid function id.

Register INREJCT release history

Register INREJCT was introduced in NA006.

OM group OAPMTYPS (continued)

Associated registers

None

Associated logs

Log number: OAP603

This log is generated when a Reject message is received.

Extension registers

INREJCT2

Register INRESLT

Incoming Result

This register is pegged each time the switch receives a call processing or session pool maintenance success response from a session pool.

Note: For test case(s), receive a session pool response for a maintenance request (for example, a busy success response).

Register INRESLT release history

Register INRESLT was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

INRESLT2

Register OGERROR

Outgoing Error

This register is pegged each time the switch sends a call processing or session pool maintenance error response for an operation request to a session pool.

Note: For test case(s), make a call to a service node for a function that requires a voice connection. Busy all the voice links. The switch will detect that all voice links are unavailable. It will then send an error response to the service node.

Register OGERROR release history

Register OGERROR was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

OGERROR2

Register OGINVOK

Outgoing Invoke

This register is pegged each time the switch sends a call processing, session pool maintenance request, or inform operation to a session pool.

Note: For test case(s), send a session pool maintenance request to a session pool (for example, a session pool busy).

Register OGINVOK release history

Register OGINVOK was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

OGINVOK2

OM group OAPMTYPS (continued)

Register OGREJCT

Outgoing Reject

This register is pegged each time the switch sends a protocol violation to a session pool.

Note: For test case(s), receive a message with an invalid operation ID.

Register OGREJCT release history

Register OGREJCT was introduced in NA006.

Associated registers

None

Associated logs

Log number: OAP600, OAP601, OAP602

One of the above logs will be generated when an outgoing Reject is sent.

OAP600 is generated if there was an invalid value for a field.

OAP601 is generated if the operation ID is unrecognized.

OAP602 is generated if a data block is missing or there is an unrecognized data block.

Extension registers

OGREJCT2

Register OGRESLT

Outgoing Result

This register is pegged each time the switch sends a call processing or session pool maintenance success response for an operation request to a session pool.

Note: For test case(s), make a call to a service node which requires the service node to successfully request a voice connection.

Register OGRESLT release history

Register OGRESLT was introduced in NA006.

OM group OAPMTYPS (end)

Associated registers

None

Associated logs

None

Extension registers

OGRESLT2

OM group OAPNMIS

OM description

Operator services advanced intelligent network (OSSAIN) advanced protocol (OAP) node management information system

This OM group is pegged for management information system (MIS) node class message types on a per node level basis.

Release history

TOPS10

Introduced the OM group OAPNMIS by feature AF7439.

Registers

OM group OAPNMIS registers display on the MAP terminal as follows:

```
>OMSHOW OAPNMIS ACTIVE

CLASS: ACTIVE
START:1995/05/19 16:30:00 WED;STOP:1995/05/19 16:33:00 WED;
SLOWSAMPLES:    2; FASTSAMPLES:         18;

   MISOAIN      MISOAIN2
42 NODEID_42
   110          0
```

Group structure

OM group OAPNMIS provides up to 768 tuples per office. A tuple is added to this OM group for each NODEID datafilled in table OANODNAM.

Key field:

NODEID {0 to 767}: Key field for table OANODNAM

Info field:

None

Associated OM groups

OAPNMTC - This OM group contains registers for each node maintenance operation and related responses for the operation.

Associated functional groups

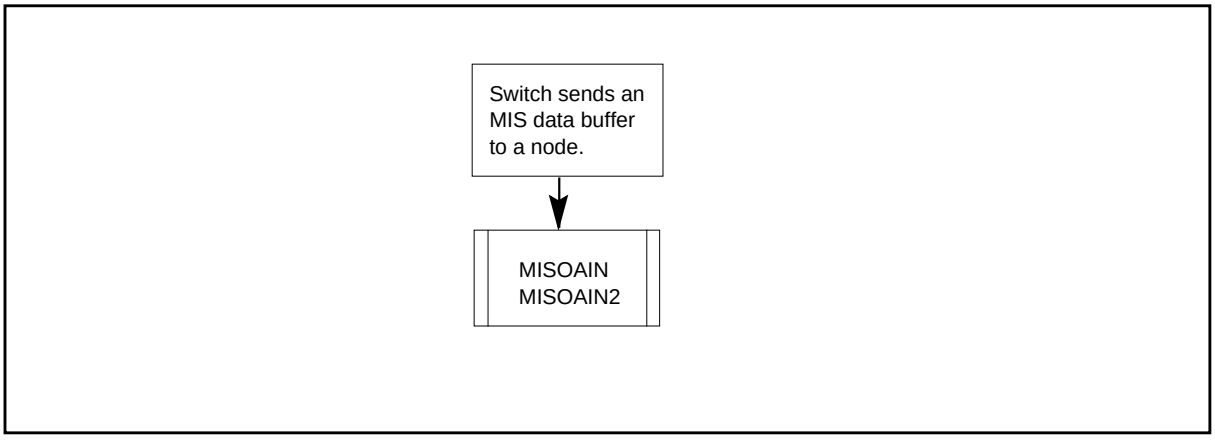
Functional group OSSAIN (OSAN0001) is associated with OM group OSACCP2.

Associated functionality codes

The functionality codes associated with OM group OAPNMIS are shown in the following table.

Functionality	Code
OSSAIN 10 Enhancements	OSAN0005

OM group OAPNMIS registers



Register MISOAIN

Management information system OSSAIN (MISOAIN)

Register MISOAIN is pegged each time the switch sends an MIS data buffer to a node.

Register MISUPDT release history

Register MISOAIN was introduced in TOPS10.

Associated registers

None

OM group OAPNMIS (end)

Associated logs

None

Extension registers

MISOAIN2

OM group OAPNMTC

OM description

Open Automated Protocol (OAP) Node Maintenance Operations and Responses

OAPNMTC contains a register for each call processing and non-call processing operation and response message defined in the OAP protocol. The purpose of the registers in this OM group is to track usage of the operations and responses. These OM registers are pegged on a per session pool basis for call processing and session pool operations and are pegged on a per node basis for node maintenance operations.

Release history

OM group OAPNMTC was introduced in NA006.

TOPS07

Two new registers added: NDLOG and NDALARM

Registers

OM group OAPNMTC registers display on the MAP terminal as follows:

```
OAPNMT2
CLASS:   ACTIVE
START:1996/07/29 12:00:00 MON; STOP:1996/07/29 12:05:30 MON;
SLOWSAMPLES:         4 ; FASTSAMPLES:         33 ;

INFO (OAP_NODE_INDEX_REGISTERINFO)
  NODEAUD        NODEAUD2        NDEAUDS        NDEAUDS2
  NDEAUDE        NDEAUDE2        NODEBSY        NODEBSY2
  NDEBSYS        NDEBSYS2        NDEBSYE        NDEBSYE2
  NODETST        NODETST2        NDETSTS        NDETSTS2
  NDETSTE        NDETSTE2        NODERTS        NODERTS2
  NDERTSS        NDERTSS2        NDERTSE        NDERTSE2
  NDLOG          NDALARM

     0              0               0              0
     0              0               0              0
     0              0               0              0
     0              0               0              0
     0              0               0              0
     0              0               0              0
     3              1
```

OM group OAPNMTC (continued)

Group structure

OM group OAPNMTC provides up to 768 tuples per office.

Key field:
NODEID {0 to 767}: Key field for table OANODNAM

Info field:
OAP_NODE_INDEX_REGISTERINFO - This name can be up to 16 characters long.

Associated OM groups

OAPMTYPN - This OM group pegs a register each time a node maintenance operation or response is sent or received by the switch.

Associated functional groups

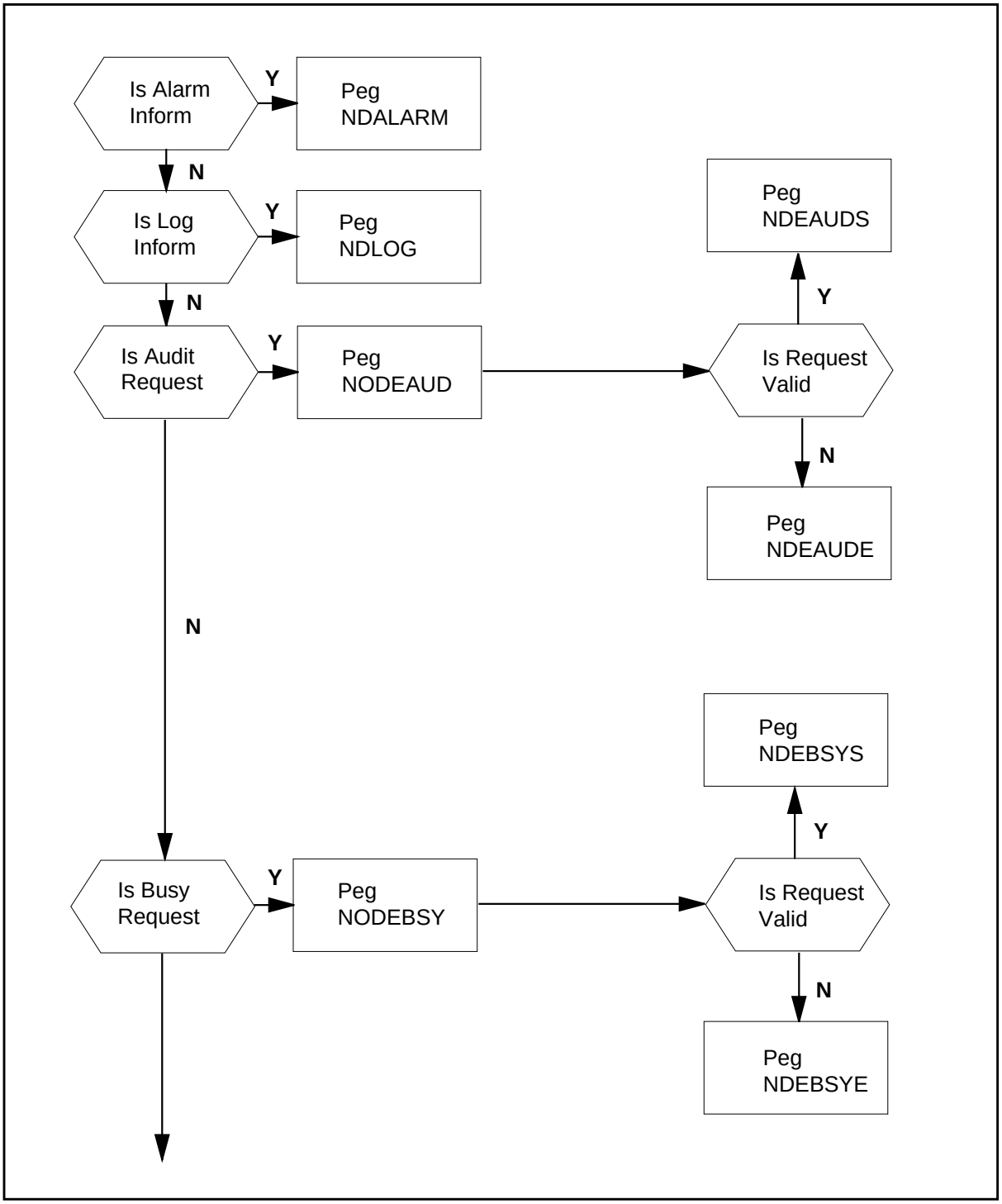
Functional group ENSV Enhanced Services (ENSV0001) is associated with OM group OAPNMTC.

Associated functionality codes

The functionality codes associated with OM group OAPNMTC are shown in the following table.

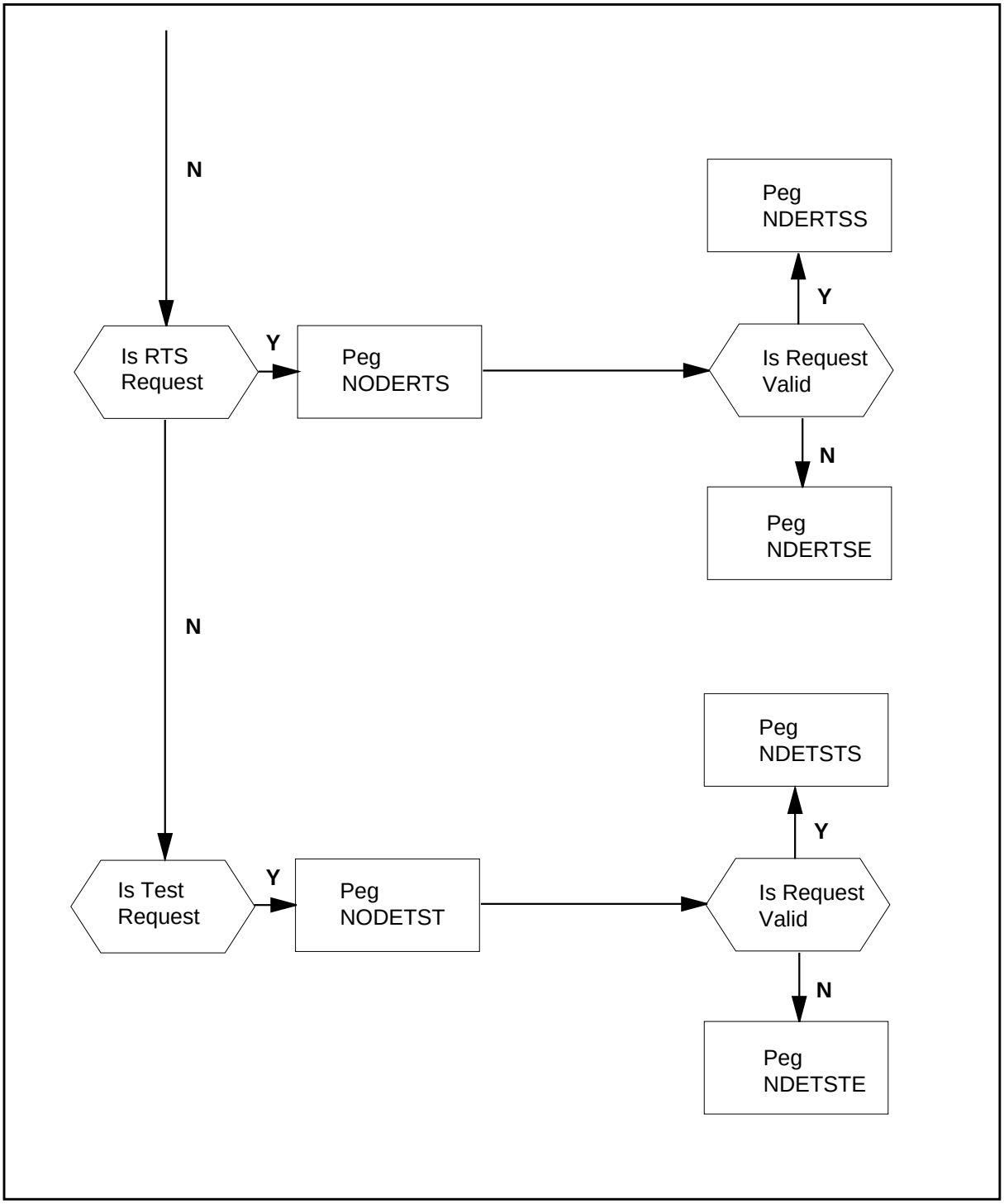
Functionality	Code
Operator Services AIN	ENSV0014
OSSAIN Enhancements	ENSV0020

OM group OAPNMTC registers



OM group OAPNMTC (continued)

OM group OAPNMTC registers (continued)



Register NDALARM

Node Alarm Operation

Register NDALARM pegs the number of log report operations received for the given service node.

Register NDALARM release history

Register NDALARM was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

None

Register NDEAUDE

Node Audit Error Response

This register is pegged each time the corresponding node maintenance operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding node maintenance operation or response.

Register NDEAUDE release history

Register NDEAUDE was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

NDEAUDE2

Register NDEAUDS

Node Audit Success Response

OM group OAPNMTC (continued)

This register is pegged each time the corresponding node maintenance operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding node maintenance operation or response.

Register NDEAUDS release history

Register NDEAUDS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

NDEAUDS2

Register NDEBSYE

Node Busy Error Response

This register is pegged each time the corresponding node maintenance operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding node maintenance operation or response.

Register NDEBSYE release history

Register NDEBSYE was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

NDEBSYE2

Register NDEBSYS

Node Busy Success Response

This register is pegged each time the corresponding node maintenance operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding node maintenance operation or response.

Register NDEBSYS release history

Register NDEBSYS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

NDEBSYS2

Register NDERTSE

Node RTS Error Response

This register is pegged each time the corresponding node maintenance operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding node maintenance operation or response.

Register NDERTSE release history

Register NDERTSE was introduced in NA006.

Associated registers

None

Associated logs

None

OM group OAPNMTC (continued)

Extension registers

NDERTSE2

Register NDERTSS

Node RTS Success Response

This register is pegged each time the corresponding node maintenance operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding node maintenance operation or response.

Register NDERTSS release history

Register NDERTSS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

NDERTSS2

Register NDETSTE

Node Test Error Response

This register is pegged each time the corresponding node maintenance operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding node maintenance operation or response.

Register NDETSTE release history

Register NDETSTE was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

NDETSTE2

Register NDETSTS

Node Test Success Response

This register is pegged each time the corresponding node maintenance operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding node maintenance operation or response.

Register NDETSTS release history

Register NDETSTS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

NDETSTS2

Register NODEAUD

Node Audit Request

This register is pegged each time the corresponding node maintenance operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding node maintenance operation or response.

Register NODEAUD release history

Register NODEAUD was introduced in NA006.

OM group OAPNMTC (continued)

Associated registers
None

Associated logs
None

Extension registers
NODEAUD2

Register NODEBSY
Node Busy Request

This register is pegged each time the corresponding node maintenance operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding node maintenance operation or response.

Register NODEBSY release history
Register NODEBSY was introduced in NA006.

Associated registers
None

Associated logs
None

Extension registers
NODEBSY2

Register NODERTS
Node RTS Request

This register is pegged each time the corresponding node maintenance operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding node maintenance operation or response.

Register NODERTS release history

Register NODERTS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

NODERTS2

Register NODETST

Node Test Request

This register is pegged each time the corresponding node maintenance operation or response is sent or received by the switch.

Note: For test case(s), make a call that would require the corresponding node maintenance operation or response.

Register NODETST release history

Register NODETST was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

NODETST2

Register NDLOG

Node Log Report operation

Register NDLOG pegs the number of alarm operations received for the given service node.

Register NDLOG release history

Register NDLOG was introduced in TOPS07.

OM group OAPNMTC (end)

Associated registers

None

Associated logs

None

Extension registers

None

OM group OAPSPMTC

OM description

Open Automated Protocol (OAP) Session Pool Maintenance Operations and Responses

OAPSPMTC contains a register for each non-call processing operation and response message defined in the OAP protocol. The purpose of the registers in this OM group is to track usage of the operations and responses. These OM registers are pegged on a per session pool basis for non-call processing and session pool operations.

Release history

OM group OAPSPMTC was introduced in NA006.

TOPS07

Seven new registers are added to OM group OAPSPMTC: SPLOG, SPCH, SPCHS, SPCHE, SPALARM, SPDRAIN, and SPSTATE.

Registers

OM group OAPSPMTC registers display on the MAP terminal as follows:

```
OAPSPMTC

CLASS:  HOLDING
START:1996/10/24 16:30:00 THU; STOP:1996/10/24 17:00:00 THU;
SLOWSAMPLES:        18 ; FASTSAMPLES:        180 ;

INFO (OAP_SP_INDEX_REGISTERINFO)
  SPAUDIT        SPAUDIT2        SPAUDTS        SPAUDTS2
  SPAUDTE        SPAUDTE2        SPBUSY         SPBUSY2
  SPBUSYS        SPBUSYS2        SPBUSYE        SPBUSYE2
  SPTEST         SPTEST2         SPTESTS        SPTESTS2
  SPTESTE        SPTESTE2        SPRTS          SPRTS2
  SPRTSS         SPRTSS2         SPRTSE         SPRTSE2
  SPCH           SPCHS           SPCHE          SPLOG
  SPALARM        SPDRAIN         SPSTATE        SPSTATE2

3 SESNPL_3

     30             0               30             0
     0              0               3              0
     3              0               0              0
     1              0               1              0
     0              0               3              0
     3              0               0              0
     2              2               0              4
     2              1               3              0
```

OM group OAPSPMTC (continued)

Group structure

OM group OAPSPMTC provides up to 4095 tuples per office.

Key field:

OASVNDCP can be indexed by either of the following:

SESNPLID {0 to 4094}: Key field for table OASESNPL.

SESNPLNM: Name associated with SESNPLID.

Info field:

OAP_SP_INDEX_REGISTERINFO - This name can be up to 16 characters long.

Associated OM groups

OAPMTYPS - This OM group pegs a register each time a session pool maintenance operation or response is sent or received by the switch.

Associated functional groups

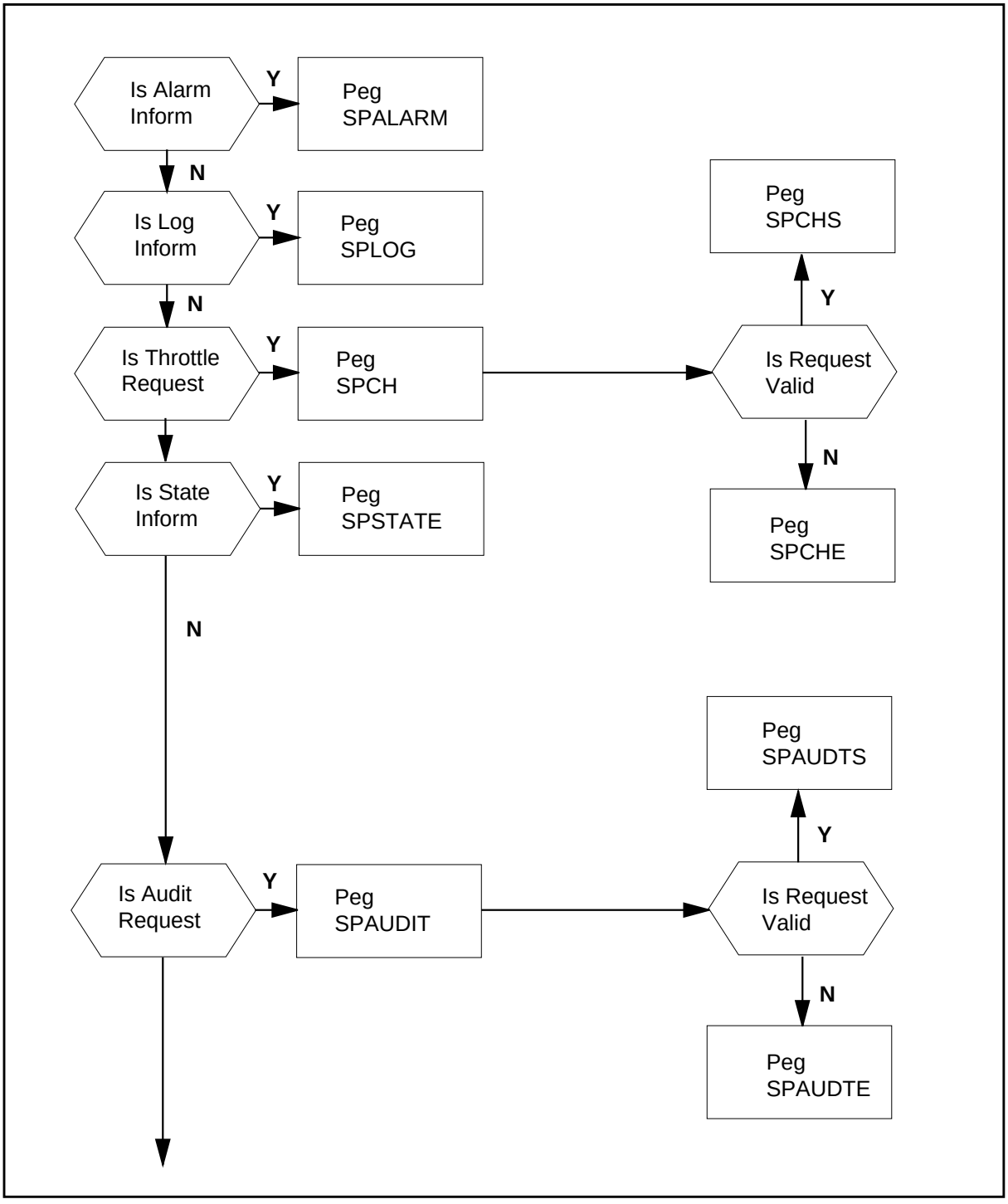
Functional group ENSV Enhanced Services (ENSV0001) is associated with OM group OAPSPMTC.

Associated functionality codes

The functionality codes associated with OM group OAPSPMTC are shown in the following table.

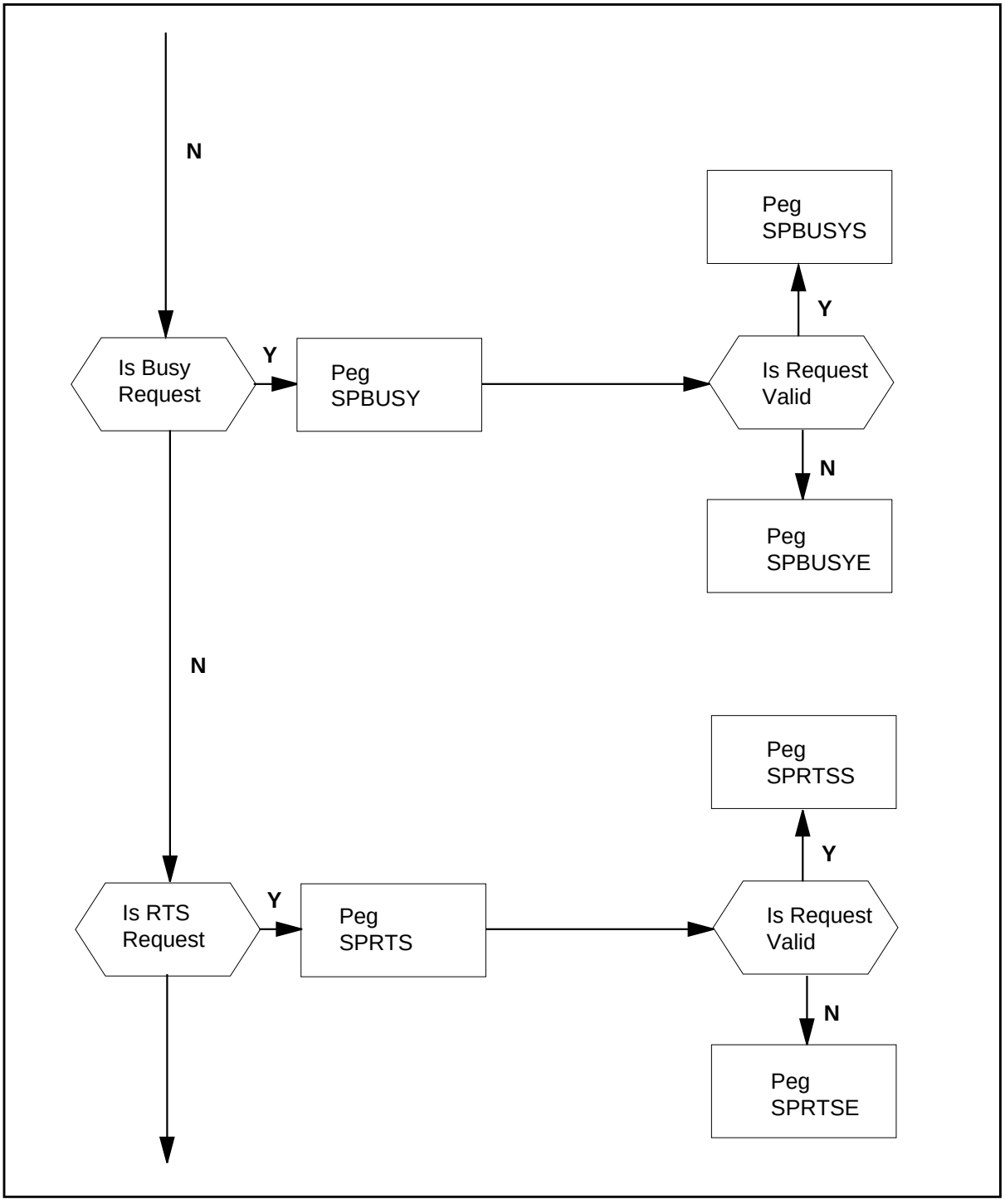
Functionality	Code
Operator Services AIN	ENSV0014
OSSAIN Enhancements	ENSV0020

OM group OAPSPMTC registers

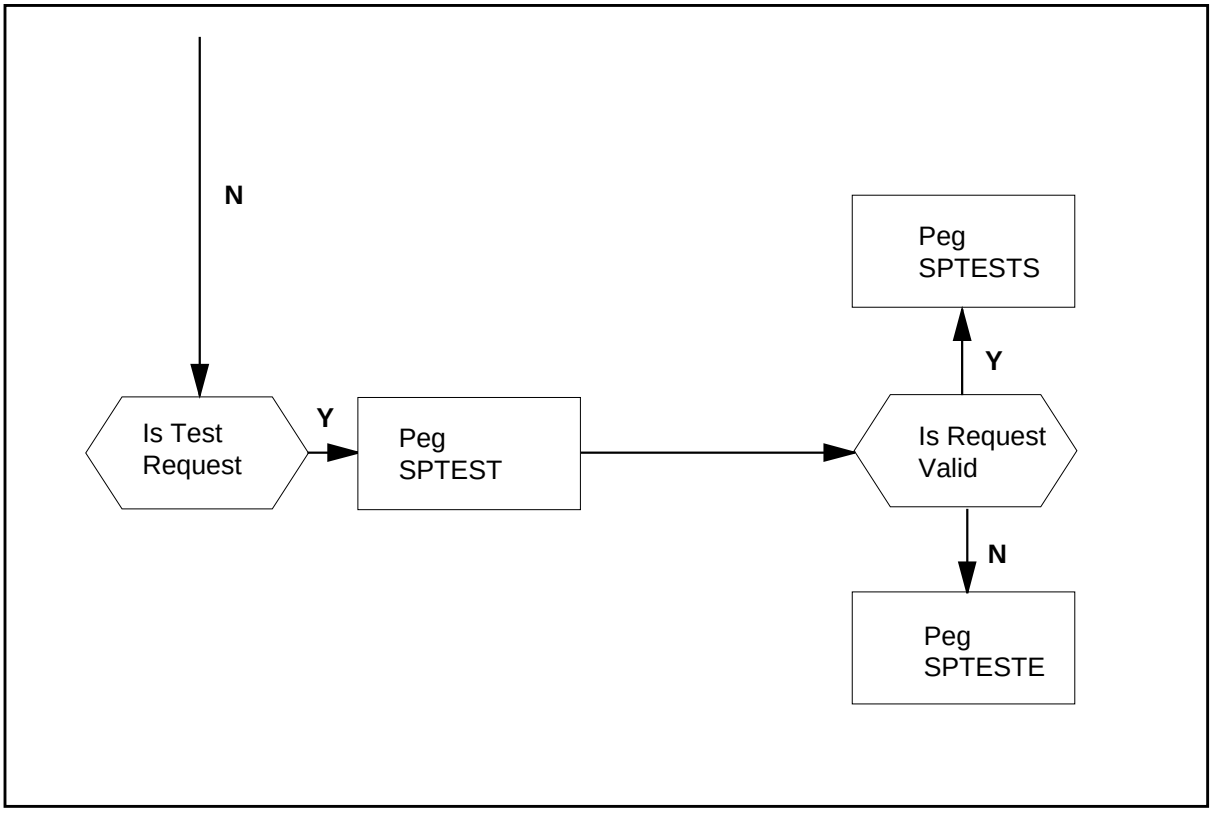


OM group OAPSPMTC (continued)

OM group OAPSPMTC registers (continued)



OM group OAPSPMTC registers (continued)



Register SPALARM

Register Alarm Operation

This register pegs the number of alarm operations for the given session pool.

Register SPALARM release history

Register SPALARM was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

None

OM group OAPSPMTC (continued)

Register SPAUDIT

Session Pool Audit Request

This register is pegged each time the audit request is sent or received by the switch.

Register SPAUDIT release history

Register SPAUDIT was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

SPAUDIT2

Register SPAUDTE

Session Pool Audit Error Response

This register is pegged each time a session pool audit error response is sent or received by the switch.

Register SPAUDTE release history

Register SPAUDTE was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

SPAUDTE2

Register SPAUDTS

Session Pool Audit Success Response

This register is pegged each time an audit success response is sent or received by the switch.

Register SPAUDTS release history

Register SPAUDTS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

SPAUDTS2

Register SPBUSY

Session Pool Busy Request

This register is pegged each time a busy request is sent or received by the switch.

Register SPBUSY release history

Register SPBUSY was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

SPBUSY2

Register SPBUSYE

Session Pool Busy Error Response

This register is pegged each time a busy error response is sent or received by the switch.

Register SPBUSYE release history

Register SPBUSYE was introduced in NA006.

Associated registers

None

OM group OAPSPMTC (continued)

Associated logs

None

Extension registers

SPBUSYE2

Register SPBUSYS

Session Pool Busy Success Response

This register is pegged each time a busy success response is sent or received by the switch.

Register SPBUSYS release history

Register SPBUSYS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

SPBUSYS2

Register SPCH

Register Throttle Operation

This register pegs the number of requests to change the number of active sessions in the given session pool.

Register SPCH release history

Register SPCH was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

None

Register SPCHE

Register Throttle Operation Error

This register pegs the number of throttle requests that sends an error response back to the requestor.

Register SPCHE release history

Register SPCHE was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

None

Register SPCHS

Register Throttle Operation Success

This register pegs the number of throttle requests that sends a success response back to the requestor.

Register SPCHS release history

Register SPCHS was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

None

Register SPDRAIN

Register Drain Operation

This register pegs the number of drain operations for the given session pool.

Register SPDRAIN release history

Register SPDRAIN was introduced in TOPS07.

OM group OAPSPMTC (continued)

Associated registers

None

Associated logs

None

Extension registers

None

Register SPLOG

Register Log Report Operation

This register pegs the number of log report operations for the given session pool.

Register SPLOG release history

Register SPLOG was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

None

Register SPRTS

Session Pool RTS Request

This register is pegged each time an RTS request is sent or received by the switch.

Register SPRTS release history

Register SPRTS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

SPRTS2

Register SPRTSE

Session Pool RTS Error Response

This register is pegged each time an RTS error response is sent or received by the switch.

Register SPRTSE release history

Register SPRTSE was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

SPRTSE2

Register SPRTSS

Session Pool RTS Success Response

This register is pegged each time an RTS success response is sent or received by the switch.

Register SPRTSS release history

Register SPRTSS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

SPRTSS2

Register SPSTATE

Session Pool State Inform

OM group OAPSPMTC (continued)

This register is pegged each time the switch sends an OAP Session Pool State Inform message to the service node.

Register SPSTATE release history

Register SPSTATE was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

SPSTATE2

Register SPTEST

Session Pool Test Request

This register is pegged each time a Test request is sent or received by the switch.

Register SPTEST release history

Register SPTEST was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

SPTEST2

Register SPTESTE

Session Pool Test Error Response

This register is pegged each time a Test error response is sent or received by the switch.

Register SPTESTE release history

Register SPTESTE was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

SPTESTE2

Register SPTESTS

Session Pool Test Success Response

This register is pegged each time a Test success response is sent or received by the switch.

Register SPTESTS release history

Register SPTESTS was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

SPTESTS2

OM group OASNPLDC

OM description

Operator Services System Advanced Intelligent Network (OSSAIN) Session Pool Data Communications

OASNPLDC (OSSAIN Session Pool Data Communications) is created for data communications operational measurements. The following OM groups are also created for data communications operational measurements:

- OADATCOM - OSSAIN Data Communications
- OANODEDC - OSSAIN Node Data Communications

OM group OASNPLDC provides peg counts for OSSAIN data communications messaging events on a per session pool basis. It provides counts for the total number of messages sent from the CM to each session pool and the total number of messages received by the CM from each session pool. Counts of messages are broken down into successful and failure counts.

Release history

OM group OASNPLDC was introduced in NA006.

Registers

OM group OASNPLDC registers display on the MAP terminal as follows:

```
OMSHOW OASNPLDC ACTIVE

OASNPLDC

CLASS: ACTIVE
START:1995/03/21 10:30:00 TUES;STOP:1995/03/21 11:40:23 TUES;
SLOWSAMPLES:       7 ; FASTSAMPLES           62 ;

          OSMSGSND    OSMSGSN2     OSMSGRCV      OSMSGRC2
          OSMSGSSC    OSMSGSS2     OSMSGRSC      OSMSGRS2
          OSMSGSFL    OSMSGRFL     OSSNRTFL      OSRCRTFL

0 SNPL_1  17620        0            17620         0
          17620        0            17620         0
          0            0            0             0
1 SNPL_2  17300        0            18560         0
          17228        0            18556         0
          0            1            0             1
```

Group structure

OM group OASNPLDC provides one tuple for each key.

Key field:
SESSPLID {0 - 4094}: Key field from table OASESNPL

Info field:
OSSAIN_SESNPL_DATACOM_OMINFO

Associated OM groups

OADATCOM: This OM group pegs all data communications events.

OANODEDC: This OM group pegs data communications events on a per node basis.

Associated functional groups

NA006

Functional group ENSV Enhanced Services (ENSV0001) is associated with OM group OASNPLDC.

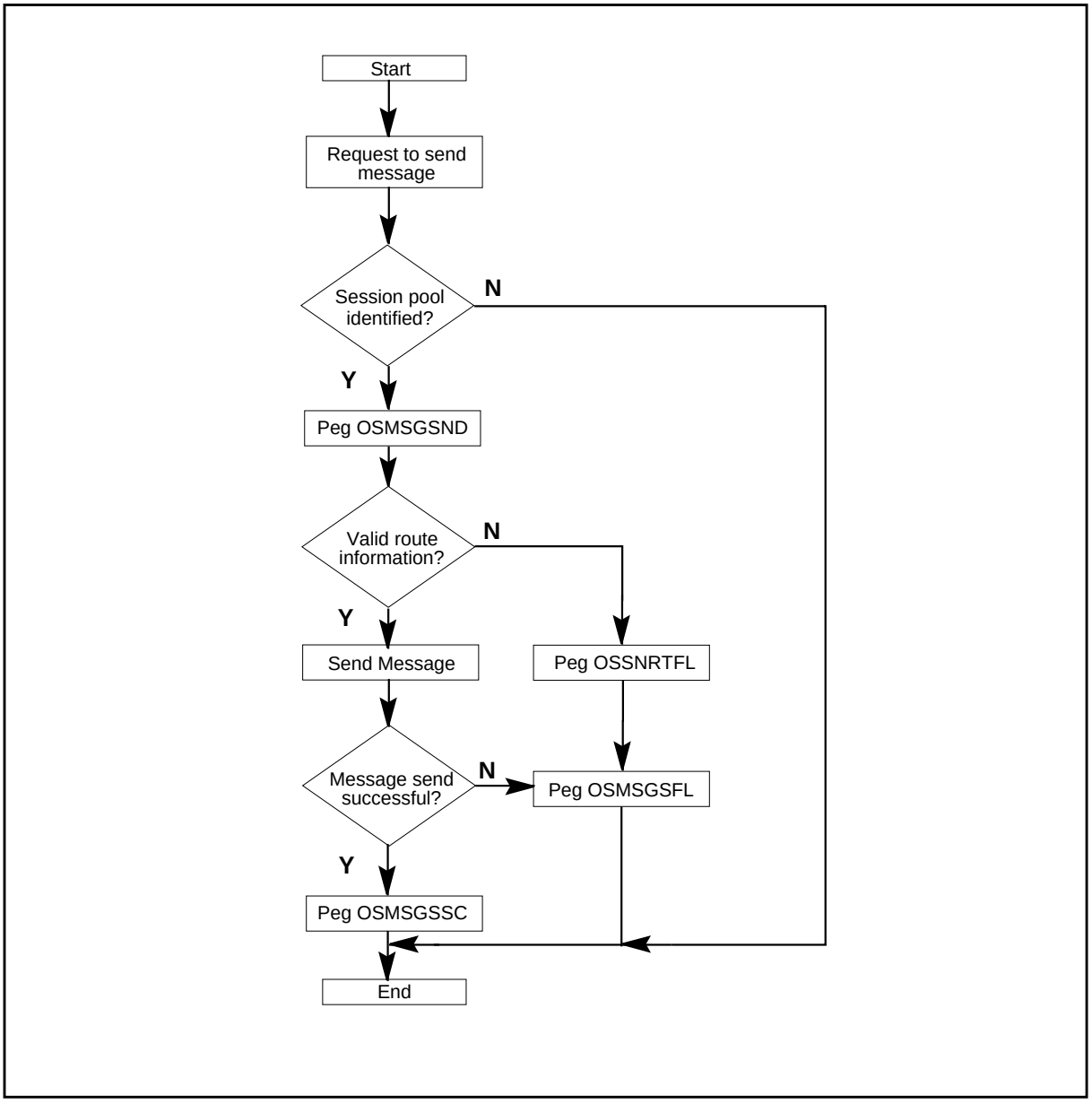
Associated functionality codes

The functionality codes associated with OM group OASNPLDC are shown in the following table.

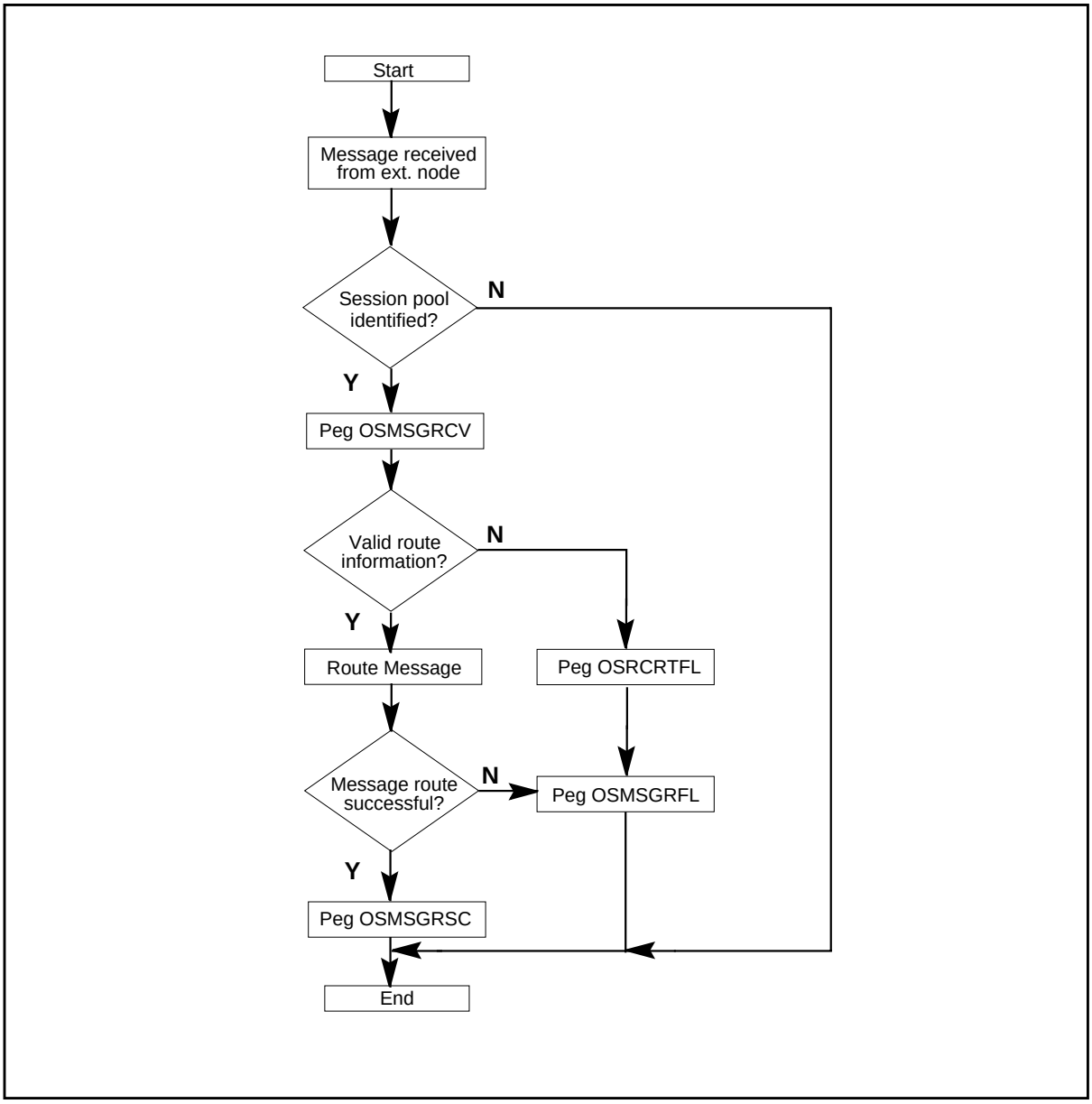
Functionality	Code
Operator Services AIN	ENSV0014 (NA006)

OM group OASNPLDC (continued)

OM group OASNPLDC registers: OM's pegged while sending a message



OM group OASNPLDC registers: OM's pegged while receiving a message



Register OSMSGRCV

OSSAIN message received per session pool

This register is pegged for a specific session pool each time an incoming message, originatind from an external node, is received from that session pool. This includes both call processing and maintenance messages.

OM group OASNPLDC (continued)

Note: This register can be validated on a per session pool basis by adding the message receive success register and the message receive failure register that apply to the node of interest.

OSMSGRCV = OSMSGRSC + OSMSGRFL

Register OSMSGRCV release history

Register OSMSGRCV was introduced in NA006.

Associated registers

OSMSGRSC and OSMSGRFL

Associated logs

None

Extension registers

OSMSGRC2

Register OSMSGRFL

OSSAIN message receive failure per session pool

This register is pegged for a specific session pool each time data communications encounters an error while attempting to forward a message originated from that session pool to the destination DMS process. This can be caused by a failure in the DMS internal messaging system or data transport interface. This register is also pegged for reasons indicated by register OSRCRTFL.

Note: The validation formula for this registers follows:

OSMSGRFL = OSMSGRC - OSMSGRSC

OSMSGRFL >= OSRCRTFL

Register OSMSGRFL release history

Register OSMSGRFL was introduced in NA006.

Associated registers

OSMSGRCV, OSMSGRSC, and OSRCRTFL

Associated logs

Log number: OAIN605 and OAIN606

Extension registers

None

Register OSMSGRSC

OSSAIN message receive success per session pool

This register is pegged for a specific session pool when the data communications software of the CM is able to successfully process an incoming message from the session pool.

Note: The validation formula for this registers follows:

OSMSGRSC = OSMSGRC - OSMSGRFL

Register OSMSGRSC release history

Register OSMSGRSC was introduced in NA006.

Associated registers

OSMSGRCV and OSMSGRFL

Associated logs

None

Extension registers

OSMSGRS2

Register OSMSGSFL

OSSAIN message send failure per session pool

This register is pegged for a specific session pool each time data communications encounters an error while attempting to send an outgoing message to the session pool. This can be caused by a transport layer failure. This register is also pegged for reasons indicated by register OSSNRTFL.

Note: The validation formula for this registers follows:

OM group OASNPLDC (continued)

OSMSGSFL = OSMSGSND - OSMSGSSC

OSMSGSFL >= OSSNRTFL

Register OSMSGSFL release history

Register OSMSGSFL was introduced in NA006.

Associated registers

OSMSGSND, OSMSGSSC, and OSSNRTFL

Associated logs

Log number: OAIN607

Extension registers

None

Register OSMSGSND

OSSAIN message send requested per session pool

This register is pegged for a specific session pool each time the data communications software is requested to send a message. This includes requests from call processes and maintenance processes.

Note: This register can be validated on a per session pool basis by adding the message send success register and the message send failure register that apply to the session pool of interest.

OSMSGSND = OSMSGSSC + OSMSGSFL

Register OSMSGSND release history

Register OSMSGSND was introduced in NA006.

Associated registers

OSMSGSSC and OSMSGSFL

Associated logs

None

Extension registers

OSMSGSN2

Register OSMSGSSC

OSSAIN message send success per session pool

This register is pegged for a specific session pool when the data communications software of the CM is able to successfully process an outgoing message destined for that session pool. Note that OSSAIN uses unguaranteed messaging. Pegging this register does not indicate that the message actually arrived at the destination session pool.

Note: The validation formula for this registers follows:

OSMSGSND and OSMSGSFL

Register OSMSGSSC release history

Register OSMSGSSC was introduced in NA006.

Associated registers

OSMSGSND and OSMSGSFL

Associated logs

None

Extension registers

OSMSGSS2

Register OSRCRTFL

OSSAIN message receive route failure per session pool

This register is pegged for a specific session pool each time the data communications software is unable to determine the destination of a message originating from that session pool. This can be caused by a variety of reasons including:

- invalid protocol version
- invalid session identifier
- invalid network address
- invalid session pool state
- invalid node state

OM group OASNPLDC (continued)

- pool/node identifier mis-match
- corrupted message

Note: The validation formula for this registers follows:

OSRCRTFL <= OSMSGRFL

Register OSRCRTFL release history

Register OSRCRTFL was introduced in NA006.

Associated registers

OSMSGRFL

Associated logs

Log number: OAIN605 and OAIN606

Extension registers

None

Register OSSNRTFL

OSSAIN message receive route failure per session pool

This register is pegged for a specific session pool each time the data communications software is unable to determine the destination of an outgoing message. This can be caused by the following reasons:

- invalid session identifier
- pool/node identifier mis-match
- corrupted message

Note: The validation formula for this registers follows:

OSSNRTFL <= OSMSGSFL

Register OSSNRTFL release history

Register OSSNRTFL was introduced in NA006.

Associated registers

OSMSGSFL

OM group OASNPLDC (end)

Associated logs

None

Extension registers

None

OM group OASNPOOL

OM description

Session Pool Inventory

This group provides the craftsperson with information regarding maintenance level activity on session pools datafilled in table OASESNPL. Specific information on maintenance detected and manual outages of a particular session pool is provided.

Release history

OM group OASNPOOL was introduced in NA006.

Registers

OM group OASNPOOL registers display on the MAP terminal as follows:

```
OMSHOW OASNPOOL ACTIVE

OASNPOOL

CLASS:   ACTIVE
START:1995/06/14 00:30:00 WED; STOP: 1995/06/14 00:44:51 WED;
SLOWSAMPLES:        9 ;  FASTSAMPLES:         89 ;

INFO (SIXTEEN_CHARS)

    SPSYSB      SPMANB          SPCBSY      RTSFAIL
   TSTFAIL

   0 Branding_1

        0           0               0           0
        0
```

Group structure

OM group OASNPOOL provides up to 4095 session pool tuples, one tuple per session pool datafilled in table OASESNPL.

Key field:
None

Info field:
(SIXTEEN_CHARS [16 Character Session Pool Name])

Associated OM groups

EXNDINV

Associated functional groups

NA006

Functional group ENSV Enhanced Services (ENSV0001) is associated with OM group OASNPOOL.

Associated functionality codes

The functionality codes associated with OM group OASNPOOL are shown in the following table.

Functionality	Code
Operator Services AIN	ENSV0014 (NA006)

Register RTSFAIL

Session Pool Return-to-Service (RTS) Fail

This register counts the number of times that a specific session pool failed to RTS—whether by audit or manual RTS.

Note: This register cannot be tested from the computing module (CM). Refer to service node session pool applications documentation to disable session pool audits which would cause the CM session pool audit to fail and the session pool to be marked system busy (SYSB) at the MAP.

Note: This test capability may not be provided by all session pool applications.

At the MAP, place the session pool in the manual busy (MANB) state and attempt to RTS the session pool by entering RTS. At the MAP, verify that the RTS fails, and that the session pool changes to the SYSB state. Also verify that an OAIN500 (DIAG FAIL) and OAIN502 (SYSB) log is produced, and that the RTSFAIL and SPSYSB OM registers are pegged.

Register RTSFAIL release history

Register RTSFAIL was introduced in NA006.

OM group OASNPOOL (continued)

Associated registers

SPSYSB

Associated logs

OAIN500

Extension registers

None

Register SPCBSY

Session Pool C-Side Busy (CBSY)

This register counts the number of times that a specific session pool went c-side busy.

Note: For test case(s), with the session pool in-service, busy the service node. Using the MAP, verify that the session pool goes CBSY and SPCBSY and is pegged. Verify that an OAIN507 log is produced, in addition to a PM105 log. Verify that a minor alarm is generated.

Repeat above test case, but instead of setting the service node to the MANB state, MANB the Ethernet interface unit (EIU) interfaced to the service node. This action should cause the service node to change to the SYSB state. Again, using the MAP, verify that the session pool went CBSY, the SPCBSY OM register is pegged, an OAIN507 log is produced (in addition to a PM102 [SYSB] log), and a major alarm is generated.

Register SPCBSY release history

Register SPCBSY was introduced in NA006.

Associated registers

INSSYSB (Count of node going from in-service to SYSB)orINSMANB (Count of node going from in-service to MANB).

Associated logs

OAIN507

Extension registers

None

Register SPMANB

Session Pool MANB

This register counts the number of times that a specific session pool went MANB.

Note: To test this register, at a MAP terminal, post a session pool and busy (BSY) it. Verify the OM count is incremented and an OAIN505 and an PM128(ISTB) log is produced, along with a minor alarm.

Register SPMANB release history

Register SPMANB was introduced in NA006.

Associated registers

None

Associated logs

OAIN505

Extension registers

None

Register SPSYSB

Session Pool SYSB

This register counts the number of times that a specific session pool went SYSB.

Note: This register cannot be tested from the CM. Refer to service node session pool applications documentation to disable session pool audits that would cause the session pool audit to fail and the session pool to be marked SYSB at the MAP.

Register SPSYSB release history

Register SPSYSB was introduced in NA006.

Associated registers

None

OM group OASNPOOL (end)

Associated logs

OAIN502

Extension registers

None

Register TSTFAIL

Session Pool Test Fail

This register counts the number of times that a specific session pool failed to successfully complete a diagnostic test.

Note: This register cannot be tested from the CM. Refer to service node session pool applications documentation to disable session pool audit responses that would cause the CM session pool audit to fail and the session pool to be marked SYSB at the MAP.

Note: This test capability may not be provided by all session pool applications.

At the MAP, place the session pool in the MANB state and attempt to test the session pool by entering TST. At the MAP, verify that the TST fails, and that the session pool stays MANB. Also verify that an OAIN500 (DIAG FAIL) log is produced and the TSTFAIL OM register is pegged.

Register TSTFAIL release history

Register TSTFAIL was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

None

OM group OASVNDCP

OM description

Operator Services Systems Advanced Intelligent Network (OSSAIN) Service Node Call Processing

OM group OASVNDCP provides peg counts for OSSAIN calls on a per session pool basis. It provides counts for all service node or OSAC call processing activities.

Release history

TOPS09

Register SBTIMOUT added by feature AF7155.

TOPS07

Two new registers added: OSCCLERR and OSCMICL

NA006

OM group OASVNDCP was introduced in NA006.

Registers

OM group OASVNDCP registers display on the MAP terminal as follows:

```
>OMSHOW OASVNDCP ACTIVE

CLASS: ACTIVE
START:1991/05/19 16:30:00 WED; STOP:1995/05/19 16:33:00 WED;
SLOWSAMPLES:    2: FASTSAMPLES:     18 ;

INFO (OASVNDCP_INDEX_REGISTERINFO)
   NDCALERR       NDMSGICL       OSCCLERR       OSCMICL
   SBTIMOUT

3 SESNPL_3
    96              0              93             0
     0
6 SESNPL_6
    6               5              108            1
    3
```

Group structure

OM group OASVNDCP provides up to 4095 tuples per office. A tuple is added for each session pool defined in table OASESNPL.

OM group OASVNDCP (continued)

Key field:

OASVNDCP can be indexed by either of the following:

SESNPLID {0 to 4094}: Key field for OASESNPL.

SESNPLNM: Name associated with SESNPLID.

Info field:

OASVNDCP_INDEX_REGISTERINFO - This name can be up to 16 characters long.

Associated OM groups

None

Associated functional groups

TOPS07

Functional group Enhanced Services (ENSV0001) is associated with functional group OASVNDCP.

NA006

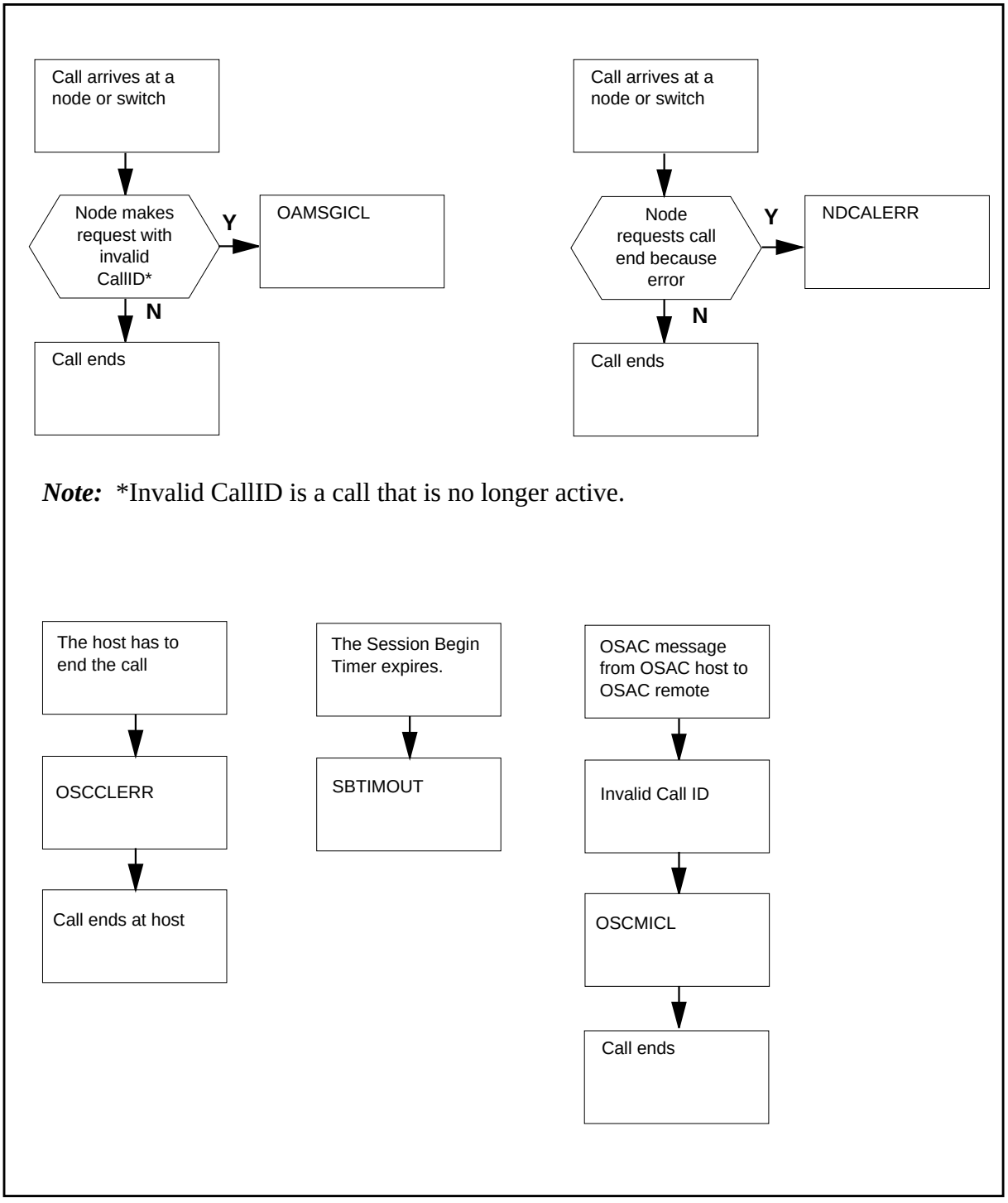
Functional group ENSV Enhanced Services (ENSV0001) introduces OM group OASVNDCP through the Operator Services AIN (ENSV0014) functionality.

Associated functionality codes

The functionality codes associated with OM group OASVNDCP are shown in the following table.

Functionality	Code
Operator Services AIN	ENSV0014
OSSAIN Enhancements	ENSV0020

OM group OASVNDCP registers



Note: *Invalid CallID is a call that is no longer active.

OM group OASVNDCP (continued)

Register SBTIMOUT

Session Begin Time Out

Pegged when a Session Begin timer expires.

Note: For test case(s), datafill OAFUNDEF with a Session Begin timer for a function. Route a call to that function, but do not respond to the Session Begin sent to the simulator. Verify the new OM is pegged after the timer period elapses.

Register SBTIMOUT release history

Register SBTIMOUT was introduced in NA009.

Associated registers

None

Associated logs

None

Extension registers

None

Register NDCALERR

Call Error

Pegged when a node requests to end a call due to an unrecoverable error.

Note: For test case(s), start by making an OSSAIN call that routes to a service node. Once at the node, perform an “End Call" and send an Abort Call datablock with the “call handling“ field set to “Error Recovery.“

Register NDCALERR release history

Register NDCALERR was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

None

Register NDMSGICL

Message Invalid Call

Pegged when a node attempts to send a message for an invalid call (one that the switch no longer considers active).

Note: For test case(s), start by making an OSSAIN call that routes to a service node. Once at the node, make a call that routes to a service node, capture the callId, then end the call. Make a subsequent request from the node which uses the previous callId.

Register NDBLKFUN release history

Register NDBLKFUN was introduced in NA006.

Associated registers

None

Associated logs

None

Extension registers

None

Register OSCCLERR

OSAC Call Error

This register is pegged when the OSAC Host has to end the call due to an error at the Host.

Register OSCCLERR release history

Register OSCCLERR was introduced in TOPS07.

Associated registers

None

Associated logs

OSAC 600

OM group OASVNDCP (end)

Extension registers

None

Register OSCMICL

OSAC Message Invalid Call

This register is pegged when the OSAC Remote receives a message from the Host for a call that is no longer active.

Register OSCMICL release history

Register OSCMICL was introduced in TOPS07.

Associated registers

None

Associated logs

None

Extension registers

None

OM group ODB

OM description

Operational measurement On-Demand B-channel (ODB) for X.25 packet services.

Assumptions and limitations

The following is a list of assumptions and limitations of the ODB OM.

- ODB calls may fail due to the non-availability of the B-channels. From set to extended peripheral module (XPM) is not considered, XPM level ODB attempt/failure is not considered.
- Packet 30 has the limitation of repeated attempts, up to four times to make a call. As a result the ODB attempt/failure, pegging can increase up to four times per one ODB call attempt.
- There is no special billing for the ODB calls. Billing is performed according to existing packet call billing.

Release history

OM group ODB is created in CCM17.

Registers

The OM group ODB registers display on the MAP terminal as follows:

```
CLASS: ACTIVE
START: 2002/07/31 12:30:00 Wed; STOP; 2002/07/31 12:48:33 Wed;
SLOWSAMPLES:    1 ; FASTSAMPLES;    6 ;
            ATTEMPTS     FAILURES     COMPLETE
      0
                    0            0            0
```

OM group ODB (end)

Register ATTEMPTS

Register ATTEMPTS is pegged under the following conditions:

- If when making the connection between the X.25/X.75 link interface unit (XLIU) and the users B channel, the connection is successful.
- For all cases for which a ODB call fails.

Register ATTEMPTS release history

Register ATTEMPTS is added in CCM17.

Associated registers

None.

Associated logs

None.

Register FAILURES

Register FAILURES is pegged under the following conditions:

- If the XSG is not in-service (InSv).
- If the free XSG channel is not available.
- The channel object is not available.
- If the initial connection set-up request to the network interface unit (NIU) fails.
- If in making the connection between the NIU and the XSG channel, the connection fails.
- If the call request packet is not initiated within one minute.
- If maintenance actions are performed on the line trunk controller (LTC), NIU or logical terminal identifier (LTID).

Register FAILURES release history

Register FAILURES is added in CCM17.

Associated registers

None.

Associated logs

None.

Register COMPLETE

Register COMPLETE is pegged under the following conditions:

- When the removal of the connection between the XLIU and the users B-channel is successful.

Register COMPLETE release history

Register COMPELTE is added in CCM17.

Associated registers

None.

Associated logs

None.

OM group OFZ

OM description

Office traffic summary (OFZ)

The OM group OFZ provides information for traffic analysis. The OM group OFZ uses a primary route scoring philosophy. This OM group differs from OTS because OFZ counts calls for the intended destination, not the destination where the call terminates.

The system routes a call to a tone or announcement if the tone or announcement is the *intended* destination of the call, or error condition occurs that includes a tone or announcement as a part of its treatment. If the treatment routes the call to another tone or announcement, note that OFZ only counts the first tone or announcement.

The OM group OFZ records the structure of traffic that arrives at an office, the first routing, and the routing of outgoing traffic. The relationship between the type of call and the OFZ registers is in tables 1 to 4. Each table corresponds to a OFZ flow chart.

The following table contains the registers that count incoming calls. The register NIN counts each incoming call. One of the following registers counts each incoming call:

- INANN
- INLKT
- INOUT
- INTRM
- INTONE
- INABNC
- INABNM

The count depends on if the source of the call is a line or a trunk.

Incoming calls (Sheet 1 of 2)

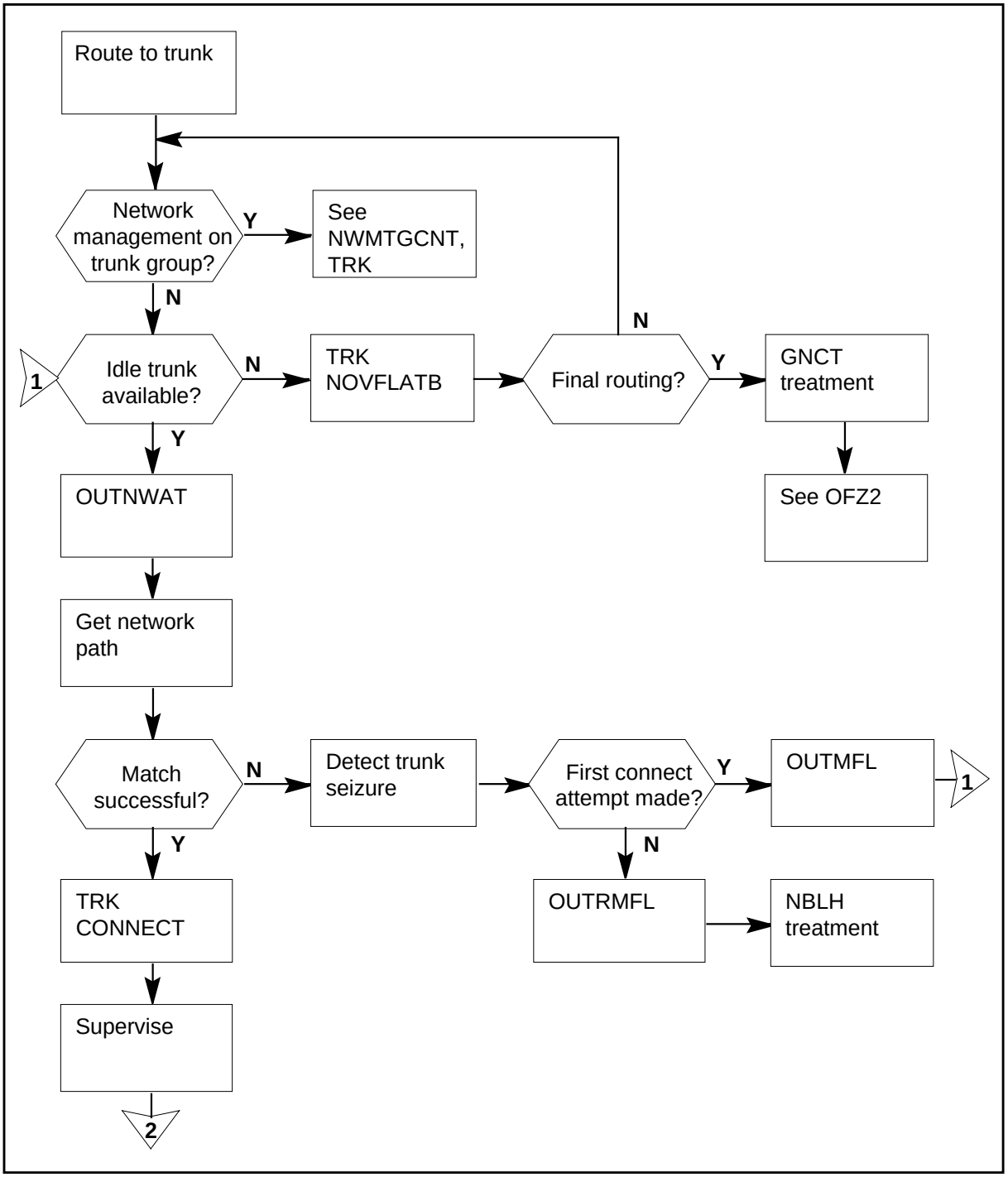
Register	Intended destination	Routing
INOUT	trunk	trunk
INOUT2	trunk	trunk
INTRM	line	line

OM group OFZ (continued)

Incoming calls (Sheet 2 of 2)

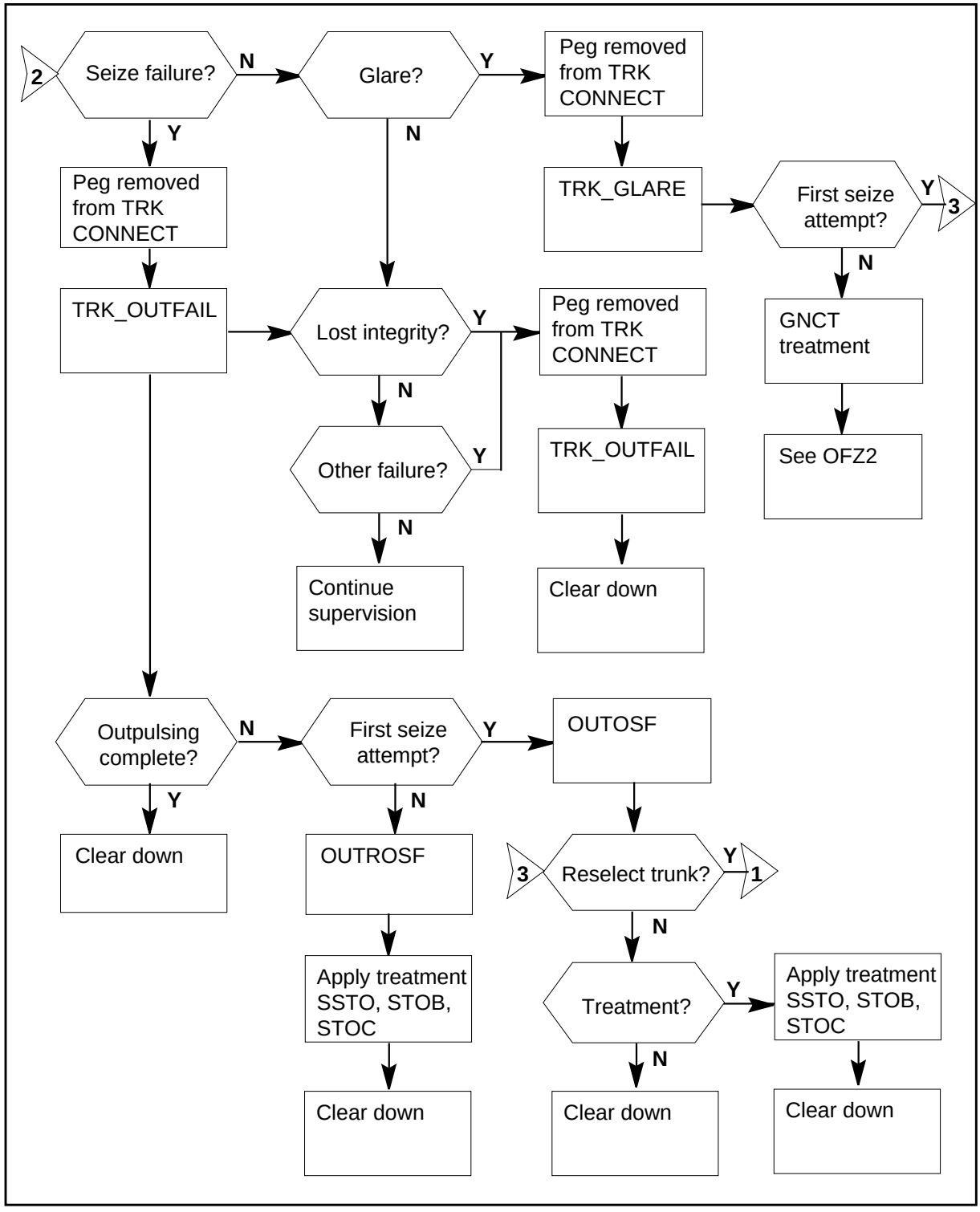
Register	Intended destination	Routing
INTRM2	line	line
INANN	trunk, line, announcement	announcement
INTONE	trunk, line, tone	tone
INLKT	trunk or line	lockout
INABNC	trunk or line	customer-abandon
INABNM	trunk or line	machine-abandon
NIN	all	all
NIN2	all	all

OM group OFZ registers: outgoing calls

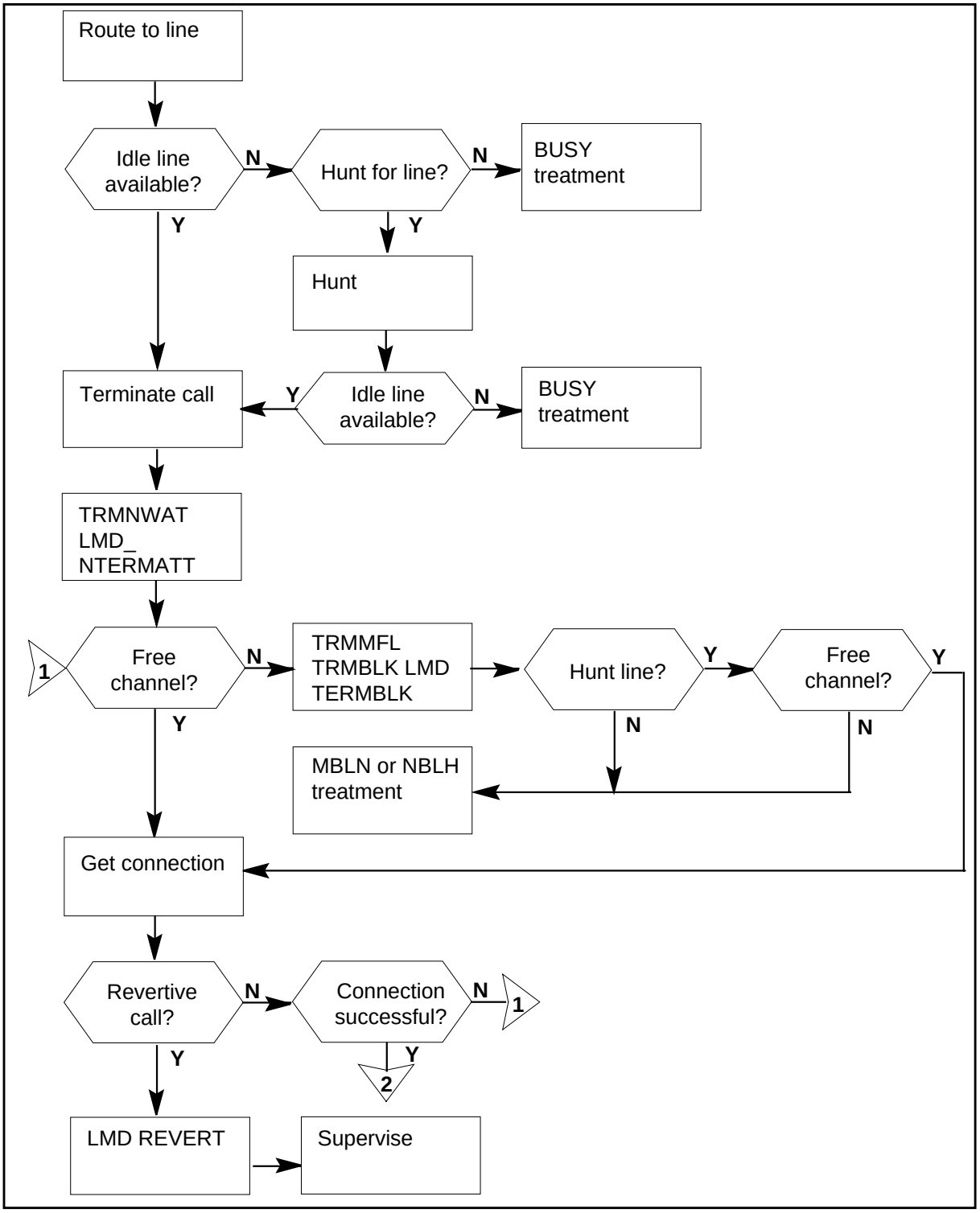


OM group OFZ (continued)

OM group OFZ registers: outgoing calls (continued)

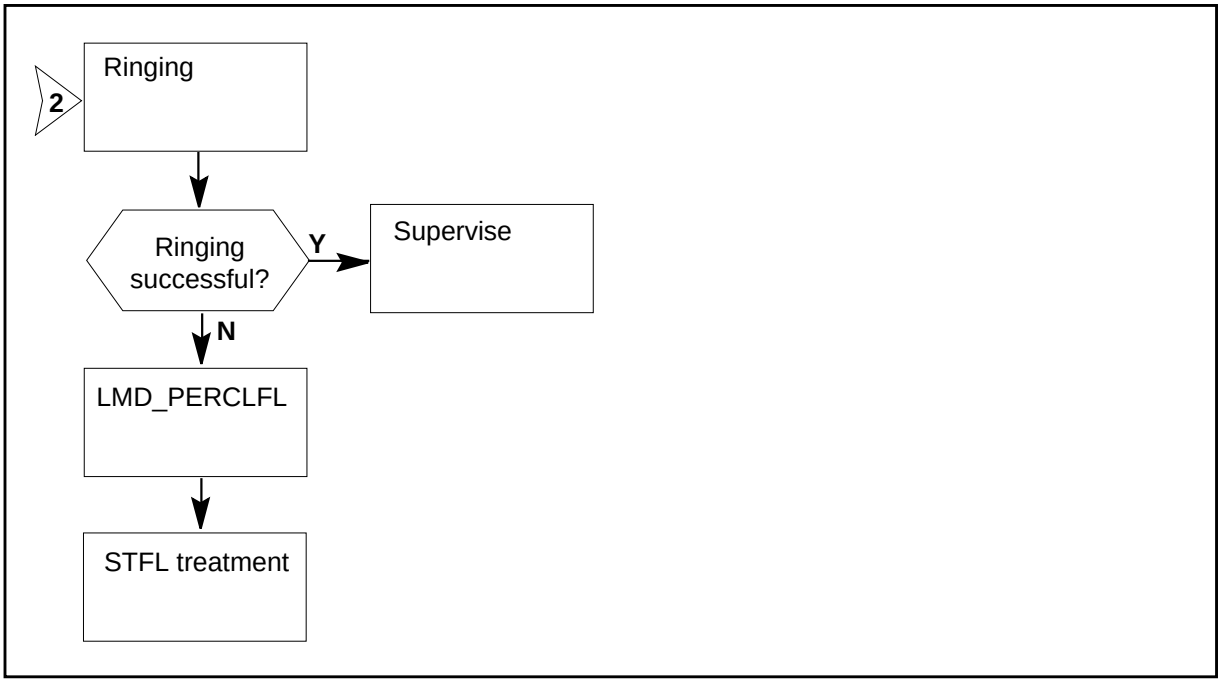


OM group OFZ registers: terminating calls

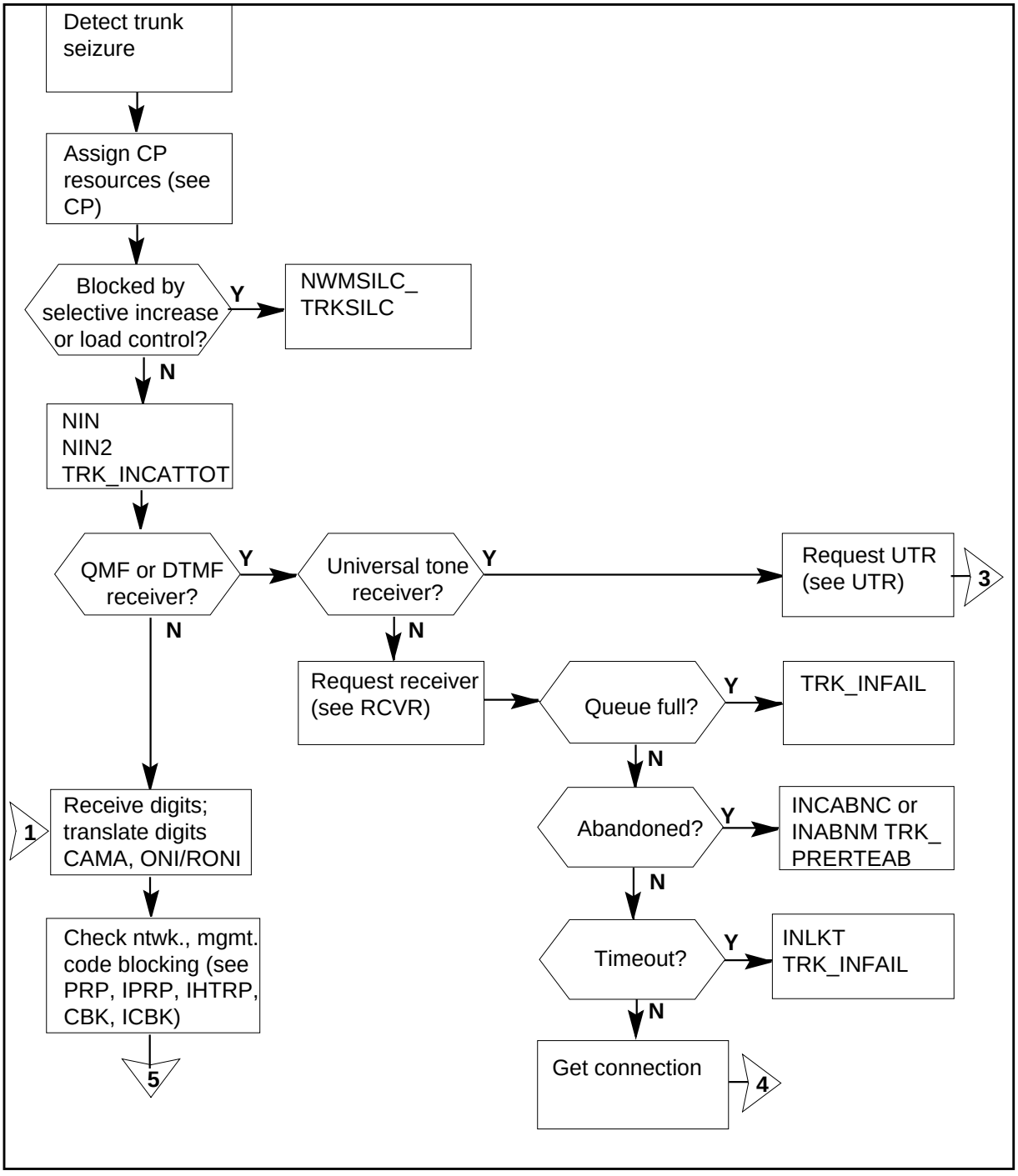


OM group OFZ (continued)

OM group OFZ registers: terminating calls (continued)

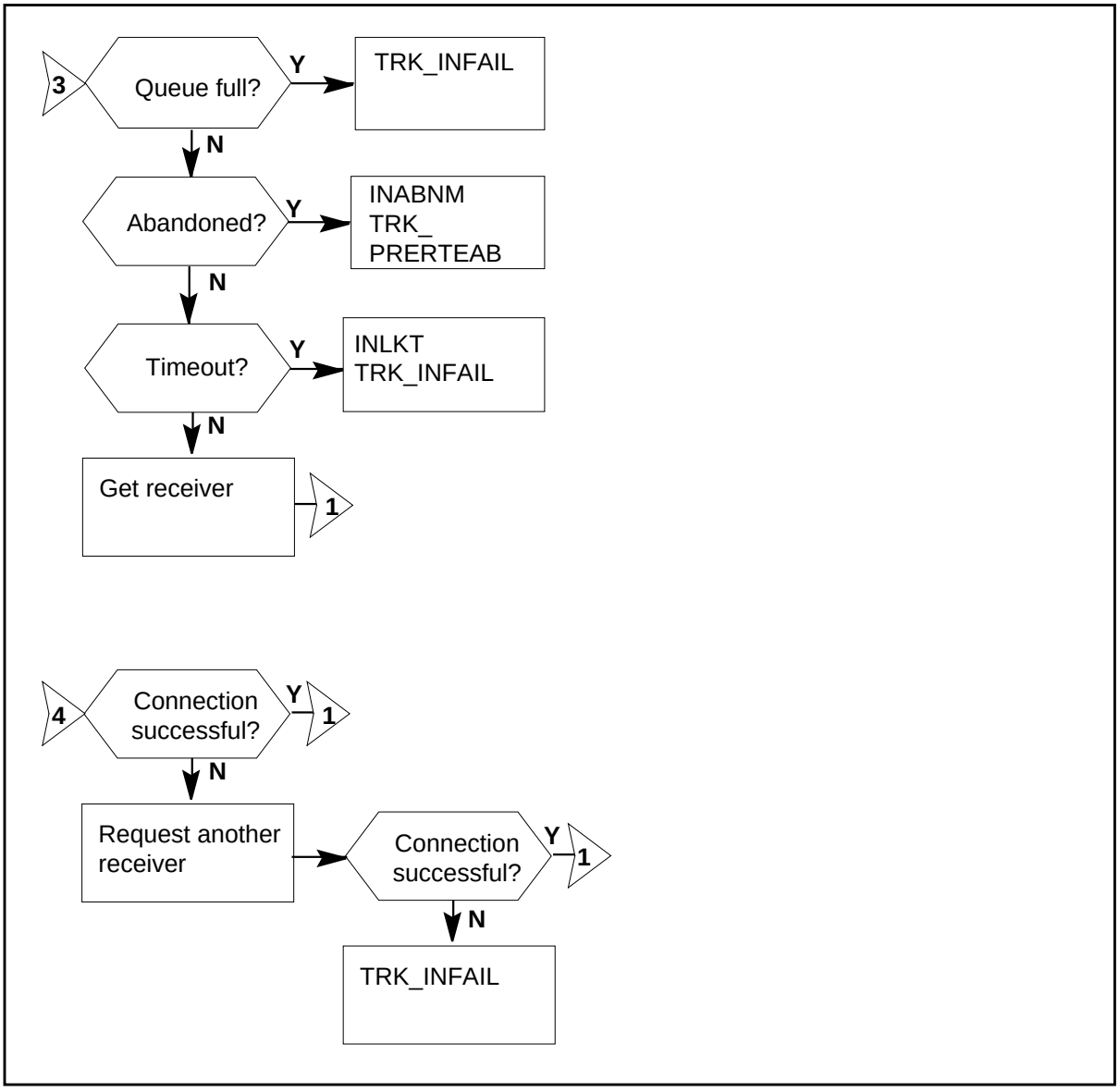


OM group OFZ registers: incoming calls

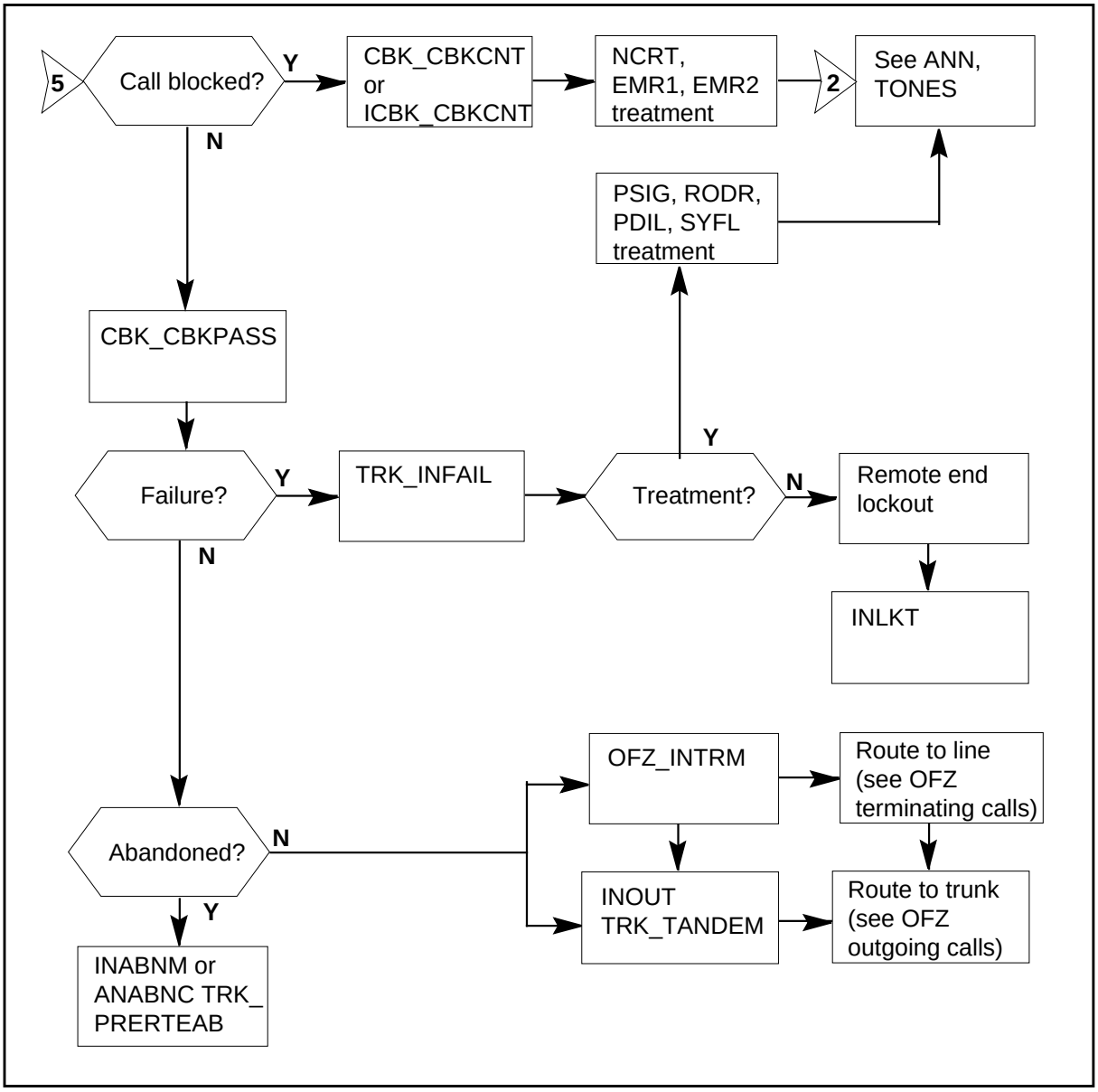


OM group OFZ (continued)

OM group OFZ registers: incoming calls (continued)

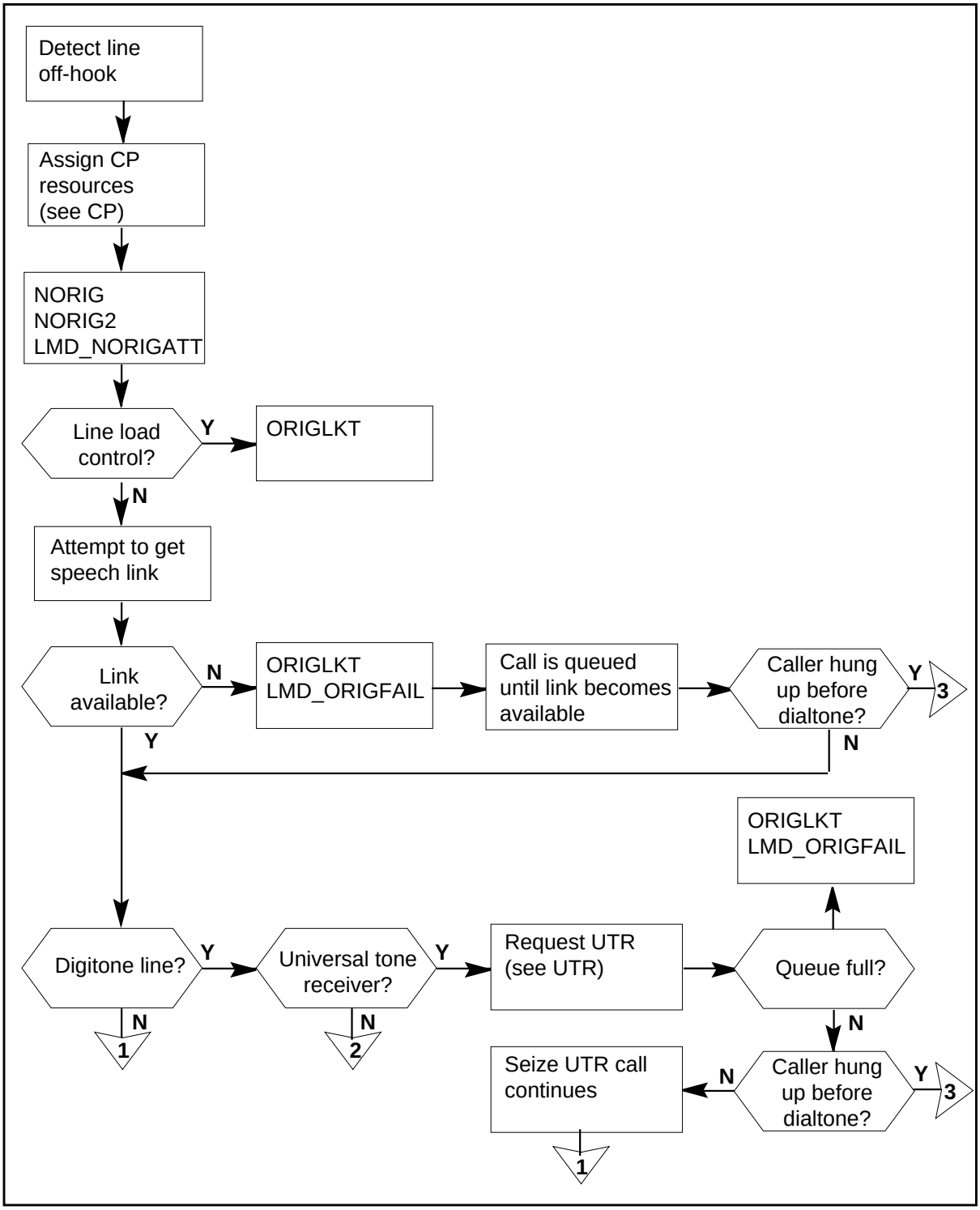


OM group OFZ registers: incoming calls (continued)

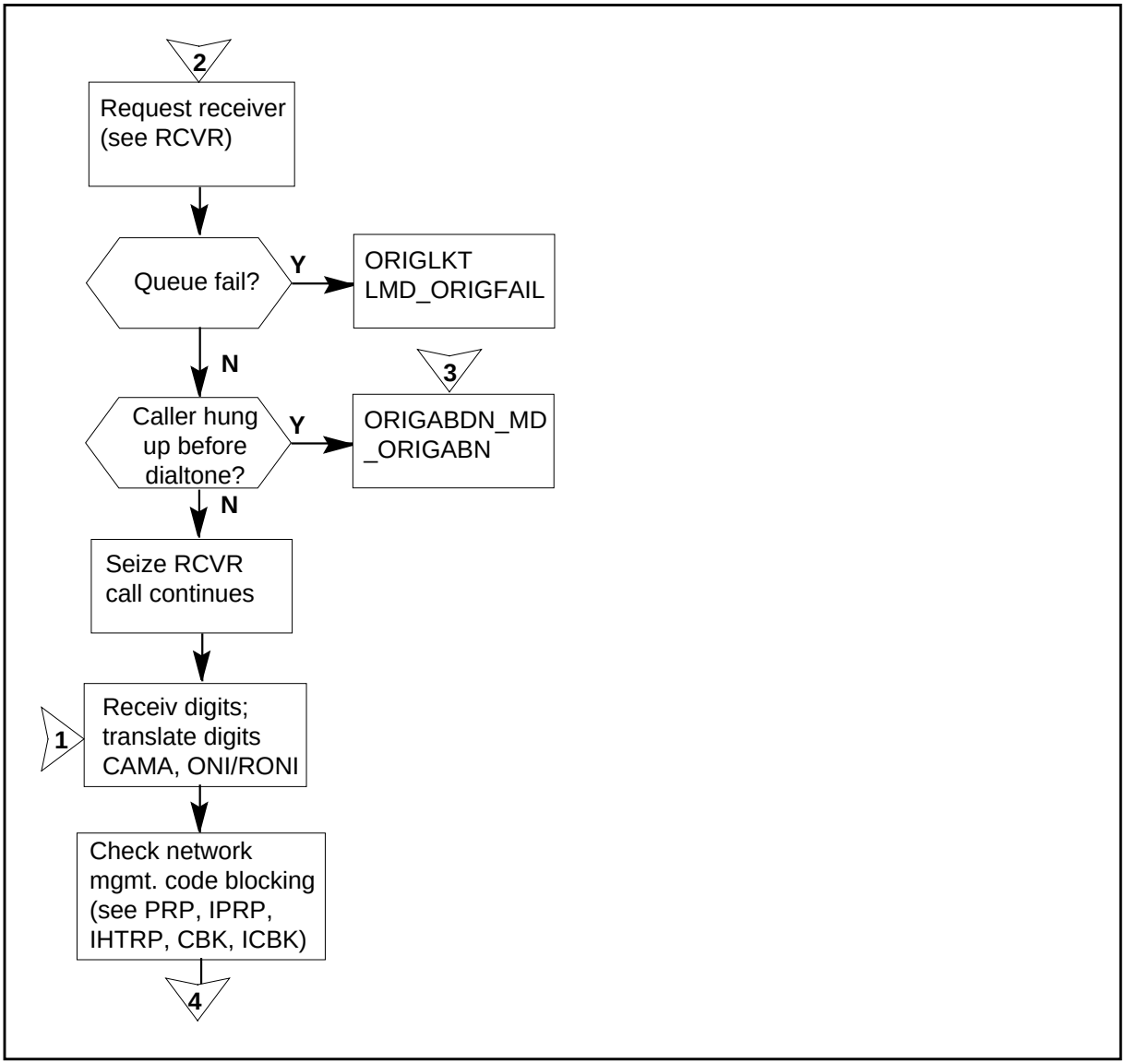


OM group OFZ (continued)

OM group OFZ registers: originating calls

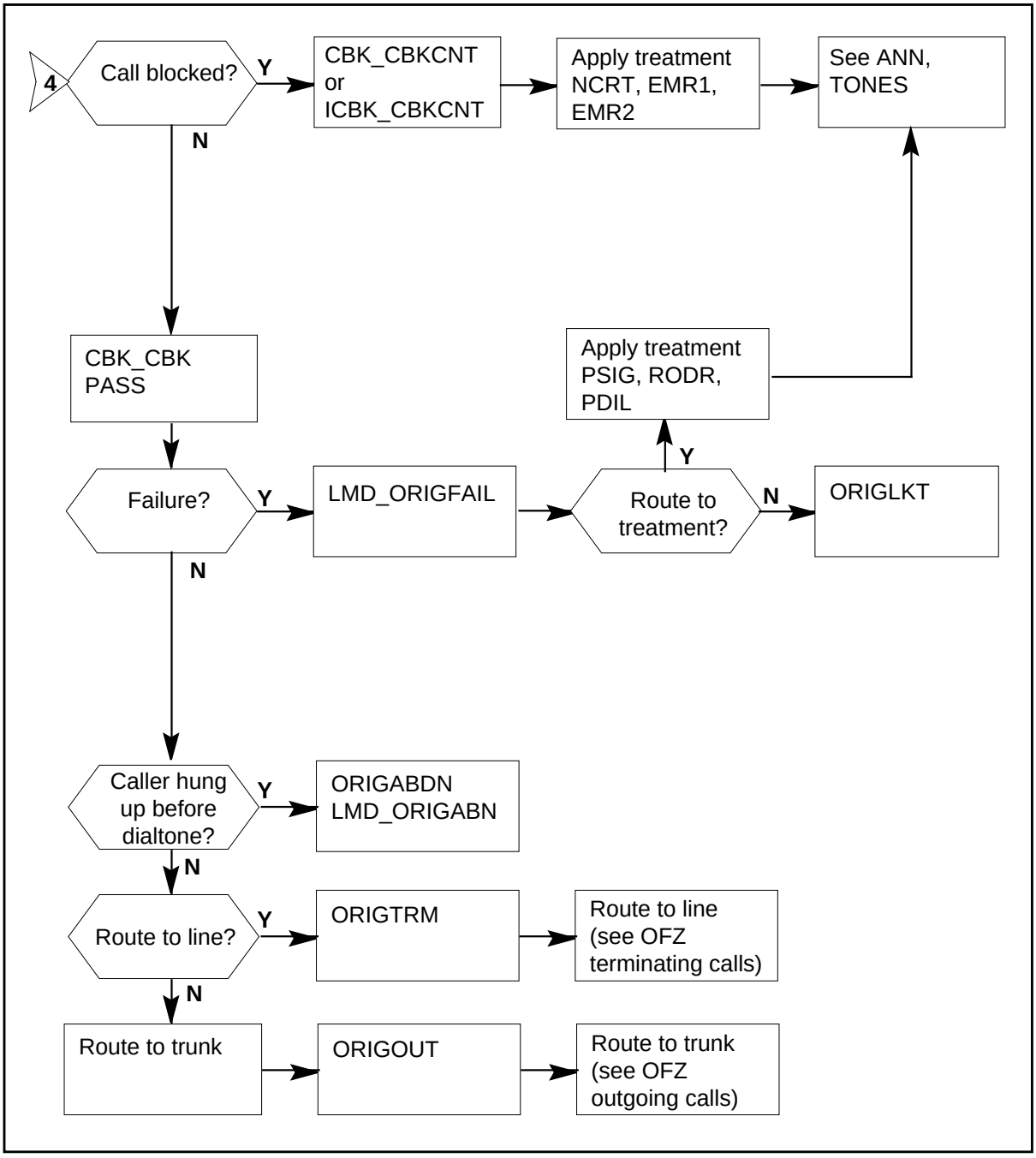


OM group OFZ registers: originating calls (continued)



OM group OFZ (continued)

OM group OFZ registers: originating calls (continued)



The following table contains a list of registers that count originating calls. Register NORIG counts each originating call. One register from registers ORIGANN, ORIGLKT, ORIGOUT, ORIGTRM, ORIGTONE, and ORIGABDN counts each originating call. The system routes a call to an

intended destination. The intended destination of the call is either a tone or an announcement. The system routes a call if an error condition is present. The error condition must include a tone or announcement as part of its treatment. If a treatment routes the call to another tone or announcement, the OFZ only counts the first tone or announcement.

Originating calls

Register	Intended destination	Routing
ORIGOUT	trunk	trunk
ORIGOUT2	trunk	trunk
ORIGTRM	line	line
ORIGTRM2	line	line
ORIGANN	trunk, line, announcement	announcement
ORIGTONE	trunk, line, tone	tone
ORIGLKT	trunk or line	lockout
ORIGABDN	trunk or line	abandon
NORIG	trunk or line	all
NORIG2	trunk or line	all

The following table contains registers that count outgoing calls. Register OUTNWAT counts each outgoing call and each retrial. Registers OUTMFL, OUTRMFL, OUTOSF, and OUTROSF count match and seize trial failures.

Outgoing calls

Register	Event
OUTMFL	match fail trial 1
OUTRMFL	match fail trial 2
OUTOSF	seize fail trial 1
OUTROSF	seize fail trial 2
OUTNWAT	all outgoing traffic and trials
OUTNWAT2	all outgoing traffic and trials

The following table contains registers that count terminating calls. Register TRMNWAT counts each terminating call. Registers TRMMFL and TRMBLK

OM group OFZ (continued)

count calls on a blocked network. LNMBPC counts lines that are made manually busy.

Terminating calls

Register	Event
TRMMFL	NBLH (network blockage heavy traffic) or NBLN (network blockage normal traffic)
TRMBLK	NBLN
LNMBPC	line manual busy
TRMNWAT	all outgoing traffic
TRMNWAT2	all outgoing traffic

Release history

OM group OFZThe OM group OFZ was introduced before BCS20.

GL04

Register OUTRMFL is not incremented.

A paragraph was added to registers ORIGANN and ORIGTONE reference call counting in GL04. Note added to the register ORIGLKT.

NA008

Register OFFCOMBLWW added as a value for office parameter OFFICETYPE.

BCS32

The OM group expanded to include traffic measurements for the lines for the remote digital terminal (integrated digital terminal).

The Integrated Services Digital Network User Part (ISUP) to Telephone User Part (TUP) Interworking feature increases registers.

BCS31

Registers OUTOSF and OUTROSF increase for failed call attempts on DMS-30.

BCS30

Registers INLKT, INOUT, NIN, OUTNWAT, OUTMFL, OUTRFML, OUTOSF, and OUTRSOF increase for the following calls:

- BTUP (UK variant of national user part) to telephone-user part plus (TUP+)
- TUP+ to BTUP calls
- calls from T101 test lines to BTUP
- TUP and TUP+ trunks
- calls from BTUP, TUP, and TUP+ trunks to T101 test lines

BCS27

Software change to count E911 calls on multi-frequency (MF) and dial pulse (DP)-type trunks in INABNC, INABNM, INLKT, NIN.

BCS26

Software change to count the following calls in ORIGTONE: activation and release of the Make Set Busy feature, and the Call Pickup feature. When a call accesses one of these features, ORIGTONE counts the call. Register ORIGTONE counts the call if the feature terminates or not.

BCS25

Software change counts the following calls in ORIGTONE:

- Meridian Digital Centrex (MDC) Speed Call short programming
- MDC Speed Call long programming
- MDC Automatic Dial programming

When a call accesses a feature and the feature terminates correctly, ORIGTONE counts the call.

Register INOUT counts calls for DMS offices in Turkey by ARTER.

BCS21

Traffic Operator Position System (TOPS) software modifies so that, in the TOPS environment:

- register INOUT counts each TOPS call from a trunk
- NIN counts each incoming call attempt from a trunk
- ORIGOUT counts each incoming call from a line

OM group OFZ (continued)

Registers

OM group OFZThe OM group OFZ registers appear on the MAP terminal as follows:

INANN	INLKT	INOUT	INOUT2
INTONE	NIN	NIN2	OUTNWAT
OUTNWAT2	OUTMFL	OUTRMFL	OUTOSF
OUTROSF	INABNM	INABNC	ORIGANN
ORIGLKT	ORIGOUT	ORIGOUT2	ORIGTRM
ORIGTRM2	ORIGTONE	NORIG	NORIG2
INTRM	INTRM2	TRMNWAT	TRMNWAT2
TRMMFL	TRMBLK	LNMBPC	ORIGABDN

Group structure

OM group OFZThe OM group OFZ provides one tuple for each office.

Key field:
There is no key field.

Info field:
There is no info field.

Enter the office parameter OFFICETYPE in table OFCSTD. The value of OFFICETYPE controls the output of OFZ. All the registers are output in offices. The OFFICETYPEs are OFF100, OFFCOMB, OFFCOMBLWW, OFFCOMBTOPS, OFF250IBN, OFF100OESD, or OFFCOMBOESD.

The following registers are output in offices. The OFFICETYPEs are OFF200, OFF200TOPS, OFF200300, 0FF250, OFF300, or OFF200OESD.

Registers INANN, INLKT, INOUT, INOUT2, INTONE, NIN, NIN2, OUTNWAT, OUTNWAT2, OUTMFL, OUTRMFL, OUTOSF, OUTROSF, INABNM, and INABNC.

Associated OM groups

The OM group ANN provides information on use of announcements.

The OM group LMD provides information on traffic for each peripheral module.

The OM group OTS provides information on office traffic by the call destination. OTS measures system-generated traffic. This measurement

results in a balance between the measured incoming and measured outgoing traffic in OTS.

The OM group TONES provides information on use of tones.

The OM group TOPSTRAF provides information on traffic in the TOPS environment.

The OM group TRK provides information on traffic for each trunk group.

Associated functional groups

The following are the associated functional groups for OM group OFZ OM group OFZ:

- DMS-100 Local
- DMS-100/200 Combined Local and Toll
- DMS-100 Wireless Combined Local and Toll with Wireless
- DMS-100/200 Combined Local and Toll with TOPS
- DMS-200 Toll
- DMS-200 Toll with TOPS
- DMS-200/300 Combined Toll and Gateway
- DMS-300 Gateway
- DMS-250 Tandem
- DMS250/SL-100 Combined Tandem and SL-100
- DMS-100 Austrian Local
- DMS-200 Austrian Toll
- DMS-100/200 Austrian Combined Local and Toll

Associated functionality codes

The associated functionality codes for OM group OFZ OM group OFZ are in the following table.

(Sheet 1 of 2)

Functionality	Code
RES (Residential Enhanced Services) Base	NTXA64AA
ISC ARTER	NTXB68AA
Common Basic	NTX001AA

OM group OFZ (continued)

(Sheet 2 of 2)

Functionality	Code
TOPS Call Processing Features (PEP NTX030CB)	NTX030CC
International Switching Center (ISC) Basic	NTX300AA
ISDN Base Access	NTX750AB

Register INABNC

Incoming calls abandoned by the customer (INABNC)

Register INABNC counts incoming calls the subscriber abandons before processing. These calls do not require treatment.

Register INABNC release history

Register INABNC was introduced before BCS20.

BCS27

Software change to include E911 calls on multi-frequency (MF) and dial pulse (DP)-type trunks

Associated registers

Register INABNM counts incoming calls that the machine abandons.

Register TRK_PRERTEAB counts incoming calls that the machine or subscriber abandons. The trunk group counts the calls.

Σ TRK_PRERTEAB = OFZ_INABNM + OFZ_INABNC

Note: This relationship does not apply to calls that originate from a mobile telephone exchange (MTX).

Register OTS_INCABNC counts incoming calls the subscriber abandons before the connection.

Register OFZ_INABNC = OTS_INCABNC

Associated logs

The system generates TRK114 when the system cannot determine the destination of an incoming call during DP reception.

The system generates TRK116 when the system cannot determine the destination of an incoming call during MF reception.

The system generates TRK162 if the outpulsing of either a trunk-to-trunk or line-to-trunk call encounters trouble. These calls use dual-tone multi-frequency (DTMF) signaling.

Extension registers

There are no extension registers.

Register INABNM

Incoming calls abandoned by the machine

Register INABNM counts incoming calls that the machine abandons before processing. The machine abandons a call when a call times out at the upstream office while waiting for a receiver. The machine also abandons a call when there is an equipment problem.

Register INABNM release history

Register INABNM was introduced before BCS20.

BCS27

Software change to include E911 calls on multi-frequency (MF) and dial pulse (DP)-type trunks

Associated registers

Register INABNC counts incoming calls that the subscriber abandons.

Register TRK_PRERTEAB counts incoming calls that the machine or subscriber abandons. The trunk group counts the calls.

Σ TRK_PRERTEAB = OFZ_INABNM + OFZ_INABNC

Note: This relationship does not apply to calls that originate from a mobile telephone exchange (MTX).

Register OTS_INCABNM counts incoming calls that the machine abandons before connection.

Register OFZ_INABNM = OTS_INCABNM

OM group OFZ (continued)

Associated logs

The system generates TRK114 when the system cannot determine the destination of an incoming call during DP reception.

The system generates TRK116 when the system cannot determine the destination of an incoming call during MF reception.

The system generates TRK162 when a problem is present in the outpulsing of either trunk-to-trunk or line-to-trunk calls. These calls use dual-tone multi-frequency (DTMF) signaling.

Extension registers

There are no extension registers.

Register INANN

Incoming call to an announcement (INANN)

Register INANN counts incoming calls that the system routes to an announcement.

The announcement is the result of a treatment applied during inpulsing, or the intended result of the call. Register INANN counts the call before it attempts to get a network connection. Register INANN counts calls that the system routes to a treatment that routes the call to an announcement. The register only counts these calls one time.

Register INANN release history

Register INANN was introduced before BCS20.

Associated registers

Register ANN_ANNATT counts attempts to generate announcements.

Register ORIGANN counts originating calls that the system routes to an announcement.

Σ ANN_ANNATT OFZ_INANN + OFZ_ORIGANN

Associated logs

The system generates TRK138 when the system routes a call to a treatment after the call is call processing busy.

Extension registers

There are no extension registers.

Register INLKT

Incoming calls to lockout (INLKT)

Incoming calls to lockout (INLKT) counts incoming calls that fail and that the system routes to lockout. The call fails for one of the following reasons:

- the incoming trunk loses its true identity
- the system cannot connect the call to a tone or announcement
- a forced release initiates manually
- a forced release initiates because call processing requests a delay (CP_WAITDENY counts the call)

Register INLKT release history

Register INLKT was introduced before BCS20.

BCS30

Register INLKT counts calls from:

- BTUP to TUP+, from TUP+ to BTUP
- from T101 test lines to BTUP, TUP and TUP+ trunks
- from BTUP, TUP and TUP+ trunks to T101 test lines

BCS27

Software change to include E911 calls on multi-frequency (MF)- and dial pulse (DP)-type trunks.

Associated registers

Register OTS_INCLKT counts incoming calls that fail to connect or receive treatment that routes the calls to lockout.

Register OFZ_INLKT = OTS_INCLKT - (number of calls that fail because of remote-end lockout)

Associated logs

The system generates TRK111 if the system encounters a problem or assigns a treatment during routing of a trunk-to-trunk call.

The system generates TRK113 when the call processing of a trunk-to-trunk call encounters a problem.

The system generates TRK122 when the central control (CC) detects a loss of accuracy. The loss must be on both planes of the network to which the trunk

OM group OFZ (continued)

equipment attaches. A loss of accuracy indicates a hardware problem in one of the following elements:

- the circuit card
- the facility
- the link between the peripheral module (PM) and the network

The system generates TRK123 when the peripheral processor sends the wrong message to the CC. The system generates TRK123 several times when a problem is present in one of the following elements:

- the originating trunk
- the terminating trunk
- the link between the PM and the CC
- the link between the PM and its peripheral processor

The system initiates tests to isolate the fault.

Extension registers

There are no extension registers

Register INOUT

Incoming to outgoing (INOUT)

Register INOUT counts incoming calls from:

- trunks
- preset conferences
- originating test lines
- auxiliary operator services system (AOSS) positions
- terminating ARTER trunk test facilities that the system routes at the start to trunks, TOPS, or AOSS positions

Register INOUT also counts TOPS calls that operate coin stations over trunks that use the line number method.

Register INOUT release history

Register INOUT was introduced before BCS20.

GL04

The DMS-100G switch does not increment INOUT.

BCS30
Register INOUT counts calls from:

- BTUP to TUP+, from TUP+ to BTUP
- from T101 test lines to BTUP, TUP and TUP+ trunks
- from BTUP, TUP and TUP+ trunks to T101 test lines

BCS25
Software change to count calls in OFZ_INOUT for DMS offices in Turkey.

BCS21
Software change so that OFZ_INOUT counts each incoming TOPS call one time.

Associated registers

Register TRK_TANDEM counts trunk-to-trunk calls, except trunk-to-TOPS calls. The incoming trunk group counts the calls.

Σ TRK_TANDEM + Trunk-to-TOPS calls = OFZ_INOUT + (OFZ_INOUT2 $\times$ 65536)

Associated logs

There are no associated logs.

Extension registers

Register INOUT2

Register INTONE

Incoming call to tone (INTONE)

Register INTONE counts incoming calls that the system routes to a tone.

The tone is the result of a treatment applied inpulsing, or the tone is the intended result of the call. Register INTONE counts the call before it attempts to find a network connection. Register INTONE counts a call that the system routes to a tone one time.

Register INTONE release history

Register INTONE was introduced before BCS30.

Associated registers

Register ORIGTONE counts originating calls that the system routes to a tone.

Register TONES_TONEATT counts attempts to attach a call to a tone.

OM group OFZ (continued)

Σ TONES_TONEATT OFZ_INTONE + OFZ_ORIGTONE

Associated logs

The system generates TRK138 when the system routes a call to a treatment after the call is call processing busy.

Extension registers

There are no extension registers.

Register INTRM

Incoming to terminating (INTRM)

Register INTRM counts incoming calls that the system routes to a line.

Register INTRM release history

Register INTRM was introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

Register INTRM2

Register LNMBPC

Line manual busy peg count

Register LNMBPC counts lines that are manual busy.

Every POTS line is pegged by one when made manual busy. Pegging of each PPhone/PSET/DATA/ ISDN line depends upon number of virtual identifiers (VIDs) associated with that line, and may be more then once, when made manual busy (MB) either by LTP/BSY or maintenance action..

Register LNMBPC release history

Register LNMBPC was introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register NIN

Number of incoming calls (NIN)

Register NIN counts incoming calls that the central control recognizes. The intended destination of the call is a line, trunk, announcement, or tone. Register NIN counts calls after a call control block and a call process are obtained. The register counts the calls before the inpulsing is set up.

Register NIN release history

Register NIN was introduced before BCS20.

BCS30

Register NIN counts calls from:

- BTUP to TUP+
- from TUP+ to BTUP
- from T101 test lines to BTUP, TUP and TUP+ trunks
- from BTUP, TUP and TUP+ trunks to T101test lines

BCS27

Software change to include E911 calls on multi-frequency (MF)- and dial pulse (DP)-type trunks.

BCS21

Software change so that OFZ_INOUT and OFZ_NIN count each TOPS call that comes in one time from a trunk.

Associated registers

Register NIN counts each incoming call. A register counts each call by destination:

- Register INABNC counts the call if the subscriber abandons the call
- Register INABNM counts the call if the machine abandons the call
- Register INANN counts the call if the destination is an announcement
- Register INLKT counts the call if the call locks out
- Register INOUT counts the call if the destination is a trunk

OM group OFZ (continued)

- Register INTRM counts the call if the destination is a line
- Register TONE counts the call if the destination is a tone

Register TRK_INCATOT and OTS_NINC count incoming calls. Register TRK counts calls by trunk group.

OFZ_NIN + (OFZ_NIN2 × 65536) = Σ TRK_INCATOT

OFZ_NIN + (OFZ_NIN2 × 65536) = OTS_NINC + (OTS_NINC2 × 65536)

Associated logs

There are no associated logs.

Extension registers

Register NIN2

Register NORIG

Number of originating calls (NORIG)

Register NORIG counts originating calls that the central control recognizes.

After a call condense block and a call process are obtained, NORIG counts a call. Register NORIG counts the call before dialing is set up. NORIG can count a single call at least once. The call is only a single call from the point of view of the caller. The system counts a three-way call when the flashing switch hook recognizes a correct feature origination signal. The feature origination signal is for the flashing line.

Register NORIG release history

Register NORIG was introduced in BCS20.

Associated registers

Register NORIG counts each originating call. A register counts each call by destination:

- Register ORIGABDN counts the call if the call abandons
- Register ORIGANN counts the call if the destination is an announcement
- Register ORIGLKT counts the call if the call locks out
- Register ORIGOUT counts the call if the destination is a trunk
- Register ORIGTONE counts the call if the destination is a tone
- Register ORIGTRM counts the call if the destination is a line

Register LMD_NORIGATT and OTS_NORG count originating calls. Register LMD counts calls by line module.

OFZ_NORIG = Σ LMD_NORIGATT = OTS_NORG

Associated logs

There are no associated logs.

Extension registers

Register NORIG2

Register ORIGABDN

Originating calls abandoned (ORIGABDN)

Originating calls abandoned (ORIGABDN) counts originating calls that the system abandons before the system routes the calls to a trunk, line, or treatment.

Register ORIGABDN release history

Register ORIGABDN was introduced before BCS20.

Associated registers

Register LMD_ORIGABN and OTS_ORGABDN counts originating calls that the system abandons. The system abandons the calls before the system routes the calls to a trunk, line, or treatment. LMD counts calls that the system does not route through an extended multiprocessor system (XMS)-based peripheral module (XPM).

Register OFZ_ORIGABDN = Σ LMD_ORIGABN = OTS_ORGABDN

The OTS is newer than the OFZ group so this is truth only if OFZ_ORIGABDN and OTS_ORGABDN are pegged at the same time.

Associated logs

The system generates LINE106 if the system cannot determine a call destination during dial pulse reception on a line.

The system generates LINE108 if the Digitone reception on a line encounters a problem.

Extension registers

There are no extension registers.

OM group OFZ (continued)

Register ORIGANN

Originating call to announcement (ORIGANN)

Register ORIGANN counts originating calls that the system routes to an announcement.

The announcement can be the result of a treatment during inpulsing, or the intended result of the call. The system counts the call in ORIGANN before an attempt to find a network connection occurs.

In GL04, a call is not counted in register ORIGANN again if it has been counted in register ORIGANN or ORIGTONE.

Register ORIGANN release history

Register ORIGANN was introduced before BCS20.

Associated registers

Register ANN_ANNATT counts attempts to attach to announcements.

The system counts INANN incoming calls that the system routes to an announcement.

Σ ANN_ANNATT OFZ_INANN + OFZ_ORIGANN

Associated logs

The system generates LINE138 if the system routes a call to a treatment after it is call processing busy.

Extension registers

There are no extension registers.

Register ORIGLKT

Originating call to lock-out (ORIGLKT)

Register ORIGLKT counts originating calls that fail on the intended destination that the system routes to lock out. The register counts these calls when the calls do not connect. Register ORIGLKT also counts the calls when

the system does not route the call to a treatment. The call fails for one of the following reasons:

- line load control (line is dead)
- a speech link is not available (call is queued until a speech link becomes available and if the caller remains off-hook the call can be successful, but ORIGLKT only increases one time)
- a Digitone receiver, or of a network connection to a Digitone receiver is not available (if caller remains off-hook, the call clears when the problem is successful, but ORIGLKT increased one time)

Note: In GL04, register ORIGLKT will be incremented when a lockout maintenance instruction is performed on an originating call as a result of a treatment. This OM will not be incremented if either ORIGANN or ORIGTONE has already been incremented.

Register ORIGLKT release history

Register ORIGLKT was introduced in BCS20.

Associated registers

The system counts OTS_ORGLKT originating calls that fail and the system routes to lockout. The system counts these calls when the calls do not connect and the system routes the calls to a treatment.

The relationship between ORIGLKT and OTS_ORGLKT is:

OFZ_ORIGLKT = OTS_ORGLKT

Associated logs

The system generates LINE104 if the call processing encounters a problem.

The system generates LINE105 if call processing encounters a problem.

The system generates LINE109 if call processing encounters a problem.

The system generates LINE204 if call processing encounters a problem.

The system generates NET130 if the system cannot find a network path.

The system generates OM2200 if a threshold condition exceeds the limit.

OM group OFZ (continued)

Extension registers

There are no extension registers.

Register ORIGOUT

Originating to outgoing (ORIGOUT)

Register ORIGOUT counts originating calls that the system routes to a trunk or a test facility.

Register ORIGOUT release history

Register ORIGOUT was introduced before BCS20.

BCS21

Software change so that ORIGOUT only counts TOPS originating calls.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

Register ORIGOUT2

Register ORIGTONE

Originating call to tone (ORIGTONE)

Register ORIGTONE counts originating calls that the system routes to a tone.

Register ORIGTONE counts the call before it attempts to find a network connection. The tone is either the result of a treatment, or the intended result of the call. Register ORIGTONE counts calls that the system routes to a treatment that routes the call to a tone. Register ORIGTONE only counts the call one time.

In GL04, a call is not counted in register ORIGANN again if it has been counted in register ORIGANN or ORIGTONE.

Register ORIGTONE release history

Register ORIGTONE was introduced before BCS20.

BCS25
Software change to count calls in ORIGTONE for:

- Meridian Digital Centrex (MDC) Speed Call short programming
- MDC Speed Call long programming
- MDC Automatic Dial programming

When one of these features is accessed, ORIGTONE counts the call if the feature terminates correctly.

Associated registers

Register INTONE counts incoming calls that the system routes to a tone.

Register TONES_TONEATT counts attempts to attach to tones.

Σ (TONES_TONEATT) OFZ_INTONE + OFZ_ORIGTONE

Associated logs

The system generates LINE138 if the system routes a call to a treatment after it is call processing busy.

Extension registers

There are no extension registers.

Register ORIGTRM

Originating to terminating (ORIGTRM)

Register ORIGTRM counts originating calls that the system routes to a line. Register ORIGTRM counts the call if a line is available or is not available.

Register ORIGTRM release history

Register ORIGTRM was introduced before BCS20.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

Register ORIGTRM2

OM group OFZ (continued)

Register OUTMFL

Outgoing match failures (OUTMFL)

Register OUTMFL counts calls that fail to find a network path to a selected outgoing or test trunk on the first attempt. A second attempt occurs to find an idle trunk and a network path.

Register OUTMFL release history

Register OUTMFL was introduced before BCS20.

BCS30

Register OUTMFL counts calls from:

- BTUP to TUP+
- from TUP+ to BTUP
- from T101 test lines to BTUP, TUP and TUP+ trunks
- from BTUP, TUP and TUP+ trunks to T101 test lines

Associated registers

Register OUTMFL and SOTS_SOUTMFL count first trial match failures.

Register TRK_OUTMTCHF counts match failures by trunk group.

Σ TRK_OUTMTCHF = OFZ_OUTMFL + OFZ_OUTRMFL

Register SOTS_SOUTMFL counts calls that fail to find a network path from a line. The register also counts calls that trunk to a selected outgoing or test trunk.

OFZ_OUTMFL = SOTS_SOUTMFL

Associated logs

The system generates NET130 if the system cannot find a network path.

Extension registers

There are no extension registers.

Register OUTNWAT

Outgoing network attempts (OUTNWAT)

Register OUTNWAT counts incoming and originating calls that are intended for an exact outgoing or test trunk.

A single call can use two or more network paths to different ports of the service circuit. For example, connection by a conference circuit or digital echo suppressor requires more than one network path.

Register OUTNWAT release history

Register OUTNWAT was introduced before BCS20.

BCS30

Register OUTNWAT counts calls from:

- BTUP to TUP+, from TUP+ to BTUP
- from T101 test lines to BTUP, TUP and TUP+ trunks
- from BTUP, TUP and TUP+ trunks to T101 test lines

Associated registers

After OUTNWAT counts the call, one of the following actions occurs:

- The call connects. Register TRK_CONNECT counts the call.
- After a first trial failure, the system routes the call in an attempt to select another outgoing trunk. OUTMFL and TRK_OUTMTCHF count the call.
- After failure to get path followed by network blockage heavy traffic (NBLH) treatment, OUTRMFL and TRK_OUTMTCHF count the call.
- After failure to get a path followed by no treatment, TRK_OUTFAIL counts the call.
- If double seizure of a trunk occurs, TRK_GLARE counts the call. The system makes a new path selection. If the system again encounters double seizure of a trunk, the call routes to a generalized no-circuit (GNCT) treatment.

OFZ_OUTNWAT + (OFZ_OUTNWAT2 × 65536) = OFZ_OUTMFL + OFZ_OUTRMFL + Σ (TRK_CONNECT+TRK_GLARE+TRK_OUTFAIL + TRK_OUTMTCHF)

Register SOTS_SOUTNWT counts the attempts to find a network path from a line or trunk to a selected outgoing or test trunk.

OFZ_OUTNWAT + (OFZ_OUTNWAT2 × 65536) = SOTS_SOUTNWT + (SOTS_SOUTNWT2 × 65536)

Associated logs

There are no associated logs.

OM group OFZ (continued)

Extension registers

Register OUTNWAT2

Register OUTOSF

Outgoing original seize failures (OUTOSF)

Register OUTOSF counts calls that fail to seize an outgoing trunk on the first attempt after network paths are acquired. A second attempt occurs to find an idle trunk and a network path, and to seize the trunk. One of the following conditions causes a failure:

- a reversed trunk
- failure to receive a known start-dial
- not planned stop-dial
- timeout before expected stop-dial
- CCS7 errors

Register OUTOSF release history

Register OUTOSF was introduced before BCS20.

BCS31

Register OUTOSF counts DMS-300 failed call attempts.

BCS30

Register OUTOSF counts calls from:

- BTUP to TUP+
- from TUP+ to BTUP
- from T101 test lines to BTUP, TUP and TUP+ trunks
- from BTUP, TUP and TUP+ trunks to T101 test lines

Associated registers

Register SOTS_SOUTOSF counts first trial seize failures that occur after an outgoing trunk is selected and the necessary network paths acquired.

OFZ_OUTOSF = SOTS_SOUTOSF

Associated logs

The system generates TRK113 if the call processing of a trunk-to-trunk call encounters a problem.

The system generates TRK121 if DMS switch does not receive an acknowledgement wink from the far-end equipment. The wink indicates that it is ready to receive digits. The digits are received during outpulsing on an exact outgoing trunk.

The system generates TRK162 if the outpulsing of either a trunk-to-trunk or line-to-trunk call encounters a problem. The line-to-trunk calls use dual-tone multi-frequency (DTMF) signaling.

The system generates C7UP111 when an outgoing call attempt fails.

Extension registers

There are no extension registers.

Register OUTRMFL

Outgoing retrial match failures (OUTRMFL)

Register OUTRMFL counts calls that fail on the second attempt to find a network path to a selected outgoing or test trunk.

This register is not incremented in GL04.

Register OUTRMFL release history

Register OUTRMFL was introduced before BCS20.

GL04

The register is not incremented.

BCS30

Register OUTRMFL counts calls from:

- BTUP to TUP+
- from TUP+ to BTUP
- from T101 test lines to BTUP, TUP and TUP+ Trunks
- from BTUP, TUP and TUP+ trunks to T101 test lines

Associated registers

Register OUTMFL counts first trial match failures.

Register OUTRMFL and SOTS_SOUTRMFL count second trial match failures.

OM group OFZ (continued)

The system counts TRK_OUTMTCHF match failures. The trunk groups counts failures.

Σ TRK_OUTMTCHF = OFZ_OUTMFL + OFZ_OUTRMFL

OFZ_OUTRMFL = SOTS_SOUTRMFL

Associated logs

The system generates NET130 if the system cannot find a network path.

Extension registers

There are no extension registers.

Register OUTROSF

Outgoing retrial seize failures (OUTROSF)

Register OUTROSF counts calls that fail on the second attempt to seize an outgoing trunk. This attempt occurs after the network paths have been acquired. One of the following conditions can cause a failure:

- a reversed trunk
- failure to receive a known start-dial
- not planned stop-dial
- time-out before an expected stop-dial

The system disconnects the call after the second failure and the call receives start signal timeout (SSTO) treatment. An equal access call receives signal timeout BOC (STOB) or signal timeout IC/INC (STOC) treatment.

The system increases OUTROSF when a second attempt occurs to run a continuity test (COT) for an outgoing ISUP trunk. The second attempt occurs if the first COT attempt fails.

Register OUTROSF release history

Register OUTROSF was introduced before BCS20.

BCS31

Register OUTROSF counts again failed DMS-300 calls.

BCS30

Register OUTROSF increases for calls from:

- BTUP to TUP+
- from TUP+ to BTUP
- from T101 test lines to BTUP, TUP and TUP+ trunks
- from BTUP, TUP and TUP+ trunks to T101 test lines

Associated registers

Register SOTS_SOUTROSF counts calls that fail the second attempt to seize an outgoing trunk.

OFZ_OUTROSF = SOTS_SOUTROSF

Associated logs

The system generates TRK113 if the call processing of a trunk-call encounters trouble.

The system generates TRK121 if the DMS switch does not receive an acknowledgement wink from the far-end equipment. The wink indicates that it is ready to receive digits during outpulsing on a exact outgoing trunk.

The system generates TRK162 if the outpulsing of either a trunk-to-trunk or line-to-trunk call encounters trouble. These calls use dual-tone multi-frequency (DTMF) signaling.

Extension registers

There are no extension registers.

Register TRMBLK

Terminating blocks (TRMBLK)

Register TRMBLK counts attempts to obtain a voice path to a terminating line that fails. This failure occurs when no free channel is present between the host network and the terminating line.

The system counts more than one failed attempt if part of a hunt group directs the call.

The system also counts each attempt in OFZ registers TRMMFL and TRMNWAT. The terminating line control device also counts in LMD registers NTERMATT and TERRMBLK

OM group OFZ (continued)

If no alternate line is available, the system routes the call to network blockage normal traffic (NBLN) treatment. Register TRMTRS_TRSNBLN counts the calls.

Register TRMBLK release history

Register TRMBLK was introduced before BCS20.

Associated registers

Register LMD_TERMBLK counts failures in the line-to-network segment. The register counts call failures for modules that are not extended multiprocessor system (XMS)-based peripheral modules (XPM).

OFZ_TRMBLK = Σ LMD_TERMBLK

Register SOTS_STRMBLK counts attempts to find a voice path from the network to a terminating line that fails. The failures occur when all the LM channels to the network are busy. Failures also occur when the idle channels on lines to the network and line shelves, that serve the terminating line, are not linked.

The relationship between TRMBLK and SOTS_STRMBLK is:

OFZ_TRMBLK = SOTS_STRMBLK

Associated logs

The system generates NET130 when the system cannot find a network path.

The system generates TRK138 when the system routes a call to treatment after it is call processing busy.

The system generates LINE138 when the system routes a call to treatment after it is call processing busy.

Extension registers

There are no extension registers.

Register TRMMFL

Terminating match failures (TRMMFL)

Register TRMMFL counts failed attempts to find a voice path to a terminating line.

The system counts more than one failed attempt if the call goes to a part of a hunt group.

The system counts each attempt in OFZ register TRMNWAT and in LMD register NTERMATT for the terminating line control device.

Failure in the path search sequence can occur if the host switch network cannot obtain a path. If the network cannot find an alternate path, the system routes the call to network blockage heavy traffic (NBLH) treatment.

Failure in the path search sequence can occur if the final cause of failure is failure to obtain a free channel on a link between the host switch network and the terminating line. Registers TRMBLK and TERMBLK count the failure to obtain a free channel .

If no alternate line is available, the system routes the call to network blockage normal traffic (NBLN) treatment. Register TRMTRS_TRSNBLN counts the calls.

Register TRMMFL release history

Register TRMMFL was introduced before BCS20.

Associated registers

Register SOTS_STRMMFL counts attempts to find a voice path to a terminating line that fail because a network connection is not available.

OFZ_TRMMFL = SOTS_STRMMFL

Associated logs

The system generates NET130 when the system cannot find a network path.

The system generates LINE138 when the system routes a call to treatment after the call is call processing busy.

The system generates TRK138 when the system routes a call to treatment after the call is call processing busy.

Extension registers

There are no extension registers.

Register TRMNWAT

Terminating network attempts

OM group OFZ (end)

Register TRMNWAT counts attempts to find a voice path to a terminating line. The complete path includes the following elements:

- a segment through the network
- a channel on the link between the line module and the network
- a matching channel on the line shelf

Register TRMNWAT counts a call only for each attempt. The calls count each attempt, whether it succeeds or fails.

Register TRMNWAT release history

Register TRMNWAT was introduced before BCS20.

Associated registers

Register LMD_NTERMATT counts intra-office calls. The register counts calls for each line module.

Register OFZ_TRMNWAT + (OFZ_TRMNWAT2 × 65536) = Σ LMD_NTERMATT

Register SOTS_STRMNWT counts attempts to find a voice path to a terminating line.

OFZ_TRMNWAT + (OFZ_TRMNWAT2 × 65536) = SOTS_STRMNWAT + (SOTS_STRMNWAT2 × 65536)

Associated logs

There are no associated logs.

Extension registers

Register TRMNWAT2

OM group OFZ2

OM description

Office traffic extension summary (OFZ2)

The OM group OFZ2 counts calls that the system routes to generalized no circuit treatment (GNCT). The system routes a call to GNCT when a trunk group is the last route in the route list and all trunks are busy.

The OM group has 11 registers. These registers give the cause of the GNCT for outgoing trunks or for the outgoing side of two-way trunks. The name of each register corresponds to an entry in the no circuit class field, NCCLS in table TRKGRP.

Release history

The OM group OFZ2 was introduced in BCS20.

Registers

The OM group OFZ2 Registers appear on the MAP terminal as follows:

```
OFZNCIT     OFZNCTC     OFZNCLT     OFZNCBN
OFZNCID     OFZNOSC     OFZNCOT     OFZNCRT
OFZNCIM     OFZNCON     OFZNCOF     PSGM
PDLM
```

Group structure

The OM group OFZ2 provides one tuple for each office. Each tuple consists of 13 Registers.

Key field:
There is no key field.

Info field:
There is no key field.

Associated OM groups

The OM group TRMTRS provides information about the treatment a call receives if the call fails. The call must fail because there are not enough of software or hardware resources for OM group TRMTRS to apply.

OM group OFZ2 (continued)

Associated functional groups

The associated functional groups associated with OM group OFZ2 appear in the following table:

- OFF100 Local
- OFFCOMB Combined local/toll
- OFFCOMBTOPS Combined local/toll with TOPS
- OFF200 Toll
- OFF200TOPS Toll with TOPS
- OFF200300 Combined gateway/toll
- OFF300 Gateway
- OFF250 DMS-250
- OFF250IBN DMS-250/SL-100
- OFF100OESD Austrian local
- OFF200OESD Austrian toll
- OFFCOMBOESD Austrian combined local/toll

Associated functionality codes

The associated functionality codes for OM group OFZ2 appear in the following table:

Functionality	Code
Common Basic	NTX001AA

Register OFZNCBN

No circuit business network trunks (OFXNCBN)

Register OFZNCBN counts calls the system routes to generalized no circuit treatment (GNCT). The system routes the calls to GNCT because Meridian Digital Centrex (MDC) trunk is not available.

Register OFZNCBN release history

Register OFZNCBN was introduced before BCS20.

Associated registers

Register TRMTRS_TRSGNCT counts calls that the system routes to GNCT.

Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, OFZNCOF

Associated logs

The system generates ATB100 when the system routes again a call that the system blocks. The system blocks the call when the call attempts to seize a specified numbering plan area (NPA) The system can also block a call that attempts to seize a trunk to a specified central office (CO).

The system generates LINE138 if the system routes a call to treatment after the call was call processing busy.

The system generates TRK138 if the system routes a call to treatment after the call was call processing busy.

Register OFZNCID

No circuit inward dial trunks (OFZNCID)

Register OFZNCID counts calls the system routes to generalized no circuit treatment (GNCT). The system routes a call to GNCT when a direct inward dial or direct outward dial trunk is not available.

Register OFZNCID release history

Register OFZNCID was introduced before BCS20.

Associated registers

Register TRMTRS_TRSGNCT counts calls that the system routes to GNCT.

Registers TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, OFZNCOF

Associated logs

The system generates ATB100 when the system routes a call again. The system blocks the call when the call attempts to seize a trunk to a specified NPA or CO.

The system generates LINE138 if the system routes a call to a treatment after the call was call processing busy.

The system generates TRK138 if the system routes a call to a treatment after the call was call processing busy.

OM group OFZ2 (continued)

Register OFZNCIM

No circuit intermachine trunks (OFZNCIM)

Register OFZNCIM counts calls that the system routes to generalized no circuit treatment (GNCT). The system routes the calls to GNCT because a circuit intermachine trunk is not available.

Register OFZNCIM release history

Register OFZNCIM was introduced before BCS20.

Associated registers

Register TRMTRS_TRSGNCT counts calls that are routed to GNCT.

Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, and OFZNCOF

Associated logs

The system generates ATB100 when the system routes a call again. The system blocked the call while the call attempted to seize a trunk to a specified NPA or CO.

The system generates LINE138 if the system routes a call to treatment after the call was call processing busy.

The system generates TRK138 if the system routes a call to treatment after the call was call processing busy.

Register OFZNCIT

No circuit intertoll trunks (OFZNCIT)

Register OFZNCIT counts calls that the system routes to generalized no circuit treatment (GNCT) because an intertoll trunk is not available.

Register OFZNCIT release history

Register OFZNCIT was introduced before BCS20.

Associated registers

Register TRMTRS_TRSGNCT counts calls that the system routes to GNCT.

Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, and OFZNCOF

Associated logs

The system generates ATB100 when the system routes a call again. The system blocked the call when the call attempted to seize a trunk to a specified NPA or CO.

The system generates LINE138 if the system routes a call to treatment after the call was call processing busy.

The system generates TRK138 if the system routes a call to treatment after the call was call processing busy.

Register OFZNCLT

No circuit local tandem trunks (OFZNCIT)

Register OFZNCLT counts calls that the system routes to generalized no circuit treatment (GNCT) because a local tandem trunk is not available.

Register OFZNCLT release history

Register OFZNCLT was introduced before BCS20.

Associated registers

Register TRMTRS_TRSGNCT counts the calls that the system routes to GNCT.

Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, OFZNCOF

Associated logs

The system generates ATB100 when the system routes a call again. The system blocked the call when the call attempted to seize a trunk to a specified NPA or CO.

The system generates LINE138 if the system routes a call to treatment after the call was call processing busy.

The system generates TRK138 if the system routes a call to treatment after the call was call processing busy.

Register OFZNCOF

No circuit offnet trunks (OFZNCOF)

OM group OFZ2 (continued)

Register OFZNCOF counts calls that the system routes to generalized no circuit treatment (GNCT). The system routes the calls to GNCT because circuit offnet access or direct dial trunk is not available.

Register OFZNCOF release history

OFZNCOF was introduced before BCS20.

Associated registers

Register TRMTRS_TRSGNCT counts calls that the system routes to GNCT.

Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, and OFZNCOF

Associated logs

The system generates ATB100 when the system routes a call again. The system blocked the call when the call attempted to seize a trunk to a specified NPA or CO.

The system generates LINE138 if the system routes a call to treatment after the call was call processing busy.

The system generates TRK138 if the system routes a call to treatment after the call was call processing busy.

Register OFZNCON

No circuit connect trunks (OFZNCON)

Register OFZNCON counts calls that the system routes to generalized no circuit treatment (GNCT). The system routes the calls to GNCT because dedicated access or mobile telephone exchange trunk is not available.

Register OFZNCON release history

Register OFZNCON was introduced before BCS20.

Associated registers

Register TRMTRS_TRSGNCT counts calls that the system routes to GNCT.

Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, and OFZNCOF

Associated logs

The system generates ATB100 when the system routes a call again. The system blocks the call when the call attempts to seize a trunk to a specified NPA or CO.

The system generates LINE138 if the system routes a call to treatment after the call was call processing busy.

The system generates TRK138 if the system routes a call to treatment after the call was call processing busy.

Register OFZNCON

No circuit onnet trunks (OFZNCON)

Register OFZNCON counts calls that the system routes to generalized no circuit treatment (GNCT). The system routes the calls to GNCT because dedicated access or mobile telephone exchange trunk is not available.

Register OFZNCON release history

Register OFZNCON was introduced before BCS20.

Associated registers

Register TRMTRS_TRSGNCT counts calls that the system routes to GNCT.

Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, and OFZNCOF

Associated logs

The system generates ATB100 when the system routes a call again. The system blocked the call when the call attempted to seize a trunk to a specified NPA or CO.

The system generates LINE138 if the system routes a call to treatment after the call was call processing busy.

The system generates TRK138 if the system routes a call to treatment after the call was call processing busy.

Register OFZNCOT

No circuit other trunk (OFZNCOT)

OM group OFZ2 (continued)

Register OFZNCOT counts calls that the system routes to generalized no circuit treatment (GNCT). The system routes the calls to GNCT because one of the following types of trunk is not available:

- test line
- test desk
- maintenance trunks
- AV101

Register OFZNCOT release history

Register OFZNCOT was introduced before BCS20.

Associated registers

Register TRMTRS_TRSGNCT counts calls that are routed to GNCT.

Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, and OFZNCOF

Associated logs

The system generates ATB100 when the system routes a call again. The system blocked the call when the call attempted to seize a trunk to a specified NPA or CO.

The system generates LINE138 if the system routes a call to treatment after the call was call processing busy.

The system generates TRK138 if the system routes a call to treatment after the call was call processing busy.

Register OFZNCRT

No circuit trunks (OFZNCRT)

Register OFZNCRT counts calls that the system routes to GNCT. The system routes a call to GNCT because one of the following types of trunk is not available:

- 0+/0- tandem to TOPS
- outgoing to AMR2 or CAMA
- outgoing local
- recording completing outgoing
- TOPS outgoing

Register OFZNCRT release history

OFZNCRT was introduced before BCS20.

Associated registers

Register TRMTRS_TRSGNCT counts all calls that the system routed to GNCT.

Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, and OFZNCOF

Associated logs

The system generates ATB100 when the system routes a call again. The system blocks a call if the call attempted to seize a trunk to a specified NPA or CO.

The system generates LINE138 if the system routes a call to treatment after the call was call processing busy.

The system generates TRK138 if the system routs a call to treatment after the call was call processing busy.

Register OFZNCTC

No circuit toll completing trunks (OFZNCTC)

Register OFZNCTC counts calls that the system routes to generalized no circuit treatment (GNCT) because toll completing trunk is not available.

Register OFZNCTC release history

Register OFZNCTC was introduced before BCS20.

Associated registers

Register TRMTRS_TRSGNCT counts calls the system routes to GNCT.

Register TRMTRS_TRSGNCT = The sum of the OFZ2 subclass Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, and OFZNCOF

Associated logs

The system generates ATB100 when the system routes a call again. The system blocked the call when the call attempted to seize a trunk to a NPA or CO.

OM group OFZ2 (continued)

The system generates LINE138 if the system routes a call to treatment after the call was call processing busy.

The system generates TRK138 if the system routes a call to treatment after the call was call processing busy.

Register OFZNOSC

No service circuit trunks (OFZNOSC)

Register OFZNOSC counts calls the system routes to generalized no circuit treatment (GNCT). The system routes the call because automatic number announcement or automatic intercept trunk is not available.

Register OFZNOSC release history

Register OFZNOSC was introduced before BCS20.

Associated registers

Register TRMTRS_TRSGNCT counts calls that are routed to GNCT.

Register TRMTRS_TRSGNCT = The sum of the OFZ2 Registers, OFZNCIT, OFZNCTC, OFZNCLT, OFZNCBN, OFZNCID, OFZNOSC, OFZNCOT, OFZNCRT, OFZNCIM, OFZNCON, and OFZNCOF

Associated logs

The system generates ATB100 when the system routes a call again. The system blocked the call when the call attempted to seize a trunk to a specified NPA or CO.

The system generates LINE138 if the system routes a call to treatment after the call was call processing busy.

The system generates TRK138 if the system routes a call to treatment after the call was call processing busy.

Register PDLM

Machine dialed partial dials (PDLM)

Register PDLM counts the machine-dialed calls that the system routes to partial dial treatment.

Register PDLM release history

Register PDLM was introduced before BCS20.

Associated registers

Register TRMTCM_TCMPDIL counts calls that the system routes to partial dial timeout treatment.

Associated logs

The system generates TRK114 if the system cannot determine call destination during dial pulse (DP) reception for an incoming call.

The system generates TRK116 if the system cannot determine call destination during multi-frequency (MF) reception for an incoming call.

The system generates TRK138 if the system routes a call to treatment after the call was call processing busy.

The system generates TRK182 when the system cannot determine call destination of an incoming call because the system had problems during Digitone reception.

Register PSGM

Machine dialed permanent signal (PSGM)

Register PSGM counts machine-dialed calls that the system routes to permanent signal treatment.

Register PSGM release history

Register PSGM was introduced before BCS20.

Associated registers

Register TRMTCM_TCMPSIG counts calls that the system routes to permanent signal timeout treatment.

Associated logs

The system generates TRK115 when the system cannot determine call destination. The system was not able to determine call destination because the system had problems during dial pulse (DP) reception for an incoming call.

The system generates TRK117 when the system cannot determine call destination. The system was not able to determine call destination because system had problems during multi-frequency (MF) reception for an incoming call.

The system generates TRK138 if the system routes a call to treatment after the call was call processing busy.

OM group OFZ2 (end)

The system generates TRK183 when a permanent signal problem occurs. The problem occurs because the system had problems during Digitone reception of an incoming call.

OM group OGTQMS

OM description

Outgoing trunk queue management system (QMS)

OGTQMS records the number of times an operator enters outgoing trunk (OGT) keystroke actions.

Release history

OM group OGTQMS was introduced in BCS34.

Registers

OM group OGTQMS Registers display on the MAP terminal as follows:

```
KEYHITS
```

Group structure

OM group OGTQMS

Key field:
none

Info field:
key type {OT, CT4Q, ASST, LANG, DUALLANG} and key label as datafilled in table TQOGTKEY

Associated OM groups

OGTMP, OGTSP

Associated functional groups

The QMS functional group is associated with OM group OGTQMS.

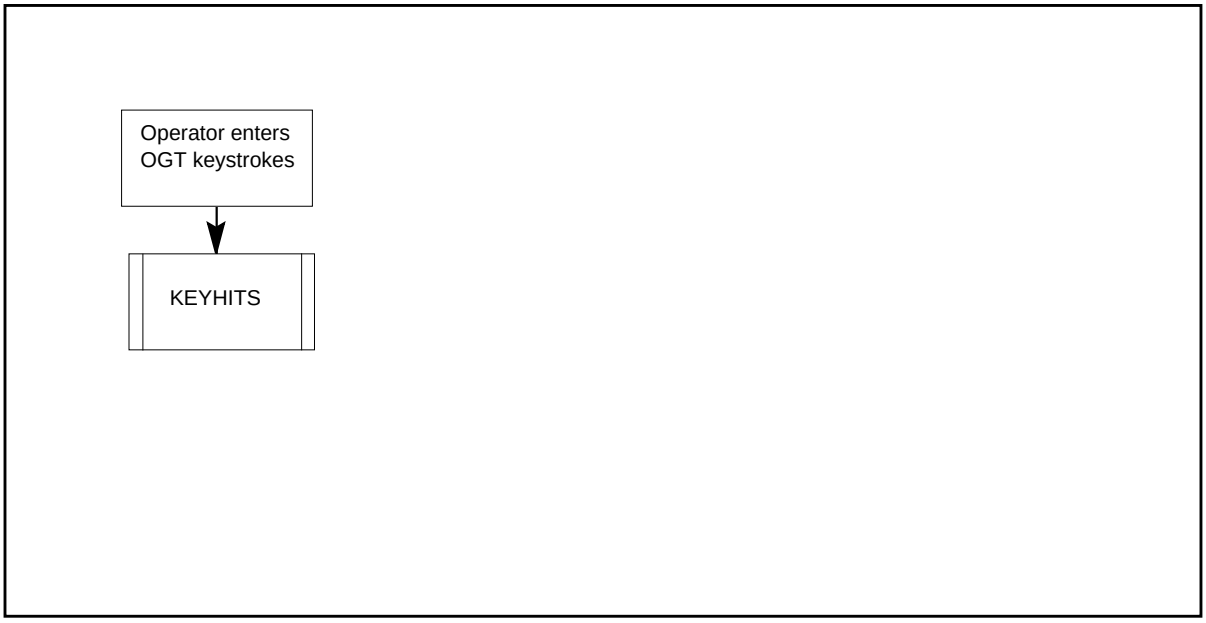
Associated functionality codes

The functionality codes associated with OM group OGTQMS are shown in the following table.

Functionality	Code
TOPS Host Queue Management System	NTXP41AA

OM group OGTQMS (end)

OM group OGTQMS registers



Register KEYHITS

OGTQMS key hits

KEYHITS is incremented each time the operator enters OGT keystroke actions.

Register KEYHITS release history

KEYHITS was introduced in BCS34.

Associated registers

None

Associated logs

None

Extension registers

None

OM group OHBTBASE

OM groups by release

The operational measurement (OM) groups that changed or originated in a release appear under each release heading.

NA02

The following list provides OM registers for:

- OHBTTYPE
- OHBTDTU
- OHBTRES

Register to OM group

All OM registers from all OM groups appear in alphanumeric order. The following table contains each OM register name and the OM group to which the OM register belongs.

Register	OM group
ORIG	OHBTTYPE
TOA	OHBTTYPE
TOS	OHBTTYPE
DTUMID	OHBTDTU
DTUNOW	OHBTDTU
DTUSZD	OHBTDTU
DTUSZD	OHBTRES
SZDFAIL	OHBTRES

Functional group to OM group

The following OM groups appear under each functional group heading:

- OM groups that monitor the function
- OM groups that monitor related activities on the switch

OM group OHBTBASE (continued)

BASE Line Maintenance

The OM groups for BASE Line Maintenance are as follows:

- OHBTTYPE
- OHBTDTU
- OHBTRES

Functionality code to OM group

Associated OM groups appear under each functionality code heading.

NT4X23AA

The associated OM groups for NT4X23AA, are as follows:

- OHBTTYPE
- OHBTDTU
- OHBTRES

Logs to registers

The OM groups that monitor the same or related activities on the switch appear under each log number.

Log number LINE 600

The following are associated registers for log number LINE 600:

- ORIG
- TOA
- TOS

Log number LINE 601

The following are associated registers for log number LINE 601:

- ORIG
- TOA
- TOS

Log number LINE 602

The following are associated registers for log number LINE 602:

- ORIG
- TOA

- TOS
- SZDFAIL

OM group OHBTDTU

OM description

Off-Hook Balance Test Digital Test Unit (OHBTDTU)

The OM group OHBTDTU monitors the following:

- the number of digital test units (DTU) available at midnight
- the number of DTUs available at the time of any OMSHOW request
- the number of DTU seizures after midnight

Release history

The OM group OHBTDTU was introduced in release NA02.

Registers

The following OM group OHBTDTU registers appear on the MAP terminal as follows:

```
DTUMID          DTUNOW          DTUSZD
```

Group structure

The OM group OHBTDTU provides one tuple.

Key field:
Key field does not apply.

Info field:
Info field does not apply.

Number of Tuples:
1

Associated OM groups

The OM group OHBTTYPE associates with the OM group OHBTDTU. Performed tests for ORIG, TOA and TOS in OM OHBTTYPE will equal the number of DTU seizures in OHBTDTU.

Associated functional groups

The Base Line Maintenance functional group associates with the OM group OHBTDTU.

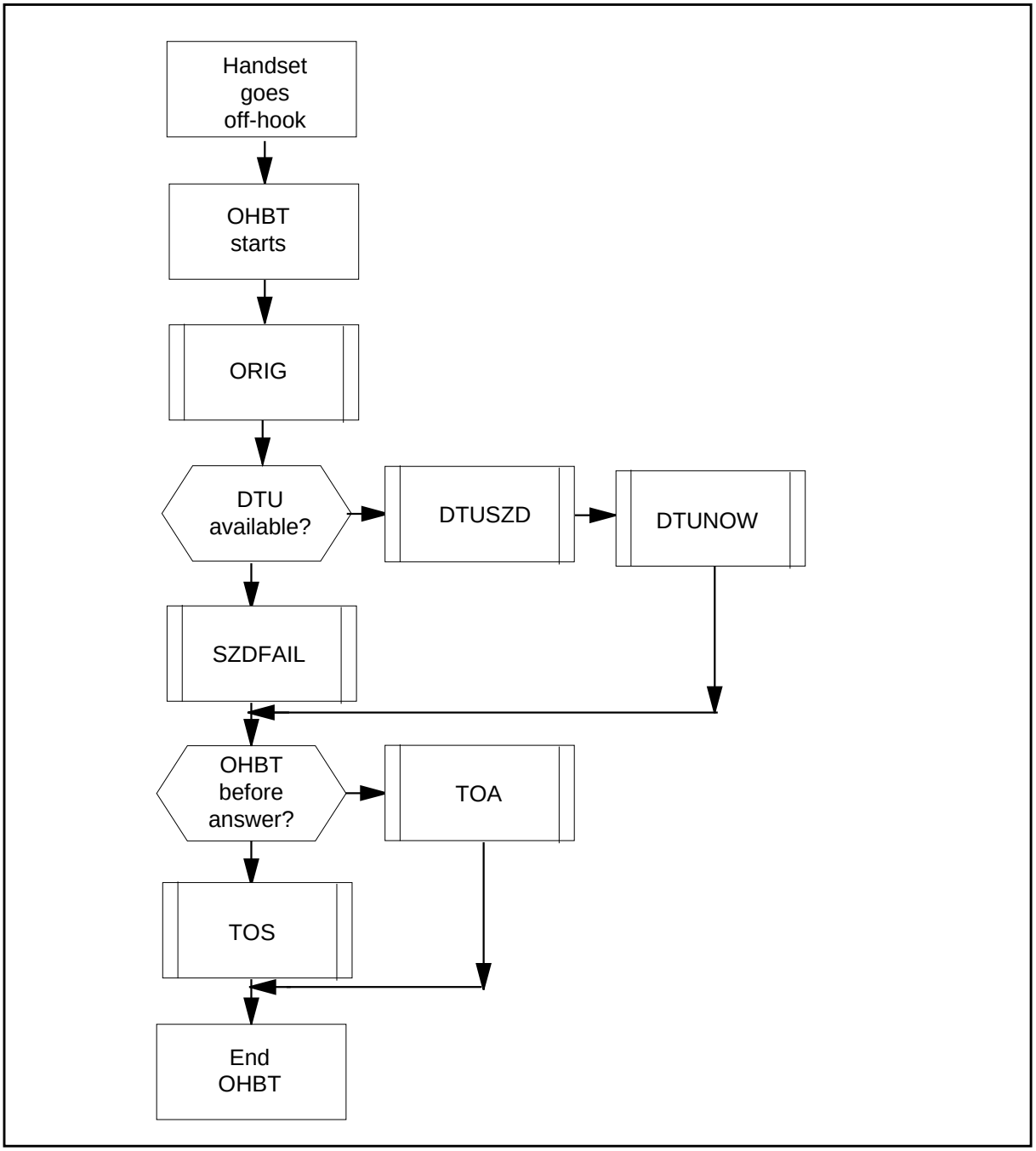
Associated functionality codes

The associated functionality codes for OM group OHBTDTU appear in the following table.

Functionality	Code
Digital Test Unit	NT4X23AA
Linecard on LM peripherals	NT2X17/18
Linecard on LCM peripherals	NT6X17/18
World linecards on LCM peripherals	NT6X17BA/A8BA

OM group OHBTDTU (continued)

OM group OHBTDTU registers



Register DTUMID

Total DTUs available at midnight (DTUMID)

Register DTUMID has one field. This register increases at midnight to give the number of available DTUs at midnight in the OHBTADMN DTU list.

Register DTUMID release history

Register DTUMID was introduced in release NA02.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DTUNOW

Total DTUs available now (DTUNOW)

Register DTUNOW has one field. This register increases each time a DTU is deleted or a DTU is added to the available list in table OHBTADMN. When the user makes an OMSHOW request, the register gives the number of available DTUs.

Register DTUNOW release history

Register DTUNOW was introduced in release NA02.

Associated registers

There are no associated registers.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register DTUSZD

Total DTU seizures in the day (DTUSZD)

Register DTUSZD has one field. This register increases when the system seizes a DTU for an OHBT.

Register DTUSZD release history

Register DTUSZD was introduced in release NA02.

OM group OHBTDTU (end)

Associated registers

The associated registers for DTUSZD are as follows:

- Registers ORIG, TOA and TOS in OM OHBTTYPE increase when the system performs an OHBT and seizes a DTU. The number of seizures in register DTUTOTAL will equal the number of test performed fields of these three registers.
- Register DTUSZD in OM OHBTRES increases when the system seizes a DTU within the hour.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group OHBTRES

OM description

Off-hook balance testing (OHBT)

The OHBT digital test unit (DTU) resource utilization (OHBTRES) OM group monitors the following:

- the number of completed OHBT tests
- the number of OHBT tests that failed to complete because of a lack of DTU availability

Release history

The OM group OHBTRES was introduced in NA02.

Registers

The following OM group OHBTRES registers appear on the MAP terminal as follows:

```
> omshow ohbtres active

OHBTRES

CLASS:  ACTIVE
START:1993/04/23 11:00:00 SAT; STOP:1993/04/23 11:04:40SAT
SLOWSAMPLES:   2; FASTSAMPLES: 0 ;

                                        DTUSZD        SZDFAIL
     MIDNIGHT_TO_ONE_AM                    0             0
     ONE_AM_TO_TWO_AM                      0             0
     TWO_AM_TO_THREE_AM                    0             0
            .                              .             .
            .                              .             .
            .                              .             .
            .                              .             .
     NINE_PM_TO_TEN_PM                     0             0
     TEN_PM_TO_ELEVEN_PM                   0             0
     ELEVEN_PM_TO_MIDNIGHT                 0             0
```

Group structure

The OM group OHBTRES provides 24 tuples.

Key field:

There is no key field.

OM group OHBTRES (continued)

Info field:
There is no info field.

Number of tuples:
24

Associated OM groups

The OM group OHBTDTU monitors DTU seizures and availability. The number of seized DTUs over 24 h in OM OHBTRES equals the number of DTU seizures listed in OM OHBTDTU.

Associated functional groups

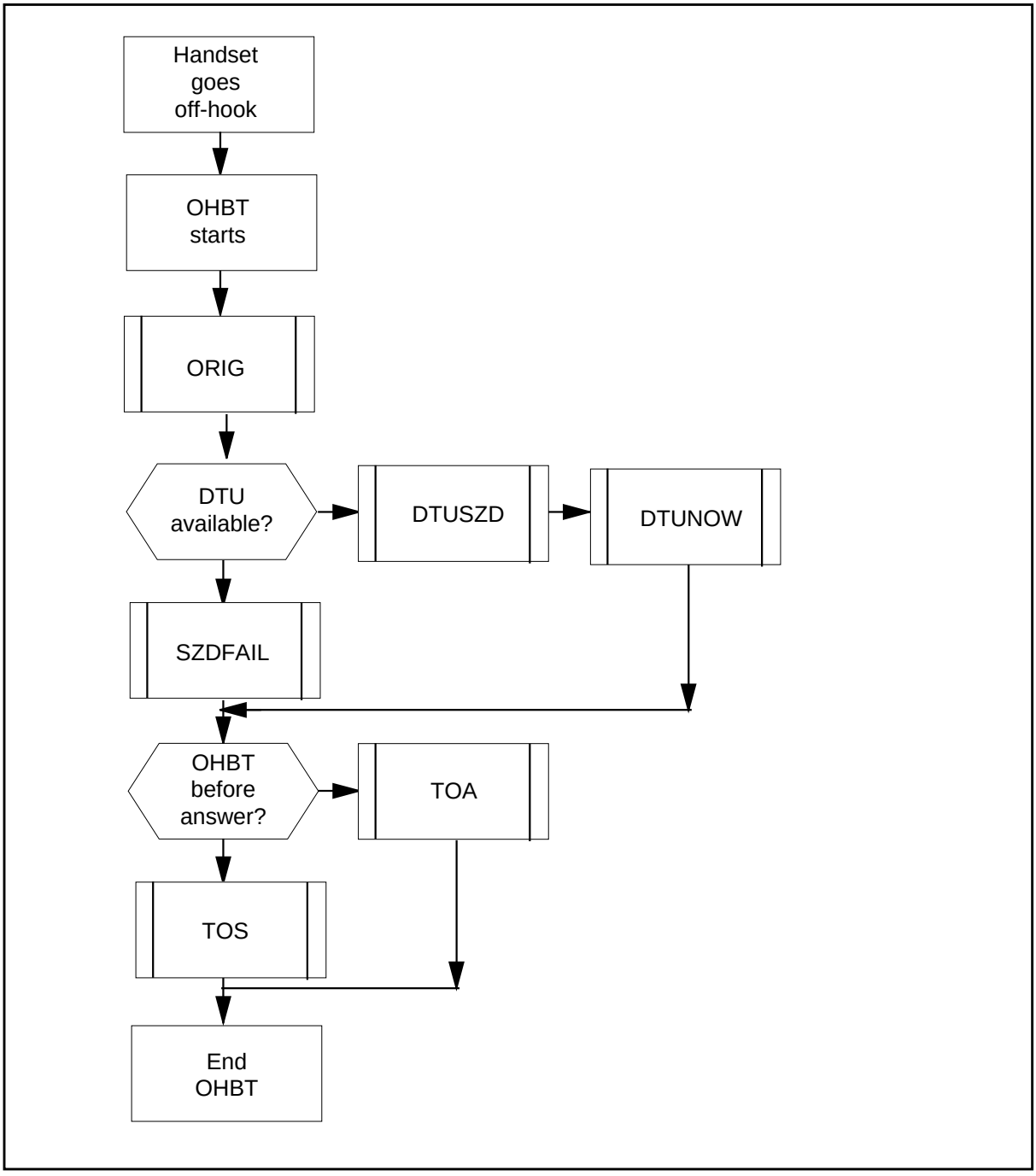
BASE Line Maintenance

Associated functionality codes

The associated functionality code for OM group OHBTRES appears in the following table.

Functionality	Code
Digital Test Unit	NT4X23AA
LM peripherals	NT2X17/18
LCM peripherals	NT6X17/18/19
World Line Cards on LCM peripherals	NT6X17BA/18/BA

OM group OHBTRES registers



Register DTUSZD

Total DTU seizures in the day (DTUSZD)

OM group OHBTRES (end)

The DTUSZD register increases if the OHBT test seized a DTU in the hour.

Register DTUSZD release history

Register DTUSZD was introduced in NA02.

Associated registers

Registers ORIG, TOA and TOS in OM OHBTTYPE increase when an OHBT test seizes a DTU. The seizures in register DTUTOTAL equal the number of tests that the system performs for these three registers.

Register SZDFAIL increases when a DTU is not available to be seized.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register SZDFAIL

Seize failed (SZFAIL)

Register SZDFAIL increases every hour in the correct field when an OHBT cannot seize the DTU. The hour of the day determines the field that increases.

Register release history

Register SZDFAIL was introduced in NA02.

Associated registers

Registers ORIG, TOA and TOS in OM OHBTTYPE increase when an OHBT does not recommend a balance network configuration.

Register DTUSZD increases when an OHBT seizes a DTU.

Associated logs

The system generates log number 602 when an OHBT cannot seize the DTU.

Extension registers

There are no extension registers.

OM group OHBTTYPE

OM description

Off-Hook Balance Test Results per test type (OHBTTYPE)

The OM group OHBTTYPE monitors the following:

- the number of Off-Hook Balance Tests (OHBT) that the system performs
- the number of OHBTs that fail to complete

Release history

The OM group OHBTTYPE was introduced in release NA02.

Registers

The following OM group OHBTTYPE registers appear on the MAP terminal when the user issues the OMSHOW command.

OMSHOW command: >omshow ohbttype active

```
OHBTTYPE

CLASS:   ACTIVE
START: 1993/04/23 11:00 SAT; STOP:1993 04/23 11:04:40 SAT;
SLOWSAMPLES:        2; FASTSAMPLES:         0;

                          ORIG    TOA    TOS

   OHBT_PERFORMED          0       0     0
   OHBT_FAILURES           0       0     0
```

Group structure

The OM group OHBTTYPE provides two tuples.

Key field:
Key field does not apply.

Info field:
Info field does not apply.

OM group OHBTTYPE (continued)

Number of tuples:
2

Associated OM groups

The OM group OHBTDTU associates with the OM group OHBTTYPE. The OM group OHBTDTU tracks the DTU seizures and availability. The performed tests for ORIG, TOA and TOS in OM OHBTTYPE equals the DTU seizures in OM OHBTDTU.

Associated functional groups

The Base Line Maintenance functional group associates with the OM group OHBTTYPE.

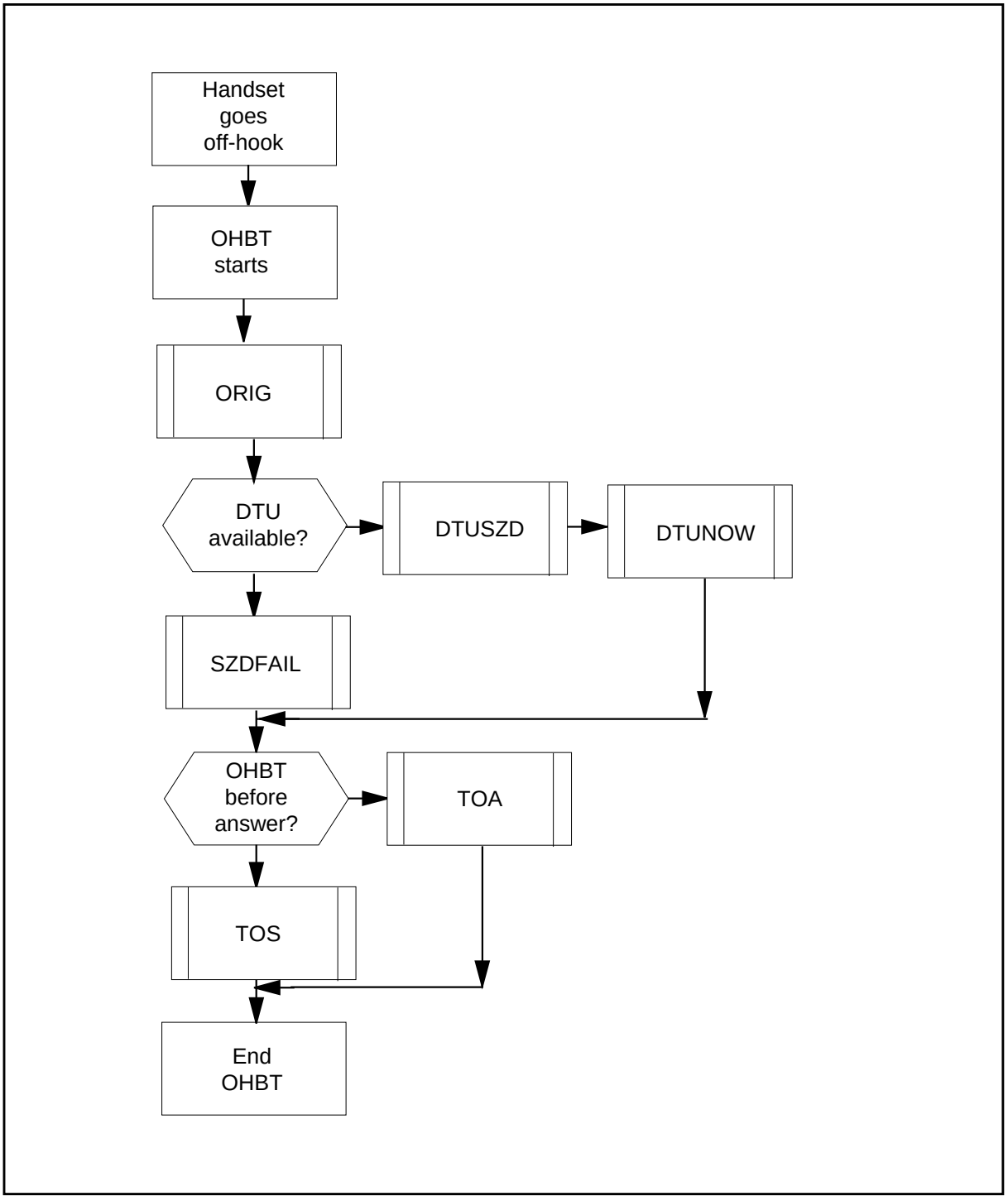
Associated functionality codes

The associated functionality codes for OM group OHBTTYPE appear in the following table.

Functionality	Code
Digital Test Unit	NT4X23AA
Linecard on LM peripherals	NT2X17/18
Linecard on LCM peripherals	NT6X17/18
World linecards on LCM peripherals	NT6X17BA/A8BA

OM group OHBTTYPE (continued)

OM group OHBTTYPE registers



OM group OHBTTYPE (continued)

Register ORIG

Originating OHBT (ORIG)

Register ORIG register has two fields. The first field increases when the system performs an originating OHBT. The second field increases when an OHBT does not recommend a network balance configuration.

Register ORIG release history

Register ORIG was introduced in release NA02.

Associated registers

The associated registers for ORIG are as follows:

- Register DTUSZD in OM group OHBTRES increases if an OHBT seized a DTU in the hour.
- Register DTUTOTAL in OM group OHBTDTU increases if an OHBT seized a DTU.
- Register SZDFAIL in OM group OHBTRES increases if an OHBT failed to seize a DTU because no DTU was available.

Associated logs

The associated logs for ORIG are as follows:

- The system generates log 600 when an OHBT recommends the current network balance configuration.
- The system generates log 601 when an OHBT recommends a new network balance configuration.
- The system generates log 602 when an OHBT fails to complete and does not recommend a network balance configuration.

Extension registers

There are no extension registers.

Register TOA

Terminating test on answer OHBT (TOA)

Register TOA has two fields. The first field increases when the system performs a terminating OHBT. The second field increases when an OHBT does not recommend a network balance configuration.

Register TOA release history

Register TOA was introduced in release NA02.

Associated registers

The associated registers for TOA are as follows:

- Register DTUTOTAL in OM group OHBTDTU increases if an OHBT seized a DTU.
- Register DTUSZD in OM group OHBTRES increases if an OHBT seized a DTU in the hour.
- Register SZDFAIL in OM group OHBTRES increases if an OHBT failed to seize a DTU because no DTU was available.

Associated logs

The associated logs for TOA are as follows:

- The system generates log 600 when an OHBT recommends the current network balance configuration.
- The system generates log 601 when an OHBT recommends a new network balance configuration.
- The system generates log 602 when an OHBT fails to complete and does not recommend a network balance configuration.

Extension Registers

There are no extension registers.

Register TOS

Terminating test on silence (TOS)

Register TOS has two fields. The first field increases when the system performs a terminating OHBT. The second field increases when an OHBT does not recommend a network balance configuration.

Register TOS release history

Register TOS was introduced in release NA02.

Associated registers

The associated registers for TOS are as follows:

- Register DTUTOTAL in OM group OHBTDTU increases if an OHBT seized a DTU.
- Register DTUSZD in OM group OHBTRES increases if an OHBT seized a DTU in the hour.
- Register SZDFAIL in OM group OHBTRES increases if an OHBT does not seize a DTU because no DTU was available.

OM group OHBTTYPE (end)

Associated logs

The associated logs for TOS are as follows:

- The system generates log 600 when an OHBT recommends the current network balance configuration.
- The system generates log 601 when an OHBT recommends a new network balance configuration.
- The system generates log 602 when an OHBT fails to complete and does not recommend a network balance configuration.

Extension registers

There are no extension registers.

OM group OHQCBQCG

OM description

Off-hook queuing and call back queuing per customer group (OHQCBQCG)

The OM group OHQCBQCG provides information about the following integrated business network (IBN) features for a customer group:

- Off-hook Queuing (OHQ)
- Call Back Queuing (CBQ)

If the system cannot complete a call from a station or an incoming trunk, the calling party can wait off-hook for an idle trunk. The system cannot complete the call because an idle outgoing trunk in the route set is not available. The system gives the caller off-hook queue tone. The system places the caller in a queue that associates with the outgoing trunk group. When an idle outgoing trunk becomes available, the system completes the call.

The CBQ feature activates when a caller encounters an all-trunks-busy (ATB) condition. The system places the call in a queue that associates with the trunk group. The system informs the caller when a trunk becomes available. The system uses the number dialed earlier to complete the call.

The OHQ and CBQ features are assigned in table NCOS.

Use of either OHQ or CBQ features can indicate that more trunks than necessary are on a specified route.

Release history

The OM group OHQCBQCG was introduced in BCS20.

Registers

The OM group OHQCBQCG registers appear on the MAP terminal as follows:

CBQDEACT	CBQDELT	CBQOK	CBQOVFL
CBQOVWRT	CBQPPT	CBQRAT	OHQABN
OHQBLOCK	OHQOFFER	OHQOVFL	

Group structure

The OM group OHQCBQCG provides one tuple for each customer group.

Key field:

There is no key field.

OM group OHQCBQCG (continued)

Info field:
OMIBNGINGO identifies the CUSTNAME of the customer group in table CUSTENG.

Parameter AVG_#_TGS_PER_OHCBQCALL in table OFCENG specifies the average number of trunk groups that are involved in OHQ and CBQ.

Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the number of transaction blocks in use for OHQ and CBQ.

Parameter NO_OF_FTR_CONTROL_BLKS in table OFCENG specifies the number of feature control blocks in use for OHQ and CBQ.

Parameter NO_OF_FTR_DATA_BLKS in table OFCENG specifies the number of FTRQ2 feature data blocks in use for OHQ and CBQ.

Parameter FTRQAGENTS in table OFCENG specifies the number of agents that can have the CBQ feature at any given time.

Parameter FTRQ2WAREAS in table OFCENG specifies the number of FTRQ2 word areas required for the engineering interval that associates with CBQ.

Associated OM groups

The OM group OHQCBQRT provides information about the integrated business network (IBN) features OHQ and CBQ for a route.

Associated functional groups

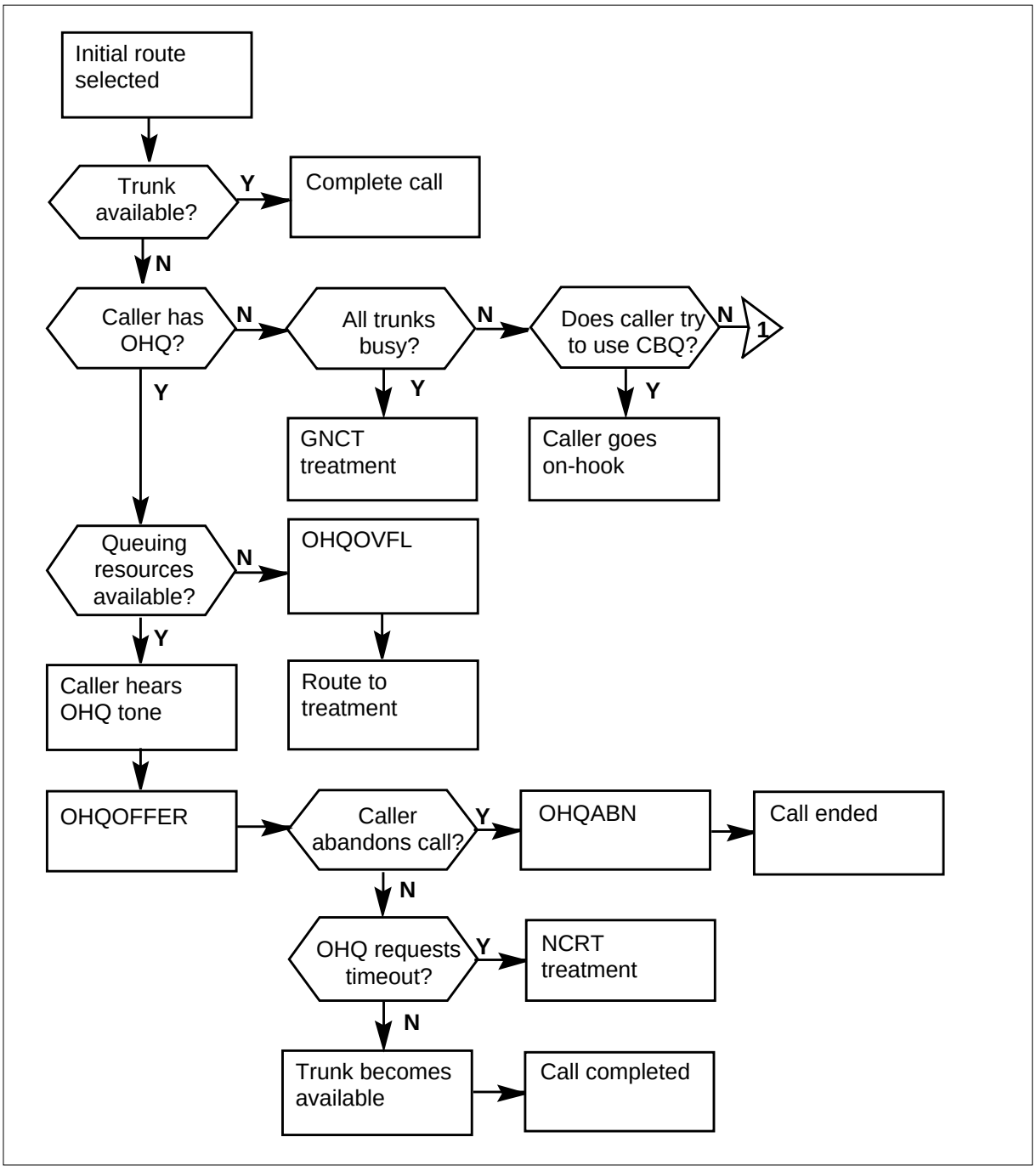
The OM group OHQCBQCG associates with the IBN Integrated Business Network functional group.

Associated functionality codes

The associated functionality codes for OM group OHQCBQCG appear in the following table.

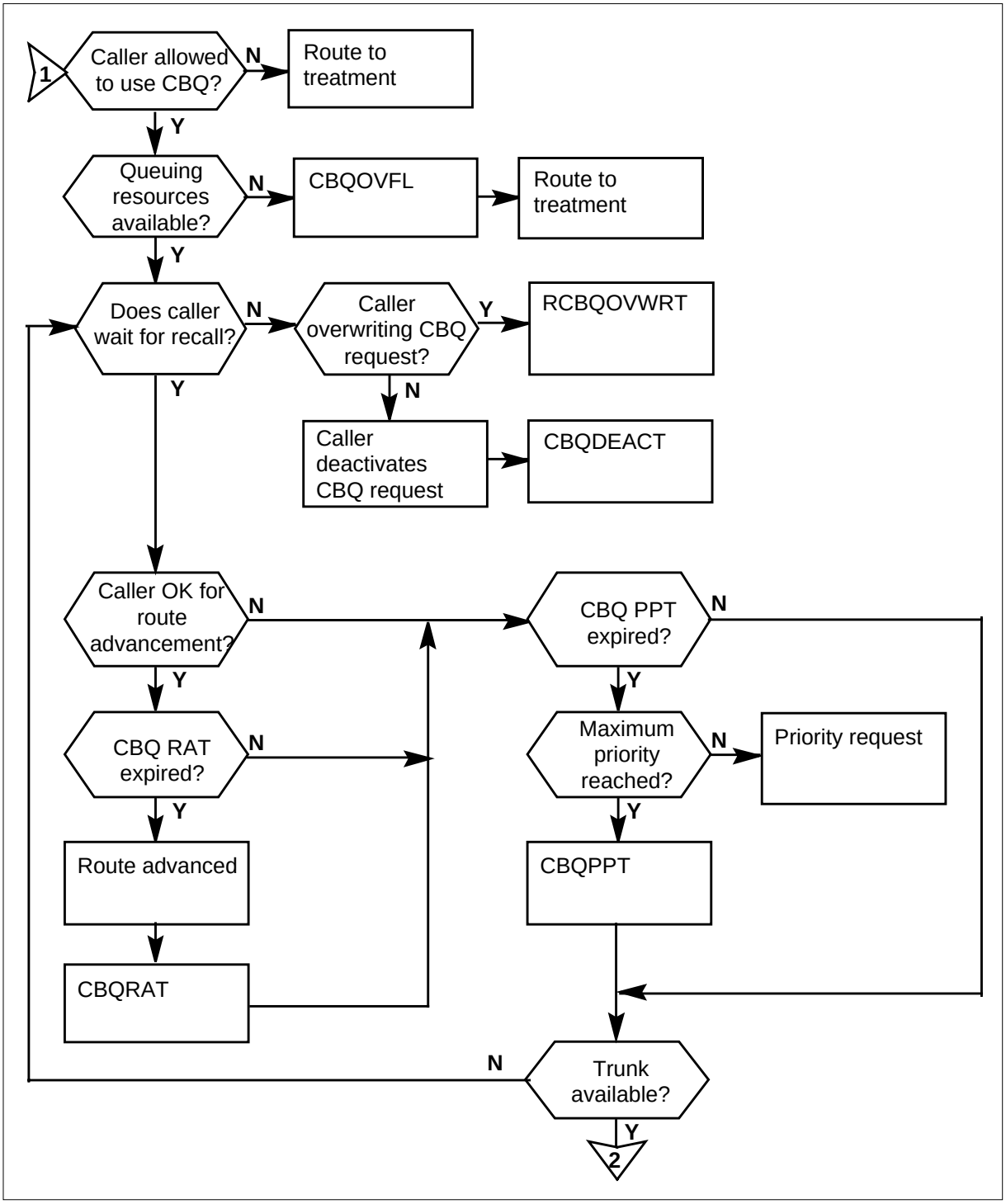
Functionality	Code
Trunk Queueing	NTX105AA
Integrated Business Network (Basic). The group is present but does not have values unless the software for off-hook and call back queuing is present.	NTX100AA

OM group OHQCBQCG registers

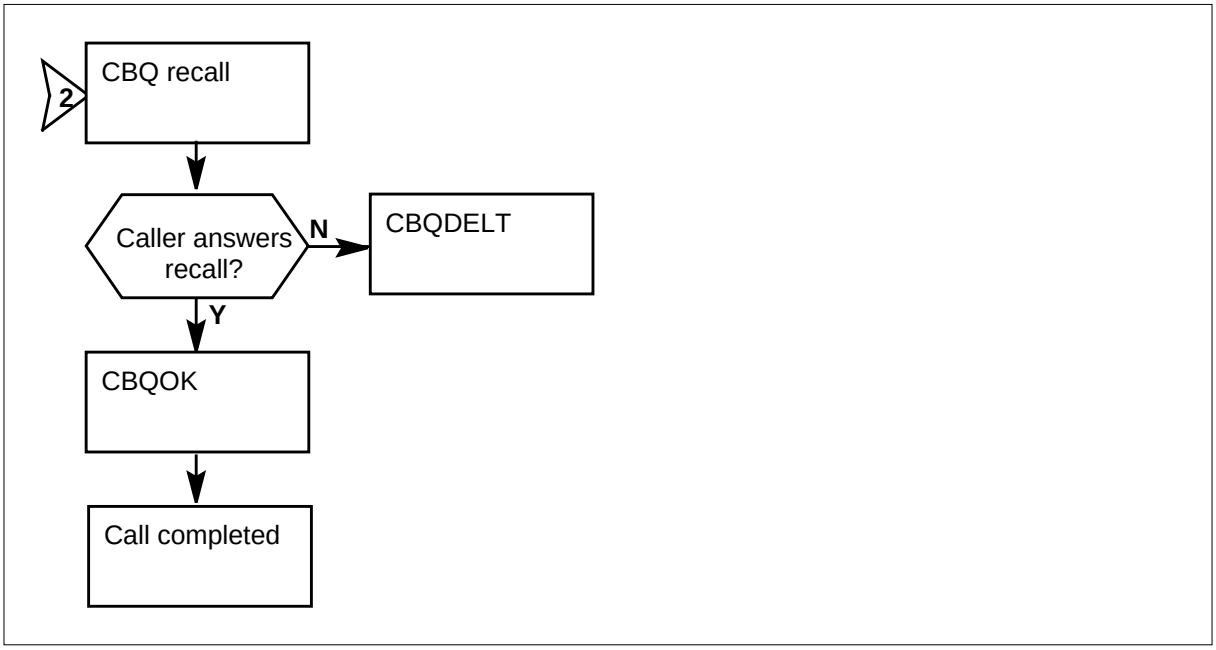


OM group OHQCBQCG (continued)

OM group OHQCBQCG registers (continued)



OM group OHQCBQCG registers (continued)



Register CBQDEACT

Call back queuing deactivations (CBQDEACT)

Register CBQDEACT increases when the system cancels a CBQ request. To cancel the CBQ request the subscriber dials the CBQ deactivation code while the CBQ is active. To cancel the CBQ request the subscriber can also press the CBQ key on a business set while CBQ is active.

Register CBQDEACT release history

Register CBQDEACT was introduced in BCS20.

Associated registers

Register OHQCBQRT_RTCBQDEA increases when the system cancels a CBQ request. To cancel the CBQ request the subscriber dials the CBQ deactivation code while the CBQ is active. To cancel the CBQ request, the subscriber can also press the CBQ key on a business set while CBQ is active.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group OHQCBQCG (continued)

Register CBQDELT

Call back queuing deletions (CBQDELT)

Register CBQDELT increases when the system deletes a CBQ request.

The system deletes the request for one of the following reasons:

- the originator did not answer the recall
- the system removes the line from service
- the system cancels the CBQ option.

Register CBQDELT release history

Register CBQDELT was introduced in BCS20.

Associated registers

Registers OHQCBQRT_RTCBQDELT counts deletions of CBQ for each route.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CBQOK

Call back queuing okay (CBQOK)

Register CBQOK increases when the system completes a CBQ request and the originator answers the recall ringback.

Register CBQOK release history

Register CBQOK was introduced in BCS20.

Associated registers

Register OHQCBQRT_RTCBQOK counts successful completions of CBQ for each route.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CBQOVFL

Call back queuing overflows (CBQOVFL)

Register CBQOVFL increases when the system cannot complete a CBQ request because of not enough software resources.

Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the number of transaction blocks used in an office for both OHQ and CBQ. Parameter AVG_#_TGS_PER_OHCBQCALL in table OFCENG specifies the average number of trunk groups involved in an OHQ/CBQ call.

If transaction blocks are not available during a CBQ request, the system denies the request.

Register CBQOVFL release history

Register CBQOVFL was introduced in BCS20.

Associated registers

Register OHQCBQRT_RTCBQOVF counts CBQ requests for each route that the system cannot complete because there are not enough software resources.

Associated log

The system generates LINE138 and TRK138 when the system routes a call to treatment after being call processing busy.

Extension registers

There are no extension registers.

Register CBQOVWRT

Call back queuing overwrites (CBQOVWRT)

Register CBQOVWRT increases when other CBQ or ring again (RAG) requests overwrite a CBQ request. This procedure occurs when the caller has a CBQ request pending and the caller activates CBQ on another call. The caller must activate CBQ on this call before completion of the original request.

To overwrite a CBQ request on a business set, cancel a remaining CBQ request. Cancellation of the CBQ request must occur before activation of the feature can occur on a different call.

Register CBQOVWRT release history

Register CBQOVWRT was introduced in BCS20.

OM group OHQCBQCG (continued)

Associated registers

Register OHQCBQRT_RTCBQOVW counts CBQ requests for each route that other CBQ or RAG requests overwrite.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CBQPPT

Call back queuing priority promotion timer (CBQPPT)

Register CBQPPT increases when the CBQ priority promotion timer for a call ends and the CBQ priority promotion of the call occurs.

The queue priority promotion time is the maximum time a station queues at a specified level in the priority ordered queue. The CBQ starting priority can be one of four levels. The CBQ maximum priority is the highest level the station can achieve in the priority-ordered queue. The request qualifies for priority promotion when the starting priority is less than the maximum priority. When the priority promotion tone expires, the starting priority is less than the maximum priority.

The CBQ priority promotion timer appears in table CUSTSTN. The CBQ starting priority and maximum priority are in table NCOS.

Register CBQPPT release history

Register CBQPPT was introduced in BCS20.

Associated registers

Register OHQCBQRT_RTCBQPPT increases when the CBQ priority promotion timer for a call ends and the CBQ priority promotion of the call occurs.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register CBQRAT

Call back queuing route advance timer (CBQRAT)

Register CBQRAT increases when the CBQ route advance timer for a CBQ request ends. Qualify the CBQ request for CBQ route advance timing.

The CBQ route advance timer prevents long delays during heavy traffic periods. At the start, a request to queue a call back on a route with a lower cost occurs. When the timer expires, the CBQ request qualifies for completion on routes with both higher and lower costs.

To apply this feature to stations in a customer group, enter the field CBQRAT in table CUSTSTN.

Register CBQRAT release history

Register CBQRAT was introduced in BCS20.

Associated registers

Register OHQCBQRT_RTCBQRAT increases when the CBQ route advance timer for a CBQ request ends.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register OHQABN

Off-hook queuing abandons (OHQABN)

Register OHQABN increases when the calling party abandons the OHQ attempt before the system can complete the request. This register counts calls that one of the following methods abandons:

- go on-hook to terminate the OHQ attempt
- flash and going on-hook to activate CBQ
- activate the CBQ feature on a business set and going on-hook

Register OHQABN release history

Register OHQABN was introduced in BCS20.

Associated registers

Register OHQCBQRT_RTOHQABN increases when the calling party abandons the OHQ attempt before the system completes the request.

OM group OHQCBQCG (continued)

Associated logs

Log LINE106 increases when the system encounters problems during dial pulse reception.

Log LINE108 increases when the system encounters problems during Digitone reception.

Log TRK114 increases when the following events occur:

- the system encounters problems during dial pulse reception for an incoming call over a trunk
- the system does not determine the call destination

Log TRK116 increases when the following events occur:

- the system encounters problems during multifrequency reception for an incoming call over a trunk
- the system does not determine the call destination

Log TRK162 increases when the system encounters problems during outpulsing of a trunk-to-trunk or line-to-line call. The outpulsing occurs while digital multifrequency signaling is in use.

Extension registers

There are no extension registers.

Register OHQBLOCK

Off-hook queuing blockages (OHQBLOCK)

Register OHQBLOCK increases when the system blocks an OHQ request because the system cannot complete the request before a specified wait timeout. Entries for the wait timeout appear in table IBNRTE.

Register OHQBLOCK increases when a likelihood test fails. The likelihood test decides if a call can be assigned an idle trunk within the wait timeout.

Register OHQBLACK release history

Register OHQBLACK was introduced in BCS20.

Associated registers

Register TRMT1_GNCT increases when the system routes a call that failed the likelihood test to the treatment.

For each route, register OHQCBQRT_RTOHQBLOCK increases when the system blocks an OHQ request. The system blocks the OHQ request because the system cannot complete the request in a specified timeout period.

Associated logs

The system generates ATB100 when the system blocks an attempt to seize a trunk to a specified numbering plan area (NPA). The system generates ATB100 when the system blocks an attempt to seize a trunk to a specified central office (CO). The call advances to another route.

Extension registers

There are no extension registers.

Register OHQOFFER

Off-hook queuing offers (OHQOFFER)

Register OHQOFFER increases when the system offers OHQ to a user because trunks are not available on the preferred route.

Register OHQOFFER release history

Register OHQOFFER was introduced in BCS20.

Associated registers

Register OHQCBQRT_RTOHQOFR increases when the system blocks an OHQ request because the system cannot complete the request in a specified timeout period. The register increases for each route.

Associated logs

The system generates ATB100 when the system blocks an attempt to seize a trunk to a specified NPA or CO. The call advances to another route.

Extension registers

There are no extension registers.

Register OHQOVFL

Off-hook queuing overflows (OHQOVFL)

Register OHQOVFL increases when the system cannot complete an OHQ request because of not enough software resources.

Parameter AVG_#_TGS_PER_OHCBQCALL in table OFCENG specifies the average number of trunk groups that will be involved in an OHQ or CBQ call.

OM group OHQCBQCG (end)

Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the number of transaction blocks that an office can use for OHQ and CBQ.

Register OHQOVFL release history

OHQOVFL was introduced in BCS20.

Associated registers

For each route, register OHQCBQRT_RTOHQOVFL increases when the system cannot complete an OHQ request because of not enough software resources.

Associated logs

Logs LINE138 and TRK138 increase when the system routes a call to a treatment because a log is call-processing busy.

Extension registers

There are no extension registers.

OM group OHQCBQR2

OM description

Off-hook queuing and call back queuing for table IBNRT2 routes (OHQCBCR2)

The OM group OHQCBCR2 provides information for each group in table IBNRT2 on the following:

- Meridian Digital Centrex (MDC) features
- off-hook queuing (OHQ)
- call back queuing (CBQ)

If the system cannot complete a call from a station or an incoming trunk, the calling party can wait off-hook for an idle trunk. The system cannot complete the call because of an idle outgoing trunk in the route set is not available. The system gives the caller an off-hook queue tone. The system places the caller in a queue that associates with the outgoing trunk group. The system completes the call when an idle outgoing trunk becomes available.

The CBQ feature becomes active when a caller encounters an all-trunks-busy (ATB) condition. The system places the call in a queue that associates with the trunk group. The system informs the caller when a trunk becomes available. The system uses the number dialed earlier to complete the call.

The OHQ and CBQ features are assigned in table NCOS.

The OHQCBQR2 contains 11 registers that count:

- the CBQ requests that the system cancels
- the CBQ requests that the system deletes
- the CBQ requests that the system completes
- the CBQ requests that the system cannot complete because of not enough software resources
- the CBQ requests that other CBQ or ring again requests overwrite
- the times the CBQ priority promotion timer for a call comes to an end and the times the CBQ priority promotion occurs
- the number of times the CBQ route advance timer for a CBQ request comes to an end
- the OHQ attempts that the calling party abandons
- the OHQ requests that the system blocks

OM group OHQCBQR2 (continued)

- the number of times the system offers OHQ to a user because trunks are not available on the desired route
- the OHQ requests that the system cannot complete because of not enough software resources

Release history

The OM group OHQCBQR2 was introduced in BCS31.

Registers

The OM group OHQCBQR2 registers appear on the MAP terminal as follows:

R2CBQDEA	R2CBQDEL	R2CBQOK	R2CBQOVF
R2CBQOWR	R2CBQPPT	R2CBQRAT	R2CHQABN
R2CHQBLK	R2CHQOFR	R2CHQOVF	

Group structure

The OM group OHQCBQR2 provides one tuple for each route in table IBNRT2.

Key Field:
There is no key field.

Info Field:
OM_IBN_RT2_INFO. The route number appears in table IBNRT2.

Associated OM groups

The OM group OHQCBQR3 provides information on the MDC features OHQ and CBQ for each route in table IBNRT3.

The OM group OHQCBQR4 provides information on the MDC features OHQ and CBQ for each route in table IBNRT4.

Associated functional groups

There are no associated functional groups.

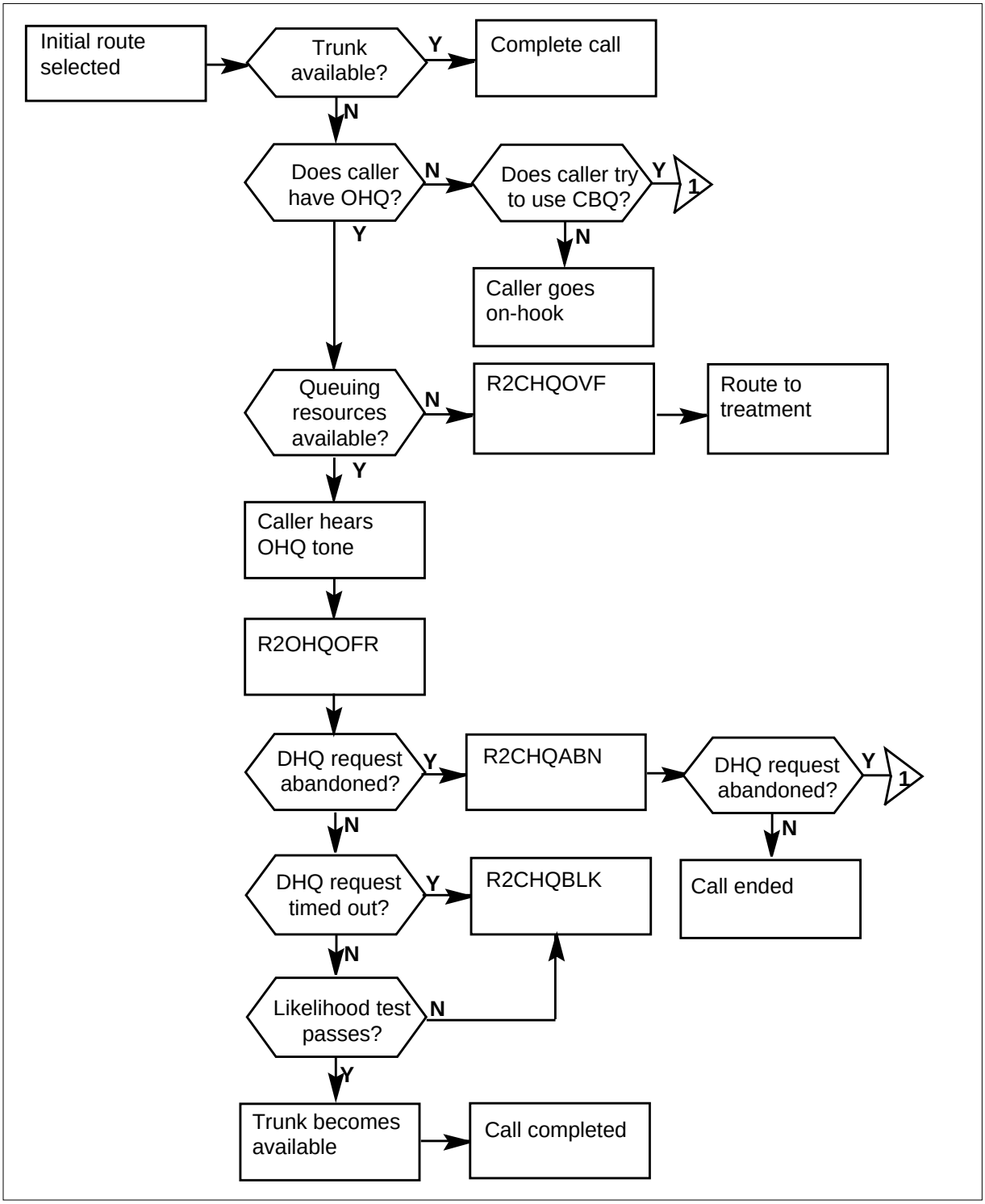
Associated functionality codes

The associated functionality codes for OM group OHQCBQR2 are in the following table.

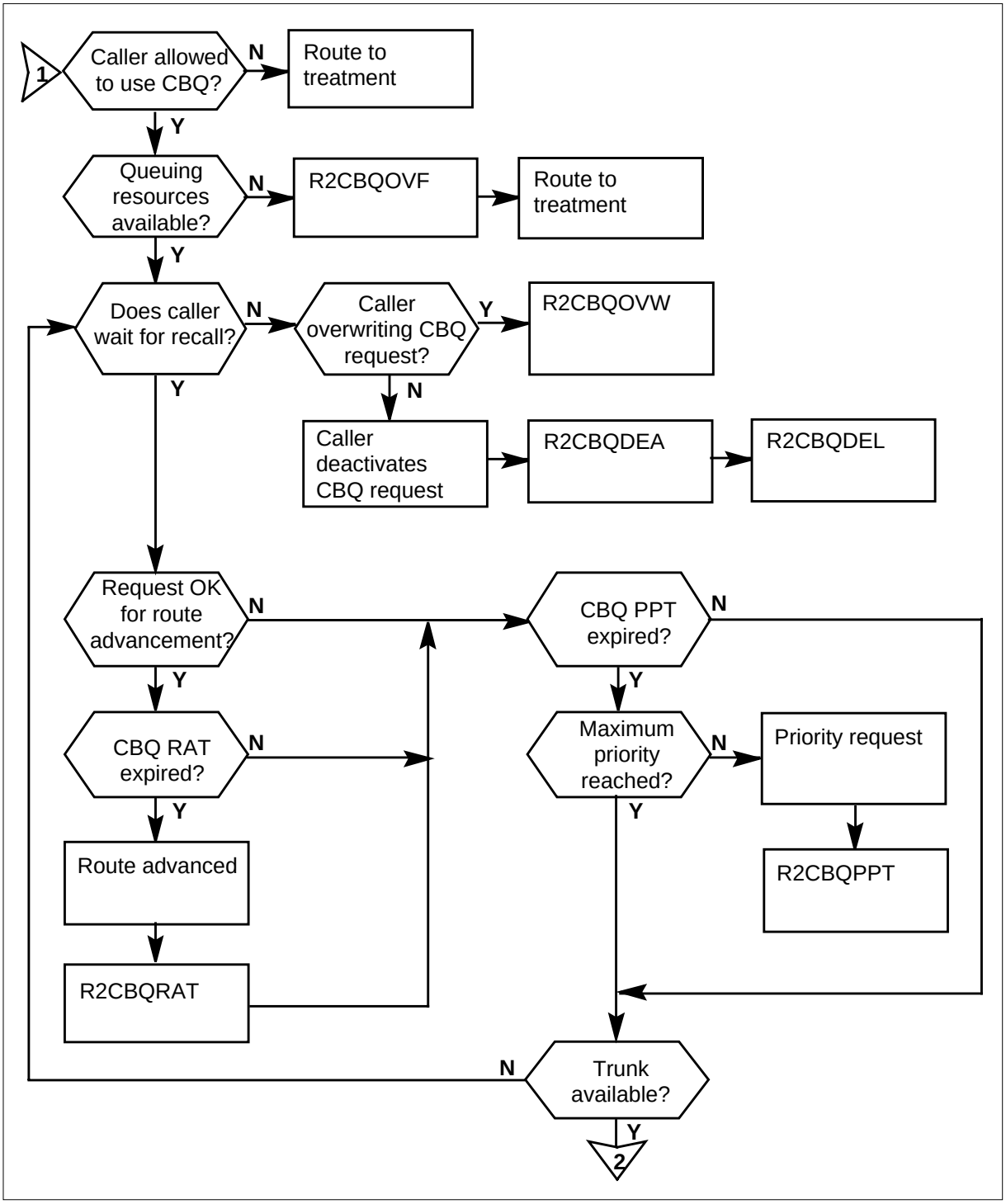
Functionality	Code
Integrated Business Networks-Basic	NTX100AA

OM group OHQCBQR2 (continued)

OM group OHQCBQR2 registers

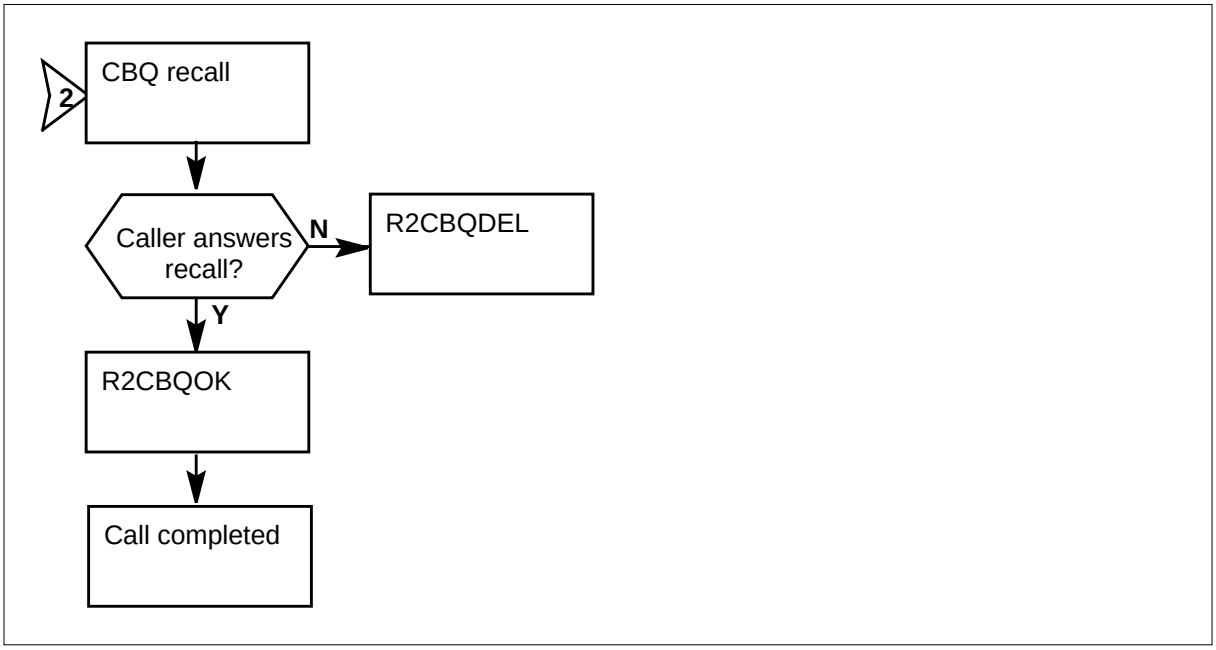


OM group OHQCBQR2 registers (continued)



OM group OHQCBQR2 (continued)

OM group OHQCBQR2 registers (continued)



Register R2CBQDEA

Route call back queuing deactivations (R2CBQDEA)

Register R2CBQDEA counts CBQ requests that the system cancels. The system cancels these requests when the subscriber dials the CBQ deactivation code.

Register R2CBQDEA release history

Register R2CBQDEA was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_CBQDEACT counts CBQ requests that the system cancels. The system cancels these requests when the subscriber dials the CBQ deactivation code while CBQ is active. The system also cancels these requests when the subscriber presses the CBQ key on a business set while CBQ is active.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register R2CBQDEL

Route call back queuing deletions (R2CBQDEL)

Register R2CBQDEL counts CBQ requests that the system deletes.

The system deletes the request for one of the following reasons:

- the originator does not answer the recall
- the system removes the line from service
- the system deactivates the CBQ option
- the system removes the CBQ option from the line

Register R2CBQDEL release history

Register R2CBQDEL was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_CBQDELT counts CBQ requests that the system deletes.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register R2CBQOK

Route call back queuing okay (R2CBQOK)

Register R2CBQOK increases when the system completes a CBQ request and the originator answers the recall ringback.

Register R2CBQOK release history

Register R2CBQOK was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_CBQOK increases when the system completes a CBQ request and the originator answers the recall ringback.

Associated logs

There are no associated logs.

OM group OHQCBQR2 (continued)

Extension registers

There are no extension registers.

Register R2CBQOVF

Route call back queuing overflows (R2CBQOVF)

Register R2CBQOVF counts CBQ requests that the system cannot complete. The system cannot complete the requests because of not enough software resources.

Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the number of transaction blocks that can be used in an office for OHQ and CBQ.

Parameter AVG_#_TGS_PER_OHCBQCALL in table OFCENG specifies the average number of trunk groups involved in an OHQ/CBQ call.

If transactions are not available during a CBQ request, the system denies the request.

Register R2CBQOVF release history

Register R2CBQOVF was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_CBQOVFL counts CBQ requests that the system cannot complete because of not enough software resources.

Associated logs

The system generates LINE138 and TRK138 when the system routes a call to a treatment after being call processing busy.

Extension registers

There are no extension registers.

Register R2CBQOWR

Route call back queuing overwrites (R2CBQOWR)

Register R2CBQOWR counts CBQ requests that other CBQ or ring again (RAG) requests overwrite. This procedure occurs when the following occur:

- the caller has a CBQ request that is pending
- the caller activates CBQ on another call before the system completes the original request

Register R2CBQOWR increases when a single line set dials an access code.

Register R2CBQOWR release history

Register R2CBQOWR was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_CBQOVWRT counts CBQ requests that other CBQ or RAG requests overwrite.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register R2CBQPPT

Route call back queuing priority promotion timer (R2CBQPPT)

Register R2CBQPPT increases when the CBQ priority promotion timer for a call comes to an end. Register R2CBQPPT increases when CBQ priority promotion of the call occurs.

The queue priority promotion time is the maximum time a station will be queued at a specified level in the priority-ordered queue. The CBQ starting priority can be one of four levels. The CBQ maximum priority is the highest level the station can reach in the priority-ordered queue. The request qualifies for priority promotion when the starting priority is less than the maximum priority. When the priority promotion timer expires, the starting priority is less than the maximum priority.

Register R2CBQPPT release history

Register R2CBQPPT was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_CBQPPT increases when the CBQ0 priority promotion timer for a call comes to an end. This register increases when CBQ priority promotion of the call occurs.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group OHQCBQR2 (continued)

Register R2CBQRAT

Route call back queuing route advance timer (R2CBQRAT)

Register R2CBQRAT increases when the CBQ route advance timer for a CBQ request comes to and end. Qualify the CBQ request for CBQ route advance timing.

The system uses the CBQ route advance timer to prevent delays during heavy traffic periods. At the start, the system makes a request to queue a call back on a route with a lower cost. When the timer expires, the system can complete the CBQ request on routes with higher and lower costs.

Entries for the field CBQRAT must appear in table CUSTSTN for this feature to apply to stations.

R2CBQRAT release history

Register R2CBQRAT was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_CBQRATRT increases when the CBQ route advance timer for a CBQ request comes to an end.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register R2CHQABN

Route off-hook queuing abandons (R2CHQABN)

Register R2CHQABN increases when the calling party abandons an OHQ attempt before the system completes the procedure.

Register R2OHQABN counts calls that one of the following methods abandons:

- go on-hook to terminate the OHQ attempt
- dial call back queue access code
- flash switch-hook, dialing CBQ access code, and go on-hook to activate CBQ
- activate the CBQ feature on a business set and go on-hook

Register R2OHQABN release history

Register R2CHQABN was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_OHQABN increases when the calling party abandons an OHQ attempt before the system completes the procedure.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register R2CHQBLK

Route off-hook queuing blockages (R2CHQBLK)

Register R2CHQBLK increases when the system blocks an OHQ request. The system blocks the request because the system cannot complete the OHQ request before a specified wait timeout occurs. Entries for the timeout period are in table INBRTE2.

Register R2CHQBLK also increases when a likelihood test fails. A likelihood test determines the assignment of a call to an idle trunk within the wait timeout period.

Register R2OHQBLK release history

Register R2CHQBLK was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_OHQBLOCK increases when the system blocks an OHQ request. The system blocks the request because the system cannot complete the OHQ request before a specified wait timeout period.

Associated logs

The system generates ATB100 when the system blocks an attempt to seize a trunk to a exact numbering plan area (NPA). The system also blocks an attempt to seize a trunk to a exact central office (CO). The call advances to another route.

Extension registers

There are no extension registers.

OM group OHQCBQR2 (continued)

Register R2CHQOFR

Route off-hook queuing offers (R2CHQOFR)

Register R2CHQOFR increases when the system offers OHQ to a user because trunks are not available on the desired route.

Register R2CHQOFR release history

Register R2CHQOFR was introduced in BCS31.

Associated registers

Register OHQCBQCG_OHQOFFER increases when the system offers OHQ to a user because trunks are not available on the desired route. The register increases for a customer group.

Associated logs

The system generates ATB100 when the system blocks an attempt to seize a trunk to a specified numbering plan area (NPA). The system generates this log when the system blocks an attempt to seize a trunk to a specified central office (CO). The call advances to another route.

Extension registers

There are no extension registers.

Register R2CHQOVF

Route off-hook queuing overflows (R2CHQOVF)

Register R2CHQOVF counts OHQ requests that the system cannot complete because of not enough software resources.

Parameter AVG_#_TGS_PER_OHBCQCALL in table OFCENG specifies the average number of trunk groups that are involved in an OHQ or CBQ call. Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the number of transaction blocks that can be used in an office for OHQ and CBQ.

Register R2CHQOVF release history

Register R2CHQOVF was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_OHQOVFL counts OHQ requests that the system cannot complete because of not enough software resources.

OM group OHQCBQR2 (end)

Associated logs

The system generates LINE138 and TRK138 when the system routes a call to a treatment after being call processing busy.

Extension registers

There are no extension registers.

OM group OHQCBQR3

OM description

Off-hook queuing and call back queuing for table IBNRT3 routes (OHQCBQR3)

The OM group OHQCBQR3 provides information for each route in table IBNRT3 on the following:

- Meridian Digital Centrex (MDC) features
- off-hook queuing (OHQ)
- call back queuing (CBQ)

If the system cannot complete a call from a station or an incoming trunk, the calling party can wait off-hook for an idle trunk. The system cannot complete a call because an idle outgoing trunk in the route set is not available. The system gives the caller an off-hook queue tone. The system places the caller in a queue that associates with the outgoing trunk group. When an idle outgoing trunk becomes available, the system completes the call.

The CBQ feature activates when a caller encounters an all-trunks-busy (ATB) condition. The system places the call in a queue that associates with the trunk group. When a trunk becomes available, the system informs the caller when a trunk becomes available. The system uses the number dialed earlier to complete the call.

OHQ and CBQ features are assigned in table NCOS.

OHQCBQR3 contains 11 registers that count:

- the CBQ requests that the system cancels
- the CBQ requests that the system deletes
- the CBQ requests that the system completes
- the CBQ requests that the system cannot complete because there are not enough software resources
- the CBQ requests that are other CBQ or ring again requests overwrite
- the times the CBQ priority promotion timer for a call elapses and the CBQ priority promotion of the call occurs
- the times the CBQ route advance timer for a CBQ request elapses
- the OHQ attempts that the calling party abandons
- the OHQ requests that the system blocks

- the times the system offers OHQ to a user because trunks are not available on the desired route
- the OHQ requests that cannot be completed because of not enough software resources

Release history

The OM group OHQCBQR3 was introduced in BCS31.

Registers

The OM group OHQCBQR3 registers appear on the MAP terminal as follows:

R3CBQDEA	R3CBQDEL	R3CBQOK	R3CBQOVF
R3CBQOWR	R3CBQPPT	R3CBQRAT	R3CHQABN
R3CHQBLK	R3CHQOFR	R3CHQOVF	

Group structure

The OM group OHQCBQR3 provides one tuple for each route in table IBNRT3.

Key field:
There is no Key field.

Info field:1
OM_IBN_RT3_INFO the route number appears in table IBNRT3.

Associated OM groups

The OM group OHQCBQR2 provides information on the MDC features, OHQ and CBQ, for each route in table IBNRT2.

The OM group OHQCBQR4 provides information on the MDC features, OHQ and CBQ, for each route in table IBNRT4.

Associated functional groups

There are no associated functional groups.

OM group OHQCBQR3 (continued)

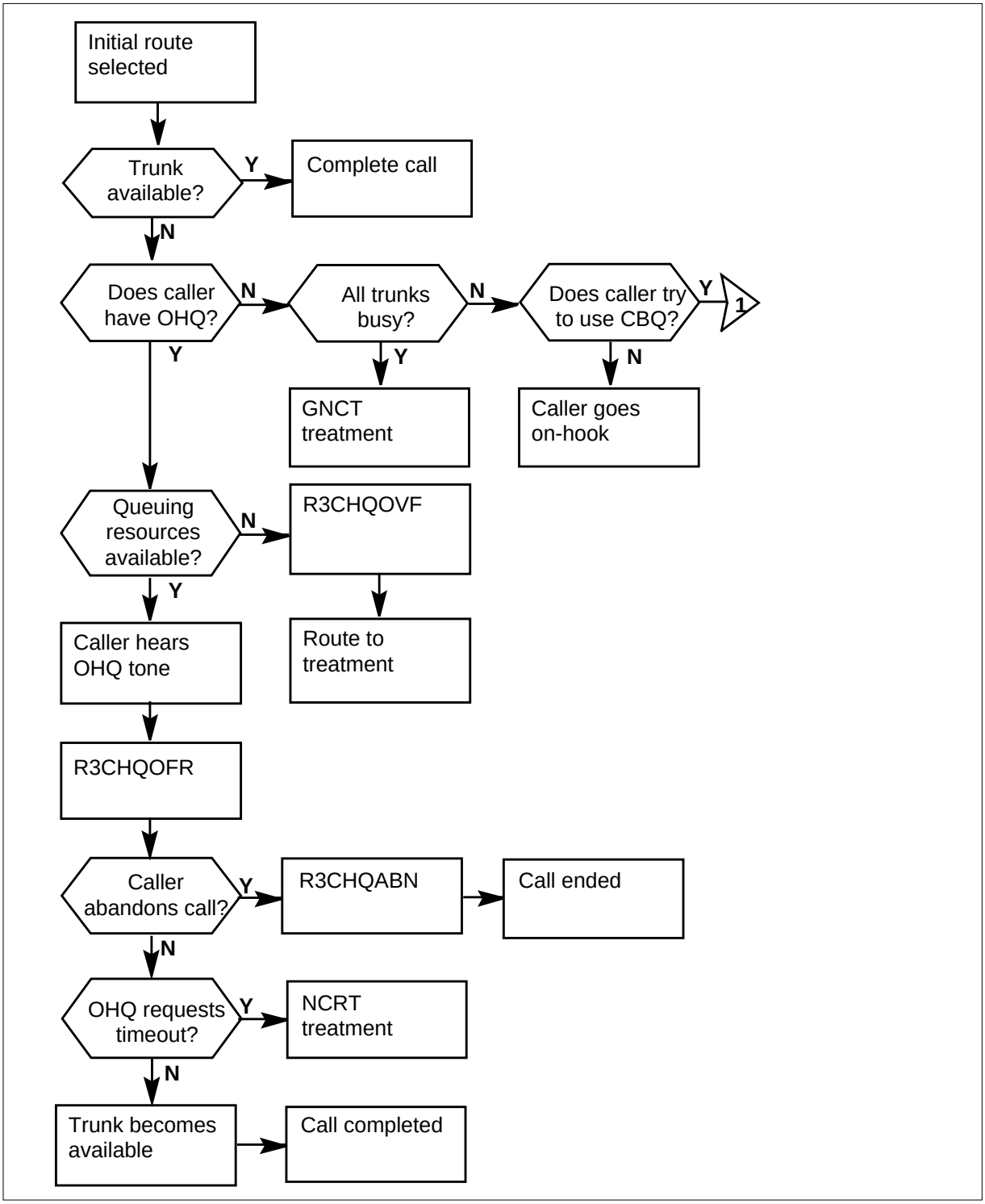
Associated functionality codes

The associated functionality codes for OM group OHQCBQR3 appear in the following table.

Functionality	Code
Integrated Business Networks-Basic	NTX100AA

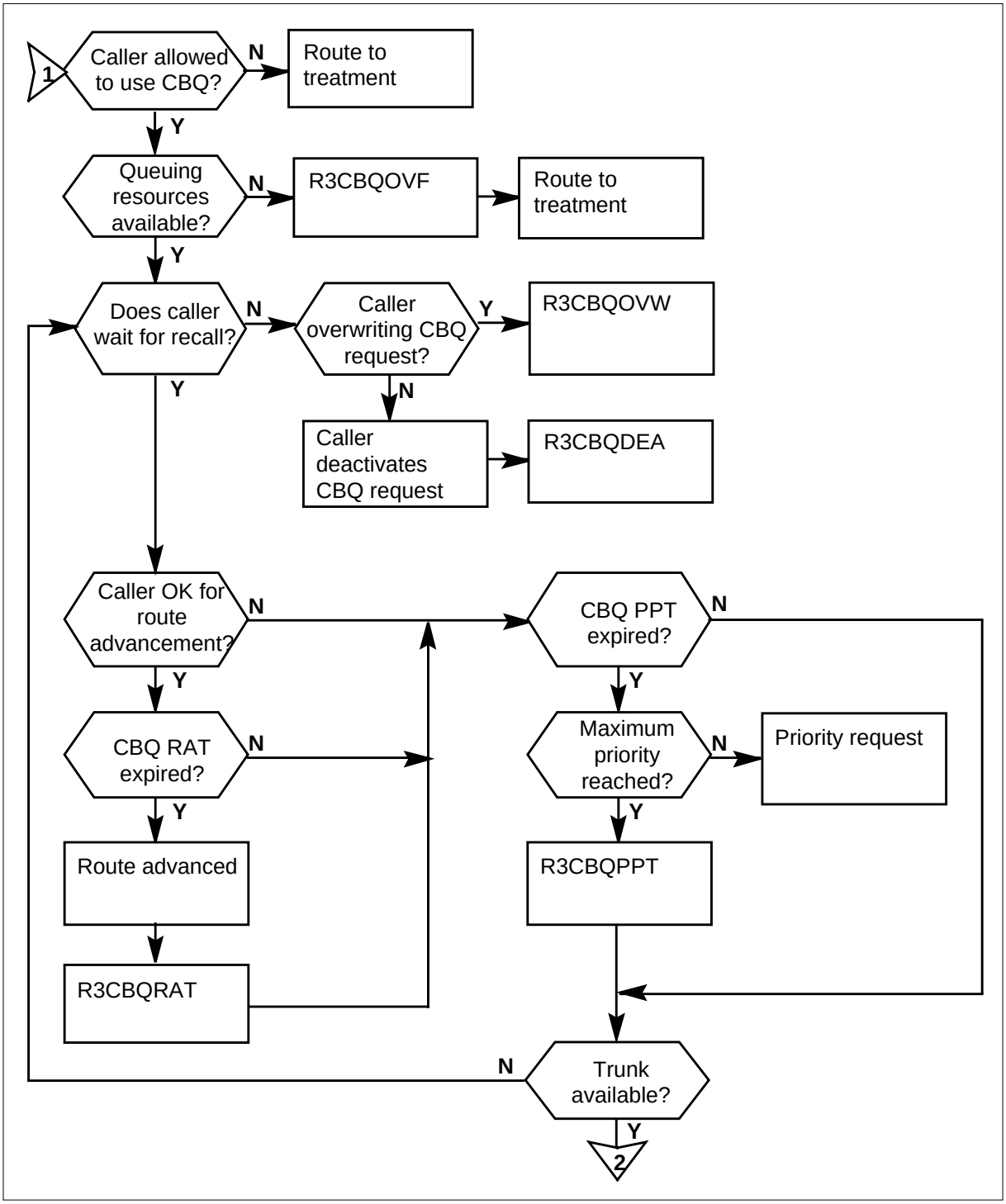
OM group OHQCBQR3 (continued)

OM group OHQCBQR3 registers

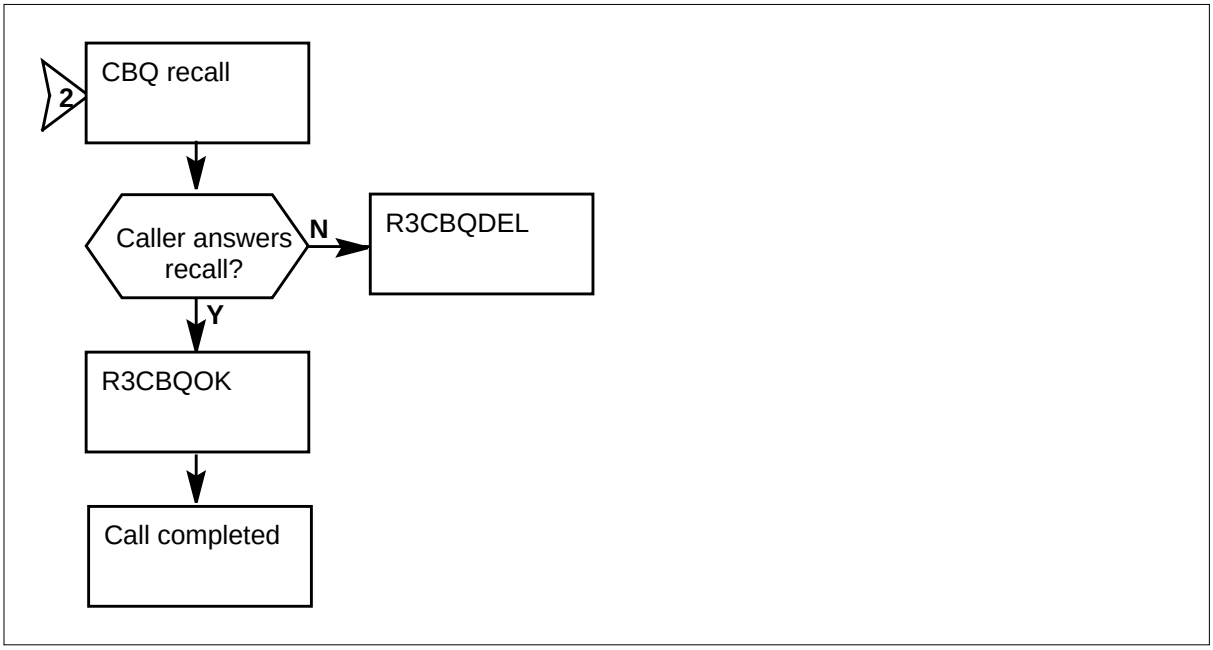


OM group OHQCBQR3 (continued)

OM group OHQCBQR3 registers (continued)



OM group OHQCBQR3 registers (continued)



Register R3CBQDEA

Route call back queuing deactivations (R3CBQDEA)

Register R3CBQDEA counts the subscriber requests. These cancellations occur when the subscriber dials the CBQ deactivation code.

Register R3CBQDEA release history

Register R3CBQDEA was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_CBQDEACT counts CBQ requests that the system cancels. These cancellations occur when the subscriber dials the CBQ deactivation code while CBQ is active. These cancellations can also occur when the subscriber presses the CBQ key on a business set while CBQ is active.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group OHQCBQR3 (continued)

Register R3CBQDEL

Route call back queuing deletions (R3CBQDEL)

Register R3CBQDEL counts CBQ requests that the system deletes.

The system deletes the request for one of the following reasons:

- the originator does not answer the recall
- the system removes the line
- the system deactivates the CBQ option
- the system removes CBQ option from the line

Register R3CBQDEL release history

Register R3CBQDEL was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_CBQDELT counts CBQ requests that the system deletes.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register R3CBQOK

Route call back queuing okay (R3CBQOK)

Register R3CBQOK counts the number of times a CBQ request that the system completes. The register counts the times the originator answers the recall ringback.

Register R3CBQOK release history

Register R3CBQOK was introduced in BCS31.

Associated registers

Register OHQCBQCG_CBQOK counts the times a customer group completes a CBQ request. This register also counts the number of times the originator answers the recall ringback.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register R3CBQOVF

Route call back queuing overflows (R3CBQOVF)

Register R3CBQOVF counts CBQ requests that the system cannot complete because there are not enough software resources.

Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the number of transaction blocks that can be used in an office for both OHQ and CBQ.

Parameter AVG_#_TGS_PER_OHCBQCALL in table OFCENG specifies the average number of trunk groups involved in an OHQ/CBQ call.

If transaction blocks are not available during a CBQ request, the system denies the request.

Register R3CBQOVF release history

Register R3CBQOVF was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_CBQOVFL counts CBQ requests that cannot complete because there are not enough software resources.

Associated logs

The system generates LINE138 and TRK138 when the system routes call to a treatment after being call processing busy.

Extension registers

There are no extension registers.

Register R3CBQOWR

Route call back queuing overwrites (R3CBQOWR)

Register R3CBQOWR counts CBQ requests that other CBQ or RAG requests overwrite. This procedure occurs when the caller has a CBQ request pending and activates CBQ on another call. The caller must activate before the system completes original request.

Register R3CBQOWR increases when the subscriber dials an access code on a single line set.

OM group OHQCBQR3 (continued)

Register R3CBQOWR release history

Register R3CBQOWR was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_CBQOVWRT counts CBQ requests that other CBQ or RAG requests overwrite.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register R3CBQPPT

Route call back queuing priority promotion timer (R3CBQPPT)

Register R3CBQPPT counts the times the CBQ priority promotion timer for a call ends. This register also counts the times the CBQ priority promotion of the call occurs.

The queue priority promotion time is the maximum time a station will be queued at a specified level in the priority-ordered queue. The CBQ starting priority can be one of four levels. The CBQ maximum priority is the highest level that the station can reach in the priority-ordered queue. The request qualifies for priority promotion when the starting priority is less than the maximum priority. When the promotion timer expires, the starting priority is less than the maximum penalty.

Register R3CBQPPT release history

Register R3CBQPPT was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_CBQPPT increases when the CBQ priority promotion timer for a call ends. This register also increases when the CBQ promotion of the call occurs.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register R3CBQRAT

Route call back queuing route advance timer (R3CBQRAT)

Register R3CBQRAT increases when the CBQ route advance timer for a CBQ request elapses. Qualify the CBQ request for CBQ route advance timing.

The system uses the CBQ route advance timer to prevent delays during heavy traffic periods. The system makes a request to queue a call back on an inexpensive route. The system can make the CBQ request on both inexpensive and expensive routes when the timer expiries.

Entries for the field CBQRAT must appear in table CUSTSTN for this feature to apply to stations.

Register R3CBQRAT release history

Register R3CBQRAT was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_CBQRATRT increases when the CBQ route advance timer for a CBQ request ends.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register R3CHQABN

Route off-hook queuing abandons (R3CHQABN)

Register R3CHQABN counts the times that the calling party abandons an OHQ attempt. This occurs before the the system completes the request.

Register R3CHQABN counts calls that one of the following methods abandons:

- go on-hook to terminate the OHQ attempt
- flash the switch hook, dials the call back queue access code, and go on-hook to activate CBQ
- activate the CBQ feature on a business set and going on-hook

Register R3CHQABN release history

Register R3CHQABN was introduced in BCS31.

OM group OHQCBQR3 (continued)

Associated registers

For a customer group, register OHQCBQCG_OHQABN counts the number of times that the calling party abandons an OHQ attempt before the attempt is complete.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register R3CHQBLK

Route off-hook queuing blockages (R3CHQBLK)

Register R3CHQBLK counts the times the system blocks an OHQ request. Blockage occurs when the system did not complete the OHQ request before a specified wait timeout period. The entries for the wait timeout period appear in table INBRTE2.

Register R3CHQBLK increases when a likelihood test fails. The likelihood test determines if the system can assign a call to an idle trunk within the wait timeout period.

Register R3OHQBLK release history

Register R3CHQBLK was introduced in BCS31.

Associated registers

Register OHQCBQCG_OHQBLOCK counts the times a customer group blocks an OHQ request. The blockage happens because the system cannot complete the OHQ request before a specified wait timeout period.

Associated logs

The system generates ATB100 when the system blocks an attempt to seize a trunk to a specified numbering plan area (NPA). The system also blocks an attempt to seize a trunk to a specified central office (CO). The system advances the call to another route.

Extension registers

There are no extension registers.

Register R3CHQOFR

Route off-hook queuing offers (R3CHQOFR)

Register R3CHQOFR counts the times that the system offers OHQ to a user. The system advances occurs because trunks are not available on the desired route.

Register R3OHQOFR release history

Register R3CHQOFR was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_OHQOFFER counts the times the system offers OHQ to a user. The system offers OHQ to a user because trunks are not available on the desired route.

Associated logs

The system generates log ATB100 when the system blocks an attempt to seize a trunk to a given NPA. The system also blocks an attempt to seize a trunk to a given central office (CO). The call advances to another route.

Extension registers

There are no extension registers.

Register R3CHQOVF

Route off-hook queuing overflows (R3CHQOVF)

Register R3CHQOVF counts OHQ requests that the system cannot complete because there are not enough software resources.

Parameter AVG_#_TGS_PER_OHBCQCALL in table OFCENG specifies the average number of trunk groups that the system will involve in an OHQ or CBQ call. Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the transaction blocks that the system can use in an office for both OHQ and CBQ .

Register R3OHQOVF release history

Register R3CHQOVF was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_OHQOVFL counts OHQ requests that the system cannot complete because there are not enough software resources.

Associated logs

The system generates logs LINE138 and TRK138 when the system routes a call to a treatment after being call processing busy.

OM group OHQCBQR3 (end)

Extension registers

There are no extension registers.

OM group OHQCBQR4

OM description

Off-hook queuing and call back queuing for table IBNRT4 routes (OHQCBCR4)

For each route in table IBNRT4, the OM group OHQCBCR4 provides information on the following:

- Meridian Digital Centrex (MDC) features
- off-hook queing
- call back queuing (CBQ)

If a call from either a station or an incoming trunk cannot be completed the calling party may wait off-hook for an idle trunk. These calls are not completed because an idle outgoing trunk in the route set is not available. The caller first receives an off-hook queue tone. The system places the tone in a queue that the outgoing trunk group associates with. The call completes when an idle outgoing trunk becomes available.

The CBQ feature acitivates when a caller encounters an all trunks busy (ATB) condition. A queue associated with the trunk group places the call. The system informs the caller when a trunk becomes available and the call is completed using the number dialed earlier.

The OHQ and CBQ features are assigned in table NCOS.

OHQCBQR4 contains 11 registers that count:

- the CBQ requests that the system cancels
- the CBQ requests that the system deletes
- the CBQ requests that the system completes
- the CBQ requests that the system cannot complete because there are not enough software resources
- the CBQ requests all back queuing requests that other CBQ or ring again requests overwrite
- the times the CBQ priority promotion timer for a call ends and the priority promotion of the call occurs
- the times the CBQ route advance timer for a CBQ request ends
- off-hook queuing attempts that are abandoned by the calling party
- the OHQ requests that the system blocks

OM group OHQCBQR4 (continued)

- the times the system offers OHQ to a user because trunks are not available on the desired route
- the OHQ requests that the system cannot complete because there are not enough software resources

Release history

The OM group OHQCBQR4 was introduced in BCS31.

Registers

The OM group OHQCBQR4 registers appear on the MAP terminal as follows:

```
R4CBQDEA    R4CBQDEL    R4CBQOK     R4CBQOVF
R4CBQOWR    R4CBQPPT    R4CBQRAT    R4CHQABN
R4CHQBLK    R4CHQOFR    R4CHQOVF
```

Group structure

The OM group OHQCBQR4 provides one tuple for each route in table IBNRT4.

Key field:
There is no key field.

Info field:
OM_IBM RT4 INFO. Table IBNRT4 assigns the route number.

Associated OM groups

The OM group OHQCBQR2 provides information on the MDC features, OHQ and CBQ, for each route in table IBNRT2.

The OM group OHQCBQR3 provides information on the MDC features, OHQ and CBQ, for each route in table IBNRT3.

Associated functional groups

There are no associated functional groups.

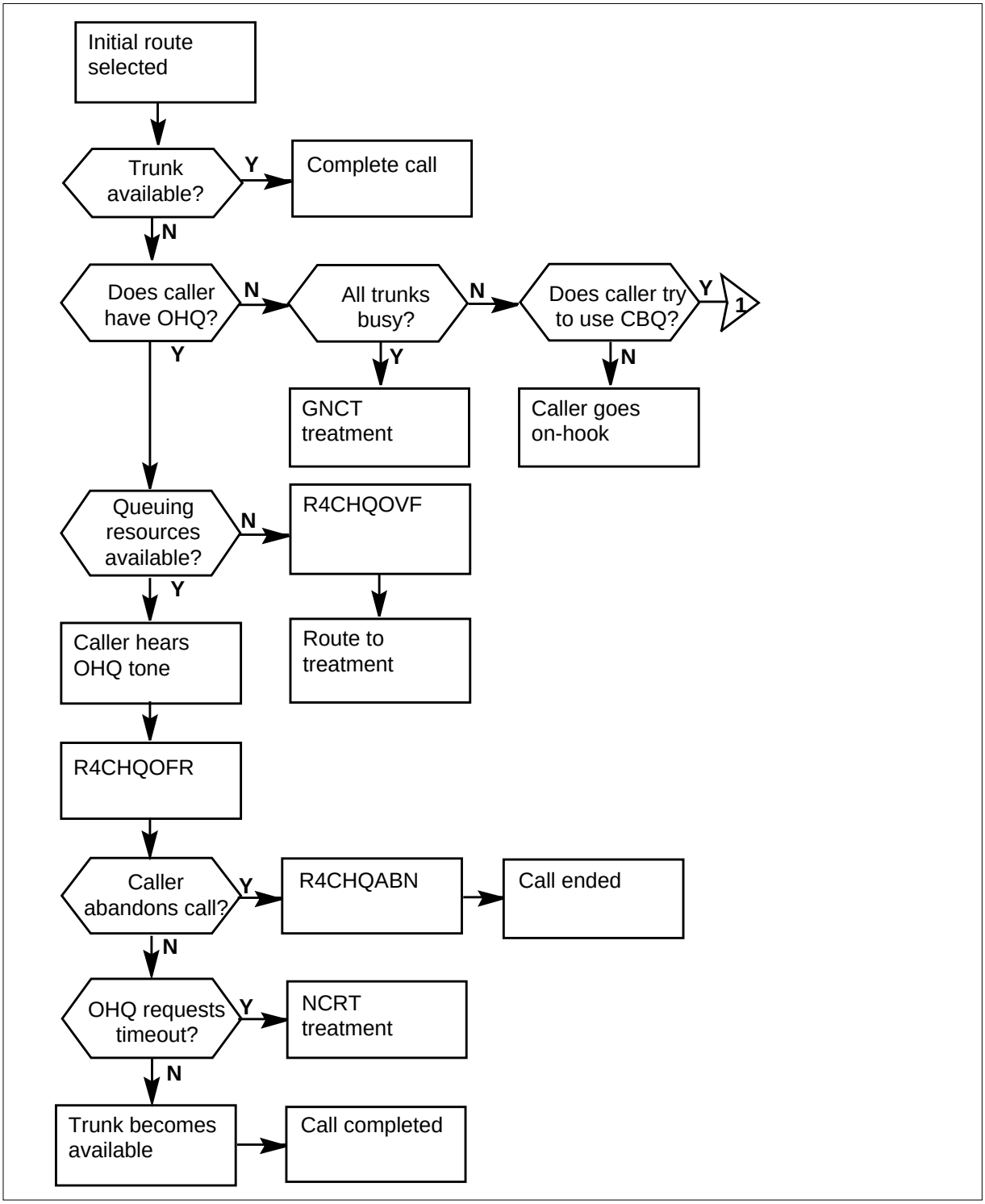
Associated functionality codes

The associated functionality codes for OM group OHQCBQR4 are in the following table.

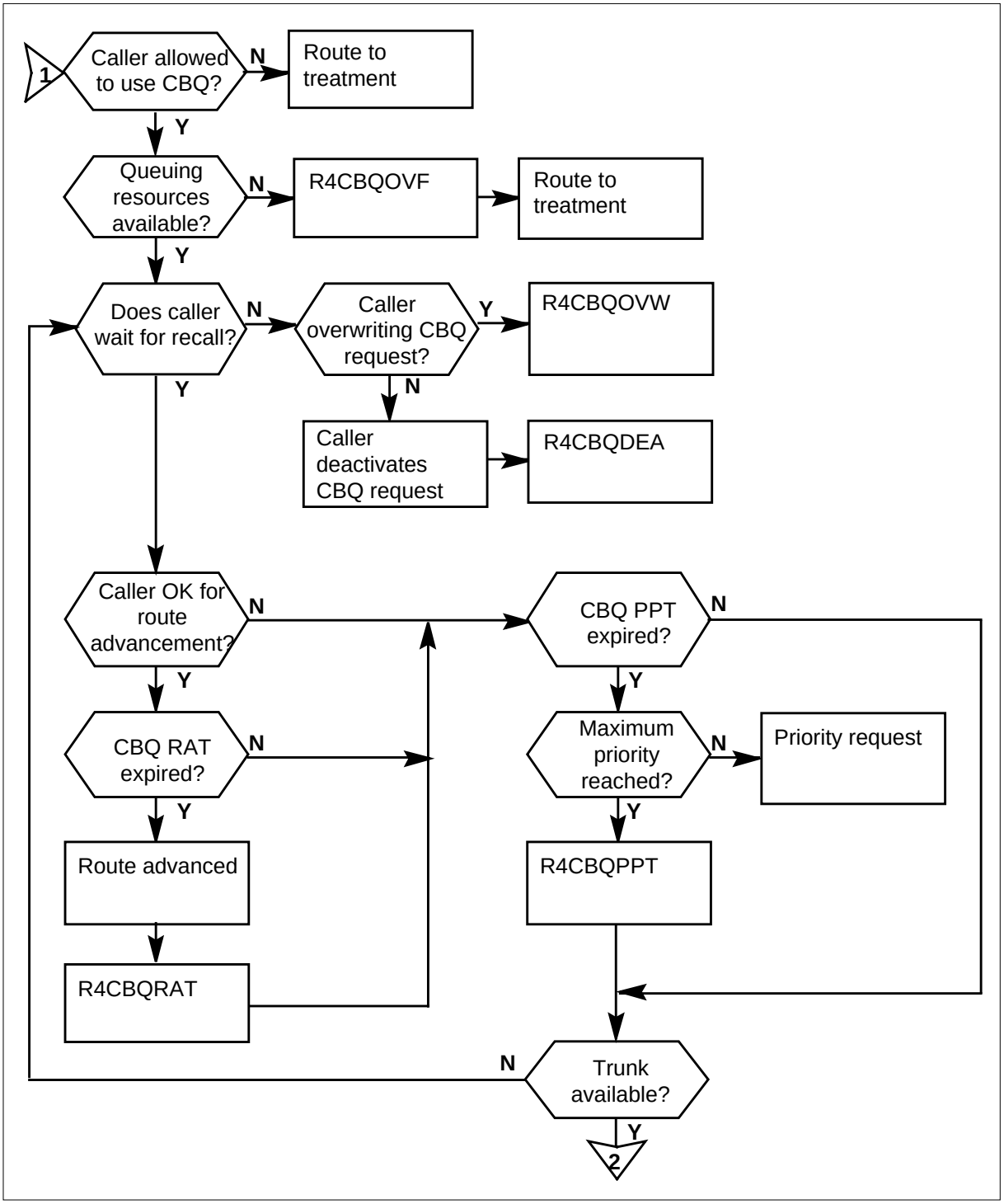
Functionality	Code
Integrated Business Networks - Basic	NTX100AA

OM group OHQCBQR4 (continued)

OM group OHQCBQR4 registers

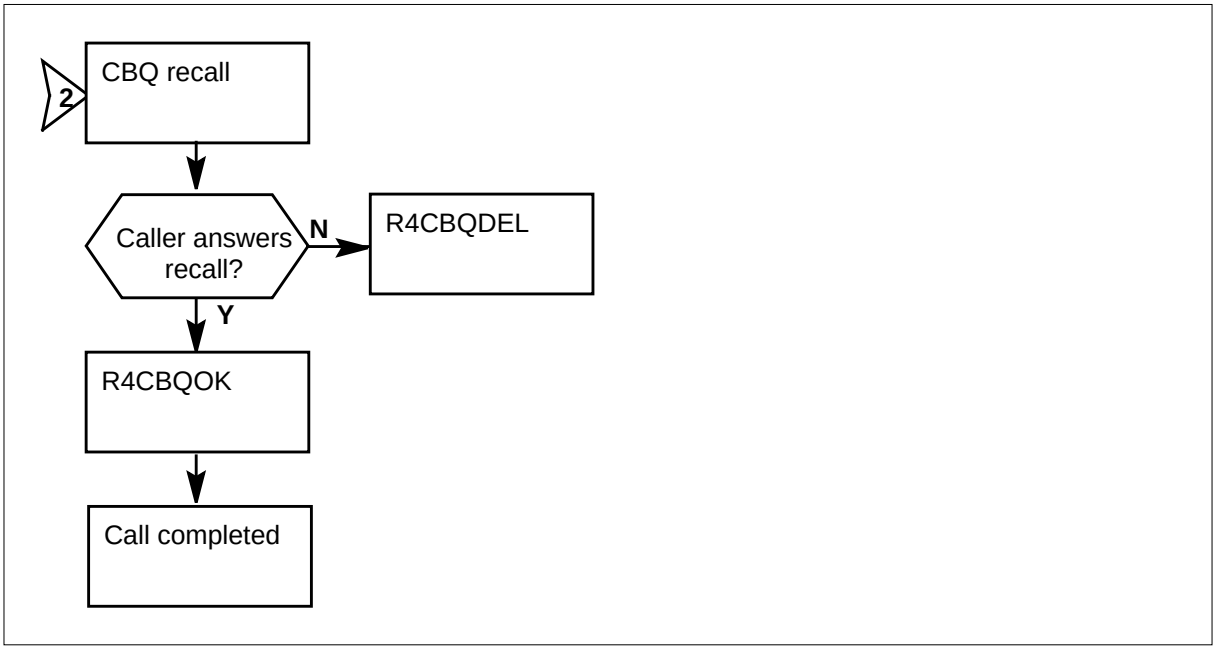


OM group OHQCBQR4 registers (continued)



OM group OHQCBQR4 (continued)

OM group OHQCBQR4 registers (continued)



Register R4CBQDEA

Route call back queuing deactivations (R4CBQDEA)

Register R4CBQDEA counts CBQ requests that the system cancels. Cancellation occurs when the subscriber dials the CBQ deactivation code.

Register R4CBQDEA release history

R4CBQDEA was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_CBQDEACT counts CBQ requests that the system cancels when the subscriber dials the CBQ deactivation code. When the subscriber presses the CBQ key on a business set while CBQ is active, the system can cancel CBQ requests.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register R4CBQDEL

Route call back queuing deletions (R4CBQDEL)

Registers R4CBQDEL counts CBQ requests that the system deletes.

The system can delete the request for one of the following reasons:

- the originator does not answer the recall
- the system removes the line
- the system deactivates the CBQ option
- the system removes the CBQ option from the line

Register R4CBQDEL release history

R4CBQDEL was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_CBQDELT counts CBQ requests that the system deletes.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register R4CBQOK

Route call back queuing okay (R4CBQOK)

Register R4CBQOK counts the times that the system completes a CBQ request and the originator answers the recall ringback.

Register R4CBQOK release history

R4CBQOK was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_CBQOK counts the number of times that the system completes a CBQ request and the originator answers the recall ringback.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

OM group OHQCBQR4 (continued)

Register R4CBQOVF

Route call back queuing overflows (R4CBQOVF)

Register R4CBQOVF counts CBQ requests that the system cannot complete because there are not enough software resources.

Paramaters NUMOHCBQTRANSBLKS in table OFCENG specifies transaction blocks that can be used in an office because of both OHQ and CBQ.

The average number of trunk groups involved in an OHQ/CBQ call is specified by Parameter AVG_#_TGS_PER_OHCBQCALL in table OFCENG.

The system denies the request if transaction blocks are not available during a CBQ request.

Register R4CBQOVF release history

Register R4CBQOVF was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_CBQOVFL counts CBQ requests that the system cannot complete because there are not enough software resources.

Associated logs

The system generates LINE138 and TRK138 when the system routes a call to a treatment after being call processing busy.

Extension registers

There are no extension registers.

Register R4CBQOWR

Route call back queuing overwrites (R4CBQOWR)

Register R4CBQOWR counts the requests that other CBQ or ring again RAG requests overwrite. This occurs when the caller has a CBQ request that is pending. The caller activates CBQ on another call before the system completes the original request.

Register R4CBQOWR increases when a single line set dials an access code.

Register R4CBQOWR release history

Register R4CBQOWR was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_CBQOVWRT counts the CBQ or RAG requests that other CBQ or RAG requests overwrite.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register R4CBQPPT

Route call back queuing priority promotion timer (R4CBQPPT)

Register R4CBQPPT increases when the CBQ priority promotion timer for a call ends and the CBQ priority promotion of the call occurs.

The queue priority promotion time is the maximum time a station will be queued at a given level in the priority-ordered queue. The CBQ starting priority can be one of four levels. The CBQ maximum priority is the highest level that the station can reach in the priority-ordered queue. The request qualifies for priority promotion when the starting priority is less than the maximum priority. When the priority promotion time expires, the starting priority is less than the maximum priority.

Register R4CBQPPT release history

Register R4CBQPPT was introduced in BCS31.

Associated registers

For customer group, register OHQCBQCG_CBQPPT increases when the CBQ priority promotion timer for a call ends. This register also increases when the CBQ priority promotion of the call occurs.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register R4CBQRAT

Route call back queuing route advance time (R4CBQRAT)

OM group OHQCBQR4 (continued)

Route call back queuing route advance timer (R4CBQRAT) increases when the call back queuing (CBQ) route advance timer for a CBQ request ends. Qualify the CBQ request for CBQ route advance timing.

The system uses the CBQ route advance timer to prevent delays during heavy traffic periods. At the start, the system makes a request to queue a call back on an inexpensive route. The CBQ request can be completed on inexpensive routes when the timer expires.

Entries for the field CBQRAT appear in table CUSTSTN for stations to apply this feature.

Register R4CBQRAT release history

Register R4CBQRAT was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_CBQRATRT increases when the CBQ route advance timer for a CBQ request ends.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register R4CHQABN

Route off-hook queuing abandons (R4CHQABN)

Register R4CHQABN counts the times the calling party abandons an OHQ attempt before the system completes the attempt.

Register R4CHQABN counts calls that one of the following methods abandons:

- go on-hook to terminate the OHQ attempt
- flash the switch hook, dial the call back queue access code, and going on-hook to activate CBQ
- activate the CBQ feature on a business set and going on-hook

Register R4CHQABN release history

Register R4CHQABN was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_OHQABN counts the times the calling party abandons an OHQ attempt before the system completes the attempt.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register R4CHQBLK

Route off-hook queuing blockages (R4CHQBLK)

Register R4CHQBLK counts the times that the system blocks an OHQ request. This occurs because the system cannot complete the OHQ before a specified wait timeout period. Entries for the wait timeout are in table INBRTE2.

Register R4CHQBLK also increases when a likelihood test fails. The likelihood test determines if the system can assign an idle trunk to a call in the wait timeout period.

Register R4OHQBLK release history

Register R4CHQBLK was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_OHQBLOCK counts the times that an OHQ blocks a request. The blockage occurs because the system cannot complete the request before a specified wait timeout period.

Associated logs

The system generates ATB100 when the system blocks an attempt to seize a trunk to a given numbering plan area (NPA). The system also blocks an attempt to seize a trunk to a given central office (CO). The system advances the call to another route.

Extension registers

There are no extension registers.

Register R4CHQOFR

Route off-hook queuing offers (R4CHQOFR)

OM group OHQCBQR4 (continued)

Register R4CHQOFR counts the times the system offers OHQ to a user. the system offers OHQ because trunks are not available on the desired route.

Register R4OHQOFR release history

R4CHQOFR was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_OHQOFFER counts the number of times the system offers OHQ. The system offers OHQ because trunks are not available on the desired route.

Associated logs

The system generates ATB100 when the system blocks an attempt to seize a trunk for one of the following:

- a given numbering plan area (NPA)
- or central office (CO)

The call advances to another route.

Extension registers

There are no extension registers.

Register R4CHQOVF

Route off-hook queuing overflows (R4CHQOVF)

Route off-hook queuing overflows (R4CHQOVF) counts OHQ requests that the system cannot because there are not enough software resources.

Parameter AVG_#_TGS_PER_OHBCQCALL in table OFCENG specifies the average number of trunk groups that will be involved in an OHQ or CBQ call. Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the transaction blocks that can be used in an office for both OHQ and CBQ.

Register R4OHQOVF release history

Register R4CHQOVF was introduced in BCS31.

Associated registers

For a customer group, register OHQCBQCG_OHQOVFL counts OHQ requests that the system cannot complete because there are not enough software resources.

Associated logs

The system generates LINE138 and TRK138 when the system routes a call to a treatment after being call processing busy.

Extension registers

There are no extension registers.

OM group OHQCBQRT

OM description

Off-hook queuing and call back queuing per route (OHQCBQRT)

For each route, the OM group OHQCBQRT provides information on the integrated business network (IBN) features off-hook queuing (OHQ) and call back queuing (CBQ).

If the system cannot complete a call from a station or an incoming trunk, the calling party can wait off-hook for an idle trunk. The system cannot complete the call because an idle outgoing trunk in the route set is not available. The system caller gives an off-hook queue tone. The system places the call in a queue that associates with the outgoing trunk group. When an idle outgoing trunk becomes available, the system completes the call.

If a caller encounters an all trunks busy (ATB) condition, the call back queuing (CBQ) feature can be activated. The call is placed in a queue associated with the trunk group. When a trunk becomes available, the caller is informed and the call is completed using the number dialed earlier.

The OHQ and CBQ features are assigned in table NCOS.

If the registers show little use of either OHQ or CBQ features, there may be more trunks provided than necessary on a route.

Release history

The OM group OHQCBQRT was introduced prior to BCS20.

Registers

The OM group OHQCBQRT registers appear on the MAP terminal as follows:

RTCBQDEA	RTCBQDEL	RTCBQOK	RTCBQOVF
RTCBQOWR	RTCBQPPT	RTCBQRAT	RTOHQABN
RTOHQBLK	RTOHQOFR	RTOHQOVF	

Group structure

The OM group OHQCBQRT provides information about the integrated business network (IBN) features off-hook queuing (OHQ) for a customer group. This OM group also provides information about the call back queuing (CBQ) for a customer group.

Key field:

There is no key field.

Info field:
OM_IBN_RTE_INFO. Table IBNRTE assigns the route number.

Parameter AVG_NUM_TGS_PER_OHCBQCALL in table OFCENG specifies the average number of trunk groups that involve OHQ and CBQ.

Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the number of transaction blocks in use for OHQ and CBQ.

Parameter NO_OF_FTR_CONTROL_BLKS in table OFCENG specifies the number of feature control blocks in use for OHQ and CBQ.

Parameter NO_OF_FTR_DATA_BLKS in table OFCENG specifies the number of feature data blocks in use for OHQ and CBQ.

Parameter FTRQAGENTS in table OFCENG specifies the number of agents that can have the CBQ feature at a time.

Parameter FTRQ2WAREAS in table OFCENG specifies the number of FTRQ2 word areas requires the engineering interval associated with CBQ.

Associated OM groups

The OM group OHQCBQCG provides information about the following integrated business network (IBN) features. Off-hook queuing (OHQ) for a customer group, and call back queuing (CBQ) for a customer group.

Associated functional groups

The IBN Integrated Business Network operating group associates with OM group OHQCBQRT.

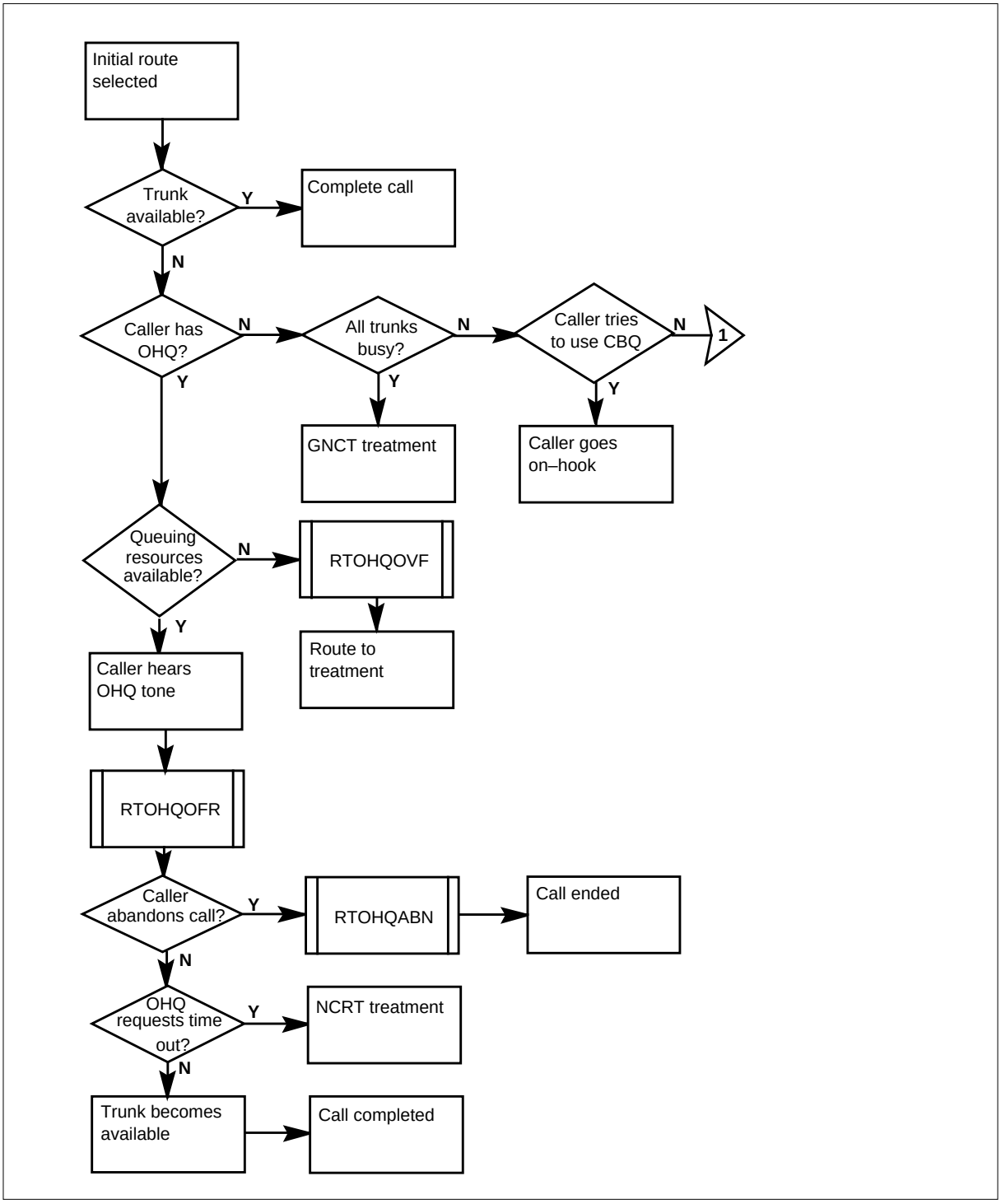
Associated functionality codes

The associated functionality codes for OM group OHQCBQRT appear in the following table.

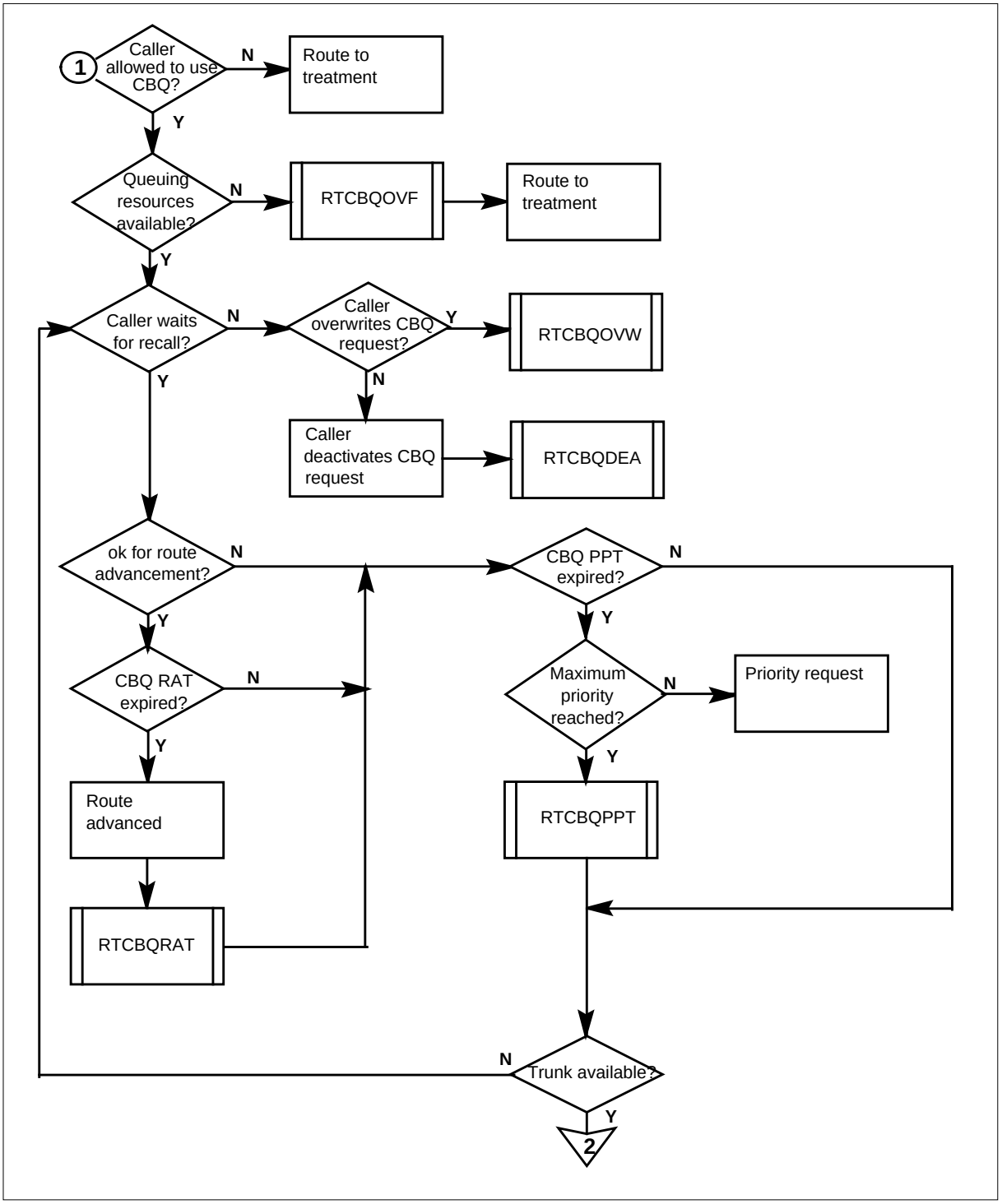
Functionality		Code
Trunk Queuing		NTX105AA
Integrated Business Network (Basic) has no values unless the software for off-hook and call back queuing is present.	The group is present but	NTX100AA

OM group OHQCBQRT (continued)

OM group OHQCBQRT registers

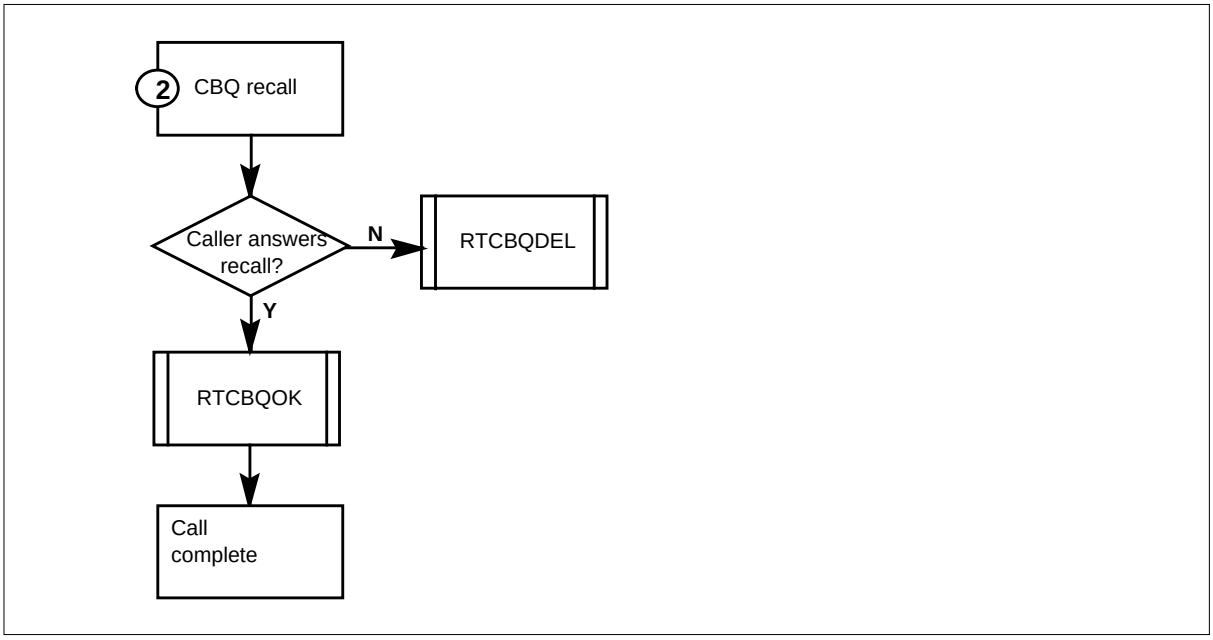


OM group OHQCBQRT registers (continued)



OM group OHQCBQRT (continued)

OM group OHQCBQRT registers (continued)



Register RTCBQDEA

Route call back queuing deactivations (RTCBQDEA)

Register RTCBQDEA increases when the subscriber cancels a call back queuing (CBQ) request. To cancel a CBQ request the caller can dial the CBQ deactivation code. Press the CBQ key on a business set while CBQ is active.

Register RTCBQDEA release history

Register RTCBQDEA is introduced in BCS20.

Associated registers

The system increases OHQCBQCG_CBQDEACT for a customer group when the user cancels a call back queuing (CBQ) request. To cancel the request, dial the CBQ deactivation code or press the CBQ key on a business set while CBQ is active.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register RTCBQDEL

Route call back queuing deletions (RTCBQDEL)

Register RTCBQDEL increases when the system deletes a call back queuing (CBQ) request.

The system can delete the request for one of the following reasons:

- the originator did not answer the recall
- the system line removed from service
- the system canceled CBQ option

Register RTCBQDEL release history

Register RTCBQDEL was introduced in BCS20.

Associated registers

For a customer group, OHQCBQCG_CBQDELT increases when the system deletes a call back queuing (CBQ) request.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register RTCBQOK

Route call back queuing okay (RTCBQOK)

Register RTCBQOK increases when a call back queuing (CBQ) request completes correctly and the originator answers the recall ringback.

Register RTCBQOK release history

Register RTCBQOK was introduced to BCS20.

Associated registers

For a customer group, OHQCBQCG_CBQOK increases when a call back queuing (CBQ) request completes correctly and the originator answers recall ringback.

Associated logs

There are no associated logs.

OM group OHQCBQRT (continued)

Extension registers

There are no extension registers.

Register RTCBQOVF

Route call back queuing overflows (RTCBQOVF)

Register RTCBQOVF increases when a call back queuing (CBQ) request cannot complete because there are not enough software resources.

Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the number of of transaction blocks that an office can use for OHQ and CBQ.

Parameter AVG_NUM_TGS_PER_OHCBQCALL in table OFCENG specifies the average number of trunk groups an OHQ/CBQ call involves.

The system denies the request if no transaction blocks are available during a CBQ request.

Register RTCBQOVF release history

Register RTCBQOVF was introduced in BCS20.

Associated registers

For a customer group, registers OHQCBQCG_CBQOVFL increases when a call back queuing (CBQ) request cannot complete. The request cannot complete because there are not enough software resources.

Associated logs

The system generates LINE138 and TRK138 when the system routes a call to a treatment after the call was processing busy.

Extension registers

There are no extension registers.

Register RTCBQOWR

Route call back queuing overwrites (RTCBQOWR)

Register RTCBQOWR increases when a call back queuing (CBQ) request or ring again (RAG) request overwrites a CBQ request. This overwrite occurs when the caller has a CBQ request pending and activates CBQ on another call. The caller activates CBQ before the original request completes.

To overwrite a CBQ request on a business set, cancel the CBQ request that remains before you activate the feature on a different call.

Register RTCBQOWR release history

Register RTCBQOWR was introduced in BCS20.

Associated registers

Register OHQCBQCG_CBQOVWRT increases for a customer group when a CBQ request or a ring again (RAG) request overwrites a call back queuing (CBQ) request.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register RTCBQPPT

Route call back queuing priority promotion timer (RTCBQPPT)

Register RTCBQPPT increases when the call back queuing (CBQ) priority promotion timer for a call ends. Call back queuing priority promotion of the call occurs.

The queue priority promotion time is the maximum time a station can remain queued at a level in the priority ordered queue. The CBQ starting priority can be one of four levels. The CBQ maximum priority is the highest level in the priority ordered queue. If the starting priority is less than the maximum priority, the request qualifies for priority promotion when the timer ends.

Register RTCBQPPT release history

Register RTCBQPPT was introduced in BCS20.

Associated registers

For customer group, register OHQCBQCG_CBQPPT increases when the call back queuing (CBQ) priority promotion timer for a call finishes. Call back queuing priority promotion of the call must occur for the register to increase.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register RTCBQRAT

Route call back queuing route advance timer (RTCBQRAT)

OM group OHQCBQRT (continued)

Register RTCBQRAT increases when the call back queuing (CBQ) route advance timer for a CBQ request finishes. The CBQ request must qualify for CBQ route advance timing.

The CBQ route advance timer prevents delays in heavy traffic periods. The system makes a request to queue a call back on a low cost route. Qualify the CBQ request to complete on inexpensive and expensive routes when the timer expires.

Enter the field CBQRAT in table CUSTSTN to apply this feature to stations.

Register RTCBQRAT release history

Register RTCBQRAT was introduced in BCS20.

Associated registers

For a customer group, register OHQCBQCG_CBQRATRTCBQRAT increases when the call back queuing (CBQ) route advance timer for a CBQ request finishes.

Associated logs

There are no associated logs.

Extension registers

There are no extension registers.

Register RTOHQABN

Route off-hook queuing abandons (RTOPHQABN)

Register RTOHQABN increases when the calling party abandons an off-hook queuing (OHQ) attempt before the attempt completes. This register counts calls that the system abandons by one of the following methods:

- user goes on-hook to terminate the OHQ attempts
- user flashes and goes on-hook to activate CBQ
- user activates the CBQ feature on a business set and goes on-hook

Register RTOHQABN release history

Register RTOHQABN was introduced in BCS20.

Associated registers

For a customer group, register OHQCBQCG_OHQABN increases when the calling party abandons an off-hook queuing (OHQ) attempt before completion.

Associated logs

The system generates LINE106 when dial pulse reception on a line has problems.

The system generates LINE108 when Digitone reception on a line has problems.

The system generates TRK114 when dial pulse reception for an incoming call over a trunk has problems. The system did not determine the call destination.

The system generates TRK116 when a multi-frequency reception for an incoming call over a trunk has problems. The system can not determine the call destination.

The system generates TRK162 when transmission of either a trunk-to-trunk has problems. The system also generates this log when a line-to-line call uses digital multi-frequency signaling.

Extension registers

There are no registers.

Register RTOHQBLK

Route off-hook queuing blockages (RTOHQBLK)

Register RTOHQBLK increases when the system blocks an off-hook queuing (OHQ) request because it cannot complete before a specified wait timeout. The wait timeout appears in table IBNRTE.

Register RTOHQBLK increases when a likelihood test fails. The likelihood test determines if the system can assign a call to an idle trunk within the wait timeout.

Register RTOHQBLK release history

Register RTOHQBLK was introduced in BCS20.

Associated registers

For a customer group, register OHQCBQCG_OHQBLOCK increases for a customer when the system blocks an off-hook queuing (OHQ). The system blocks the request because the request cannot complete before a specified wait timeout.

OM group OHQCBQRT (continued)

Associated logs

The system generates the ATB100 when the system blocks an attempt to seize a trunk to an exact numbering plan area (NPA) or central office (CO). The call advances to another route.

Extension registers

There are no extension registers.

Register RTOHQOFR

Route off-hook queuing offers (RTOHQOFR)

Register RTOHQOFR increases when the system offers off-hook queuing (OHQ) to a user because trunks are not available on the desired route.

Register RTOHQOFR release history

Register RTOHQOFR was introduced in BCS20.

Associated registers

For a customer group, register OHQCBQCG_OHQOFFER increases when the system offers off-hook queuing (OHQ) to a user. The system offers OHQ to the user because no available trunks are present on the desired route.

Associated logs

The system generates ATB100 when the system blocks an attempt to seize a trunk to an exact numbering plan area (NPA) or central office (CO). The call advances to another route.

Extension registers

There are no extension registers.

RTOHQOVF

Route off-hook queuing overflows (RTOHQOVF)

Register RTOHQOVF increases when an off-hook queuing (OHQ) request cannot complete because there are not enough software resources.

Parameter AVG_NUM_TGS_PER_OHCBQCALL in table OFCENG specifies the average number of trunk groups the system involves in an OHQ or CBQ call. Parameter NUMOHCBQTRANSBLKS in table OFCENG specifies the number of transaction blocks an office can use for both OHQ and CBQ.

Register RTOHQOVF release history

Register RTOHQOVF was introduced in BCS20.

Associated registers

For a customer group, register OHQCBQCG_OHQOVFL RTOHQOVF increase for a customer group when an off-hook queuing (OHQ) request cannot complete. The request cannot complete when there are not enough software resources.

Associated logs

The system generates LINE138 and TRK138 when the system routes a call to a treatment after being call processing busy.

Extension registers

There are no extension registers.

DMS-100 Family

North American DMS-100

Operational Measurements Reference Manual

Volume 3 of 6

OM Groups ISGBD-OHQCBQRT

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