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DMS-100 Family

## **North American DMS-100**

Operational Measurements Reference Manual Volume 5 of 6  
OM Groups TCAPERRS-XPMOVL

LEC0015 and up Standard 14.02 May 2001

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DMS-100 Family

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Operational Measurements Reference Manual Volume 5 of 6

OM Groups TCAPERRS-XPMOVL

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# 1 Operational measurements

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## 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 TCAPERRS

---

### OM description

Transaction capabilities application part error counts (TCAPERRS)

The OM group TCAPERRS counts protocol errors the system detects by the transaction capabilities application part (TCAP) for each subsystem.

The TCAP provides a common protocol to format messages, content rules, and exchange procedures across the Common Channel Signaling 7 (CCS7) network. Application processes like the Enhanced 800 Service (E800), which performs operations on remote network nodes, use TCAP.

The TCAP messages are constructed with data elements. Each data element consists of three parts: identifier, length of contents, and content. The TCAP message identifier identifies the TCAP message. The TCAP message identifier contains the information that identifies the transaction. The transaction is the transaction part of the TCAP message. In ANSI, the TCAP message identifier is the package type identifier. In ITV, the TCAP message identifier is the message type identifier.

The TCAP message consists of three layers. The transaction layer associates the message with a unique transaction. The dialogue layer facilitates the dialogue information exchange. The component layer consists of minimum of one TCAP component. There are four types of TCAP components, as follows:

- *invoke* components initiate an operation on a remote node
- *result* components report the successful completion of an invoked operation
- *error* components report attempts to perform an invoked operation, that are not successful
- *reject* components reject the transaction

Two types of errors can occur within the component portion: message format errors and state change errors. Format errors include data values that are not recognized, and data that is not correct or missing. Format errors can also include data that is not reflected. State change errors include messages that do not conform to normal state changes. When the system detects a format error or state change error, TCAP rejects the message. The system sends a reject component to the message originator.

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**OM group TCAPERRS (continued)**


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The OM group TCAPERRS registers are grouped into the following allocations and components:

- The transaction allocation registers are TCTPEUPT, TCTPEITP, TCTPESTP, and TCTPEUTI.
- The communication allocation registers are TCDPEUID, TCDPEBDP, TCDPEMDP, and TCDPEIDP.
- The component portion registers are TCCPEUCT, TCCPEICP, and TCCPESCP.
- The invoke component registers are TCICEDII, TCICEUOC, TCICEUXP, and TCICEUCI.
- The return result component registers are TCRCEUCI, TCRCEXRR, and TCRCEUXP.
- The return error component registers are TCECEUCI, TCECEXEC, TCECEUPC, TCECEXPC, and TCECEIP.

## Release history

The OM group TCAPERRS was introduced in BCS21.

### CSP08

New registers TCDPEUID, TCDPEBDP, TCDPEMDP, and TCDPEIDP added

### BCS36

Three new key field values (NCS800, NCS900, and NCSCC) added, NCSSAC deleted

### BCS35

Three new key field values (HLRMTX, VLRMTX, and MSCMTX) added

### BCS33

Eleven new key field values (GF0-GF9, and GFNTEST) added

### BCS31

The MAPMTX subsystem added to key field

### BCS29

The CMS subsystem added to key field

### BCS24

Authorization code validation application and account code validation application subsystems added to key field

## OM group TCAPERRS (continued)

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### BCS22

The SCCP subsystems added to key field

### Registers

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

|          |          |          |          |
|----------|----------|----------|----------|
| TCTPEUPT | TCTPEITP | TCTPESTP | TCTPEUTI |
| TCCPEUCT | TCCPEICP | TCCPESCP | TCICEDII |
| TCICEUOC | TCICEUXP | TCICEUCI | TCRCEUCI |
| TCRCEXRR | TCRCEUXP | TCECEUCI | TCECEXEC |
| TCECEUPC | TCECEXPC | TCECEIP  | TCDPEUID |
| TCDPEBDP | TCDPEMDP | TCDPEIDP |          |

### Group structure

The OM group TCAPERRS provides 11 tuples for each subsystem. Each tuple consists of C7\_SUBSYSTEM\_NAME.

#### Key field:

(C7\_SUBSYSTEM\_NAME) for each tuple is the subsystem name: one of TUP, ISDNUP, OAM, E800, ACCS, N00, TCN, BNS, SCPE800, SCPACCS, SCPBNS, AUTHSS, ACCTSS, CMS-Canada only, PVN, NETRAG, CLASS, INTERWRK, MAPMSC, MAPLR, NMS, DOC, LEC, MAPMTX, GF0-GF9, GFNTEST, HLRMTX, VLRMTX, MSCMTX, NCS800, NCS900, and NCSCC.

#### Info field:

There is no Info field.

### Associated OM groups

The OM group TCAPUSAG contains registers that count messages, transactions, and components for each subsystem.

### Associated functional groups

The functional groups that associate with OM group TCAPERRS:

- Automatic Calling Card Service (ACCS)
- Common Channel Signaling 7 (CCS7)
- Enhanced 800 Service (E800)

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**OM group TCAPERRS** (continued)

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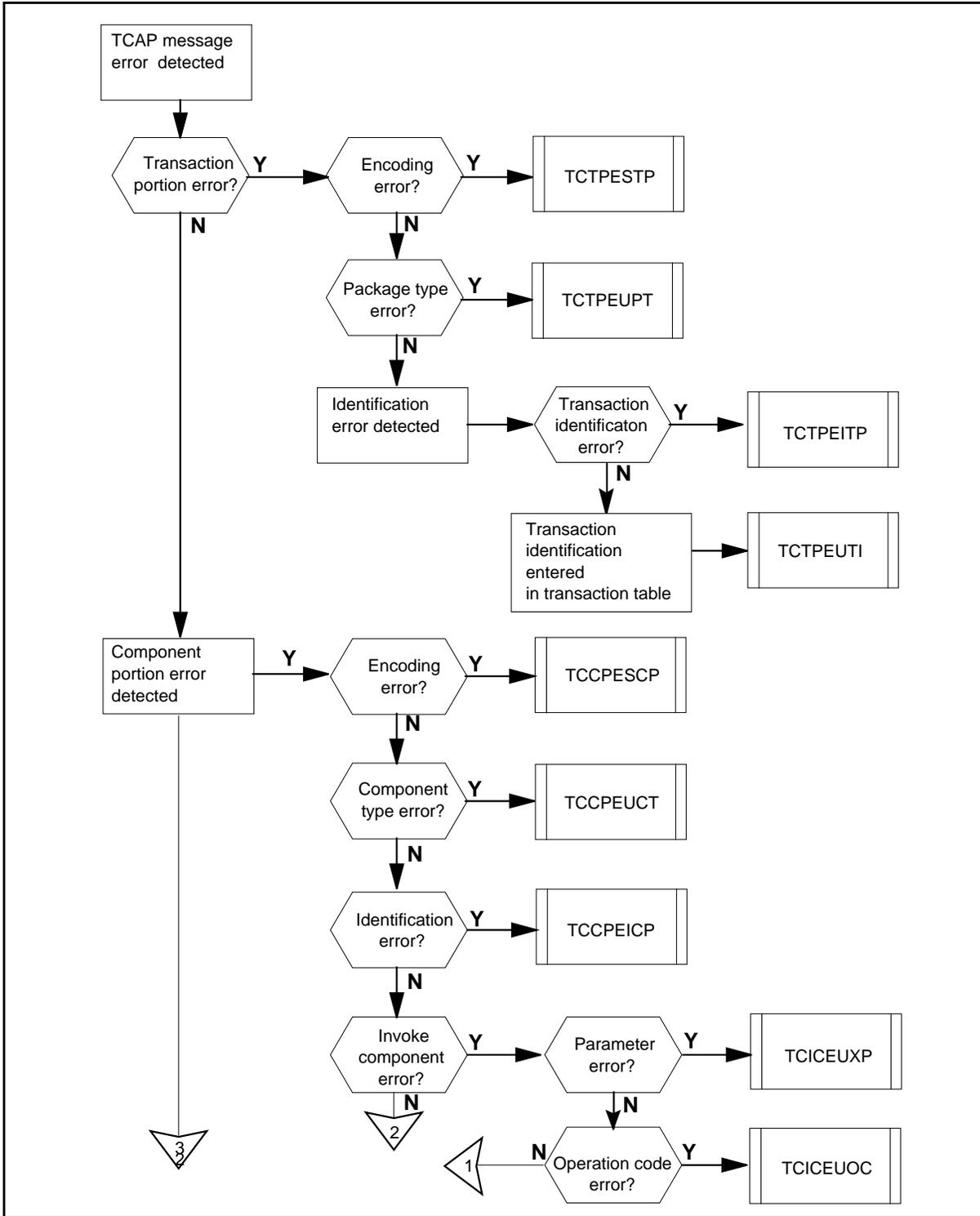
**Associated functionality codes**

The associated functionality codes for OM group TCAPERRS are in the following table.

| <b>Functionality</b>                                       | <b>Code</b> |
|--|-------------|
| MTX IS-41 SS7 Carriage                                     | NTXG81AA    |
| DMS250 CCS7 TCAP-based Acct Code and Priv Speed Validation | NTX366AA    |
| DMS250 CCS7 TCAP-based Authcode Validation                 | NTX367AA    |
| CCS7 Transaction Service Support                           | NTX550AA    |
| DMS-250 TCAP Protocol                                      | NTXL39AA    |

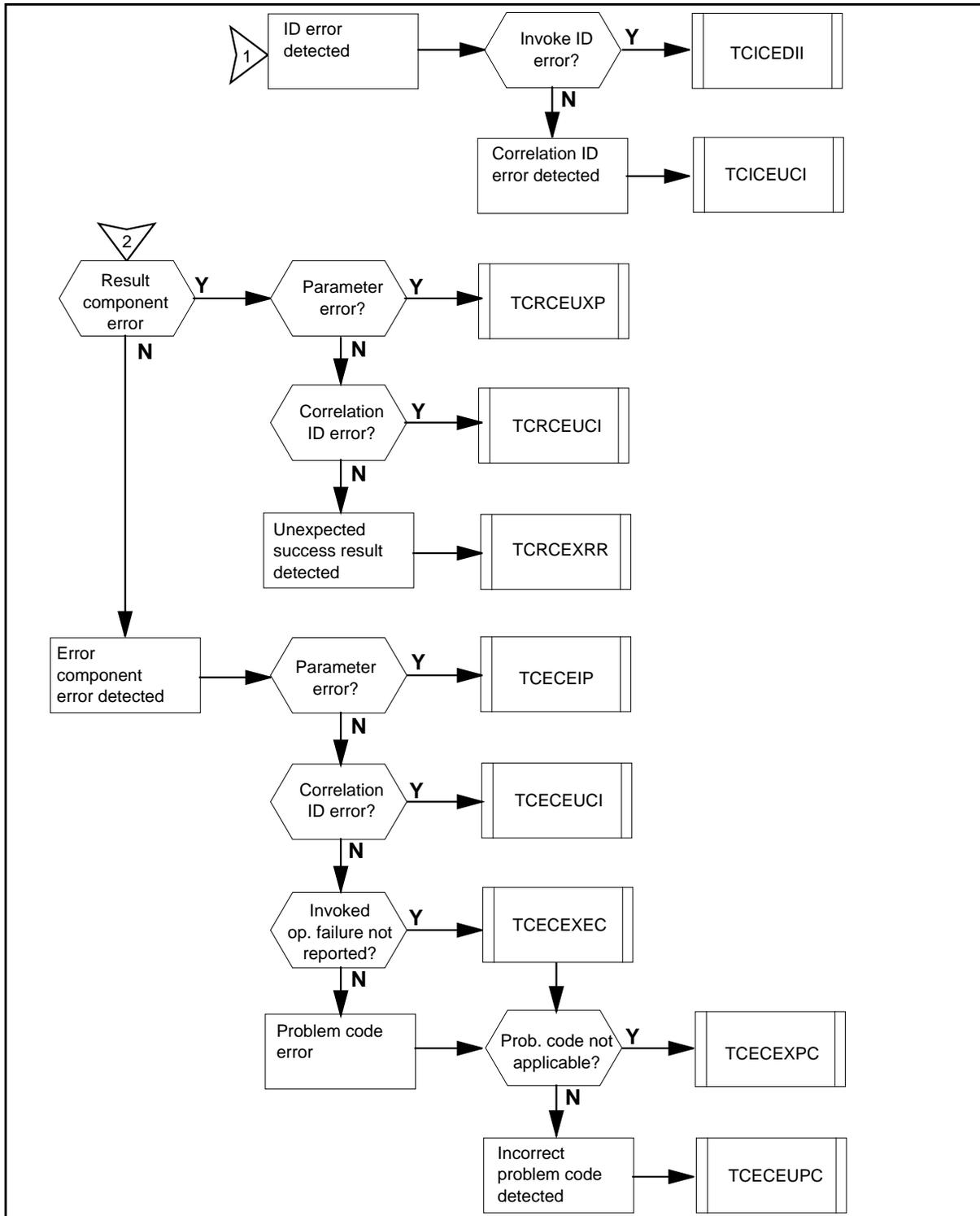
**OM group TCAPERRS (continued)**

**OM group TCAPERRS registers**



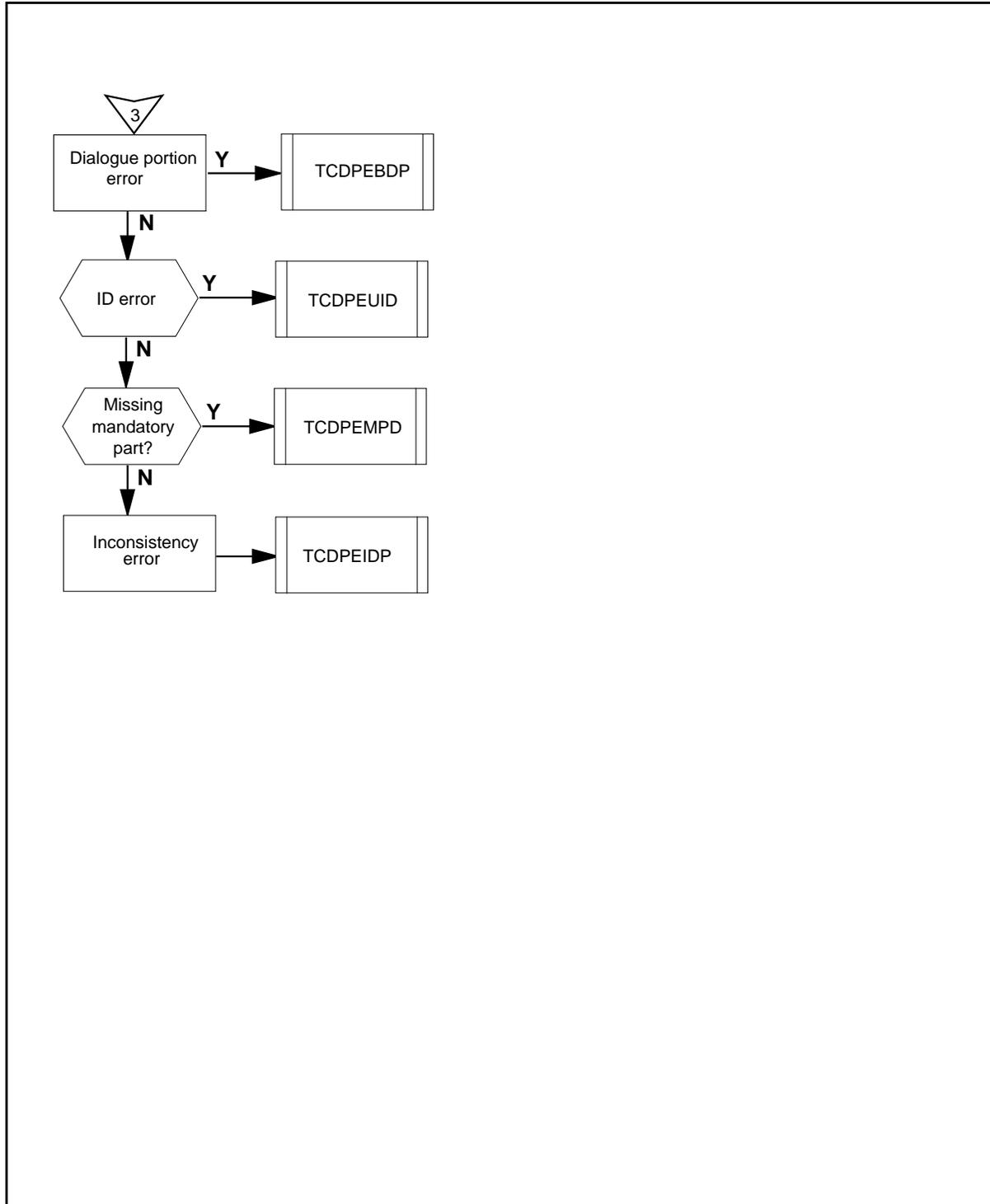
## OM group TCAPERRS (continued)

## OM group TCAPERRS registers (continued)



## OM group TCAPERRS (continued)

### OM group TCAPERRS registers (continued)



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**OM group TCAPERRS** (continued)

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**Register TCCPEICP**

TCAP component portion error wrong component portion (TCCPEICP)

Register TCCPEICP counts received components that contain an identifier that is not correct.

**Register TCCPEICP release history**

Register TCCPEICP was introduced in BCS21.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCCPESCP**

TCAP component portion error badly structured component portion (TCCPESCP)

Register TCCPESCP counts components that the system receives that contain a dangerous coding problem, for example a length that is not correct.

**Register TCCPESCP release history**

Register TCCPESCP was introduced in BCS21.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCCPEUCT**

TCAP component portion error unrecognized component type (TCCPEUCT)

Register TCCPEUCT counts messages that the system receives that contain a wrong component type.

**Register TCCPEUCT release history**

Register TCCPEUCT was introduced in BCS21.

**Associated registers**

There are no associated registers.

## **OM group TCAPERRS (continued)**

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### **Associated logs**

There are no associated logs.

### **Register TCDPEBDP**

TCAP communication allocations error: bad dialogue portions (TCDPEBDP)

Register TCDPEBDP counts incoming messages that contain bad dialogue portions.

### **Register TCDPEBDP release history**

Register TCDPEBDP was released in CSP08.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Register TCDPEIDP**

TCAP communication allocation error: inconsistent dialogue portions (TCDPEIDP)

Register TCDPEIDP counts incoming messages that contain dialogue portions that are not consistent.

### **Register TCDPEIDP release history**

Register TCDPEIDP was released in CSP08.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Register TCDPEMPD**

TCAP communication allocation error: dialogue portions with missing mandatory parts (TCDPEMPD)

Register TCDPEMPD counts incoming messages that contain dialogue portions that are missing required information.

### **Register TCDPEMPD release history**

Register TCDPEMPD was released in CSP08.

---

**OM group TCAPERRS** (continued)

---

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCDPEUID**

TCAP dialogue portion error: bad dialogue portion identifiers (TCDPEUID)

Register TCDPEUID counts incoming TCAP messages that contain bad dialogue portion IDs.

**Register TCDPEUID release history**

Register TCDPEUID was released in CSP08.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCECEIP**

TCAP return error component error incorrect parameter (TCECEIP)

Register TCECEIP counts return error components that contain a parameter that is not correct.

**Register TCECEIP release history**

Register TCECEIP was introduced in BCS21.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCECEUCI**

TCAP return error component error unrecognized correlation identification (TCECEUCI)

Register TCECEUCI counts return error components that contain a correlation identification that does not reflect an operation in progress.

## **OM group TCAPERRS (continued)**

---

### **Register TCECEUCI release history**

Register TCECEUCI was introduced in BCS21.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCECEUPC**

TCAP return error component error unrecognized problem code (TCECEUPC)

Register TCECEUPC counts return error components that contain a problem code that is not correct.

### **Register TCECEUPC release history**

Register TCECEUPC was introduced in BCS21.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCECEXEC**

TCAP return error component error unexpected return error component (TCECEXEC)

Register TCECEXEC counts return error components that do not report failure of the invoked operation.

### **Register TCECEXEC release history**

Register TCECEXEC was introduced in BCS21.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCECEXPC**

TCAP return error component error not planned problem code (TCECEXPC)

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**OM group TCAPERRS** (continued)

---

Register TCECEXPC counts return error components that contain a problem code that is not applicable to the invoked operation.

**Register TCECEXPC release history**

Register TCECEXPC was introduced in BCS21.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCICEDII**

TCAP invoke component error duplicate invoke identification (TCICEDII)

Register TCICEDII counts invoke components that contain an invoke identification that the system assigns to another operation in progress.

**Register TCICEDII release history**

Register TCICEDII was introduced in BCS21.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCICEUCI**

TCAP invoke component error unrecognized correlation identification (TCICEUCI)

Register TCICEUCI counts invoke components that contain a correlation identification that does not reflect an operation in progress.

**Register TCICEUCI release history**

Register TCICEUCI was introduced in BCS21.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## **OM group TCAPERRS** (continued)

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### **Register TCICEUOC**

TCAP invoke component error unrecognized operation code (TCICEUOC)

Register TCICEUOC counts invoke components that contain an operation code that is not correct.

#### **Register TCICEUOC release history**

Register TCICEUOC was introduced in BCS21.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

There are no associated logs.

### **Register TCICEUXP**

TCAP invoke component error not defined or not planned parameter (TCICEUXP)

Register TCICEUXP counts invoke components that contain a parameter that is not correct.

#### **Register TCICEUXP release history**

Register TCICEUXP was introduced in BCS21.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

There are no associated logs.

### **Register TCRCEUCI**

TCAP return result component error unrecognized correlation identification (TCRCEUCI)

Register TCRCEUCI counts return result components that contain a correlation identification that does not indicate an operation in progress.

#### **Register TCRCEUCI release history**

Register TCRCEUCI was introduced in BCS21.

#### **Associated registers**

There are no associated registers.

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**OM group TCAPERRS** (continued)

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**Associated logs**

There are no associated logs.

**Register TCRCEUXP**

TCAP return result component error not defined or not planned parameter (TCRCEUXP)

Register TCRCEUXP counts return result components that contain a parameter that is not correct.

**Register TCRCEUXP release history**

Register TCRCEUXP was introduced in BCS21.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCRCEXRR**

TCAP return result component error unexpected return result (TCRCEXRR)

Register TCRCEXRR counts return result components that occur in response to invoked operations that did not require a return result component.

**Register TCRCEXRR release history**

Register TCRCEXRR was introduced in BCS21.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCTPEITP**

TCAP transaction portion error incorrect transaction portion (TCTPEITP)

Register TCTPEITP counts received messages that contain an identifier that is not correct in the transaction portion.

**Register TCTPEITP release history**

Register TCTPEITP was introduced in BCS21.

## **OM group TCAPERRS (continued)**

---

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCTPESTP**

TCAP transaction portion error incorrectly structured transaction portion (TCTPESTP)

Register TCTPESTP counts received messages that have an encoding problem in the transaction portion, for example, a length that is not correct.

### **Register TCTPESTP release history**

Register TCTPESTP was introduced in BCS21.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCTPEUPT**

TCAP transaction portion error unrecognized package type (TCTPEUPT)

Register TCTPEUPT counts received messages that contain package types that are not correct.

### **Register TCTPEUPT release history**

Register TCTPEUPT was introduced in BCS21.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCTPEUTI**

TCAP transaction allocation error unrecognized transaction identification (TCTPEUTI)

Register TCTPEUTI counts received messages that contain a transaction identification that is not correct.

**OM group TCAPERRS (end)**

---

**Register TCTPEUTI release history**

Register TCTPEUTI was introduced in BCS21.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## OM group TCAPUSAG

---

### OM description

Transaction capabilities application part usage measurements (TCAPUSAG)

The OM group TCAPUSAG records the use of the transaction capabilities application part (TCAP) for each subsystem. Examples of transaction capabilities are: messages, transactions and components.

The TCAP provides a common protocol for message formats, content rules, and exchange procedures across the Common Channel Signaling 7 (CCS7) network. Application processes like the Enhanced 800 Service (E800), which performs operations on remote network nodes, use the TCAP.

The TCAP messages are constructed with data elements. Each data element consists of three parts: identifier, length of contents, and content. The TCAP message identifier is the package type identifier. The package type identifier identifies the TCAP message and contains the information that identifies the transaction. The transaction is the transaction part of the TCAP message.

The TCAP message contents field can have up to three data elements:

- transaction identification, which is needed to associate the message with a unique transaction
- dialogue portions which the system uses to facilitate dialogue information exchange
- data element, which contains a minimum of one component

The component portion of a message consists of a sequence of a minimum of one TCAP component. There are four TCAP components:

- *invoke* components initiate an operation on a remote node
- *result* components report the successful completion of an invoked operation
- *error* components report attempts to invoke operations, that are not successful
- *reject* components reject the transaction

### Release history

The OM group TCAPUSAG was introduced in BCS21.

#### CSP08

New registers TCDPUSE and TCDPUSE2 were introduced in CSP08.

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**OM group TCAPUSAG (continued)**

---

**BCS36**

Three new key field values (NCS800, NCS900, and NCSCC) were introduced and NCSSAC was deleted in BCS36.

**BCS35**

Three new key field values (HLRMTX, VLRMTX, and MSCMTX) were introduced in BCS35.

**BCS33**

Eleven new key field values (GF0-GF9) and GFNTEST were introduced in BCS33.

**BCS31**

The MAPMTX subsystem was added to key field in BCS31.

**BCS29**

CMS subsystem was added to key field in BCS29.

**BCS23**

Registers TCTRANS, TCNORMAL, and TCFORCED were deleted in BCS23.

**BCS22**

Registers TCMGOU2, TCMGIN2, TCQWPER2, TCQNPER2, TCCWPER2, TCCNPER2, TCRESPN2, TCINVKL2, TCINVKN2, TCRSLTL2, TCRSLTN2, TCRTERR2, and TCREJEC2 were activated in BCS22. Registers TCTRANS, TCNORMAL, and TCFORCED were set to zero.

**BCS21**

Registers TCMGOU2, TCMGIN2, TCQWPER2, TCQNPER2, TCCWPER2, TCCNPER2, TCRESPN2, TCINVKL2, TCINVKN2, TCRSLTL2, TCRSLTN2, TCRTERR2, and TCREJEC2 were set to zero in BCS21.

**Registers**

The OM group TCAPUSAG registers appears on the MAP terminal as follows:

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**OM group TCAPUSAG** (continued)
 

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|          |          |          |          |
|----------|----------|----------|----------|
| TCMSGOUT | TCMSGOU2 | TCMSGIN  | TCMSGIN2 |
| TCUNIDIR | TCUNIDI2 | TCQWPERM | TCQWPER2 |
| TCQNPERM | TCQNPER2 | TCCWPERM | TCCWPER2 |
| TCCNPERM | TCCNPER2 | TCRESPNS | TCRESPN2 |
| TCINVKL  | TCINVKL2 | TCINVKNL | TCINVKN2 |
| TCRSLTL  | TCRSLTL2 | TCRSLTNL | TCRSLTN2 |
| TCRTERR  | TCRTERR2 | TCREJECT | TCREJEC2 |
| TCABORT  | TCABORT2 | TCDPUSE  | TCDPUSE2 |

### Group structure

The OM group TCAPUSAG provides one tuple for each subsystem.

#### Key field

(C7\_SUBSYSTEM\_NAME) for each tuple is the subsystem name: one of TUP, ISDNUP, OAM, E800, ACCS, N00, TCN, BNS, SCPE800, SCPACCS, SCPBNS, AUTHSS, ACCTSS, CMS-Canada only, PVN, NETRAG, CLASS, INTERWRK, MAPMSC, MAPLR, NMS, DOC, LEC, MAPMTX, GF0-GF9, GFNTEST, HLRMTX, VLRMTX, MSCMTX, NCS800, NCS900, and NCSCC.

#### Info field:

There is no info field.

### Associated OM groups

The OM group TCAPPERRS contains registers that count the protocol errors the TCAP detects for each subsystem.

### Associated functional groups

The following functional groups associate with OM group TCAPUSAG:

- Automatic Calling Card Service (ACCS)
- Common Channel Signaling 7 (CCS7)
- Enhanced 800 Service (E800)

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**OM group TCAPUSAG** (continued)

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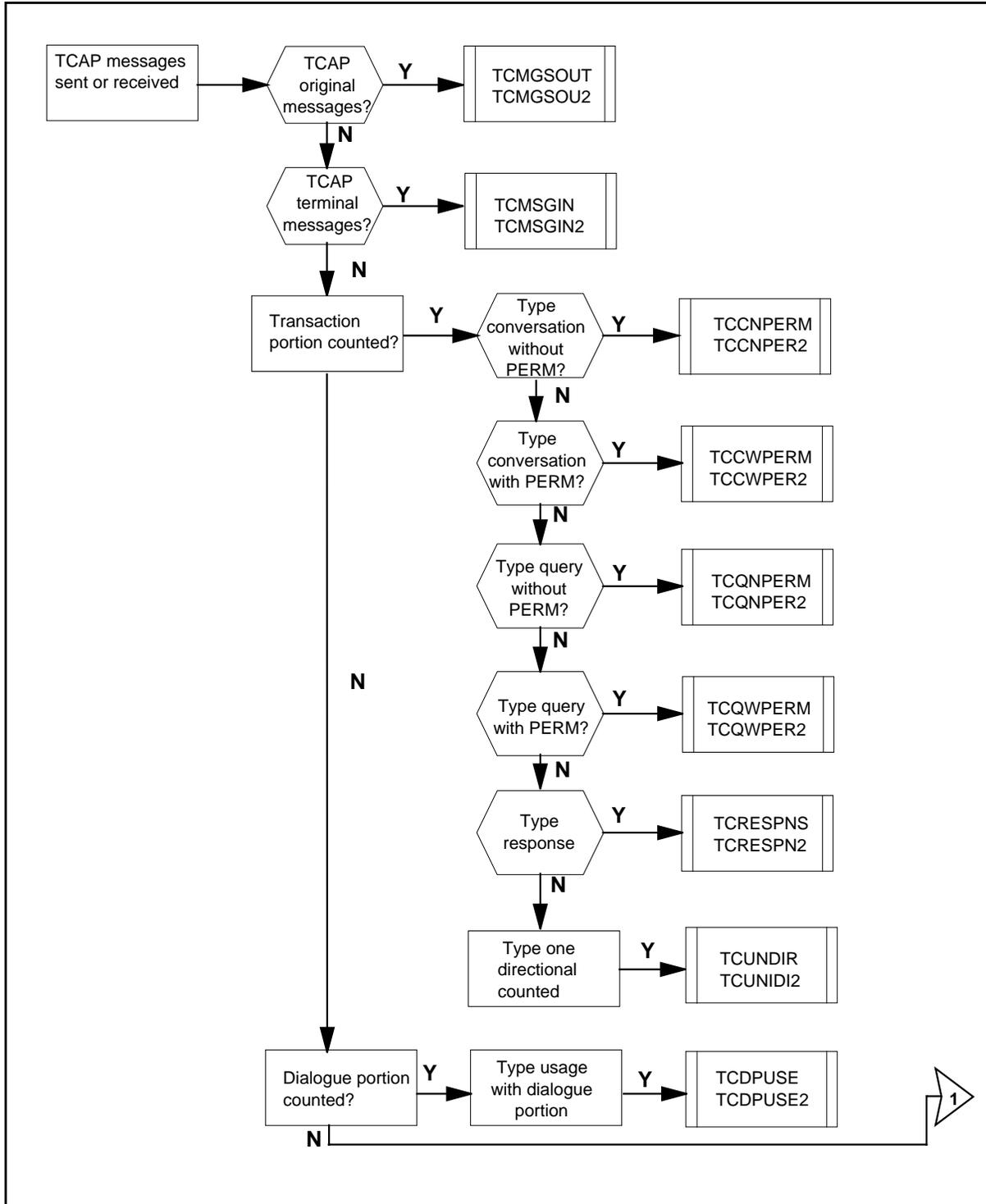
**Associated functionality codes**

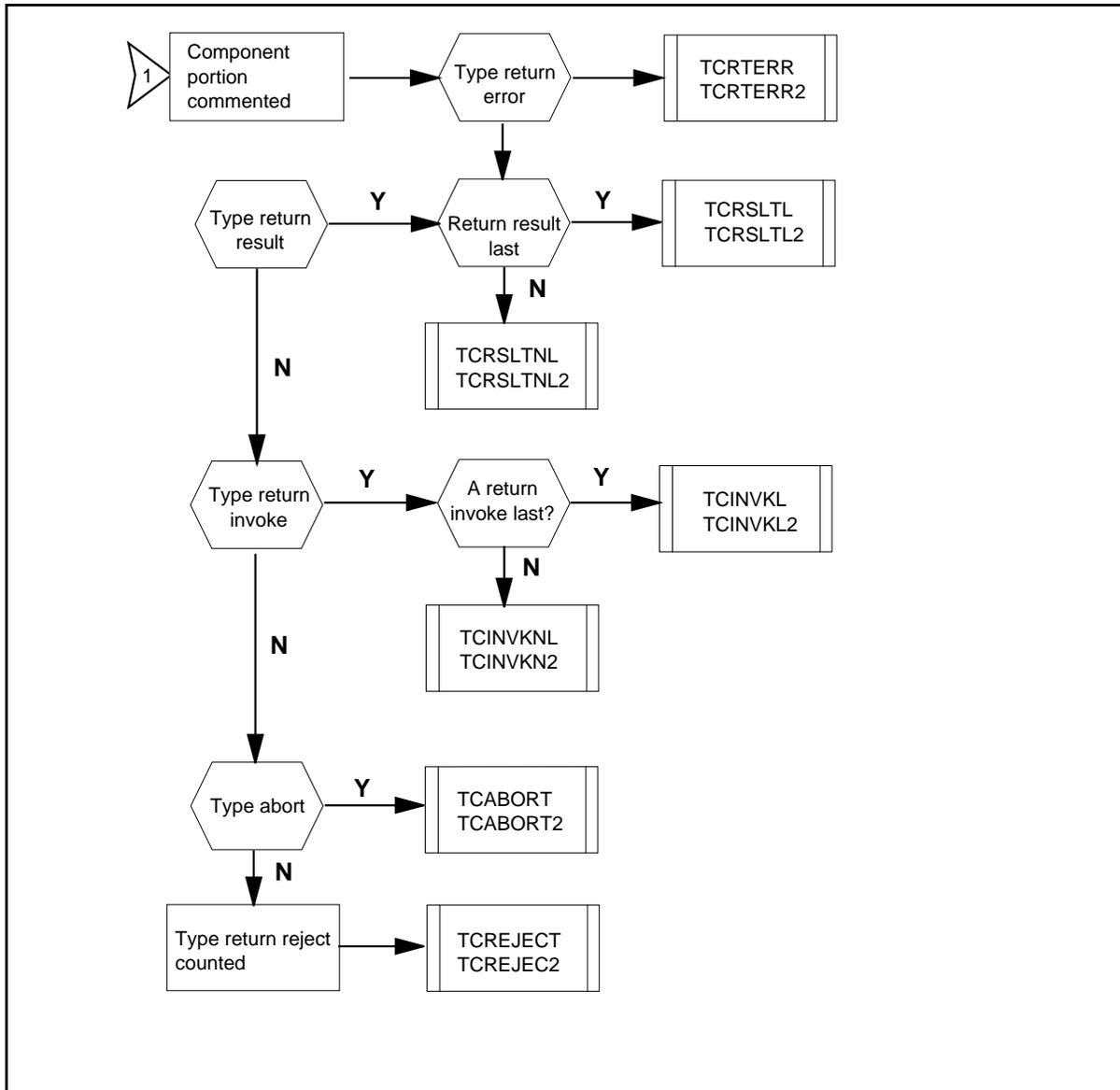
The associated functionality codes for OM group TCAPUSAG appear in the following table.

| <b>Functionality</b>                                       | <b>Code</b> |
|--|-------------|
| MTX IS-41 SS7 Carriage                                     | NTXG81AA    |
| DMS250 CCS7 TCAP-based Acct Code and Priv Speed Validation | NTX366AA    |
| DMS250 CCS7 TCAP-based Authcode Validation                 | NTX367AA    |
| CCS7--Transaction Service Support                          | NTX550AA    |
| DMS-250 TCAP Protocol                                      | NTXL39AA    |

## OM group TCAPUSAG (continued)

### The OM group TCAPUSAG registers



**OM group TCAPUSAG (continued)****OM group TCAPUSAG registers (continued)****Register TCABORT**

Total number of TCAP messages sent or received with package type Abort

TCCNPERM counts the TCAP messages sent or received that contain the package type Abort.

**Register TCABORT release history**

Register TCABORT was introduced in BCS36.

## **OM group TCAPUSAG (continued)**

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### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

TCABORT2

## **Register TCCNPERM**

Total number of TCAP messages sent or received with package type Conversation Without Permission (TCCNPERM)

Register TCCNPERM counts the TCAP messages that the system sends or receives that contain the package type Conversation Without Permission. A message with this package type continues a transaction. The message informs the receiving node that the node cannot end the transaction normally. Each message contains one TCAP package. Conversation packages always associate with a transaction.

### **Register TCCNPERM release history**

#### **BCS22**

Register TCCNPER2 was activated in BCS22.

#### **BCS21**

Register TCCNPERM and TCCNPER2 were added in BCS21. Register TCCNPER2 was set to zero in BCS21.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

TCCNPER2

## **Register TCCWPERM**

Total number of TCAP messages sent or received with package type Conversation With Permission (TCCWPERM)

Register TCCWPERM counts TCAP messages that the system sends or receives that contain package type Conversation With Permission. A message

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**OM group TCAPUSAG** (continued)

---

with this package type continues a transaction. The message informs the receiving node that the node may end the transaction normally. Each message contains one TCAP package. Conversation packages always associate with a transaction.

**Register TCCWPERM release history****BCS22**

Register TCCWPER2 was activated in BCS22.

**BCS21**

Register TCCWPERM and TCCWPER2 was added in BCS21. Register TCCWPER2 was set to zero in BCS21.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

TCCWPER2

**Register TCDPUSE**

Total number of TCAP messages sent or received that contain a dialogue position (TCDPUSE)

Register TCDPUSE counts incoming and outgoing TCAP messages that contain a dialogue portion.

**Register TCDPUSE release history**

Register TCDPUSE was introduced in CSP08.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

TCDPUSE2

Register TCDPUSE2 is the overflow register for TCDPUSE. Register TCDPUSE2 counts the number of times that TCDPUSE overflows to 0.

## **OM group TCAPUSAG** (continued)

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### **Register TCFORCED**

Total number of forced transmission terminations (TCFORCED)

Register TCFORCED counts forced transmission terminations. A forced termination means that the remote node sent a response package without permission. A forced termination can also mean that the local application cancelled a transaction without permission.

#### **Register TCFORCED release history**

##### **BCS23**

Register TCFORCED was deleted in BCS23.

##### **BCS22**

Register TCFORCED was set to zero in BCS22.

##### **BCS21**

Register TCFORCED was added in BCS21.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

There are no associated logs.

### **Register TCINVKL**

Total number of components sent or received of type Invoke Last (TCINVKL)

Register TCINVKL counts Invoke Last components that the system sends or receives. An Invoke component initiates an operation on a remote node. Invoke Last indicates that additional replies do not follow. There can be several components in each package.

#### **Register TCINVKL release history**

##### **BCS22**

Register TCINVKL2 was activated in BCS22.

##### **BCS21**

Registers TCINVKL and TCINVKL2 are added in BCS21. Register TCINVKL2 was set to zero in BCS21.

#### **Associated registers**

There are no associated registers.

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**OM group TCAPUSAG** (continued)

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**Associated logs**

There are no associated logs.

**Extension registers**

TCINVKL2

**Register TCINVKNL**

Total number of components sent or received of type Invoke Not Last (TCINVKL)

Registers TCINVKNL counts Invoke Not Last components that the system sends or receives. An Invoke component initiates an operation on a remote node. An Invoke Not Last component indicates that additional replies follow. There can be several components in each package.

**Register TCINVKNL release history****BCS22**

Register TCINVKN2 was activated in BCS22.

**BCS21**

Register TCINVKNL and TCINVKN2 were added in BCS21. Register TCINVKN2 was set to zero in BCS21.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

TCINVKN2

**Register TCMMSGIN**

Total TCAP messages terminating at this node (TCMMSGIN)

Register TCMMSGIN counts the transactions that terminate at the remote network. The system can terminate a transaction without receiving a message. Not all received messages associate with a transaction.

**Register TCMMSGIN release history****BCS22**

Register TCMMSGIN2 was activated in BCS22.

## **OM group TCAPUSAG (continued)**

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### **BCS21**

Registers TCMMSGIN and TCMMSGIN2 were added in BCS21. Register TCMMSGIN2 was set to zero in BCS21.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

TCMMSGIN2

## **Register TCMSGOUT**

Total TCAP messages originating on this node (TCMSGOUT)

Register TCMSGOUT counts TCAP messages. Each transaction consists of a minimum of one message that the system sends to a remote network node. Not all sent messages associate with a transaction.

### **Register TCMSGOUT release history**

#### **BCS22**

Register TCMSGOUT was activated in BCS22.

#### **BCS21**

Registers TCMGSOUT and TCMMSGOU2 were added in BCS21. Register TCMMSGOU2 was set to zero in BCS21.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

TCMGSOU2

## **Register TCNORMAL**

Total number of transactions terminated normally (TCNORMAL)

Register TCNORMAL counts transactions that terminate normally. A normal termination means that the remote node had permission to terminate and sent

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**OM group TCAPUSAG** (continued)

---

a response package. A normal termination also means the local application had permission and terminated the transaction.

**Register TCNORMAL release history****BCS23**

Register TCNORMAL was deleted in BCS23.

**BCS22**

Register TCNORMAL was set to zero in BCS22.

**BCS21**

Register TCNORMAL was added in BCS21.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCQNPPerm**

Total number of TCAP message sent or received with package type Query Without Permission (TCQNPPerm)

Register TCQNPPerm counts TCAP messages that the system sends or receives, that have the package type Query Without Permission. This package type initiates a transaction and informs the destination node that the node may not terminate the transaction normally. Each message has one TCAP package. Outgoing query packages associate with a transaction. Incoming packages do not associate with a transaction.

**Register TCQNPPerm release history****BCS22**

Register TCQNPPerm2 was activated in BCS22.

**BCS21**

Registers TCQNPPerm and TCQNPPerm2 added. Register TCQNPPerm2 set to zero.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## **OM group TCAPUSAG** (continued)

---

### **Extension registers**

TCQNPER2

### **Register TCQWPERM**

Total number of TCAP messages sent or received with package type Query With Permission (TCQWPERM)

Register TCQWPERM counts TCAP messages that the system sends or receives, that have package type Query With Permission. This package type initiates a transaction and informs the destination node that the node can end the transaction normally. Each message contains one TCAP package. Outgoing query packages associate with a transaction. Incoming query packages do not associate with a transaction.

### **Register TCQWPERM release history**

#### **BCS22**

Register TCQWPER2 was activated in BCS22.

#### **BCS21**

Register TCQWPERM and TCQWPER2 were added in BCS21. Register TCQWPER2 was set to zero in BCS21.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

TCQWPER2

### **Register TCREJECT**

Total number of components sent or received of type Reject (TCREJECT)

Register TCREJECT counts Reject components that the system sends or receives. The system sends the Reject component in reply to a message or component that contains a protocol error. There can be several components in each package.

### **Register TCREJECT release history**

#### **BCS22**

Register TCREJEC2 was activated in BCS27.

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**OM group TCAPUSAG** (continued)

---

**BCS21**

Registers TCREJECT and TCREJEC2 were added in BCS21. Register TCREJEC2 was set to zero in BCS21.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

TCREJEC2

**Register TCRESPNS**

Total number of TCAP messages sent or received with package type Response (TCRESPNS)

Register TCRESPNS counts TCAP messages that the system sends or receives that contain the package type Response. This package type ends the transaction normally. Each message contains one TCAP package. Response packages always associate with a transaction.

**Register TCRESPNS release history****BCS22**

Register TCRESPN2 was activated in BCS22.

**BCS21**

Registers TCRESPNS and TCRESPN2 were added in BCS21. TCRESPN2 was set to zero in BCS21.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

TCRESPN2

**Register TCRSLTL**

Total number of components sent or received of type Return Result Last (TCRSLTL)

## **OM group TCAPUSAG** (continued)

---

Register TCRSLTL counts Return Result Last components that the system sends or receives. The system sends a Return Result component in reply to an Invoke component whose operation is completed. Return Result Last indicates that no additional result components follow.

### **Register TCRSLTL release history**

#### **BCS22**

Register TCRSLTL2 was activated in BCS22.

#### **BCS21**

Registers TCRSLTL and TCRSLTL2 were added in BCS21. Register TCRSLTL2 was set to zero in BCS21.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

TCRSLTL2

## **Register TCRSLTNL**

Total number of components sent or received of type Return Result Not Last (TCRSLTNL)

Register TCRSLTNL counts Return Result Not Last components that the system sends or receives. The system sends a result component in reply to an Invoke component whose operations complete. Return Result Not Last indicates that no additional replies follow.

### **Register TCRSLTNL release history**

#### **BCS22**

Register TCRSLTN2 was activated in BCS22.

#### **BCS21**

Registers TCRSLTNL and TCRSLTN2 were added in BCS21. Register TCRSLTN2 was set to zero in BCS21.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

---

**OM group TCAPUSAG** (continued)

---

**Extension registers**

TCRSLTN2

**Register TCRERR**

Total number of components sent or received of type Return Error (TCRERR)

Register TCRERR counts components of type Return Error that the system sends or receives. The system sends an error component in reply to an Invoke component that has an operation that failed. There can be several components in each package.

**Register TCRERR release history****BCS22**

Register TCRERR2 was activated in BCS22.

**BCS21**

Registers TCRERR and TCRERR2 were added in BCS21. Register TCRERR2 was set to zero in BCS21.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

TCRERR2

**Register TCTRANS**

Total number of TCAP transactions

TCTRANS counts transactions that all applications initiate on this remote network node using the TCAP.

**Register TCTRANS release history****BCS23**

Register TCTRANS was deleted in BCS23.

**BCS22**

Register TCTRANS was set to zero in BCS22.

## **OM group TCAPUSAG (end)**

---

### **BCS21**

Register TCTRANS was added in BCS21.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCUNIDIR**

Total number of TCAP messages sent or received with package type one directional (TCUNIDIR)

Register TCUNIDIR counts TCAP messages that the system sends or receives that contain a one directional package type. A message with a one directional package type flows in one direction only. Each message has one TCAP.

### **Register TCUNIDIR release history**

#### **BCS22**

Register TCUNIDI2 was activated in BCS22.

#### **BCS21**

Registers TCUNIDIR and TCUNIDI2 were added in BCS21. Register TCUNIDI2 was set to zero in BCS21.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

TCUNIDI2

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## OM group TCN7ERRS

---

### OM Description

Transaction capabilities application part CCS7 errors (TCN7ERRS)

The OM group TCN7ERRS counts errors for the transaction capabilities application part (TCAP). The TCAP functions in the CCITT common channel signaling 7 (CCS7) protocol.

The OM group TCN7ERRS error counts are grouped into two major categories: transaction part errors and component portion errors.

Component portion errors are divided into the following problem codes:

- general problems
- invoke problems
- return result problems
- return error problems

### Release history

The OM group TCN7ERRS was introduced in BCS34.

### Registers

The OM group TCN7ERRS registers appear on the MAP terminal as follows:

|          |          |          |          |
|----------|----------|----------|----------|
| TNTPEUPT | TNTPEITP | TNTPESTP | TNTPEUTI |
| TNTPERLM | TNCPEUCT | TNCPEMIC | TNCPESCP |
| TNICEDII | TNICEUOC | TNICEMIP | TNICEUCI |
| TNICERLM | TNICERLS | TNICELRU | TNICEULO |
| TNRCEUII | TNRCEXRR | TNRCEMIP | TNECEUII |
| TNECEXEC | TNECEUPC | TNECEXPC | TNECEMIP |

### Group structure

The OM group TCN7ERRS provides one tuple for each TCAP application.

**Key field:**

C7\_SUBSYSTEM\_NAME

**Info field:**

There is no info field.

### Associated OM groups

TCN7USAG

## **OM group TCN7ERRS (continued)**

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### **Associated functional groups**

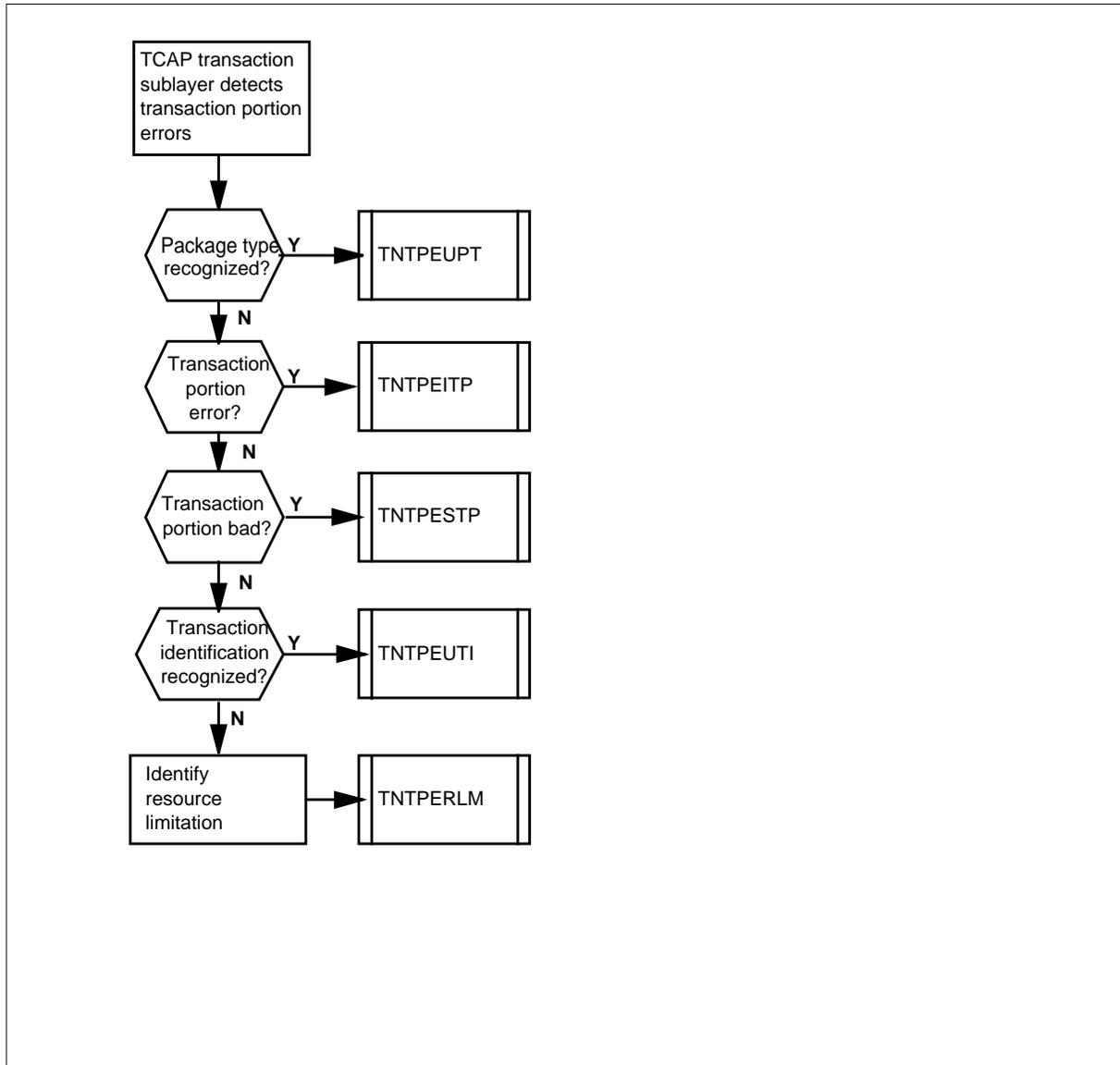
The following functional groups are for OM group TCN7ERRS:

- CCITT SCCP (011) and TCAP

### **Associated functionality codes**

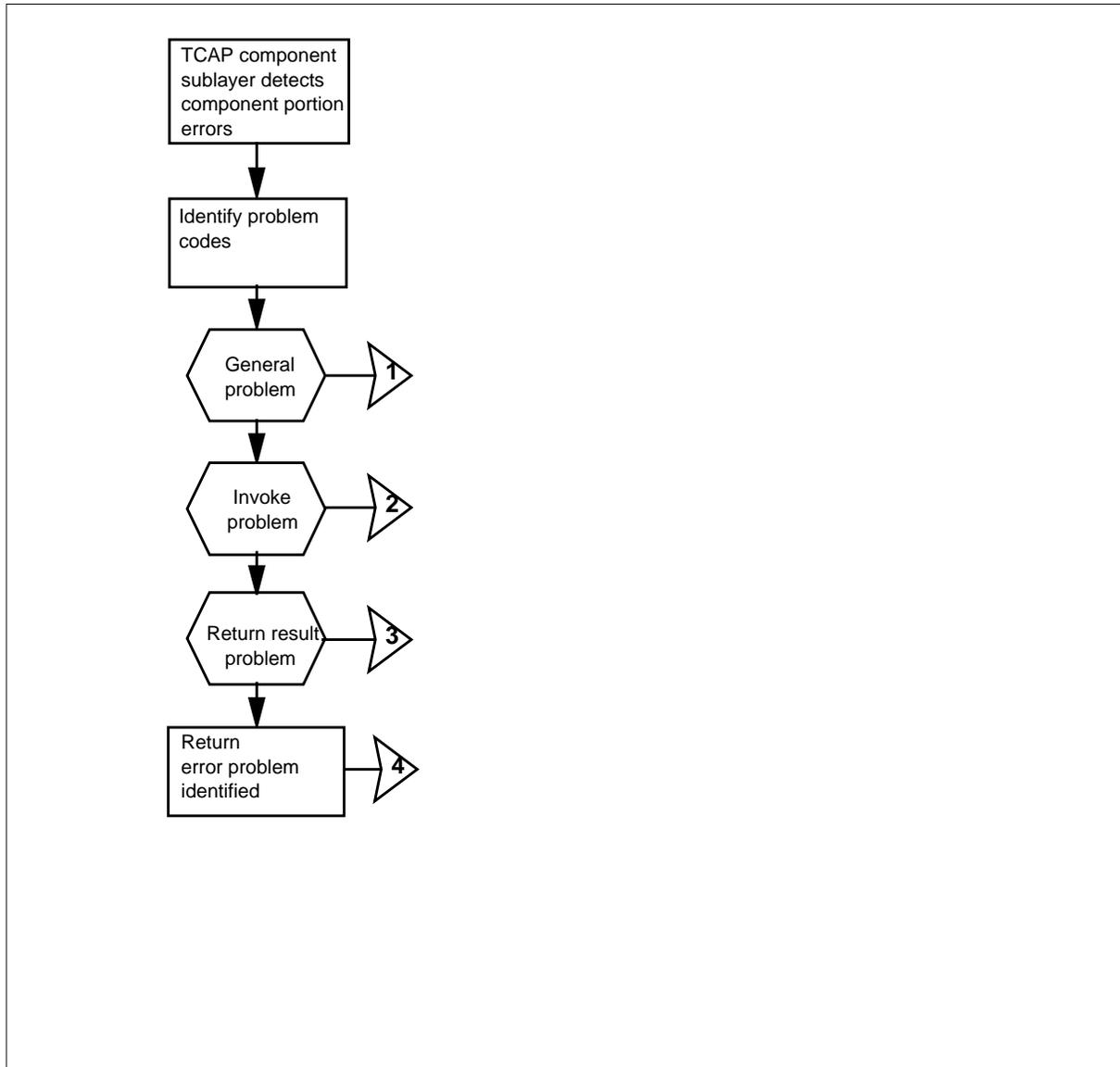
The associated functionality codes for OM group TCN7ERRS appear in the following table.

| <b>Functionality</b> | <b>Code</b> |
|----------------------|-------------|
| CCS7 Base            | TEL00008    |

**OM group TCN7ERRS (continued)****OM group TCN7ERRS registers - transaction portion errors**

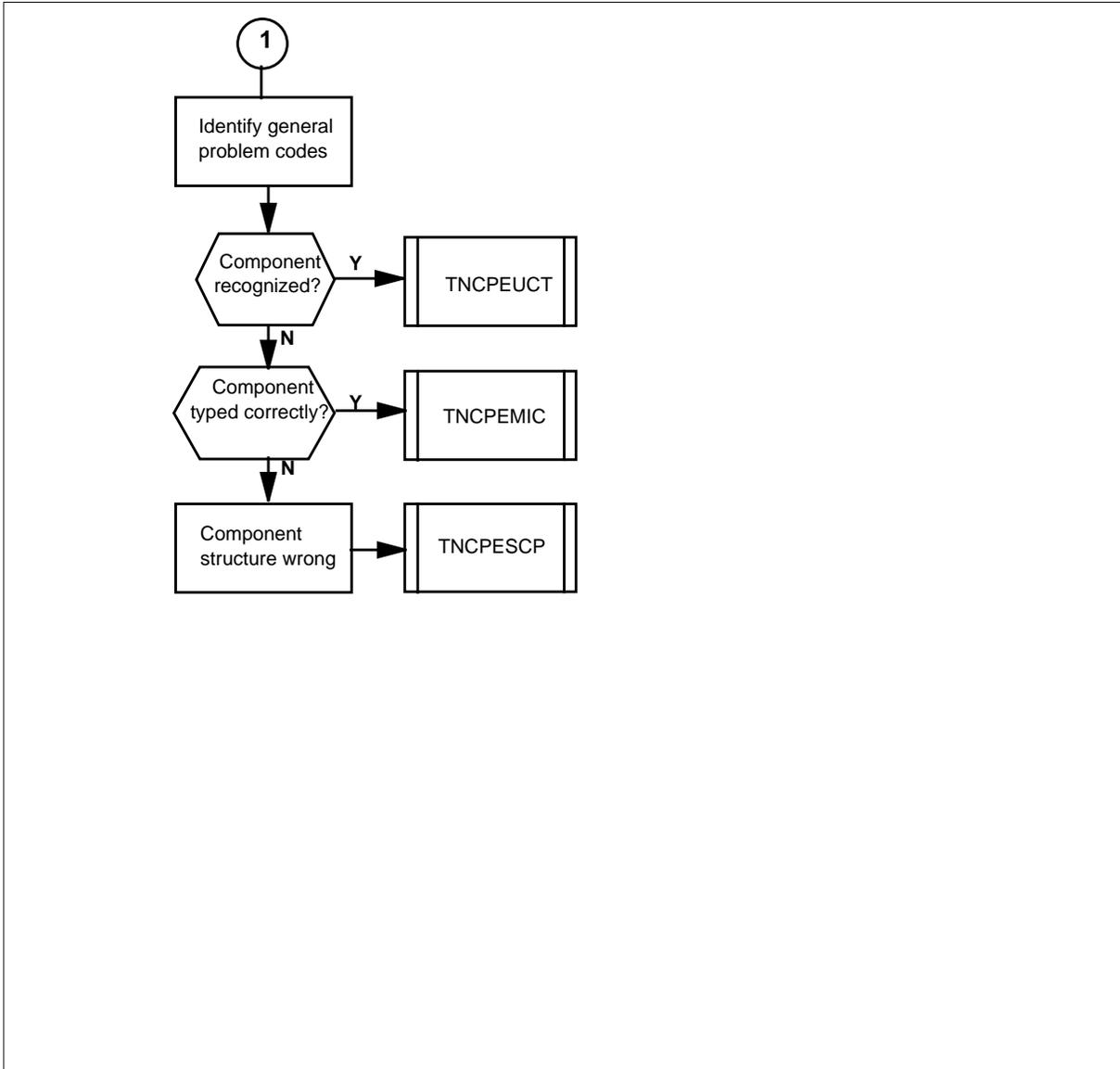
## OM group TCN7ERRS (continued)

### OM group TCN7ERRS registers - component portion errors



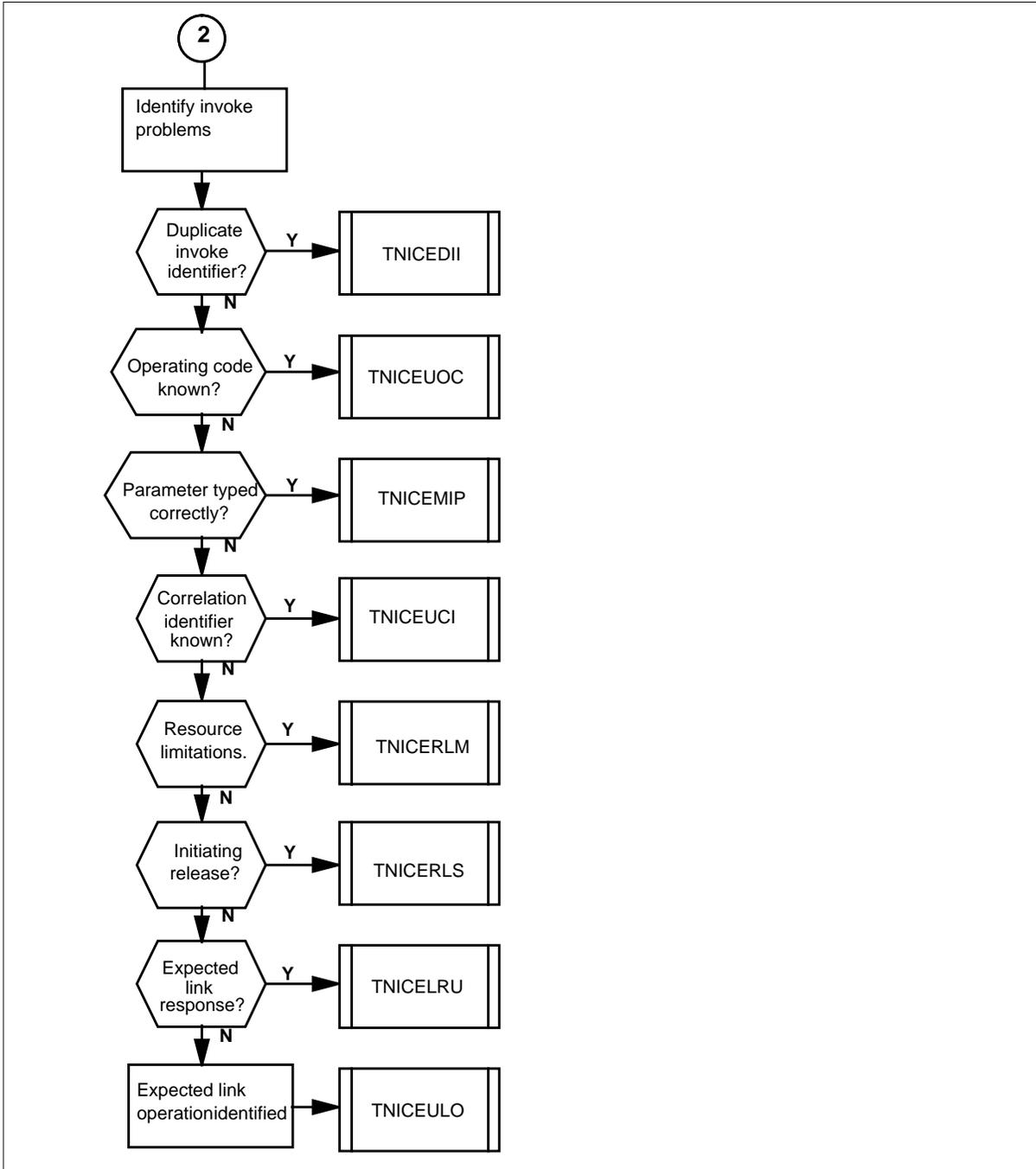
**OM group TCN7ERRS (continued)**

**OM group TCN7ERRS registers - general problem codes**



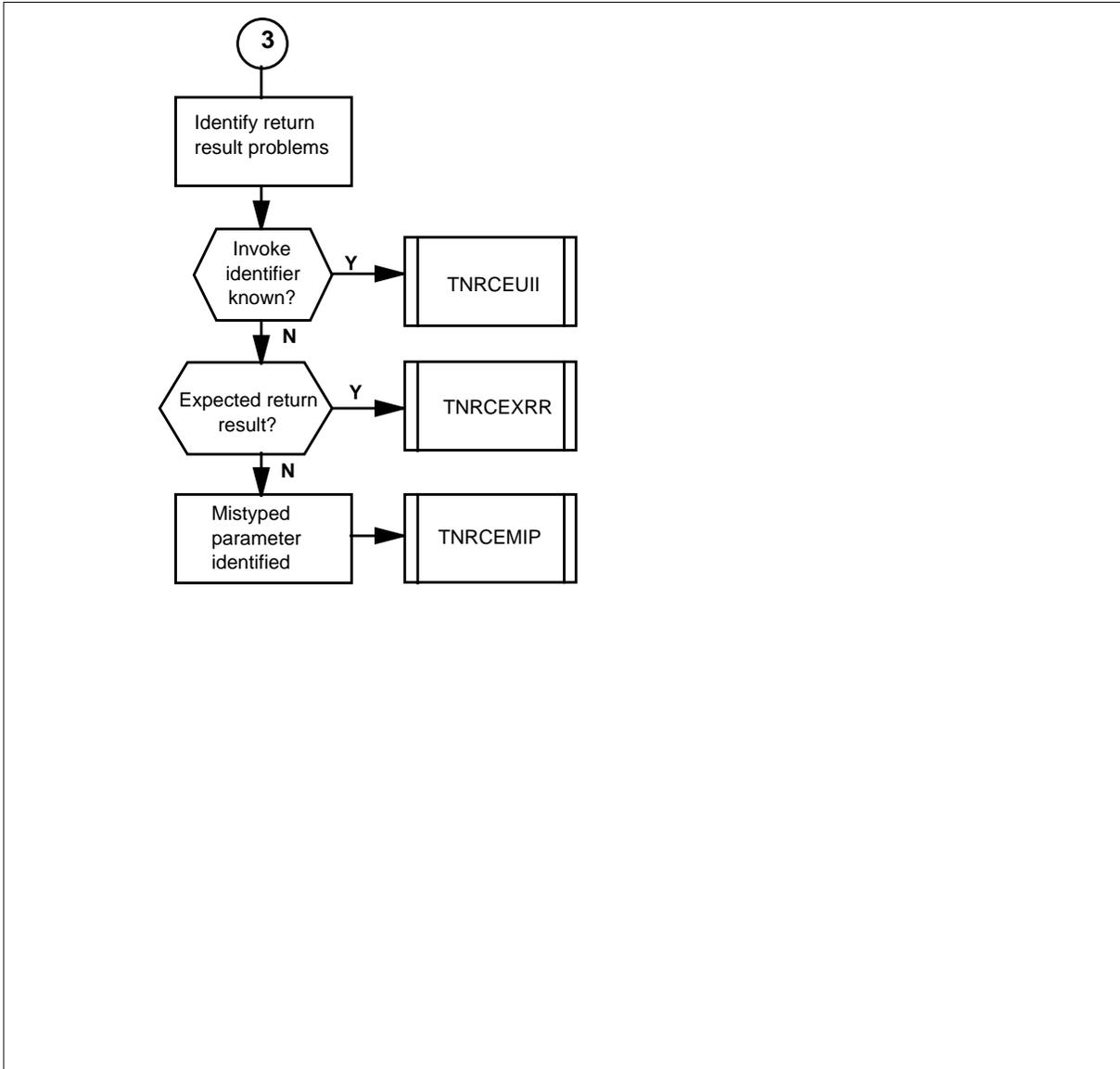
## OM group TCN7ERRS (continued)

### OM group TCN7ERRS registers - invoke problem codes



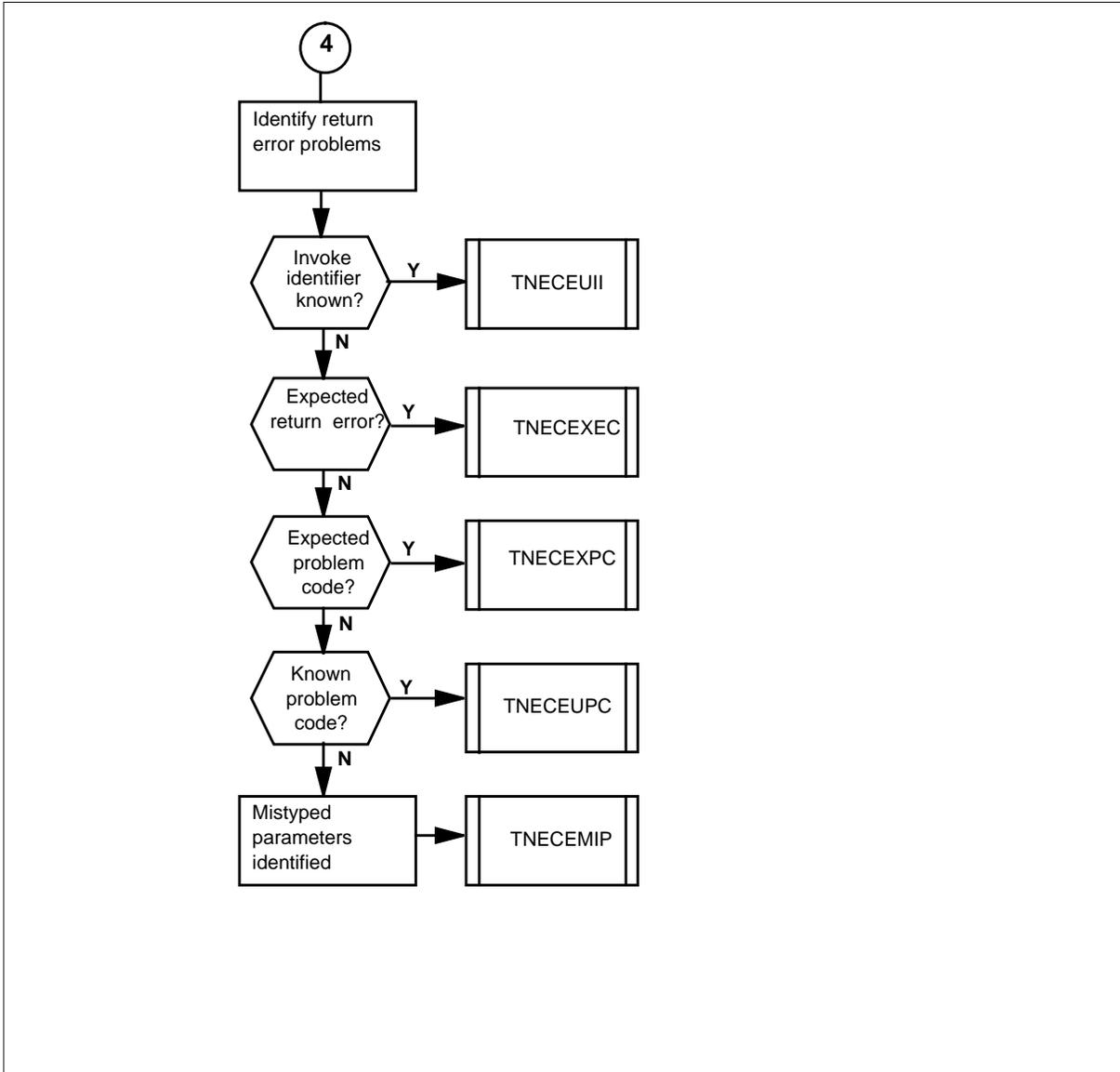
**OM group TCN7ERRS (continued)**

**OM group TCN7ERRS registers - return result problem codes**



## OM group TCN7ERRS (continued)

### OM group TCN7ERRS registers - return error problem codes



### Register TNCPEMIC

Total number component portion errors, mistyped component (TNCPEMIC)

Register TNCPEMIC increases when the TCAP detects a component portion error with the general problem code Mistyped Component.

### Register TNCPEMIC release history

Register TNCPEMIC was introduced in BCS34.

---

**OM group TCN7ERRS** (continued)

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**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TNCPESCP**

Total number component portion errors, badly structured component portion (TNCPESCP)

Register TNCPESCP increases when the TCAP detects a component portion error with the general problem code Badly Structured Component Portion.

**Register TNCPESCP release history**

Register TNCPESCP was introduced in BCS34.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TNCPEUCT**

Total number component portion errors, unrecognized component type (TNCPEUCT)

Register TNCPEUCT increases when the TCAP detects a component portion error with the general problem code Unrecognized Component.

**Register TNCPEUCT release history**

Register TNCPEUCT was introduced in BCS34.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TNECEMIP**

Total number return error component errors, mistyped parameter (TNECEMIP)

## **OM group TCN7ERRS (continued)**

---

Register TNECEMIP increases when the TCAP detects a component portion error with the return error problem code Mistyped Parameter.

### **Register TNECEMIP release history**

Register TNECEMIP was introduced in BCS34.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TNECEUII**

Total number return error component errors, unrecognized invoke identifier (TNECEUII)

Register TNECEUII increases when the TCAP detects a component portion error with the return error problem code Unrecognized Invoke Identifier.

### **Register TNECEUII release history**

Register TNECEUII was introduced in BCS34.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TNECEUPC**

Total number return error component errors, unrecognized problem code (TNECEUPC)

Register TNECEUPC increases when the TCAP detects a component portion error with the return error problem code Unrecognized Problem Code.

### **Register TNECEUPC release history**

Register TNECEUPC was introduced in BCS34.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

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**OM group TCN7ERRS** (continued)

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**Register TNECEXEC**

Total number return error component errors, unexpected return error component (TNECEXEC)

Register TNECEXEC increases when the TCAP detects a component portion error with the return error problem code Unexpected Return Error Component.

**Register TNECEXEC release history**

Register TNECEXEC was introduced in BCS34.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TNECEXPC**

Total number return error component errors, unexpected problem code (TNECEXPC)

Register TNECEXPC increases when the TCAP detects a component portion error with the return error problem code Unexpected Problem Code.

**Register TNECEXPC release history**

Register TNECEXPC was introduced in BCS34.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TNICEDII**

Total number invoke component errors, duplicate invoke identifier (TNICEDII)

Register TNICEDII increases when the TCAP detects a component portion error with the invoke problem code Duplicate Invoke Identifier.

**Register TNICEDII release history**

Register TNICEDII was introduced in BCS34.

## **OM group TCN7ERRS (continued)**

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### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TNICELRU**

Total number invoke component errors, link response unexpected (TNICELRU)

Register TNICELRU increases when the TCAP detects a component portion error with the invoke problem code Link Response Unexpected.

### **Register TNICELRU release history**

Register TNICELRU was introduced in BCS34.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TNICEMIP**

Total number invoke component errors, mistyped parameter (TNICEMIP)

Register TNICEMIP increases when the TCAP detects a component portion error with the invoke problem code Mistyped Parameter.

### **Register TNICEMIP release history**

Register TNICEMIP was introduced in BCS34.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TNICERLM**

Total number invoke component errors, resource limit (TNICERLM)

Register TNICERLM increases when the TCAP detects a component portion error with the invoke problem code Resource Limit.

---

**OM group TCN7ERRS** (continued)

---

**Register TNICERLM release history**

Register TNICERLM was introduced in BCS34.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TNICERLS**

Total number invoke component errors, initiating release (TNICERLS)

Register TNICERLS increases when the TCAP detects a component portion error with the invoke problem code Initiating Release.

**Register TNICERLS release history**

Register TNICERLS was introduced in BCS34.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TNICEUCI**

Total number invoke component errors, unrecognized correlation identifier (TNICEUCI)

Register TNICEUCI increases when the TCAP detects a component portion error with the invoke problem code Unrecognized Correlation Identifier.

**Register TNICEUCI release history**

Register TNICEUCI was introduced in BCS34.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TNICEULO**

Total number invoke component errors, unexpected linked operation (TNICEULO)

## **OM group TCN7ERRS (continued)**

---

Register TNICEULO increases when the TCAP detects a component portion error with the invoke problem code Unexpected Linked Operation.

### **Register TNICEULO release history**

Register TNICEULO was introduced in BCS34.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TNICEUOC**

Total number invoke component errors, unrecognized operation code (TNICEUOC)

Register TNICEUOC increases when the TCAP detects a component portion error with the invoke problem code Unrecognized Operation Code.

### **Register TNICEUOC release history**

Register TNICEUOC was introduced in BCS34.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TNRCEMIP**

Total number return result component errors, mistyped parameter (TNRCEMIP)

Register TNRCEMIP increases when the TCAP detects a component portion error with the return result problem code Mistyped Parameter.

### **Register TNRCEMIP release history**

Register TNRCEMIP was introduced in BCS34.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

---

**OM group TCN7ERRS** (continued)

---

**Register TNRCEUII**

Total number return result component errors, unrecognized invoke identifier (TNRCEUII)

Register TNRCEUII increases when the TCAP detects a component portion error with the return result problem code Unrecognized Invoke Identifier.

**Register TNRCEUII release history**

Register TNRCEUII was introduced in BCS34.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TNRCEXRR**

Total number return result component errors, unexpected return result (TNRCEXRR)

Register TNRCEXRR increases when the TCAP detects a component portion error with the return result problem code Unexpected Return Result.

**Register TNRCEXRR release history**

Register TNRCEXRR was introduced in BCS34.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TNTPEITP**

Total number transaction portion error, incorrect transaction part (TNTPEITP)

Register TNTPEITP increases when a transaction portion that is not correct causes a TCAP transaction portion error.

**Register TNTPEITP release history**

Register TNTPEITP was introduced in BCS34.

**Associated registers**

There are no associated registers.

## **OM group TCN7ERRS (continued)**

---

### **Associated logs**

The system generates TCAP 199 when a transaction portion that is not correct causes a TCAP transaction portion error.

### **Register TNTPERLM**

Total number transaction portion errors, resource limitation (TNTPERLM)

Register TNTPERLM increases when a resource limit causes TCAP transaction portion error.

### **Register TNTPERLM release history**

Register TNTPERLM was introduced in BCS34.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Register TNTPESTP**

Total number transaction portion errors, badly structured transaction portion (TNTPEUPT)

Register TNTPEUPT increases when a badly structured transaction portion causes a TCAP transaction portion error.

### **Register TNTPESTP release history**

Register TNTPESTP was introduced in BCS34.

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates TCAP199 when a badly structured transaction portion causes a TCAP transaction portion error.

### **Register TNTPEUPT**

Total number transaction portion error, unrecognized package type (TNTPEUPT)

Register TNTPEUPT increases when an unrecognized package type causes a TCAP transaction portion error.

---

**OM group TCN7ERRS (end)**

---

**Register TNTPEUPT release history**

Register TNTPEUPT was introduced in BCS34.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates log TCAP199 when an unrecognized package type causes a TCAP transaction portion error.

**Register TNTPEUTI**

Total number transaction portion errors, unrecognized transaction identification (TNTPEUTI)

Register TNTPEUTI increases when an unrecognized transaction identification causes a TCAP transaction portion error.

**Register TNTPEUTI release history**

Register TNTPEUTI was introduced in BCS34.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## OM group TCN7USAG

---

### OM description

Transaction capability application part CCS7 use (TCN7USAG)

The OM group TCN7USAG provides use measurements for the transaction capabilities application part (TCAP). The TCAP functions in the CCITT common channel signaling 7 (CCS7) protocol.

### Release history

The OM group TCN7USAG was introduced in BCS34.

### Registers

The OM group TCN7USAG registers appears on the MAP terminal as follows:

|          |          |          |          |
|----------|----------|----------|----------|
| TNMSGOUT | TNMSGOU2 | TNMSGIN  | TNMSGIN2 |
| TNUNIDIR | TNUNIDI2 | TNBEGIN  | TNBEGIN2 |
| TNEND    | TNEND2   | TNCONTIN | TNCONTI2 |
| TNABORT  | TNABORT2 | TNINVK   | TNINVK2  |
| TNRSLTL  | TNRSLTL2 | TNRSLTNL | TNRSLTN2 |
| TNRTErr  | TNRTErr2 | TNREJECT | TNREJEC2 |

### Group structure

OM group TCN7USAG provides one tuple for each TCAP application.

**Key field:**

C7\_SUBSYSTEM\_NAME

**Info field:**

There is no info field.

### Associated OM groups

TCN7ERRS

---

**OM group TCN7USAG** (continued)

---

**Associated functional groups**

The following functional group associates with OM group TCN7USAG:

- CCITT SCCP (011) and TCAP

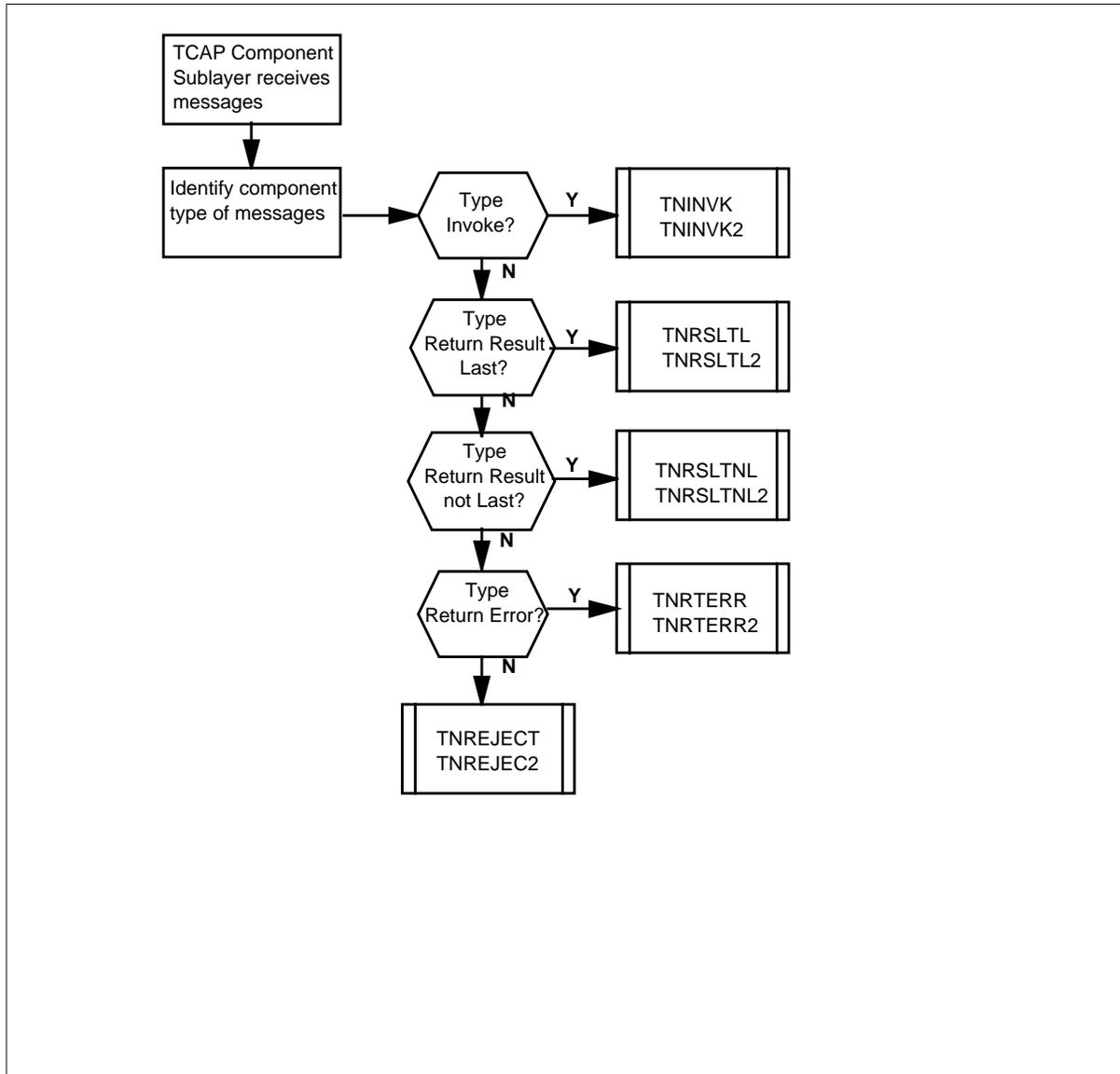
**Associated functionality codes**

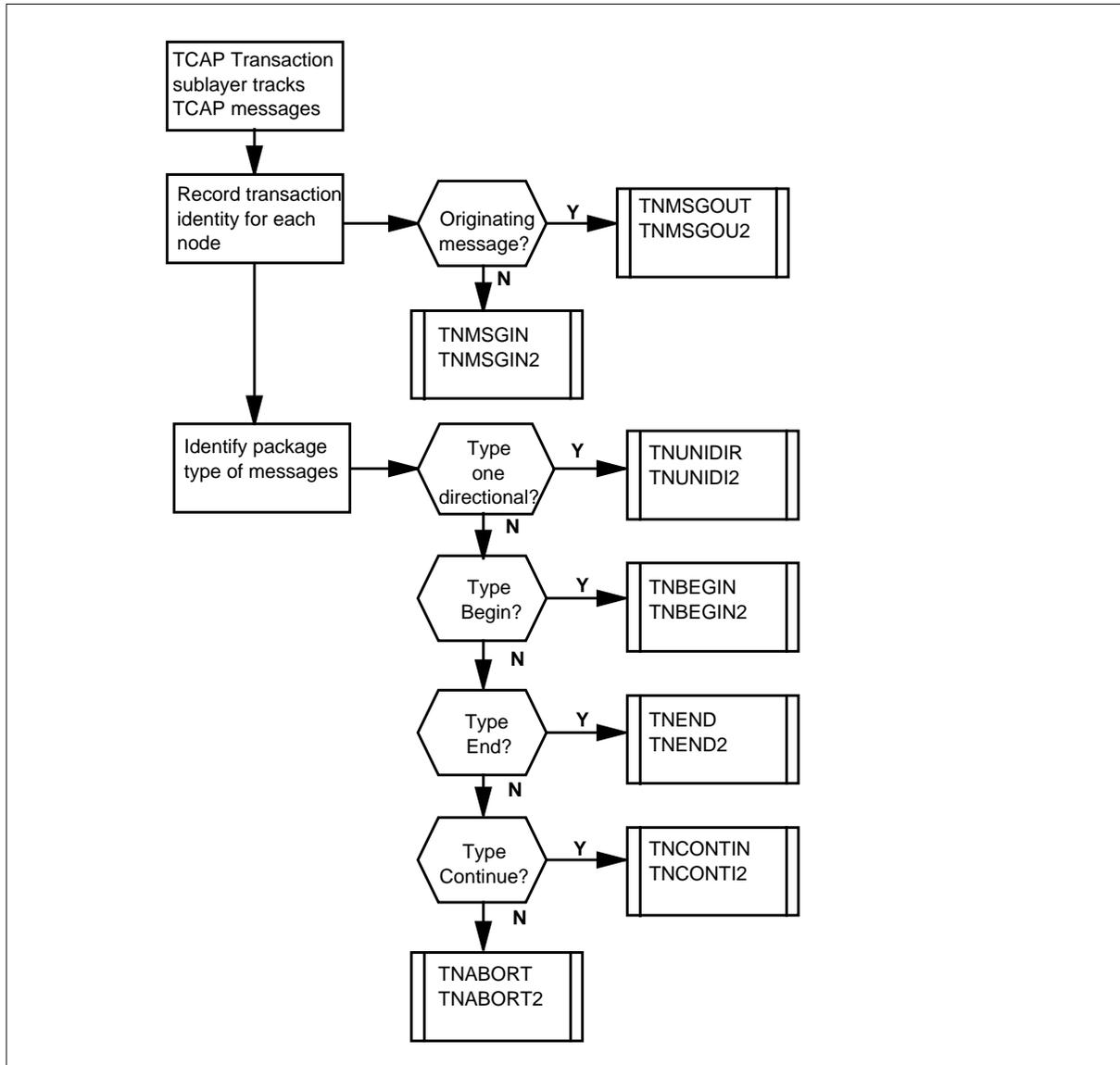
The associated functionality codes for OM group TCN7USAG appear in the following table.

| <b>Functionality</b> | <b>Code</b> |
|----------------------|-------------|
| CCS7 Base            | TEL00008    |

## OM group TCN7USAG (continued)

### OM group TCN7USAG registers



**OM group TCN7USAG (continued)****OM group TCN7USAG registers (continued)****Register TNABORT**

Total number type abort (TNABORT)

Register TNABORT increases when an incoming or outgoing TCAP message is of package type Abort. A package type Abort terminates a transaction in conditions that are not normal.

**Register TNABORT release history**

Register TNABORT was introduced in BCS34.

## **OM group TCN7USAG (continued)**

---

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

TNABORT2

## **Register TNBEGIN**

Total number type begin (TNBEGIN)

Register TNBEGIN increases when an incoming or outgoing TCAP message is of package type Begin. The package type Begin initiates a transaction with a remote node.

### **Register TNBEGIN release history**

Register TNBEGIN was introduced in BCS34.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

TNBEGIN2

## **Register TNCONTIN**

Total number type continue (TNCONTIN)

Register TNCONTIN increases when an incoming or outgoing TCAP message is of package type Continue. The package type Continue maintains an existing transaction.

### **Register TNCONTIN release history**

Register TNCONTIN was introduced in BCS34.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

---

**OM group TCN7USAG** (continued)

---

**Extension registers**

TNCONTI2

**Register TNEND**

Total number type end (TNEND)

Register TNEND increases when an incoming or outgoing TCAP message is of package type End. The package type End terminates a transaction under normal conditions.

**Register TNEND release history**

Register TNEND was introduced in BCS34.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

TNEND2

**Register TNINVK**

Total number invoke (TNINVK)

Register TNINVK increases when an incoming or outgoing TCAP message is of component type Invoke. The package type Invoke is a request by a remote user.

**Register TNINVK release history**

Register TNINVK was introduced in BCS34.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

TNINVK2

**Register TNMSGIN**

Total number messages in (TNMSGIN)

## **OM group TCN7USAG** (continued)

---

Register TNMSGIN increases for each CCS7 node, each time a TCAP message terminates at that particular node.

### **Register TNMSGIN release history**

Register TNMSGIN was introduced in BCS34.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

TNMSGIN2

## **Register TNMSGOUT**

Total number messages out (TNMSGOUT)

Register TNMSGOUT increases for each CCS7 node, when a TCAP message originates from that particular node.

### **Register TNMSGOUT release history**

Register TNMSGOUT was introduced in BCS34.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

TNMSGOU2

## **Register TNREJECT**

Total number reject (TNREJECT)

Register TNREJECT increases when an incoming or outgoing TCAP message is of component type Reject. A component type Reject indicates corrupt data, out of sequence data, or data not understood. This message includes problem codes that TCAP defines, and parameters that the user can define.

### **Register TNREJECT release history**

Register TNREJECT was introduced in BCS34.

---

**OM group TCN7USAG** (continued)

---

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

TNREJEC2

**Register TNRSLTL**

Total number return result last (TNRSLTL)

Register TNRSLTL increases when an incoming or outgoing TCAP message is of component type Return Result Last. The component type Return Result Last indicates that the associated transaction was successful. This message also contains a response, or the last segment of a longer response.

**Register TNRSLTL release history**

Register TNRSLTL was introduced in BCS34.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

TNRSLTL2

**Register TNRSLTNL**

Total number return result not last (TNRSLTNL)

Register TNRSLTNL increases when an incoming or outgoing TCAP message is of component type Return Result Not Last. The component type Return Result Not Last indicates that the associated transaction was successful. This message also contains a segment of a response that is longer than the allowed message length.

**Register TNRSLTNL release history**

Register TNRSLTNL was introduced in BCS34.

**Associated registers**

There are no associated registers.

## **OM group TCN7USAG (continued)**

---

### **Associated logs**

There are no associated logs.

### **Extension registers**

TRSLTN2

## **Register TNRTERR**

Total number return error (TNRTERR)

Register TNRTERR increases when an incoming or outgoing TCAP message is of component type Return Error. The component type Return Error indicates that the associated request was not complete. This message includes error codes and parameters that the user defines.

### **Register TNRTERR release history**

Register TNRTERR was introduced in BCS34.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

TNRTERR2

## **Register TNUNIDIR**

Total number one directional (TNUNIDIR)

Register TNUNDIR increases when an incoming or outgoing TCAP message is of package type one directional. The package type one directional indicates that this message is a one-way transmission.

### **Register TNUNIDIR release history**

Register TNUNIDIR was introduced in BCS34.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

**OM group TCN7USAG** (end)

---

**Extension registers**  
TNUNIDI2

## OM group TCW

---

### OM description

Talking Call Waiting

The TCW OM group provides information on the use of the TCW functionality. This group contains registers to measure specific occurrences during a TCW session, either in normal or error conditions.

### Release history

NA012 introduced OM group TCW.

### Registers

OM group TCW registers display on the MAP terminal as follows.

```
>omshow tcw active
TCW

CLASS:          ACTIVE
START:1999/06/04 12:15:00 WED;  STOP: 1999/06/04 12:22:59
WED:
SLOWSAMPLES:   5;  FASTSAMPLES:  48;

          TCWATT      TCWFLSH      TCSCON      TCWDNERR
          TCWABDN      TCWT1      TCWT2
0          2          2          1          0
          0          0          0
```

### Group structure

OM group TCW

**Key field:**  
none

**Info field:**  
none

---

**OM group TCW** (continued)

---

**Related OM groups**

The existing CWT OMs (OM group CALLWAIT) are not impacted by TCW and are pegged normally.

The CWTTATT register of the CALLWAIT OM group will be pegged whenever the call waiting feature is invoked on a call whether TCW is activated or not.

**Related functional groups**

None

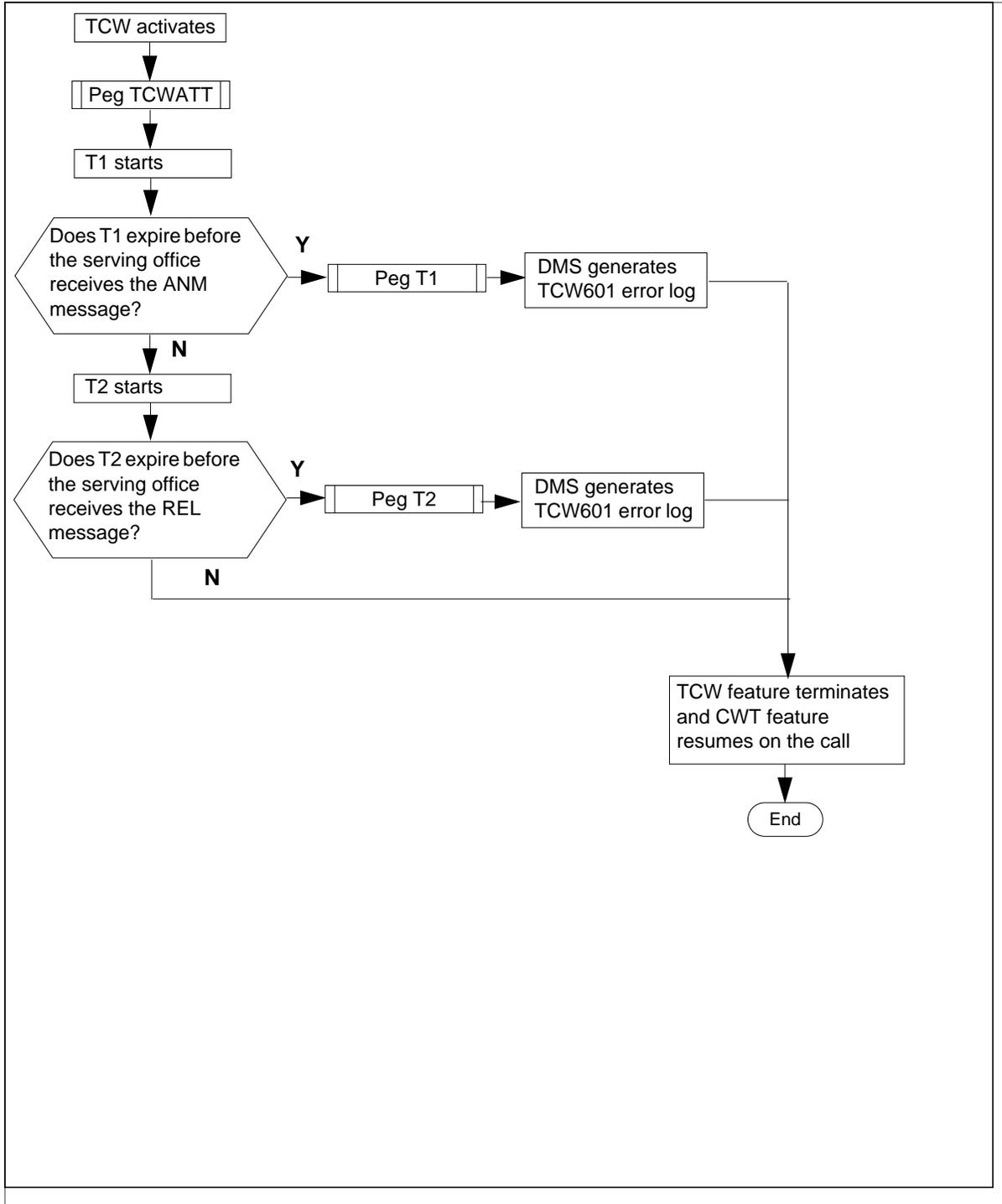
**Related functionality codes**

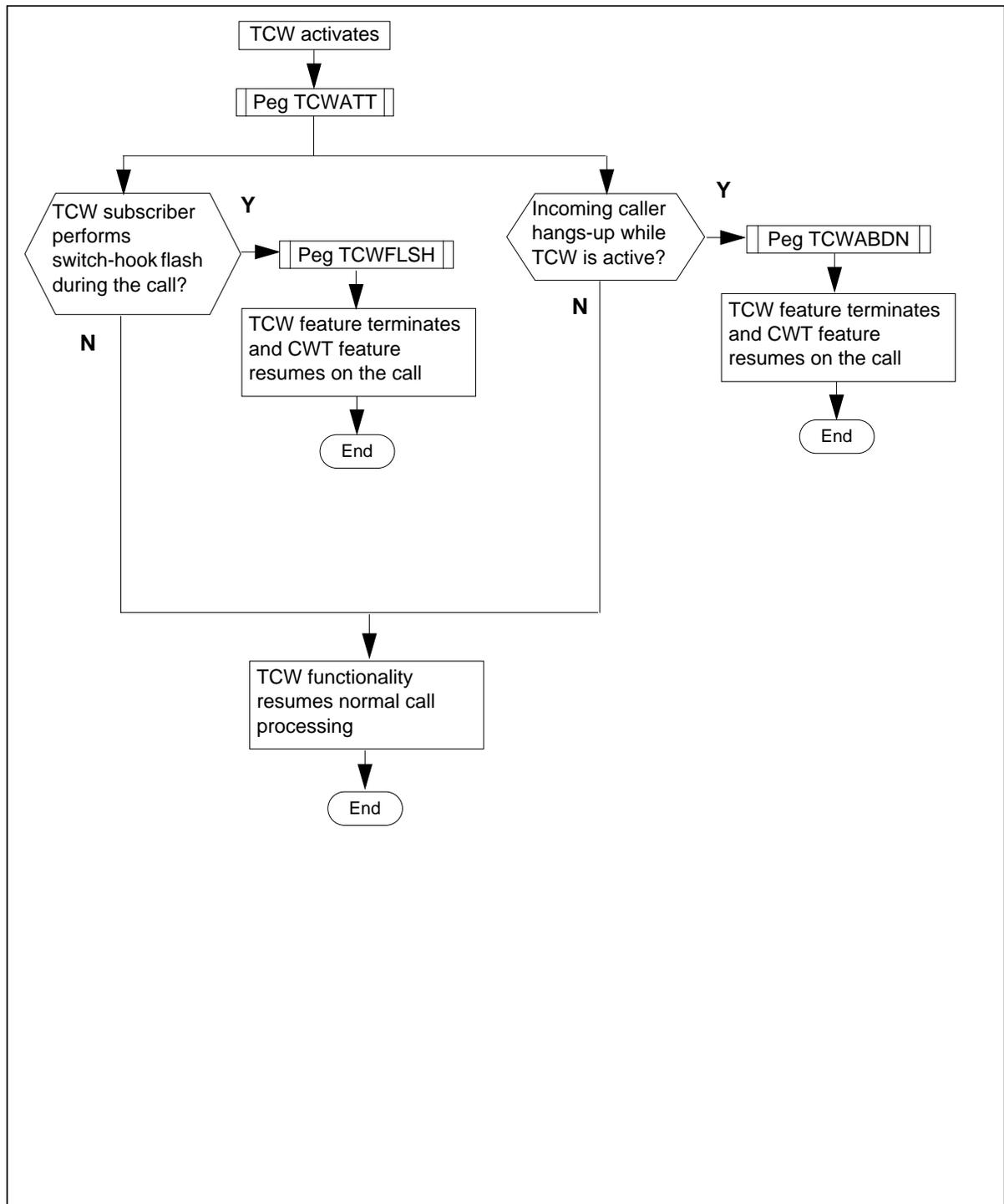
The table that follows lists the functionality name and codes related to OM group TCW.

| <b>Functionality</b> | <b>Code</b> |
|----------------------|-------------|
| Res CW Talking       | RES00091    |

## OM group TCW (continued)

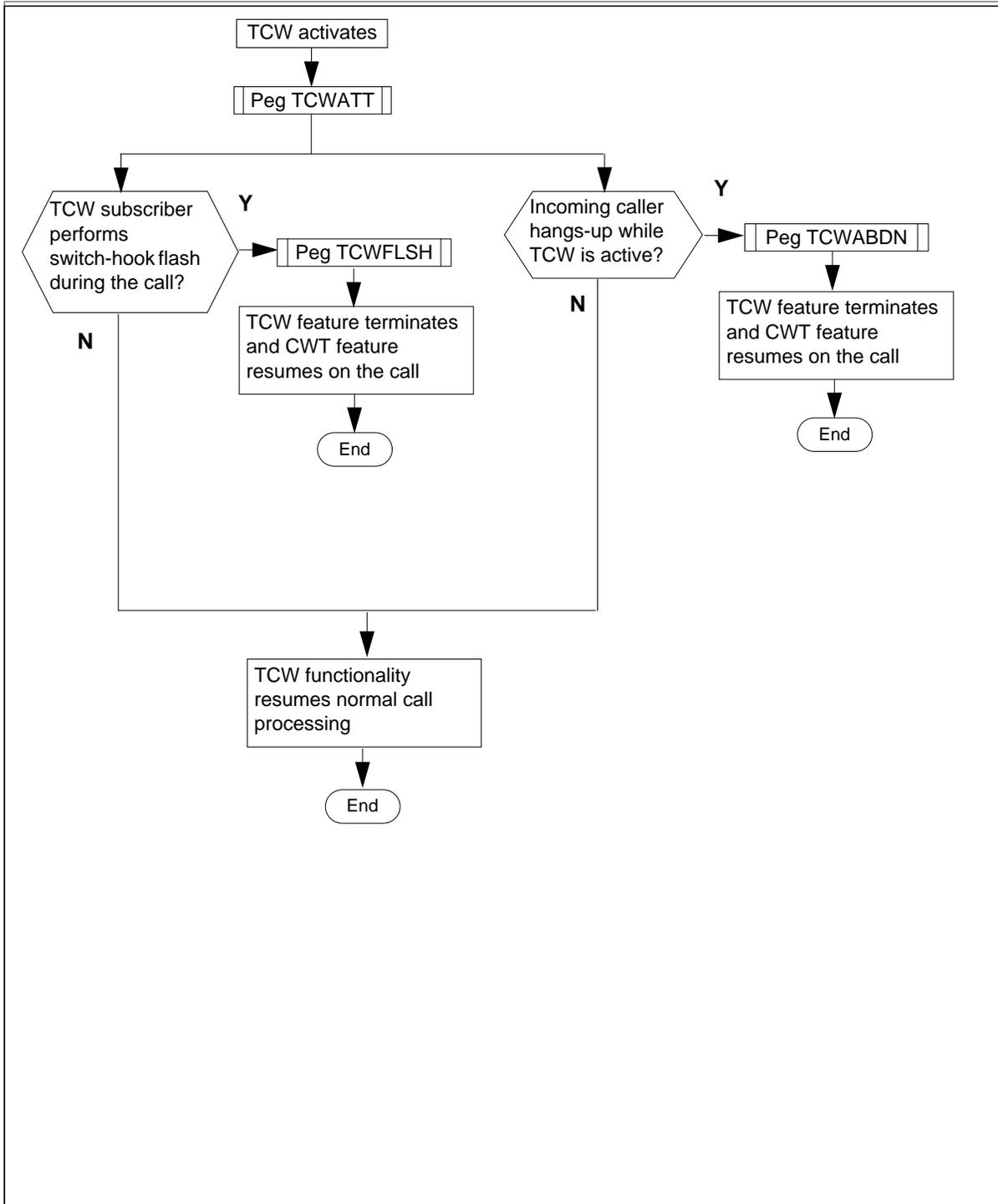
### OM group TCW registers for timer events



**OM group TCW (continued)****OM group TCW registers for end-user events**

## OM group TCW (continued)

### OM group TCW registers for connection events



---

**OM group TCW** (continued)

---

**Register TCWABN**

Register Talking Call Waiting Abandon (TCWABDN)

The TCW service increments this register when the calling party hangs up after the TCW feature starts and before the TCW subscriber's terminating office receives the REL message from the SN's switching office.

**Register TCWABDN release history**

NA012 introduced register TCWABDN.

**Related registers**

None

**Related logs**

None

**Extension registers**

None

**Register TCWATT**

Register Talking Call Waiting Attempts (TCWATT)

The TCW service is a register which counts the activation attempts of the TCW feature. This register is incremented when an incoming call terminates on a TCW subscriber busy on a regular two party call and the TCW feature is activated.

**Register TCWATT release history**

NA012 introduced register TCWATT.

**Related registers**

None

**Related logs**

None

**Extension registers**

None

**Register TCWCON**

Register Talking Call Waiting Connection (TCWCON)

## **OM group TCW** (continued)

---

The TCW service increments this register when the TCW service connects a TCW subscriber to the Service Node (SN) to hear the alerting tone and audible name announcement.

### **Register TCWCON release history**

NA012 introduced register TCWCON.

### **Related registers**

None

### **Related logs**

None

### **Extension registers**

None

## **Register TCWDNERR**

Register Talking Call Waiting Directory Number Error (TCWDNERR)

The TCW service increments this register when it is unable to complete a call to the SN DN due to an invalid DN, a treatment, or an unsupported agent.

### **Register TCWDNERR release history**

NA012 introduced register TCWDNERR.

### **Related registers**

None

### **Related logs**

None

### **Extension registers**

None

## **Register TCWFLSH**

Register Talking Call Waiting Flash (TCWFLSH)

The TCW service increments this register when TCW has been invoked on the call and the TCW subscriber performs a switch-hook flash.

### **Register TCWFLSH release history**

NA012 introduced register TCWFLSH.

---

**OM group TCW (end)**

---

**Related registers**

None

**Related logs**

None

**Extension registers**

None

**Register TCWT1**

Register Talking Call Waiting Timer 1 (TCWT1)

The TCW service increments this register when the T1 timer expires.

**Register TCWT1 release history**

NA012 introduced register TCWT1.

**Related registers**

None

**Related logs**

None

**Extension registers**

None

**Register TCWT2**

Register Talking Call Waiting Timer 2 (TCWT2)

The TCW service increments this register when the T2 timer expires.

**Register TCWT2 release history**

NA012 introduced register TCWT2.

**Related registers**

None

**Related logs**

None

**Extension registers**

None

## OM group TDCLAPD

---

### OM description

TDC LAPD protocol (TDCLAPD)

The OM group TDCLAPD consists of link access processor for a D-channel (LAPD) protocol information on LAPD channels in the D-channel handler (DCH).

TDCLAPD contains 23 registers that count the following:

- initialization calls for a channel
- messages that the system sends or receives with buffers that are too long for layer 1
- layer 1 messages that the system correctly transmits
- buffers that pass through the transmitter
- layer 1 messages with errors in transmission
- layer 1 messages that the system correctly receives
- buffers that pass through the receiver
- messages that the system receives with frame check sequence errors
- messages that the system does not completely receive and aborts
- the number of times the host could not keep up with the chip receiver because there are not enough receive buffers
- layer one messages with errors in reception
- times the system executes a host-initiated link sequence
- times the system executes a peer-initiated link sequence
- times the system executes a link release sequence
- information frames that the system sends
- information frames that the system receives
- information frames that the system transmits again because the system does not receive the information frames correctly
- frame reject information frames that the system receives
- frame reject information frames that the system sends
- frames that the system sends when the receiver is not ready
- frames that the system receives when the receiver is not ready

---

## OM group TDCLAPD (continued)

---

- L2 link error indication that the system receives from the state machine
- the number of control fields that the system cannot decode

The system keeps the counts in the TOPS line trunk controller for ISDN (LTCI) peripheral module (TMS). The system transfers the counts to the central control before the transfer of active registers to holding registers. The active count is normally zero, and increases before the transfer to holding registers.

### Release history

The OM group TDCLAPD was introduced in BCS32.

### Registers

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

|          |          |          |          |
|----------|----------|----------|----------|
| LDINIT   | LDBFOV   | LDTXGOOD | LDTXBF   |
| LDTXERR  | LDRXGOOD | LDRXBF   | LDRXCRC  |
| LDRXABRT | LDRXOVRN | LDRXERR  | L2HSETUP |
| L2PSETUP | L2RLSE   | L2IFRTX  | L2IFRRX  |
| L2RETX   | L2REJTX  | L2REJRX  | L2RNRTX  |
| L2RNRRX  | L2MDLERR | L2CTLERR |          |

### Group structure

The OM group TDCLAPD provides one tuple for each key.

#### Key field:

TDC\_OMTYPE consists of the TMS number, the DCH number within the TMS, and the channel type number of the DCH.

#### Info field:

TDC\_OMINFO consists of the peripheral type, the peripheral number, the ISDN service group number, and the TMS data channel type.

### Associated OM groups

There are no associated OM groups.

### Associated functional groups

The TOPS functional group associates with OM group TDCLAPD.

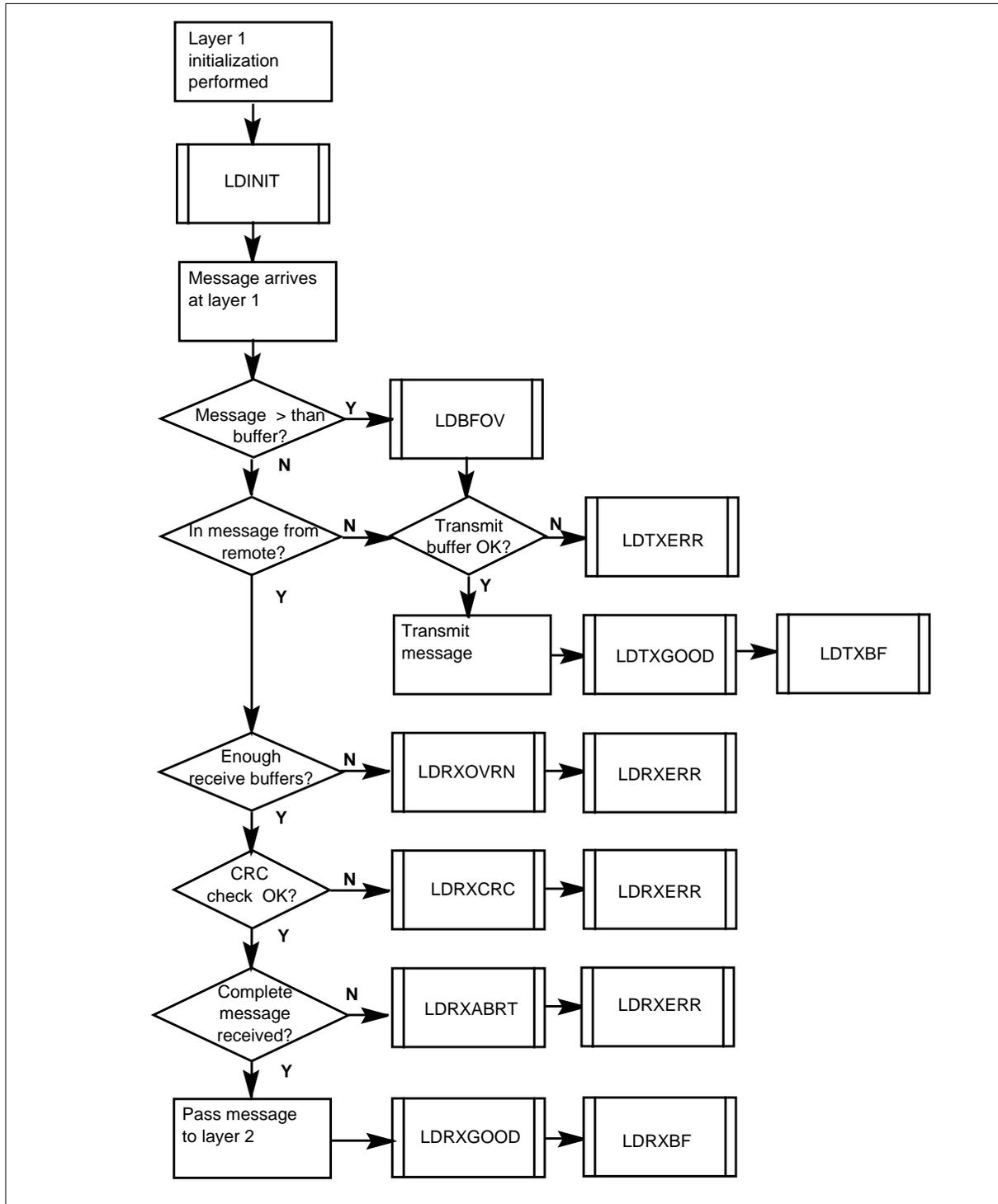
**OM group TDCLAPD** (continued)

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**Associated functionality codes**

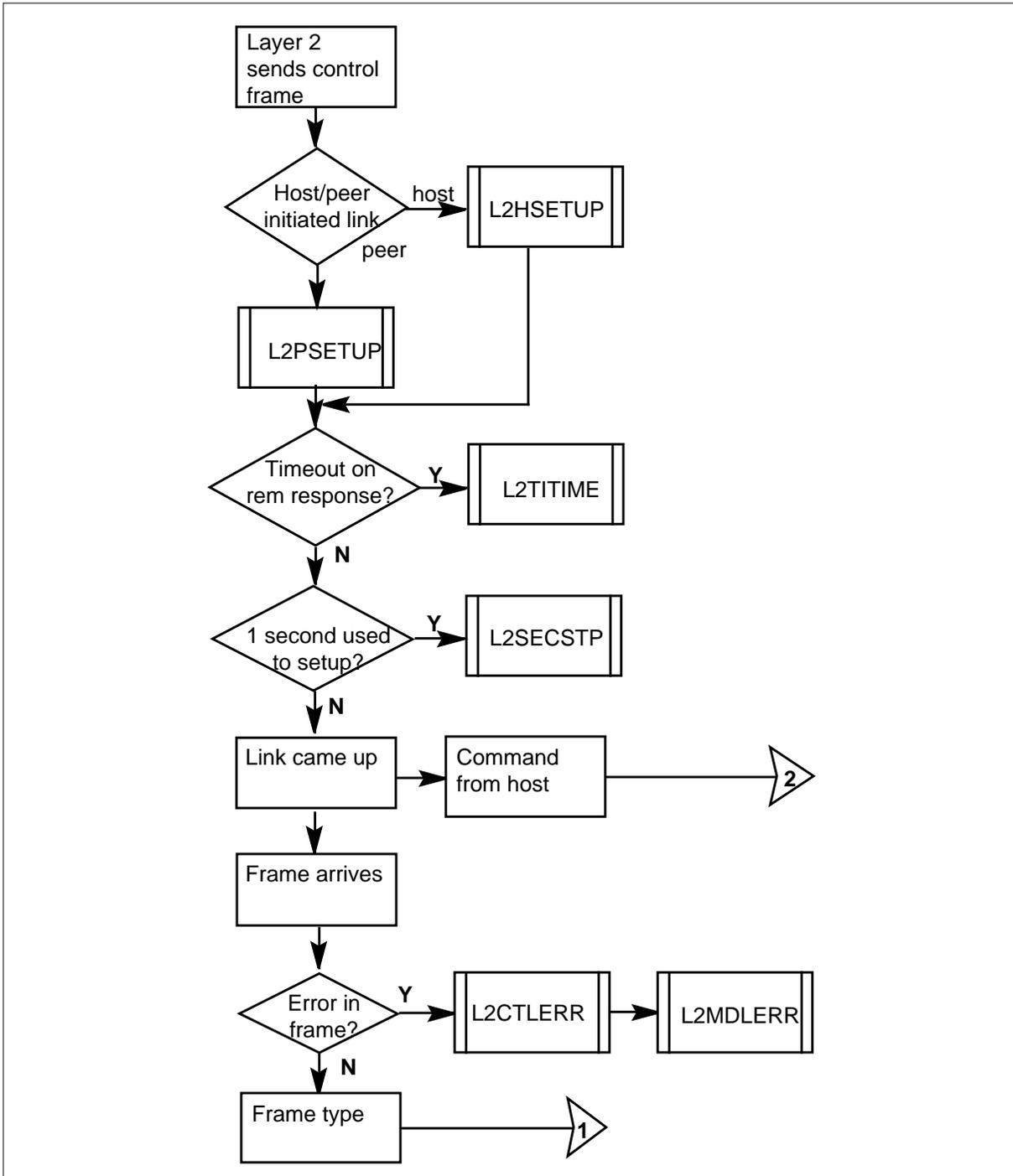
The associated functionality codes for OM group TDCLAPD appear in the following table.

| <b>Functionality</b> | <b>Code</b> |
|----------------------|-------------|
| TOPS Message Switch  | NTXA83AA    |

**OM group TDCLAPD (continued)****OM group TDCLAPD layer 1 registers**

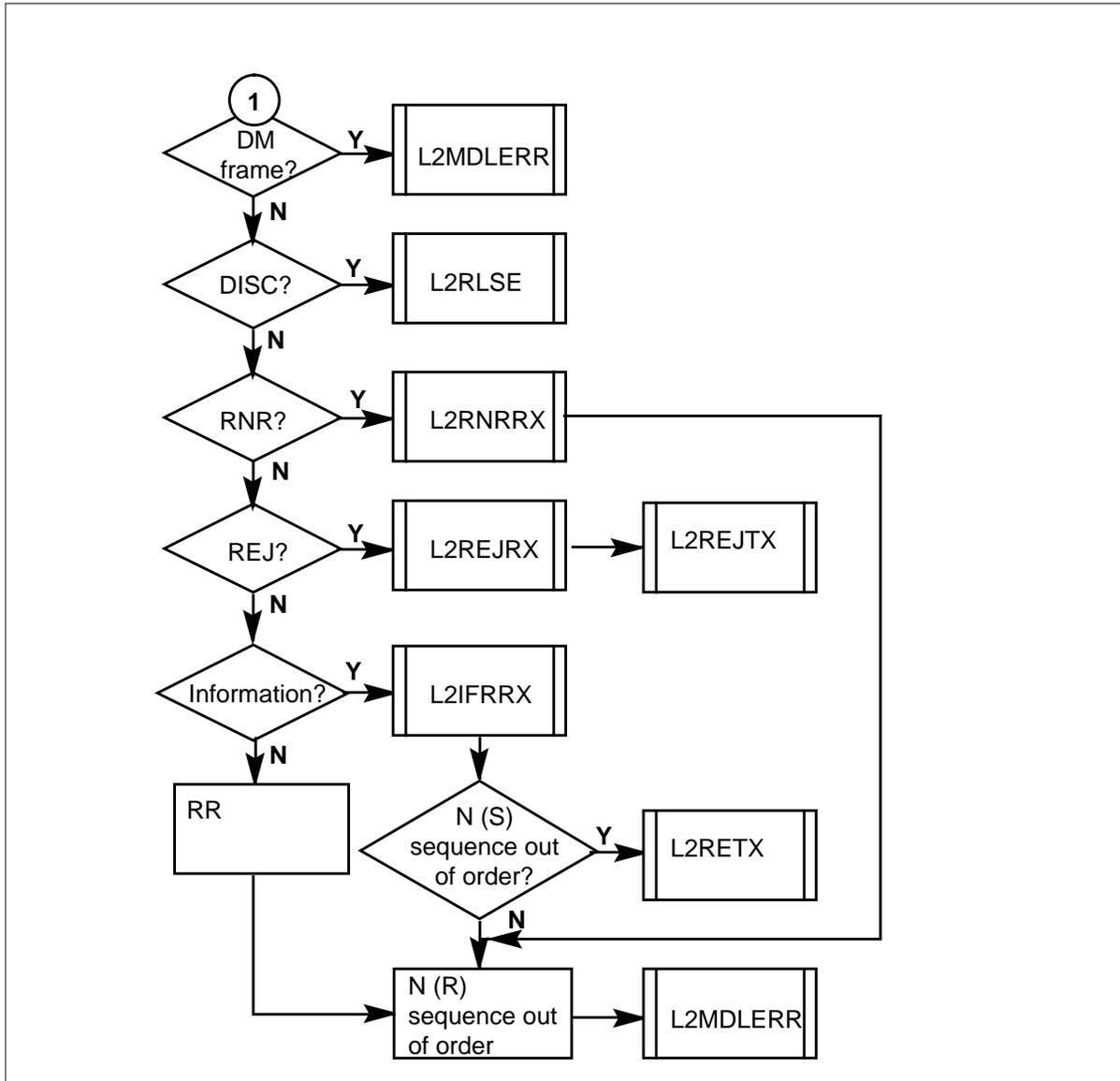
## OM group TDCLAPD (continued)

### OM group TDCLAPD layer 2 registers



**OM group TDCLAPD (continued)**

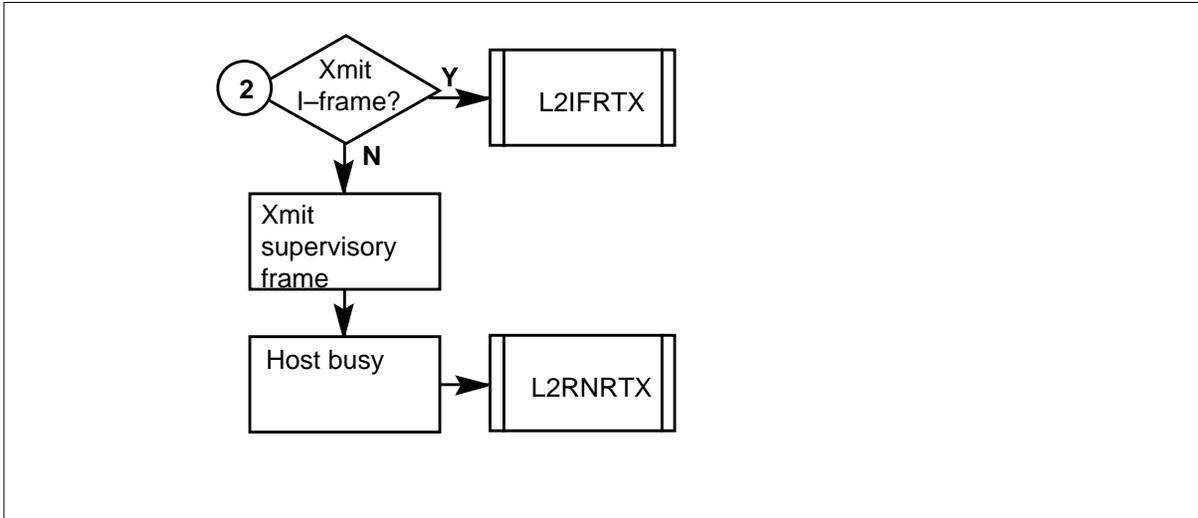
**OM group TDCLAPD layer 2 registers (continued)**



## OM group TDCLAPD (continued)

---

### OM group TDCLAPD layer 2 registers (continued)



### Register LDBFOV

Buffer overflow (LDBFOV)

Register LDBFOV counts the messages that the system sends or receives with buffers that are too long for layer 1.

#### Register LDBFOV release history

Register LDBFOV was introduced in BCS32.

#### Associated registers

There are no associated registers.

#### Associated logs

There are no associated logs.

#### Extension registers

There are no extension registers.

### Register LDINIT

Initialization calls (LDINIT)

Register LDINIT counts the initialization calls for a channel.

#### Register LDINIT release history

Register LDINIT was introduced in BCS32.

---

**OM group TDCLAPD** (continued)

---

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register LDRXABRT**

Messages aborted (LDRXABRT)

Register LDRXABRT counts the messages that the system does not completely receive and aborts.

**Register LDRXABRT release history**

Register LDRXABRT was introduced in BCS32.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register LDRXBF**

Buffers through receiver (LDRXBF)

Register LDRXBF counts the buffers that pass through the receiver.

**Register LDRXBF release history**

Register LDRXBF was introduced in BCS32.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

## **OM group TDCLAPD** (continued)

---

### **Register LDRXCRC**

Frame check sequence error (LDRXCRC)

Register LDRXCRC counts the number of messages that the system receives with frame check sequence errors.

#### **Register LDRXCRC release history**

Register LDRXCRC was introduced in BCS32.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

There are no associated logs.

#### **Extension registers**

There are no extension registers.

### **Register LDRXERR**

Layer 1 reception errors (LDRXERR)

Register LDRXERR counts layer 1 messages that have errors in reception.

#### **Register LDRXERR release history**

Register LDRXERR was introduced in BCS32.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

There are no associated logs.

#### **Extension registers**

There are no extension registers.

### **Register LDRXGOOD**

Layer 1 messages correctly received (LDRXGOOD)

Register LDRXGOOD counts layer 1 messages that the system receives.

#### **Register LDRXGOOD release history**

Register LDRXGOOD was introduced in BCS32.

---

**OM group TDCLAPD** (continued)

---

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register LDRXOVRN**

Receiver overflow (LDRXOVRN)

Register LDRXOVRN counts the times that the host could not keep up with the chip receiver. The host could not keep up because there are not enough receive buffers.

**Register LDRXOVRN release history**

Register LDRXOVRN was introduced in BCS32.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register LDTXBF**

Buffers through transmitter (LDTXBF)

Register LDTXBF counts the buffers that pass through the transmitter.

**Register LDTXBF release history**

Register LDTXBF was introduced in BCS32.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## **OM group TDCLAPD** (continued)

---

### **Extension registers**

There are no extension registers.

## **Register LDTXERR**

Layer 1 transmission errors (LDTXERR)

Register LDTXERR counts layer 1 messages with errors in transmission.

### **Register LDTXERR release history**

Register LDTXERR was introduced in BCS32.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register LDTXGOOD**

Layer 1 successful transmission (LCTXGOOD)

Register LDTXGOOD counts layer 1 messages that the system transmits.

### **Register LDTXGOOD release history**

Register LDTXGOOD was introduced in BCS32.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register L2CTLERR**

Control field error (L2CTLERR)

Register L2CTLERR counts control fields that the system cannot decode.

---

**OM group TDCLAPD** (continued)

---

**Register L2CTLERR release history**

Register L2CTLERR was introduced in BCS32.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register L2HSETUP**

Link host setup sequence executions (L2HSETUP)

Register L2HSETUP counts the times the system executes a host-initiated link sequence.

**Register L2HSETUP release history**

Register L2HSETUP was introduced in BCS32.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs

**Extension registers**

There are no extension registers.

**Register L2IFRRX**

Information frames received (L2IFRRX)

Register L2IFRRX counts the information frames that the system receives.

**Register L2IFRRX release history**

Register L2IFRRX was introduced in BCS32.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## **OM group TDCLAPD** (continued)

---

### **Extension registers**

There are no extension registers.

### **Register L2IFRTX**

Information frames transmitted (L2IFRTX)

Register L2IFRTX counts the information frames that the system sends.

### **Register L2IFRTX release history**

Register L2IFRTX was introduced in BCS32.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

### **Register L2MDLERR**

MDL errors (L2MDLERR)

Register L2MDLERR counts the MDL error indications that the system generates.

### **Register L2MDLERR release history**

Register L2MDLERR was introduced in BCS32.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

### **Register L2PSETUP**

Link peer setup sequence executions (L2PSETUP)

L2PSETUP counts the times the system executes a peer-initiated link sequence.

---

**OM group TDCLAPD** (continued)

---

**Register L2PSETUP release history**

Register L2PSETUP was introduced in BCS32.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register L2REJRX**

Rejected information frames received (L2REJRX)

Register L2REJRX counts the reject information frames that the system receives.

**Register L2REJRX release history**

Register L2REJRX was introduced in BCS32.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register L2REJTX**

Rejected information frames transmitted (L2REJTX)

Register L2REJTX counts the reject information frames that the system sends.

**Register L2REJTX release history**

Register L2REJTX was introduced in BCS32.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## **OM group TDCLAPD (continued)**

---

### **Extension registers**

There are no extension registers.

### **Register L2RETX**

Information frames retransmitted (L2RETX)

Register L2RETX counts the information frames that the system transmits again because the information frames were not received correctly.

### **Register L2RETX release history**

Register L2RETX was introduced in BCS32.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

### **Register L2RLSE**

Link release sequence execution (L2RLSE)

Register L2RLSE counts the times the system executes the link release sequence.

### **Register L2RLSE release history**

Register L2RLSE was introduced in BCS32.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

### **Register L2RNRRX**

Receiver not ready receive (L2RNRRX)

---

**OM group TDCLAPD (end)**

---

Register L2RNRRX counts the frames that the system receives when the peer is congested and not ready to receive.

**Register L2RNRRX release history**

Register L2RNRRX was introduced in BCS32.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register L2RNRTX**

Receiver not ready transmit (L2RNRTX)

Register L2RNRTX counts the frames the system sends when the host is congested and not ready to receive.

**Register L2RNRTX release history**

Register L2RNRTX was introduced in BCS32.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

## OM group TDCPROT

---

### OM description

#### OM group TDCPROT

TMS data channel X.25 Protocol (TDCPROT)

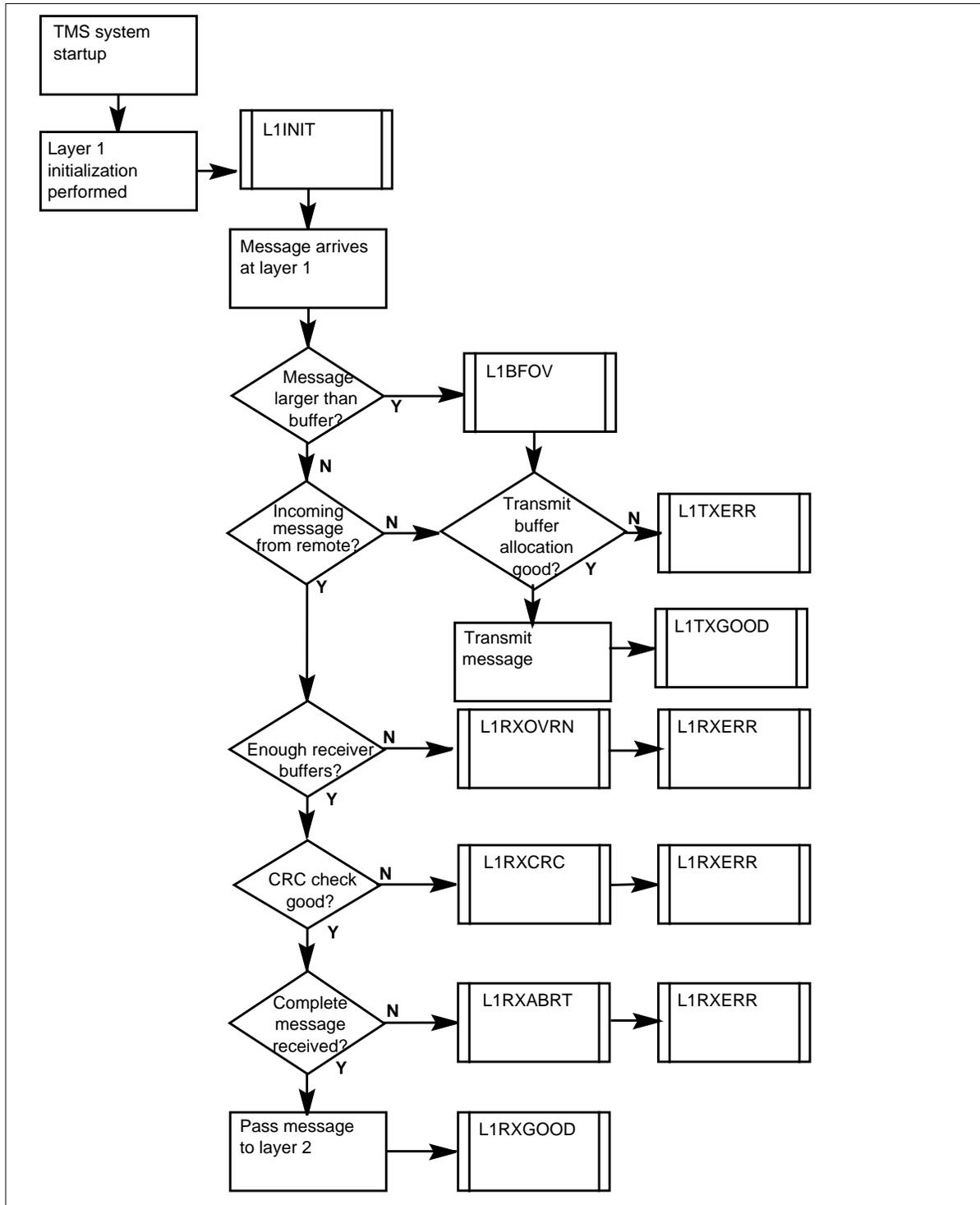
The OM group TDCPROT contains information about the X.25 protocol on the TOPS LTCI peripheral module (TMS) data channels in the D-channel handler.

The OM group TDCPROT contains 23 registers that count:

- initialization calls for a channel
- messages the system sends or receives with buffers too long for layer 1
- layer 1 messages the system transmits
- buffers that pass through the transmitter
- layer 1 messages with errors in transmission
- layer 1 messages the system receives
- buffers that pass through the receiver
- messages the system receives with frame check sequence errors
- messages the system partially receives and aborts
- the times the host cannot keep up with the chip receiver because not enough receive buffers are present
- layer 1 messages with errors in reception
- execution of the link set-up sequence
- link disconnect information frames the system sends and receives
- timeouts that occur before a remote responds
- information frames the system sends and receives
- information frames the system transmits again because the frames were not received correctly
- frame rejects information frames the system receives
- frame rejects information frames the system sends
- seconds that pass when the system tries to enable the link
- kbytes of data the system sends and receives
- timeouts that occur before a remote responds to a data packet

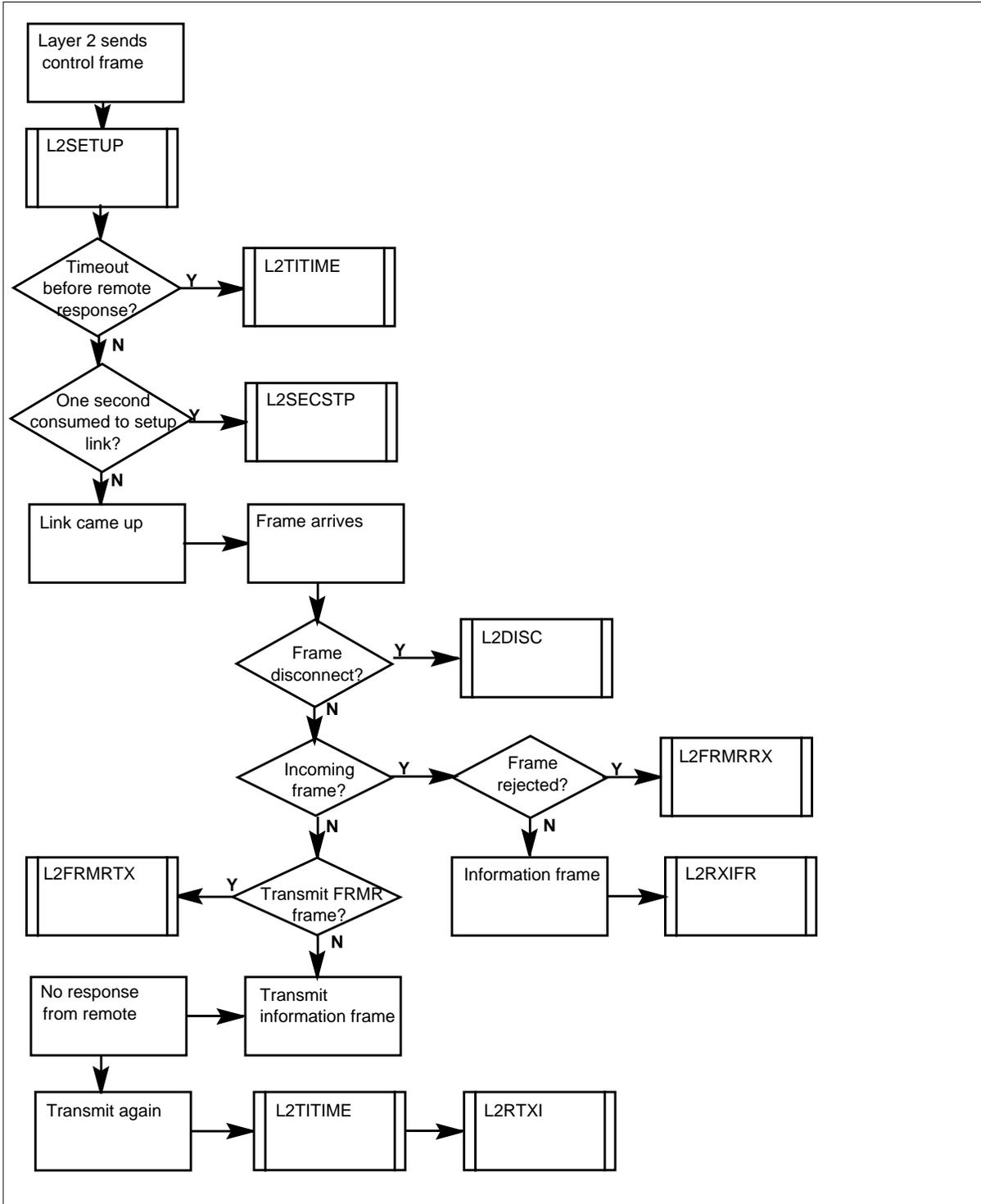
## OM group TDCPROT (continued)

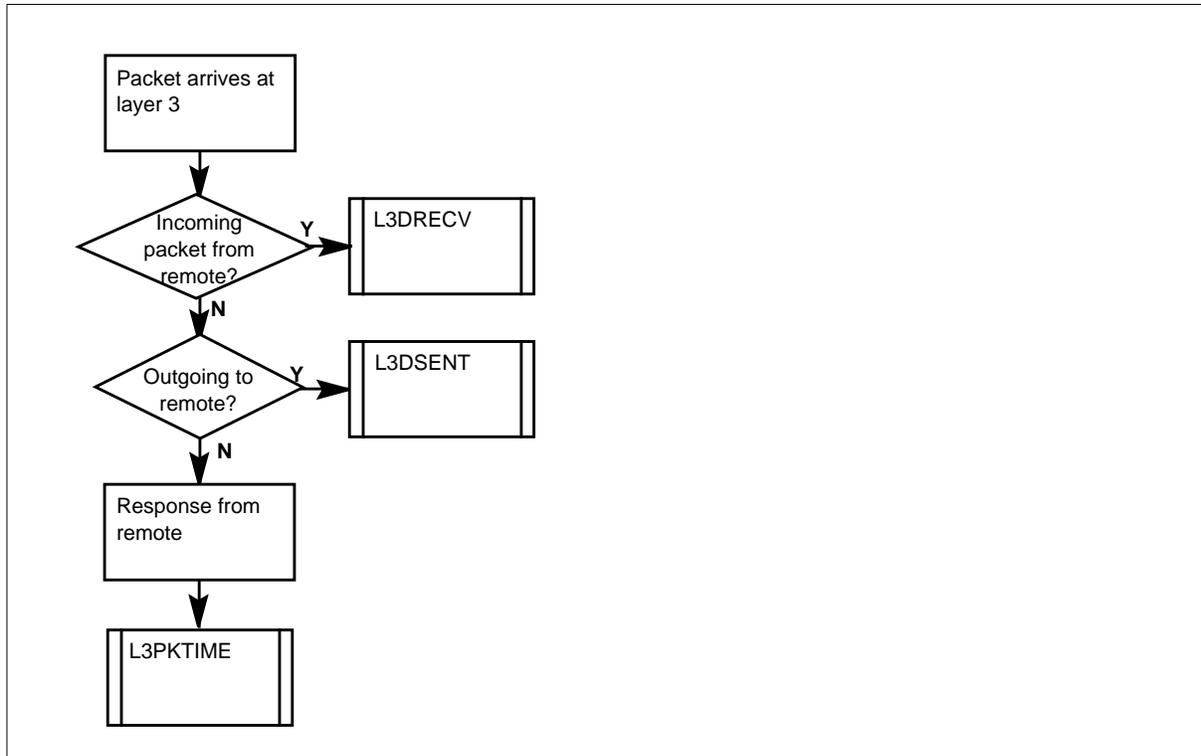
## TDCPROT— Layer 1 registers



**OM group TDCPROT (continued)**

**TDCPROT— Layer 2 registers**



**OM group TDCPROT** (continued)**TDCPROT—Layer 3 registers**

The system keeps counts in the TOPS LTCI peripheral module (TMS) and transfers the counts to the central control (CC). The system transfers counts before the system transfers active registers to holding registers. The active count is zero most of the time and increases before the transfer to holding registers.

The information contained in the registers of OM group TDCPROT is used to determine the following:

- if a link is down
- if a link makes noise
- the amount of traffic on a link
- potential protocol errors

**BCS history**

Register TDCPROT was created in BCS30.

## OM group TDCPROT (continued)

---

### Registers

The OM group TDCPROT registers appear at the MAP terminal as follows:

- L1INIT
- L1BFOV
- L1TXGOOD
- L1TXBF
- L1TXERR
- L1RXGOOD
- L1RXBF
- L1RXCRC
- L1RXABRT
- L1RXOVRN
- L1RXERR
- L2SETUP
- L2DISC
- L2T1TIME
- L2TXIFR
- L2RXIFR
- L2RTXI
- L2FRMRTX
- L2FRMRRX
- L2SECSTP
- L3DSENT
- L3DRECV
- L3PKTIME

### Group structure

Register TDCPROT provides one tuple for each key.

*Key field:* TDCPROT\_OMTYPE consists of the TMS number, the DCH number within the TMS, and the channel type number of the DCH.

*Info field:* TDCPROT\_OMINFO consists of the peripheral type, the peripheral number, the ISDN service group number, and the TMS data channel type.

---

**OM group TDCPROT** (continued)

---

The value output for a channel type in the OM registers is the total count of all channels of that channel type. For example, for directory help (DA) channels, the system totals counts for DA channels 1 and 3. The total outputs as one tuple.

**Associated OM groups**

The TDCROUT provides information on calls that the system routes:

- on the TMS data channels in the D-channel handler
- on the TMS data channels in the ISDN signaling processor

**Associated products**

DMS-200

TOPS

**NT feature packages**

NTXA83AA TOPS Message Switch

**L1BFOV**

Buffer overflow (L1BFOV)

Register L1BFOV counts messages the system sends or receives with buffers too long for layer 1.

**BCS history**

Register L1BFOV was introduced in BCS30.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**L1INIT**

Initialization calls

Register L1INIT counts initialization calls for a channel.

**BCS history**

Register L1INIT was created in BCS30.

**Associated registers**

There are no associated registers.

## OM group TDCPROT (continued)

---

### Associated logs

There are no associated logs.

### L1RXABRT

Messages aborted (L1RXABRT)

Register L1RXABRT counts messages that the system partially receives and aborts.

### BCS history

Register L1RXABRT was created in BCS30.

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

### L1RXBF

Buffers through receiver (LRXBF)

Register L1RXBF increases one time for every 100 buffers that pass through the receiver.

### BCS history

Register L1RXBF was created in BCS30.

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

### L1RXCRC

Frame check sequence error (L1RXCRC)

Register L1RXCRC counts messages the system receives with frame check sequence errors.

### BCS history

Register L1RXCRC was created in BCS30.

---

**OM group TDCPROT** (continued)

---

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**L1RXERR**

Layer 1 reception errors (L1RXERR)

Register L1RXERR counts layer 1 messages that have errors in reception.

**BCS history**

Register L1RXERR was created in BCS30.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**L1RXGOOD**

Layer 1 messages successfully received (L1RXGOOD)

Register L1RXGOOD increases one time for every 100 layer 1 messages the system receives.

**BCS history**

Register L1RXGOOD was created in BCS30.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs

**L1RXOVRN**

Receiver overflow (L1RXOVRN)

Register L1RXOVRN counts the times the host cannot keep up with the chip receiver because not enough receive buffers are present.

**BCS history**

Register L1RXOVRN was created in BCS30.

## OM group TDCPROT (continued)

---

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

### L1TXBF

Buffers through transmitter (L1TXBF)

Register L1TXBF increases one time for every 100 buffers that pass through the transmitter.

### BCS history

Register L1TXBF was created in BCS30.

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

### L1TXERR

Layer 1 transmission errors (L1TXERR)

Register L1TXERR counts layer 1 messages that have errors in transmission.

### BCS history

Register L1TXERR was created in BCS30.

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

### L1TXGOOD

Layer 1 successful transmissions (L1TXGOOD)

Register L1TXGOOD increases one time for every 100 layer 1 messages the system transmits.

### BCS history

Register L1TXGOOD was created in BCS30.

---

**OM group TDCPROT** (continued)

---

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**L2DISC**

Link disconnects (L2DISC)

Register L2DISC counts link disconnect information frames the system sends and receives.

**BCS history**

Register L2DISC was created in BCS30.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**L2FRMRRX**

Local protocol violations (FRMR received) (L2FRMRRX)

Register L2FRMRRX counts frame reject (FRMR) information frames the system receives because of a protocol problem.

**BCS history**

Register L2FRMRRX was created in BCS30.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**L2FRMRTX**

Local protocol violations (FRMR sent) (L2FRMRTX)

Register L2FRMRTX counts frame reject (FRMR) information frames the system sends because of a protocol problem.

## **OM group TDCPROT** (continued)

---

### **BCS history**

Register L2FRMRTX was created in BCS30.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **L2RTXI**

Information frames retransmitted (L2RTXI)

Register L2RTXI counts information frames the system transmits again because the frames were not received correctly.

### **BCS history**

Register L2RTXI was created in BCS30.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **L2RXIFR**

Information frames received (L2RXIFR)

Register L2RXIFR increases one time for every 10 information frames the system receives by layer 2. The system routes the information frames to layer 3.

### **BCS history**

Register L2RXIFR was created in BCS30.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **L2SECSTP**

Seconds enabling the link (L2SECSTP)

---

**OM group TDCPROT** (continued)

---

Register L2SECSTP counts seconds that pass when the system attempts to enable the link.

**BCS history**

Register L2SECSTP was created in BCS30.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**L2SETUP**

Link setup sequence executions (L2SETUP)

Register L2SETUP counts the times the system executes the link setup sequence.

**BCS history**

Register L2SETUP was created in BCS30.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**L2T1TIME**

T1 timeouts (L2T1TIME)

Register L2T1TIME counts timeouts that occur before a remote responds.

**BCS history**

Register L2TITIME was created in BCS30.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**L2TXIFR**

Information frames sent (L2TXIFR)

## **OM group TDCPROT** (continued)

---

Register L2TXIFR increases one time for every 10 information frames layer 3 sends to layer 2.

### **BCS history**

Registers L2TXIFR was created in BCS30.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **L3DRECV**

Data received (L3DRECV)

Register L3DRECV counts kbytes of data layer 3 receives from layer 2.

### **BCS history**

Register L3DRECV was created in BCS30.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **L3DSENT**

Data sent (L3DSENT)

Register L3DSENT counts kbytes of data layer 2 sends to layer 3.

### **BCS history**

Register L3DSENT was created in BCS30.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **L3PKTIME**

Timeouts (L3PKTIME)

**OM group TDCPROT (end)**

---

Register L3PKTIME counts timeouts that occur before a remote responds to a data packet.

**BCS history**

Register L3PKTIME was created in BCS30.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## OM group TDCROUT

---

### OM description

TMS data channel router (TDCROUT)

The OM group TDCROUT provides information on calls the system routes on the TOPS LTCI peripheral module (TMS) data channels. The data channels are in the D-channel handler (DCH) and the ISDN signaling processor (ISP).

The OM group TDCROUT contains 14 registers that count:

- messages the system sends to a TOPS subtending node (TSN) from another subtending node or from an ISP
- messages the system receives from a TOPS subtending node
- messages a TSN sends to an ISP
- messages the system receives from an ISP
- messages the system discards from the D-channel handler because the destination link is not in-service or connected
- messages that wait to transmit
- average delay between messages that enter and leave the D-channel handler
- call processing messages the ISP sends to a TSN
- call processing messages the ISDN signaling processor receives from a TSN
- maintenance messages the ISP sends to a TSN
- maintenance messages the ISP receives from a TSN
- average messages size (including header) in an ISP
- average message size (including header) on the TOPS LTCI peripheral module data channel
- messages the system discards in an ISP

The system keeps register counts in the TMS and transfers the counts to the central control (CC). The transfer to central control takes place before the transfer of active registers to holding registers. The active count is normally zero and increases before the transfer to holding registers.

### Release history

Register TDCROUT was introduced in BCS30.

---

**OM group TDCROUT** (continued)

---

**Registers**

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

```
DMSENT  DMRECV  DMISPTX  DMISPRX
DMDISC  DAVGQS  DAVGMS  DAVGBM
ICPSENT  ICPRECV  IMTSENT  IMTREC V
IAVGMSG  IMDISC
```

**Group structure**

The OM group TDCROUT provides one tuple for each key.

**Key field:**

TDCROUT\_OMTYPE consists of the TMS number, the DCH number within the TMS, and the channel type number on the DCH.

**Info field:**

TDCROUT\_OMINFO consists of the peripheral type, the peripheral number, the ISDN service group number, and the TDC channel type.

**Associated OM groups**

The TDCPROT contains information about the X.25 protocol on the TMS data channels in the D-channel handler.

**Associated products**

DMS-200

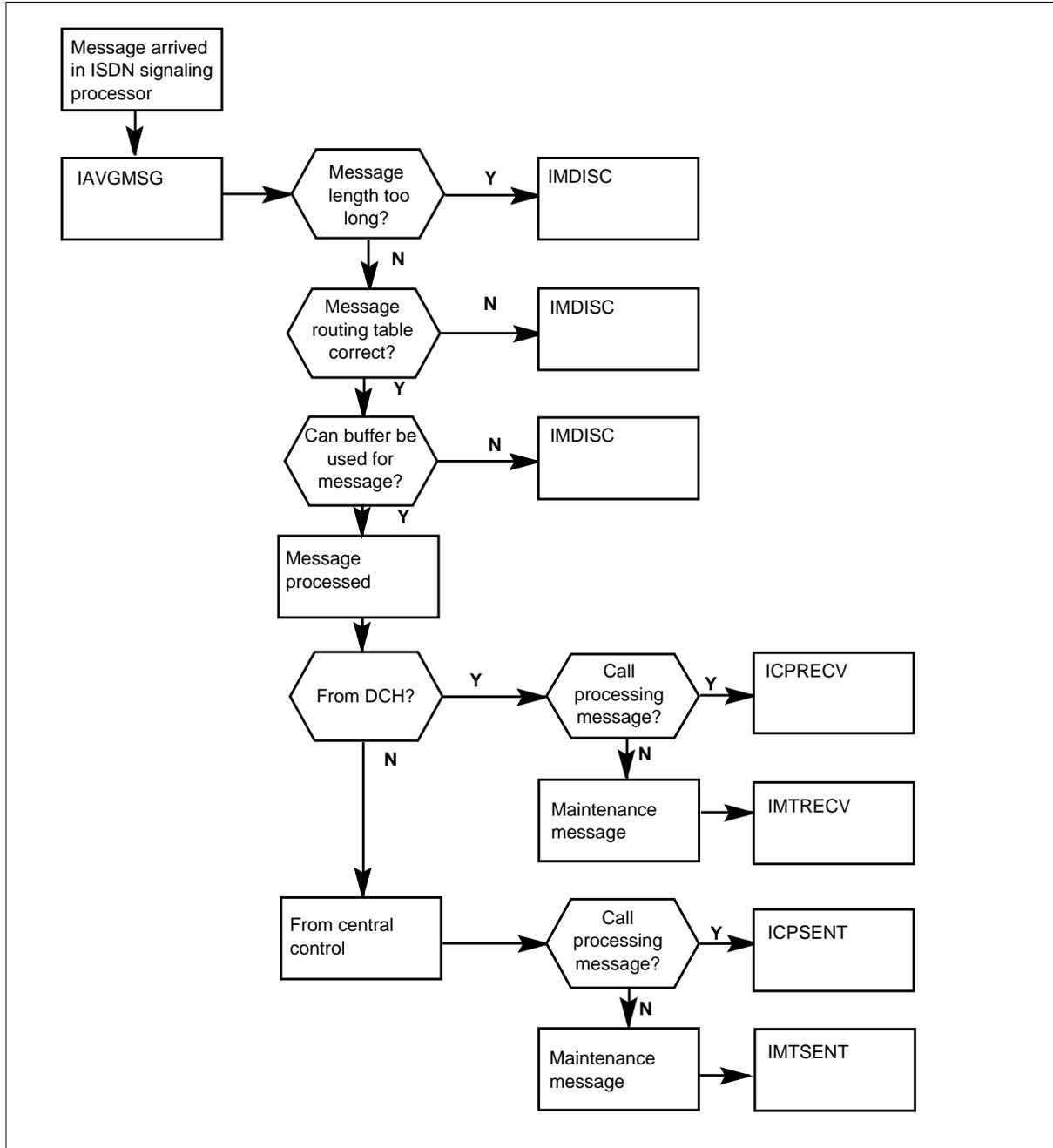
TOPS

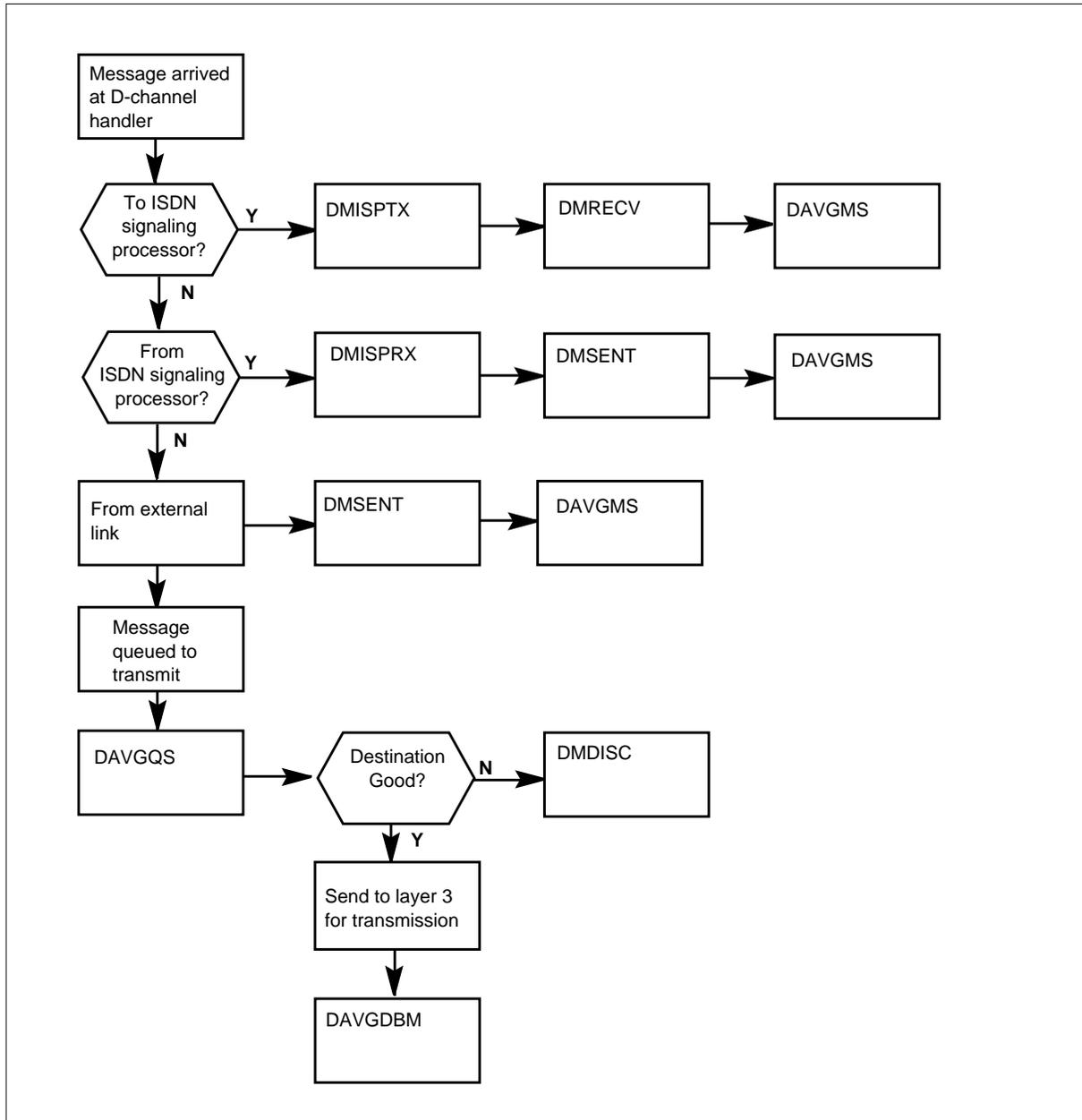
**NT feature packages**

NTXA83AA TOPS Message Switch

**OM group TDCROUT (continued)**

**OM group TDCROUT registers**



**OM group TDCROUT** (continued)**OM group TDCROUT registers (continued)**

The information contained in the registers of OM group TDCROUT can be used to determine the following:

- the amount of call processing and maintenance traffic through the TMS
- the percentage of traffic in a TMS that is call processing, or in maintenance
- the amount of traffic through different types of TSN

## **OM group TDCROUT** (continued)

---

- total number of call processing messages and maintenance messages to the central control (CC) from different types of TSN
- total number of call processing messages and maintenance messages from the CC to different types of TSN
- the percentage of database traffic through a DCH

### **Register DAVGDBM**

Average delay (DAVGDBM)

Register DAVGDBM records the average delay between messages that enter and leave the D-channel handler.

This register is not active and returns a value of zero to the central control.

#### **Register DAVGDBM release history**

Register DAVGDBM was created in BCS30.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

There are no associated logs.

### **Register DAVGMS**

Average message size on channel (DAVGMS)

Register DAVGMS records the average message size (including header) in bytes on the TMS data channel.

#### **Register DAVGMS release history**

Register DAVGMS was created in BCS30.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

There are no associated logs.

### **Register DAVGQS**

Message waiting (DAVGQS)

---

**OM group TDCROUT** (continued)

---

Register DAVGQS counts messages that wait for the system to transmit the messages.

**Register DAVGQS release history**

Register DAVGQS was created in BCS30.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register DMDISC**

Messages discarded in DCH (DMDISC)

Register DMDISC counts messages the system discards from the D-channel handler because:

- the destination link is not in service
- the destination link is not connected

**Register DMDISC release history**

Register DMDISC was created in BCS30.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register DMISPRX**

Messages received from ISDN signaling processor (DMISPRX)

Register DMISPRX counts messages the system receives from an ISP

**Register DMISPRX release history**

Register DMISPRX was created in BCS30.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## **OM group TDCROUT** (continued)

---

### **Register DMISPTX**

Messages to ISDN signaling processor (DMISPTX)

Register DMISPTX counts messages a TSN sends to an ISP.

#### **Register DMISPTX release history**

Register DMISPTX was created in BCS30.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

There are no associated logs.

### **Register DMRECV**

Messages received (DMRECV)

Register DMRECV counts messages the ISP receives from a TSN.

#### **Register DMRECV release history**

Register DMRECV was created in BCS30.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

There are no associated logs.

### **Register DMSENT**

Messages sent (DMSENT)

Register DMSENT counts messages the system sends to a TSN from another subtending node or from an ISP.

#### **Register DMSENT release history**

Register DMSENT was created in BCS30.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

There are no associated logs.

---

**OM group TDCROUT** (continued)

---

**Register IAVGMSG**

Average message size in ISP (IAVGMSG)

Register IAVGMSG records the average message size (including header) in an ISP.

**Register IAVGMSG release history**

Register IAVGMSG was created in BCS30.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register ICPRECV**

Call processing messages received (ICPRECV)

Register ICPRECV counts call processing messages that an ISP receives from a TSN.

**Register ICPRECV release history**

Register ICPRECV was created in BCS30.

**Associated registers**

Register ICPSSENT counts call processing messages an ISP sends to an TSN.

Total call processing traffic in TMS = ICPRECV = ICPSSENT

**Associated logs**

There are no associated logs

**Register ICPSSENT**

Call processing messages sent (ICPSSENT)

Register ICPSSENT counts call processing messages the ISP sends to a TSN.

**Register ICPSSENT release history**

Register ICPSSENT was created in BCS30.

**Associated registers**

Register ICPRECV counts call processing messages an ISP receives from a TSN.

## **OM group TDCROUT (continued)**

---

Total call processing traffic in TMS = ICPSSENT = ICPRECV

### **Associated logs**

There are no associated logs.

## **Register IMDISC**

Messages discarded in ISP (IMDISC)

Register IMDISC counts messages the system discards in the ISP for one of the following reasons:

- the message from the DCH is too long
- a route table problem is present
- a buffer is not available to send the message

### **Register IMDISC release history**

Register IMDISC was created in BCS30.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register IMTREC**

Maintenance messages received (IMTREC)

Register IMTREC counts maintenance messages the ISP receives from a TSN.

### **Register IMTREC release history**

Register IMTREC was introduced in BCS30.

### **Associated registers**

Register IMTSENT counts maintenance messages the ISP sends to a TSN.

Total maintenance traffic in TMS = IMTREC = IMTSENT

### **Associated logs**

There are no associated logs.

## **Register IMTSENT**

Maintenance messages sent (IMTSENT)

**OM group TDCROUT (end)**

---

Register IMTSENT counts maintenance message the ISP sends to a TSN.

**Register IMTSENT release history**

Register IMTSENT was created in BCS30.

**Associated registers**

Register IMTRECVC counts maintenance messages the ISP receives from a TSN.

Total maintenance traffic in TMS = IMTSENT = IMTRECVC

**Associated logs**

There are no associated logs.

## OM group TFCANA

---

### OM Descriptions

Traffic separation/traffic analysis (TFCANA)

The TFCANA provides information on call attempts, call setup time, and call connect time. The information occurs at source-traffic-separation and destination-traffic-separation intersections.

The traffic separation measurement system (TSMS) separates traffic from point to point. The following three components of each call can separate:

- the point-to-point attempt peg
- the setup time
- the point-to-point connect time

The system collects the counts at source-traffic-separation and destination-traffic-separation intersections. The system breaks down the data on the first calls by call type. The three call types are as follows:

- the direct dialed (DD)
- the operator assisted (OA)
- the no prefix dialed (NP)

The system groups sources and destinations according to the requirements of the operating company. The system assigns a traffic separation number (TRAFSNO) to each source group and destination group. All traffic to be separated as a group receives the same TRAFSNO. Examples of traffic groups include a group of lines, a group of trunks, or groups of announcements. Any number of lines, trunks, tones, special tones, or announcements can have the same TRAFSNO. The system assigns each source group a source traffic separation number (STSN) from 0 to 127. The system assigns each destination group a destination traffic separation number (DTSN) from 0 to 127.

The sources and destinations are as follows:

- a line or group of lines
- a trunk group or group of trunk groups
- a network class of service (NCOS) associated with Meridian Digital Centrex (MDC) traffic

The sources and destinations are as follows:

- a line or group of lines
- a trunk group or group of trunk groups

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**OM group TFCANA** (continued)

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- an announcement or group of announcements
- a tone or group of tones
- generic destinations
- NCOS associated with MDC traffic

The DTSN intersection assigns the attempt peg register and the registers for setup and connect use at each STSN. The attempt peg register makes an attempt count when an idle destination terminal is available and a successful network connection occurs. Time-stamping accumulates the setup time. The OM use scan accumulates the connect time.

**Release history**

The OM group TFCANA was introduced before the BCS20.

**NA011**

The maximum number of registers in OM group TFCANA increased from 2048 to 4096.

**BCS33**

The BCS33 converts register TFANCU from CCS to deci-erlangs. The BCS33 converts register TFANCU before the OMSHOW command on the ACTIVE class displays the deci-erlangs.

**BCS27**

The BCS27 is an attempt count that increases on E911 calls on multi-frequency (MF) and dial pulse (DP) trunks.

**BCS25**

The BCS25 is a group of traffic separation measurements that increase for MDC speed call long programming and short programming.

**BCS23**

The BCS23 is an attempt count and a connect time that increase on international DMS-100 family switches.

**BCS20**

The BCS20 is a group of traffic separation measurements that increase on MDC calls.

**Registers**

The MAP terminal displays the OM group TFCANA registers as follows:

## OM group TFCANA (continued)

|         |          |        |         |
|---------|----------|--------|---------|
| TFANPEG | TFANPEG2 | TFANSU | TFANSU2 |
| TFANCU  | TFANCU2  |        |         |

For international switches, the TFCANA registers appear at the MAP as follows:

|         |          |        |         |
|---------|----------|--------|---------|
| TFANPEG | TFANPEG2 | TFANCU | TFANCU2 |
|---------|----------|--------|---------|

### Group structure

The office parameter `TFAN_ENHANCED_FEATURE` in table `OFCOPT` must be set to `Y` (yes) in order to activate the TSMS feature. The maximum matrix is 128 by 128. The maximum OM register allocation is 4096.

The office parameter `NO_TFAN_OM_REGISTERS` in table `OFCENG` specifies the maximum number of register numbers that can occur in table `TFANINT`.

The office parameter `TFAN_DEFAULT_REG_LOG` in table `OFCENG` controls the production of the default register log report `TFAN100`. The system generates the `TFAN100` log when traffic routes to the default register.

The system uses the `TRAFSNO` field of table `TRKGRP` to assign the source traffic separation numbers (`STSN`) to trunk groups. The system uses the `TRAFSNO` field of table `LINEATTR` to assign the `STSN` to subscriber lines. The range of the `TRAFSNO` field is 0 to 127.

The system uses the `TRAFSNO` field of table `TRKGRP` to assign the `DTSN` to trunk groups. The system uses the `TRAFSNO` field of table `LINEATTR` to assign the `DTSN` to lines. The system uses the `TRAFSNO` field of table `NCOS` to assign the `DTSN` to the `NCOS` in a specified subscriber group. The system uses the `TRAFSNO` field of table `ANNS` to assign the `DTSN` to announcements. The system uses the `TRAFSNO` field of table `TONES` to

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**OM group TFCANA** (continued)

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assign the DTSN to tones. The system uses the TRAFSNO field of table STN to assign the DTSN to special tones. The range of the TRAFSNO field is 0 to 127.

The system preassigns the DTSN from 0 through 9. The following generic DTSNs are defined:

- 0 - default (DEFDTS)
- 1 - lockout (LKDTS)
- 2 - test lines (TLDTS)
- 3 - CAMA/TOPS position (POSDTS)
- 4 - call forwarding (CFDTS)
- 5 - speed calling (SCDTS)
- 6 - revertive calling (RVDTS)
- 7 - false start (FSDTS)
- 8 - partial dial abandon (PDADTS)
- 9 - future

Source by destination intersections are assigned in table TFANINT. The two-part index in table TFANINT is the STSN and DTSN. At each intersection, measurements have three OM register numbers assign according to call type. These three registers are the DDREGNO, the OAREGNO, and the NPREGNO. The DDREGNO is for direct dial (DD) call type traffic. The OAREGNO is for operator assisted (OA) call type traffic. The NPREGNO is for no prefix dialed (NP) call type traffic. Call types apply to originating traffic only. The user assigns the same register number to each call type to avoid separation by call type.

The system abandons partial dial abandon (PDAB) and partial dial timeout (PDTO) calls before called number routing analysis. The system assigns the same register number for all three call types.

**Key field:**

The REGISTER\_NUMBERS is a integer in the range 0 to 4095 as assigned in fields DDREGNO, OAREGNO and NPREGNO in table TFANINT.

## **OM group TFCANA (continued)**

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### **Info field:**

There is no information field.

### **Associated OM groups**

There are no associated OM groups.

### **Associated functional groups**

The traffic separation measurement system operating group associates with the OM group TFCANA.

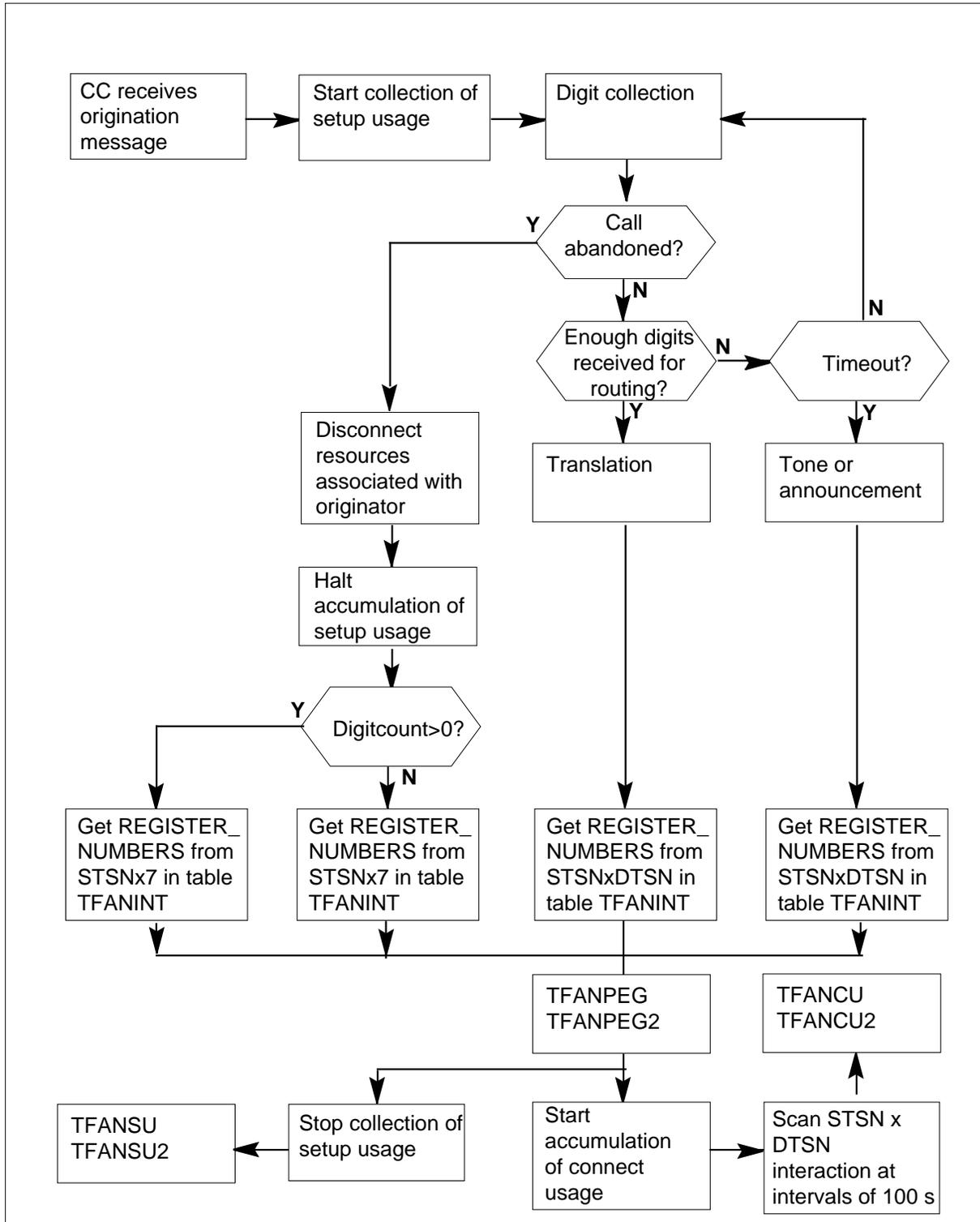
### **Associated functionality codes**

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

| <b>Functionality</b> | <b>Code</b> |
|----------------------|-------------|
| Common Basic         | NTX001AA    |
| TSMS Peg Count       | NTX085AA    |
| TSMS Usage Counts    | NTX087AA    |

**OM group TFCANA (continued)**

**OM group TFCANA registers**



## OM group TFCANA (continued)

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### Register TFANCU

#### Connect usage

The TFANCU is a usage register. The scan rate is slow: 100 s. The TFANCU records a connection at the intersection of the STSN and the DTSN. The system collects the connect usage only after the system collects setup usage at the intersection.

The OM usage scan accumulates the connect usage. The usage scan begins to accumulate at the intersection of the STSN and the DTSN when a call connection occurs. The system can route calls to an alternate route after a seize-fail or an out-fail causes a connection. These calls connect to the DTSN intersections, and contribute connect time to each of the STSN by the DTSN intersections.

The DTSN assigns register 0 to the STSN by default. The connect time accumulates in register 0 when the DTSN or the STSN by the DTSN intersection is not specified.

The system provides the generic DTSN of 3 (POSDTS) for the centralized automatic message accounting/Traffic Operator Position System (CAMA/TOPS) position. Connect time does not accumulate in the register assigned to the STSN by POSDTS intersection.

The system provides the generic DTSN of 4 (CFDTS) for call forwarding. Connect time does not accumulate in the register assigned to the STSN by the CFDTS intersection.

The system provides the generic DTSN of 5 (SCDTS) for speed calling. Connect time does not accumulate in the register assigned to the STSN by the SCDTS intersection. When the programming of the speed-dial short list or long list completes, the system connects the subscriber to a confirmation tone. A silent tone follows the confirmation tone. The connect usage accumulates in the register that the confirmation tone at the DTSN intersection assigned to the STSN. The connect usage accumulates in the register that the silent tone at the DTSN intersection assigned to the STSN. A programming attempt can result in a treatment. The connect time accumulates in the register that treatment at the DTSN intersection assigned to the STSN.

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**OM group TFCANA** (continued)

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The system provides the generic DTSN of 6 (RVDTs) for revertive calling. Revertive calls are processed as two or three calls. The revertive calls are as follows:

- The first call is from the calling party to the announcement or tone.
- The second call is from the called party to the announcement or tone.
- The third call is the called party to the calling party connection.

The calling party connects to a recorded announcement or a tone. At this time, connect time accumulates in the register assigned to the calling STSN. The announcement or tone at the DTSN intersection assigns the register to the STSN. When the telephone of the called party rings, connect time accumulates in the register assigned to the calling STSN. The RVDTs intersection assigns the register to the STSN. For a coded or a superimposed ringing line, connect time continues to accumulate during the ringing and during the call. Connect usage ceases when either the calling or called party goes on-hook.

For frequency ringing lines, the called subscriber connects for a short time to an announcement or tone. This connection generates connect time at the called STSN by an announcement or a tone at the DTSN intersection. Connect usage accumulation continues during the call and ceases when either the calling party or called party goes on-hook.

Calls abandoned before called number routing analysis are called PDAB calls. The PADB traffic uses DTSN 7 and 8. There is no connect time for the PDAB traffic.

Calls that fail called number integrity are known as the PDTO. Dial tone timeout occurs when a line remains off-hook and digits are not dialed. Interdigit timeout occurs when a line remains off-hook before the subscriber dials enough digits. The system assigns the DTSN for tones, special tones or announcement treatments in field TRAFSNO in table TONES, STN, or ANN. The system uses the DTSN for tones, special tones or announcement treatments for dial tone timeout and interdigit timeout. Timeout traffic causes connect time to accumulate in the register that the treatment at the DTSN intersection assigned to the STSN. The assignment of different DTSN to the treatments distinguishes dial tone timeout and interdigit timeout calls.

The system processes lines with the Call Waiting feature as if the subscriber has two lines. The first call contributes connect time at the STSN by the DTSN intersection. The second call that arrives at the busy line contributes connect time at the correct STSN by the DTSN intersection. The connect time begins

## **OM group TFCANA** (continued)

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to accumulate when the called party receives the call waiting tone. This tone indicates a waiting call.

The system processes lines with the Three-Way Calling feature as if the subscriber has two lines. The system treats each origination as a new call. The DTSN intersection accumulates the connect time at the correct STSN. The three parties connect either in private consultation or in conference mode. While the three parties are connected, the DTSN intersections accumulate the connect time at both of the STSN. An attempt to add a third party causes the system to route the call to a treatment. As a result, the connect time accumulates at the correct STSN by treatment at the DTSN intersection.

### **Register TFANCU release history**

Register TFANCU was introduced before the BCS20.

#### **BCS33**

When the office parameter OMINERLANGS is set to Y, the usage count converts from CCS to deci-erlangs. The conversion from CCS to deci-erlangs occurs before the OMSHOW command on the ACTIVE class displays the deci-erlangs. The value held in the active registers is not altered and remains in CCS.

#### **BCS25**

The BCS25 is the connect time accumulated for the MDC speed-call long programming and short programming.

#### **BCS23**

The BCS23 is the connect time accumulated on the international DMS-100 group switches.

#### **BCS20**

The BCS20 is the connect time accumulated on the MDC calls.

### **Associated registers**

The TFAN100 generates when traffic data routes to the default register REGISTER\_NUMBERS 0.

### **Associated logs**

There are no associated logs.

### **Extension registers**

The extension register is the TFANCU2 register.

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**OM group TFCANA** (continued)

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**Register TFANPEG**

The register TFANPEG is an attempt peg.

The TFANPEG counts network connections at the intersection of the STSN and DTSN.

The register counts successful network connections. If a seize-fail or an out-fail occurs after the connection, the call can connect to another route. When the call reroutes, the system counts an attempt at the intersection of the successful network connection of the new route.

The DTSN assigns register 0 to the STSN by default. When the DTSN or the STSN by the DTSN intersection is not specified, the TFANPEG increases register 0.

The system provides the generic DTSN of 3 (POSDTS) for the CAMA/TOPS positions. The system increases the register assigned to the STSN by the DTSN intersection for calls connected to a CAMA/TOPS position. The system increases the register assigned to the STSN by POSDTS intersection. The system increases this register when the systems abandons calls while the calls queue for a CAMA/TOPS position.

The system provides the generic DTSN of 4 (CFDTS) for call forwarding. When the user dials the access code, call forwarding activates or deactivates. As a result, the system increases the register assigned to the STSN by the CFDTS intersection. The system considers the activation call made to the forward-to-directory number. The system increases the register assigned to the STSN by the DTSN intersection. When the activation or deactivation is complete, the subscriber receives a confirmation tone and a silent tone. The registers assigned to the STSN by the confirmation tone at the DTSN intersection increase. The registers assigned to the STSN by the silent tone at the DTSN intersection increase. An activation attempt can result in a treatment. The system increases the register assigned to the STSN by the treatment at the DTSN intersection.

The system provides the generic DTSN of 5 (SCDTS) for speed calling. When the user dials the access code, the system programs the speed dialing short list or long list. The register assigned to the STSN by the SCDTS intersection increases. When programming is complete, the subscriber connects to a confirmation tone followed by a silent tone. The registers assigned to the STSN by the confirmation tone at the DTSN intersection increase. The registers assigned to the STSN by the silent tone at the DTSN intersection are incremented also. A programming attempt can result in a treatment. The

## OM group TFCANA (continued)

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register assigned to the STSN by the treatment at the DTSN intersection increases.

The system provides the generic DTSN of 6 (RVDTs) for revertive calling. The system processes revertive calls as two or three calls. The first call is from the calling party to the announcement or tone. The second call, if the call applies, is from the called party to the announcement or tone. The third call is the called party to calling party connection. The calling party connection to a recorded announcement or a tone causes the register assigned to the calling STSN to increase. The system assigns the register to the calling STSN by the announcement or tone DTSN intersection. For frequency ringing line, the called subscriber connects for a time to an announcement or a tone. This connection increases the register assigned to the called STSN by the announcement or tone DTSN intersection. When the telephone of the called party rings, an attempt peg increases the register assigned to the calling STSN. The RVDTs intersection assigns the register.

Calls abandoned before called number routing analysis are known as PDAB calls. The PDAB traffic uses the DTSN 7 and the DTSN 8. False start abandon (FSDTS) uses the DTSN 7. The FSDTS occurs when a line goes on-hook or flashes without any digits dialed before dial tone timeout. An FSDTS call increases the register assigned to the STSN by the FSDTS intersection.

The partial dial abandon (PDADTS) uses the DTSN 8. The PDADTS occurs when a line goes on-hook before the user dials all digits and before interdigit timeout. A PDADTS call increases the register assigned to the STSN by the PDADTS intersection. The three-way calling feature treats the false start and partial dial abandon calls as one type. As a result, false start and partial dial calls increase the register assigned to the STSN by the PDADTS intersection.

Calls that fail called number integrity are known as PDTO. Dial tone timeout occurs when a line remains off-hook and no digits are dialed. Interdigit timeout occurs when a line remains off-hook after the user fails to dial enough digits. The DTSN for tone, special tones, or announcement treatments are used for dial tone timeout and interdigit timeout. The DTSN for tone, special tones, or announcement treatments appear in field TRAFSNO in table TONES, STN or ANN. Timeout traffic increases the register assigned to the STSN by the treatment in the DTSN intersection. Assignment of different DTSN to the treatments distinguishes dial tone timeout and interdigit timeout calls.

The system processes lines with the call waiting feature as if the subscriber has two lines. For the first call, the system increases the register assigned to the STSN by the DTSN intersection. For the second call that arrives at the busy

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**OM group TFCANA** (continued)

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line, the system increases the register assigned to the STSN. The DTSN intersection assigns the register.

The system processes lines with the three-way calling feature as if the subscriber has two lines. The system treats each origination as a new call. The system increases the register assigned to the correct STSN by the DTSN intersection. An attempt to add a third party causes the system to route the call to a treatment. The addition of a third party increases the register assigned to the STSN by treatment in the DTSN intersection.

For overlapped outpulsing traffic, the system increases the register assigned to the STSN by the DTSN intersection. This increase occurs when enough digits are available to route the call. The register assigned to the STSN by the PDADTS intersection does not increase if the system abandons the call.

**Register TFANPEG release history**

Register TFANPEG was introduced before the BCS20.

**BCS27**

The BCS27 is an attempt count that increases on E911 calls on multi-frequency (MF) and dial pulse (DP) trunks.

**BCS25**

The BCS25 is an attempt count that increases for MDC speed call long programming and short programming.

**BCS23**

The BCS23 is an attempt count that increases on international DMS-100 family switches.

**BCS20**

The BCS20 is an attempt count that increases on MDC calls.

**Associated registers**

There are no associated registers.

**Associated logs**

The TFAN100 generates when the system sends traffic data to the default register, REGISTER\_NUMBERS 0.

**Extension registers**

The extension register is the TFANPEG2.

## OM group TFCANA (continued)

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### Register TFANSU

The TFANSU register is setup usage.

The TFANSU is a record of the setup time at the intersection of the STSN and DTSN. Setup usage is the number of seconds between origination and connection of a call.

The system does not generate TFANSU for international switches.

Time-sampling accumulates the setup time. The setup count begins for lines when the origination message arrives at the central control. The system must accept the origination message for service. Accepted for service indicates that a channel is free. If the system requires a digitone receiver, either a receiver or space in the receiver-wait queue is available. For dial pulse lines, a the system requires a free channel. If resources are not available, the origination returns to one of the following for reorigination:

- line module (LM)
- line concentrating module (LCM)
- remote line module (RLM)
- remote line concentrating module (RLCM)

If the system returns the call for reorigination, time-stamping does not occur.

The setup count begins for trunks when the origination message arrives in the central control. For multifrequency trunks, the start time is the time of seizure. For dial pulse trunks, the start time occurs when the user dials at least three digits.

When the network connection to the first available destination terminal occurs, the system calculates the difference in time from origination to connection. The system calculates the difference in time to the second. The system adds the calculation to the setup usage register at the intersection of the STSN and the DTSN.

When the DTSN or the STSN by the DTSN intersection is not specified, setup time accumulates in the register assigned to STSN. The system assigns the register to the STSN by default DTSN (0).

The system provides the generic DTSN of 3 (POSDTS) for CAMA/TOPS positions. The setup time for an operator-assisted call is the dialing time. The setup time includes the time in queue for or connected to a TOPS or CAMA position. The setup time accumulates in the register assigned to the STSN by the DTSN intersection. The setup time for calls the system abandons

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**OM group TFCANA** (continued)

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accumulates in the register assigned to the intersection of STSN and POSDTS. The system can abandon calls that are in queue or at a CAMA/TOPS position.

The system provides the generic DTSN of 4 (CFDTS) for call forwarding. Call forwarding activates or deactivates when the user dials the access code. The setup time accumulates while the subscriber activates or deactivates call forwarding. The setup time accumulates in the register assigned to the intersection of the STSN and the CFDTS. The setup time is the time difference between the detection of a call and start of the follow-up activation call. The setup time for call forwarding deactivation is the time difference between call detection and when the caller goes on-hook. The system considers the activation call made to the forward-to-directory number. Setup time does not occur at the STSN by the DTSN intersection. Setup time records at the STSN by the CFDTS intersection. When activation or deactivation is complete, the subscriber receives a confirmation tone and a silent tone. The setup time does not accumulate at the STSN by the confirmation tone at the DTSN intersection. Setup time does not accumulate at the STSN by the silent tone at the DTSN intersection.

The system provides the generic DTSN of 5 (SCDTS) for speed calling. When the user dials the access code, the system programs the speed-dialing short-list or long-list. Setup time accumulates in the register assigned to the intersection of the STSN and the SCDTS. The setup time is the time difference between call detection of a call and when at which the caller goes on-hook. When the programming is complete, the subscriber receives a confirmation tone and a silent tone.

Setup time does not accumulate at the STSN by the confirmation tone at the DTSN intersection. Setup time does not accumulate at the STSN by the silent tone at the DTSN intersection. A programming attempt can cause the system to route a call to treatment. If the system routes the call, setup time accumulates in the register assigned to the STSN by the SCDTS intersection. Setup time does not accumulate at the register assigned to the STSN by the treatment at the DTSN intersection.

The system provides the generic DTSN of 6 (RVDTS) for revertive calling. The system processes revertive calls as two or three calls. The first call is from the calling party to the announcement or tone. The second call is from the called party to the announcement or tone. The third call is the called party to calling party connection. The calling party receives a recorded announcement or tone. When this event occurs, the setup time starts to accumulate. Setup time accumulates in the register assigned at the calling STSN by the announcement or tone at the DTSN intersection.

## **OM group TFCANA** (continued)

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Calls abandoned before called number routing analysis are known as PDAB calls. The PDAB uses the DTSN 7 and the DTSN 8. False start abandon (FSDTS) uses the DTSN 7. False start abandon occurs when a line goes on-hook or flashes before dial tone timeout. A FSDTS call causes setup time to accumulate at the register assigned to the STSN by the FSDTS intersection. Partial dial abandon (PDADTS) uses the DTSN 8. Partial dial abandon occurs when a line goes on-hook before the user dials all digits and before interdigit timeout. A partial dial abandon call causes setup time to accumulate in the register assigned to the STSN. The PDADTS intersection assigns the register.

The system processes lines with the Call Waiting feature as if two calls are in progress. Setup time for each call accumulates at the appropriate STSN by the DTSN intersection. The setup time is the time between call detection and call connection.

The system processes lines with the Three-Way Calling feature as if the subscriber has two lines. The system treats each origination as a new call. The setup time accumulates in the register assigned to the correct STSN by the DTSN intersection. An attempt to add a third party can cause the system to route the call to a treatment. The addition of a third party causes setup time to accumulate at the register assigned to the STSN by the DTSN intersection. The Three-Way Calling feature treats false start and partial dial abandon calls as one type. False start and partial dial abandon calls cause setup time to accumulate at the register assigned to the STSN. The PDADTS intersection assigns the register.

For overlapped outpulsing traffic, the setup time accumulates at the STSN by the DTSN intersection. Setup time accumulates at the STSN by the DTSN intersection when enough digits are available to route the call. If the system abandons the call, setup time does not accumulate at the register assigned to the STSN. The PDADTS intersection assigns the register.

### **Register TFANSU release history**

Register TFANSU was introduced before the BCS20.

#### **BCS25**

The BCS25 is the setup time accumulated on MDC speed-call long programming and short programming.

#### **BCS20**

The BCS20 is the setup time accumulated on MDC calls.

### **Associated registers**

There are no associated registers.

**OM group TFCANA (end)**

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**Associated logs**

The TFAN100 generates when the system sends traffic data to the default register, REGISTER\_NUMBERS 0.

**Extension registers**

The TFANSU2 is the extension register.

## OM group TM

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### OM description

Trunk modules (TM)

The OM group TM counts errors, faults, and maintenance state transitions for trunk modules, maintenance trunk modules, and remote service modules.

### Release history

The OM group TM was introduced before BCS20.

#### BCS30

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

### Registers

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

|         |         |         |       |
|---------|---------|---------|-------|
| TMERR   | TMFLT   | TMSBU   | TMMBU |
| TMCCTDG | TMCCTFL | TMMBP   | TMSBP |
| TMMBTCO | TMSBTCO | TMCCTOP |       |

### Group structure

The OM group TM provides one tuple for each office.

#### Key field:

There is no key field

#### Info field:

There is no info field

### Associated OM groups

The measurements in this group are included in groups PM and PMTYP. Group PM counts errors, faults, and maintenance state transitions for peripheral modules (PM) with node numbers. Group PMTYP counts peripheral module errors, faults, and state changes for a group of PMs of the same type.

### Associated functional groups

There are no associated functional groups.

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**OM group TM** (continued)

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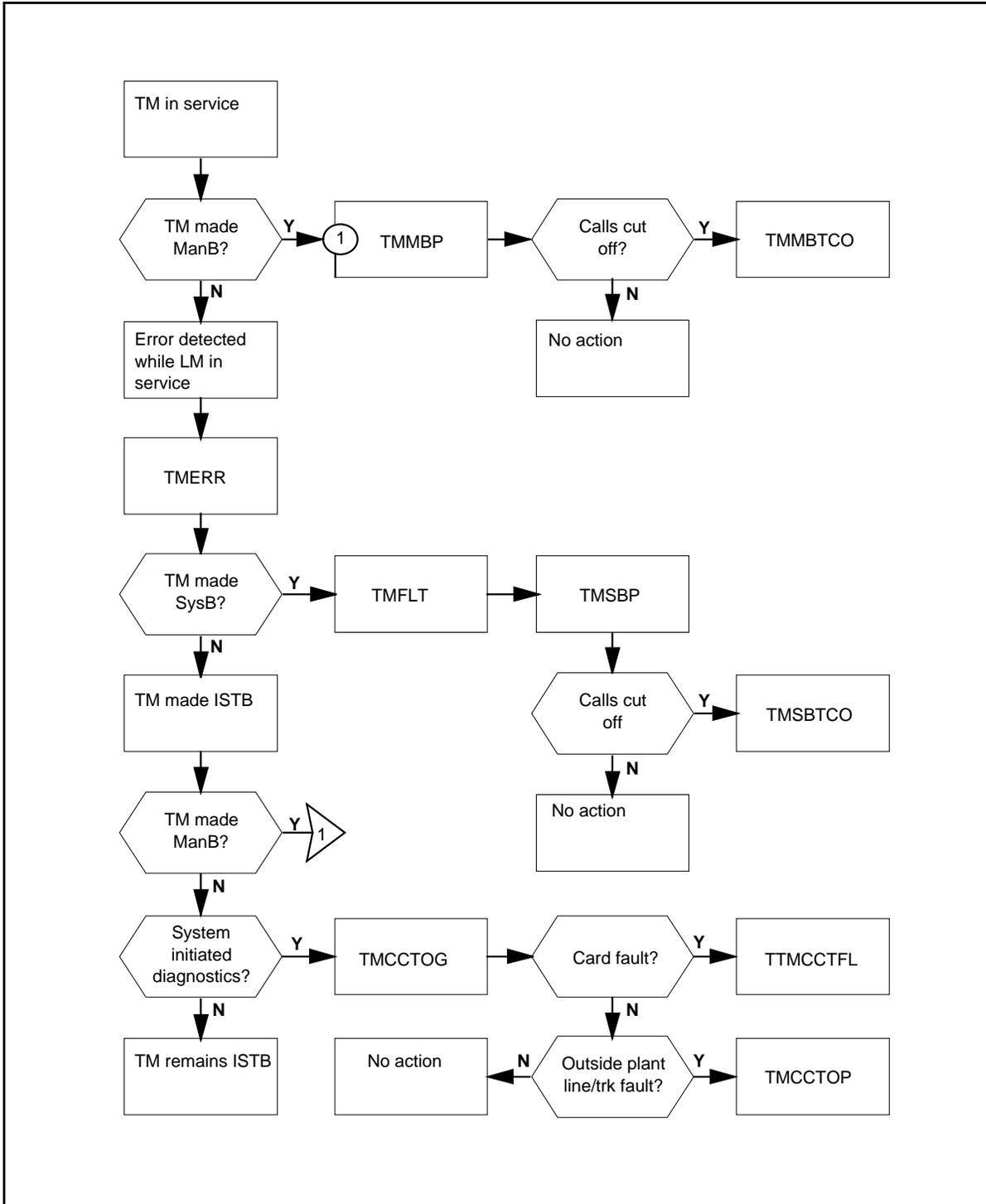
**Associated functionality codes**

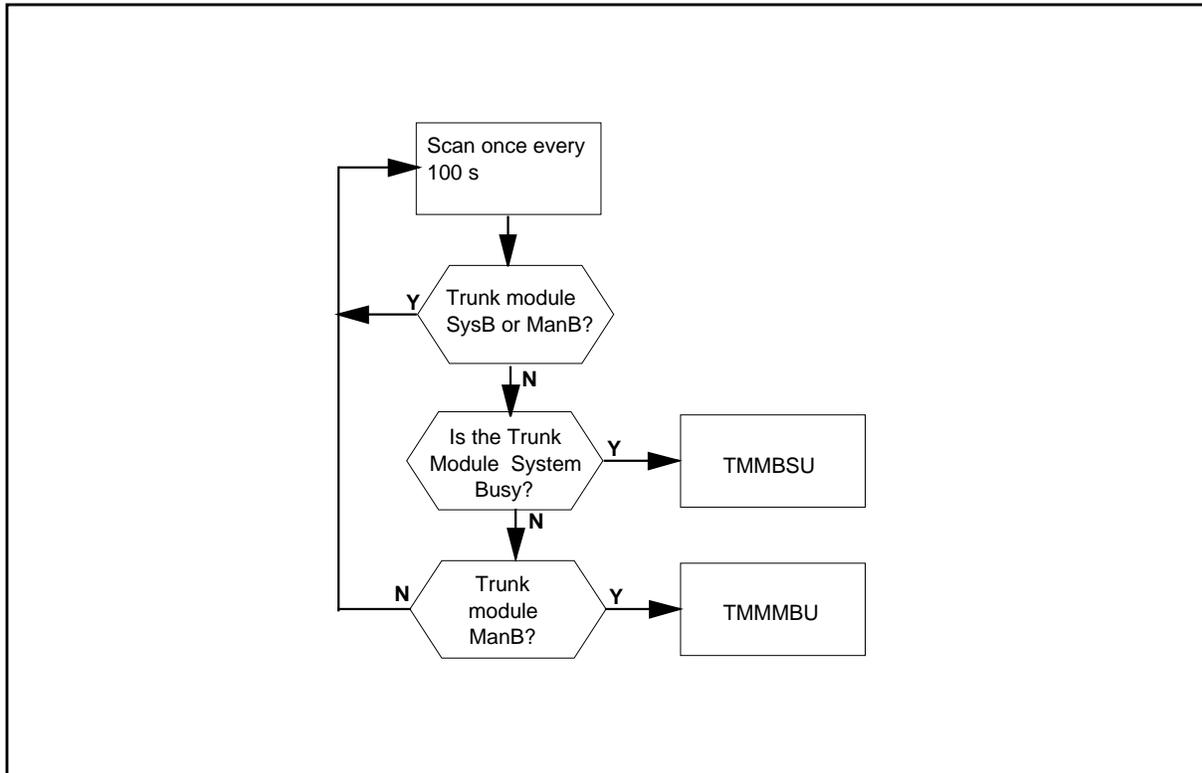
The associated functionality codes for OM group TM appear in the following table.

| <b>Functionality</b>                 | <b>Code</b> |
|--------------------------------------|-------------|
| Common Basic                         | NTX001AA    |
| International Switching Center-Basic | NTX300AA    |

**OM group TM (continued)**

**OM group TM registers**



**OM group TM (continued)****OM group TM usage registers****Register TMCCTDG**

Trunk module circuit diagnostics (TMCCTDG)

Register TMCCTDG increases when the system runs diagnostics on any trunk interface card or service circuit. The trunk module diagnostics perform the following activities:

- check that cards of the correct type are present
- operates the test relay
- operates and releases signal distribution points and analyses scan results
- checks transmission loss in looparound mode

**Register TMCCTDG release history**

Register TMCCTDG was introduced before BCS20.

## **OM group TM** (continued)

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### **Associated registers**

Registers PM\_PMCCTDG and PMTYP\_PMTCCTDG increase when the system increases TMCCTDG.

### **Associated logs**

There are no associated logs.

## **Register TMCCTFL**

Trunk module circuit failure (TMCCTFL)

Register TMCCTFL increases when diagnostics run on a trunk interface card or service circuit fail because of a card fault.

### **Register TMCCTFL release history**

Register TMCCTFL was introduced before BCS20.

### **Associated registers**

Register TMCCTDG increases when a diagnostic is run.

### **Associated logs**

There is no associated logs.

## **Register TMCCTOP**

Trunk module circuit outside plant (TMCCTOP)

Register TMCCTOP increases when the signaling test at a switching office detects a fault on a trunk circuit. The system detects the fault between the switching office and a far-end office. Register TMCCTOP increases when an originating office does not receive a start-dial or wink signal from the far-end office. A start-dial or wink signal is sent in response to the off-hook that the originating office sent.

### **Register TMCCTOP release history**

Register TMCCTOP was introduced prior to BCS20.

### **Associated registers**

Registers PM\_PMCCTOP and PMTYP\_PMTCCTOP increase when the system increases TMCCTOP.

### **Associated logs**

There are no associated logs.

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**OM group TM** (continued)

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**Register TMERR**

Trunk module errors (TMERR)

TMERR counts errors and failures detected in an in-service trunk module.

The events that TMERR counts include

- software and hardware errors
- accuracy, audit, and processing failures
- controller message congestion

**Register TMERR release history**

Register TMERR was introduced before BCS20.

**Associated registers**

Registers PM\_PMERR and PMTYP\_PMTERR increase when the system increases TMERR.

**Associated logs**

There are no associated logs.

**Register TMFLT**

Trunk module faults (TMFLT)

Register TMFLT counts errors that cause the trunk module to become system busy.

A manual or system-initiated recovery attempt initiates when the trunk modules become system busy.

**Register TMFLT release history**

Register TMFLT was introduced before BCS20.

**Associated registers**

Errors counted by TMFLT are also counted by TMERR.

Registers PM\_PMFLT and PMTYP\_PMTFLT increase when the system increases TMFLT.

**Associated logs**

There are no associated logs.

## **OM group TM** (continued)

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### **Register TMMBP**

Trunk module manual busy change (TMMBP)

Register TMMBP increases when the system makes the trunk module manual busy from an in-service or in-service-trouble state.

#### **Register TMMBP release history**

Register TMMBP was introduced before BCS20.

#### **Associated registers**

Registers PM\_PMMBP and PMTYP\_PMTMBP increase when the system increases TMMBP.

#### **Associated logs**

There are no associated logs.

### **Register TMMBTCO**

Trunk module manual busy terminals cut-off (TMMBTCO)

Register TMMBTCO counts subscriber calls (terminals) that are cut off when the system makes a trunk module manual busy. Calls must associate with lines or trunks in a call-processing-busy state or a call-processing-deload state. If calls do not associate, they are not counted by TMMBTCO.

#### **Register TMMBTCO release history**

Registers TMMBTCO was introduced before BCS20.

#### **Associated registers**

Registers PM\_PMMBTCO and PMTYP\_PMTMBTCO increase when the system increases TMMBTCO.

#### **Associated logs**

There are no associated logs.

### **Register TMMBU**

Trunk module manual busy (TMMBU)

Register TMMBU is a usage register. The scan rate is 100 s. Register TMMBU records if trunk modules are manual busy.

#### **Register TMMBU release history**

Register TMMBU was introduced prior to BCS20.

---

**OM group TM** (continued)

---

**BCS30**

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

**Associated registers**

Registers PM\_PMMMBU and PMTYP\_PMTMMBU increase when the system increases TMMBU.

**Associated logs**

There are no associated logs.

**Register TMSBP**

Trunk module system busy transitions (TMSBP)

Register TMSBP increases when the system makes the trunk module system busy. The trunk module is made system busy from an in-service or an in-service-trouble state.

If the trunk module recovers from the C-side busy state before being made system busy, this register is not increased.

**Register TMSBP release history**

Register TMSBP was introduced before BCS20.

**Associated registers**

Registers PM\_PMSBP and PMTYP\_PMTSBP increases when the system increases TMSBP.

**Associated logs**

There are no associated logs.

**Register TMSBTCO**

Trunk module system busy terminals cut off (TMSBTCO)

Register TMSBTCO counts subscriber calls (terminals) that are cut off. Calls are cut off when the system makes a trunk module C-side busy. The trunk module is made C-side busy from an in-service or in-service-trouble state.

C-side busy is an intermediate state that occurs before the system makes the trunk module system busy.

**Register TMSBTCO release history**

Register TMSBTCO was introduced before BCS20.

## OM group TM (end)

---

### Associated registers

Registers PM\_PMSBTCO and PMTYP\_PMTSBTCO increase when the system increases TMSBTCO.

### Associated logs

There are no associated logs.

## Register TMSBU

Trunk module system busy (TMSBU)

TMSBU is a usage register. The scan rate is 100 s. TMSBU records if trunk modules are system busy.

The system makes a trunk module system busy if the trunk module

- fails an routine audit
- does not have available message paths
- sends more than 200 not requested trouble reports within an audit period

### Register TMSBU release history

Registers TMSBU was introduced before BCS20.

### BCS30

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

### Associated registers

Registers PM\_PMMSBU and PMTYP\_PMTMSBU increases when the system increases TMSBU.

### Associated logs

There are no associated logs.

---

## OM group TME

---

### OM description

Terminal management environment (TME)

TME provides information on the use of the terminal management environment (TME).

TME contains five registers that count the following activities:

- attempts to initiate a TME session
- successful TME name updates
- not complete TME name updates
- successful TME feature updates
- not complete TME feature updates

### Release history

The OM group TME was introduced in BCS29.

### Registers

The OM group TME registers appears on the MAP terminal as follows:

```

TMEKEY      NAMEUPD NAMEFAIL      FEATUPD
FEATFAIL

```

### Group structure

The OM group TME provides one tuple for each office.

**Key field:**

There is no key field

**Info field:**

There is no key field

### Associated OM groups

There are no associated OM groups.

### Associated functional groups

The following functional groups associate with OM group TME:

- DMS-100 Remote Switching Center
- Display Electronic Business Set

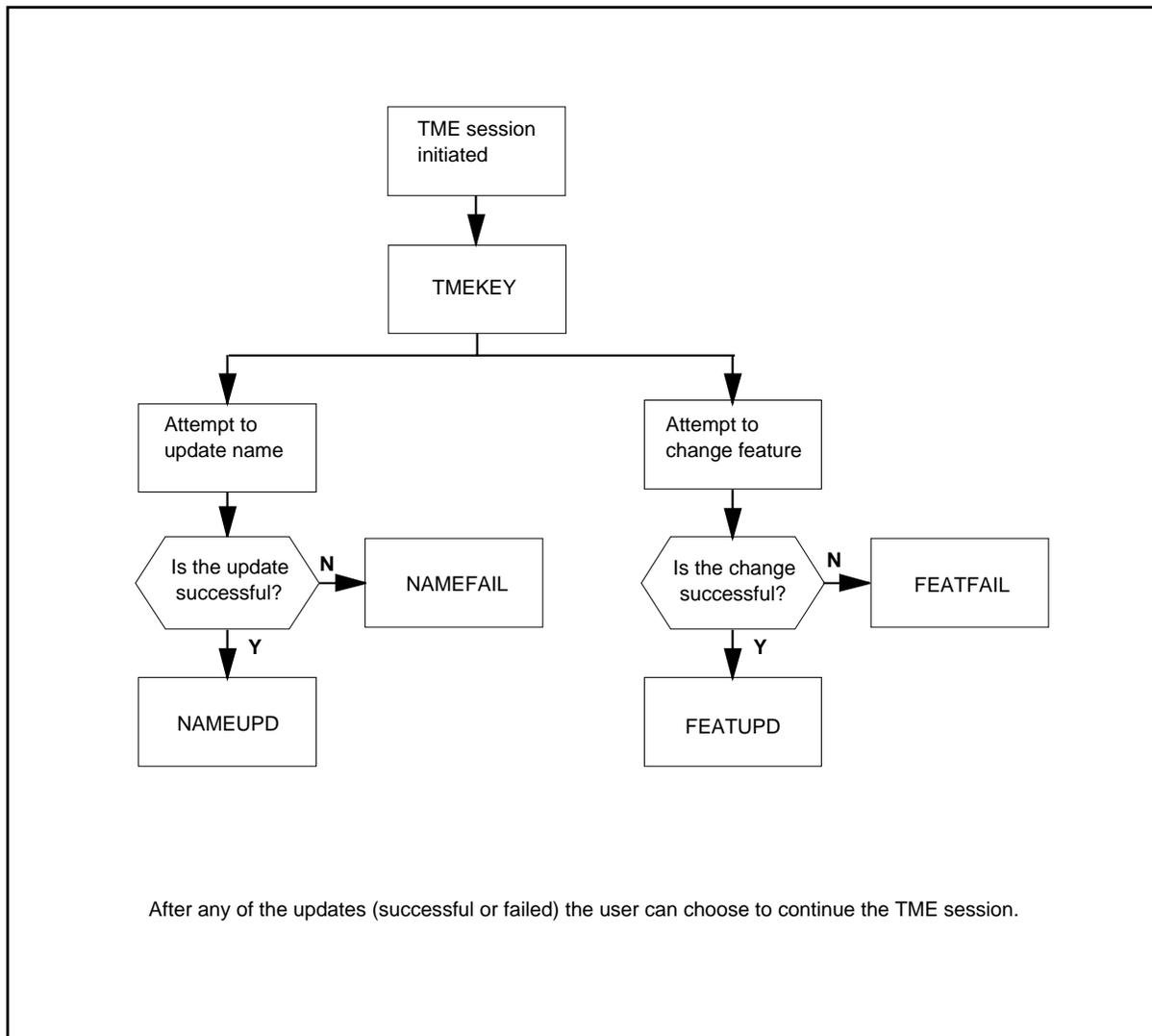
## OM group TME (continued)

### Associated functionality codes

The functionality codes for OM group TME are in the following table.

| Functionality            | Code     |
|--------------------------|----------|
| MBS Interactive Displays | NTXF88AA |

### OM group TME registers



---

**OM group TME** (continued)

---

**Register FEATFAIL**

Unsuccessful feature changes (FEATFAIL)

Register FEATFAIL counts terminal management environment (TME) sessions that fail to add a feature to a key. FEATFAIL also counts TME sessions that fail to delete a feature from a key on a Meridian business set (MBS).

**Register FEATFAIL release history**

Register FEATFAIL was introduced in BCS29.

**Associated registers**

Register FEATUPD counts TME sessions that correctly add a feature to a key or delete a feature from a key on an MBS.

**Associated logs**

There are no associated logs.

**Register FEATUPD**

Successful feature change (FEATUPD)

Register FEATUPD counts TME sessions that correctly add a feature to a key or delete a feature from a key on an MBS.

**Register FEATUPD release history**

Register FEATUPD was introduced in BCS29.

**Associated registers**

Registers FEATFAIL counts TME sessions that fail to add a feature to a key or delete a feature from a key on an MBS.

**Associated logs**

There are no associated logs.

**Register NAMEFAIL**

Unsuccessful name update (NAMEFAIL)

Register NAMEFAIL counts TME sessions that fail to update the name that associate with a line on an MBS.

**NAMEFAIL release history**

Register NAMEFAIL was introduced in BCS29.

## **OM group TME (end)**

---

### **Associated registers**

There are no associated registers.

Registers NAMEUPD counts TME sessions that correctly update the name associated with a line on an MBS.

### **Associated logs**

There are no associated logs.

## **Register NAMEUPD**

Successful name update (NAMEUPD)

Register NAMEUPD counts TME sessions that correctly update the name that associates with a line on an MBS.

### **Register NAMEUPD release history**

Register NAMEUPD was introduced in BCS29.

### **Associated registers**

Register NAMEFAIL counts TME sessions that fail to update the name that associate with a line on an MBS.

### **Associated logs**

There are no associated logs.

## **Register TMEKEY**

Terminal management environment (TME) session initiation (TMEKEY)

Register TMEKEY counts attempts to initiate a TME session.

### **Register TMEKEY release history**

Register TMEKEY was introduced in BCS29.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

---

## OM group TONES

---

### OM description

Tones (TONES)

The OM group TONES provides information on traffic for tone generators. The OM group TONES contains two peg registers, TONEATT and TONEOVFL.

The OM group TONES is provided for all types of DMS offices.

### Release history

The OM group TONES was introduced before BCS20.

### Registers

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



TONEATT

TONEOVFL

### Group structure

The OM group TONES provides one tuple for each tone generator. Each tuple consists of the two registers contained in TONES.

#### Key field:

CLLI is the common language location identifier for the tone generator.

The standard CLLIs used for TONES are as follows:

- BVTONE Busy Verification Tone
- CWT Call Waiting Tone
- DISTCWT Distinctive Call Waiting Tone
- EBOT Executive Busy Override Warning Tone
- ENHCWT1 Enhanced Call Waiting Tone for the First Secondary Directory Number
- ENHCWT2 Enhanced Call Waiting Tone for the Second Secondary Directory
- Number
- ERWT Expensive Route Warning Tone
- IEBOT International Executive Busy Override Tone (UK Switches)
- OHQT Off Hook Queuing Tone

## OM group TONES (continued)

---

- PCNOR Preset Conference Normal Notification Tone
- ROH Receiver Off Hook
- SVDTMF Digitone Outpulsing Circuit
- SVMFC R2 Interregister Signaling Circuit
- SVOBSV Service Observing Circuit

The customer defines other CLLI.

### **Info field:**

There is no info field.

Three tables must be datafilled: TONES, STN, and SVRCKT.

Table TONES defines tones the system generates at the line or trunk peripheral.

Table STN (special tone table) defines tones the system generates on cards on a TM or MTM.

Table SVRCKT (service circuit table) defines tones the system generates on cards on a TM or MTM for the following circuits:

- Digitone outpulsing
- R2 interregister signaling
- service-observing circuits

## **Associated OM groups**

The OM group OFZ measures office traffic by the intended call destination.

The OM group OTS measures office traffic by the real call destination.

The OM group STN provides information about special tones broadcast from trunk cards in the maintenance trunk modules.

## **Associated functional groups**

There are no associated functional groups.

---

**OM group TONES** (continued)

---

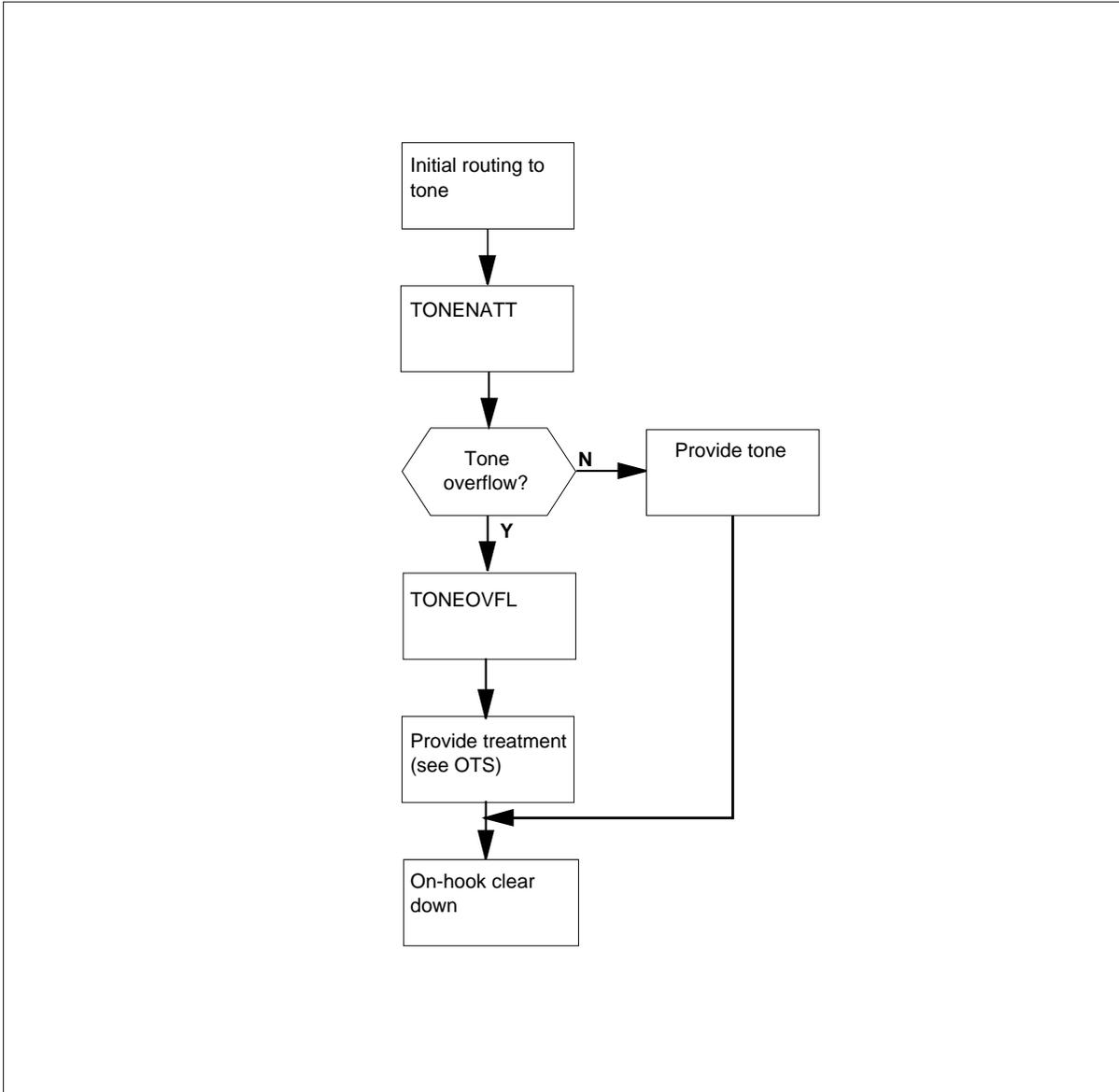
**Associated functionality codes**

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

| <b>Functionality</b> | <b>Code</b> |
|----------------------|-------------|
| Common Basic         | NTX001AA    |

## OM group TONES (continued)

### OM group TONES registers



### Register TONEATT

Tone attempts (TONEATT)

Register TONEATT counts calls the system routes to each tone generator. The register increases before the system determines if the call can connect to the tone.

---

**OM group TONES** (continued)
 

---

If the maximum permitted number of calls uses the tone, the call routes again to the next entry in the routing list.

**Register TONEATT release history**

Register TONEATT was introduced before BCS20.

**Associated registers**

Register OFZ\_INTONE counts calls that originate on a trunk and first route to a tone.

Register OFZ\_ORIGTONE counts calls that originate on a line and first route to a tone.

Register OFZ\_INTONE and OFZ\_ORIGTONE do not count calls that route to a tone after another location.

The relationship between these registers appears in the following formula:

$$\Sigma (\text{TONES\_TONEATT}) \text{ OFZ\_INTONE} + \text{OFZ\_ORIGTONE TONES}$$

Register OTS\_ORGTRMT counts calls that originate on a line and connect to a tone or an announcement.

Register OTS\_INCTRMT counts calls that originate on a trunk and connect to a tone or an announcement.

Register ANN\_ANNATT counts attempts to connect to an announcement.

The relationship between these registers appears in the following formula:

$$\begin{aligned} & \Sigma (\text{ANN\_ANNATT}) + (\text{TONES\_TONEATT}) \\ & \text{TONES} \qquad \qquad \qquad \text{TONES} \\ & \geq \text{OTS\_ORGTRM} + \text{OTS\_INCTRMT} \end{aligned}$$

**Associated logs**

There are no associated logs.

**Register TONEOVFL**

Tone overflow (TONEOVFL)

## **OM group TONES (end)**

---

Register TONEOVFL counts calls the system routes to a tone generator that do not connect. The system cannot connect the calls because the maximum number of calls are already connected or the generator is maintenance busy.

Register TONEOVFL does not count calls that overflow because of network blockage.

### **Register TONEOVFL release history**

Register TONEOVFL was introduced prior to BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates LINE138 if a call is call processing busy and routes to a treatment.

The system generates TRK138 if a call is call processing busy and routes to a treatment.

---

## OM group TRA125M1

---

### OM Description

Traffic route analysis 125 measurements 1 (TRA125M1)

The OM group TRA125M1 provides information about line use, and counts originations and terminations on selected subscriber lines or groups of lines.

Table TRA125I1 specifies monitored lines. The table holds a maximum of 125 entries. The subscriber line usage (SLU) option is added to a line through SERVORD. The SLUADD command adds the line to table TRAI25I1. When a user gives the SLU\_INSTALL command, the system copies the contents of table TRA125I1 into TRA125M1.

New entries can be added to table TRA125I1 while group TRA125M1 monitors the lines that the table first specified. The new entries do not affect the group until the user gives the SLU\_INSTALL command.

### Release history

The OM group TRA125M1 was introduced before BCS20.

#### NA006

This release added OM register BUSY2.

#### CSP04

This release redefined registers TBU, ORIG, and TERM as TBU2, ORIG2, and TERM2 to eliminate dual use of OM register names.

#### BCS33

The OMSHOW command on the ACTIVE class can change Register TBU from CCS to deci-erlangs before display.

#### BCS31

Registers increase on SL-100 for intelligent peripheral equipment (IPE).

### Registers

The OM group TRA125M1 registers appear on the MAP terminal as follows:



## OM group TRA125M1 (continued)

---

### Group structure

The OM group TRA125M1 provides one tuple for each line specified in table TRA125I1.

**Key field:**

There is no key field.

**Info field:**

SLU\_OM\_INFO

**Number of tuples:**

1-125. The number of tuples depends on the number of lines under study

To activate the SLU feature, set parameter OPTIONAL\_SLU\_FEATURE in table OFCOPT to Y (yes). The SLU feature is enabled in tables LENFEAT, IBNFEAT, and KSETFEAT.

### Associated OM groups

Groups ENG640M1, TRA125M2, and TRA250M1 provide information about line use and count originations and terminations on selected or groups of subscriber lines.

### Associated functional groups

The Meridian SL-100 PBX functional group associates with OM group TRA125M1.

### Associated functionality codes

The associated functionality codes for OM group TRA125M1 appear in the following table.

| Functionality   | Code     |
|---|----------|
| Extended Peripheral Equipment   | NTXN25AA |
| Subscriber Line Measurements  | NTX082AA |
| IBN Proprietary Business Set. This functionality allows SLU to be assigned to any business set directory number appearance. SLU is not available on business set multiple appearance directory number (MADN) secondary directory appearances. | NTX106AA |

---

**OM group TRA125M1 (continued)**

---

**OM group TRA125M1 originating calls registers**

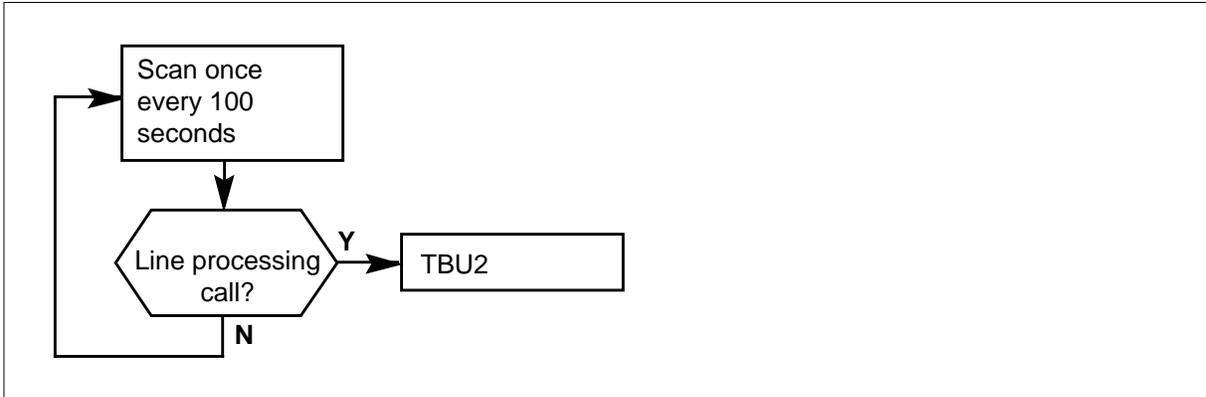


**OM group TRA125M1 terminating calls registers**

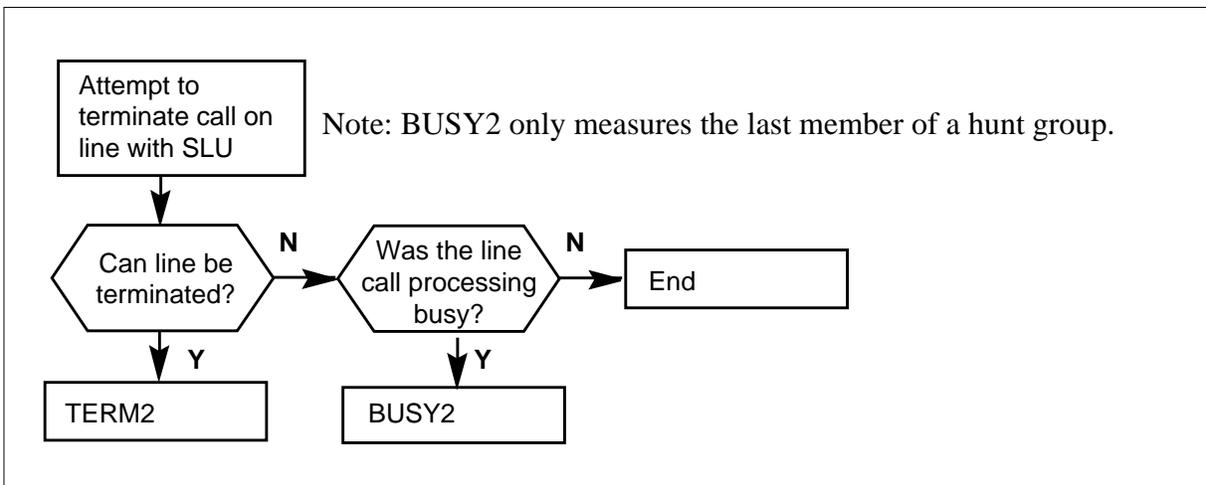


## OM group TRA125M1 (continued)

### OM group TRA125M1 usage registers



### OM group TRA125M1 call processing busy registers



## Register TBU2

Traffic busy use (TBU2)

Register TBU2 is a usage register. Parameter TRA125M1\_SCAN\_RATE in table OFCVAR specifies the scan rate. Register TBU2 records if a line processes calls.

The default value of parameter TRA125M1\_SCAN\_RATE is 100 s.

### Register TBU2 release history

Register TBU was introduced before BCS20.

---

**OM group TRA125M1** (continued)

---

**CSP04**

This release described register TBU as TBU2 to eliminate double use of OM register names.

**BCS33**

When office parameter OMINERLANGS is set to Y, the usage count changes from CCS to deci-erlangs before the count display. The OMSHOW command on the ACTIVE class converts the usage count. The value in the active registers does not change and remains in CCS.

**BCS31**

The TBU increased on SL-100 for IPE.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register ORIG2**

Originations (ORIG2)

Register ORIG2 increases when a subscriber with the SLU option attempts to originate a call and the system connects dial tone.

If the switch can identify which party of two- and four-party lines tries to call, the register increases one time. If the switch cannot identify the party, the register counts each directory number on the line.

**Register ORIG2 release history**

Register ORIG was introduced before BCS20.

**CSP04**

This release redefined register ORIG as ORIG2 to eliminate double use of OM register names.

**BCS31**

Register ORIG increased on SL-100 for IPE.

**Associated registers**

There are no associated registers.

## OM group TRA125M1 (continued)

---

### Associated logs

There are no associated logs.

### Extension registers

There are no extension registers.

## Register TERM2

Terminations (TERM2)

Register TERM2 increases when a call terminates to a line with the SLU option and ringing tone begins.

Register TERM2 does not count calls within the same hunt group or the same equivalent group.

### Register TERM2 release history

Register TERM was introduced BCS20.

#### CSP04

This release redefined register TERM as TERM2 to eliminate double use of OM register names.

#### BCS31

Register TERM increased on SL-100 for IPE.

### Associated registers

For a hunt group with the SLU option associated with all the lines:  
HUNT\_HUNTATT - HUNT\_HUNTOVFL = TERM2

### Associated logs

There are no associated logs.

### Extension registers

There are no extension registers.

## Register BUSY2

Call Processing Busy - termination attempt failed (BUSY2)

This register counts calls that cannot terminate to a line because the line is in a CPB state. For lines that are part of a hunt group, register BUSY2 measures only the last member of the hunt group.

---

**OM group TRA125M1** (end)

---

**Register BUSY2 release history**

**NA006**

Register BUSY2 was introduced in NA006.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

## OM group TRA125M2

---

### OM description

Traffic Route Analysis 125 Measurements 2 (TRA125M2)

The OM group TRA125M2 provides information about line use and counts originations and terminations on selected or groups of subscriber lines.

Table TRA125I2 specifies the monitored lines. The table holds a maximum of 125 entries. The subscriber line usage (SLU) option is added to a line through SERVORD. The SLUADD command adds the line to table TRA125I2. The user gives the SLU\_INSTALL command, the system copies the contents of table TRA125I2 into TRA125M2.

New entries can be added to table TRA125I2 while group TRA125M2 monitors the lines that the table first specified. The new entries do not affect the group until the SLU\_INSTALL command.

### Release history

The OM group TRA125M2 was introduced before BCS20.

#### NA006

This release added OM register BUSY3.

#### CSP04

This release redefined registers TBU, ORIG, and TERM as TBU3, ORIG3, and TERM3 to eliminate double use of OM register names.

#### BCS33

The OMSHOW command on the ACTIVE class can change register TBU from CCS to deci-erlangs before display.

#### BCS31

Registers increase on SL-100 for intelligent peripheral equipment (IPE).

### Registers

The OM group TRA125M2 registers appear on the MAP terminal as follows:



---

**OM group TRA125M2 (continued)**


---

**Group structure**

The OM group TRA125M2 provides one tuple for each line specified in table TRA125I2.

**Key field:**

There is no key field.

**Info field:**

SLU\_OM\_INFO

**Number of tuples:**

1-125. The number of tuples depends on the number of lines under study

To activate the SLU feature, set parameter OPTIONAL\_SLU\_FEATURE in table OFCOPT to Y (yes). The SLU feature is enabled in tables LENFEAT, IBNFEAT, and KSETFEAT.

**Associated OM groups**

Registers ENG640M1, TRA125M1, and TRA250M1 provide information about line use and count originations and terminations on selected or groups of subscriber lines.

**Associated functional groups**

The Meridian SL-100 PBX functional group associates with OM group TRA125M2.

**Associated functionality codes**

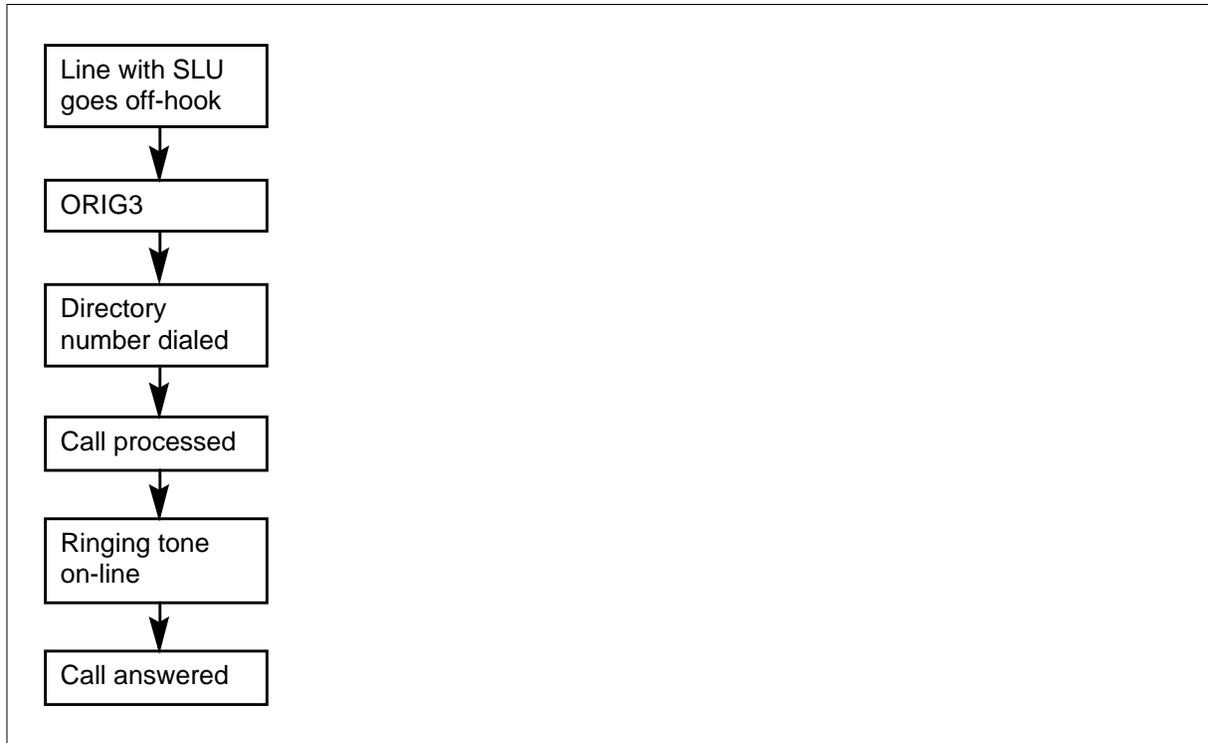
The associated functionality codes for OM group TRA125M2 appear in the following table.

| Functionality   | Code     |
|---|----------|
| Extended Peripheral Equipment   | NTXN25AA |
| Subscriber Line Measurements  | NTX082AA |
| IBN Proprietary Business Set. This functionality allows SLU to be assigned to any business set directory number appearance. SLU is not available on business set multiple appearance directory number (MADN) secondary directory appearances. | NTX106AA |

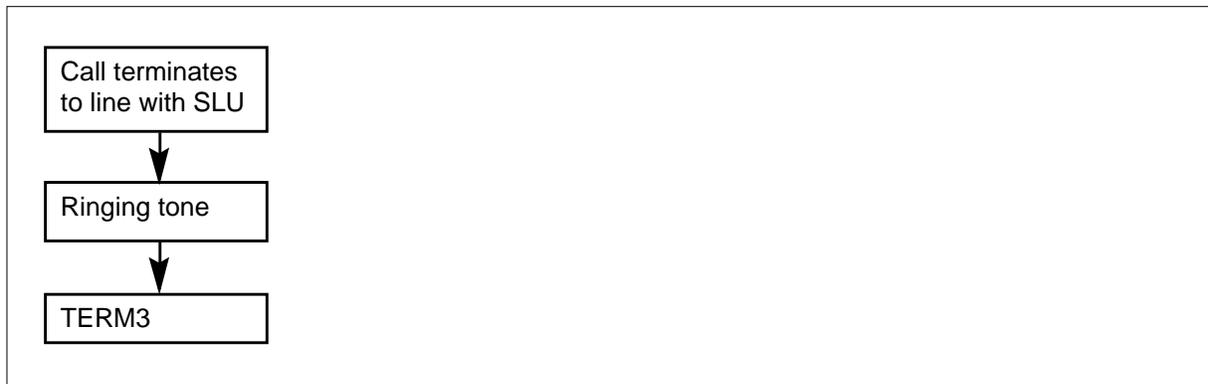
## OM group TRA125M2 (continued)

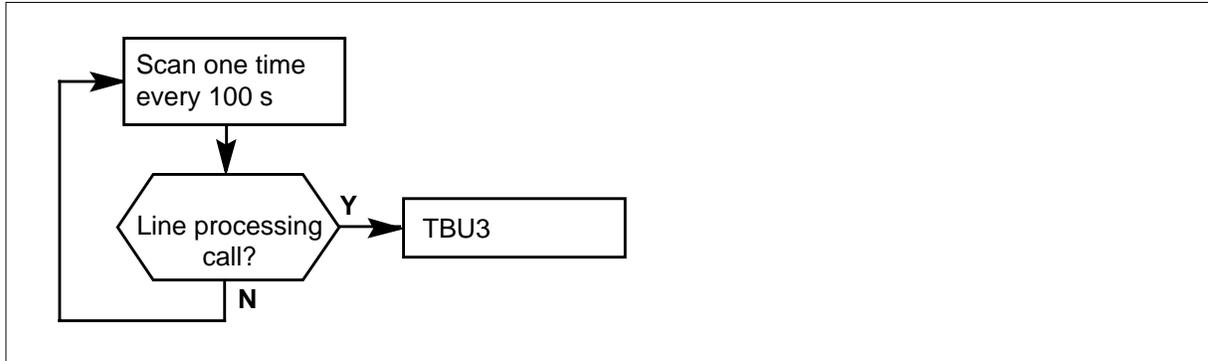
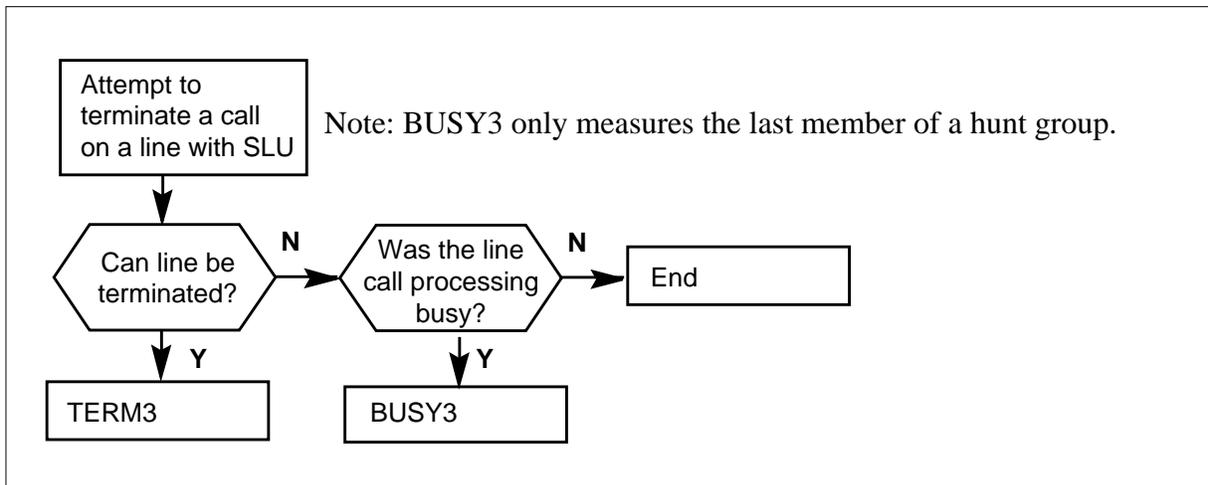
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### OM group TRA125M2 originating calls registers



### OM group TRA125M2 terminating calls registers



**OM group TRA125M2 (continued)****OM group TRA125M2 use registers****OM group TRA125M2 call processing busy registers****Register TBU3**

Traffic busy usage (TBU3)

Register TBU3 is a use register. Parameter TRA125M2\_SCAN\_RATE in table OFCVAR specifies the scan rate. Register TBU3 records when a line is processing calls.

The default value of parameter TRA125M2\_SCAN\_RATE is 100 s.

**Register TBU3 release history**

Register TBU3 was introduced before BCS20.

## OM group TRA125M2 (continued)

---

### **CSP04**

This release redefines register TBU as TBU3 to eliminate double use of OM register names.

### **BCS33**

When office parameter OMINERLANGS is set to Y, the usage count changes from CCS to deci-erlangs before the count displays. The OMSHOW command on the ACTIVE class converts the usage counts. The value held in the active registers does not change and remains in CCS.

### **BCS31**

Register TBU increases on SL-100 for IPE.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register ORIG3**

Originations (ORIG3)

Register ORIG3 increases when a subscriber with the SLU option attempts to originate a call and the system connects dial tone.

If the switch can identify which party of two- and four-party lines made the call attempt, the register increases only one time. If the switch cannot identify the party, the register counts each directory number on the line.

### **Register ORIG3 release history**

Register ORIG was introduced before BCS20.

### **CSP04**

This release redefined register ORIG as ORIG3 to eliminate double use of OM register names.

### **BCS31**

Register ORIG increased on SL-100 for IPE.

### **Associated registers**

There are no associated registers.

---

**OM group TRA125M2** (continued)

---

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register TERM3**

Terminations (TERM3)

Register TERM3 increases when a call terminates to a line with the subscriber line usage (SLU) option and a ringing tone begins.

Register TERM3 does not count calls within the same hunt group or the same equivalent group.

**Register TERM3 release history**

Register TERM was introduced before BCS20.

**CSP04**

This release redefined register TERM as TERM3 to eliminate double use of OM register names.

**BCS31**

Register TERM increases on SL-100 for IPE.

**Associated registers**

For a hunt group with the SLU option associated with all the lines:  
HUNT\_HUNTATT - HUNT\_HUNTOVFL = TERM3

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register BUSY3**

Call Processing Busy - termination attempt failed (BUSY3)

Register BUSY3 counts calls that cannot terminate to a line because the line is in a CPB state. For lines that are part of a hunt group, register BUSY3 measures only the last member of the hunt group.

## **OM group TRA125M2 (end)**

---

### **Register BUSY3 release history**

#### **NA006**

Register BUSY3 was introduced in BUSY3.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

---

## OM group TRA250M1

---

### OM Descriptions

Traffic Route Analysis 250 Measurements 1

The OM group TRA250M1 provides information about line use and count originations and terminations on selected subscriber lines or groups of lines.

Table TRA250I1 specifies the monitored lines. The table holds a maximum of 250 entries. A SERVORD adds the subscriber line usage (SLU) option to a line. The SLUADD command adds the line to Table TRA250I1. The SLU\_INSTALL command copies the contents of table TRA250I1 into TRA250M1.

The user can add new entries to table TRA250I1 while group TRA250M1 monitors the lines that the table originally specifies. The new entries do not affect the group until the user gives the SLU\_INSTALL command.

### Release history

The OM group TRA250M1 was introduced before BCS20.

#### NA006

This release added OM register BUSY1.

#### CSP04

This release defined Registers TBU, ORIG, and TERM as TBU1, ORIG1, and TERM1 to eliminate double use of OM register names.

#### BCS33

The OMSHOW command on the ACTIVE class can convert register TBU from CCS to deci-erlangs. The OMSHOW command converts register TBU before display.

#### BCS31

Current registers increased on SL-100 for intelligent peripheral equipment (IPE).

### Registers

The OM group TRA250M1 registers appear on the MAP terminal as follows:

|      |       |       |       |
|------|-------|-------|-------|
| TBU1 | ORIG1 | TERM1 | BUSY1 |
|------|-------|-------|-------|

## OM group TRA250M1 (continued)

---

### Group structure

The OM group TRA250M1 provides one tuple for each line specified in table TRA250I1.

**Key field:**

There is no key field.

**Info field:**

SLU\_OM\_INFO

**Number of tuples:**

1-250, depending on the number of lines under study

To activate the SLU feature, set parameter OPTIONAL\_SLU\_FEATURE in table OFCOPT to Y (yes). Tables LENFEAT, IBNFEAT, and KSETFEAT will have the SLU feature.

### Associated OM groups

The OM groups ENG640M1, TRA125M2 and TRA125M1 provide information about line use and count originations and terminations. The OM groups provide information on selected subscriber lines or groups of lines.

### Associated functional groups

The Meridian SL-100 PBX functional group associates with OM group TRA250M1.

### Associated functionality codes

The functionality codes associated with OM group TRA250M1 appear in the following table.

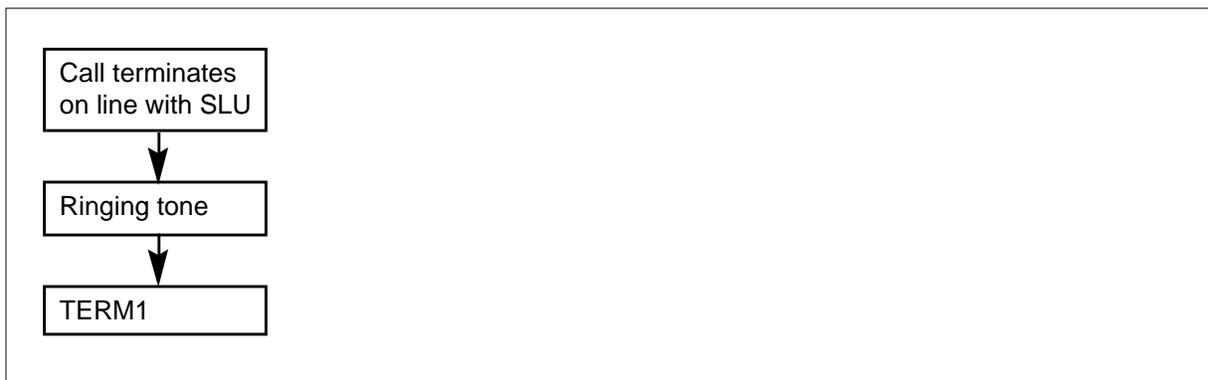
| Functionality  | Code     |
|--|----------|
| Extended Peripheral Equipment  | NTXN25AA |
| Subscriber Line Measurements   | NTX082AA |
| IBN Proprietary Business Set. This functionality allows the system to assign SLU to any business set directory number appearance. The SLU option is not available on business set multiple appearance directory number (MADN) secondary directory appearances. | NTX106AA |

**OM group TRA250M1 (continued)**

**OM group TRA250M1 originating calls registers**

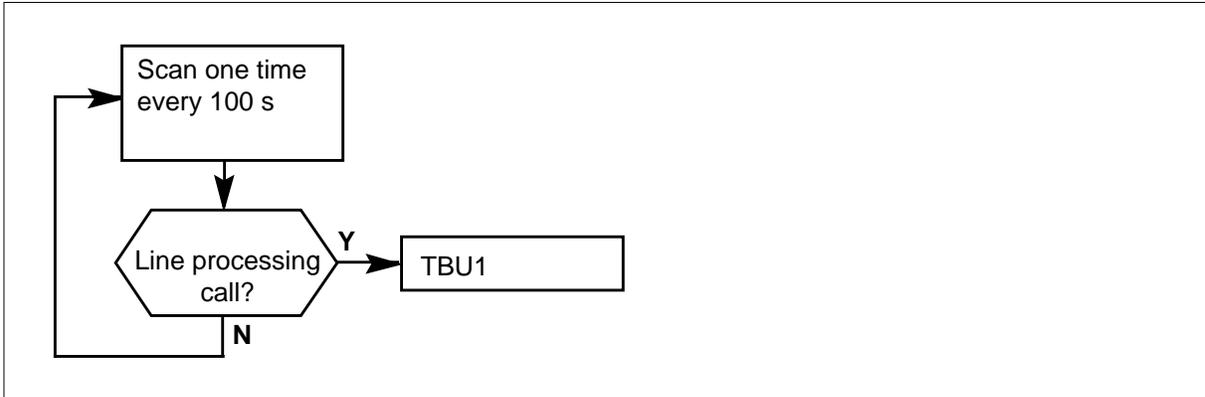


**OM group TRA250M1 terminating calls registers**

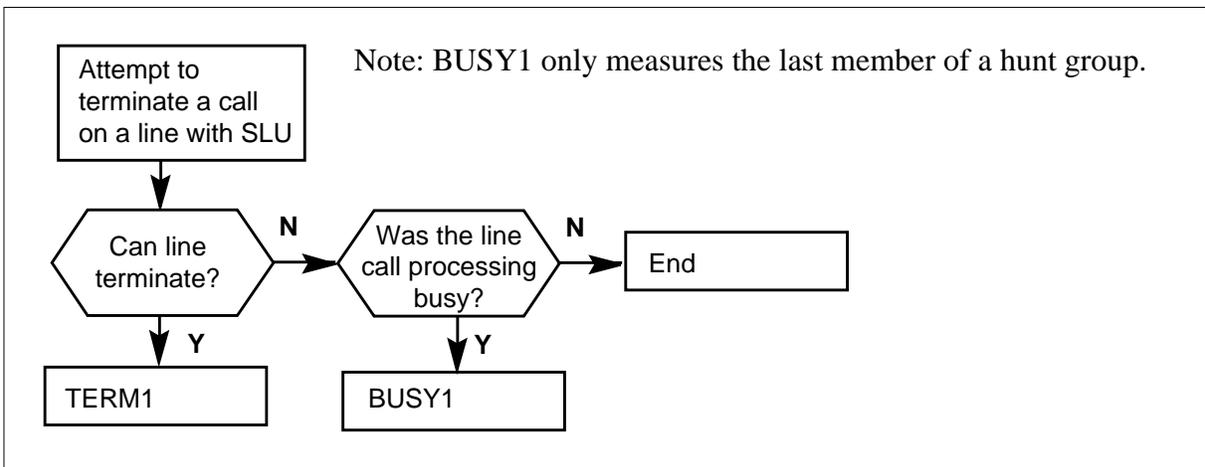


## OM group TRA250M1 (continued)

### OM group TRA250M1 use registers



### OM group TRA250M1 call processing busy registers



## Register TBU1

Traffic busy usage (TBU1)

Register TBU1 is a usage register. Parameter TRA250M1\_SCAN\_RATE in table OFCVAR specifies the scan rate. The TBU1 records when a line processes calls.

The default value of parameter TRA250M1\_SCAN\_RATE is 100 s.

### Register TBU1 release history

Register TBU was introduced before BCS20.

---

**OM group TRA250M1** (continued)

---

**CSP04**

This release describes register TBU as TBU1 to eliminate double use of OM register names.

**BCS33**

When office parameter OMINERLANGS is Y, the OMSHOW command on the ACTIVE class converts the use count from CCS to deci-erlangs. The use count converts before display. The value the active registers holds does not change. The value remains in CCS.

**BCS31**

Register TBU increases on SL-100 for IPE.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register ORIG1**

Originations (ORIG1)

Register ORIG1 increases when a subscriber with the SLU option attempts to originate a call and a dial tone connects.

If the switch can identify which party of two- and four-party lines made the call attempt, the register increases once. If the switch cannot identify which party of two- and four-party lines made the call attempt, the register counts each directory number on the line.

**Register ORIG1 release history**

Register ORIG was introduced before BCS20.

**CSP04**

This release describes register ORIG as ORIG1 to eliminate use of OM register names.

**BCS31**

Register ORIG increased on SL-100 for IPE.

## **OM group TRA250M1** (continued)

---

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register TERM1**

Terminations (TERM1)

Register TERM1 increases when a call terminates to a line with the SLU and a ringing tone begins.

Register TERM1 does not count calls in the same hunt group or the same equivalent group.

### **Register TERM1 release history**

Register TERM was introduced before BCS20.

#### **CSP04**

This release defined TERM as TERM1 to eliminate double use of OM register names.

#### **BCS31**

Register TERM increases on SL-100 for IPE.

### **Associated registers**

For a hunt group with the SLU option associated with all the lines:  
HUNT\_HUNTATT - HUNT\_HUNTOVFL = TERM1

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register BUSY1**

Call Processing Busy - termination attempt failed

**OM group TRA250M1 (end)**

---

This register measures the number of calls the system cannot terminate to a line because the line is in a CPB state. For lines that are part of a hunt group, register BUSY1 measures only the last member of the hunt group.

**Register BUSY1 release history**

Register BUSY1 was introduced in NA006.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

## OM group TRK

---

### OM description

Trunk group (TRK)

Register TRK provides information on trunk traffic for each trunk group.

The registers in TRK count the following:

- routing attempts
- seizure attempts
- seize failures
- total trunk use
- busy state use

The OM groups OFZ and OTS provide office-wide traffic summaries for trunks.

### Release history

The OM group TRK was introduced before BCS20.

#### APC010

Feature AU2916, DCTS and Answer OM Enhancements, introduced registers INANSU, INANSWER, and OUTANSU.

#### NA009

Register NOANSWER was added.

#### GL04

Treatment was introduced to register section for DMS-100G.

The OFF100G Global was introduced to group and associated functional group sections.

#### NA008

The OM group OFFCOMBLWW was introduced as a value for office parameter OFFICETYPE. Register ACCCONG was introduced in NA008.

#### EUR004

Register ANSWER increased for United Kingdom (UK) signaling on the European DMS-100 (DMS-100EUR) switch.

---

**OM group TRK** (continued)

---

**NA04B**

Register ANSWER migrated from an IDC DMS-250 switch to a DMS-100 switch for trunk to trunk calls.

**BCS35**

Register DEFLDCA increases when the bidirectional trunk group reservation controls (BRC) network management trunk group control prevents a call from accessing the trunk group. The call cannot access the trunk group that the system routes the call to. Optional register Q33FLT added for DMS-300 switches.

**BCS34**

Registers ANSU and NANS were introduced in BCS34.

**BCS33**

You can convert registers DREU, PREU, TRU, SBU, MBU, TOTU, and TRU2WIN from CCS to deci-erlangs. Conversion must take place before the system displays the registers. The OMSHOW command on the ACTIVE class converts the registers.

**BCS32**

The ISDN User Part (ISUP) to Telephone User Part (TUP) Interworking feature increase the following registers:

- INCATOT
- INFAIL
- NATTMPT
- NOVFLATB
- GLARE
- OUTFAIL
- DEFLDCA
- TRU
- SBU
- MBU
- OUTMTCHF
- ANSWER
- INTRMLU
- INTRNSU

## OM group TRK (continued)

---

- OUTTRMLU
- OUTTRMSU

### BCS31

Software changes allow this group to contain a maximum of 8192 tuples. Registers INFALL, OUTFAIL, and GLARE increase for failed call attempts on DMS-300.

### BCS29

Register TRU2WIN was introduced in DMS-250 offices.

### BCS27

Registers BLKCTRK, MAXBU, TOTU were introduced in DMS-250 offices.

### BCS26

To identify the trunk groups, the OM system uses the entries of the administrative number (ADNUM) field in table TRKNAME.

### BCS25

Registers FCONG and FBUSY were introduced in BCS25.

### BCS23

Register DEFLDCA increases for DMS-100 Family international switches.

### BCS20

Software change was to provide introduced usage counts DREU, PREU, TRU, SBU, MBU, and TOTU in CCS or deci-erlangs. Registers INTRMLU, INTRSNU, OUTTRMLU, and OUTTRNSU changed from usage registers to peg registers that increase for each call.

## Registers

The registers that appear at the MAP terminal depend on the type of office that the office parameter OFFICETYPE in table OFCSTD specifies.

The system generates the following registers in offices where OFFICETYPE is OFF100, OFF200, OFFCOMB, OFFCOMBTOPS, OFF200TOPS, or OFFCOMBITOPS:

**OM group TRK (continued)**

|          |          |         |         |
|----------|----------|---------|---------|
| INCATOT  | PRERTEAB | INFAIL  | NATTMPT |
| NOVFLATB | GLARE    | OUTFAIL | DEFLDCA |
| DREU     | PREU     | TRU     | SBU     |
| MBU      | OUTMTCHF | CONNECT | TANDEM  |
| AOF      | ANF      | TOTU    | ANSWER  |
| ANSU     | NANS     | ACCCONG |         |

The system generates the following registers in offices where OFFICETYPE is OFF200300:

|          |          |          |          |
|----------|----------|----------|----------|
| INCATOT  | PRERTEAB | INFAIL   | NATTMPT  |
| NOVFLATB | GLARE    | OUTFAIL  | DEFLDCA  |
| DREU     | PREU     | TRU      | SBU      |
| MBU      | ANSWER   | CONGEST  | INTRMLU  |
| INTRNSU  | OUTTRMLU | OUTTRNSU | OUTMTCHF |
| CONNECT  | TANDEM   | AOF      | ANF      |

The system generates the following registers in offices where OFFICETYPE is OFF300:

|          |          |          |          |
|----------|----------|----------|----------|
| INCATOT  | PRERTEAB | INFAIL   | NATTMPT  |
| NOVFLATB | GLARE    | OUTFAIL  | DEFLDCA  |
| DREU     | PREU     | TRU      | SBU      |
| MBU      | ANSWER   | CONGEST  | INTRMLU  |
| INTRNSU  | OUTTRMLU | OUTTRNSU | OUTMTCHF |
| CONNECT  | TANDEM   | FCONG    | FBUSY    |
| Q33FLT   |          |          |          |

A DMS-MTX switch whose OFFICETYPE is OFFMTX100I outputs the same registers as OFF250. However, the interpretation of some of the registers in a DMS-MTX office differs. These registers are identified as DMS-MTX whenever applicable.

The following registers are generated in offices whose OFFICETYPE is OFFCOMBLWW, OFF250, OFFMTX100I, or OFF250IBN:

**OM group TRK** (continued)

|          |          |         |         |
|----------|----------|---------|---------|
| INCATOT  | PRERTEAB | INFAIL  | NATTMPT |
| NOVFLATB | GLARE    | OUTFAIL | DEFLDCA |
| DREU     | PREU     | TRU     | SBU     |
| MBU      | OUTMTCHF | CONNECT | TANDEM  |
| AOF      | ANF      | TOTU    | ANSWER  |
| INVAUTH  | BLKCTRK  | MAXBU   | TRU2WIN |
| NCTPASS  | NCTFAIL  |         |         |

**Note:** In office types OFF250, OFF250IBN, and OFFMTX100I, register NOANSWER is displayed but is not incremented.

The system generates the following registers in offices where OFFICETYPE is OFF100OESD:

|          |          |         |         |
|----------|----------|---------|---------|
| INCATOT  | PRERTEAB | INFAIL  | NATTMPT |
| NOVFLATB | GLARE    | OUTFAIL | DEFLDCA |
| DREU     | PREU     | TRU     | SBU     |
| MBU      | OUTMTCHF | CONNECT | TANDEM  |
| ANSWER   | FV       | FA      | TOTU    |

The system generates the following registers in offices where OFFICETYPE is OFF200OESD or OFFCOMBOESD:

|          |          |          |         |
|----------|----------|----------|---------|
| INCATOT  | PRERTEAB | INFAIL   | NATTMPT |
| NOVFLATB | GLARE    | OUTFAIL  | DEFLDCA |
| DREU     | PREU     | TRU      | SBU     |
| MBU      | OUTMTCHF | CONNECT  | TANDEM  |
| ANSWER   | MTRPULS  | MTRPULS2 | FV      |
| FA       | TOTU     | CONVTIME |         |

The system generates the following registers in offices where OFFICETYPE is OFFCOMB300 or OFFCOMB300ITOPS:

**OM group TRK** (continued)

|          |          |         |          |
|----------|----------|---------|----------|
| INCATOT  | PRERTEAB | INFAIL  | NATTMPT  |
| NOVFLATB | GLARE    | OUTFAIL | DEFLDCA  |
| DREU     | PREU     | TRU     | SBU      |
| MBU      | OUTMTCHF | CONNECT | TANDEM   |
| AOF      | ANF      | TOTU    | ANSWER   |
| CONGEST  | INTRMLU  | INTRNSU | OUTTRMLU |
| OUTTRNSU | FCONG    | FBUSY   |          |

The system generates the following registers in offices where OFFICETYPE is OFFCOMBLWW:

|          |          |         |         |
|----------|----------|---------|---------|
| INCATOT  | PRERTEAB | INFAIL  | NATTMPT |
| NOVFLATB | GLARE    | OUTFAIL | DEFLDCA |
| DREU     | PREU     | TRU     | SBU     |
| MBU      | OUTMTCHF | CONNECT | TANDEM  |
| AOF      | ANF      | TOTU    | ANSWER  |

**Group structure**

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

**Key field:**

COMMON\_LANGUAGE\_NAME

**Info field:**

OM2TRKINFO has three parts: TRKDIR, NCCT, and NWCCT

The TRKDIR is the trunk group direction. The fixed TRKDIR for TRK are as follows:

- IC—incoming trunk
- OG—outgoing trunk
- 2W—two-way trunk

The NCCT is the total number of trunk circuits in the group.

The NWCCT is the number of trunk circuits available for service at the end of the reporting period.

You must datafill tables TRKNAME and OFCSTD.

## OM group TRK (continued)

---

You enter the administrative number in field AONUM in table TRKNAME. The administrative number associates with a trunk group.

The office parameter OFFICETYPE in table OFCSTD specifies the type of office. The value of OFFICETYPE controls the generation of TRK registers. Correct entries for OFFICETYPE appear below:

- OFF100 Local
- OFFCOMB Combined local/toll
- OFFCOMBLWW Combined local/toll with wireless
- OFFCOMBTOPS Combined local/toll with traffic operator position system (TOPS)
- OFF200 Toll
- OFF200TOPS Toll with TOPS
- OFF200300 Combined gateway/toll
- OFF250 DMS-250
- OFF300 Gateway
- OFF250IBN DMS-250/SL-100
- OFF100OESD Austrian local
- OFF200OESD Austrian toll
- OFFCOMBOESD Austrian combined local/toll
- OFFCOMBITOPS Combined local/toll with international TOPS (ITOPS)
- OFFMTX100I DMS-MTX with DMS-100I capabilities
- OFFCOMB300 Combined local/toll and gateway
- OFFCOMB300ITOPS Combined local/toll and gateway with ITOPS

The office type parameters appear in table OFCSTD.

When the system reports an answer indication to CM from the outgoing trunk, the OM Answer register for the outgoing trunk increases.

### Associated OM groups

The OFZ provides information about calls based on the source of the call. This OM group also provides information about calls based on the intended destination of the call. This information is on an office-wide basis.

**OM group TRK (continued)**

The OTS provides information about calls based on the source of the call. This OM group also provides information about calls based on the intended destination of the call. This information is on an office-wide basis.

**Associated functional groups**

The following functional groups associate with OM group TRK:

- OFF100 Local
- OFFCOMB Combined local/toll
- OFFCOMBLWW Combined local/toll with wireless
- 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**

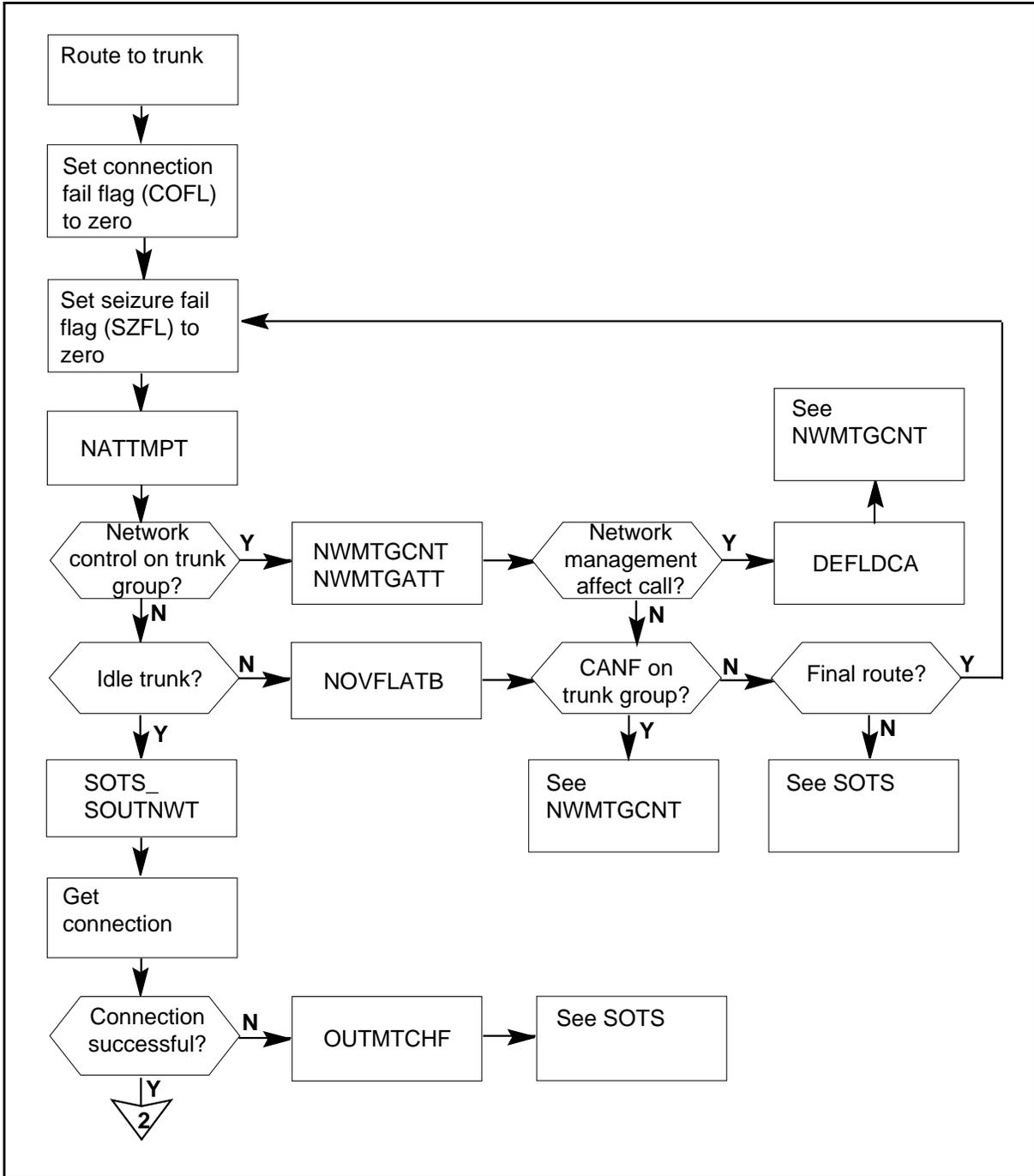
The functionality codes for OM group TRK appear in the following table:

| <b>Functionality</b>                       | <b>Code</b> |
|--|-------------|
| Common Basic                               | NTX001AA    |
| DMS-250 Call Processing Type II            | NTX222BA    |
| International Switching Center (ISC) Basic | NTX300AA    |
| OMS in Erlangs                             | NTX664AA    |
| International Network Management           | NTX669AA    |
| ISC R2 Signaling                           | NTX905AA    |

The following flowcharts illustrate OM group TRK registers.

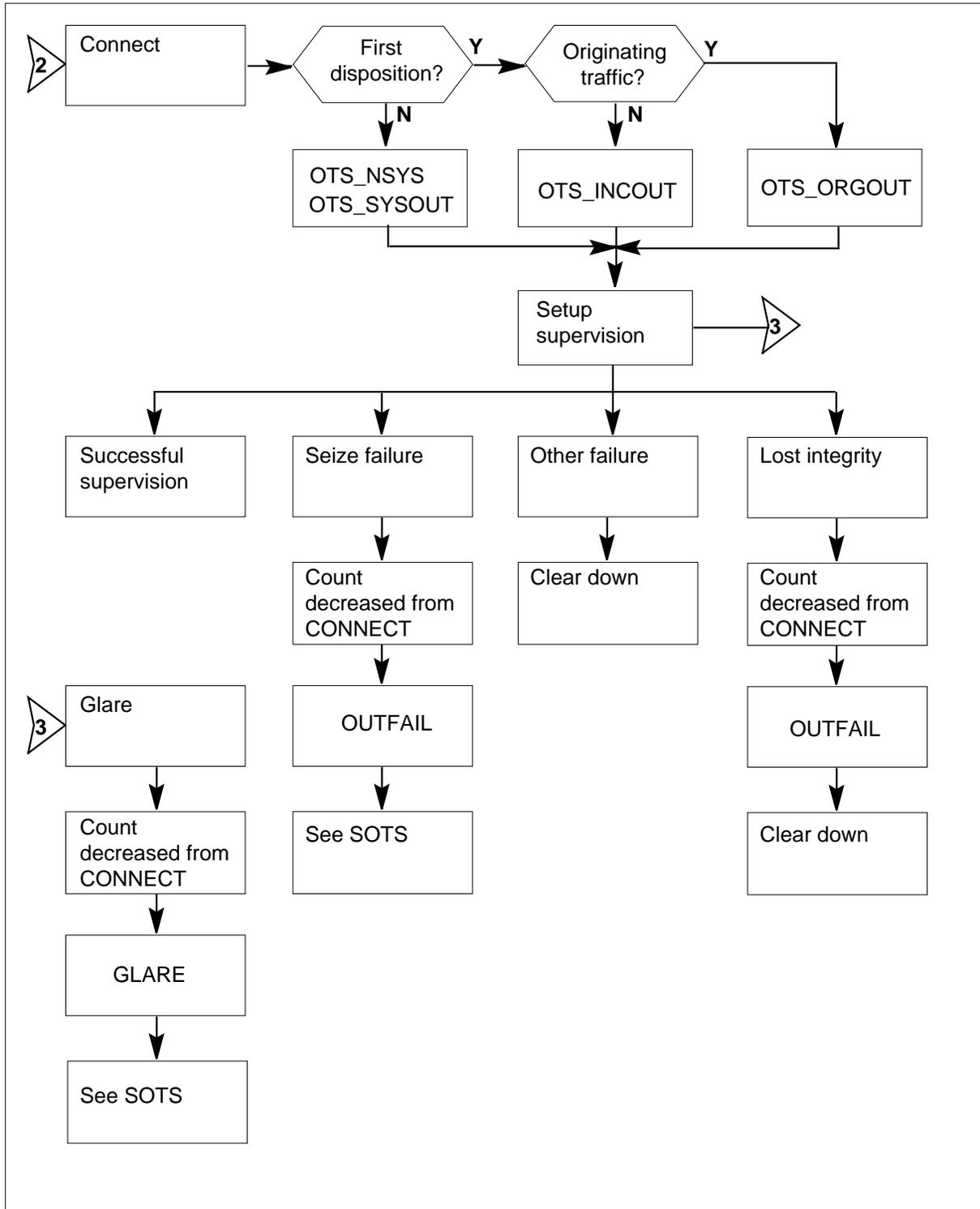
**OM group TRK** (continued)

**OM group TRK registers: outgoing traffic**



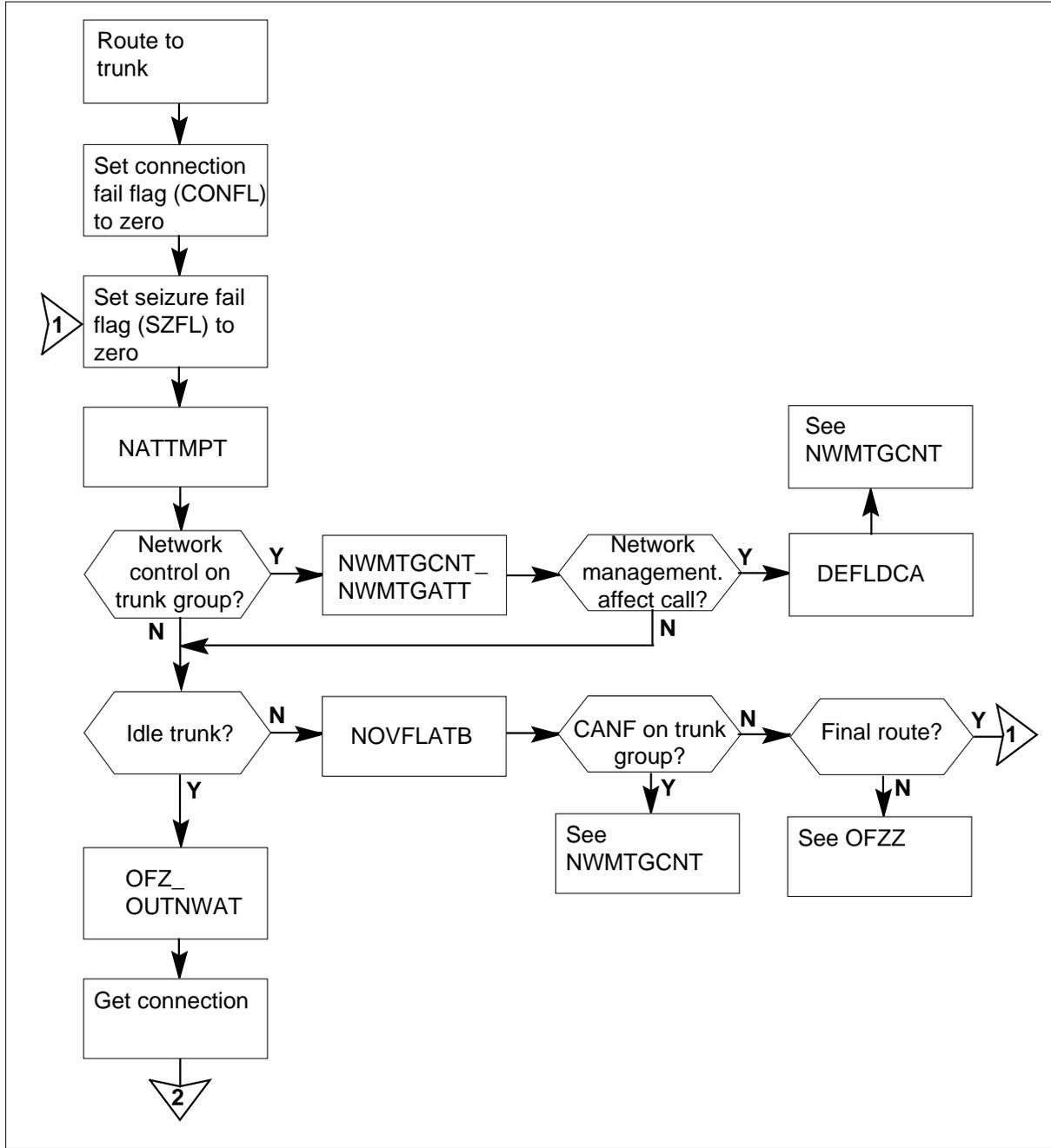
**OM group TRK (continued)**

**OM group TRK registers: outgoing traffic (continued)**



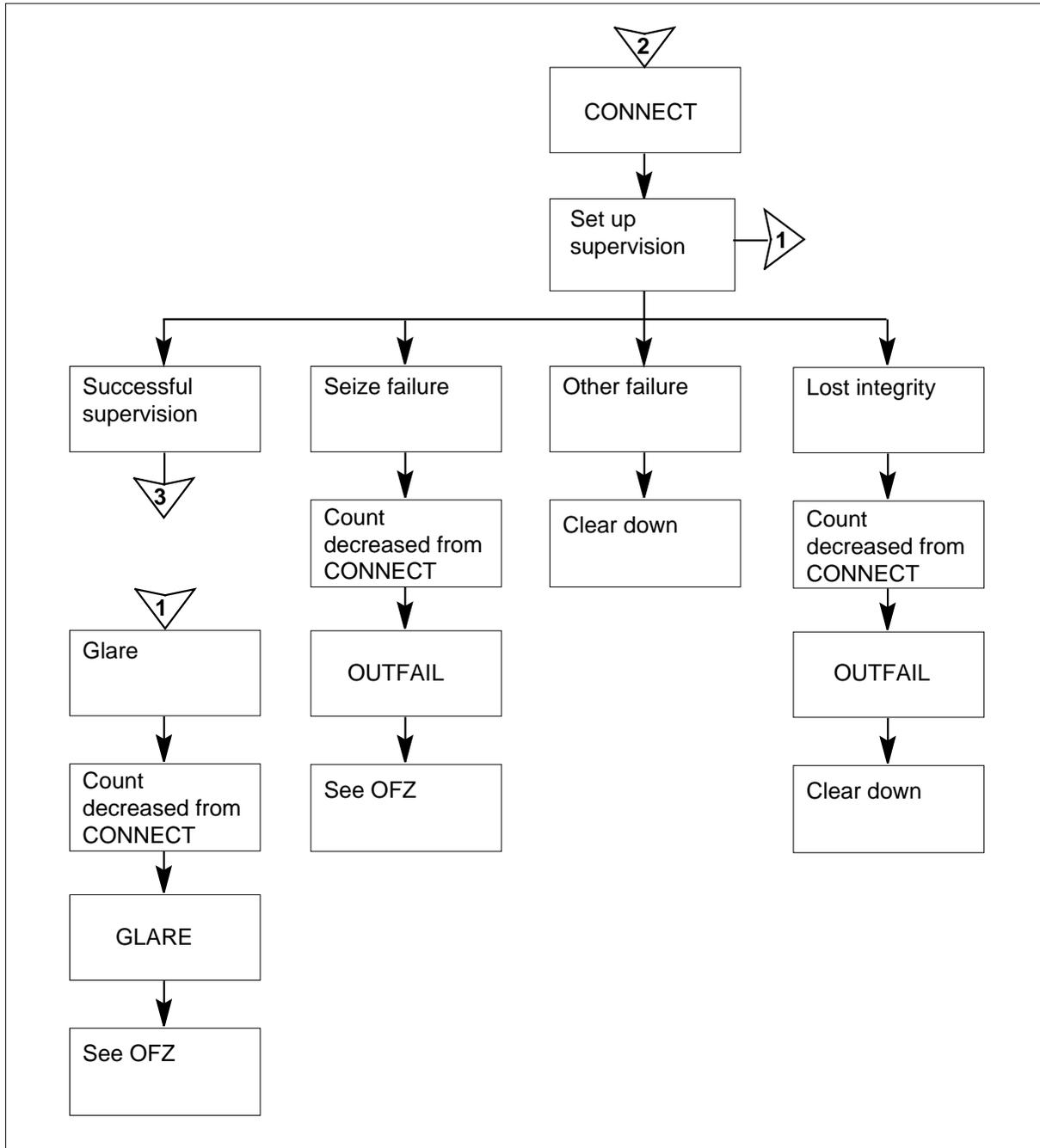
**OM group TRK (continued)**

**OM group TRK registers: trunk terminations**



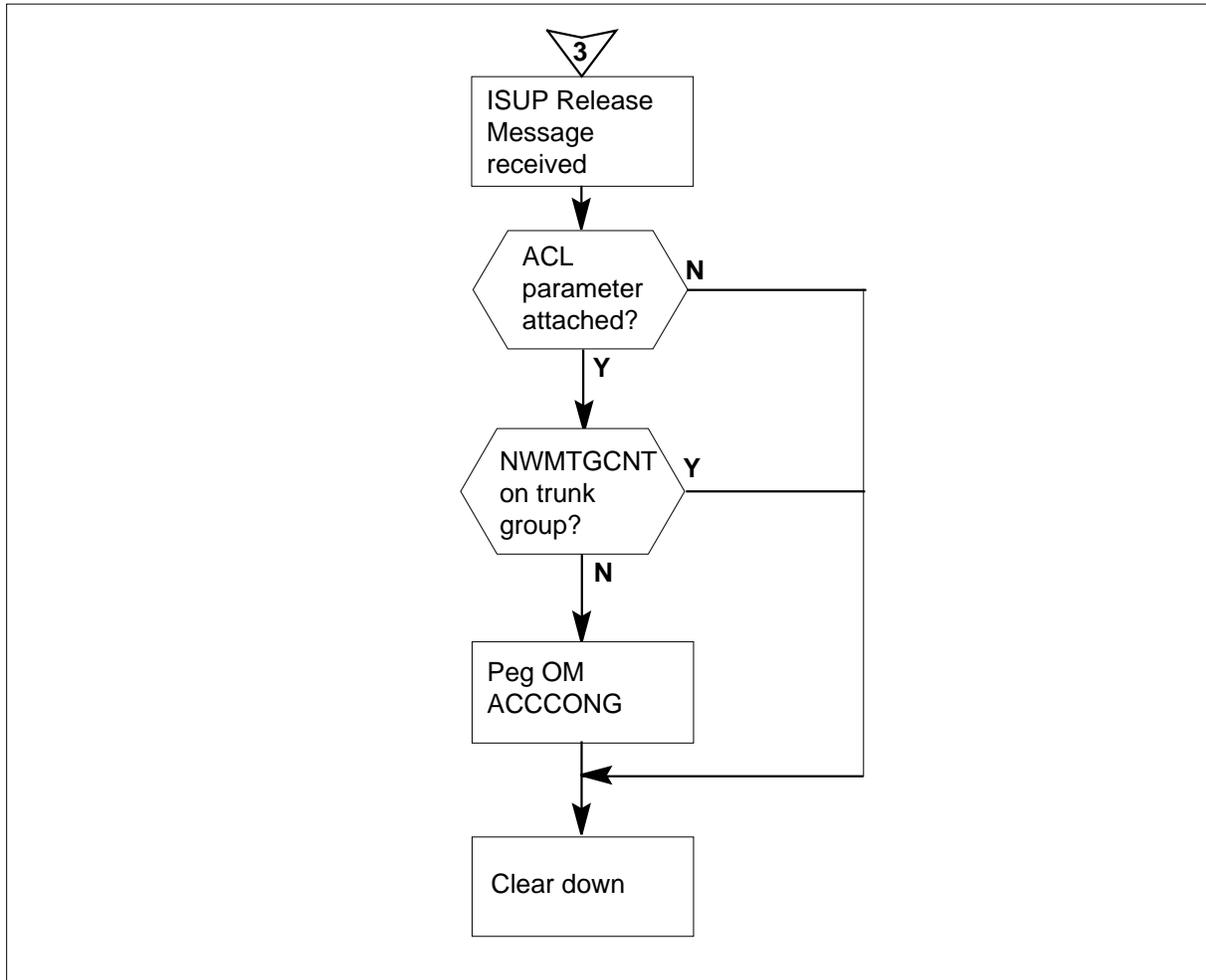
**OM group TRK (continued)**

**OM group TRK registers: trunk terminations (continued)**



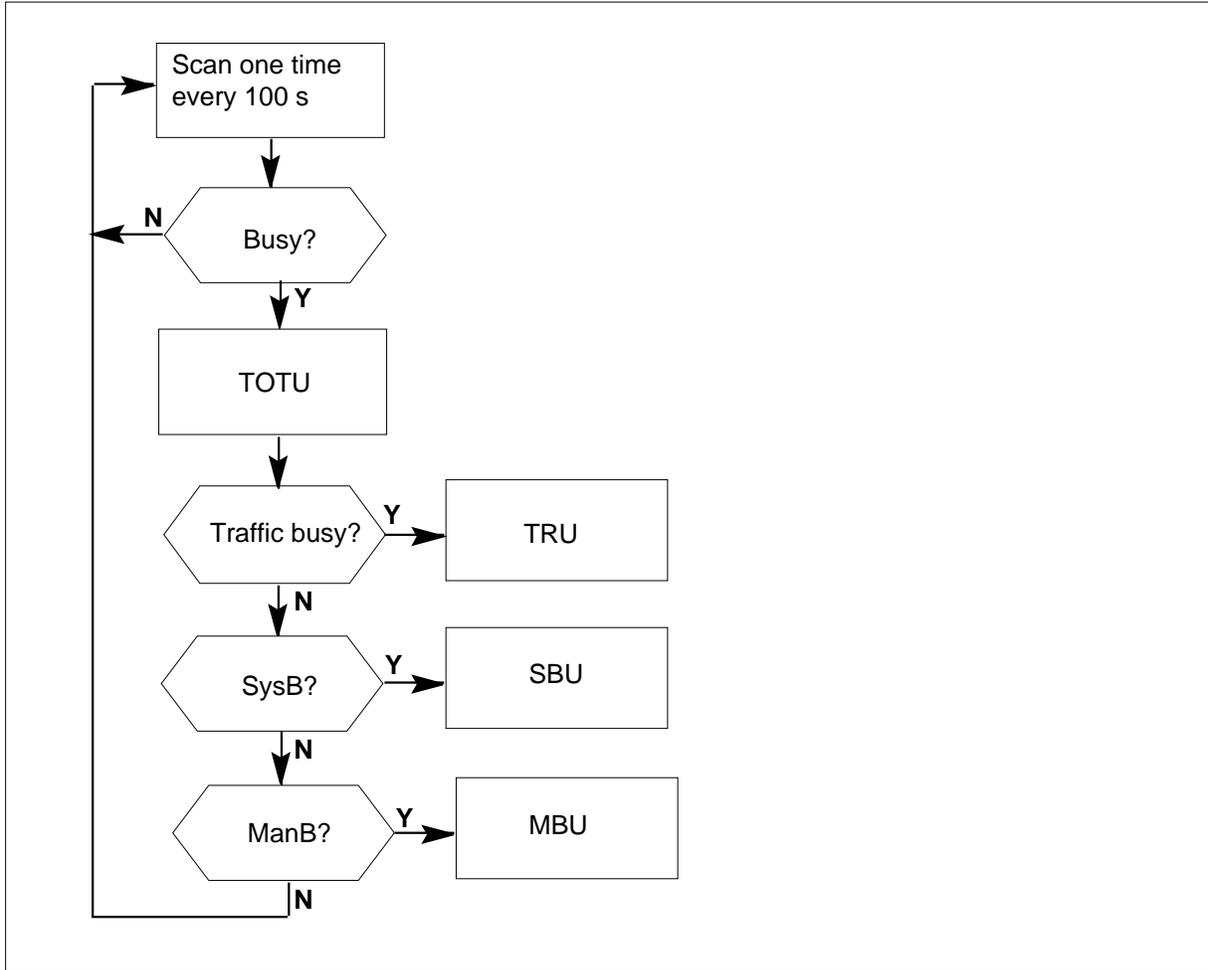
## OM group TRK (continued)

### OM group TRK registers: trunk terminations (continued)



**OM group TRK (continued)**

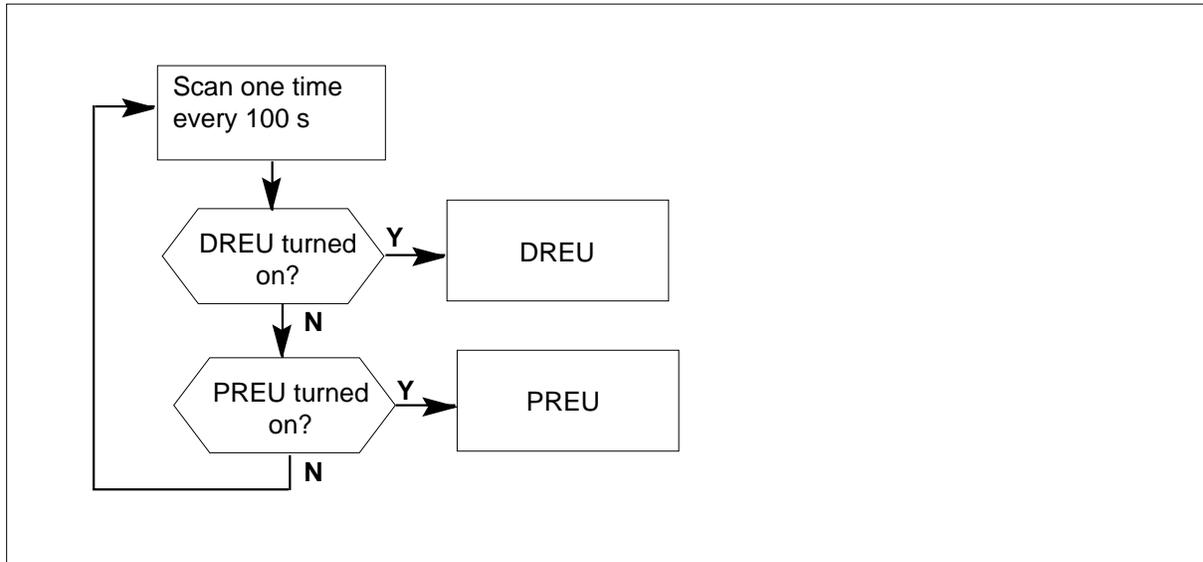
**OM group TRK busy usage registers**



## OM group TRK (continued)

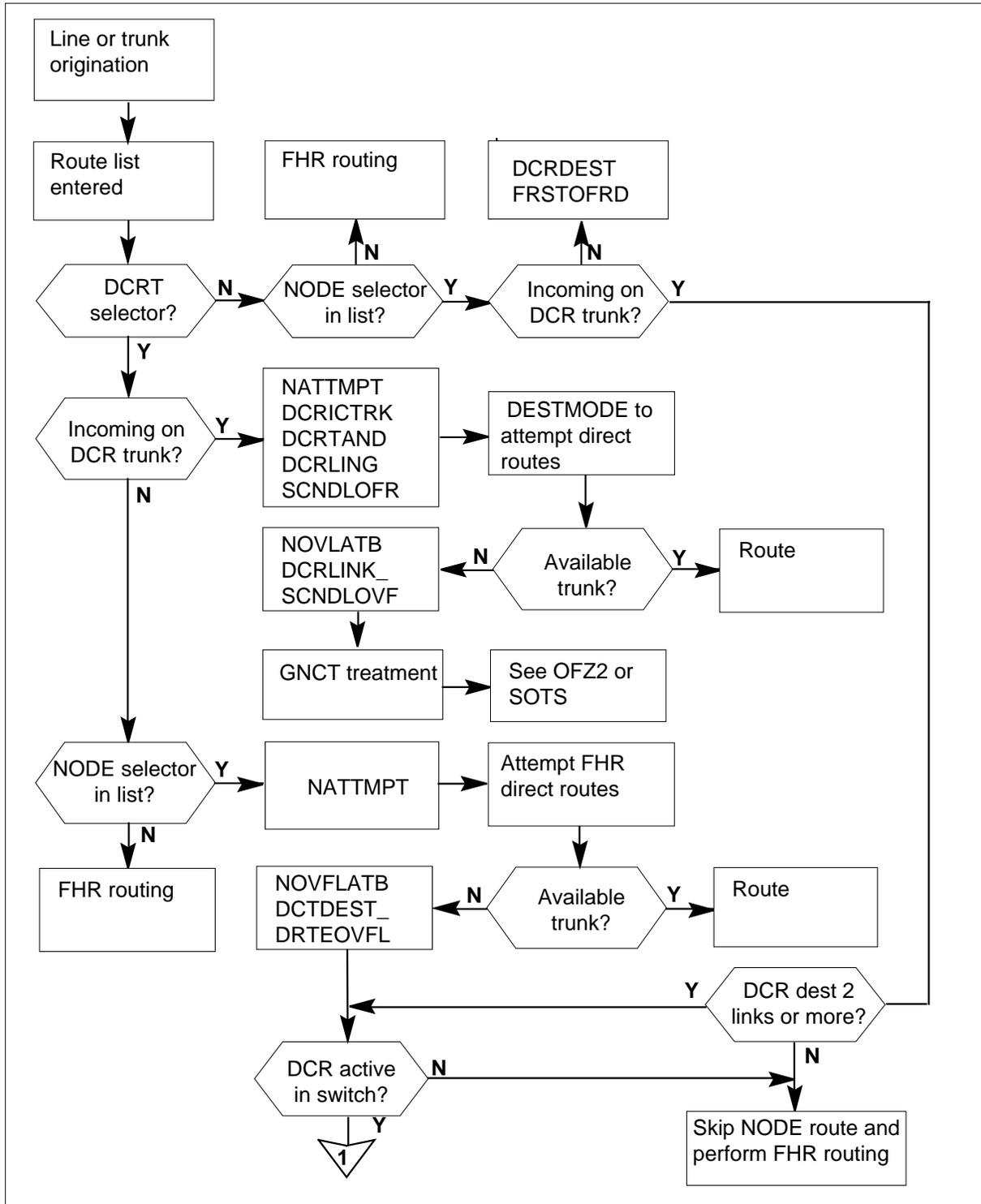
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### OM group TRK directional reservation usage registers



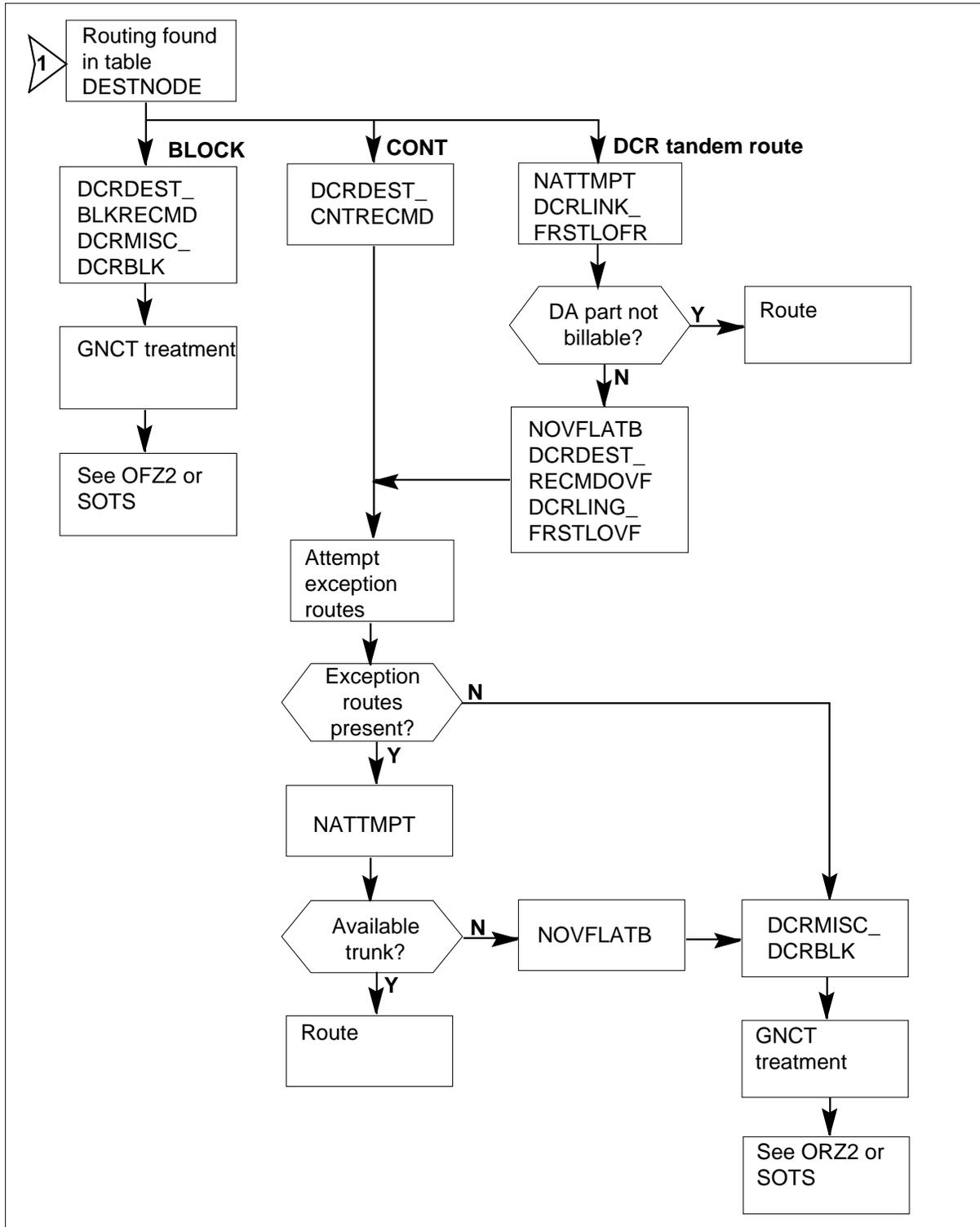
**OM group TRK (continued)**

**OM group TRK registers: DCR call processing**



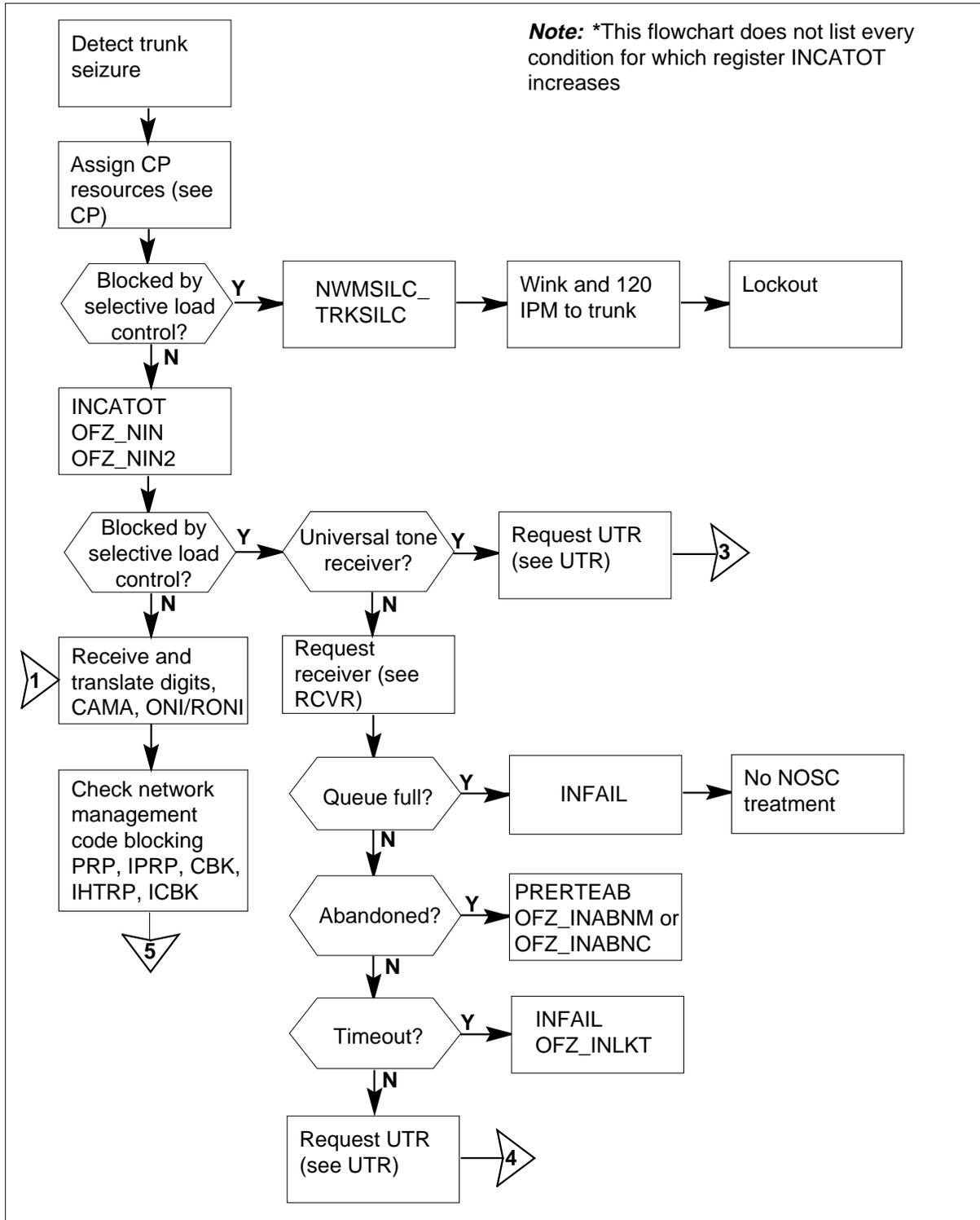
**OM group TRK (continued)**

**OM group TRK registers: DCR call processing (continued)**



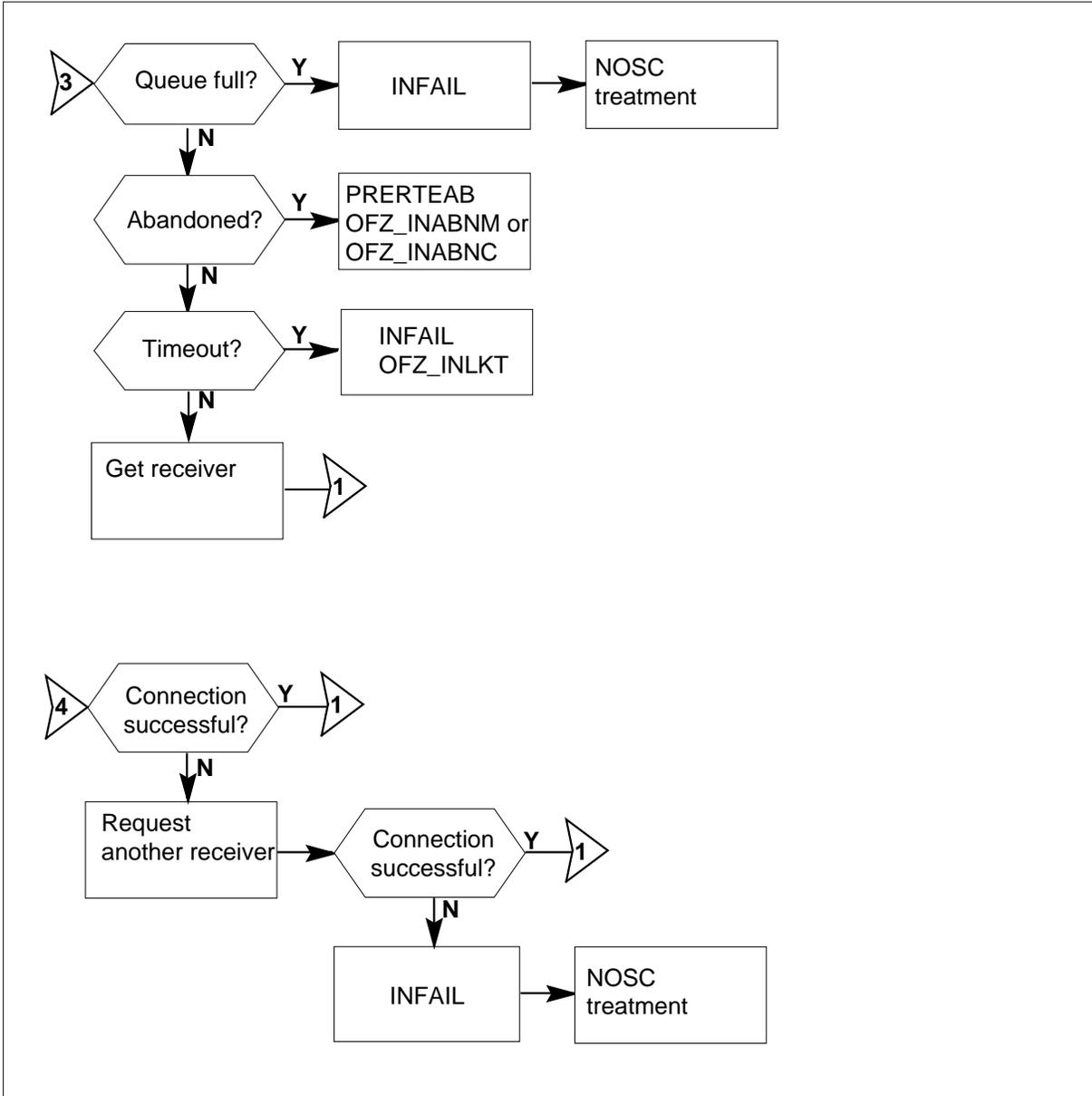
OM group TRK (continued)

OM group TRK registers: trunk origination



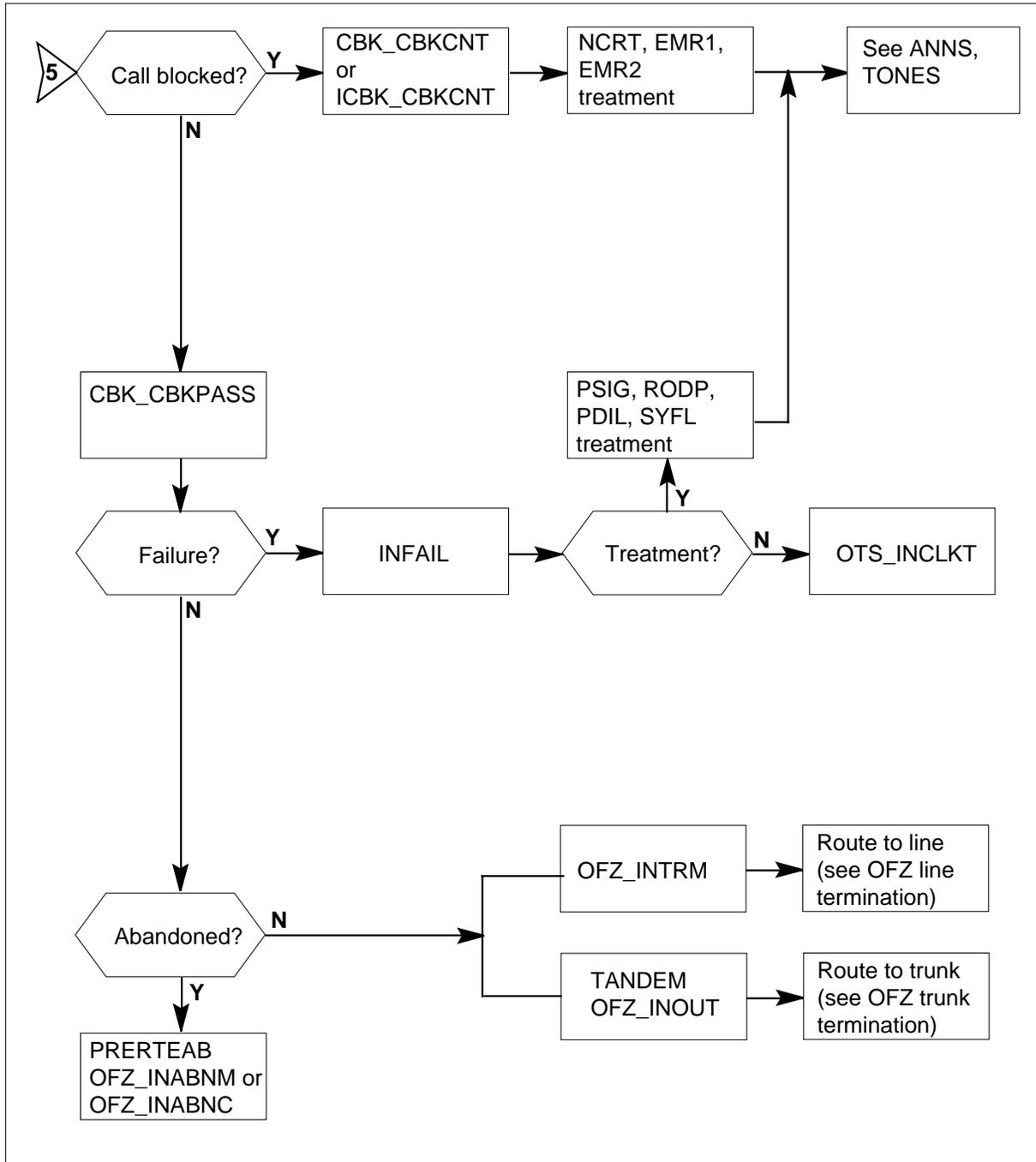
## OM group TRK (continued)

### OM group TRK registers: trunk origination (continued)



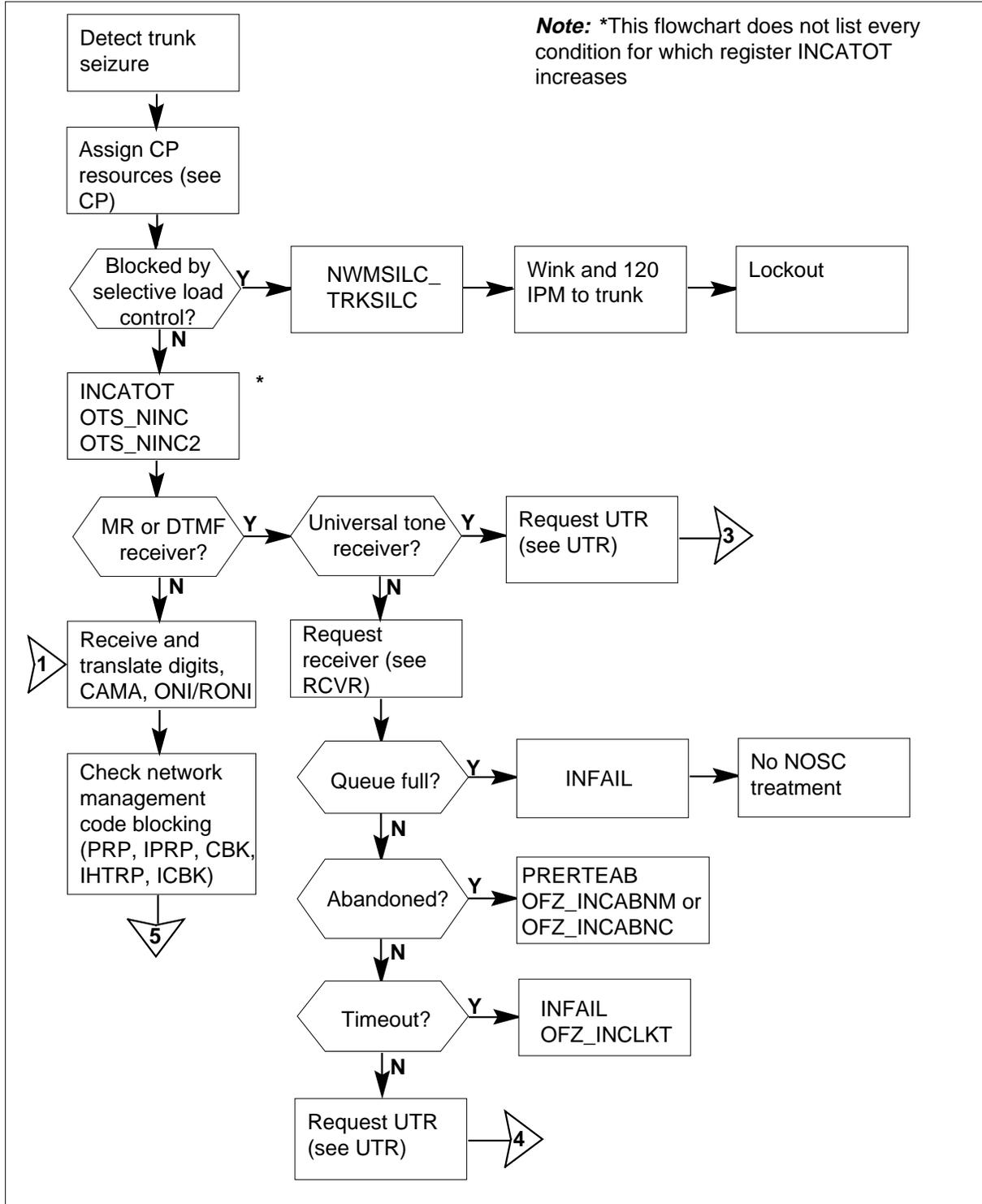
**OM group TRK (continued)**

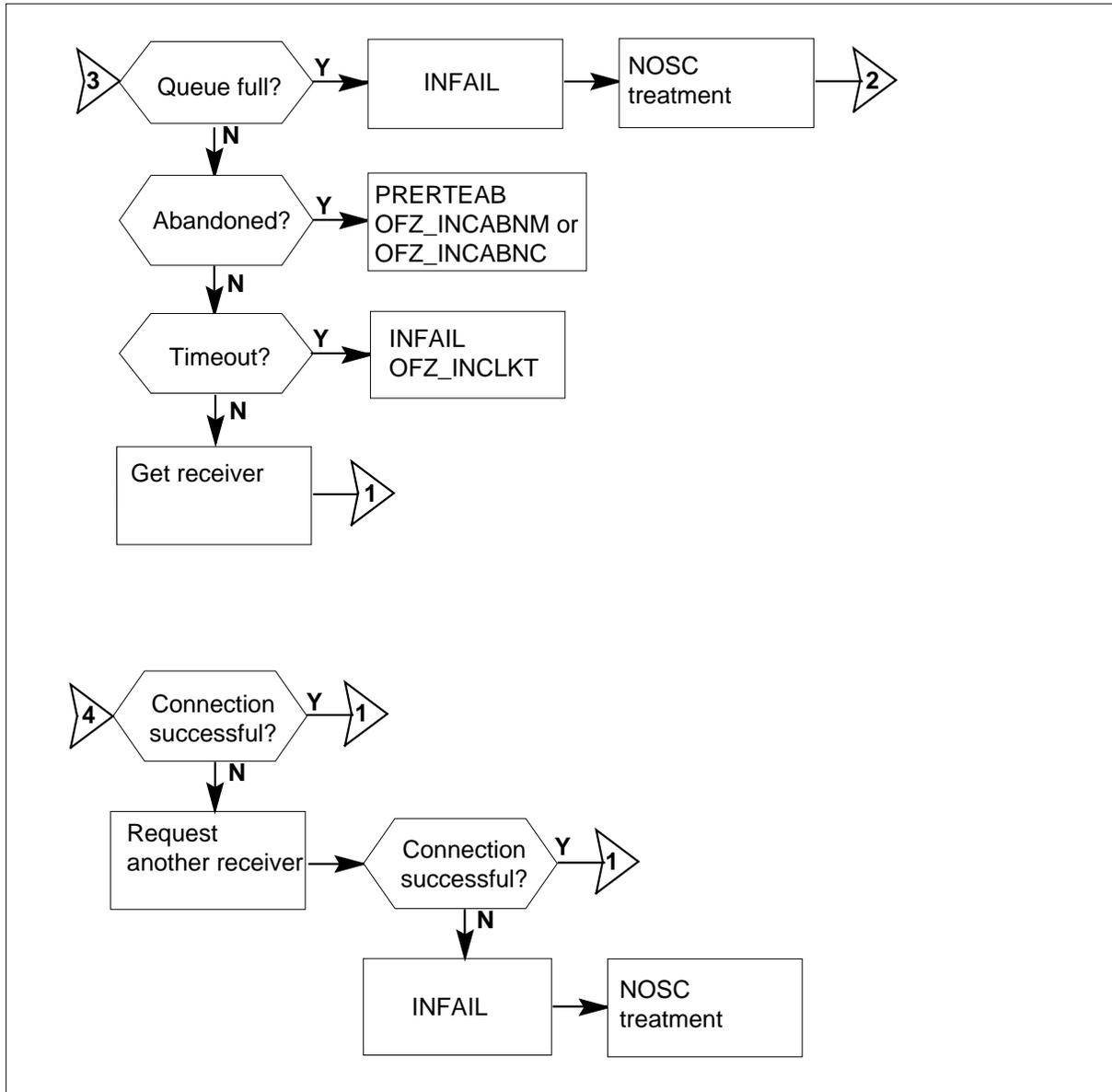
**OM group TRK registers: trunk origination (continued)**



**OM group TRK (continued)**

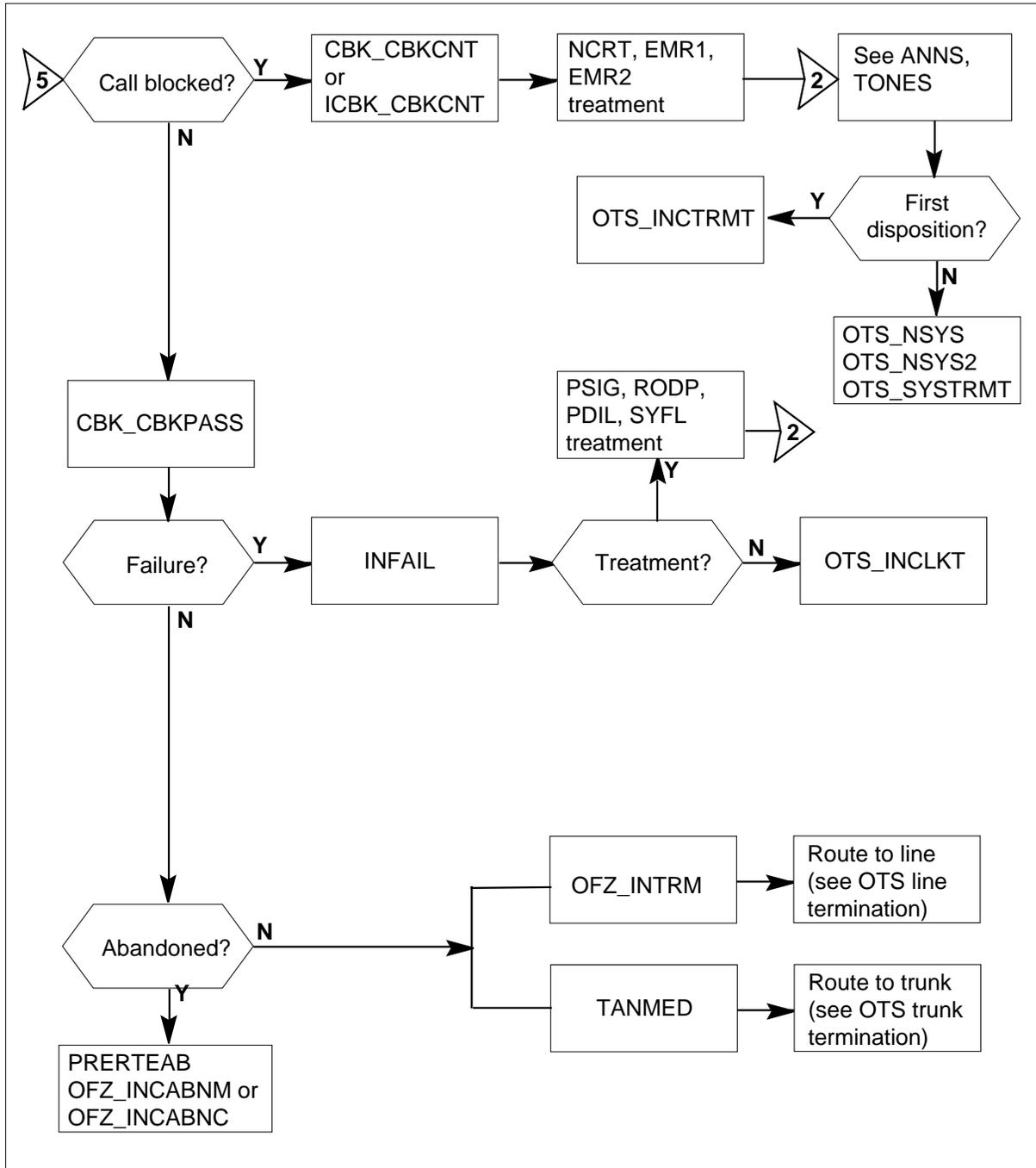
**OM group TRK registers: incoming traffic**

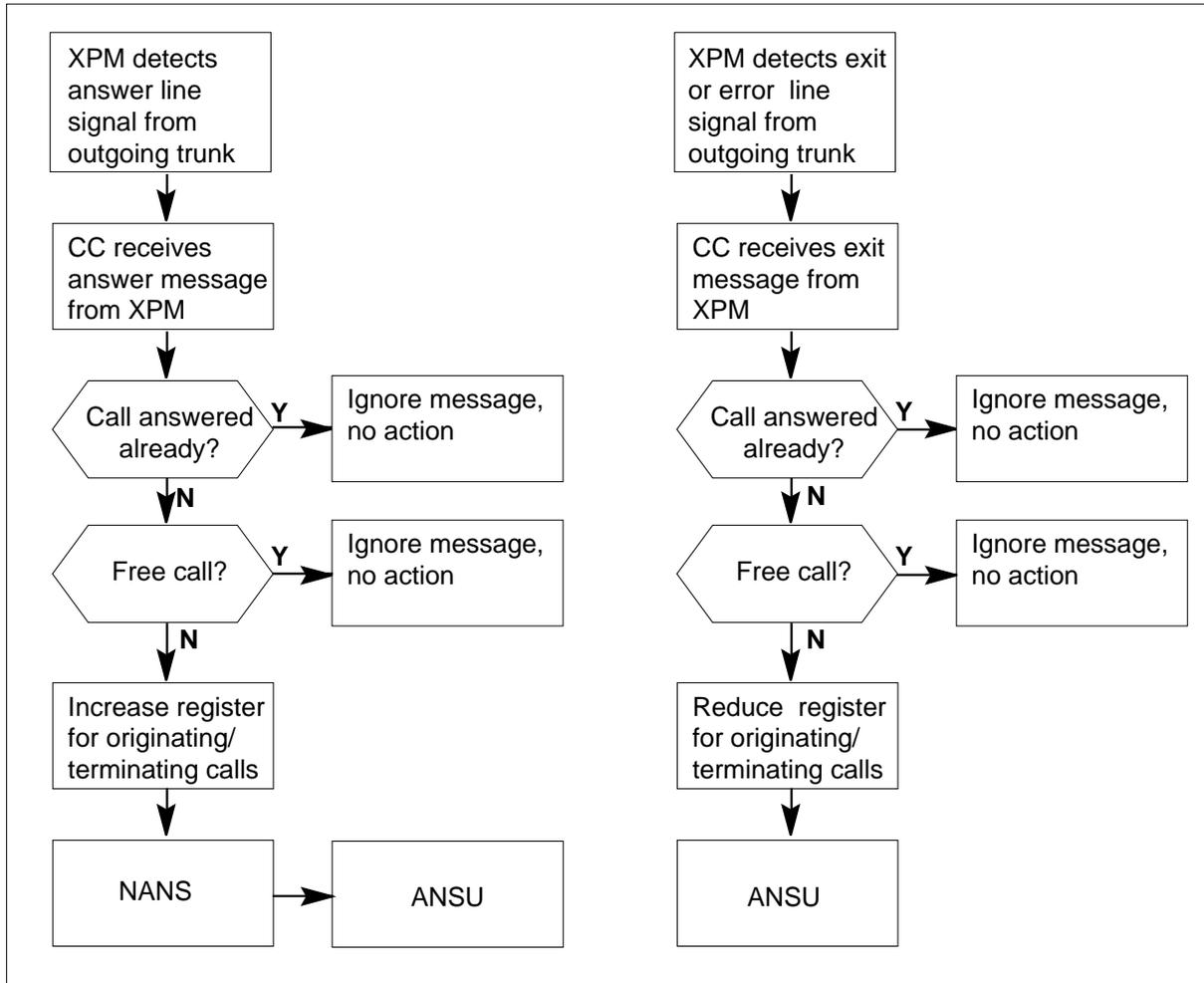


**OM group TRK (continued)****OM group TRK registers: incoming traffic (continued)**

**OM group TRK (continued)**

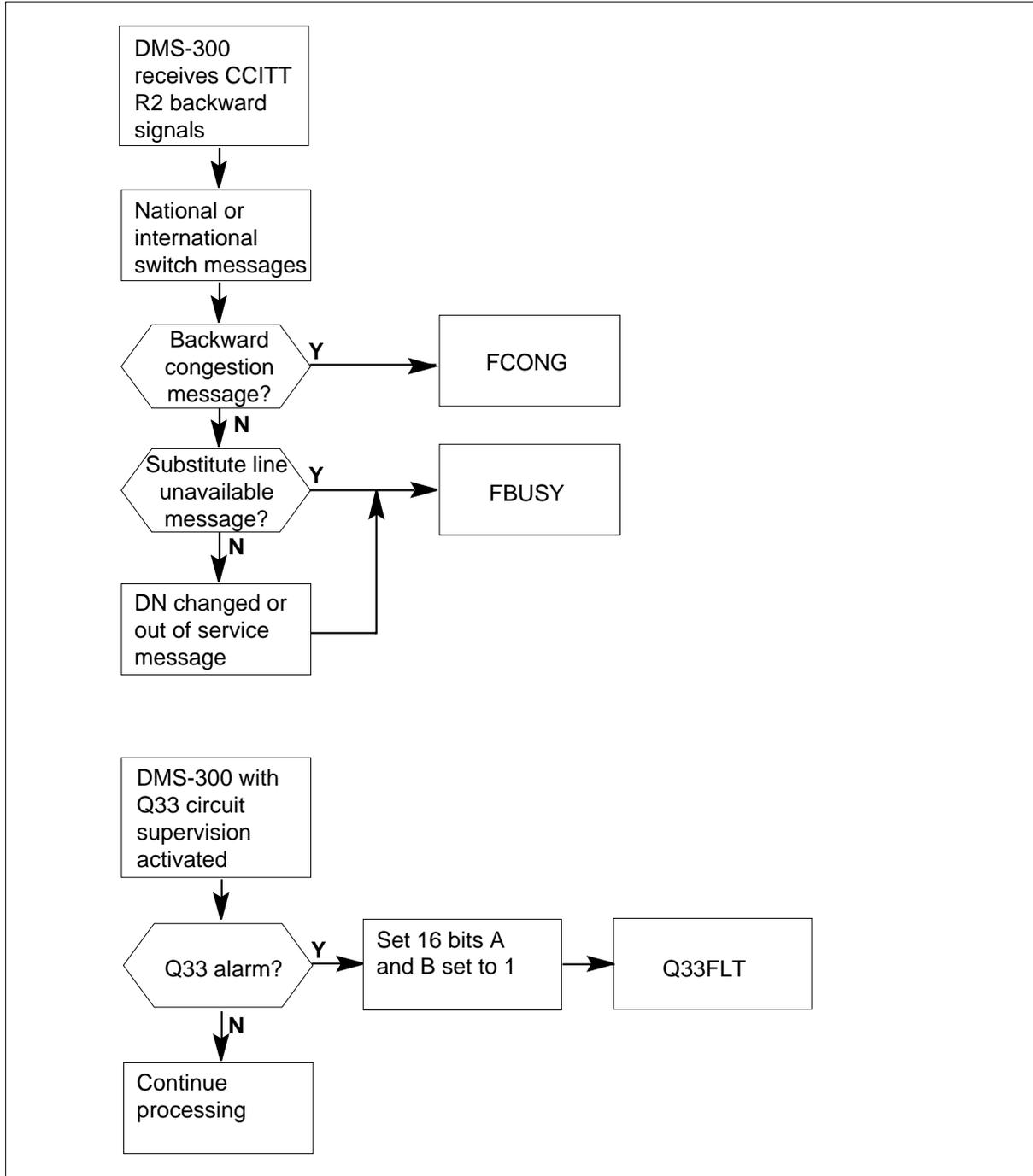
**OM group TRK registers: incoming traffic (continued)**



**OM group TRK (continued)****OM group TRK registers: answered calls**

## OM group TRK (continued)

### OM group TRK DMS-300 registers



## Register ACCCONG

Automatic congestion control (ACCCONG)

---

**OM group TRK (continued)**

---

Register ACCCONG counts the number of times that a trunk group enters Automatic Congestion Control (ACC) congestion.

**Register ACCCONG release history**

Register ACCCONG 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 ANF**

Invalid or no automatic number identification (ANI) signals (ANF)

Register ANF counts incoming centralized-automatic message accounting (CAMA) or TOPS calls for which:

- the system receives invalid ANI signaling
- the system did not receive ANI signaling
- the numbering plan area code (N0/1X) or the central office code (NNX) of the calling number for the incoming trunk group is not correct

Register ANF increases when the system attaches the necessary receiver to the call.

The system generates this register for the following office types:

- OFF200
- OFFCOMB
- OFFCOMBLWW
- OFFCOMBTOPS
- OFF200TOPS
- OFF200300
- OFF250
- OFF250IBN

## **OM group TRK (continued)**

---

For DMS-MTX switches and DMS-250 switches, this register increases when the DMS switch receives a calling number with a central office code. The code for the incoming CAMA trunk group concerned is not correct.

### **Register ANF release history**

Register ANF was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates TRK120 when the DMS switch or the intervening operator encounters problems. Problems can occur during operator number identification (ONI) spill for an incoming call over a CAMA trunk. The system cannot determine the call origination address.

### **Extension registers**

There are no extension registers.

## **Register ANSU**

Answered calls usage register (ANSU)

Register ANSU provides a usage measurement of answered calls for each trunk group on a DMS-100I. This register increases when the extended multiprocessor system (XMS)-based peripheral module (XPM) detects an answer line signal from the outgoing trunk. The register decreases when the XPM detects an exit message from the outgoing trunk.

The system generates this register for office types OFF100, OFF200, OFFCOMB, and OFFCOMBITOPS. This register is optional for office type OFFCOMB and is only present if the system loads package NTXB22AA (OM Enhancements).

### **Register ANSU release history**

The APC100 product does not use register ANSU.

Register ANSU was introduced in BCS34.

### **Associated registers**

NANS

### **Associated logs**

There are no associated logs.

---

**OM group TRK** (continued)

---

**Extension registers**

There are no extension registers.

**Register ANSWER**

Answer supervisions (ANSWER)

When an incoming line/trunk originates a call and an outgoing trunk reports an answer indication to the computer module (CM), the register increases. This register is the answer register for the outgoing trunk. Table 1 shows the interworking supported for releases LEC0011 and above. Table 2 shows the interworking supported for release EUR004 and above.

This register only generates for the following office types:

- OFF100
- OFF200
- OFF200300
- OFF250
- OFF300
- OFFCOMB
- OFFCOMBLWW
- OFFCOMBITOPS
- OFF200TOPS
- OFFCOMBTOPS
- OFF250IBN
- OFF100OESD
- OFF200OESD
- OFFCOMBOESD

For DMS-MTX switches and DMS-250 switches, this register counts hardware or audio answer supervisions received on the trunk group.

For the DMS-100EUR switch, the only valid value for office parameter OFFICETYPE is OFF100.

**OM group TRK** (continued)

Table 1 shows the interworking supported for releases LEC0011 and above.  
Table 2 shows the interworking supported for release EUR004 and above.

**Interworking supported by OM TRK Answer Register for release LEC0011 and above.**

| Originating /<br>Incoming Agents<br>(see Note) | Terminating / Outgoing Agents |           |                         |          |
|--|-------------------------------|-----------|-------------------------|----------|
|  | ISUP Trunk                    | PTS Trunk | PRI Trunk (see<br>Note) | PX Trunk |
| Line   | Yes                           | Yes       | Yes                     | Yes      |
| ISUP Trunk                                     | Yes                           | Yes       | Yes                     | Yes      |
| PTS Trunk                                      | Yes                           | Yes       | Yes                     | Yes      |
| PRI Trunk (see Note)                           | Yes                           | Yes       | Yes                     | Yes      |
| PX Trunk                                       | Yes                           | Yes       | Yes                     | Yes      |

**Note:** Only Northern American PRI trunks.

**Interworking Supported by OM TRK Answer Register for UK release EUR004 and above (Sheet 1 of 2)**

| Incoming<br>Agents | Outgoing Agents |            |           |      |     |     |     |     |     |
|--------------------|-----------------|------------|-----------|------|-----|-----|-----|-----|-----|
|                    | ISUP            | C7NU<br>P  | DPNS<br>S | AC15 | DC5 | R1  | PRI | EC  | LD  |
| BRI Line           | No              | Yes<br>(1) | No        | No   | No  | No  | Yes | No  | No  |
| IBN Line           | Yes             | Yes        | Yes       | Yes  | Yes | Yes | Yes | Yes | Yes |
| ISUP               | Yes             | Yes        | Yes       | Yes  | Yes | Yes | Yes | Yes | Yes |
| C7NUP              | Yes             | Yes        | Yes       | Yes  | Yes | Yes | Yes | Yes | Yes |
| DPNSS              | Yes             | Yes        | Yes       | Yes  | Yes | Yes | No  | Yes | Yes |
| AC15               | Yes             | Yes        | Yes       | Yes  | Yes | Yes | Yes | Yes | Yes |
| DC5                | Yes             | Yes        | Yes       | Yes  | Yes | Yes | Yes | Yes | Yes |
| R1                 | Yes             | Yes        | Yes       | Yes  | Yes | Yes | Yes | Yes | Yes |

**Note:** 1. Supported in EUR003.

**OM group TRK** (continued)**Interworking Supported by OM TRK Answer Register for UK release EUR004 and above (Sheet 2 of 2)**

| Incoming Agents |     | Outgoing Agents |     |     |     |     |     |     |     |
|-----------------|-----|-----------------|-----|-----|-----|-----|-----|-----|-----|
| PRI             | Yes | Yes             | No  | Yes | Yes | Yes | Yes | No  | No  |
| EC              | Yes | Yes             | Yes | Yes | Yes | Yes | No  | Yes | Yes |
| LD              | Yes | Yes             | Yes | Yes | Yes | Yes | No  | Yes | Yes |

**Note:** 1. Supported in EUR003.

**Register ANSWER release history**

Register ANSWER was introduced before BCS20.

**NA0011**

OM TRK Answer Register table revised for release LEC0011

**CCM04**

Register ANSWER increases for Japan signaling as specified by design activity AR1355, "Answer TRK OM pegging capability for IDC Japan."

**EUR004**

Register ANSWER increases for UK signaling as specified by design activity AG4589, "OM ANSWER Peg for UK."

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register AOF**

Automatic number identification (ANI) office failure (AOF)

Register AOF counts incoming calls for which the originating office detects an ANI failure. Failure can be detected despite correct key pulse and signaling terminal control signals. The missing information digits, missing category code or the complete lack of digits indicates an ANI failure.

Register AOF generates for office types OFF100, OFFCOMB, OFFCOMBLWW, OFFCOMBTOPS, OFF200TOPS, OFF200300, OFF250, and OFF250IBN.

## OM group TRK (continued)

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For DMS-MTX switches and DMS-250 switches, this register increases when an information digit 2 or 5 is received from the local office.

### Register AOF release history

Register AOF was introduced before BCS20.

#### BCS34

This register is not used any longer in the following office types: OFF100, OFF200, OFFCOMB, and OFFCOMBITOPS.

Register AOF counts the number of answered calls for each trunk group for the following office types: OFF100, OFF200, OFFCOMB, and OFFCOMBITOPS.

### Associated registers

There are no associated registers.

### Associated logs

Register TRK118 generates when the system encounters trouble during ANI spill for an incoming call. In this example, the system cannot determine call originating address.

Register TRK119 generates when an operator keys in the originating station number identification and releases the call. The operator releases the call because the system encounters trouble with DMS ANI.

### Extension registers

There are no extension registers.

## Register BLKCTRK

Blocked calls on trunk (BLKCTRK)

Register BLKCTRK counts the number of times the following events occur:

- an associated trunk group for a call is a dedicated access line or primary rate access
- the trunk is the last available route in the route list
- the call receives general no-circuit (GNCT) treatment or busy (BUSY) treatment

Register BLKCTRK only appears in DMS-250 switches and OFFCOMBLWW offices.

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**OM group TRK** (continued)

---

**Register BLKCTRK release history**

Register BLKCTRK was introduced in BCS27.

**Associated registers**

There are no associated registers.

**Associated logs**

Register TRK138 generates when the subscriber receives GNCT or BUSY treatment.

**Extension registers**

There are no extension registers.

**Register CONGEST**

Congestion signals (CONGEST)

Register CONGEST counts congestion signals received on the outgoing number 5 or number 6 trunk group.

This register generates only in office types OFF300 and OFF200300.

**Register CONGEST release history**

Register CONGEST 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 CONNECT**

Successful connections (CONNECT)

Register CONNECT counts outgoing seizure attempts on the trunk group that appear to result in successful connection.

Register CONNECT increases before the system knows if the seizure is successful. The count reduces by 1 (decreases) if an indication of glare or seize failure is received. This register generates for all correct office types.

## OM group TRK (continued)

---

For office type OFF300, this register decreases on number 5 trunks, number 6 trunks and number 7 trunks.

### Register CONNECT release history

Register CONNECT was introduced before BCS20.

### Associated registers

Register GLARE increases when the system drops an earlier selected trunk. The system drops the trunk because the peripheral module detects an origination before it can seize the trunk.

Register OFZ\_OUTMFL counts calls that fail on the first attempt to find a network path to a selected outgoing or test trunk.

Register OFZ\_OUTNWAT counts attempts to find a network path from a line or trunk to a selected outgoing or test trunk.

Register OFZ\_OUTRMFL counts calls that fail on the second attempt to find a network path to a selected outgoing or test trunk.

Register OUTFAIL counts errors that occur on an outgoing trunk after the system makes an attempt to seize the trunk.

The following calculation represents the relationship among the above-mentioned registers:

$$\begin{aligned} & \text{OFZ\_OUTNWAT} + (\text{OFZ\_OUTNWAT} \times 65536) - \text{OFZ\_OUTMFL} - \\ & \text{OFZ\_OUTRMFL} \\ & = \Sigma (\text{CONNECT} + \text{GLARE} + \text{OUTFAIL}) \end{aligned}$$

Register GLARE increases when the system drops an earlier selected trunk. The system drops the trunk because the PM detects an origination before the PM could seize the trunk.

Register SOTS\_SOUTMFL counts calls that fail on the first attempt to find a network path to a selected outgoing or test trunk.

Register SOTS\_SOUTNWT counts attempts to find a network path from a line or trunk to a selected outgoing or test trunk.

Register SOTS\_SOUTRMFL counts calls that fail on the second attempt to find a network path to a selected outgoing or test trunk.

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**OM group TRK (continued)**


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Register **OUTFAIL** counts errors that occur on an outgoing trunk after an attempt to seize the trunk.

The following calculation represents the relationship among the above-mentioned registers:

$$\begin{aligned} & \text{SOTS\_SOUTNWAT} + (\text{SOTS\_SOUTNWT2} \times 65536) - \text{SOTS\_SOUTMFL} \\ & - \text{SOTS\_SOUTRMFL} = \Sigma (\text{CONNECT} + \text{GLARE} + \text{OUTFAIL}) \end{aligned}$$

### Associated logs

There are no associated logs.

### Extension registers

There are no extension registers.

## Register DEFLDCA

Network management (NWM) reroute (DEFLDCA)

Register **DEFLDCA** counts calls that the system prevents from accessing the trunk group. The system routes the calls to this trunk group. The system denies access by the calls because of the action of network management controls.

Register **DEFLDCA** counts calls that the system denies for the activity of any of the following NWM controls:

- SKIP control is in effect
- the number of trunks qualified for incoming calls is at or below the directional reservation (DRE) level
- the number of idle trunks is at or below the protective reservation (PRE) level for calls that have been alternate-routed to the group
- time assignment speech interpolation (TASI) control is in effect
- selective trunk reservation (STR) control is in effect
- cancel to (CANT) control is in effect
- bidirectional trunk group reservation control (BRC) is in effect

If the control is **SKIP**, **DRE**, **PRE**, or **TASI**, the system routes the call. If cancel from (**CANF**) control is in effect, the system sends the call to treatment.

If the control is **STR** or **CANT** the system sends the call to treatment.

## OM group TRK (continued)

---

The system this register for all correct office types.

### Register DEFLDCA release history

Register DEFLDCA was introduced before BCS20.

#### **BCS35**

Register DEFLDCA increases when the BRC network management trunk group control prevents a call from accessing the trunk group to which it is routed.

#### **BCS23**

Register DEFLDCA increased on international DMS-100 Family switches.

### Associated registers

There are no associated registers.

### Associated logs

The system generates NWM100 when the system activates or deactivates DRE for a trunk group.

The system generates NWM101 when the system activates or deactivates PRE for a trunk group.

The system generates NWM102 when the system activates or deactivates CANT for a trunk group.

The system generates NWM103 when the system activates or deactivates CANF for a trunk group.

The system generates NWM104 when the system activates or deactivates SKIP for a trunk group.

The system generates NWM106 when the system activates or deactivates STR for a trunk group.

The system generates NWM108 when the system activates or deactivates TASI for a trunk group.

### Extension registers

There are no extension registers.

## Register DREU

Directional reservation (DRE) usage (DREU)

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**OM group TRK** (continued)

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Register DREU is a usage register. Every 100 s the system scans the trunk group and this register records if DRE activates for a two-way trunk group.

The system generates DREU for all correct office types.

**Register DREU release history**

Register DREU was 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.

**BCS20**

Software changes in BCS20 to provide usage counts in CCS or deci-erlangs.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates NWM100 when DRE activates or deactivates for a trunk group.

**Extension registers**

There are no extension registers.

**Register FA**

Fangen (FA)

Register FA increases when "fangen" (seizure) occurs on the trunk group.

The system generates this register in office types OFF100OESD, OFF200OESD, and OFFCOMBOESD.

**Register FA release history**

FA was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## OM group TRK (continued)

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### Extension registers

There are no extension registers.

### Register FBUSY

Far-end busy (FBUSY)

Register FBUSY increases when information about a call result from the far end indicates one of the following conditions:

- directory number changed
- subscriber line busy
- subscriber line on intercept
- subscriber line seized
- out of service

The system generates this register in office type OFF300.

### Register FBUSY release history

Register FBUSY was introduced in BCS25.

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

### Extension registers

There are no extension registers.

### Register FCONG

Far-end congestion (FCONG)

Register FCONG increases when information about the call result from the far end indicates one of the following conditions:

- congestion
- DMS-300 international congestion
- timeout

The system generates this register in office type OFF300.

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**OM group TRK** (continued)

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**Register FCONG release history**

Register FCONG was introduced in BCS25.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register FV**

Fangen vorbereitet (FV)

Register FV counts “fangen vorbereitet” (seizure ready) states that occur on a trunk group.

The system generates this register in office types OFF100OESD, OFF200OESD, and OFFCOMBOESD.

**Register FV release history**

Register FV 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 GLARE**

Glare (GLARE)

Register GLARE increases when the system drops a trunk that the system selects at an earlier time. The system drops this trunk because the PM detects an origination before the PM can seize the trunk. The operating company gives information that indicates that outgoing calls give way to simultaneous incoming calls (glare).

## OM group TRK (continued)

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The system attempts a new selection. If the system encounters glare again, the system routes the call to generalized no-circuit (GNCT) treatment. Register GLARE increases again. The system generates this register for office types that are correct.

### GLARE release history

Register GLARE was introduced before BCS20.

### BCS31

Register GLARE increases for failed call attempts on DMS-300.

### Associated registers

Register CONNECT counts outgoing seizure attempts on the trunk group that result in connections.

Register OFZ\_OUTMFL counts calls that fail to find a network path to a selected outgoing or test trunk on the first attempt.

Register OFZ\_OUTNWAT counts attempts to find a network path from a line or trunk to a selected outgoing or test trunk.

Register OFZ\_OUTRMFL counts calls that fail to find a network path to a selected outgoing or test trunk on the second attempt.

Register OUTFAIL increases when an error occurs on an outgoing trunk after the system makes an attempt to seize the trunk.

The following calculation represents the relationship among the above-mentioned registers:

$$\text{OFZ\_OUTNWAT} + (\text{OFZ\_OUTNWAT2} \times 65536) - \text{OFZ\_OUTMFL} - \text{OFZ\_OUTRMFL}$$

$$= \Sigma (\text{CONNECT} + \text{GLARE} + \text{OUTFAIL})$$

Register CONNECT counts outgoing seizure attempts on the trunk group that result in connections.

Register OUTFAIL counts errors on an outgoing trunk after an attempt to seize the trunk.

Register SOTS\_SOUTMFL counts calls that fail to find a network path to a selected outgoing or test trunk on the first attempt.

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**OM group TRK** (continued)
 

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Register SOTS\_SOUTNWT counts attempts to find a network path from a line or trunk to a selected outgoing or test trunk.

Register SOTS\_SOUTRMFL counts calls that fail to find a network path to a selected outgoing or test trunk on the second attempt.

The following calculation represents the relationship among the above-mentioned registers:

$$\text{SOTS\_SOUTNWT} + (\text{SOTS\_SOUTNWT2} \times 65536) - \text{SOTS\_SOUTMFL}$$

$$\text{SOTS\_SOUTRMFL} = \Sigma (\text{CONNECT} + \text{GLARE} + \text{OUTFAIL})$$

### Associated logs

The system generates log TRK113 if the system encounters problems during call processing of a trunk-to-trunk call.

The system generates TRK121 if the DMS does not receive an acknowledgement wink from the far-end equipment. An acknowledgement wink indicates that the far-end equipment is ready to receive digits.

### Extension registers

There are no extension registers.

## Register INANSWER

Answer messages sent and received on incoming trunk (INANSWER)

Register INANSWER counts the answered calls for incoming traffic for each incoming or two-way trunk.

### Register INANSWER release history

APC010 introduced register INANSWER.

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

### Extension registers

There are no extension registers.

## OM group TRK (continued)

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### Register INANSU

Answer messages received and sent usage on incoming trunk (INANSU)

Register INANSU is a usage register that shows the number of answered calls on incoming trunk calls. This register measures traffic in the answered state for each incoming or two-way trunk. The register measures the occupancy in Erlangs.

The value of register INANSU increases every 100 s according to the number of trunks occupied with answered calls.

#### Register INANSU release history

APC010 introduced register INANSU.

#### Associated registers

There are no associated registers.

#### Associated logs

There are no associated logs.

#### Extension registers

There are no extension registers.

### Register INCATOT

Incoming attempts total (INCATOT)

Register INCATOT counts incoming seizures on a trunk group, including seizures that fail or that the system abandons before routing. The system generates this register for all office types that are correct.

For DMS-MTX switches, this register increases when the system attempts to originate on an MTX trunk group. The system attempt includes handoff attempts for an originating mobile. This system can assign a maximum of eight MTX trunk groups to a cell site. The register can increase a maximum of eight times for a single origination, one time for each group.

#### Register INCATOT release history

Register INCATOT was introduced before BCS20.

#### Associated registers

OFZ\_NIN counts incoming calls.

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**OM group TRK (continued)**


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**The following calculation represents the relationship between the registers:**

$$\Sigma \text{TRK\_INCATOT} = \text{OFZ\_NIN} + (\text{OFZ\_NIN2} \times 65535)$$

OTS\_NINC counts incoming call attempts.

The following calculation represents the relationship between the registers:

$$\Sigma \text{TRK\_INCATOT} = \text{OFZ\_NINC} + (\text{OFZ\_NINC2} \times 65535)$$

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register INFAIL**

Incoming failures (INFAIL)

Register INFAIL increases when any one of the following events occurs on a trunk that has originated a call or appears to have originated a call:

- permanent signal
- partial dial timeouts and false starts
- bad digits, including bad signaling terminal (ST) digit
- any originations on one-way outgoing trunks
- lost integrity on the network path while connected to a service circuit or to another trunk before answer
- failure to attach a receiver after two attempts
- receiver queue overflow
- receiver queue wait time-out
- failure to time-out after 30 s while waiting for a multifrequency receiver
- progress message of a type not expected in the current call environment
- force-release before connection

These events can indicate a need for maintenance action. These events can result in call failure if a call was in progress. This register generates for office types that are correct.

## OM group TRK (continued)

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### Register INFAIL release history

Register INFAIL was introduced before BCS20.

### BCS31

Register INFAIL increases for failed call attempts on DMS-300.

### Associated registers

Register OFZ\_INANN counts incoming calls that the system routes to an announcement.

Register OTS\_INCLKT counts incoming calls that fail and that the system routes to lockout.

Register OTS\_INCTRMT counts incoming calls that the system routes to a tone or an announcement.

Register OFZ\_INLKT counts incoming calls that the system routes to lockout.

Register OFZ\_INTONE counts incoming calls that the system routes to a tone.

Registers OFZ\_INLKT and OFZ\_INTONE or OFZ\_INANN, or OTS\_INCLKT, and OTS\_INCTRMT can also count calls that fail.

### Associated logs

The system generates TRK111 if a trunk-to-trunk call encounters problems or if the system routes the call to a treatment.

The system generates log TRK114 if the system cannot determine the call destination during dial pulse (DP) reception for an incoming call.

The system generates log TRK115 if the system cannot determine the call destination during DP reception for an incoming call.

The system generates log TRK116 if the system cannot determine call destination during multifrequency (MF) reception for an incoming call.

The system generates log TRK117 if the system cannot determine call destination during MF reception for an incoming call.

The system generates log TRK138 if the system routes a call to a treatment after being call processing busy.

The system generates log TRK182 if the system cannot determine call destination during Digitone (DT) reception for an incoming call.

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**OM group TRK** (continued)

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The system generates log TRK183 if a permanent signal problem occurs when an incoming call encounters problems during DT reception.

The system generates log TRK213 when the system encounters problems on a trunk.

**Extension registers**

There are no extension registers.

**Register INTRMLU**

Incoming terminal traffic (INTRMLU)

Register INTRMLU counts incoming terminal calls for which the first digit received is key pulse (KP) or KP1.

The system generates this register in office types OFF200300 and OFF300.

**Register INTRMLU release history**

Register INTRMLU was introduced before BCS20.

**BCS20**

Register INTRMLU changed from a usage register to a peg register. This register increases one time for each call.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register INTRNSU**

Incoming transit traffic (INTRNSU)

Register INTRNSU counts incoming transit calls for which the first digit received is KP2.

The system generates this register in office types OFF200300 and OFF300.

**Register INTRNSU release history**

Register INTRNSU was introduced before BCS20.

## **OM group TRK (continued)**

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### **BCS20**

Register INTRNSU changed from a usage register to a peg register. This register counts one time for each call.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

There are no associated logs.

#### **Extension registers**

There are no extension registers.

## **Register INVAUTH**

Invalid authorization code (INVAUTH)

Register INVAUTH counts authorization codes that are not correct.

The system generates register INVAUTH in office types OFF250, OFF250IBN, OFFMTX100I, OFF500, OFFCOMBLWN and OFFCOMB300. However the register is primarily pegged when the office type is set to OFF250IBN.

#### **Register INVAUTH release history**

Register INVAUTH 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 MAXBU**

Maximum busy circuits (MAXBU)

Register MAXBU is a usage register. Every 100 s the system scans the trunk group. This register increases if the number of busy circuits exceeds the maximum number that the system recorded at an earlier time.

The system generates register MAXBU only in DMS-250 offices.

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**OM group TRK** (continued)

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**Register MAXBU release history**

Register MAXBU was introduced in BCS27.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register MBU**

Maintenance busy usage (MBU)

Register MBU is a usage register. Every 100 s the system scans the trunk group. This register records if a trunk is in one of the following states:

- manual busy
- seized
- network management busy

The system generates register MBU for office types that are correct.

**Register MBU release history**

Register MBU was introduced before BCS20.

**BCS33**

When you set office parameter OMINERLANGS to Y, you convert the usage count from CCS to dec-erlangs before the count appears. Use the OMSHOW commands on the ACTIVE class to display the usage count. The active registers remains in CCS.

**BCS20**

Software change in BCS20 provide usage counts in CCS or deci-erlangs.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## **OM group TRK (continued)**

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### **Extension registers**

There are no extension registers.

### **Register MTRPULS**

Metering pulses (MTRPULS)

Register MTRPULS counts metering pulses that the system generates for the trunk group.

The system generates this register in office types OFF200OESD and OFFCOMBOESD.

### **Register MTRPULS release history**

Register MTRPULS was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

MTRPULS2

### **Register NANS**

Number of answered calls (NANS)

Register NANS counts the number of answered calls for each trunk group on a DMS-100I. This register increases when the extended multiprocessor system (XMS)-based peripheral module (XPM) detects an answer line signal from the outgoing trunk.

The system generates register NANS in office types OFF100, OFF200, OFFCOMB, and OFFCOMBITOPS. This register is optional for office type OFFCOMB and is only present if the system loads package NTXB22AA.

### **Register NANS release history**

The APC100 product does not use register NANS.

Register NANS was introduced in BCS34.

### **Associated registers**

ANSU

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**OM group TRK** (continued)

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**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register NATTMPT**

Number of attempts (NATTMPT)

Register NATTMPT increases when the system routes an outgoing call to a trunk group.

Register NATTMPT increases before network management controls increase. This register increases before an idle trunk and a network connection to the trunk are available. The system generates this register for office types that are correct.

For DMS-MTX switches, this register counts attempts to terminate on an MTX trunk group. These attempts include handoff attempts for a terminating mobile.

The system can assign up to eight MTX trunk groups to a cell site. Register MTX can increase up to eight times for a single termination, one time for each group.

**Register NATTMPT release history**

Register NATTMPT 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 NCTFAIL**

Network call transfer fail (NCTFAIL)

Register NCTFAIL records the total number of failed network call transfers (NCT). Register NCTFAIL is not available to all customers. Contact Nortel Support about NCTFAIL for your switch.

## **OM group TRK (continued)**

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Register NCTFAIL is visible in offices where OFFICETYPE is OFFCOMBLWW, OFF250, OFFMTX100I, or OFF250IBN.

### **Register NCTFAIL release history**

Register NCTFAIL was introduced in TL04.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register NCTPASS**

Network call transfer pass (NCTPASS)

Register NCTPASS records the total number of completed network call transfers (NCT).

Register NCTPASS is visible only in offices where OFFICETYPE is OFFCOMBLWW, OFF250, OFFMTX100I, or OFF250IBN. Register NCTPASS is not available to all customers. Contact Nortel Support about NCTPASS for your switch.

### **Register NCTPASS release history**

Register NCTPASS was introduced in TL04.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register NOVFLATB**

Number of overflows, all trunks busy (NOVFALTB)

Register NOVFLATB increases when a call with access to the trunk group overflows the group. The system routes the call because an idle trunk is not

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**OM group TRK** (continued)

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available. A call can access the same group more than one time. Overflow can occur only one time. Overflow occurs if the system cannot use the first trunk because of seize fail, glare or network blockage. Register NOVFLATB increases when the system cannot find an idle trunk on the first or any of the following access attempts. This register generates for office types that are correct.

For DMS-MTX switches, this register increases when an attempt to terminate on an MTX trunk group fails. This register increases when an attempt to handoff a terminating mobile to an MTX trunk group fails. Failure occurs because an idle trunk is not available. The system can assign up to eight MTX trunk groups to a cell site. This register can increase up to eight times for a single termination, one time for each group.

**Register NOVFLATB release history**

Register NOVFLATB was introduced in BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates ATB100 when the system blocks an attempt to seize a trunk to a specified numbering plan area or central office. The system advances the call to another route.

**Extension registers**

There are no extension registers.

**Register OUTANSU**

Answer message received and sent usage on an outgoing trunk (OUTANSU)

Register OUTANSU is a usage register that shows the number of answered calls on outgoing trunk calls. This register measures traffic in the answered state for each outgoing or two-way trunk. The register measures the occupancy in Erlangs.

The value of register OUTANSU increases every 100 s according to the number of trunks occupied with answered calls.

**Register OUTANSU release history**

APC010 introduced register OUTANSU.

**Associated registers**

There are no associated registers.

## **OM group TRK (continued)**

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### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register OUTFAIL**

Outgoing failures (OUTFAIL)

Register OUTFAIL counts attempts to seize an outgoing trunk in the trunk group that fail because of following:

- signaling problems
- loss of accuracy
- outgoing failures
- seizure failures

The system releases the trunk. The system performs a maximum of two attempts to seize a trunk. The system counts each failed attempt in OUTFAIL. If a second attempt to seize a trunk fails, the system routes the call to treatment.

The system can generate a log message. Generation of a log message depends on the cause of the failure.

The system generates register OUTFAIL for office types that are correct.

### **Register OUTFAIL release history**

Register OUTFAIL was introduced before BCS20.

### **BCS31**

Register OUTFAIL increases for failed call attempts on DMS-300.

### **Associated registers**

Register CONNECT counts outgoing seizure attempts on the trunk group that result in connections.

Register GLARE increases when the system drops a trunk that the system selects at an earlier time. The system drops the trunk because the PM detected an origination. The PM detects an origination before the PM seizes the trunk.

Register OFZ\_OUTMFL counts calls that fail on the first attempt to find a network path to a selected outgoing or test trunk.

**OM group TRK** (continued)

Register OFZ\_OUTNWAT counts attempts to find a network path from a line or trunk to a selected outgoing or test trunk.

Register OFZ\_OUTOSF counts calls that fail on the first attempt to seize an outgoing trunk.

Register OFZ\_OUTROSF counts calls that fail on the second attempt to seize an outgoing trunk.

The system counts each failure to seize an outgoing trunk in OUTFAIL. The system also counts the first failed attempt in OFZ\_OUTOSF. The system also counts the second failed attempt in OFZ\_OUTROSF.

Register OFZ\_OUTRMFL counts calls that fail on the second attempt to find a network path to a selected outgoing or test trunk.

The following calculation represents the relationship among the above-mentioned registers:

$$\begin{aligned} & \text{OFZ\_OUTNWAT} + (\text{OFZ\_OUTNWAT2} \times 65536) - \text{OFZ\_OUTMFL} - \\ & \text{OFZ\_OUTRMFL} \\ & = \Sigma (\text{CONNECT} + \text{GLARE} + \text{OUTFAIL}) \end{aligned}$$

Register CONNECT counts outgoing seizure attempts on the trunk group that result in connections.

Register GLARE increases when the system drops a trunk the system selects at an earlier time. The system drops the trunk because the PM detected an origination. The PM detects an origination before the system seizes the trunk.

Register SOTS\_SOUTMFL counts calls that fail on the first attempt to find a network path to a selected outgoing or test trunk.

Register SOTS\_SOUTNWT counts attempts to find a network path from a line or trunk to a selected outgoing or test trunk.

Register SOTS\_SOUTRMFL counts calls that fail on the second attempt to find a network path to a selected outgoing or test trunk.

The following calculation represents the relationship among the above-mentioned registers:

$$\begin{aligned} & \text{SOTS\_SOUTNWT} + (\text{SOTS\_SOUTNWAT2} \times 65536) - \text{SOTS\_SOUTMFL} \\ & - \text{SOTS\_SOUTRMFL} \end{aligned}$$

## OM group TRK (continued)

---

$$= \Sigma (\text{CONNECT} + \text{GLARE} + \text{OUTFAIL})$$

### Associated logs

The system generates TRK113 if the system encounters problems during call processing of a trunk-to-trunk call.

The system generates TRK121 if the DMS does not receive an acknowledgement wink from the far-end equipment. The acknowledgement wink indicates that the equipment is ready to receive digits.

The system generates TRK122 if the central control detects a loss of accuracy on both planes of the trunk equipment.

The system generates TRK162 if the system encounters problems during outpulsing of a trunk-to-trunk or line-to-trunk call. The call uses dual-tone multifrequency (DTMF) signaling.

The system generates TRK213 if the system encounters problems on a trunk.

### Extension registers

There are no extension registers.

## Register OUTMTCHF

Outgoing matching failure (OUTMTCHF)

Register OUTMTCHF counts attempts to find a path from an incoming trunk or originating line to a selected trunk that fail. Failure occurs as a result of network blockage.

If the system blocks an outgoing call, the call again attempts to select a trunk. If the system blocks this attempt, OUTMTCHF counts the call again. The system routes the call to NBLH treatment.

The system generates this register for office types that are correct.

### Register OUTMTCHF release history

Register OUTMTCHF was introduced before BCS20.

### Associated registers

Register OFZ\_OUTMFL counts calls that fail on the first attempt to find a network path to a selected outgoing or test trunk.

Register OFZ\_OUTNWAT counts incoming or originating calls intended for a specified outgoing or test trunk.

---

**OM group TRK** (continued)

---

Register OFZ\_OUTNWAT counts attempts to access a network path from an incoming trunk or an originating line. The system sends the network path to a selected trunk.

Register OFZ\_OUTRMFL counts calls that fail on the second attempt to find a network path to a selected outgoing or test trunk.

Register OUTMTCHF and OFZ\_OUTMFL count first-trial failures.

Register OUTMTCHF and OFZ\_OUTRMFL count second-trial failures.

The following calculation represents the relationship among the above-mentioned registers:

$$\Sigma \text{TRK\_OUTMTCHF} = \text{OFZ\_OUTMFL} + \text{OFZ\_OUTRMFL}$$

Register OTS\_SOUTNWT counts attempts to access a network path from an incoming trunk or an originating line. The system sends the network path to a selected trunk.

Register OTS\_SOUTNWT counts attempts to access a network path from an incoming trunk or an originating line. The system sends the network path to a selected trunk.

Register OUTMTCHF and OTS\_SOUTMFL count first-trial failures.

Register OUTMTCHF and SOTS\_SOUTRMFL count second-trial failures.

Register SOTS\_SOUTMFL counts calls that fail on the first attempt to find a network path to a selected outgoing or test trunk.

Register SOTS\_SOUTNWT counts incoming or originating calls intended for a specified outgoing or test trunk.

Register SOTS\_SOUTRMFL counts calls that fail on the second attempt to find a network path to a selected outgoing or test trunk.

The following calculation represents the relationship among the above-mentioned registers:

$$\Sigma \text{TRK\_OUTMTCHF} = \text{OTS\_SOUTMFL} + \text{SOTS\_SOUTRMFL}$$

**Associated logs**

The system generates NET130 if the system cannot find a network path.

## **OM group TRK (continued)**

---

### **Extension registers**

There are no extension registers.

### **Register OUTTRMLU**

Outgoing terminal traffic (OUTTRMLU)

Register OUTTRMLU counts outgoing terminal calls for which the first digit received is KP or KP1.

The system generates this register in office types OFF200300 and OFF300.

### **Register OUTTRMLU release history**

Register OUTTRMLU was introduced before BCS20.

#### **BCS20**

Register OUTTRMLU changes from a usage register to a peg register. This register counts one time for each call.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

### **Register OUTTRNSU**

Outgoing transit traffic (OUTTRNSU)

OUTTRNSU counts outgoing transit calls for which the first digit received is KP2. The system generates this register in office types OFF200300 and OFF300.

### **Register OUTTRNSU release history**

Register OUTTRNSU was introduced before BCS20.

#### **BCS20**

Register OUTTRNSU changes from a usage register to a peg register. This register counts one time for each call.

### **Associated registers**

There are no associated registers.

---

**OM group TRK (continued)**

---

**Associated logs**

There are no associated registers.

**Extension registers**

There are no extension registers.

**Register PRERTEAB**

Preroute abandon (PRERTEAB)

Register PRERTEAB counts incoming attempts the system abandons before the system can complete routing. The system generates this register for all office types that are correct.

**Register PRERTEAB release history**

Register PRERTEAB was introduced before BCS20.

**Associated registers**

Register OFZ\_INABNC counts incoming calls the subscriber abandons.

Register OFZ\_INABNM counts incoming calls the switch abandons.

The following calculation represents the relationship among the above-mentioned registers:

$$\Sigma \text{TRK\_PRERTEAB} = \text{OFZ\_INABNM} + \text{OFZ\_INABNC}$$

This relationship does not apply to calls that originate from a mobile telephone exchange (MTX).

Register OTS\_INCABNC counts incoming calls the subscriber abandons.

Register OTS\_INCABNM counts incoming calls the switch abandons.

The following calculation represents the relationship among the above-mentioned registers:

$$\Sigma \text{TRK\_PRERTEAB} = \text{OTS\_INCABNM} + \text{OTS\_INCABNC}$$

This relationship does not apply to calls originating from a Mobile telephone.

**Associated logs**

The system generates register TRK113 if the system encounters problems during call processing of a trunk-to-trunk call.

## OM group TRK (continued)

---

The system generates TRK116 if the system cannot determine the call destination during multifrequency reception for an incoming call.

### Extension registers

There are no extension registers.

## Register PREU

Protective reservation (PRE) usage (PREU)

Register PREU is a usage register. Every 100 s the system scans the trunk group. This register records if the system turns the PRE on for a two-way trunk group.

The system generates this register for office types that are correct.

### Register PREU release history

Register PREU was introduced before BCS20.

#### BCS33

When the office parameter OMINERLANGS is set to Y, the usage count converts from CCS to deci-erlangs. The command OMSHOW on the ACTIVE class converts the usage count before the system displays the count. The value in the active registers does not alter and remains in CCS.

#### BCS20

Software change provides usage counts in CCS or deci-erlangs.

### Associated registers

There are no associated registers.

### Associated logs

The system generates NWM101 when the system activates or deactivates PRE for a trunk group.

### Extension registers

There are no extension registers.

## Register Q33FLT

Q33 fault (Q33FLT)

Register Q33FLT counts Q33 circuit failures that occur on a given trunk. Datafill for this trunk appears in table TRKSGRP with the Q33SUP option. These faults occur when AB bits of time slot 16 are set to 11.

---

**OM group TRK** (continued)

---

**Register Q33FLT release history**

Register Q33FLT was introduced in BCS35.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates TRK149 when a Q33 failure occurs on a given trunk.

**Extension registers**

There are no extension registers.

**Register SBU**

System busy usage (SBU)

Register SBU is a usage register. Every 100 s the system scans the trunk group. This register records if a trunk is in one of the following states:

- remote busy
- peripheral module busy
- system busy
- carrier fail
- deloaded

The system generates this register for office types that are correct.

**Register SBU release history**

Register SBU was introduced before BCS20.

**BCS33**

When the office parameter OMINERLANGS is set to Y, the usage count converts from CCS to deci-erlangs. The command OMSHOW on the ACTIVE class converts the usage count before the system displays the count. The value in the active registers does not alter and remains in CCS.

**BCS20**

Software change provides usage counts in CCS or deci-erlangs.

**Associated registers**

There are no associated registers.

## OM group TRK (continued)

---

### Associated logs

The system generates TRK106 if a self-test on trunk equipment fails.

The system generates TRK109 when a self-test on a DS-1 facility fails.

### Extension registers

There are no extension registers.

## Register TANDEM

TANDEM

Register TANDEM counts incoming calls on a trunk group that first routes to an outgoing trunk group. Register TANDEM increases before the system determines if the outgoing trunk group is busy, or if a junctor path is available. The system generates this register for office types that are correct, except OFF300.

### Register TANDEM release history

Register TANDEM was introduced before BCS20.

### Associated registers

Register OFZ\_INOUT counts incoming calls that first route to other trunks, TOPS, AOSS, and terminating test lines.

The following calculation represents the relationship among the above-mentioned registers:

$$\begin{aligned} & \text{OFZ\_INOUT} + (\text{OFZ\_INOUT2} \times 65536) - (\text{trunk-to-TOPS calls}) \\ & = \Sigma \text{TRK\_TANDEM} \end{aligned}$$

### Associated logs

There are no associated logs.

### Extension registers

There are no extension registers.

## Register TOTU-U.S. and Australia only

Total usage (TOTU)

Register TOTU is a usage register. Every 100 s the system scans the trunk group and register TOTU records if any trunk in the group is busy.

---

**OM group TRK** (continued)

---

The system generates register TOTU in the following office types:

- OFF100
- OFF100G
- OFFCOMB
- OFFCOMBLWW
- OFFCOMBTOPS
- OFF200
- OFF200TOPS
- OFF250
- OFF100OESD
- OFF200OESD
- OFFCOMBOESD

**Register TOTU release history**

Register TOTU was introduced before BCS20.

**BCS33**

When the office parameter OMINERLANGS is set to Y, the usage count converts from CCS to deci-erlangs. The command OMSHOW on the ACTIVE class converts the count before the system displays the count. The value in the active registers does not alter and remains in CCS.

**BCS27**

Register TOTU is included in OFF250 offices.

**BCS20**

Software change provides usage counts in CCS or deci-erlangs.

**Associated registers**

Register MBU counts manual busy trunks.

Register SBU counts system busy trunks.

Register TRU counts call processing busy trunks.

$TOTU = TRU + SBU + MBU$

**Associated logs**

There are no associated logs.

## OM group TRK (continued)

---

### Extension registers

There are no extension registers.

### Register TRU

Traffic busy usage (TRU)

Register TRU is a usage register. Every 100 s the system scans the trunk group. This register records if a trunk in the group is in one of the following states:

- call processing busy (TK\_CP\_BUSY)
- call processing busy deload (TK\_CP\_BUSY\_DELOAD)
- lockout (TK\_LOCKOUT)

The system generates this register for office types that are correct.

### Register TRU release history

Register TRU was introduced before BCS20.

#### BCS33

When the office parameter OMINERLANGS is set to Y, the usage count converts from CCS to deci-erlangs. The command OMSHOW on the ACTIVE class converts the count before the system displays the count. The value in the active registers does not alter and remains in CCS.

#### BCS20

Software change provides usage counts in CCS or deci-erlangs.

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

### Extension registers

There are no extension registers.

### Register TRU2WIN

Incoming two-way trunk usage (TRU2WIN)

---

**OM group TRK (end)**

---

Register TRU2WIN is a usage register. Every 100 s the system scans the trunk group. This register records if a two-way trunk in a group is in one of the following states:

- call processing busy (TK\_CP\_BUSY)
- call processing busy deload (TK\_CP\_BUSY\_DELOAD)
- lockout (TK\_LOCKOUT)

The system generates register TRU2WIN for office type DMS250.

**Register TRU2WIN release history**

Register TRU2WIN was introduced in BCS29.

**BCS33**

When the office parameter OMINERLANGS is set to Y, the usage count converts from CCS to deci-erlangs. The command OMSHOW on the ACTIVE class converts the count before the system displays the count. The value in the active registers does not alter and remains in CCS.

**Associated registers**

Register TRU is a usage register. This register scans the trunk group every 100 s and records if any trunk in a trunk group is call processing busy.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

## OM group TRKDCTS

---

### OM description

Destination code traffic summary

OM group TRKDCTS records traffic data about office trunk groups datafilled in table TRKDCTS. The data is sorted by destination code.

Registers record the following events for all signals:

- total traffic to a specified destination code and trunk group (TRFUT)
- call attempts (NCAT)
- successful calls (NSCT)
- answered calls (NANST)

A register increments for the following event for P-R2 signals:

- seizures (NSZGT)
- Registers increment for the following events for PTUP, ANSI7+, and ETSI ISUP v1 signals:
  - number of IAM or IAI messages (NIAMIAIT)
  - number of NUB or UBM messages (NNUBUBMT)
  - number of messages not received (NNMAFAMT)

### Release history

#### APC010

Feature AU2916, DCTS and Answer OM Enhancements, increased the number of tuples OM group TRKDCTS provides for destination codes.

#### APC009

OM group TRKDCTS was introduced to APC100 in APC009.

#### BCS34

OM group TRKDCTS was introduced in BCS34 to the DMS100i product.

### Registers

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

|       |       |          |          |
|-------|-------|----------|----------|
| NCAT  | NSZGT | NIAMIAIT | NSCT     |
| NANST | TRFUT | NNUBUBMT | NNMAFAMT |

---

**OM group TRKDCTS** (continued)

---

**Group structure**

OM group TRKDCTS provides one tuple per destination code (maximum 2048)

**Key field:**

TRUNK\_DEST\_CODE\_NAME.

This field numbers from 0 to 2047.

**Info field:**

TRKDCTSINFO

The info field contains:

- the trunk group name
- the number of working trunk circuits
- the destination code

**Associated OM groups**

OM group DCTS

**Associated functional groups**

None

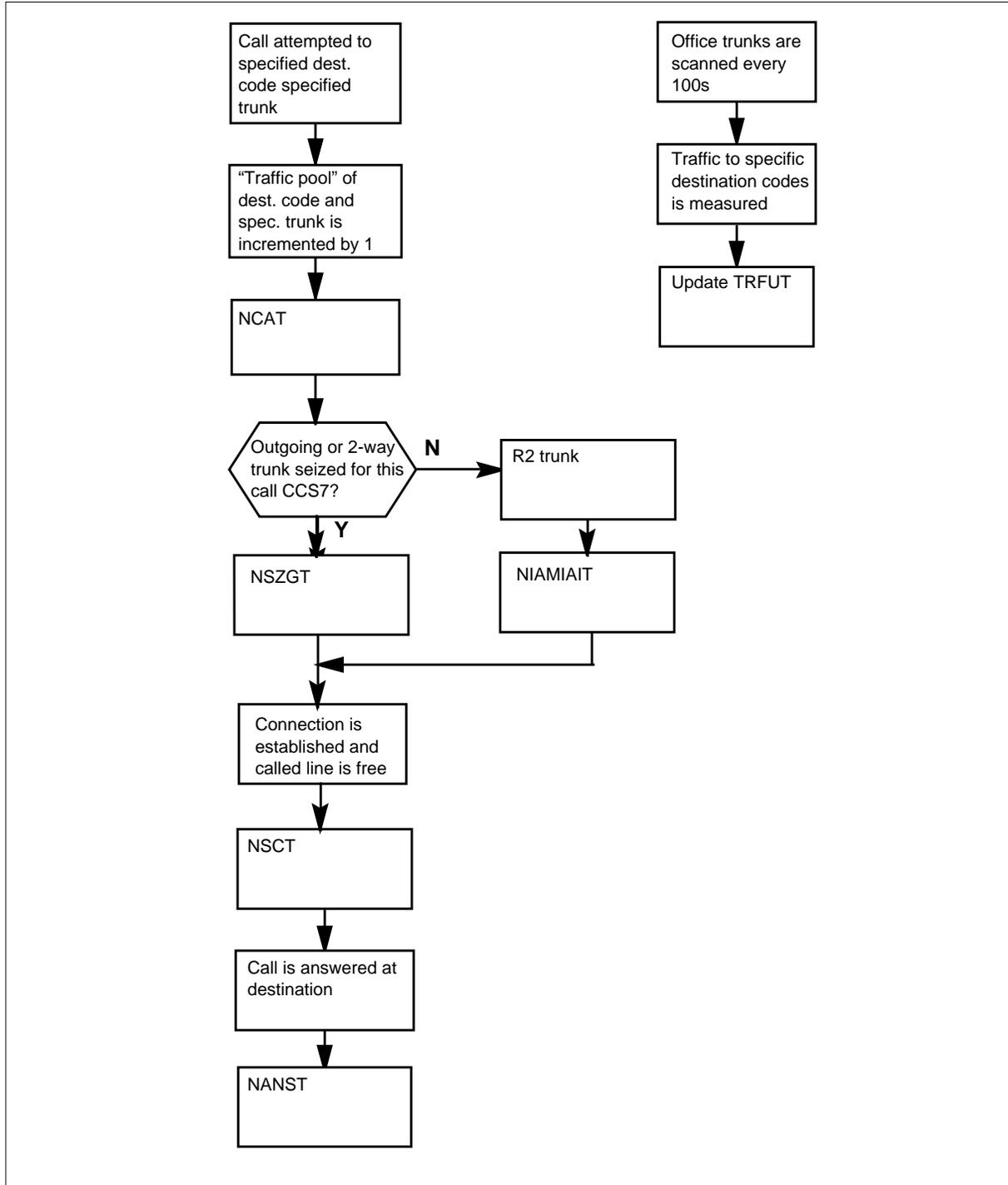
**Associated functionality codes**

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

| Functionality        | Code     |
|----------------------|----------|
| AUS Interconnect OMs | AUS00045 |

## OM group TRKDCTS (continued)

### OM group TRKDCTS registers



---

**OM group TRKDCTS** (continued)

---

**Register NANST**

Number of answered calls on a specified office trunk

NANST counts each time a call is answered after routing to the specified destination code on a specified office trunk.

**Register NANST release history**

NANST was introduced to the DMS100i product in BCS34.

NANST was introduced to the APC100 product in the APC009 release.

**Associated registers**

None

**Associated logs**

None

**Register NCAT**

Number of call attempts on specified office trunks

NCAT counts each time a call attempt routes to the specified destination code on a specified office trunk.

**Register NCAT release history**

NCAT was introduced to the DMS100i product in BCS34.

NCAT was introduced to the APC100 product in the APC009 release.

**Associated registers**

None

**Associated logs**

None

**Register NSCT**

Number of successful calls on a specified office trunk

NSCT counts each time a connection is established on the specified trunk and then a Subscriber Free line signalling message is received for the calls routed to a specified destination code.

**Register NSCT release history**

NSCT was introduced to the DMS100i product in BCS34.

## OM group TRKDCTS (continued)

---

NSCT was introduced to the APC100 product in the APC009 release.

### **Associated registers**

None

### **Associated logs**

None

## Register NSZGT

Number of seizures on a specified office trunk

NSZGT counts each time any of the non-CCS7 trunks is seized for the calls routed to a specified destination code.

### **Register NSZGT release history**

NSZGT was introduced to the DMS100i product in BCS34.

NSZGT was introduced to the APC100 product in the APC009 release.

### **Associated registers**

None

### **Associated logs**

None

## Register TRFUT

Total traffic usage of a specified office trunk

TRFUT is updated every 100[[hairsp](#)]s to record the total traffic to a specified destination code on a specified office trunk.

### **Register TRFUT release history**

TRFUT was introduced to the DMS100i in BCS34.

TRFUT was introduced to the APC100 product in the APC009 release.

### **Associated registers**

None

### **Associated logs**

None

---

**OM group TRKDCTS** (continued)

---

**Register NIAMIAIT**

Total number of IAM or IAI messages on the trunk.

This register increments for PTUP, ANSI7+, and ETSI ISUP v1 calls only.

This register is incremented for CTUP calls only.

**Register NIAMIAIT release history**

NIAMIAIT was introduced to the DMS100i product in BCS34.

NIAMIAIT was introduced to the APC100 product in the APC009 release.

**Associated registers**

None

**Associated logs**

None

**Register NNUBUBMT**

Total number of NUB or UBM messages on the trunk (pegged calls only).

This register is incremented for CTUP calls only.

This register increments for PTUP, ANSI7+, and ETSI ISUP v1 calls only.

**Register NNUBUBMT release history**

NNUBUBMT was introduced to the DMS100i product in BCS34.

NNUBUBMT was introduced to the APC100 product in the APC009 release.

**Associated registers**

None

**Associated logs**

None

**Register NNMAFAMT**

Contains the total number of messages not received after a FAM message is sent on the trunk.

This register is incremented for CTUP calls only.

This register increments for PTUP, ANSI7+, and ETSI ISUP v1 calls only.

## **OM group TRKDCTS (end)**

---

### **Register NNMAFAMT release history**

NNMAFAMT was introduced to the DMS100i product in BCS34.

NNMAFAMT was introduced to the APC100 product in the APC009 release.

### **Associated registers**

None

### **Associated logs**

None

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## OM group TRKVERDS

---

### OM descriptions

Trunk verification from a designated station (TRKVERDS)

The OM group TRKVERDS collects information about trunk verification from a designated station (TVDS) calls.

Use the TVDS feature to determine if the system can select a trunk in a trunk group. Also use this feature to determine if the trunk meets audible transmission objectives.

Seven registers count:

- attempts to activate the TVDS feature
- failures to activate the TVDS feature because:
  - the user enters a trunk group or member number that is not correct
  - not enough software resources are present
  - feature link is restricted
- TVDS features dropped by a flash of the hook switch
- trunks that are call processing busy or maintenance busy

### Release history

The OM group TRKVERDS was introduced in BCS20.

### Registers

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

|          |          |          |        |
|----------|----------|----------|--------|
| TVDSATP  | TVDSOVFL | TVDSINV  | TVDSCP |
| TVDSMANB | TVDSABDN | TVDSFAIL |        |

### Group structure

The OM group TRKVERDS provides one tuple for each office.

**Key field:**

There is no Key field.

**Info field:**

There is no Info field.

The user must datafill the trunk group number in table TVDSTRKS for the trunk group to be correct for TVDS.

## **OM group TRKVERDS** (continued)

---

### **Associated OM groups**

There are no associated OM groups.

### **Associated functional groups**

There are no associated functional groups.

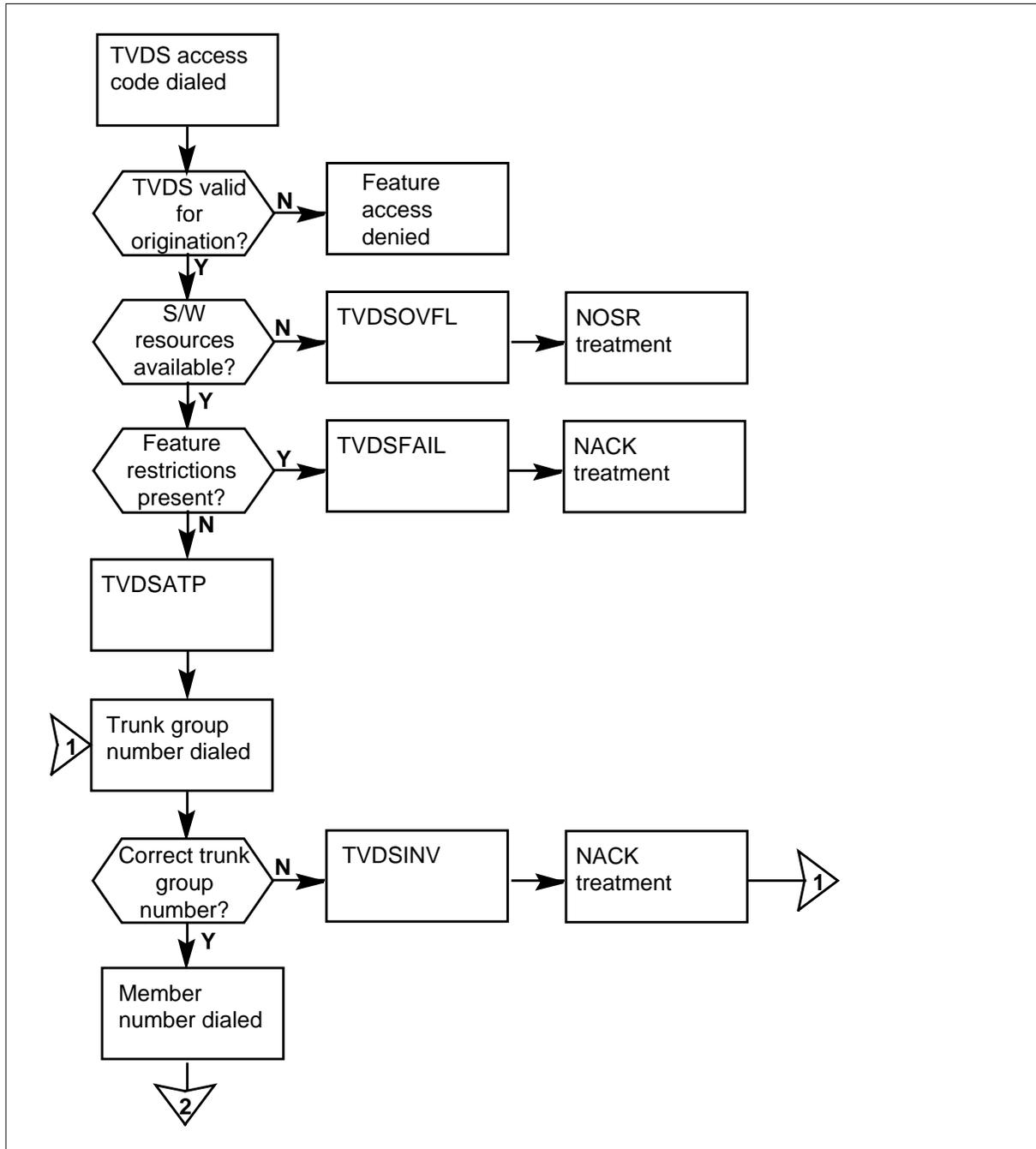
### **Associated functionality codes**

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

| <b>Functionality</b>                      | <b>Code</b> |
|---|-------------|
| IBN Trunk Verification Designated Station | NTX717AB    |

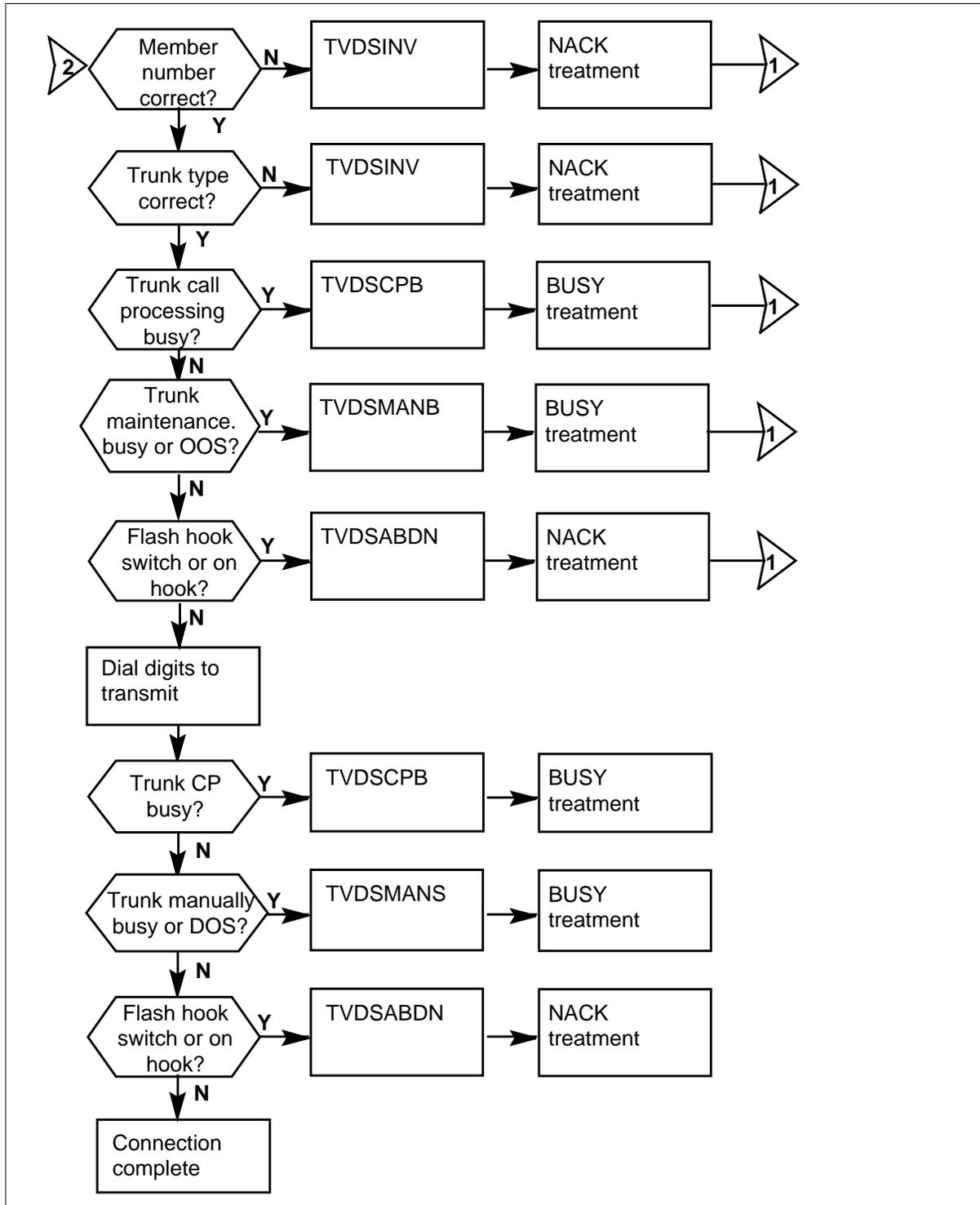
**OM group TRKVERDS (continued)**

**OM group TRKVERDS registers**



**OM group TRKVERDS (continued)**

**OM group TRKVERDS registers (continued)**



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**OM group TRKVERDS** (continued)

---

**Register TVDSABDN**

Feature abandons (TVDSABDN)

Register TVDSABDN counts trunk verifications that the user abandons when the user flashes the hook switch or goes on hook. The system drops the TVDS feature and the call.

**Register TVDSABDN release history**

Register TVDSABDN 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 TVDSATP**

Feature activation attempts (TVDSTAP)

Register TVDSATP counts attempts to activate the TVDS feature caused when users dial the access code.

Access TVDS from a 2500 set or an SL-100 Electronic Telephone Set (ETS). Both sets must be in the correct, customer-designated network class of service (NCOS) the customer designated in table NCOS.

**Register TVDSATP release history**

Register TVDSATP 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 TVDSCP**

Trunk call processing busy (TVDSCP)

## **OM group TRKVERDS** (continued)

---

Register TVDSCPB counts attempts to verify a trunk that fail because the trunk is call processing busy.

### **Register TVDSCPB release history**

Register TVDSCPB 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 TVDSFAIL**

Feature interaction restrictions (TVDSFAIL)

Register TVDSFAIL counts attempts to activate the TVDS feature that fail as a result of feature link restrictions.

### **Register TVDSFAIL release history**

Register TVDSFAIL 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 TVDSINV**

Invalid trunk group or member number (TVDSINV)

Register TVDSINV counts attempts to activate the TVDS feature that fail. Failure occurs because the trunk group number does not appear in table TVDSTRKS as a correct trunk group for TVDS.

Register TVDSINV also increases if the user enters a member number that is not correct. Register TVDSINV also increases if the user attempts to verify a trunk type that is not correct.

---

**OM group TRKVERDS** (continued)

---

The system uses TVDS to verify any central office or tie trunk that uses dial pulse, Digitone, or multifrequency signaling.

**Register TVDSINV release history**

Register TVDSINV 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 TVDSMANB**

Trunk maintenance busy (TVDSMANB)

Register TVDSMANB counts attempts to verify a trunk that fail because the trunk is maintenance busy or out of service.

**Register TVDSMANB release history**

Register TVDSMANB 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 TVDSOVFL**

Lack of software resources (TVDSOVFL)

Register TVDSOVFL counts attempts to activate the TVDS feature that fail because the system does not have enough software resources. Software resources include call condense blocks or feature data blocks.

**Register TVDSOVFL release history**

Register TVDSOVFL was introduced in BCS20.

**OM group TRKVERDS (end)**

---

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

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## OM group TRMSCRND

---

### OM description

Terminating code screened domestic (TRMSCRND)

Register TRMSCRND counts domestic calls from coin stations that the system bills to a domestic credit card. When the system screens these calls, the calls appear as compromised for domestic calls.

### Release history

The OM group TRMSCRND was introduced in BCS30.

#### BCS33

Registers TCSCCD, TCSCOLD, and TCSTHRDD replace register TCSCOMPD. The system sets register TCSCOMPD to zero.

### Registers

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



TCSCOMPD TCSCCD TCSCOLD TCSTHRDD

### Group structure

The OM group TRMSCRND provides one tuple for each office.

#### Key field:

There is no Key field.

#### Info field:

There is no Info field.

### Associated OM groups

Register TRMSCRNO counts overseas calls from coin stations that the system bills to a domestic credit card. When the system screens these calls, the calls appear as compromised for a call to that country.

### Associated functional groups

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

- DMS-200
- TOPS

---

## OM group TRMSCRND (continued)

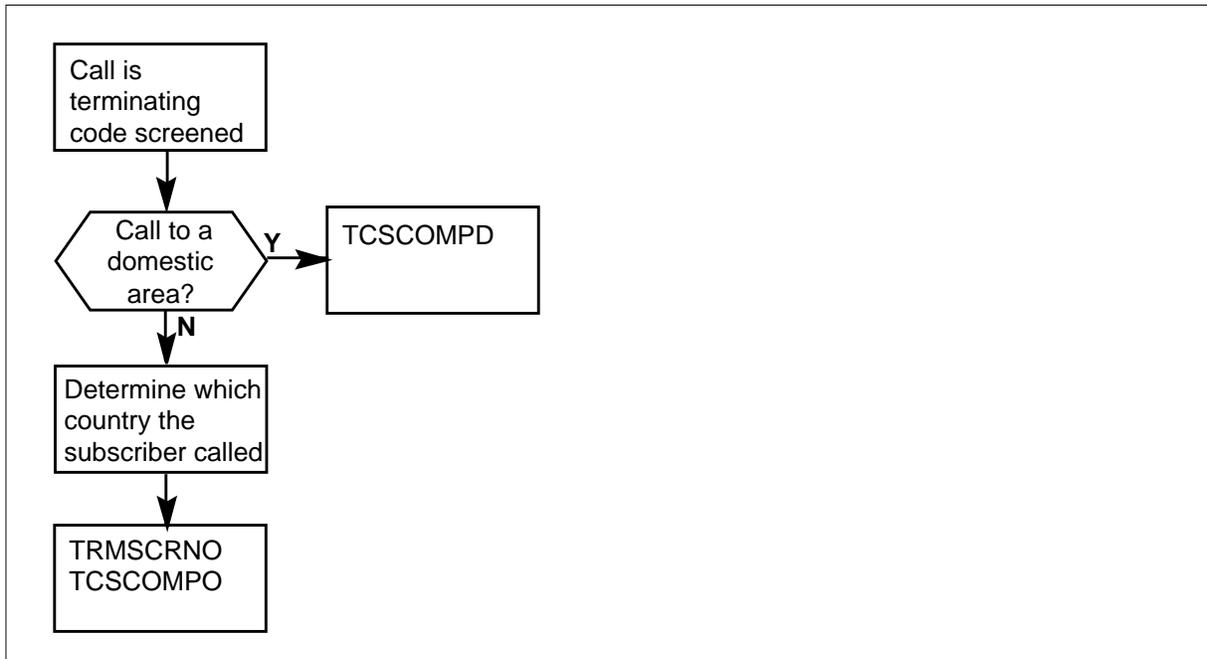
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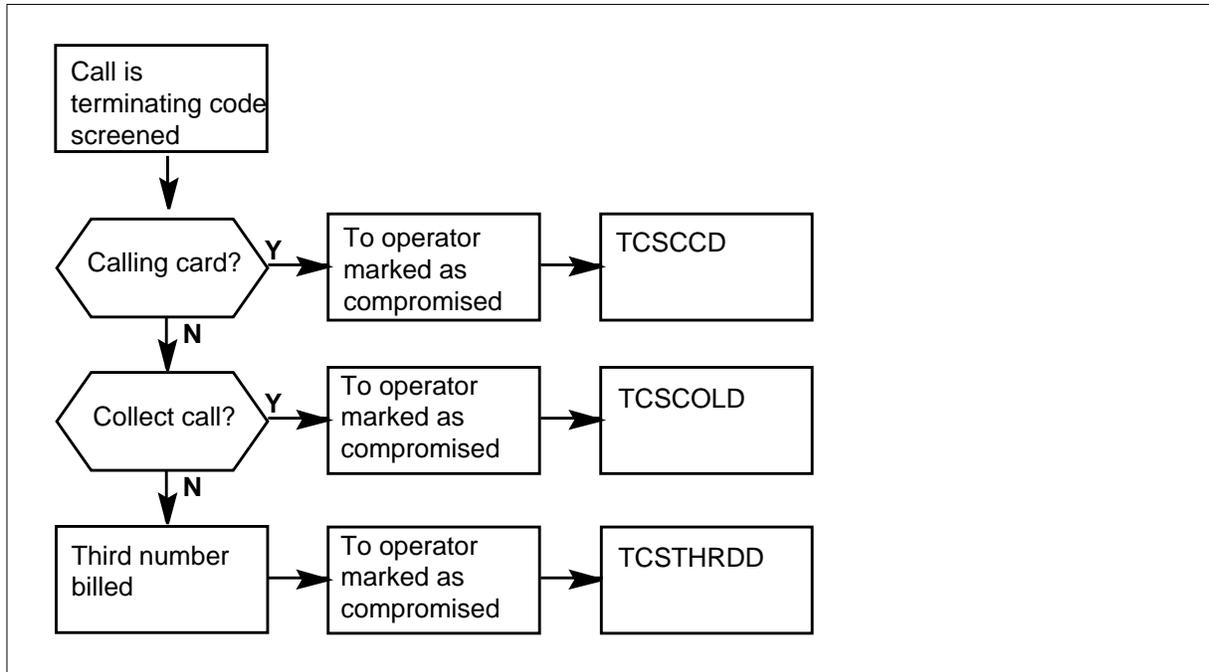
### Associated functionality codes

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

| Functionality         | Code     |
|-----------------------|----------|
| Custom Charge Calling | NTX552AB |

### OM group TRMSCRND registers



**OM group TRMSCRND (continued)****OM group TRMSCRND registers (continued)****Register TCSCCD**

Terminating code screening credit card screened domestic calls (TCSCCD)

Register TCSCCD counts the number of times the system screens the following calls for terminating codes:

- automatic calling card service or automated alternate billing service (AACS/AABS)
- operator handled calling cards

The system then sends these calls to an operator marked as compromised.

**Register TCSCCD release history**

Register TCSCCD was introduced in BCS33.

**Associated registers**

Registers TCSCOLD and TCSTHRDD

**Associated logs**

There are no associated logs.

## **OM group TRMSCRND (continued)**

---

### **Extension registers**

There are no associated extension registers.

## **Register TCSCOMPD**

Terminating code screened compromised calls (TCSCOMPD)

Register TCSCOMPD counts domestic calls from coin stations that the system bills to a domestic credit card. When the system screens these calls, the calls appear as compromised for domestic calls. The system routes the call to a TOPS position.

### **Register TCSCOMPD release history**

Register TCSCOMPD was introduced in BCS30.

#### **BCS33**

Register set to zero.

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates TOPS116 when a terminating code screened call appears as compromised.

### **Extension registers**

There are no extension registers.

## **Register TCSCOLD**

Terminating code screening collect screened domestic calls (TCSCOLD)

Register TCSCOLD counts the number of times the system screens the following calls for terminating codes:

- operator-handled calls
- automated alternate billing services (AABS) collect calls

The system then sends these calls to an operator marked as compromised.

### **Register TCSCOLD release history**

Register TCSCOLD was introduced in BCS33.

### **Associated registers**

Register TCSCCD and TCSTHRDD

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**OM group TRMSCRND (end)**

---

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register TCSTHRDD**

Terminating code screening third number billing screened domestic calls (TCSTHRDD)

Register TCSTHRDD counts the number of times the system screens the following calls for terminating codes:

- operator-handled calls
- automated alternate billing services (AABS) third-number billed calls

The system then sends these calls to an operator marked as compromised.

**Register TCSTHRDD release history**

Register TCSTHRDD was introduced in BCS33.

**Associated registers**

Register TCSCCD and TCSCOLD

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

## OM group TRMSCRNO

---

### OM description

Terminating code screened overseas (TRMSCRNO)

The OM group TRMSCRNO counts overseas calls from coin stations that the system bills to a domestic credit card. When the system screens the credit card, the credit card is compromised for a call to that country.

### Release history

The OM group TRMSCRNO was introduced in BCS30.

#### BCS33

Registers TCSCCO, TCSCOLO and TCSTHRDO replace register TCSCOMPO. Register TCSCOMPO set to zero.

### Registers

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



### Group structure

The OM group TRMSCRNO provides one tuple for each key.

#### Key field:

COUNTRY\_NUMBER\_STRING\_RANGE is the name of the called overseas country as given in field COUNTRY\_NAME in table OVSBILL.

#### Info field:

There is no info field.

### Associated OM groups

The OM group TRMSCRND counts domestic calls from coin stations that the system bills to a domestic credit card. When the system screens the credit card, the credit card is compromised for domestic calls.

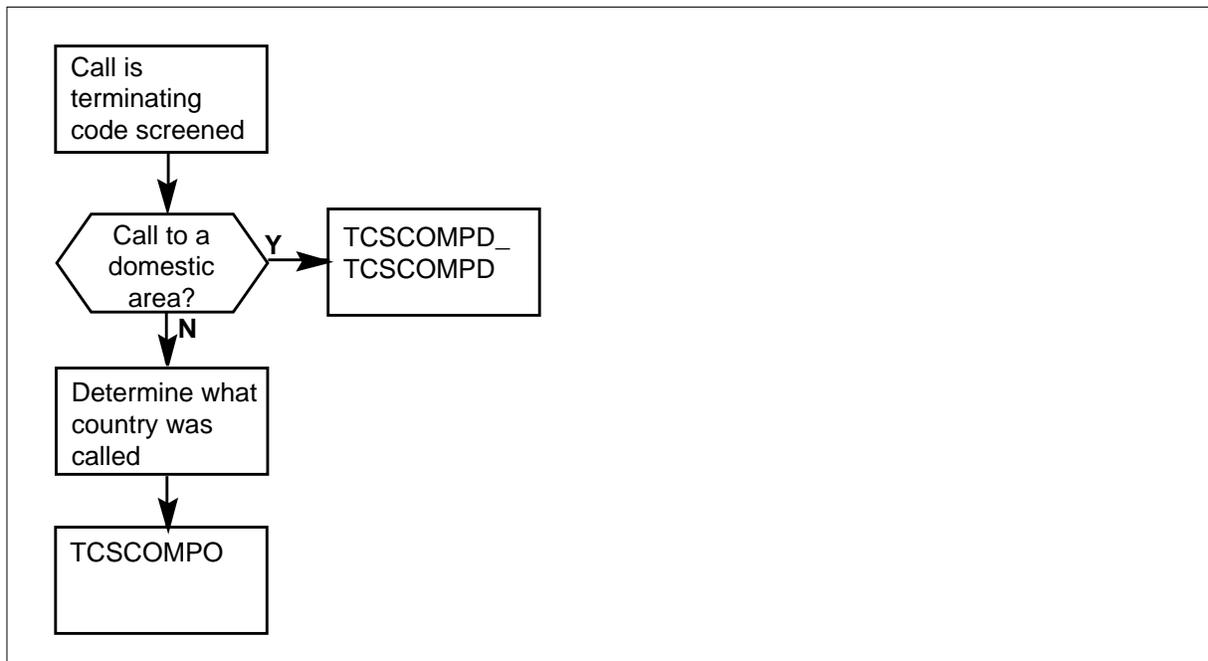
### Associated functional groups

The functional groups DMS-20 and TOPS associate with OM group TRMSCRNO.

**OM group TRMSCRNO** (continued)**Associated functionality codes**

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

| Functionality         | Code     |
|-----------------------|----------|
| Custom Charge Calling | NTX552AB |

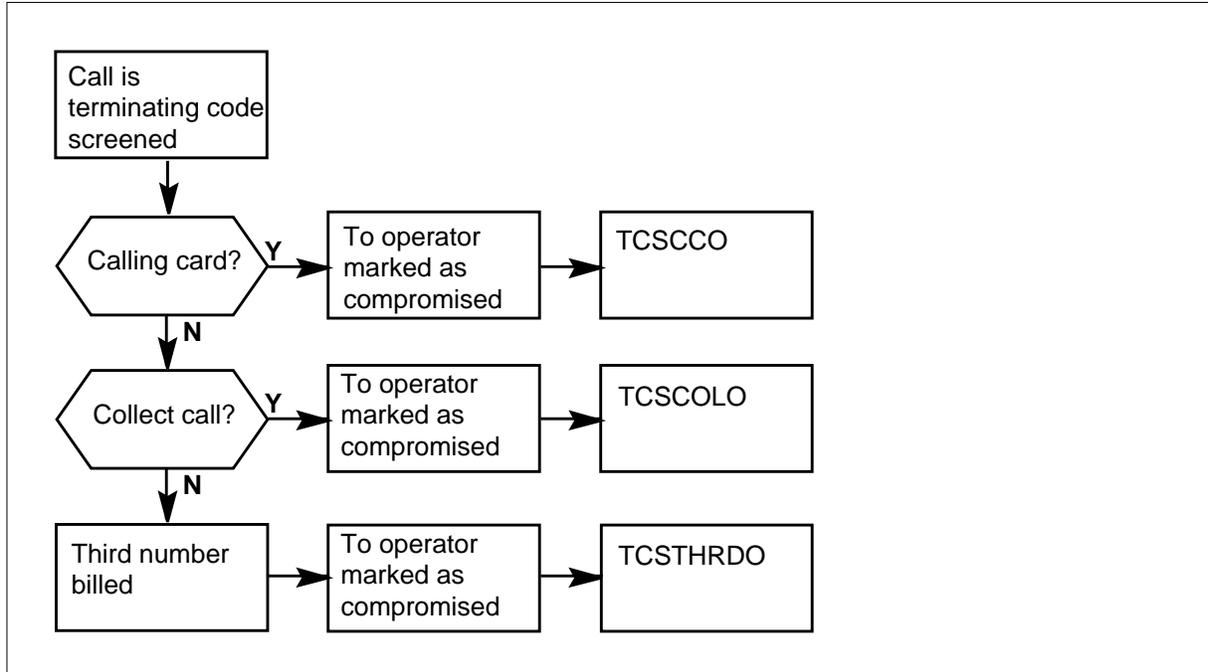
**OM group TRMSCRNO registers**

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## OM group TRMSCRNO (continued)

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### OM group TRMSCRNO registers (continued)



### Register TCSCCO

Terminating code screening credit card screened overseas calls (TCSCCO)

Register TCSCCO counts the number of times the following are terminating code screened:

- automatic calling card service/automated alternate billing service (AACS/AABS) calling cards
- operator-handled calling cards

The register counts the number of times the system sends these to the operator marked as compromised.

### Register TCSCCO release history

Register TCSCCO was introduced in BCS33.

### Associated registers

Registers TCSCOLO and TCSTHRDO were introduced.

### Associated logs

There are no associated logs.

---

**OM group TRMSCRNO** (continued)

---

**Extension registers**

There are no extension registers.

**Register TCSCOMPO**

Terminating code screened compromised calls (TCSCOMPO)

Register TCSCOMPO counts overseas calls from coin stations that the system bills to a domestic credit card. When the system screens the credit card, the credit card is compromised for a call to that country. The system routes the call to a TOPS position.

**Register TCSCOMPO release history**

Register TCSCOMPO was introduced in BCS30.

**BCS33**

Register is set to zero.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates TOPS116 when a terminating code screened call is compromised.

**Extension registers**

There are no extension registers.

**Register TCSCOLO**

Terminating code screening collect screened overseas calls (TCSCOLO)

Register TCSCOLO counts the number of times the following are terminating code screened:

- operator-handled collect calls
- automated alternate billing service (AABS) collect calls

The register counts the number of times the system sends these to the operator marked as compromised.

**Register TCSCOLO release history**

Register TCSCOLO was introduced in BCS33.

## **OM group TRMSCRNO (end)**

---

### **Associated registers**

TCSCCO and TCSTHRDO

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register TCSTHRDO**

Terminating code screening third number billing screened overseas calls (TCSTHRDO)

Register TCSTHRDO counts the number of times the following are terminating code screened:

- operator handled third number calls
- automated alternate billing services (AABS) third number calls

The register counts the times the system sends these calls to an operator marked as compromised.

### **Register TCSTHRDO release history**

Register TCSTHRDO was introduced in BCS33.

### **Associated registers**

Registers TCSCCO and TCSCOLO were introduced.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

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## OM group TRMTCM

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### OM description

Customer miscellaneous treatment (TRMTCM)

The OM group TRMTCM counts calls that the system routes to a treatment. The treatment is a result of a customer action, but does not relate to authorization.

The OM group TRMTCM contains one register for each call treatment. The registers are named TCMaaaa, where aaaa is the external treatment abbreviation. The register increases when the system routes a call through the treatment.

### Release history

The OM group TRMTCM was introduced before BCS20.

#### GL04

DMS-100G was added to the following register descriptions: TCMANCT, TCMBLDN, TCMDISC, TCMPDIL, TCMPSIG, and TCMVACT. Treatment added for DMS-100G switch.

#### BCS36

Performance for DMS-100 international switches added.

#### BCS31

Register TCMRING was introduced.

#### BCS29

Registers TCMN9DF, TCMN9OB, and TCMN9NS were introduced.

#### BCS28

Register TCMVPFX was introduced.

#### BCS27

Register TCMNTRS, TCMCREJ, TCMUPAB, and TCMCNAD were introduced.

#### BCS26

Registers TCMCHAN and TCMCHAF were introduced.

### Registers

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

**OM group TRMTCM** (continued)

|          |         |         |         |
|----------|---------|---------|---------|
| TCMUNDT  | TCMPDIL | TCMPSIG | TCMVACT |
| TCMUNDN  | TCMBLDN | TCMOPRT | TCMTRBL |
| TCMANCT  | TCMDISC | TCMATBS |         |
| TCMTDBR  | TCMVACS | TCMANTO | TCMCFWV |
| TCMVCCT  | TCMATDT | TCMCBTN | TCMCHAN |
| TCMCHAF  | TCMOSVR | TCMNC8F | TCMNTRS |
| TCMNCREJ | TCMUPAB | TCMCNAD | TCMVAFX |
| TCMN9DF  | TCMN9OB | TCMN9NS | TCMRING |

The following treatments apply to DMS-100 local switching offices: UNDT, PDIL, PSIG, VACT, UNDN, BLDN, OPRT, TRBL, ANCT, DISC, TDBR, CFWV, and RING.

The following treatments apply to DMS-100 international switching offices: UNDT, PDIL, PSIG, VACT, BLDN, TRBL, ANCT, and DISC.

The following treatments apply to DMS-200 toll switching offices: UNDT, PDIL, PSIG, VACT, and UNDN.

The following treatments apply to DMS-100/200 combined local and toll switching offices: UNDT, PDIL, PSIG, VACT, UNDN, BLDN, OPRT, TRBL, ANCT, DISC, TDBR, CFWV, and RING.

The following treatments apply to DMS-300 gateway switching offices: PDIL, PSIG, VACT, and UNDN.

The following treatments apply to DMS-250 tandem switching offices for common carriers: PDIL, PSIG, VACT, VACS, VCCT, ATDT, OSVR, N9DF, N9OB, and N9NS.

The following treatments apply to DMS-MTX Mobile telephone exchanges: UNDT, PDIL, PSIG, VACT, BLDN, and ANTO.

The following treatments apply to originating screening offices with Enhanced 800 Service: CHAN and CHAF.

**Group structure**

The OM group TRMTCM provides one tuple for each office.

Table TMTCNTL defines all treatments.

The operating company uses sub-table TMTCNTL.TREAT to define the tones, announcements and states that the system returns to the originator of a call.

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**OM group TRMTCM** (continued)

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The system returns the tones, announcements and states when the system encounters a specified treatment code during call translation. If a treatment code does not apply to an office type, the treatment is redundant and must be set to overflow or to a like tone.

Table OFRT lists the sequence of tones, announcements and states the system must return to the originator of a call. The system returns the tones, announcements, and states when the system encounters a specified treatment code during call translation.

Table CLLI defines the common language location identifier (CLLI) of each tone and announcement. The system also defines each treatment CLLI in one of the following tables:

- Table TONES defines the CLLI for software-generated tones.
- Table STN defines the CLLI for hardware-generated tones.
- Table ANNS defines the CLLI for recorded announcements.
- Table DRAMS defines the CLLI for digital recorded announcements.

The system does not define the following treatment CLLI:

- fixed treatment CLLIs
- IDLE (idle)
- LKOUT (lockout)
- and COPP (cutoff on permanent signal and partial dial)

A call can terminate in a specified treatment code, because the operating-company-supplied translations lead the call to a treatment. A call can terminate in a specified treatment code because the DMS switch detects fixed conditions. The DMS switch and prescribes a treatment code without reference to the operating company translations. These conditions are not a normal set of conditions and prevent the completion of the call.

The treatment code is occasionally part of a normal call completion process. The normal call process includes, for example, an announcement to the originator before the call is complete.

While the DMS translates a call, the DMS can determine if the call must terminate in a specified treatment call. When the DMS determines that the call must terminate in a specified treatment code, the DMS accesses sub-table TRTCNTL.TREAT. The DMS determines the tone, announcement, or state that the system returns to the originator. The DMS also determines the route

## OM group TRMTCM (continued)

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in table OFRT that lists the sequence of tones, announcements, and/or states to return to the originator.

**Key field:**

There is no key field.

**Info field:**

There is no info field.

### Associated OM groups

The OM group TRMTCU counts calls that the system routes to a treatment. The treatment notifies the subscriber that the action is not correct for reasons of authorization.

The OM group TRMTCU2 is an extension of OM group TRMTCU. The OM group TRMTCU2 counts calls that the system routes to a treatment. The treatment notifies the subscriber that the action is not correct for reasons of authorization.

The OM group TRMTER counts calls that the system routes to a treatment of a failure caused by a switching equipment problem.

The OM group TRMTFR counts calls that the system routes to a treatment that is a normal sequence of a call.

The OM group TRMTFR2 is an extension of OM group TRMTFR and counts the same type of calls.

The OM group TRMTRS counts calls that the system routes to a treatment because of a failure. Not enough software or hardware resources causes the failure.

### Associated functional groups

The following functional groups associate with OM group TRMTCM:

- DMS-100 local
- DMS-200 toll
- DMS-100/200 combined local and toll
- DMS-300 international gateway for North America
- DMS-250 tandem switching office for common carriers
- DMS-MTX mobile telephone exchange

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**OM group TRMTCM** (continued)
 

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**Associated functionality codes**

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

| Functionality | Code     |
|---------------|----------|
| Common Basic  | NTX001AA |

**Register TCMANCT**

Machine intercept (ANCT) treatment (TCMANCT)

The DMS-100 local, DMS-100G, international, and DMS-100/200 local/toll offices use register TCMANCT. Register TCMANCT counts calls that the system routes to ANCT treatment. The system routes the calls to treatment because the directory number that the caller dials is not connected. The directory number that the caller dials is out of service.

**Register TCMANCT release history**

Register TCMANCT was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates LINE138 if the system routes a call to treatment after being call processing busy.

The system generates TRK138 if the system routes a call to treatment after being call processing busy.

**Register TCMANTO**

Answer timeout (ANTO) treatment (TCMANTO)

For DMS-MTX offices, TCMANTO counts calls that the system routes to ANTO treatment. The system routes the call to treatment because the called party did not answer before ANTO.

**Register TCMANTO release history**

Register TCMANTO was introduced before BCS20.

**Associated registers**

There are no associated registers.

## **OM group TRMTCM** (continued)

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### **Associated logs**

The system generates LINE138 if the system routes a call to treatment after being call processing busy.

The system generates TRK138 if the system routes a call to treatment after being call processing busy.

## **Register TCMATBS**

Attendant busy (ATBS) treatment (TCMATBS)

Register TCMATBS is not in use. The system handles Meridian Digital Centrex (MDC) treatments in table AUDIO.

### **Register TCMATBS release history**

Register TCMATBS was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCMATDT**

Audio tone detector timeout (ATDT) treatment (TCMATDT)

For DMS-250 tandem offices, TCMATDT counts calls that the system routes to ATDT treatment because a calling subscriber remained off-hook. The calling subscriber remained off-hook long enough for the audio tone detector default timer to time out. The system disconnects calling subscriber on the completion of the treatment, and the system does not bill the call.

### **Register TCMATDT release history**

Register TCMATDT was introduced in BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates TRK138 if the system routes a call to treatment after being call processing busy.

## **Register TCMBLDN**

Blank directory number (BLDN) treatment (TCMBLDN)

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**OM group TRMTCM** (continued)

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The DMS-100 local, DMS-100G, international, DMS-100/200 local/toll, and DMS-MTX offices use register TCMBLDN. Register TCMBLDN counts calls that the system routes to BLDN treatment. The system routes the calls to treatment when the caller dials a directory number the system did not assign.

**Register TCMBLDN release history**

Register TCMBLDN was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates LINE138 if the system routes a call to treatment after being call processing busy.

The system generates TRK138 if the system routes a call to treatment after being call processing busy.

**Register TCMCBTN**

Clearback tone (CBTN) treatment (TCMCBTN)

Register TCMCBTN counts calls that the system routes to CBTN treatment for reasons the licensee assigns.

This register supports the integration of software loads that are licensee-specific.

**Register TCMCBTN release history**

Register TCMCBTN was introduced in BCS22.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCMCFWV**

Variable call forwarding verification (CFWV) treatment (TCMCFWV)

The DMS-100 local, and DMS-100/200 local/toll offices use register TCMCFWV. Register TCMCFWV counts calls that the system routes to variable CFWV treatment. The system routes the call to treatment because a subscriber with the Variable Call Forwarding feature dials the activation code.

## **OM group TRMTCM** (continued)

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The subscriber dials the call forwarding activation code while call forwarding is already active on a line.

### **Register TCMCFWV release history**

Register TCMCFWV was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates LINE138 if the system routes a call to treatment after being call processing busy.

The system generates TRK138 if the system routes a call to treatment after being call processing busy.

## **Register TCMCHAF-Canada only**

Changed 800 number forward (CHAF) treatment (TCMCHAF)

For originating screening office with enhanced 800 service, TCMCHAF counts calls that the system routes to CHAF treatment. The system routes calls to treatment because the response from the operating company (Bell Canada) database is Changed 800 Number - Treatment 2.

The system routes the calling subscriber to national directory assistance.

### **Register TCMCHAF release history**

Register TCMCHAF was introduced in BCS22.

### **Associated registers**

Register TCMCHAN counts calls that the system routes to CHAF treatment. The system routes calls to treatment because the response from the operating company (Bell Canada) database is Changed 800 Number-Treatment 1. The system routes the calling subscriber to an announcement that states the dialed 800 number has changed. The announcement advises the subscriber to check the number before the subscriber dials again.

### **Associated logs**

There are no associated logs.

## **Register TCMCHAN-Canada only**

Changed 800 number announcement (CHAN) treatment (TCMCHAN)

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**OM group TRMTCM** (continued)

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For originating screening offices with enhanced 800 service, TCMCHAN counts calls that the system routes to CHAN announcement treatment. The system routes calls to treatment because the response from the operating company (Bell Canada) database is Changed 800 Number-Treatment 1.

The system routes the calling subscriber to an announcement that states the dialed 800 number has changed. The announcement advises the subscriber to check the number before the subscriber dials again.

**Register TCMCHAN release history**

Register TCMCHAN was introduced in BCS22.

**Associated registers**

Register TCMCHAF counts calls that the system routes to CHAN treatment. The system routes calls to treatment because the response from the operating company (Bell Canada) database is Changed 800 Number-Treatment 2.

The system routes the calling subscriber to national directory assistance.

**Associated logs**

There are no associated logs.

**Register TCMCNAD**

Call not allowed (CNAD) treatment (TCMCNAD)

Register TCMCNAD counts calls that the system routes to CNAD treatment.

For example, for private virtual network calls, TCMCNAD counts calls that the system routes to CNAD treatment. The system routes the calls to treatment because the calling party does not have access to a database.

**Register TCMCNAD release history**

Register TCMCNAD was introduced in BCS27.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCMNCREJ**

Call rejected (NCREJ) treatment (TCMNCREJ)

## **OM group TRMTCM** (continued)

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Register TCMNCREJ counts calls that the system routes to CREJ treatment.

For example, for integrated services digital network (ISDN), TCMNCREJ counts calls that the system routes to CREJ treatment. The system routes the call to treatment because a functional terminal rejects the call.

### **Register TCMNCREJ release history**

Register TCMNCREJ was introduced in BCS27.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCMDISC**

Disconnect timing (DISC) treatment (TCMDISC)

For DMS-100 local, DMS-100G, international, and DMS-100/200 local/toll offices, TCMDISC counts calls that the system routes to DISC treatment. The system routes the calls to treatment for one of the following reasons:

- the subscriber fails to go on-hook within 10 s after the other party terminates the call
- the call disconnects by force from a centralized automatic message accounting (CAMA) position that a non-TOPS switching office serves
- the called party does not answer a direct dialing overseas call within 5 min of set up
- an origination (caused by a hardware failure) comes from an outgoing emergency service office (911) trunk

### **Register TCMDISC release history**

Register TCMDISC was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates LINE138 if the system routes a call to treatment after being call processing busy.

The system generates TRK138 if the system routes a call to treatment after being call processing busy.

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**OM group TRMTCM** (continued)

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**Register TCMNC8F**

Network control system (NCS) 800 service failure (NC8F) treatment (TCMNC8F)

For DMS-250 tandem offices, TCMNC8F counts calls that the system routes to NC8F treatment. The system routes the calls to treatment because an NCS 800 service failure occurs for one of the following reasons:

- 800 number not found (action code 20)
- 800 number out of band (action code 21)
- 800 number not in service (action code 22)

**Register TCMNC8F release history**

Register TCMNC8F was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCMNTRS**

No terminal responding (NTRS) treatment (TCMNTRS)

Register TCMNTRS increases when the system routes a call to NTRS treatment.

For example, for integrated services digital network (ISDN), TCMNTRS counts calls that the system routes to CREJ treatment. The system routes the call to treatment because an operating terminal does not respond to a call.

**Register TCMNTRS release history**

Register TCMNTRS was introduced in BCS27.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCMN9DF**

Network Control System (NCS) 900 database failure (N9DF) treatment (TCMN9DF)

## **OM group TRMTCM** (continued)

---

For DMS-250 tandem offices, TCMN9DF counts calls that the system routes to N9DF treatment. The system routes the calls to treatment because the 900 number dialed is not in the NCS database. The subscriber receives an announcement or reorder tone to indicate that the system cannot complete the 900 call as dialed.

### **Register TCMN9DF release history**

Register TCMN9DF was introduced in BCS29.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCMN9NS**

Network Control System (NCS) 900 not in service (N9NS) treatment (TCMN9NS)

For DMS-250 tandem offices, TCMN9NS counts calls that the system routes to N9NS treatment. The system routes the calls to treatment because the 900 number that the caller dials is not in service. The subscriber receives an announcement or reorder tone to indicate that the system cannot complete the 900 call as dialed.

### **Register TCMN9NS release history**

Register TCMN9NS was introduced in BCS29.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCMN9OB**

Network Control System (NCS) 900 out-of-band (N9OB) treatment (TCMN9OB)

For DMS-250 tandem offices, TCMN9OB counts calls that the system routes to N9OB treatment. The system routes calls to treatment because the 900 number that the caller dials is not accessible from the calling area. The subscriber receives an announcement or reorder tone. The announcement or tone indicates that the 900 call is out of band from where the call originated.

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**OM group TRMTCM** (continued)

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**Register TCMN9OB release history**

Register TCMN9OB was introduced in BCS29.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCMOPRT**

Regular operator intercept (OPRT) treatment (TCMOPRT)

For DMS-100 local and DMS-100/200 local/toll offices, TCMOPRT counts calls that the system routes to the operator. The system routes the calls to the operator because the system disconnects directory number dialed. The system also routes the calls to the operator because the number is out of service.

**Register TCMOPRT release history**

Register TCMOPRT was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates LINE138 if the system routes a call to treatment after being call processing busy.

The system generates TRK138 if the system routes a call to treatment after being call processing busy.

**Register TCMOSVR**

Operator services voice response (OSVR) treatment (TCMOSVR)

The following, with the Auxiliary Operator Services System (AOSS) Voice Response Extended Call Handling feature, use register TCMOSVR:

- DMS-100 local
- DMS-200 toll
- DMS-100/200 local/toll

## **OM group TRMTCM** (continued)

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Register TCMOSVR counts calls that the system routes to OSVR treatment for one of the following reasons:

- on a directory assistance Operator Number Identification call, the operator entered the calling number at the AOSS console. The operator searched for the requested directory number. The operator connected the subscriber to the audio response unit (ARU) for voice response.
- on a directory assistance automatic number identification (ANI) call, the ANI equipment provides the calling number to the DMS switch. The operator searched for the requested directory number, and connected the subscriber to the ARU for voice response.
- on an operator-handled intercept call, the operator collected the called number. The operator initiated a search for a possible new number, and connected the subscriber to the ARU for voice response.

The system routes the AOSS call to an internal or external ARU.

The system can connect the subscriber to the operator again. The system can connect the subscriber if the subscriber stays on the line after the subscriber listens to the announcement.

### **Register TCMOSVR release history**

Register TCMOSVR was introduced in BCS23.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCMPDIL**

Partial dial timeout (PDIL) treatment (TCMPDIL)

The DMS-100 local, DMS-100G, international, DMS-200 toll, DMS-100/200 local/toll, DMS-250 tandem, and DMS-MTX offices use register TCMPDIL. Register TCMPDIL counts calls the system routes to PDIL treatment. The system routes calls to treatment because the system received at least one digit, but not enough digits to complete the call.

The system can receive a multifrequency (MF) key pulse signal on a call on an MF trunk. If the system receives the key pulse signal, the system routes the call to PDIL treatment.

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**OM group TRMTCM** (continued)

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If the system does not receive an MF start (ST) signal on a call on an MF trunk, the system routes the call to PDIL treatment. The system can receive the ST signal that is not correct in the environment of the call. When this condition occurs, the system routes the call to reorder (RODR) treatment.

For DMS-300 gateway offices, register TCMPDIL counts calls that the system routes to PDIL treatment.

The system routes a call incoming on a private line or on an international 101 test line to PDIL treatment. The system routes the call for one of the following reasons:

- the call fails during digit collection
- a lack of digits prevents the completion of the translation
- the terminating exchange received an ST signal and timed out while waiting for enough digits to complete the call

The system routes a call incoming on an R1 signaling trunk to PDIL treatment for one of the following reasons:

- a lack of digits prevents the completion of the translation
- the terminating exchange received an ST signal and timed out while waiting for enough digits to complete the call

The system routes a call outgoing on a 6 signaling trunk to PDIL treatment. The system routes the call to treatment if the terminating exchange received an ST signal and timed out. The terminating exchange times out while waiting for enough digits to complete the call.

**Register TCMPDIL release history**

Register TCMPDIL was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates LINE138 if the system routes a call to treatment after being call processing busy.

The system generates TRK138 if the system routes a call to treatment after being call processing busy.

**Register TCMPSIG**

Permanent signal timeout (PSIG) treatment (TCMPSIG)

## **OM group TRMTCM** (continued)

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The DMS-100 local, DMS-100G, international, DMS-200 toll, and DMS-100/200 local/toll offices use register TCMPSIG. Register TCMPSIG counts calls that the system routes to PSIG treatment. The system routes calls to treatment because the system does not receive digits before timeout.

When the system receives distorted signals, the system routes the calls to reorder (RODR) treatment.

For DMS-300 gateway offices, TCMPSIG counts calls that the system routes to PSIG treatment.

The system routes a call incoming on an R1 signaling trunk to PSIG treatment for one of the following reasons:

- the system receives a key pulse (KP) signal that is not correct during digit collection
- the receiver times out while the receiver waits for digits during digit collection
- KP1, or KP2 signals are not present during translation verification

The system routes a call incoming on a private line or an international 101 test line to PSIG treatment. The system routes the call to treatment if the receiver times out while the receiver waits for digits during digit collection.

For DMS-250 tandem and DMS-MTX offices, TCMPSIG counts calls that the system routes to PSIG treatment. The system routes a call originating on an incoming or two-way trunk to PSIG treatment. The system routes a call to treatment because the caller does not dial digits in the period specified. Trunk subgroup parameter PSPDSEIZ specifies the period.

### **Register TCMPSIG release history**

Register TCMPSIG was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates LINE138 if the system routes a call to treatment after being call processing busy.

The system generates TRK138 if the system routes a call to treatment after being call processing busy.

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**OM group TRMTCM** (continued)

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**Register TCMRING**

No terminal responding-release call (RING) treatment (TCMRING)

For DMS-100 local and DMS-100/200 local/toll offices, TCMRING counts calls that the system routes to RING treatment. The system routes an ISDN user part to basic rate access (ISUP-to-BRA) call to RING treatment when:

- timer T310 expires
- the originator of the call is an ISDN party
- audible ringing is not already in progress for the call

**Register TCMRING release history**

Register TCMRING was introduced in BCS31.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCMTDBR**

Test desk bridged (TDBR) treatment (TCMTDBR)

For DMS-100 local and DMS-100/200 local/toll offices, TCMTDBR counts calls that the system routes to TDBR treatment. The system routes the calls to treatment for one of the following reasons:

- An AT&T mechanized loop tester connects to a line that has one of these options activated:
  - suspended service (SUS)
  - remote suspended service (RSUS)
  - plug up (PLP)
  - remote make busy (RMB)

The test desk closes the tip and ring loop, or the line goes off-hook.

- A No. 14 local test desk signaling type trunk (trunk group type TD) connects in idle bridge mode to a line. This line has one of the options SUS, RSUS, PLP, or RMB activated.

**Register TCMTDBR release history**

Register TCMTDBR was introduced before BCS20.

## **OM group TRMTCM** (continued)

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### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates LINE138 if the system routes a call to treatment after being call processing busy.

The system generates TRK138 if the system routes a call to treatment after being call processing busy.

## **Register TCMTRBL**

Trouble intercept (TRBL) treatment (TCMTRBL)

For DMS-100 local and DMS-100/200 local/toll offices, TCMTRBL counts calls that the system routes to TRBL treatment. The system routes the calls to treatment for one of the following reasons:

- An incoming operator (trunk group type IO) originates a check call to a busy line that has the plug-up (PLP) option. The PLP option is assigned in table LENLINES or IBNLINES.
- A test desk (trunk group type TD) position tries to use a directory number dialing to post a line. The line has the PLP option assigned in table LENLINES or IBNLINES.
- A call originates from a line or trunk to a line that has the PLP option assigned in table LENLINES or IBNLINES.

### **Register TCMTRBL release history**

Register TCMTRBL was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCMUNDN**

Unassigned directory number (UNDN) treatment (TCMUNDN)

The DMS-100 local, international, DMS-200 toll, and DMS-100/200 local/toll offices use the register TCMUNDN. Register TCMUNDN counts calls that the system routes to the UNDN treatment. The system routes the calls to treatment because, for the digits dialed, the operating company specifies

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**OM group TRMTCM** (continued)

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treatment UNDN. Treatment UNDN is in field TRMT in table THOUGRP, AVTHGRP, or WRDN.

For DMS-300 gateway offices, TCMUNDN counts calls that the system routes to treatment UNDN.

The system routes the following calls to treatment:

- calls incoming on a private line
- calls incoming on an R1 signaling trunk
- calls incoming on an international 101 test line
- calls outgoing on a No. 6 signaling trunk

The system routes the calls to treatment UNDN if the terminating exchange determines the national number received is not in use. While the call connects, the system determines the number is not in use. The system must reach the subscriber by another number.

**Register TCMUNDN release history**

Register TCMUNDN was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates LINE138 if the system routes a call to treatment after being call processing busy.

The system generates TRK138 if the system routes a call to treatment after being call processing busy.

**Register TCMUNDT**

Unidentified (UNDT) treatment (TCMUNDT)

For DMS-100 local, DMS-200 toll, DMS-100/200 local/toll, and DMS-MTX offices, UNDT is the default value for entries in field TREAT. Field TREAT is in tables CLSVSCRC and PFXTREAT when treatment is not required.

**Register TCMUNDT release history**

Register TCMUNDT was introduced before BCS20.

**Associated registers**

There are no associated registers.

## **OM group TRMTCM** (continued)

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### **Associated logs**

There are no associated logs.

### **Register TCMUPAB**

Universal public access blocked (UPAB) treatment (TCMUPAB)

Register TCMUPAB counts calls that the system routes to UPAB treatment. Universal public access includes telephones for use without coins, coin telephones, and hotel/motel telephones.

### **Register TCMUPAB release history**

Register TCMUPAB was introduced in BCS27.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Register TCMVACS**

Vacant speed number (VACS) treatment (TCMVACS)

For DMS-250 tandem offices, TCMVACS counts calls that the system routes to VACS treatment. The system routes calls to treatment because the number has a speed number format but is not in the database.

### **Register TCMVACS release history**

Register TCMVACS was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates LINE138 if the system routes a call to treatment after being call processing busy.

The system generates TRK138 if the system routes a call to treatment after being call processing busy.

### **Register TCMVACT**

Vacant code (VACT) treatment (TCMVACT)

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**OM group TRMTCM** (continued)

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The DMS-100 local, DMS-100G, international DMS-200 toll, and DMS-100/200 local/toll offices use register TCMVACT. Register TCMVACT counts calls that the system routes to VACT treatment for one of the following reasons:

- A line dials:
  - a toll terminating center code
  - an operator code
  - a terminating inward wide area telephone service (INWATS) number
  - a tandem INWATS number
  - a numbering plan area (NPA) + NPA code
  - a number that is specified in sub-table FNPACODE as unauthorized centralized automatic message accounting (CAMA)
- A line or trunk dials a country code that is not assigned.
- The system does not specify data in table INWORICN for an originating INWATS call.
- For an originating INWATS call, the system does not specify a terminating service office code in table INWORICN. The code is for the NXX code and the area code N 0/1 X dialed. The system does not specify a code when the originating screening office is also the terminating screening office.
- On a terminating INWATS call, the system does not specify data in table INWTERCN for the incoming digits.
- On a station ringer call, the last four digits do not match those of the calling line. The system defines the call as no-prefix local.
- A blue box fraud call is cut off.
- A call is a line or operator-to-test-line call.
- The originator fails to dial the single-party direct-dial digit.
- The originator fails to dial enough digits on speed calling or call forwarding updates.
- The originator attempts to place a three-way call to an automatic number announcement, an outgoing service desk, or a revertive call.

For DMS-300 gateway offices, TCMVACT counts calls that the system routes to VACT treatment.

## OM group TRMTCM (continued)

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The system routes a call incoming on a private line or an international 101 test line to VACT treatment. The system routes the call to treatment for one of the following reasons:

- The national number transmitted to the terminating exchange is empty or spare.
- The call fails screening because the call uses table DESTCTL and the table does not have entries or field DISDRLST is D.
- The call fails in translation for one of the following reasons:
  - on an overseas call, field SYMBOL in table CCTRNSL is NCTR for the trunk group is used
  - on a terminating call to North America, table OVNTRNSL does not have entries
  - on a subscriber dialed terminating call to North America, the D or E digit equals 0 or 1
  - on a subscriber dialed terminating call to North America, the dialed digits are NPA-555-XXXX
  - the number of digits received is more than the maximum number specified in table MMAX, INPRTRNS, or OVNTRNSL

The system routes a call incoming on an R1 signaling trunk to VACT treatment for one of the following reasons:

- The call fails during digit collection because the system does not receive a damaged digit, or an integrity failure occurs.
- The system does not receive a start digit. The start digit received is a second key pulse (KP) digit, or is not correct.
- The national number transmitted to the terminating exchange is empty or spare.
- The call fails in translation for one of the following reasons:
  - on an overseas call, field SYMBOL in table CCTRNSL is NCTR for the trunk group used
  - on a terminating call to North America, table OVNTRNSL does not have entries
  - on a subscriber-dialed terminating call to North America, the D or E digit equals 0 or 1

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**OM group TRMTCM** (continued)
 

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- on a subscriber-dialed terminating call to North America, the dialed digits are NPA-555-XXXX
- the number of digits received are greater than maximum number specified in table MMAX, INPRTRNS, or OVNTRNSL
- The call fails screening because the call uses destination control table (DESTCTL) that is not datafilled, or field DISDRLST is D.

For DMS-250 tandem offices, register TCMVACT counts calls that the system routes to VACT treatment for one of the following reasons:

- The subscriber dials an NPA code, office code, or country code that is not assigned.
- Incoming exclusion specifies that the system must block the call. This system must block the call because a subscriber dialed a number in the calling area of the subscriber.

For DMS-MTX offices, register TCMVACT counts calls that the system routes to VACT treatment. The system routes the call to treatment because the subscriber dialed an NPA code, office code, or country code that is not assigned.

### **Register TCMVACT release history**

Register TCMVACT was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates LINE138 if the system routes a call to treatment after being call processing busy.

The system generates TRK138 if the system routes a call to treatment after being call processing busy.

## **Register TCMVCCT**

Vacant country code (VCCT) treatment (TCMVCCT)

For DMS-250 tandem offices, TCMVCCT counts calls that the system routes to VCCT treatment.

If the network system is not datafilled for country code dialing, the system routes an international direct distance dialing call to VCCT treatment.

## **OM group TRMTCM (end)**

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### **Register TCMVCCT release history**

Register TCMVCCT was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates LINE138 if the system routes a call to treatment after being call processing busy.

The system generates TRK138 if the system routes a call to treatment after being call processing busy.

## **Register TCMVPFX**

Vacant prefix code (VPFX) treatment (TCMVPFX)

Register TCMVPFX counts calls that receive VPFX treatment because the prefix digits a subscriber dials are not datafilled.

### **Register TCMVPFX release history**

Register TCMVPFX was introduced in BCS28.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

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## OM group TRMTCM2

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### OM description

Treatments, customer miscellaneous (2)

The system increments TRMTCM2 when a customer miscellaneous treatment group 2 treatment occurs.

### Release history

The system includes OM group TRMTCM2 since BCS33.

### Registers

OM group TRMTCM2 registers display on the MAP terminal as follows:

|         |         |         |         |
|---------|---------|---------|---------|
| TCMMTBL | TCMCCRG | TCMCCRP | TCMCCRM |
| TCMCCRH | TCMCCRT | TCMPODN | TCMRESL |

This OM group contains spare registers that are visible, but are unavailable to the user. Later software releases make use of these registers. The following spare registers display on the MAP display terminal.

|         |         |         |         |
|---------|---------|---------|---------|
|         |         |         | CMSPR07 |
| CMSPR8  | CMSPR9  | CMSPR10 | CMSPR11 |
| CMSPR12 | CMSPR13 | CMSPR14 | CMSPR15 |
| CMSPR16 | CMSPR17 | CMSPR18 | CMSPR19 |
| CMSPR20 | CMSPR21 | CMSPR22 | CMSPR23 |
| CMSPR24 | CMSPR25 | CMSPR26 | CMSPR27 |
| CMSPR28 | CMSPR29 | CMSPR30 | CMSPR31 |

The spare register name in the previous MAP example is valid until a software release uses it. When a spare register is put to use, the new register name does not appear in the MAP display until the subsequent release of the software.

### Group structure

OM group TRMTCM2 provides one tuple per office.

**Key field:**

None

## OM group TRMTCM2 (continued)

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**Info field:**

None

**Associated OM groups**

None

**Associated functional groups**

None

**Associated functionality codes**

The following table lists the functionality codes of OM group TRMTCM2.

| Functionality | Code     |
|---------------|----------|
| Common Basic  | BASE0001 |

**Register TCMMTBL**

Treatment, customer miscellaneous, mobile trouble

TCMMTBL counts the times the mobile trouble treatment occurs.

**Register TCMMTBL release history**

The system includes TCMMTBL since BCS33.

**Associated registers**

None

**Associated logs**

None

**Register TCMCCRG**

Cumulative charge restriction treatment for general subscribers

Register TCMCCRG counts the times calls route to treatment CCRG (cumulative charge restriction for general subscribers).

**Register TCMCCRG release history**

The system includes TCMCCRG since CSP008.

**Associated registers**

None

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**OM group TRMTCM2** (continued)

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**Associated logs**

None

**Extension registers**

None

**Register TCMCCRP**

Cumulative charge restriction treatment for payphone subscribers

Register TCMCCRP counts the times calls route to treatment CCRP (cumulative charge restriction for payphone subscribers).

**Register TCMCCRP release history**

The system includes TCMCCRP since CSP008.

**Associated registers**

None

**Associated logs**

None

**Extension registers**

None

**Register TCMCCRM**

Cumulative charge restriction treatment for mobile subscribers

Register TCMCCRM measure the number of times calls route to treatment CCRM (cumulative charge restriction for mobile subscribers).

**Register TCMCCRM release history**

CSP008 introduced register TCMCCRM.

**Associated registers**

None

**Associated logs**

None

**Extension registers**

None

## **OM group TRMTCM2 (continued)**

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### **Register TCMCCRH**

Cumulative charge restriction treatment for PHS subscribers

Register TCMCCRH counts the times calls route to treatment CCRH (cumulative charge restriction for PHS subscribers).

#### **Register TCMCCRH release history**

The system includes TCMCCRH since CSP008.

#### **Associated registers**

None

#### **Associated logs**

None

#### **Extension registers**

None

### **Register TCMCCRT**

Cumulative charge restriction treatment for third-party-billed calls

Register TCMCCRT counts the times calls route to treatment CCRT (cumulative charge restriction for third-party-billed calls).

#### **Register TCMCCRT release history**

The system includes TCMCCRT since CSP008.

#### **Associated registers**

None

#### **Associated logs**

None

#### **Extension registers**

None

### **Register TCMPODN**

Treatment, customer miscellaneous, ported out directory number

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**OM group TRMTCM2 (end)**

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The operating company specifies ported out directory number (PODN) treatment for calls that satisfy both of the following requirements:

- The call terminates on a DN that has a native number plan area and office code (NPA-NXX).
- The call is to a DN that has moved to another switch.

Register TCMPODN counts the number of times that PODN treatment occurs.

**Register TCMPODN release history**

The system includes TCMPODN since NA009.

**Associated registers**

None

**Associated logs**

None

**Register TCMRESL**

Restriction treatment for the 20 restriction reasons for categories used in the Turkish market.

Register TCMRESL counts the number of times that calls route to treatments RL00 to RL17.

**Register TCMRESL release history**

The system includes TCMRESL since MMP14.

**Associated registers**

None

**Associated logs**

None

## OM group TRMTCU

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### OM description

Customer unauthorized treatment (TRMTCU)

The OM group TRMTCU counts calls that the system routes to a treatment. The treatment notifies the subscriber that the action of the subscriber is not correct for reasons of authorization. These treatments normally indicate that the subscriber dials a sequence of digits that is one of the following:

- not correct
- follows a procedure that is not correct

Register TRMTCU contains one register for each call treatment. The registers are named TCUnnnn, where nnnn is the external treatment abbreviation.

### Release history

The OM group TRMTCU was introduced before BCS20.

#### GL04

Registers TCUCNDT, TCUDNTR, TCUORSS and TCUTESS do not increase.

DMS-100G added to the register descriptions for TCUFNAL, TCUMSLC, and TCUNACK.

#### BCS36

Performance for DMS-100 international switches was introduced.

### Registers

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

|         |         |         |         |
|---------|---------|---------|---------|
| TCUINAC | TCUCNDT | TCUMSCA | TCUMSLC |
| TCUUNCA | TCUHNPI | TCUUNOW | TCUTDND |
| TCUUNIN | TCUORSS | TCUTESS | TCUDNTR |
|         | TCUNOCN | TCUINAU | TCUTINV |
| TCUCNOT | TCUDCFC | TCUDODT | TCURSDT |
| TCUFNAL | TCUUMOB | TCUANIA | TCUNACK |
| TCUCACE | TCUD950 | TCUN950 | TCUILRS |
| TCUNACD | TCUDACD | TCUADBF | TCUFDNZ |

The following treatments apply to DMS-100 local switching offices: CNDT, UNOW, TDND, UNIN, ORSS, TESS, DNTR, NOCN, CNOT, DCFC,

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**OM group TRMTCU** (continued)

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MSCA, MSLC, HNPI, DODT, FNAL, NACK, CACE, D950, N950, ILRS, and DACD.

The following treatments apply to DMS-200 toll switching offices: MSCA, HNPI, TDND, UNIN, DODT, FNAL, CACE, D950, N950, and DACD.

The following treatments apply to DMS-100/200 local toll switching offices: CNDT, MSCA, MSLC, HNPI, UNOW, TDND, UNIN, ORSS, TESS, DNTR, NOCN, CNOT, DCFC, DODT, FNAL, NACK, CACE, D950, N950, ILRS, NACD, and DACD.

The following treatments apply to DMS-100 international switching offices: ORSS, DNTR, FNAL, and NACK.

The following treatments apply to DMS-300 gateway switching offices: DODT and ANIA.

The following treatments apply to DMS-250 tandem switching offices: CNDT, INAC, MSLC, INAU, TINV, RSDT, ANIA, ADBF, and FDNZ.

The following treatments apply to DMS-MTX mobile telephone exchanges: CNDT, MSCA, MSLC, HNPI, TDND, ORSS, TESS, FNAL, and UMOB.

The following treatments apply to DMS-100G switching offices: FNAL, DNTR, MSLC, and NACK.

## Group structure

The OM group TRMTCU provides one tuple for each office.

### Key field:

There is no key field.

### Info field:

There is no info field.

Table TMTCNTL defines all treatments.

The operating company uses sub-tables TMTCNTL.TREAT to define the tone(s), announcement(s), or states, that the system returns to the originator of a call. The system returns the tone(s), announcement(s), or states when the

## OM group TRMTCU (continued)

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system encounters a specified treatment code during translation of a call. If a treatment code does not apply to an office type, the treatment is redundant and:

- can be set to overflow tone
- can be set to like tone

Table OFRT lists the sequence of tones, announcements, or states that the system returns to the originator of a call. The system returns the tones, announcements, or states when the system encounters a specified treatment code during translation of a call.

Table CLLI defines the CLLI of each tone and announcement. The following tables define treatment CLLI. The tables do not define fixed treatment CLLIs, IDLE (idle), LKOUT (lockout), and COPP (cutoff on permanent signal and partial dial).

- Table TONES defines the CLLI for software-generated tones.
- Table STN defines the CLLI for hardware-generated tones.
- Table ANNS defines the CLLI for recorded announcements.
- Table DRAMS defines the CLLI for digital recorded announcements.

A call terminates in a specified treatment code for one of the following reasons:

- the operating company-supplied translations lead the call to a treatment
- the DMS detects specified conditions and prescribes a treatment code without reference to the operating company translations

These conditions are not a normal set of conditions and prevent the completion of the call.

The treatment code is occasionally part of a normal call completion process. The call completion process includes, for example, an announcement to the originator before the system completes the call.

The DMS can determine, while the DMS translates a call, that the call must terminate in a specified treatment code. The DMS accesses the sub-tables TRTCNTL.TREAT to determine what announcement, tone, or state is to return to the originator. The DMS determines what route in table OFRT lists the sequence of announcements, tones, or states to return to the originator.

### Associated OM groups

Register TRMTCM counts calls that the system routes to a treatment that is the result of a customer action. The treatment does not relate to authorization.

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**OM group TRMTCU** (continued)

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Register TRMTCU2 is an extension of group TRMTCU and counts the same type of calls.

Register TRMTER counts calls that the system routes to a treatment because of a failure that a switching equipment failure causes.

Register TRMTFR counts calls that the system routes to a treatment that is a normal sequence of a call.

Register TRMTFR2 is an extension of TRMTFR. Register TRMTFR2 counts calls that the system routes to a treatment that is a normal sequence of a call.

Register TRMTRS counts calls that the system routes to a treatment. The system routes the calls to a treatment because of a failure caused by a lack of software or hardware resources.

**Associated functional groups**

The following functional groups associate with OM group TRMTCU:

- DMS-100 local
- DMS-200 toll
- DMS-100/200 combined local and toll
- DMS Auxiliary Operator Service System (AOSS)
- DMS-300 international gateway for North America
- DMS-250 tandem switching office for common carriers
- DMS-MTX mobile telephone exchange

**Associated functionality codes**

The associated functionality code for OM group TRMTCU is Common Basic, NTX001AA.

**Register TCUADBFB**

Automatic number identification database failure (ADBF) treatment (TCUADBFB)

For DMS-250 tandem offices, register TCUADBFB counts calls that the system routes to treatment ADBF. The system routes the calls to treatment because call processing cannot find the ANI of the subscriber in the database.

**Register TCUADBFB release history**

Register TCUADBFB was introduced before BCS20.

## **OM group TRMTCU** (continued)

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### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCUANIA**

Automatic number identification account status not allowed (ANIA) treatment (TCUANIA)

For DMS-250 tandem and DMS-300 gateway offices, register TCUANIA counts calls that the system routes to treatment ANIA. The system routes calls that originate on a trunk to treatment ANIA if the system cannot find ANI in the database. The system also routes these calls to treatment if the database is set to block calls that come from that ANI.

### **Register TCUANIA release history**

Register TCUANIA was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCUCACE**

Carrier access coded in error (CACE) treatment (TCUCACE)

The DMS-100 local, DMS-200 toll, and DMS-100/200 local toll end offices with equal access use register TCUCACE. Register TCUCACE counts calls that the system routes to treatment CACE. The system routes the calls to treatment because the dialed carrier access code 10XXX is empty or has changed.

The system routes the call to an announcement.

### **Register TCUCACE release history**

Register TCUCACE was introduced before BCS20.

### **Associated registers**

There are no associated registers.

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**OM group TRMTCU** (continued)

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**Associated logs**

There are no associated logs.

**Register TCUCNDT**

Coin denied termination (CNDT) treatment (TCUCNDT)

The DMS-100 local, DMS-100/200 local toll, DMS-250 tandem, and DMS-MTX offices use register TCUCNDT. Register TCUCNDT counts calls that the system routes to treatment CNDT. The system routes a call that originates on a line or trunk to treatment CNDT. The system routes the call to treatment if the coin line directory number has the denied terminating (DTM) option assigned. The system dials the coin line directory number.

This register does not increase in GL04.

**Register TCUCNDT release history**

Register TCUCNDT was introduced in BCS20.

**GL04**

Register does not increase.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUCNOT**

Coin overtime (CNOT) treatment (TCUCNOT)

For DMS-100 local and DMS-100/200 local toll offices, TCUCNOT counts calls that the system routes to treatment CNOT.

A DMS office can have the Local Coin Overtime Charging feature BR0372. The system routes a call that originates on a coin line in a DMS office with this feature to treatment CNOT. The system routes the call to treatment if the caller did not deposit coins for the overtime period.

If the DMS office does not have feature BR0372, the system routes the call to overflow or like tone.

**Register TCUCNOT release history**

Register TCUCNOT was introduced before BCS20.

## **OM group TRMTCU (continued)**

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### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated registers.

## **Register TCUD950**

Dial 950 (D950) treatment (TCUD950)

The DMS-100 local, DMS-200 toll, and DMS-100/200 local toll end office with equal access use register TCUD950. Register TCUD950 counts calls that the system routes to the treatment D950. The system routes the calls to treatment because the subscriber dials the carrier code 10XXX instead of 950-1XXX.

The system routes the call to the announcement.

### **Register TCUD950 release history**

Register TCUD950 was introduced before BCS20.

### **Associated registers**

Register TCUN950 counts calls that the system routes to the do-not-dial 950 treatment. The system routes calls to treatment because the subscriber dials 950-1XXX instead of the carrier access code 10XXX.

### **Associated logs**

There are no associated logs.

## **Register TCUDACD**

Dial carrier access code (DACD) treatment (TCUDACD)

The DMS-100 local, DMS-200 toll, and DMS-100/200 local toll end office with equal access feature use register TCUDACD. Register TCUDACD counts calls that the system routes to treatment DACD. The system routes the calls to treatment because the subscriber did not dial the required carrier access code 10XXX.

The system routes the call to the announcement.

### **Register TCUDACD release history**

Register TCUDACD was introduced before BCS20.

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**OM group TRMTCU** (continued)

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**Associated registers**

Register TCUNACD counts calls that the system routes to the do-not-dial-carrier-access-code treatment. The system routes the calls to treatment because the carrier access code that the subscriber dialed is the carrier access code of the primary inter-LATA carrier (PIC) of the subscriber. The carrier access code is 10XXX. The PIC of the subscriber is assigned in table LENFEAT.

**Associated logs**

There are no associated logs.

**Register TCUDCFC**

Disallowed coin free call (DCFC) treatment (TCUDCFC)

For DMS-100 local and DMS-100/200 local toll offices, TCUDCFC counts calls that the system routes to treatment DCFC.

The system routes a call that originates on a coin free line to treatment DCFC. The system routes the call to treatment if the call originator dials a call other than an operator assisted (0+) call. The system also routes a call to treatment if the call originator dials a call other than a three-digit service code.

**Register TCUDCFC release history**

Register TCUDCFC was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUDNTR**

Denied terminating (DNTR) treatment (TCUDNTR)

The DMS-100 local, DMS-100G, international, and DMS-100/200 local toll offices use register TCUDNTR. Register TCUDNTR counts calls that the system routes to treatment DNTR.

The system routes a call that originates on a line or trunk to treatment DNTR. The system routes the call to treatment if the non-coin line directory number has the denied terminating (DTM) option. The subscriber dials the non-coin line directory number.

This register does not increase in GL04.

## **OM group TRMTCU (continued)**

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### **Register TCUDNTR release history**

Register TCUDNTR was introduced before BCS20.

#### **GL04**

Register does not increase.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCUDODT**

Denied originating data terminal (DODT) treatment (TCUDODT)

The DMS-100 local, DMS-200 toll, DMS-100/200 local toll, and DMS-300 gateway offices use register TCUDODT. Register TCUDODT counts calls that the system routes to treatment DODT. The system routes the calls to treatment because a data unit attempts to originate a call. The data unit attempts to originate a call when the RS-232 data terminal ready (DTR) lead was not on.

### **Register TCUDODT release history**

Register TCUDODT was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCUFDNZ**

First digit not zero (FDNZ) treatment (TCUFDNZ)

For DMS-250 tandem offices, TCUFDNZ counts calls that the system routes to treatment FDNZ. The system routes a travel card number (TCN) call reorigination to the FDNZ treatment. The system routes the TCN call to treatment if the first digit of the address digits is not zero. The subscriber has one more opportunity to dial the called number correctly.

The system routes the call to the announcement.

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**OM group TRMTCU** (continued)

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**Register TCUFDNZ release history**

Register TCUFDNZ was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUFNAL**

Feature not allowed (FNAL) treatment (TCUFNAL)

The DMS-100 local, DMS-100G, international, DMS-200 toll, DMS-100/200 local toll, and DMS-MTX offices use register TCUFNAL. Register TCUFNAL counts calls that the system routes to treatment FNAL. The system routes the calls to treatment because a subscriber dials the feature activation digits of a requirement calling feature. The requirement calling feature is not assigned to the line of the subscriber.

**Register TCUFNAL release history**

Register TCUFNAL was introduced before BCS20.

**Associated registers**

Register TCUNACK counts calls that the system routes to the negative acknowledgement treatment. The system routes the calls to treatment because a subscriber attempts to use a custom calling feature. The system cannot complete the call because of feature interaction or feature restriction.

**Associated logs**

There are no associated logs.

**Register TCUHNPI**

Home number plan area (NPA) intercept (HNPI) treatment (TCUHNPI)

For DMS-100 local, DMS-200 toll, DMS-100/200 local toll, and DMS-MTX offices, TCUHNPI counts calls that the system routes to treatment HNPI.

The system routes a call that originates on a line or trunk to treatment HNPI. The system routes the calls to treatment if the call originator dials the home NPA. The call originator dials the home NPA when the system does not permit home NPA dialing.

## OM group TRMTCU (continued)

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### Register TCUHNPI release history

Register TCUHNPI was introduced before BCS20.

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

## Register TCUILRS

Inter-LATA restriction (ILRS) treatment (TCUILRS)

The DMS-100 local, DMS-200 toll, and DMS-100/200 local toll end office with equal access use register TCUILRS. Register TCUILRS counts calls that the system routes to the treatment ILRS for one of the following reasons:

- A line with the inter-LATA toll denied (ITD) option attempts to originate an inter-LATA call.
- A line with the carrier toll denied (CTD) option attempts to use a carrier to originate a toll call.

The system completes or blocks the call to a carrier and sends the call to the inter-LATA restricted treatment. The decision to block a call to a carrier with the carrier toll denied option assigned depends on the call characteristics. The call characteristics are as follows:

- The system completes a (10XXX) 0 + 7/10 digit operator assisted call. If the call is direct dial, the system routes the call to treatment ILRS.
- The system completes a (10XXX) 011+ CC + NN operator assisted call. If the call is direct dial, the system routes the call to treatment ILRS.
- The system completes a 10XXX + 0 direct dial call.
- The system routes a 10XXX + # direct dial call to treatment ILRS.
- The system completes a 1 + 800 + 4 digit direct dial call.
- The system routes a 950 + 1XXX direct dial call to treatment ILRS.
- The system routes a (10XXX) 1 + NPA + 555 + 4 digit direct dial call to treatment ILRS.

*Note:* Brackets indicate that the carrier digits are optional in the dialing sequence.

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**OM group TRMTCU** (continued)

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If the system routes the call to the inter-LATA restriction treatment, the system routes the call to an announcement.

**Register TCUILRS release history**

Registers TCUILRS was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUINAC**

Invalid account code (INAC) treatment (TCUINAC)

For DMS-250 tandem offices, TCUINAC counts calls that the system routes to treatment INAC.

The system routes a call that requires account code validation to treatment INAC. The system routes the call to treatment if the account code dialed is invalid for that trunk group.

**Register TCUINAC release history**

Register TCUINAC was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUINAU**

Invalid authorization code (INAU) treatment (TCUINAU)

For DMS-250 tandem offices, TCUINAU counts calls that the system routes to treatment INAU for one of the following reasons:

- authorization code that the system dials was invalid
- subscriber did not dial the authorization code in a correct city of origin
- security code digits that the subscriber dials with the authorization code did not match the security code digits. The system stores the security digits against the authorization code

## **OM group TRMTCU** (continued)

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### **Register TCUINAU release history**

Register TCUINAU was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCUMSCA**

Misdirected CAMA call (MSCA) treatment (TCUMSCA)

The DMS-100 local, DMS-200 toll, DMS-100/200 local toll, and DMS-MTX offices use the register TCUMSCA. Register TCUMSCA counts calls that the system routes to treatment MSCA for one of the following reasons:

- A local call attempted to use the toll network but the system did not permit the attempt.
- A subscriber dialed a prefix digit 0 or 1 on a local call.

### **Register TCUMSCA release history**

Register TCUMSCA was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCUMSLC**

Misdirected local calls (MSLC) treatment (TCUMSLC)

The DMS-100 local, DMS-100G, DMS-100/200 local toll, DMS-250 tandem, and DMS-MTX offices use register TCUMSLC. Register TCUMSLC counts

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**OM group TRMTCU** (continued)

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calls that the system routes to treatment MSLC for one of the following reasons:

- A line attempted to originate an operator-assisted call (0+) to codes NPA555, 555, or 800.
- The last four digits on a station ringer call do not match those of the calling line. The call is not defined as no-prefix local in the local calling area (LCASCRN) and prefix treatment (PFXTREAT) tables.
- The subscriber does not dial a prefix digit 0 or 1 on a toll call. The prefix treatment (PFXTREAT) table specifies that the system requires a prefix digit on toll calls.

**Register TCUMSLC release history**

Register TCUMSLC was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUN950**

Do not dial 950 (N950) treatment (TCUN950)

The DMS-100 local, DMS-200 toll, and DMS-100/200 local toll end offices with equal access feature use register TCUN950. Register TCUN950 counts calls that the system routes to treatment N950. The system routes the calls to treatment because the system dials 950-1XXX instead of the carrier access code 10XXX.

The system routes the call to an announcement.

**Register TCUN950 release history**

Register TCUN950 was introduced before BCS20.

**Associated registers**

Register TCUD950 counts calls that the system routes to the dial-950 treatment. The system routes the calls to treatment because the subscriber dials the carrier code 10XXX instead of 950-1XXX.

**Associated logs**

There are no associated logs.

## **OM group TRMTCU (continued)**

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### **Register TCUNACD**

Do not dial carrier access code (NACD) treatment (TCUNACD)

The DMS-100 local and DMS-100/200 local toll end offices with equal access use register TCUNACD. Register TCUNACD counts calls that the system routes to treatment NACD. The system routes the calls to treatment because the carrier access code is the carrier access code of the primary inter-LATA carrier (PIC) of the subscriber. The carrier access code is 10XXX. The PIC of the subscriber is assigned in table LENFEAT. The subscriber dials the carrier access code.

The system routes the call to an announcement.

#### **Register TCUNACD release history**

Register TCUNACD was introduced before BCS20.

#### **Associated registers**

Register TCUDACD counts calls that the system routes to the dial-carrier-access-code treatment. The system routes the calls to treatment because the subscriber did not dial the carrier access code 10XXX.

#### **Associated logs**

There are no associated logs.

### **Register TCUNACK**

Negative acknowledgement (NACK) treatment (TCUNACK)

The DMS-100 local, DMS-100G, international, and DMS-100/200 local toll offices use register TCUNACK. Register TCUNACK counts calls that the system routes to treatment NACK when a subscriber attempts to use a custom calling feature. The system cannot complete the call because of feature interaction or restriction.

#### **Register TCUNACK release history**

Register TCUNACK was introduced before BCS20.

#### **Associated registers**

Register TCUFNAL counts calls that the system routes to the feature not allowed treatment. The system routes the calls to treatment because a subscriber dialed the feature activation digits of a requirement calling feature. The feature is not assigned to the line of a subscriber.

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**OM group TRMTCU** (continued)

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**Associated logs**

There are no associated logs.

**Register TCUNOCN**

No coin (NOCN) treatment (TCUNOCN)

For DMS-100 local and DMS-100/200 local toll offices, TCUNOCN counts calls that the system routes to treatment NOCN.

The system routes a call that originates on a coin line to treatment NOCN. The system routes the call to treatment if the subscriber deposits no coin on a call the system charges.

**Register TCUNOCN release history**

Register TCUNOCN was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUORSS**

Originating service suspension (ORSS) treatment (TCUORSS)

For DMS-100 local, international, and DMS-100/200 local toll offices, TCUORSS counts calls that the system routes to ORSS treatment.

The system routes a call that originates on a line to ORSS treatment. The system routes the call to treatment if the line has the denied originating option or the suspended service option assigned. The options are assigned in table LENLINES or table IBNLINES.

For DMS-MTX offices, TCUORSS counts calls that the system routes to treatment ORSS. The system routes the call to treatment because a mobile that is temporarily not correct originates a call.

This register does not increase in GL04.

**Register TCUORSS release history**

Register TCUORSS was introduced before BCS20.

**GL04**

Register does not increase.

## OM group TRMTCU (continued)

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### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

## Register TCURSDT

Restricted date and time (RSDT) treatment (TCURSDT)

For DMS-250 tandem offices, TCURSDT counts calls that the system routes to treatment RSDT. The system routes the calls to treatment because the authorization code of the subscriber does not allow access to the network. The subscriber is the originating subscriber.

### Register TCURSDT release history

Register TCURSDT was introduced before BCS20.

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

## Register TCUTDND

Toll denied (TDND) treatment (TCUTDND)

The DMS-100 local, DMS-200 toll, and DMS-100/200 local toll offices use register TCUTDND. Register TCUTDND counts calls that the system routes to treatment TDND for one of the following reasons:

- A line with the toll denied (TDN) option assigned in table LENLINES originated a direct dial (DD) call. Class-of-service screening did not intercept the DD call.
- A coin line with option TDN assigned in table LENLINES originated an operator assisted (OA) call. Class-of-service screening did not intercept the OA call.
- The switching office has AMR5 signaling. A line, other than coin, with option TDN assigned in table LENLINES originated a zero plus (0+) or zero minus (0-) call. The ZEROMPOS field in table LINEATTR is other than AMR5.

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**OM group TRMTCU (continued)**


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- A call terminated on an incoming or two-way CAMA/AMR5 trunk with AMR5 signaling format. The category code in table AMRCAT for the trunk specifies treatment TDND.
- An MDC line originates a toll call other than 1+ 555, 1 + NPA555, or 1+ 800. The line has the toll denied restriction specified with the direct outward dial access code in table IBNXLA.

For DMS-MTX offices, TCUTDND counts calls that the system routes to treatment TDND. The system routes the calls to treatment because a cellular subscriber attempted a toll call that table CELLULAR restricts.

**Register TCUTDND release history**

Register TCUTDND was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUTESS**

Terminating service suspension (TESS) treatment (TCUTESS)

For DMS-100 local and DMS-100/200 local toll offices, TCUTESS counts calls that the system routes to treatment TESS. The system routes calls to treatment for one of the following reasons:

- An incoming operator verification call terminated on a busy line. The line has the suspended service (SUS) option assigned in table LENLINES or table IBNLINES.
- A call that originates on a line or a trunk call terminated on a line. The line has option SUS assigned in table LENLINES or table IBNLINES.

For DMS-MTX offices, TCUTESS counts calls that the system routes to the terminating service suspension treatment. The system routes calls to treatment because the terminating mobile is temporarily not correct.

This register does not increase in GL04.

**Register TCUTESS release history**

Register TCUTESS was introduced before BCS20.

**GL04**

Register does not increase.

## **OM group TRMTCU (continued)**

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### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCUTINV**

Temporarily invalid authorization code (TINV) treatment (TCUTINV)

For DMS-250 tandem offices, TCUTINV counts calls that the system routes to treatment TINV. The system routes calls to treatment because the authorization code that the subscriber dials is temporarily not correct.

### **Register TCUTINV release history**

Register TCUTINV was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCUUMOB**

UnRegistered mobile (UMOB) treatment (TCUUMOB)

For DMS-MTX offices, TCUUMOB counts calls that the system routes to treatment UMOB. The system routes calls to treatment because the mobile identification number (MIN) of the mobile station is not correct. The mobile station attempts the origination.

### **Register TCUUMOB release history**

Register TCUUMOB was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCUUNCA**

Unauthorized CAMA call (UNCA) treatment (TCUUNCA)

Register TCUUNCA is not active.

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**OM group TRMTCU** (continued)

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**Register TCUUNCA release history**

Register TCUUNCA was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUUNIN**

Unauthorized INWATS call treatment (TCUUNIN)

The DMS-100 local, DMS-200 toll, and DMS-100/200 local toll offices use register TCUUNIN. Register TCUUNIN counts calls that the system routes to treatment UNIN for one of the following reasons:

- An INWATS call that originates from outside the state dialed an 800 + NX2 number where the system reserves NX2 codes for intrastate calls.
- An INWATS call that originates in the state dialed an 800 + NNX + XXXX number.
- An INWATS terminating call originates from a band that is further away than the terminator paid for.
- A call with an INWATS number that is not correct terminated on an INWATS line.
- A call that was not direct dialed terminated on an INWATS line.
- A call that originated in the local free calling area terminated on an INWATS line. The system cannot bill the subscriber for the call.

**Register TCUUNIN release history**

Register TCUUNIN was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUUNOW**

Unauthorized OUTWATS call (UNOW) treatment (TCUUNOW)

## **OM group TRMTCU (end)**

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The DMS-100 local and DMS-100/200 local toll offices use register TCUUNOW. Register TCUUNOW counts calls that the system routes to treatment UNOW.

The system routes a call that originates on an OUTWATS line to treatment UNOW. The system routes the call to treatment if the call originator dialed an out-of-band code.

### **Register TCUUNOW release history**

Register TCUUNOW was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

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## OM group TRMTCU2

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### OM description

Customer not authorized treatment extension (TRMTCU2)

The OM group TRMTCU2 is an extension of group TRMTCU. The OM group TRMTCU2 counts calls that the system routes to a treatment. The treatment notifies the subscriber that an action is not correct for reasons of authorization.

These treatments normally indicate that the subscriber dials an invalid sequence of digits or follows a procedure that is not correct.

The OM group TRMTCU contains one register for each call treatment. The registers are named TCUnnnn, where nnnn is the external treatment abbreviation.

### Release history

The OM group TRMTCU2 was introduced before BCS20.

#### BCS36

Register TCUITDN was introduced in BCS36.

#### BCS34

Registers TCUEROR, TCUERTR, TCUERTO and TCUESNF were introduced in BCS34.

#### BCS33

Registers TCUAARD and TCUGFNV were introduced in BCS33.

#### BCS32

Register TCUITCF was introduced in BCS32.

The call processing software increases registers. The call processing software provides the trunk-to-trunk interworking. The interworking is between CCS7 ISDN part (ISUP) and CCITT telephone user part (TUP) gateway trunk types.

#### BCS31

Registers TCUBCNI and TCUJACK were introduced in BCS31.

#### BCS30

Registers TCULCNV, TCUCGFL, TCUPTFL, and TCUVPFL were introduced in BCS30.

**OM group TRMTCU2** (continued)

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**BCS29**

Register TCUCCCF was introduced in BCS29.

**BCS28**

Registers TCUCCIR and TCUCCN were introduced in BCS28.

**BCS26**

Register TCUBBFS was introduced in BCS26.

**BCS24**

Registers TCUCOSX and TCUCACB were introduced in BCS24.

**BCS23**

Registers TCUCNAC and TCUN00B were introduced in BCS23.

**BCS21**

Registers TCUSCUN, TCUINPD, TCUNPAR, and TCUIDPB were introduced in BCS21.

**BCS20**

Register TCUIVCC was introduced in BCS20.

**Registers**

The OM group TRMTCU2 registers appear on the MAP terminal as follows:

|         |         |         |         |
|---------|---------|---------|---------|
| TCUCCNV | TCUCCNA | TCULCAB | TCUINCC |
| TCUANBB | TCUIVCC | TCUSCUN | TCUINPD |
| TCUNPAR | TCUIDPB | TCUCNAC | TCUN00B |
| TCUCOSX | TCUCACB | TCUBBFS | TCUCCIR |
| TCUCCN  | TCUCCCF | TCULCNV | TCUCGFL |
| TCUVPFL | TCUPTFL | TCUBCNI | TCUJACK |
| TCUITCF | TCUAARD | TCUGFNV | TCUEROR |
| TCUERTR | TCUERTO | TCUESNF | TCUITDN |

The following treatments apply to DMS-100 local switching offices: IVCC, CACB, and BCNI.

The following treatment applies to DMS-200 toll switching offices: CACB.

The following treatments apply to DMS-100/200 local/toll switching offices: IVCC, CACB, and BCNI.

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**OM group TRMTCU2** (continued)

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The following treatment applies to DMS-100/200 local/toll switching offices with TOPS and DMS-200 toll switching offices with TOPS: CCCF.

The following treatments apply to DMS-250 tandem switching offices: CCNV, CCNA, LCAB, INCC, ANBB, SCUN, INPD, NPAR, IDPB, N00B, COSX, BBFS, and JACK.

The following treatments apply to the DMS-300 gateway switching office: VPFL, PTFL, CGFL, and ITCF.

The treatment CNAC applies to ISDN.

## Group structure

The OM group TRMTCU2 provides one tuple for each office.

**Key field:**

There is no key field.

**Info field:**

There is no info field.

Table TMTCNTL defines all treatments.

The operating company uses subtable TMTCNTL.TREAT to define the tone(s), announcement(s), or states (for example idle or lockout). The system returns these tone(s), announcement(s), or state(s) to the originator of a call. The system returns these tone(s), announcement(s), or state(s) when the system encounters a specified treatment code during translation of a call.

Table OFRT lists the sequence of tones, announcements, or states that returns to the originator of a call. The system returns these tone(s), announcement(s), or state(s) when the system encounters a specified treatment code during translation of a call.

Table CLLI defines the common language location identifier (CLLI) of each tone and announcement. The following tables define each treatment CLLI. The tables do not define fixed treatment CLLIs, IDLE (idle), LKOUT (lockout), and COPP (cutoff on permanent signal and partial dial).

- table TONES defines the CLLI for software-generated tones
- table STN defines the CLLI for hardware-generated tones
- table ANNS defines the CLLI for recorded announcements
- table DRAMS defines the CLLI for digital recorded announcements

## **OM group TRMTCU2** (continued)

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A call can terminate to a specified treatment code for one of two reasons. The first reason is because the operating company supplies translations that lead the call to a treatment. The second reason is because the DMS switch detects specified conditions. The DMS switch prescribes a treatment code without reference to the operating company translations. These conditions are not a normal set of conditions and prevent the completion of a call.

The treatment code is part of a normal call completion process. The call completion process includes, for example, an announcement to the originator before the system completes the call.

The DMS switch can determine, (while the system translates a call), that the call must terminate to a specified treatment code. The switch accesses subtable TRTCNTL.TREAT to determine what announcement, tone, or state returns to the originator. The switch determines what route in table OFRT lists the sequence of tones, announcements, or states return to the originator.

### **Associated OM groups**

The OM group TRMTCM counts calls that the system routes to a treatment. The treatment is a result of a customer action, and does not relate to authorization.

The OM group TRMTCU counts calls that the system routes to a treatment. The treatment notifies the subscriber that an action is not correct for reasons of authorization.

The OM group TRMTER counts calls that the system routes to a treatment because of a failure that switching equipment failure causes.

The OM group TRMTFR counts calls that the system routes to a treatment that is a normal sequence of a call.

The OM group TRMTFR2 is an extension of TRMTFR. The OM group TRMTFR2 counts calls that the system routes to a treatment that is a normal sequence of a call.

The OM group TRMTRS counts calls that the system routes to a treatment. The system routes the calls to treatment because of a failure caused by a lack of software or hardware resources.

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**OM group TRMTCU2 (continued)**


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**Associated functional groups**

The following functional groups associate with OM group TRMTCU2:

- DMS-100 Local
- DMS-200 Toll
- DMS-100/200 combined local and toll
- DMS-250 tandem switching office for common carriers
- Integrated Service Digital Network (ISDN)
- DMS-200 toll with TOPS
- DMS-100/200 combined local and toll with TOPS
- DMS-300 Gateway

**Associated functionality codes**

The associated functionality codes for OM group TRMTCU2 appear in the following table.

| <b>Functionality</b>  | <b>Code</b> |
|---|-------------|
| Common Basic  | NTX001AA    |
| ISDN Functional Mode Basic Rate Services (upgraded by NTX753AB) | NTX753AA    |
| DMS-250 LEC Calling Card  | NTXG47AA    |
| DMS-250 TCAP Based Local Exch. Carrier (LEC) Calling Card       | NTXG78AA    |
| Service Screening Enhanced                                      | NTXK08AA    |

**Register TCUAARD**

Automatic number identification (ANI) account recently disallowed (TCUAARD)

Register TCUAARD increases when the system routes a call to ANI account recently disallowed (AARD) treatment. The system routes the call to treatment if the ANI status is recently disallowed.

**Register TCUAARD release history**

Register TCUAARD was introduced in BCS33.

## **OM group TRMTCU2 (continued)**

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### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates TRKT202 when the system routes a call to AARD treatment.

## **Register TCUANBB**

Automatic number identification (ANI) feature group B blockage (ANBB) treatment (TCUANBB)

For DMS-250 tandem office, register TCUANBB counts calls that the system routes to ANBB treatment.

The system routes a call to ANBB treatment if a call without a correct ANI attempts to access feature group B trunks. The system blocks the ANI that is not correct in table ANISCRNU.

### **Register TCUANBB release history**

Register TCUANBB was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCUBBFS**

Blue box fraud screening (BBFS) treatment (TCUBBFS)

For DMS-250 tandem offices, register TCUBBFS counts calls that the system routes to BBFS treatment.

### **Register TCUBBFS release history**

Register TCUBBFS was introduced in BCS26.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

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**OM group TRMTCU2** (continued)

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**Register TCUBCNI**

Bearer capability not implemented (BCNI) treatment (TCUBCNI)

For DMS-100 local and DMS-100/200 local/toll end offices, TCUBCNI counts calls that the system routes to BCNI treatment. The system routes the calls to treatment because bearer capability checking fails at the terminating interface.

**Register TCUBCNI release history**

Register TCUBCNI was introduced in BCS31.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUCACB**

Carrier access code blocked (CACB) treatment (TCUCACB)

For DMS-100/200 local/toll end offices with equal access, register TCUCACB counts calls that the system routes to CACB treatment. The system routes the calls to treatment because the system blocks dialed carrier access code (CAC) calls. The system blocks CAC calls for one of the following reasons:

- The carrier has chosen to not handle CAC calls.
- The carrier only handles traffic from customers that make the accessed carrier their primary inter-LATA carrier.

**Register TCUCACB release history**

Register TCUCACB was introduced in BCS24.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUCCCF**

TOPS carrier call completion failure (CCCF) treatment (TCUCCCF)

The DMS-100/200 local/toll switching offices with TOPS and DMS-200 toll switching offices with TOPS use register TCUCCCF. Register TCUCCCF

## **OM group TRMTCU2 (continued)**

---

counts calls that the system routes to TOPS CCCF treatment. The system routes the calls to treatment because the selected first and alternate carrier cannot complete the TOPS carrier call.

### **Register TCUCCCF release history**

Register TCUCCCF was introduced in BCS29.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCUCCIR**

Credit card invalid release (CCIR) treatment (TCUCCIR)

Register TCUCCIR counts calls that the system routes to CCIR treatment because the credit card used is invalid.

### **Register TCUCCIR release history**

Register TCUCCIR was introduced in BCS28.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCUCCNA**

Calling card not allowed (CCNA) treatment (TCUCCNA)

For DMS-250 tandem offices, Register TCUCCNA counts calls that the system routes to CCNA treatment.

In an international DMS-250 tandem office with the Credit Card Calling feature, the system routes a call to CCNA treatment. The system routes the call to treatment when the system assigns a credit card number as ABUSED in table CCTAB. The system takes the call down after the application of this treatment.

### **Register TCUCCNA release history**

Register TCUCCNA was introduced before BCS20.

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**OM group TRMTCU2** (continued)

---

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUCCNV**

Calling card invalid (CCNV) treatment (TCUCCNV)

For DMS-250 tandem offices, register TCUCCNV counts calls that the system routes to CCNV treatment.

In a DMS-250 tandem office with the Mechanized Calling Card Service (MCCS) feature, the system routes a call to CCNV treatment. The system routes the call to treatment if the travel card number (TCN) is invalid. The subscriber has one more opportunity to enter a correct TCN. The system routes the call to an announcement.

In an international DMS-250 office with the Credit Card Calling feature, the system routes a call to CCNV treatment. The system routes the call to treatment if a credit card authorization code does not match the authorization code the subscriber filed against the card.

**Register TCUCCNV release history**

Register TCUCCNV was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUCGFL**

Closed User Group failure (CGFL) treatment (TCUCGFL)

For DMS-300 gateway offices, register TCUCGFL counts calls that the system routes to CGFL treatment. The system routes the calls to treatment if the call is not an authorized attempt to use Closed User Group Service. The service screening determines if the call is authorized.

Service screening by destination is an option available on DMS-300 gateway switches. The feature checks that each call only uses those services that are allowed at the destination.

## **OM group TRMTCU2** (continued)

---

### **Register TCUCGFL release history**

Register TCUCGFL was introduced in BCS30.

### **Associated registers**

There are no associated registers.

### **Associated logs**

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

## **Register TCUCNAC**

Call not accepted (CNAC) treatment (TCUCNAC)

For offices with ISDN, register TCUCNAC counts calls that the system routes to CNAC treatment. The system routes the calls to treatment because the bearer capability of the originator is not compatible with that of the terminator.

### **Register TCUCNAC release history**

Register TCUCNAC was introduced in BCS23.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCUCOSX**

Class of service exceeded (COSX) treatment (TCUCOSX)

For DMS-250 tandem offices, register TCUCOSX counts calls that the system routes to COSX treatment. The system routes the calls to treatment because the call failed class-of-service screening.

### **Register TCUCOSX release history**

Register TCUCOSX was introduced in BCS24.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

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**OM group TRMTCU2** (continued)

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**Register TCUEROR**

Enhanced roamer validation (ERV) originator treatment (TCUEROR)

Register TCUEROR increases when the tumbling electronic serial number (TESN) process of the ERV system finds an invalid originating mobile. When the clearinghouse, which provides the ERV services, identifies an originating mobile as fraudulent, this treatment is set.

**Register TCUEROR release history**

Register TCUEROR was introduced in BCS34.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates ERV100 when the ERV originator treatment is set.

**Register TCUERTO**

Enhanced roamer validation (ERV) timeout treatment (TCUERTO)

Register TCUERTO increases when a cellular call times out while waiting for a response from a clearinghouse. The clearinghouse provides real-time positive roamer validation services and maintains a positive subscriber database.

**Register TCUERTO release history**

Register TCUERTO was introduced in BCS34.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates ERV102 when the ERV originator treatment is set.

**Register TCUERTR**

Enhanced roamer validation (ERV) terminator treatment (TCUERTR)

Register TCUERTR increases when the tumbling electronic serial number (TESN) process of the ERV system finds an invalid terminating mobile. When the clearinghouse, which provides the ERV services, identifies a terminating mobile as fraudulent, this treatment is set.

## OM group TRMTCU2 (continued)

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### Register TCUERTR release history

Register TCUERTR was introduced in BCS34.

### Associated registers

There are no associated registers.

### Associated logs

The system generates ERV101 when the ERV terminator treatment is set.

## Register TCUESNF

Customer unauthorized electronic serial number (ESN) fraud treatment (TCUESNF)

Register TCUESNF increases when the subscriber makes a call attempt from a mobile (originating call) with a false manufacturer ESN code. The datafill in table ESN FRAUD determine if a manufacturer ESN code is false. The register increases when the system blocks the call. This event causes the originator to receive the ESNF treatment.

If a subscriber uses a mobile with a false manufacturer ESN code to make an E911 call. The system does not block the call. The ESNF treatment does not apply, and register TCUESNF does not increase.

Register TCUESNF applies to DMS-MTX offices.

### Register TCUESNF release history

Register TCUESNF was introduced in BCS34.

### Associated registers

Register ESNFRAUD increases when the subscriber makes a call attempt to or from a mobile with a false manufacturer ESN code. The entries in table ESN FRAUD determine if the manufacturer ESN code is false. The register increases when the system blocks the call. Register ESN FRAUD is in OM group OMMTXSYS.

Register TCUESNF £ OMMTXSYS\_ESNFRAUD

### Associated logs

The system generates ESNF100 when the system blocks an originating or terminating mobile with a false manufacturer ESN code. The system also generates this log when the subscriber uses a mobile with a false manufacturer ESN code to make an E911 call. The system also generates this log when the system does not block the call.

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**OM group TRMTCU2** (continued)

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**Register TCUGFNV**

Register FONCARD not-valid treatment (TCUGFNV)

Register TCUGFNV increases when the system routes a call to the global fiber optic network card (FONCARD) not-valid treatment. The system routes the call to treatment when the global FONCARD is not correct. The global FONCARD is not correct because the global FONCARD is not datafilled, or is datafilled as invalid at the service control point.

**Register TCUGFNV release history**

Register TCUGFNV was introduced in BCS33.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUIDPB**

International direct distance dialing (IDDD) prohibited (IDPB) treatment (TCUIDPB)

For DMS-250 tandem offices, register TCUIDPB counts calls that the system routes to IDPB treatment.

The system routes an IDDD call to IDPB treatment. The system routes the call to treatment if the call originates from a subscriber that cannot use an IDDD destination number. The authorization code or automatic number identification (ANI) database of the subscriber specifies that the subscriber cannot use this IDDD number.

**Register TCUIDPB release history**

Register TCUIDPB was introduced in BCS21.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUINCC**

Invalid city code (INCC) treatment (TCUINCC)

## **OM group TRMTCU2** (continued)

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For DMS-250 tandem offices, register TCUINCC counts calls that the system routes to INCC treatment. The system routes the calls to treatment because the caller dialed an invalid city code.

### **Register TCUINCC release history**

Register TCUINCC was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCUINPD**

Invalid personal identification number digit (INPD) treatment (TCUINPD)

For DMS-250 tandem offices, register TCUINPD counts calls that the system routes to INPD treatment. The system routes the calls to treatment because the personal identification number (PIN) digits do not match. The subscriber dials the PIN digits which do not match the authorization code database.

### **Register TCUINPD release history**

Register TCUINPD was introduced in BCS21.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCUITCF**

Information transfer capability failed (ITCF) treatment (TCUITCF)

For DMS-300 gateway offices, register TCUITCF counts calls that the system routes to ITCF treatment. The system routes the calls to treatment because of an information transfer capability value that is not correct.

### **Register TCUITCF release history**

Register TCUITCF was introduced in BCS32.

### **Associated registers**

There are no associated registers.

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**OM group TRMTCU2** (continued)

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**Associated logs**

There are no associated logs.

**Register TCUITDN**

Treatment international toll denied (TCUITDN)

Register TCUITDN increases when the system applies treatment International Toll Denied.

**Register TCUITDN release history**

Register TCUITDN was introduced in BCS36.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUIVCC**

Invalid corridor call (IVCC) treatment (TCUIVCC)

The DMS-100 local and DMS-100/200 local/toll end offices with equal access use register TCUIVCC. Register TCUIVCC counts calls that the system routes to IVCC treatment.

The system routes a call to IVCC treatment when a subscriber attempts to make an inter-LATA call. The call is outside the inter-LATA corridor of the operating company.

**Register TCUIVCC release history**

Register TCUIVCC was introduced in BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUJACK**

Justified alternate calling knowledge (JACK) treatment (TCUJACK)

For DMS-250 tandem offices, register TCUJACK counts hotel calls that the system routes to JACK treatment. The system routes the call to treatment

## **OM group TRMTCU2** (continued)

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because the call fails line information database (LIDB) verification twice. The JACK treatment can route to an announcement, tone, or terminating trunk.

### **Register TCUJACK release history**

Register TCUJACK was introduced in BCS31.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCULCAB**

Local call area barred (LCAB) treatment (TCULCAB)

For DMS-250 tandem offices, register TCULCAB counts calls that the system routes to LCAB treatment.

The system routes a local call to LCAB treatment if the call attempts to use a carrier. Carriers cannot complete calls that originate and terminate in the same local calling area.

### **Register TCULCAB release history**

Register TCULCAB was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TCULCNV**

Local exchange carrier (LEC) calling card not valid (LCNV) treatment (TCULCNV)

For DMS-250 tandem offices, register TCULCNV counts calls that the system routes to LCNV treatment. The system routes the calls to treatment because a subscriber enters an LEC calling card number that is not correct. An announcement prompts the subscriber to enter a correct number.

For LEC calling card calls, the system does not access table TMTCNTL. To receive a credit-card invalid announcement, the user must enter LCNV treatment in table MCCSANNs.

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**OM group TRMTCU2** (continued)

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**Register TCULCNV release history**

Register TCULCNV was introduced in BCS30.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUN00B**

N00 call blocked (N00B) treatment (TCUN00B)

The DMS-250 tandem offices with CCS7 transaction capabilities application part (TCAP)-based service feature use register TCUN00B. Register TCUN00B counts calls that the system routes to N00B treatment when the N00 database blocks the N00 number.

**Register TCUN00B release history**

Register TCUN00B was introduced in BCS23.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUNPAR**

Numbering plan area restricted (NPAR) treatment (TCUNPAR)

For DMS-250 tandem offices, register TCUNPAR counts calls that the system routes to NPAR treatment. The system routes the calls to treatment for one of the following reasons:

- an INWATS call that a subscriber dials. The numbering plan area (NPA) of the subscriber is assigned BLOCKED in table IEXCLUDE
- a subscriber dials a universal access code followed by an 800 number

**Register TCUNPAR release history**

Register TCUNPAR was introduced in BCS21.

**Associated registers**

There are no associated registers.

## **OM group TRMTCU2** (continued)

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### **Associated logs**

There are no associated logs.

## **Register TCUPTFL**

Plain ordinary telephone service (POTS) failure (PTFL) treatment (TCUPTFL)

For DMS-300 gateway offices, register TCUPTFL counts calls that the system routes to PTFL treatment. The system routes the call to treatment because service screening determines the call is not an authorized attempt to use POTS service.

Service screening by destination is an option available on DMS-300 gateway switches. The feature checks that each call only uses the services allowed at the destination.

### **Register TCUPTFL release history**

Register TCUPTFL was introduced in BCS30.

### **Associated registers**

There are no associated registers.

### **Associated logs**

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

## **Register TCUSCUN**

Service currently unavailable (SCUN) treatment (TCUSCUN)

For DMS-250 tandem offices, register TCUSCUN counts calls that the system routes to SCUN treatment.

The system routes 0+ONNET call to SCUN treatment when the call cannot access an operator.

### **Register TCUSCUN release history**

Register TCUSCUN was introduced in BCS21.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

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**OM group TRMTCU2 (end)**

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**Register TCUUCCN**

Unpaid credit card (UCCN) treatment (TCUUCCN)

Register TCUUCCN counts calls that receive UCCN treatment.

**Register TCUUCCN release history**

Register TCUUCCN was introduced in BCS28.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TCUVPFL**

Virtual private network failure (VPFL) treatment (TCUVPFL)

For DMS-300 gateway offices, TCUVPFL counts calls that the system routes to VPFL treatment. The system routes the calls to treatment because the call is not an authorized attempt to use virtual private network service. The service screening determines if the call is not an authorized attempt.

Service screening by destination is an option available on DMS-300 gateway switches. The feature checks that each call uses only the services allowed at the destination.

**Register TCUVPFL release history**

Register TCUVPFL was introduced in BCS30.

**Associated registers**

There are no associated registers.

**Associated logs**

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

## OM group TRMTCU3

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### OM description

Customer unauthorized treatment extension

The OM group TRMTCU3 is an extension of group TRMTCU. The OM group TRMTCU3 counts calls that the system routes to a treatment. The treatment notifies the subscriber that an action is not correct for reasons of authorization.

These treatments indicate if the subscriber dials a sequence of digits that is not correct. These treatments also indicate if the subscriber follows a procedure that is not correct.

The OM group TRMTCU contains one register for each call treatment. The registers are TCUUnnn, where nnnn is the external treatment abbreviation.

### Release history

#### EUR006

Registers TCUUNMC and TCUFACJ were introduced in EUR006.

#### NA006

Registers TCUMSOA and TCUATHF were introduced in NA006.

The OM group TRMTCU3 was introduced in TL04.

### Registers

The OM group TRMTCU3 has no active registers.

This OM group contains spare registers that are not in use, but are visible to the user. Later software releases will use these registers. The releases document the register at that time. The following spare registers appear on the MAP terminal:

|         |         |         |         |
|---------|---------|---------|---------|
| TCUMSOA | TCUATHF | TCUMSUS | TCUUNMC |
| TCUFACJ | CUSPR5  | CUSPR6  | CUSPR7  |
| CUSPR8  | CUSPR9  | CUSPR10 | CUSPR11 |
| CUSPR12 | CUSPR13 | CUSPR14 | CUSPR15 |
| CUSPR16 | CUSPR17 | CUSPR18 | CUSPR19 |
| CUSPR20 | CUSPR21 | CUSPR22 | CUSPR23 |
| CUSPR24 | CUSPR25 | CUSPR26 | CUSPR27 |
| CUSPR28 | CUSPR29 | CUSPR30 | CUSPR31 |
| CUSPR32 |         |         |         |

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**OM group TRMTCU3** (continued)
 

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When a spare register is first put to use, the register retains the name that appears in the preceding table. With the release of the Northern Telecom software, its name changes to reflect the use of the register.

The following treatments apply to DMS-100 local switching offices: IVCC, CACB, and BCNI.

The following treatments apply to DMS-200 toll switching offices: CACB.

The following treatments apply to DMS-100/200 local/toll switching offices: IVCC, CACB, and BCNI.

The following treatment applies to DMS-100/200 local/toll switching offices with TOPS and DMS-200 toll switching offices with TOPS: CCCF.

The following treatments apply to DMS-250 tandem switching offices: CCNV, CCNA, LCAB, INCC, ANBB, SCUN, INPD, NPAR, IDPB, N00B, COSX, BBFS, and JACK.

The following treatments apply to the DMS-300 gateway switching office: VPFL, PTFL, CGFL, and ITCF.

The treatment CNAC applies to ISDN.

The following treatments apply to DMS-100E ETSI ISDN Base services: UNMC and FACJ.

## Group structure

The OM group TRMTCU3 provides one tuple for each office.

**Key field:**

There is no key field.

**Info field:**

There is no info field.

Table TMTCNTL defines all treatments.

The operating company uses subtable TMTCNTL.TREAT to define the tone(s), announcement(s), or states (for example idle or lockout) that the system returns to the originator of a call. The system returns the signals if the originator encounters a specified treatment code. The system encounters the treatment code during translation of a call.

Table OFRT lists the sequence of tones, announcements, or states that the system returns to the originator of a call. The signals return to the originator

## OM group TRMTCU3 (continued)

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when the system encounters a specified treatment code during translation of a call.

Table CLLI defines the common language location identifier (CLLI) of each tone and announcement. The descriptions for each treatment CLLI appear in one of the following tables:

- table TONES defines the CLLI for software-generated tones
- table STN defines the CLLI for hardware-generated tones
- table ANNS defines the CLLI for recorded announcements
- table DRAMS defines the CLLI for digital recorded announcements

A call terminates to a specified treatment code because the operating company supplied translations that lead the call to a treatment. A call also terminates to a specified treatment code because the DMS switch detects conditions and prescribes a treatment code. The switch prescribes a treatment code without reference to the operating company translations. These conditions are not a normal set of conditions that prevent the completion of a call.

Occasionally, the treatment code is part of a normal call completion process. A normal call completion process includes, for example, an announcement to the originator before the call is complete.

While the DMS switch translates a call, the switch can determine if the call must terminate to a specified treatment code. If the call must terminate to a specified treatment code, the DMS switch accesses subtable TRTCNTL.TREA. The DMS switch accesses the subtable to determine what announcement, tone, or state returns to the originator. The switch also determines which route in table OFRT lists the sequence of signals that the system returns to the originator.

### Associated OM groups

The OM group TRMTCM counts calls that the system routes to a treatment that is the result of a customer action. The treatment does not relate to authorization.

The OM group TRMTCU counts calls that the system routes to a treatment. The treatment notifies the subscriber that an action is not appropriate for reasons of authorization.

The OM group TRMTER counts calls that the system routes to a treatment. The system routes the calls because of a failure caused by switching equipment failure.

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## OM group TRMTCU3 (continued)

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The OM group TRMTFR counts calls that the system routes to a treatment that is a normal progression of a call.

The OM group TRMTFR2 is an extension of TRMTFR. The OM group TRMTFR2 counts calls that the system routes to a treatment that is a normal progression of a call.

The OM group TRMTRS counts calls that the system routes to a treatment. The system routes the calls to treatment because of a failure caused by a lack of software or hardware resources.

### Associated functional groups

The following functional groups associate with the OM group TRMTCU3:

- DMS-100 Local
- DMS-200 Toll
- DMS-100/200 Combined local and toll
- DMS-250 Tandem switching office for common carriers
- integrated service digital network (ISDN)
- DMS-200 Toll with TOPS
- DMS-100/200 Combined local and toll with TOPS
- DMS-300 Gateway
- DMS-100E ETSI ISDN Base services

### Associated functionality codes

The associated functionality codes for the OM group TRMTCU3 appear in the following table.

(Sheet 1 of 2)

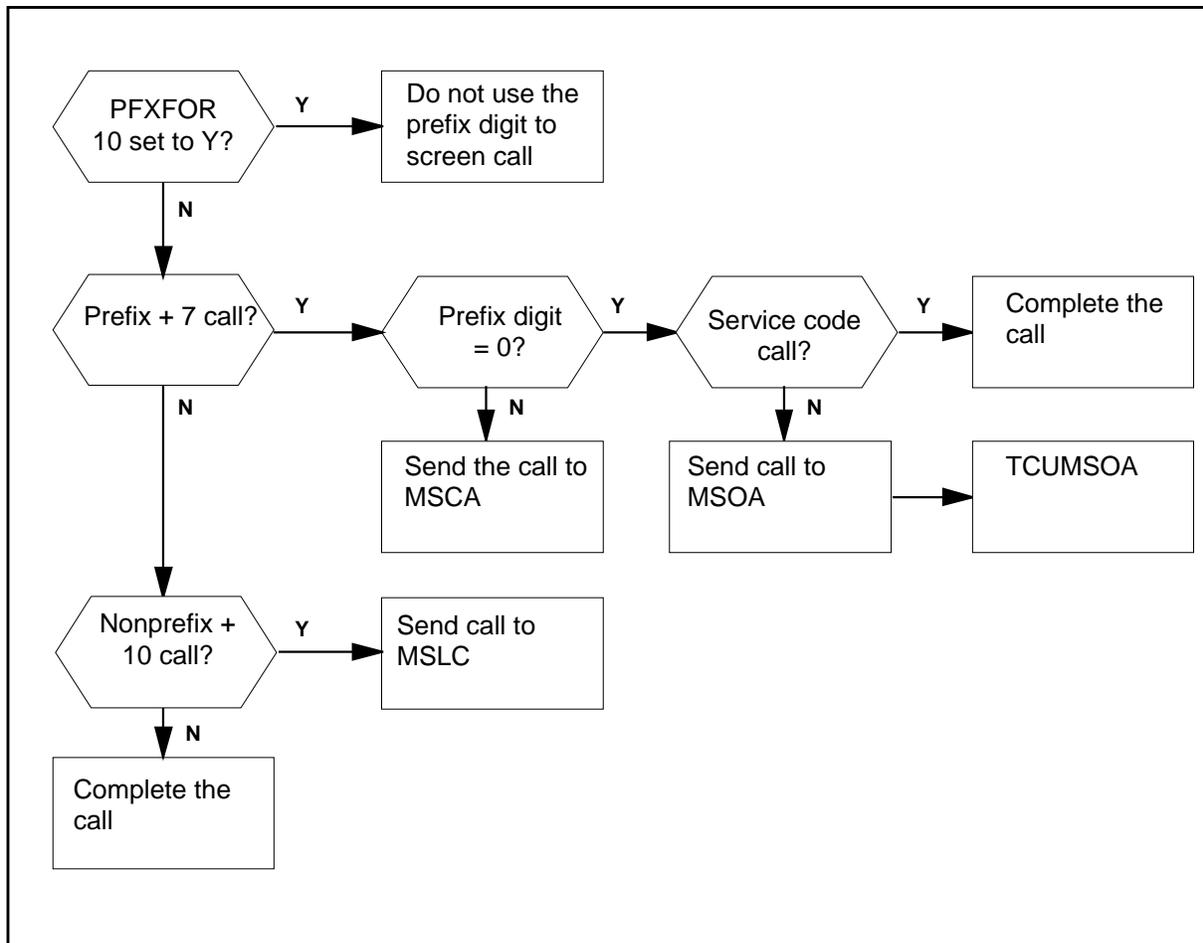
| Functionality   | Code     |
|---|----------|
| Common Basic  | NTX001AA |
| ISDN Functional Mode Basic Rate Services (upgraded by NTX753AB) | NTX753AA |
| DMS 250 LEC Calling Card  | NTXG47AA |
| DMS-250 TCAP Based Local Exch. Carrier (LEC) Calling Card       | NTXG78AA |

**OM group TRMTCU3** (continued)

(Sheet 2 of 2)

| Functionality                                     | Code     |
|---|----------|
| Service Screening Enhanced                        | NTXKO8AA |
| ETSI ISDN Base ServicesWorld Trade other services | SULN0002 |

**OM group TRMTCU3 registers**



**Register TCUMSOA release history**

Register TCUMSOA was introduced in NA006.

Register TCUMSOA records the times the system applies the Misdirected Operator Assisted treatment.

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**OM group TRMTCU3 (end)**

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**Register TCUATHF release history**

Register TCUATHF was introduced in NA006.

The computer module (CM) pegs register TCUATHF in the MSC-S. The CM pegs the register when the system applies an authentication failure treatment to a Mobile originated call.

**Register TCUMSUS release history**

Register TCUMSUS was introduced in MTX06.

The CM pegs register TCUMSUS in the MSC-S when the system applies a Mobile suspended (MSUS) treatment.

**Register TCUUNMC release history**

Register TCUUNMC was introduced in EUR006.

Register TCUUNMC records the times the system applies the User Not Member of Closed user group (CUG) treatment, UNMC.

**Register TCUUNMC release history**

Register TCUFACJ was introduced in EUR006.

Register TCUFACJ records the times the system applies the Facility Rejected treatment, FACJ.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

## OM group TRMTER

---

### OM description

Equipment-related treatment group (TRMTER)

The OM group TRMTER counts calls that the system routes to a treatment. The system routes the calls to a treatment because of a failure caused by a switching equipment failure.

The OM group TRMTER contains one register for each call treatment. The registers are TERnnnn, where nnnn is the external treatment abbreviation. The register increases each time the system routes a call to that treatment.

### Release history

The OM group TRMTER was introduced prior to BCS20.

#### GL04

DMS-100G added to register descriptions TERDTFL, TERRODR, TERSONI, and TERSYFL. Treatment description added for DMS-100G switch.

#### BCS36

Effectivity for DMS-100 international switches was introduced in BCS36.

#### BCS35

Registers TERQ33A and TERQ33B were introduced in BCS35.

#### BCS32

Registers TERPERR, TERINVM, and TERSONI were introduced in BCS32.

#### BCS26

Registers TERDTFL and TERC7AP were introduced in BCS26.

#### BCS24

Register TERINBT was introduced in BCS24.

#### BCS22

Registers TERANFL and TERMTOC were introduced in BCS22.

### Registers

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

**OM group TRMTER** (continued)

|         |         |         |         |
|---------|---------|---------|---------|
| TERSYFL | TERSSTO | TERRODR | TERPNOH |
| TERPTOF | TERNMZN | TERERDS | TERSTOB |
| TERSTOC | TERINOC | TERAIFL | TERFDER |
| TERCONP | TERSCFL | TERNONT | TERNCUN |
| TERANFL | TERMTOC | TERINBT | TERC7AP |
| TERDTFL | TERPERR | TERINVM | TERSONI |
| TERQ33A | TERQ33B |         |         |

This OM group contains spare registers that are not in use, but are visible to the user. Future software releases will use these registers. The registers will be documented at that time. The following spare registers appear on the MAP terminal:

|        |        |        |        |
|--------|--------|--------|--------|
| ERSPR1 | ERSPR2 | ERSPR3 | ERSPR4 |
| ERSPR5 | ERSPR6 |        |        |

When a spare register is first put to use, the register retains the name that appears in the preceding table. With the next release of the Northern Telecom software, the name will change to reflect the use.

The following treatments apply to DMS-100 local switching offices: SYFL, SSTO, RODR, ERDS, and AIFL.

The following treatments apply to DMS-200 toll switching offices: SYFL, SSTO, RODR, and ERDS.

The following treatment applies to DMS-100 local (international NETAS) switching offices: INBT.

The following treatments apply to DMS-100 international switching offices: SYFL, RODR, and INBT.

The following treatment applies to DMS-100 local (K&S Austria) switching offices: FDER.

The following treatments apply to DMS-100/200 local toll switching offices: SYFL, SSTO, RODR, ERDS, STOB, STOC, INOC, and AIFL.

The following treatments apply to DMS-MTX mobile telephone exchanges: SYFL and RODR.

## OM group TRMTER (continued)

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The following treatments apply to DMS-300 gateway switching offices: SYFL, RODR, and ERDS.

The following treatments apply to DMS-250 tandem switching offices: RODR, CONP, SCFL, NONT, and NCUN.

The following treatments apply to DMS-100G switch: DTFL, RODR, SONI, and SYFL.

### Group structure

The OM group TRMTER provides one tuple for each office.

**Key field:**

There is no key field.

**Info field:**

There is no info field.

Table TMTCNTL defines all treatments.

The operating company uses subtable TMTCNTL.TREAT to define the tone(s), announcement(s), and/or states that the system returns to the originator of a call. The system returns the tone, for example, if the originator encounters a specified treatment code during translation of a call. If a treatment code does not apply to an office type, the treatment is redundant. The treatment is set to overflow or like tone.

Table OFRT lists the sequence of tones, announcements, or states that the system returns to the originator of a call. The system returns these signals if the system encounters a specified treatment code during translation of a call.

Table CLLI defines the common language location identifier (CLLI) of each tone and announcement. The description for each treatment CLLI appears in one of the following tables:

- Table TONES defines the CLLI for software-generated tones.
- Table STN defines the CLLI for hardware-generated tones.
- Table ANNS defines the CLLI for recorded announcements.
- Table DRAMS defines the CLLI for digital recorded announcements.

A call can terminate in a specified treatment code because the operating company supplied translations that lead the call to a treatment. A call also terminates in a specified treatment code because the DMS detects certain conditions and prescribes a treatment code. The DMS switch prescribes a

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**OM group TRMTER** (continued)

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treatment code without reference to the operating company translations. These conditions are not normal and prevent the completion of the call.

Occasionally, the treatment code is part of a normal call completion process. A normal call completion process includes an announcement to the originator before the call is complete.

When the DMS switch translates a call, the DMS can determine if a call must terminate in a specified treatment code. If the call must terminate in a specified treatment code, the DMS switch accesses the subtable TRTCNTL.TREAT. The DMS accesses the subtable to determine what tones, announcements, or states to return to the originator. The switch also determines which route in table OFRT lists the sequence of tones, announcements, or states to return to the originator.

**Associated OM groups**

The OM group TRMTCM counts calls that the system routes to a treatment as a result of a customer action. The treatment does not relate to authorization.

The OM group TRMTCU counts calls that the system routes to a treatment. The treatment notifies the subscriber that an action is not appropriate for reasons of authorization.

The OM group TRMTCU2 is an extension of group TRMTCU. The OM group TRMTCU2 counts calls that the system routes to a treatment. The treatment notifies the subscriber that the action is not appropriate for reasons of authorization.

The OM group TRMTFR counts calls that the system routes to a treatment that is a normal sequence of a call.

The OM group TRMTRS counts calls that the system routes to a treatment. The system routes the calls because of a failure caused by a loss of software or hardware resources.

**Associated functional groups**

The following functional groups associate with the OM group TRMTER:

- DMS-100 local
- DMS-100 local (international NETAS)
- DMS-100 local (K&S Austria)
- DMS-200 Toll
- DMS-100/200 combined local and toll

## OM group TRMTER (continued)

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- DMS-300 international gateway for North America
- DMS-250 tandem switching office for common carriers
- DMS-MTX mobile telephone exchange

### Associated functionality codes

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

| Functionality | Code     |
|---------------|----------|
| Common Basic  | NTX001AA |

### Register TERAIFL

Auto identified outward dialing (AIOD) failure (AIFL) treatment (TERAIFL)

Register TERAIFL counts calls for DMS-100 local and DMS-100/200 local toll offices, register TERAIFL counts calls that the system routes to AIFL treatment.

The system routes an incoming call on a PBX line with the AIOD feature to AIFL treatment. The system also routes an incoming call on a trunk of group type PX or P2 with the AIOD feature to AIFL treatment. The system routes a call to treatment if the DMS fails to receive the AIOD message over the AIOD data link in the specified delay.

#### Register TERAIFL release history

Register TERAIFL was introduced before BCS20.

#### Associated registers

There are no associated registers.

#### Associated logs

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

### Register TERANFL

Announcement fail (ANFL) treatment (TERANFL)

Register TERANFL counts calls that the system routes to ANFL treatment for reasons that the licensee assigns.

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**OM group TRMTER** (continued)

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This register supports the integration of software loads for the licensee.

**Register TERANFL release history**

Register TERANFL was introduced in BCS22.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TERC7AP**

CCS7 application (C7AP) failure treatment (TERC7AP)

For access tandem and equal access end offices, register TERC7AP counts service switching point (SSP) calls. The register counts calls that the system routes to C7AP treatment. The system routes the calls to treatment for one of the following reasons:

- service control point database time-out or trouble
- transaction capabilities application part (TCAP) message decoding problems
- transaction identification is not available for SSP calls or
- carrier identification for 800 calls is not correct

The C7AP treatment is available instead of RODR. The RODR treatment is now dedicated for distorted signals during dialing or in-pulsing.

**Register TERC7AP release history**

Register TERC7AP was introduced in BCS26.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TERCONP**

Connection not possible (CONP) treatment (TERCONP)

For DMS -250 tandem offices, register TERCONP counts calls that the system routes to CONP treatment. The system routes calls to CONP treatment when 3L-to-3L blocking does not allow a carrier to complete a call.

## **OM group TRMTER (continued)**

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### **Register TERCONP release history**

Register TERCONP was introduced 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.

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

## **Register TERDTFL**

Equipment related treatment of datafill error (TERDTFL)

For DMS-100G switch.

Register TERDTFL counts the number of times the system encounters an error in datafill.

### **Register TERDTFL release history**

Register TERDTFL was introduced before BCS26.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TERERDS**

Trunk permanent ground (ERDS) treatment (TERERDS)

Register TERERDS counts calls that the system routes to ERDS treatment. The DMS-100 local, DMS-200 toll, DMS-100/200 local toll, and DMS-300 gateway office use register TERERDS. The system routes a call to ERDS treatment because the system detects a permanent ground during a call.

### **Register TERERDS release history**

Register TERERDS was introduced before BCS20.

### **Associated registers**

There are no associated registers.

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**OM group TRMTER** (continued)

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**Associated logs**

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

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

**Register TERFDER**

Feature data error (FDER) treatment (TERFDER)

For DMS-100 local K&S offices (Austria), register TERFDER counts calls that the system routes to FDER treatment.

The system routes calls that originate in DMS-100 switches with the Call Forwarding K&S (Austria) feature to FDER treatment. The system routes the calls to treatment when a caller attempts a call forward that is not correct.

North American DMS-100 switches do not use the FDR treatment.

**Register TERFDER release history**

Register TERFDER was introduced 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.

**Register TERINBT**

Installation busy (INBT) treatment (TERINBT)

For DMS-100 local (International NETAS), and international offices, register TERINBT counts calls that the system routes to INBT treatment. The system routes the calls to treatment because an incoming call attempts to terminate on a line. The link is in the installation busy (INB) state.

**Register TERINBT release history**

Register TERINBT was introduced in BCS24.

**Associated registers**

There are no associated registers.

## **OM group TRMTER (continued)**

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### **Associated logs**

There are no associated logs.

### **Register TERINOC**

Invalid operator code (INOC) treatment (TERINOC)

For DMS-100/200 local toll offices, register TERINOC counts calls that the system routes to INOC treatment. The system routes the calls to treatment when the Auxiliary Operator Services System (AOSS) trunk sends an invalid operator identification code (OIC).

### **Register TERINOC release history**

Register TERINOC was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

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

### **Register TERINVM**

Equipment-related treatment of an invalid message (TERINVM)

Register TERINVM increases when the called party number receives an invalid numbering plan indicator. The register also increases when the called party receives an invalid calling party category.

### **Register TERINVM release history**

Register TERINVM was introduced in BCS32.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Register TERMTOC**

Multifrequency compelled (MFC) time-out or confusion (MTOC) treatment

Register TERMTOC counts calls that the system routes to MTOC treatment for reasons that the licensee assigns. This register supports integration of software loads for the licensee.

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**OM group TRMTER** (continued)

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**Register TERMTOC release history**

Register TERMTOC was introduced in BCS22.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TERNCUN**

National Communications System (NCS) unexpected error (NCUN) treatment (TERNCUN)

For DMS-250 tandem offices, register TERNCUN counts calls that the system routes to NCUN treatment if:

- the action code in a response message received from the NCS is 8 (unexpected error) on a virtual private network (VPN) call
- the action code in a response message received from the NCS is 5, 23, or 63 (not used)

**Register TERNCUN release history**

Register TERNCUN was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

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

**Register TERNMZN**

No metering zone (NMZN) treatment (TERNMZN)

Register TERNMZN is not active.

**Register TERNMZN release history**

Register TERNMZN was introduced before BCS20.

**Associated registers**

There are no associated registers.

## **OM group TRMTER (continued)**

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### **Associated logs**

There are no associated logs.

## **Register TERNONT**

Not on network (NONT) treatment (TERNONT)

For DMS-250 tandem offices, register TERNONT counts calls that the system routes to NONT treatment. The system routes the calls to treatment when the caller attempts a call origination to an area code. The area code is not on the network.

### **Register TERNONT release history**

Register TERNONT was introduced 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.

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

## **Register TERPERR**

Equipment-related treatment of protocol error (TERPERR)

Register TERPERR increases when the system routes a call to protocol error treatment.

### **Register TERPERR release history**

Register TERPERR was introduced in BCS32.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TERPNOH**

Permanent signal no receiver off-hook (PNOH) treatment (TERPNOH)

Register TERPNOH is not active.

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**OM group TRMTER** (continued)

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**Register TERPNOH release history**

Register TERPNOH was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TERPTOF**

Premature trunk offering (PTOF) treatment (TERPTOF)

Register TERPTOF is not active.

**Register TERPTOF release history**

Register TERPTOF was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TERQ33A**

Q33 fault treatment on incoming trunks (TERQ33A)

Register TERQ33F counts the number of calls sent to treatment. The system sends calls to treatment because of a Q33 fault on an incoming trunk. A Q33 fault occurs when AB bits of time slot 16 are set to (A=B=1).

**Register TERQ33A release history**

Register TERQ33A was introduced in BCS35.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates TRK149 when a Q33 failure occurs on a given trunk.

**Register TERQ33B**

Q33 fault treatment on outgoing trunks (TERQ33B)

## OM group TRMTER (continued)

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Register TERQ33F counts the number of calls sent to treatment. The system sends calls to treatment because of a Q33 fault on an outgoing trunk. A Q33 fault occurs when AB bits of time slot 16 are set to (A=B=1).

### Register TERQ33B release history

Register TERQ33B was introduced in BCS35.

### Associated registers

There are no associated registers.

### Associated logs

The system generates TRK149 when a Q33 failure occurs on a given trunk.

## Register TERRODR

Reorder (RODR) treatment (TERRODR)

The DMS-100 local, international, DMS-100G, DMS-200 toll, and DMS-100/200 local toll offices use register TERRODR. Register TERRODR counts calls the system routes to RODR treatment for one of the following reasons:

- the system received distorted signals during dialing or in-pulsing
- an attempt to outpulse too many digits to a trunk of group type OP occurred

For DMS-300 gateway offices, register TERRODR counts calls that the system routes to RODR treatment.

The system routes calls incoming on a private line, R1 signaling trunk, or international 101 test line to RODR treatment. The system routes the calls to treatment for one of the following reasons:

- the selector in the chosen route list is not known while the call is in routing
- a time-out occurs before the subscriber dials all the digits
- while the call is in translation, one of the following occurs. An translation result is not correct. A key pulse (KP) signal is not correct. Or a signaling type is not correct.

The system routes calls outgoing on an R1 signaling trunk, a no. 5 signaling trunk, or an international 101 test line to RODR treatment. The system routes the calls to treatment if the selector in the chosen route list is not known.

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**OM group TRMTER** (continued)

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The system routes calls outgoing on a no. 6 signaling trunk to RODR treatment if:

- the selector in the chosen route list is not known while the system routes the call
- a timeout occurs while or before the caller dials the digits

For DMS-250 tandem offices, register TERRODR counts calls that the system routes to RODR treatment for one of the following reasons:

- the number of digits the caller dials is more than the maximum number required
- a digit receiver or network path is not available for foreign exchange office (FXO) or foreign exchange station (FXS) circuit
- the speed number database did not return enough digits for translation to make a determination
- an error condition that is not expected occurs on an outgoing trunk while a call is up
- a treatment is set that does not appear in the trunk-group-specific treatment subtable, or in subtable TMTCNTL.OFFTREAT

For DMS-MTX offices, register TERRODR counts calls that the system routes to RODR treatment for one of the following reasons:

- the number of digits pulsed on an incoming trunk is more than the maximum required
- an error condition that is not expected occurs on an outgoing trunk while a call is up
- a resource is not available
- no page response from a mobile unit

**Register TERRODR release history**

Register TERRODR was introduced 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.

## **OM group TRMTER** (continued)

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

### **Register TERSCFL**

Database system communication failure (SCFL) treatment (TERSCFL)

For DMS-250 tandem offices, register TERSCFL counts calls that the system routes to database SCFL treatment for one of the following reasons:

- a failure in the communications link to the National Communications System (NCS) prevents the processing of virtual private network (VPN) calls
- the VPN transaction processing feature cannot hold onto a request because the WAIT\_FOR\_ACK queue is full
- the NCS communications software in the DMS-250 fails to respond
- the system detects an error in the data received from the NCS
- communication links are not available to the NCS

#### **Register TERSCFL release history**

Register TERSCFL was introduced before BCS20.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

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

### **Register TERSONI**

Equipment-related treatment of service or option not implemented (TERSONI)

Register TERSONI increases when the system receives a circuit existence indicator that is not correct. The register also increases when the system receives a teleservice indicator in an initial address message.

#### **Register TERSONI release history**

Register TERSONI was introduced in BCS32.

#### **Associated registers**

There are no associated registers.

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**OM group TRMTER** (continued)

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**Associated logs**

There are no associated logs.

**Register TERSSTO**

Start signal time-out (SSTO) treatment (TERSSTO)

The DMS-100 local, DMS-200 toll, and DMS-100/200 local toll use register TERSSTO. Register TERSSTO counts calls that the system routes to SSTO treatment for one of the following reasons:

- time-out waiting for an operator answer
- automatic number identification (ANI) outpulse failure or time-out, while the system outpulses the called number or the ANI information
- failure on an outgoing trunk during remote office test line (ROTL) tests

**Register TERSSTO release history**

Register TERSSTO was introduced 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.

The system generates TRK121 when the system encounters a problem while the system outpulses on an outgoing trunk.

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

**Register TERSTOB**

Signal timeout Bell operating company (STOB) treatment (TERSTOB)

For DMS-100/200 local toll, register TERSTOB counts calls that the system routes to STOB treatment.

The system routes a call in an equal access environment over an access tandem (AT) trunk to STOB treatment. The system routes the call to treatment because the AT trunk does not receive equal access end office (EAEO) wink.

**Register TERSTOB release history**

Register TERSTOB was introduced before BCS20.

## OM group TRMTER (continued)

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### Associated registers

Register TERSTOC counts calls that the system routes to signal timeout inter-LATA/international carrier (STOC) treatment. The system routes a call in an equal access environment over an AT trunk to STOC treatment. The system routes the call to STOC treatment because the AT trunk does not receive inter-LATA carrier/international carrier wink(s).

### Associated logs

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

The system generates TRK121 when the system encounters a problem during outpulsing on an outgoing trunk.

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

## Register TERSTOC

Signal timeout inter-LATA carrier (IC)/international carrier (INC) (STOC) treatment (TERSTOC)

For DMS-100/200 local toll, TERSTOC counts calls that the system routes to STOC treatment.

The system routes a call in an equal access environment over an access tandem (AT) trunk to STOC treatment. The system routes the call to STOC treatment because the AT does not receive IC/INC wink(s).

### Register TERSTOC release history

Register TERSTOC was introduced before BCS20.

### Associated registers

Register TERSTOB counts calls that the system routes to the signal timeout Bell operating company (STOB) treatment. The system routes a call in an equal access environment over an AT trunk to STOB treatment. The system routes the call to STOB treatment because the AT did not receive equal access end office (EAEO) wink.

### Associated logs

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

The system generates TRK121 when the system encounters a problem during outpulsing on an outgoing trunk.

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**OM group TRMTER** (continued)

---

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

**Register TERSYFL**

System failure (SYFL) treatment (TERSYFL)

The DMS-100 local, international, DMS-200 toll, DMS-100/200 local toll, and DMS-MTX offices use register TERSYFL. Register TERSYFL counts calls that the system routes to SYFL treatment. The system routes the call to SYFL treatment when the system must abort a call because of a failure of the switching unit. A failure of the switching unit occurs for one of the following reasons:

- call failure or integrity loss from port 1
- miscellaneous messages from port 2
- software failure or error condition
- line-to-line, line-to-trunk, or trunk-to-line error takedown
- miscellaneous failures during overlap outpulsing
- miscellaneous error returns during call set-up
- the line module (LM) of the called line is busy or under test
- automatic number identification (ANI) test failure caused by data error
- ANI failure on local call detail recording (CDR) call
- data error
- failure in line number control processor
- integrity loss while receiving digits
- ring failure

The system also routes a call on an incoming or two-way CAMA trunk with Bell operating company format to SYFL treatment. The system routes a call to treatment if the start signal does not match the signal in field SDATA in table TRKGRP.

For DMS-300 gateway offices, register TERSYFL counts calls that the system routes to the system failure treatment.

## **OM group TRMTER (end)**

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The system routes a call incoming on a private line, an R1 signaling trunk, or an international 101 test line to the SYFL treatment. The system routes a call to treatment SYFL for one of the following reasons:

- the system aborts the call during the routing procedure
- the system aborts the call during translation verification
- during screening, the call accesses table DCACCTL and the system does not find the data in the table to be correct

### **Register TERSYFL release history**

Register TERSYFL was introduced 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.

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

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## OM group TRMTFR

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### OM description

Feature-related treatment

The OM group TRMTFR counts calls that the system routes to a treatment that is a normal progression of a call.

The OM group TRMTFT contains one register for each call treatment. The registers are TFRnnnn, where nnnn is the external treatment abbreviation. The register increases when the system routes a call to that treatment.

### Release history

The OM group TRMTFR was introduced before BCS20.

#### GL04

DMS-100G was added to register description for registers TFRBUSY, TFRCFOV, and TFRCONF. Treatment added for DMS-100G.

#### BCS36

Effectivity for DMS-100 international switches was introduced in BCS36.

#### BCS30

Register TFRICNF was introduced in BCS30.

#### BCS29

Register TFRSCRJ was introduced in BCS29.

#### BCS28

Registers TFRSORE, TFRCCAP, TFRACPR, TFRADPA, TFRCCDT, and TFRCBDN were introduced in BCS28.

### Registers

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

|         |         |          |         |
|---------|---------|----------|---------|
| TFRBUSY | TFRMANL | TFRORMC  | TFRCONF |
| TFRRRPA | TFRORAF | TFRTRRF  | TFRORAC |
| TFORMMF | TFRSRRR |          | TFRPRSC |
| TFRMHLD | TFRPGTO | TFRCCCTO | TFRNINT |
| TFRNCIX | TFRNCII | TFRNCTF  | TFRCFOV |
| TFRILRR | TFRSINT | TFRIWUC  | TFRFRDR |
| TFRSORE | TFRCCAP | TFRACPR  | TFRADPA |
| TFRCCDT | TFRCBDN | TFRSCRJ  | TFRICNF |

## OM group TRMTFR (continued)

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The following treatments apply to DMS-100 local switching offices: BUSY, MANL, ORMC, CONF, ORAF, TRRF, ORAC, ORMF, SRRR, CFOV, ILRR, IWUC, FRDR, and SCRJ.

The following treatments apply to DMS-100 international switching offices: BUSY, CONF, ILRR, and IWUC.

The following treatments apply to DMS-200 toll switching offices: BUSY, CFOV, and FRDR.

The following treatments apply to DMS-100/200 combined local and toll switching offices: BUSY, MANL, ORMC, CONF, ORAF, TRRF, ORAC, ORMF, SRRR, CFOV, ILRR, IWUC, and FRDR.

The following treatment applies to DMS-300 gateway switching offices: BUSY.

The following treatments apply to DMS-250 Tandem switching offices for common carriers: PRSC, CCTO, NINT, NCIX, NCII, NCTF, SINT, and ICNF.

The following treatments apply to DMS-MTX mobile telephone exchanges: BUSY, and PGTO.

The following treatments apply to DMS-100G switching offices: BUSY, CFOV, and CONF.

## Group structure

The OM group TRMTFR provides one tuple for each office.

Table TMTCNTL defines all treatments.

The operating company uses subtables TMTCNTL.TREAT to define the tone(s), announcement(s), or states that the system returns to the originator of a call. The system returns the signals to the originator when the system encounters a specified treatment code during translation of a call. If a treatment code does not apply to an office type, the treatment is redundant. The treatment must be set to overflow or like tone.

Table OFRT lists the sequence of tones, announcements, or states that the system returns to the originator of a call. The signals return to the originator when the system encounters a specified treatment code during translation of a call.

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**OM group TRMTFR** (continued)

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Table CLLI defines the CLLI of each tone and announcement. The following tables define each treatment CLLI:

- Table TONES defines the CLLI for software-generated tones
- Table STN defines the CLLI for hardware-generated tones
- Table ANNS defines the CLLI for recorded announcements
- Table DRAMS defines the CLLI for digital recorded announcements

A call terminates in a specified treatment code because the operating company supplied translations that lead the call to a treatment. A call also terminates in a specified treatment code because the DMS detects conditions and prescribes a treatment. The DMS prescribes a treatment code without reference to the operating company translations. These conditions are not a normal set of conditions that prevent the completion of a call.

Occasionally, the treatment code is part of a normal call completion process. A normal call completion process includes, for example, an announcement to the originator before the call is complete.

When the DMS switch translates a call, it determines if the call must terminate to a specified treatment code. If the call must terminate, the DMS accesses subtable TMTCNTL.TREAT. The DMS switch accesses the subtables to determine what tone, announcement, or state returns to the originator. The DMS also accesses the subtables to determine what route in table OFRT lists the sequence of signals that return to the originator.

**Key field:**

There is no key field.

**Info field:**

There is no info field.

**Associated OM groups**

The OM group TRMTCM counts calls that the system routes to a treatment as a result of a customer action. The treatment does not relate to authorization.

The OM group TRMTCU counts calls that the system routes to a treatment. The treatment notifies the subscriber that an action is not appropriate for reasons of authorization.

The OM group TRMTCU2 is an extension of OM group TRMTCU and counts the same type of calls.

## OM group TRMTFR (continued)

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The OM group TRMTFR counts calls that the system routes to a treatment. The system routes the calls because of a failure caused by a switching equipment failure.

The OM group TRMTRS counts calls that the system routes to a treatment. The system routes the calls because of a failure caused by a lack of software or hardware resources.

### Associated functional groups

The following functional group associate with the OM group TRMTFR:

- DMS-100 local
- DMS-100/200 combined local and toll
- DMS-300 International Gateway for North America
- DMS-250 tandem switching office for common carriers
- DMS-MTX mobile telephone exchange

### Associated functionality codes

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

| Functionality                        | Code     |
|--------------------------------------|----------|
| Common Basic                         | NTX001AA |
| DMS-250 three Way Calling on Foncard | NTXG43AA |

### Register TFRACPR

Authcode prompt (ACPR) treatment (TFRACPR)

Register TFRACPR counts calls that the system routes to treatment ACPR.

#### Register TFRACPR release history

Register TFRACPR was introduced in BCS28.

#### Associated registers

There are no associated registers.

#### Associated logs

There are no associated logs.

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**OM group TRMTFR (continued)**

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**Register TFRADPA**

Address digits prompt announcement (ADPA) treatment (TFRADPA)

Register TFRADPA counts calls that the system routes to treatment ADPA.

**Register TFRADPA release history**

Register TFRADPA was introduced in BCS28.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TFRBUSY**

Busy line (BUSY) treatment (TFRBUSY)

Register TFRBUSY counts calls for DMS-100 local, DMS-100G, and International toll offices that the system routes to the treatment BUSY. Register TFRBUSY also counts calls for DMS-200, and DMS-100/200 local toll offices. The calls go to treatment BUSY for one of the following reasons:

- A line or trunk dialed a directory number (DN) that is call processing busy and Call Waiting is not activated.
- A line without the intercom (INT) option, assigned in table LENLINES, dials its own DN.
- The system seizes the called line for testing. The called line is out of service and the system does not assign the plug-up (PLP) option. Test equipment can access busy lines except when the busy line has the no double connection (NDC) option. Table LENLINES or table IBNLINES contains the NDC option.

Register TFRBUSY counts calls, for DMS-300 gateway offices, that the system routes to treatment BUSY. The system routes calls that are incoming on a private line, an R1 signaling trunk, or an international 101 test line. The system also routes calls that are outgoing on a no. 6 signaling trunk if the call terminates on a line that is:

- call processing busy
- damaged, or
- out of service

## **OM group TRMTFR (continued)**

---

Register TFRBUSY counts calls, for DMS-MTX offices, that the system routes to treatment. The system routes the calls to BUSY if:

- a mobile station dials its own DN
- a mobile station or trunk dials a DN that is call processing busy

### **Register TFRBUSY release history**

Register TFRBUSY was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

The system generates TRK138 if the system routes a call to a treatment after being call processing busy.

## **Register TFRCBDN**

Call back destination number (CBDN) treatment (TFRCBDN)

Register TFRCBDN counts push-button international subscriber-dialed calls that the system routes to an announcement that requests a destination number.

### **Register TFRCBDN release history**

Register TFRCBDN was introduced in BCS28.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## **Register TFRCCAP**

Credit card announcement prompt (CCAP) treatment (TFRCCAP)

Register TFRCCAP counts calls that the system routes to treatment CCAP.

### **Register TFRCCAP release history**

Register TFRCCAP was introduced in BCS28.

---

**OM group TRMTFR (continued)**

---

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TFRCCDT**

Credit card dial tone (CCDT) treatment (TFRCCDT)

Register TFRCCDT counts calls that the system routes to treatment CCDT.

**Register TFRCCDT release history**

Register TFRCCDT was introduced in BCS28.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TFRCCCTO**

Calling card timeout (CCTO) treatment (TFRCCCTO)

Register TFRCCCTO counts calls, for DMS-250 tandem offices, that the system routes to treatment CCTO. The calls go to treatment because the subscriber did not enter a travel card number (TCN) in the timeout period.

The office parameter MCCS\_CALLING\_CARD\_TIMEOUT in table OFCVAR determines the timeout period (1 to 10 s).

The system routes a call to an announcement. If the caller does not dial any digits after this announcement, the system routes the call to partial dial timeout (PDIL) treatment.

**Register TFRCCCTO release history**

Register TFRCCCTO was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates LINE138 if the system routes the call to a treatment after being call processing busy.

## **OM group TRMTFR (continued)**

---

### **Register TFRCF OV**

Call forwarding overflow (CFOV) treatment (TFRCF OV)

Register TFRCF OV counts calls, for DMS-100 local, DMS-100G, and DMS-100/200 local toll offices, that the system routes to treatment CFOV. The system routes a call to treatment if the system cannot forward the call through a POTS call forwarding base station. The call cannot forward if the number of calls exceeds the maximum simultaneous forwarding limit of the base station.

#### **Register TFRCF OV release history**

Register TFRCF OV was introduced before BCS20.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

There are no associated logs.

### **Register TFRCONF**

Confirmation tone (CONF) treatment (TFRCONF)

Register TFRCONF counts calls, for DMS-100 local, DMS-100G, and DMS-100/200 local/toll offices, that the system routes to treatment CONF. The system routes the calls to CONF when a caller accesses a custom calling feature.

#### **Register TFRCONF release history**

Register TFRCONF was introduced before BCS20.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

### **Register TFRFRDR**

Feature reorder (FRDR) treatment (TFRFRDR)

For DMS-100 local, and DMS-100/200 local toll offices with the IBN message service feature, TFRFRDR counts calls that are routed to treatment FRDR because a voice message exchange (VMX) failure has been detected during activation or deactivation of a Message Waiting indication.

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**OM group TRMTFR (continued)**

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**Register TFRFRDR release history**

Register TFRFRDR was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TFRICNF**

Invalid conference code (ICNF) treatment (TFRICNF)

Register TFRICNF counts three-way calls, for DMS-250 offices, that the system routes to treatment ICN. The system routes the calls to ICN because the controller of the three-way conference call dials an invalid conference feature code.

**Register TFRICNF release history**

Register TFRICNF was introduced in BCS30.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TFRILRR**

International line restriction (ILRR) treatment (TFRILRR)

For DSM-100 local, international, and DMS-100/200 local toll international end offices, TFRILRR counts calls that are routed to the treatment ILRR.

A call originating in an international end office with the International Line Restriction feature is routed to treatment ILRR when an attempt is made to originate a call that is restricted by feature NC0473 (International Line Restrictions for DMS-100).

**Register TFRILRR release history**

Register TFRILRR was introduced before BCS20.

**Associated registers**

There are no associated registers.

## **OM group TRMTFR (continued)**

---

### **Associated logs**

There are no associated logs.

## **Register TFRIWUC**

International wake-up call (IWUC) treatment (TFRIWUC)

For DMS-100 local, International and DMS-100/200 local toll international end offices, TFRIWUC counts calls that are routed to treatment IWUC.

The system routes a call that originates in an international end office with the International Wake-up Call feature to the trunk. The trunk uses the wake-up announcement during the wake-up process.

If a party answers a wake-up call, the line of the subscriber receives treatment IWUC.

### **Register TFRIWUC release history**

Register TFRIWUC was introduced in BCS24.

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates FTR138 when a line, trunk, or attendant console receives a treatment. The components receive treatment while the components use, initiate, or try to initiate a feature.

## **Register TFRMANL**

Manual line (MANL) treatment (TFRMANL)

Register TFRMANL counts calls, for DMS-100 local and DMS-100/200 local toll offices, that the system routes to treatment MANL.

The system routes a call that originates on a line with the originating manual service (MAN) option to treatment MANL. Table LENLINES contains the MAN option. The system routes the call to MAN when the line attempts to originate a call.

### **Register TFRMANL release history**

Register TFRMANL was introduced before BCS20. (TFRMANL)

### **Associated registers**

There are no associated registers.

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**OM group TRMTFR (continued)**

---

**Associated logs**

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

**Register TFRMHL D**

Music on hold (MHL D) treatment (TFRMHL D)

Register TFRMHL D is no longer used. The audio interlude table (AUDIO) handles the Meridian Digital Centrex (MDC) treatments.

**Register TFRMHL D release history**

Register TFRMHL D was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TFRNCII**

Network communication system invalid identification code (NCII) treatment (TFRNCII)

Register TFRNCII counts calls for DMS-250 tandem offices that the system routes to treatment NCII. The system routes the calls to NCII because the action code is 7 (invalid ID code). The network communication system (NCS) sends a response message that contains the action code.

**Register TFRNCII release history**

Register TFRNCII was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates TRK138 if the system routes a call to a treatment after being call processing busy.

**Register TFRNCIX**

Network communication system incoming exclusion (NCIX) treatment (TFRNCIX)

## **OM group TRMTFR (continued)**

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Register TRFNCIX counts calls for DMS-250 tandem offices that the system routes to treatment NCIX. The system routes the calls to NCIX because the action code is 6 (incoming exclusion). The network communication system (NCS) sends a response message that contains the action code.

### **Register TFRNCIX release history**

Register TFRNCIX was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates TRK138 if the system routes a call to a treatment after being call processing busy.

## **Register TFRNCTF**

Network communication system translation failure (NCTF) treatment (TFRNCTF)

Register TFRNCTF counts calls for DMS-250 tandem offices that the system routes to network communication system translation failure (NCTF) treatment. The system routes the calls to TFRNCTF because the network communication system (NCS) sends one of the following action codes:

- 9 misdialed number
- 12 supplementary code required
- 13 outgoing trunk not found
- 14 automatic number identification not found
- 15 NPA\_NXX not found
- 16 pilot number not found
- 17 associated partition not found
- 18 ADF format error
- 19 switch ID not found

### **Register TFRNCTF release history**

Register TFRNCTF was introduced in BCS20.

### **Associated registers**

There are no associated registers.

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**OM group TRMTFR (continued)**

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**Associated logs**

The system generates TRK138 if the system routes a call to a treatment after being call processing busy.

**Register TFRNINT**

Changed number intercept (NINT) treatment (TFRNINT)

Register TFRNINT counts calls for DMS-250 tandem offices that the system routes to treatment NINT. The system routes the calls to NINT because the called number changed.

**Register TFRNINT release history**

Register TFRNINT was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

The system generates TRK138 if the system routes a call to a treatment after being call processing busy.

**Register TFRORAC**

Originating revertive action for two-party lines with coded ringing (ORAC) treatment (TFRORAC)

Register TFRORAC counts calls for DMS-100 local and DMS-100/200 local toll offices that the system routes to treatment ORAC.

The system routes a call that originates on a two-party line with coded ringing to treatment ORAC. The system routes a call to ORAC when the line attempts to terminate to a party on the same line.

**Register TFRORAC release history**

Register TFRORAC was introduced before BCS20.

**Associated registers**

There are no associated registers.

## **OM group TRMTFR (continued)**

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### **Associated logs**

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

## **Register TFRORAF**

Originating revertive action for two-party lines with frequency ringing (ORAF) treatment (TFRORAF)

Register TFRORAF counts calls for DMS-100 local and DMS-100/200 local/toll offices that the system routes to treatment ORAF.

The system routes a call that originates on a two-party line with frequency ringing to treatment ORAF. The system routes a call to ORAF when the line attempts to terminate to a party on the same line.

### **Register TFRORAF release history**

Register TFRORAF was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

## **Register TFRORMC**

Originating revertive action for multiparty lines with coded ringing (ORMC) treatment (TFRORMC)

Register TFRORMC counts calls for DMS-100 local and DMS-100/200 local toll offices that the system routes to treatment ORMC.

The system routes a call that originates on a multiparty line with coded ringing to treatment ORMC. The system routes a call to ORMC when the line attempts to terminate to a party on the same line.

### **Register TFRORMC release history**

Register TFRORMC was introduced before BCS20.

### **Associated registers**

There are no associated registers.

---

**OM group TRMTFR (continued)**

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**Associated logs**

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

**Register TFRORMF**

Originating revertive action for multiparty lines with frequency ringing (ORMF) treatment (TFRORMF)

Register TFRORMF counts calls for DMS-100 local and DMS-100/200 local toll offices that the system routes to treatment ORMF.

The system routes a call that originates on a multiparty line with frequency ringing to ORMF treatment. The system routes a call to ORMF when the line attempts to terminate to a party on the same line.

**Register TFRORMF release history**

Register TFRORMF was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

**Register TFRPGTO**

Mobile page timeout (PGTO) treatment (TFRPGTO)

Register TFRPGTO counts calls for DMS-MTX offices that the system routes to treatment PGTO when a page timeout occurs.

**Register TFRPGTO release history**

Register TFRPGTO was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

The system generates TRK138 if the system routes a call to a treatment after being call processing busy.

## **OM group TRMTFR (continued)**

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### **Register TFRPRSC**

Priority screen fail (PRSC) treatment (TFRPRSC)

Register TFRPRSC counts calls for DMS-250 tandem offices that the system routes to treatment PRSC.

The system routes a call that originates on a trunk to treatment PRSC. The system routes a call to PRSC when authorization code priority screening is in effect in the office. The system routes a call to PRSC when the authorization code priority of the subscriber is lower than the current office priority.

#### **Register TFRPRSC release history**

Register TFRPRSC was introduced before BCS20.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

### **Register TFRRRPA**

Revertive ring prefix announcement (RRPA) treatment (TFRRRPA)

Register TFRRRPA is not active.

#### **Register TFRRRPA release history**

Register TFRRRPA was introduced before BCS20.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

There are no associated logs.

### **Register TFRSINT**

Service interception (SINT) treatment (TFRSINT)

Register TFRSINT counts calls that the subscriber does not dial correctly, that go to treatment SINT. Register TFRSINT counts calls for DMS-250 tandem offices. Datafill in the universal translation tables route calls to SINT.

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**OM group TRMTFR (continued)**

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The datafill routes the calls to a TOPS position. The service interception (SVI) facility (in the TOPS position) handles the calls.

**Register TFRSINT release history**

Register TFRSINT was introduced in BCS24.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TFRSORE**

Station origination restriction error (SORE) treatment (TFRSORE)

Register TFRSORE counts calls that the system routes to the treatment SORE. The system routes the calls to SORE because they are prohibited on an Integrated Business Network (IBN) line.

**Register TFRSORE release history**

Register TFRSORE was introduced in BCS28.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TFRSRRR**

Single-party revertive ringing (SRRR) treatment (TFRSRRR)

Register TFRSRRR counts calls for DMS-100 local and DMS-100/200 local toll that the system routes to treatment SRRR.

The system routes a call to treatment if a subscriber dials their own directory number to ring an extension telephone. The system routes the call if the line has the intercom (INT) option. Table LENLINES contains the INT option.

**Register TFRSRRR release history**

Register TFRSRRR was introduced before BCS20.

**Associated registers**

There are no associated registers.

## OM group TRMTFR (continued)

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### Associated logs

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

### Register TFRTRRF

Terminating revertive action for coded ringing (TRRF) treatment (TFRTRRF)

Register TFRTRRF counts calls for DMS-100 local and DMS-100/200 local/toll offices that the system routes to treatment TRRF.

The system routes the called party to treatment TRRF when both calling and called parties are multiparty lines with frequency ringing. Both parties must be on the same line. The system routes the called party to TRRF when it goes off-hook.

### Register TFRTRRF release history

Register TFRTRRF was introduced before BCS20.

### Associated registers

There are no associated registers.

### Associated logs

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

### Register TFRSCRJ

Selective call rejection (SCRJ) treatment (TFRSCRJ)

Register TFRSCRJ counts calls for DMS-100 local offices that receive treatment SCRJ. The call receives SCRJ because the Selective Call Rejection feature screened and rejected the call.

### Register TFRSCRJ release history

Register TFRSCRJ was introduced in BCS29.

### Associated registers

Register SCRJ\_SCRJSRJT counts calls that the Selective Call Rejection screens and rejects.

SCRJ\_SCRJSRJT = TRMTFR\_TFRSCRJ

Problems can occur while routing calls to the announcement. Routing problems occur if the number of calls that the SCRJ rejects is not equal to the

**OM group TRMTFR (end)**

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number of calls that receive treatment SCRJ. A routing problem can occur if too few announcement circuits are available for treatment SCRJ.

**Associated logs**

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

## OM group TRMTFR2

---

### OM description

Feature-related treatment extension (TRMTFR2)

Register TRMTFR2 is a continuation of OM group TRMTFR. Register TRMTFR2 counts calls that the system routes to a treatment. The treatment must be a normal progression of a call.

Register TRMTFR2 contains one register for each call treatment. The registers are TFRnnnn, where nnnn is the external treatment abbreviation. The register increases when a call goes to treatment.

### Release history

The OM group TRMTFR2 was introduced in BCS30.

#### NA009

Register TFRACRJ is pegged for BRI lines.

#### NA002

Registers TFRLDAD and TFRLDAA were introduced in NA002.

#### CCM02

Register TFRORBT was introduced in CCM02.

#### BCS36

Registers TFRINRF, TFRRTTE, TFRAIND, TFRAINP, and TFRPRTO were introduced in BCS36.

#### BCS35

Register TFRMBIA was introduced in BCS35.

#### BCS34

Registers TFRTRGB, TFRDSCN, TFRRFCS, TFRRFCD, and TFRRFCE were introduced in BCS34.

#### BCS33

Registers TFRRIEC, TFRWUCR, and TFRMWKP were introduced in BCS33.

#### BCS32

Registers TFRNVIP, TFRACRJ, TFRFCNI, TRFCDAS, TFRCDAF, TFRCDDS, and TFRCDDF were introduced in BCS32.

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**OM group TRMTFR2 (continued)**


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**BCS31**

Registers TFRNCS0 and TFRNCS1 were introduced in BCS31.

**Registers**

The OM group TRMTFR2 registers appear on the MAP terminal as follows:

|         |         |         |         |
|---------|---------|---------|---------|
| TFRLECV | TFRSCA  | TFRNCS0 | TFRNCS1 |
| TFRNVIP | TFRACRJ | TFRFCNI | TFRCDAS |
| TFRCDAF | TFRCDDS | TFRCDFD | TFRIEC  |
| TFRWUCR | TFRMWKP | TFRRFCS | TFRRFCD |
| TFRRFCE | TFRTRGB | TFRDSCN | TFRMBIA |
| TFRAIND | TFRAINF | TFRINRF | TFRRTTE |
| TFRPRTO | TFRPAGE | TFRCFWD | TFRLDAA |
| TFRLDAD | TFRORBT |         |         |

Treatment register TFRSCA applies to DMS-100 local switching offices.

The following treatment registers apply to DMS-250 tandem switching offices: TFRLECV, TFRNCS0, and TFRNCS1.

Treatment register TFRTRGB is only active in DMS-250 Sprint offices.

Treatment register TFRMBIA applies to DMS-MTX mobile telephone exchanges.

**Group structure**

The OM group TRMTFR2 provides one tuple for each office.

**Key field:**

There is no key field.

**Info field:**

There is no info field.

Table TMTCNTL defines all treatments.

The operating company uses subtable TMTCNTL.TREAT to define tones, announcements or states. These tones, announcements or states return to the originator of a call when a specified treatment code appears during the translation of the call. If a treatment code does not apply to an office type, the treatment is redundant. The treatment must be set to overflow or a like tone.

## OM group TRMTFR2 (continued)

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Table OFRT lists a sequence of tones, announcements, or states. These tones, announcements, or states return to the originator of a call when a specified treatment code appears during the translation of the call.

Table CLLI defines the common language location identifier (CLLI) of each tone and announcement. One of the following tables defines each treatment CLLI.

- Table TONES defines the CLLI for software-generated tones.
- Table STN defines the CLLI for hardware-generated tones.
- Table ANNS defines the CLLI for recorded announcements.
- Table DRAMS defines the CLLI for digital recorded announcements.

The tables do not include definitions for fixed treatment CLLIs, idle (IDLE), lockout (LKOUT), and cutoff on permanent signal and partial dial (COPP).

A call may terminate to a specified treatment code for one of the following reasons:

- The operating company supplies translations that lead the call to a treatment.
- The DMS switch detects conditions that prevent completion of the call. The switch prescribes a treatment code without reference to the operating company translations.

Sometimes the treatment code is part of a normal call completion process. This process includes, for example, an announcement to the originator before the call completes.

When the DMS switch determines that a call must terminate to a specified treatment code, it accesses subtable TMTCNTL.TREAT. The subtable determines what tone, announcement, or state returns to the originator. The subtable also determines what route in table OFRT lists the sequence of tones, announcements, or states.

### Associated OM groups

Group TRMTFR counts calls that the system routes to a treatment that is a normal sequence of a call.

Group TRMTCM counts calls that the system routes to a treatment as a result of a customer action. The treatment is not related to authorization.

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**OM group TRMTFR2 (continued)**


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Group TRMTCU counts calls that the system routes to a treatment. The treatment notifies the subscriber that an action is not appropriate for reasons of authorization.

Group TRMTCU2 is an extension of TRMTCU and counts the same type of calls.

Register TRMTER counts calls that the system routes to a treatment because of a switching equipment failure.

Register TRMTRS counts calls that the system routes to a treatment because not enough software or hardware resources are available.

### Associated functional groups

There are no associated functional groups.

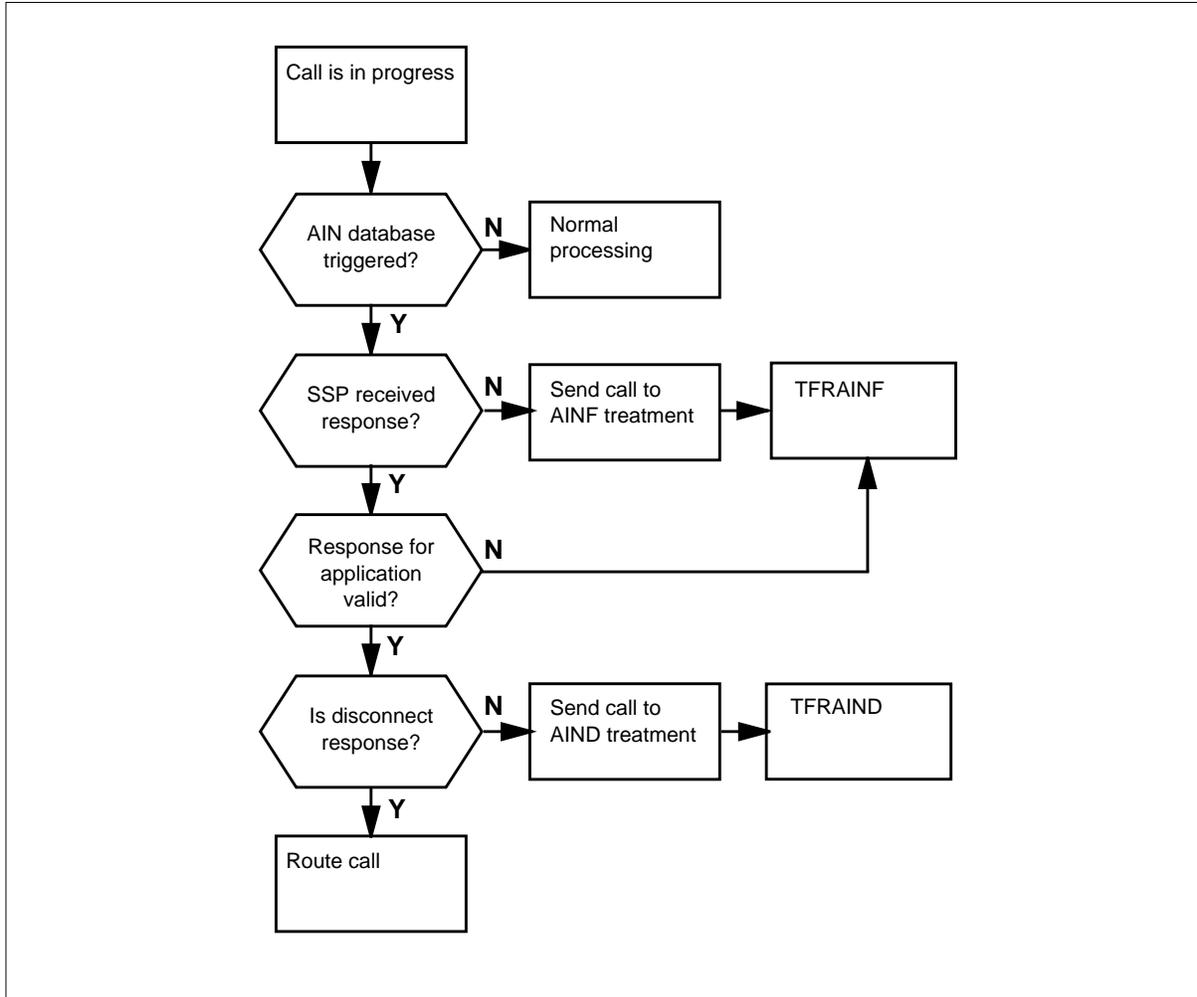
### Associated functionality codes

The associated functionality codes for OM group TRMTFR2 appear in the following table.

| Functionality                          | Code     |
|--|----------|
| DMS-250 Virtual Private Network (VNET) | NTX353CA |
| CLASS Selective Call Acceptance        | NTXA45AA |
| DMS-250 LEC Calling Card               | NTXG47AA |
| DMS-250 N00 Call Redirection           | NTXL86AA |
| AIN Ro .1 SSP                          | NTXQ43AA |

## OM group TRMTFR2 (continued)

### OM group TRMTFR2 registers



### Register TFRACRJ

Terminating treatment: feature-related anonymous caller rejection (TFRACRJ)

Register TFRACRJ counts the number of rejected calls that the system routes to anonymous caller rejection (ACRJ) treatment.

### Register TFRACRJ release history

Register TFRACRJ was introduced in BCS32.

### NA009

TFRACRJ is pegged for BRI lines.

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**OM group TRMTFR2** (continued)

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**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TFRAIND**

Terminating treatment: feature-related advanced intelligent network (AIN) disconnect call treatment (TFRAIND)

Register TFRAIND increases when the service control point requests that the service switching point disconnect an AIN call. Register TFRAIND counts the number of rejected calls that the system routes to AIN disconnect call treatment.

**Register TFRAIND release history**

Register TFRAIND was introduced in BCS36.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register TFRAIN**

Terminating treatment: feature-related advanced intelligent network (AIN) final treatment (TFRAIN)

Register TFRAIN counts the number of rejected calls that the system routes to final AIN treatment. Register TFRAIN increases when an AIN call fails because of a fatal call-related error.

**Register TFRAIN release history**

Register TFRAIN was introduced in BCS36.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## **OM group TRMTFR2 (continued)**

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### **Extension registers**

There are no extension registers.

### **Register TFRCDAF**

Treatment: call delivery activation failed (TFRCDAF)

Register TFRCDAF records the number of times the call delivery activation (CDA) treatment fails.

### **Register TFRCDAF release history**

Register TFRCDAF was introduced in BCS32.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

### **Register TFRCDAS**

Treatment: call delivery activation successful (TFRCDAS)

Register TFRCDAS records the number of times the call delivery activation (CDA) treatment is successful.

### **Register TFRCDAS release history**

Register TFRCDAS was introduced in BCS32.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

### **Register TFRCDDF**

Treatment: call delivery deactivation failed (TFRCDDF)

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**OM group TRMTFR2 (continued)**

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Register TFRCDDF records the number of times the call delivery deactivation treatment fails.

**Register TFRCDDF release history**

Register TFRCDDF was introduced in BCS32.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register TFRCDDS**

Treatment: call delivery deactivation successful (TFRCDDS)

Register TFRCDDS records the number of times the call delivery deactivation is successful.

**Register TFRCDDS release history**

Register TFRCDDS was introduced in BCS32.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register TFRCFWD**

Treatment: call forwarding a mobile call (TFRCFWD)

Register TFRCFWD is not active.

**Register TFRCFWD release history**

Register TFRCFWD was introduced in BCS36.

**Associated registers**

There are no associated registers.

## **OM group TRMTFR2 (continued)**

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### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register TFRDSCN**

Treatment: disconnect (TFRDSCN)

Register TFRDSCN records the number of times a call goes to disconnect treatment. A subscriber can have a feature Spontaneous Call Waiting Identification With Disposition (DSCWID). This treatment provides an announcement to the waiting party when a subscriber with DSCWID chooses the busy disposition for the waiting call. After the announcement, the call disconnects.

### **Register TFRDSCN release history**

Register TFRDSCN was 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 TFRFCNI**

Treatment: facility not implemented (TFRFCNI)

Register TFRFCNI increases when a call goes to the facility-not-implemented (FCNI) treatment.

### **TFRFCNI release history**

Register TFRFCNI was introduced in BCS32.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

---

**OM group TRMTFR2 (continued)**

---

**Extension registers**

There are no extension registers.

**Register TFRIIEC**

Treatment: feature related, invalid information element component (TFRIIEC)

Register TFRIIEC counts the number of times a call goes to an invalid information element component (IIEC) treatment.

**Register TFRIIEC release history**

Register TFRIIEC 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 TFRINRF**

Treatment: feature related, invalid redirection feature (TFRINRF)

Register TFRINRF increases when treatment INRF is set. Register TFRINRF counts the number of times a caller dials a redirection feature code that is not correct.

**Register TFRINRF release history**

Register TFRINRF was introduced in BCS36.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates FTR 138 when a caller dials an invalid redirection feature code and INRF treatment is set.

**Extension registers**

There are no extension registers.

**Register TFRLECV**

Treatment: local exchange carrier calling card validation (TFRLECV)

## **OM group TRMTFR2 (continued)**

---

Register TFRLECV counts calls that go to the local exchange carrier calling card validation (LECV) treatment. Treatment LECV indicates that the calling card number is valid and the call is ready for the system to route.

For local exchange carrier calling card calls, the system accesses table TMTCNTL when the system applies treatment LECV. To receive a confirmation announcement, treatment LECV must be datafilled in table MCCSANNNS.

### **Register TFRLECV release history**

Register TFRLECV was 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 TFRMBIA**

Treatment: mobile inactive (TFRMBIA)

Register TFRMBIA counts the number of times a call goes to the Mobile inactive (MBIA) treatment. This event occurs when an incoming call attempts to terminate to an inactive mobile that does not have Call Forwarding Don't Answer (CFD).

If an inactive mobile without CFD has line option Page Always (PGA), the mobile is paged and no MBIA treatment is given.

### **Register TFRMBIA release history**

Register TFRMBIA was introduced in BCS35.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

---

**OM group TRMTFR2** (continued)

---

**Register TFRMWKP**

Treatment: mobile weak power (TFRMWKP)

Register TFRMWKP counts the number of times a call goes to Mobile weak power (MWKP) treatment.

**Register TFRMWKP release history**

Register TFRMWKP 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 TFRNCS0**

Treatment: network control system 0 (TFRNCS0)

Register TFRNCS0 is not active.

**Register TFRNCS0 release history**

Register TFRNCS0 was 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 TFRNCS1**

Treatment: network control system 1

Register TFRNCS1 is not active.

**Register TFRNCS1 release history**

Register TFRNCS1 was introduced in BCS31.

## OM group TRMTFR2 (continued)

---

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register TFRNVIP**

Treatment: not very important person (TFRNVIP)

Register TFRNVIP counts the number of calls that the system routes to not very important person (NVIP) treatment. This action occurs on all calls to non-VIP subscribers in local exchange codes with enabled VIP screening.

### **Register TFRNVIP release history**

Register TFRNVIP was introduced in BCS32.

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates logs TRK138 and LINE138.

### **Extension registers**

There are no extension registers.

## **Register TFRORBT**

Treatment: feature related, Call Overflow for E008 (TFRORBT)

Register TFRORBT increases when an E008 call with the Call Overflow feature cannot complete. The call exhausts all routes in the Call Overflow destinations list. Register TFRORBT measures call failures caused by a call feature. The TFRORBT does not include treatments used to deny access to features for authorization reasons.

### **Register TFRORBT release history**

Register TFRORBT was introduced in CCM02.

### **Associated registers**

There are no associated registers.

---

**OM group TRMTFR2** (continued)

---

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register TFRPAGE**

Treatment: paging a mobile call (TFRPAGE)

Register TFRPAGE is not active.

**Register TFRPAGE release history**

Register TFRPAGE was introduced in BCS36.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register TFRPRTO**

Treatment: profile timeout (TFRPRTO)

Register TFRPRTO counts the number of timeouts that occur while the system waits for:

- an IS41 qualification request response or
- an IS41 service profile request response

**Register TFRPRTO release history**

Register TFRPRTO was 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 TRMTFR2 (continued)**

---

### **Register TFRRFCD**

Treatment: remote feature control denied (TFRRFCD)

Register TFRRFCD counts the number of times the system denies remote feature control.

#### **Register TFRRFCD release history**

Register TFRRFCD was introduced in BCS34.

#### **Associated registers**

Registers TFRRFCE and TFRRFCS are associated registers.

#### **Associated logs**

There are no associated logs.

#### **Extension registers**

There are no extension registers.

### **Register TFRRFCE**

Treatment: remote feature control error (TFRRFCE)

Register TFRRFCE counts the number of errors for remote feature control.

#### **Register TFRRFCE release history**

Register TFRRFCE was introduced in BCS34.

#### **Associated registers**

Registers TFRRFCD and TFRRFCS are associated registers.

#### **Associated logs**

There are no associated logs.

#### **Extension registers**

There are no extension registers.

### **Register TFRRFCS**

Treatment: remote feature control success (TFRRFCS)

Register TFRRFCS counts the number of times the remote feature control treatment is successful. Remote feature control operates from a remote site to control a feature in the home database. A single star (\*) placed before the feature code controls a feature in the serving database. A double star (\*\*) is placed before the feature code.

---

**OM group TRMTFR2 (continued)**

---

**Register TFRRFCS release history**

Register TFRRFCS was introduced in BCS34.

**Associated registers**

Registers TFRRFCE and TFRRFCD are associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register TFRRTTE**

Treatment: feature related, redirection tandem threshold exceeded RTTE (TFRRTTE)

Register TFRRTTE increases when treatment RTTE is set. The TFRRTTE counts the number of call redirections. This event occurs when the number of call redirections exceeds the maximum number of times allowed.

**Register TFRRTTE release history**

Register TFRRTTE was introduced in BCS34.

**Associated registers**

Registers TFRRFCE and TFRRFCD are associated registers.

**Associated logs**

The system generates FTR 138 when the system blocks call redirection. The system blocks call redirections when the number of redirections has exceeded the maximum allowed and RTTE treatment is set.

**Extension registers**

There are no extension registers.

**Register TFRSCA**

Treatment: selective call acceptance (TFRSCA)

Register TFRSCA counts calls rejected by SCA screening and that the system routes to selective call acceptance (SCA).

**Register TFRSCA release history**

Register TFRSCA was introduced in BCS30.

## OM group TRMTFR2 (continued)

---

### Associated registers

Register SCA\_SCASRJT counts calls that the SCA feature rejects. The call goes to SCA treatment.

### Associated logs

There are no associated logs.

### Extension registers

There are no extension registers.

## Register TFRTRGB

Treatment: trigger block (TFRTRGB)

Register TFRTRGB counts Sprint DMS-250 calls that attempt to use the distributed intelligent network architecture (DINA). Sprint DMS-250 calls attempt to use DINA when the datafill (field BLOCK\_CALL) in tables TRIGNTRY and TRIGCUST requires blocked calls.

### Register TFRTRGB release history

Register TFRTRGB was 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 TFRWUCR

Treatment: wake-up call (TFRWUCR)

Register TFRWUCR counts the number of successful wake-up call attempts that the system routes to the wake-up call reminder (WUCR) treatment. Tables CLLI, DRAMS, DRAMTRK, TMTCNTL, ANNS, ANNMEMS, and OFRT must be entered to define a wake-up call announcement.

### Register TFRWUCR release history

Register TFRWUCR was introduced in BCS33.

### Associated registers

There are no associated registers.

---

**OM group TRMTFR2 (continued)**

---

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register TFRLDAA**

Treatment: long distance signal activation (TFRLDAA)

Register TFRLDAA increases when the system routes a call to LDAA treatment. The subscriber dials the LDS access code (\*49 or 1149) to activate LDS functionality on the line.

The following conditions must exist before a subscriber can dial the LDS activation access code and route to LDAA treatment:

- Office parameter LDS\_ENABLED is set to Y.
- The line attribute index for the subscriber has option LDSV set to active.
- The line for the subscriber has option LDSO, or the office parameter LDS\_AUTO\_PROV\_ENABLED is set to Y.
- Option LDSA is not present on the line for the subscriber.

**Register TFRLDAA release history**

Register TFRLDAA was introduced in NA002.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates LINE138 when the operating company selects Y for the log option of treatment LDAA in table TMTCNTL.

**Extension registers**

There are no extension registers.

**Register TFRLDAD**

Treatment: long distance signal deactivation (TFRLDAD)

Register TFRLDAD increases when a call goes to LDAD treatment. The subscriber dials the LDS access code (\*49 or 1149) to deactivate LDS functionality on the line.

## **OM group TRMTFR2 (end)**

---

The following conditions must exist before a subscriber can gain access to dial the LDS access code and route to LDAD treatment:

- Office parameter LDS\_ENABLED is set to Y.
- The line attribute index for the subscriber has option LDSV set to active.
- Option LDSO is present on the line for the subscriber, or the office parameter LDS\_AUTO\_PROV\_ENABLED is set to Y.
- Option LDSA is not present on the line for the subscriber.
- Office image dumping is not in progress.

### **Register TFRLDAD release history**

Register TFRLDAD was introduced in NA002.

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates LINE138 when the operating company selects Y for the log option of treatment LDAD in table TMTCNTL.

### **Extension registers**

There are no extension registers.

---

## OM group TRMTFR3

---

### OM description

Feature-related treatment extension 3

OM group TRMTFR3 is a continuation of OM groups TRMTFR and TRMTFR2. OM group TRMTFR3 counts calls that are routed to a treatment as a normal progression of a call.

OM group TRMTFR3 contains one register for each call treatment. Spare registers have a prefix of FRSPR and a number. Used registers have a name that is an abbreviation of their function. Used registers are incremented when a call is routed to that treatment.

### Release history

Registers TFRCMGA and TFRCMGD were added in NA010.

Register FRSPR15 was renamed to TFRB900 in CSP008.

Register FRSPR16 was renamed to TFRRMIA in CSP008.

Register FRSPR17 was renamed to TFRRMID in CSP008.

Register FRMISRTE was added in CSP007.

OM group TRMTFR3 was introduced in CSP004.

### Registers

OM group TRMTFR3 contains registers that are in use and spare registers that are not yet used appear on the MAP display. Every in-use register in the TRMTFR3 group records the number of connections to the treatment that is associated with that register.

**Note:** When a spare register is initially put to use, it retains the name shown in the display that follows. Upon release of the software that makes use of the register, the register name is changed to reflect its use.

The following OM group TRMTFR3 registers display on the MAP terminal:

**OM group TRMTFR3** (continued)

```
> OMSHOW TRMTFR3 ACTIVE
```

```
CLASS: ACTIVE
```

```
START:1998/05/21 18:00:00 THU;STOP: 1998/05/21
```

```
18:13:32 THU;
```

```
SLOWSAMPLES: 9; FASTSAMPLES: 81;
```

|          |          |          |          |
|----------|----------|----------|----------|
| FRSPR1   | FRRTEERR | TFRNDISC | TFRPSNF  |
| TFRINER  | ISAEXIT  | TFRPNUN  | TFRUNPM  |
| FRMISRTE | TFRICSA  | TFRICSD  |          |
| GSMLNPMC | TFRCBFC  | TFRB900  | TFRRMID  |
| TFRRMIA  | TFRROTAE | TFRPGAP  | UCSLNPMR |
| TFRCMGA  | TFRCMGD  | MULTAUTH | FRSPR24  |
| FRSPR25  | FRSPR26  | FRSPR27  | FRSPR28  |
| FRSPR29  | FRSPR30  | FRSPR31  | FRSPR32  |
| 0        | 0        | 0        | 0        |
| 0        | 0        | 0        | 0        |
| 0        | 0        | 0        | 0        |
| 0        | 0        | 0        | 0        |
| 0        | 0        | 0        | 0        |
| 0        | 0        | 0        | 0        |
| 0        | 0        | 0        | 0        |
| 0        | 0        | 0        | 0        |

**Group structure**

OM group TRMTFR3 provides one tuple for each office.

**Key field:**

None

**Info field:**

None

Number of tuples: 1

Table TMTCNTL defines all treatments.

The operating company uses subtable TMTCNTL.TREAT to define the tones, announcements, and states that are returned to the originator of a call when a specified treatment code is encountered during translation of the call.

Table OFRT lists the sequence of the tones, announcements, or states that are returned. If a treatment code is not applicable to an office type, the treatment is redundant and must be set to overflow or to a similar tone.

---

## OM group TRMTFR3 (continued)

---

Table CLLI defines the common language location identifier (CLLI) of each tone and announcement. Each treatment CLLI, except for fixed treatment CLLIs, idle (IDLE), lockout (LKOUT), and cutoff on permanent signal and partial dial (COPP), is also defined in one of the following tables:

- TONES (defines the CLLI for software-generated tones)
- STN (defines the CLLI for hardware-generated tones)
- ANNS (defines the CLLI for recorded announcements)
- DRAMS (defines the CLLI for digital recorded announcements)

A call terminates to a specified treatment code for one of the following reasons:

- The operating company translations explicitly lead the call to a treatment.
- The DMS switch detects certain conditions that prevent completion of the call, so the switch determines a treatment code without reference to the operating company translations.

Sometimes the treatment code is part of a normal call completion process that includes, for example, an announcement to the originator before the call is completed.

When the DMS switch determines that a call must terminate to a specified treatment code, it accesses subtable TMTCNTL.OFFTREAT. Once accessed, it determines what tone, announcement, or state to return to the originator, or what route in table OFRT lists the sequence of tones, announcements, or states to return to the originator.

### Associated OM groups

The following OM groups are associated with OM group TRMTFR3:

- TRMTCM/TRMTCM2 counts customer miscellaneous-related treatments.
- TRMTCU/TRMTCU2 counts customer unauthorized-related treatments.
- TRMTER counts equipment-related treatments.
- TRMTFR/TRMTFR2 counts feature-related treatments.
- TRMTPR counts protocol-related treatments.
- TRMTRS counts resource shortage-related treatments.

### Associated functional groups

This OM group pertains to functional groups RES Advanced Custom Calling, RES00002 and RES Non-display Services, RES00005.

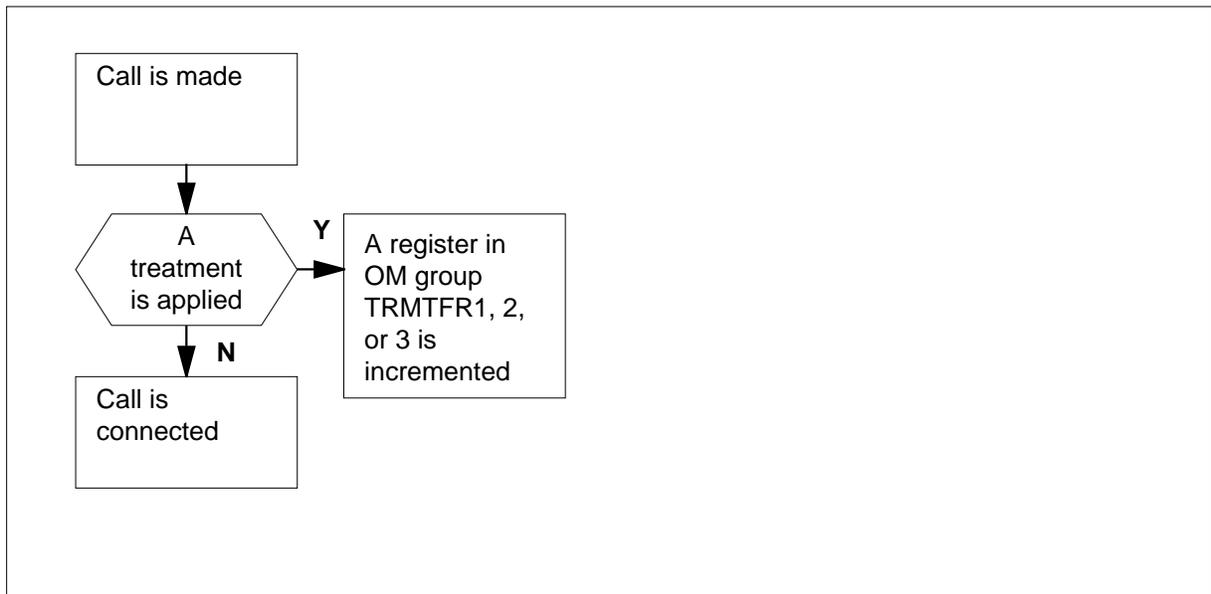
## OM group TRMTFR3 (continued)

### Associated functionality codes

The functionality codes associated with OM group TRMTFR3 are shown in the following table.

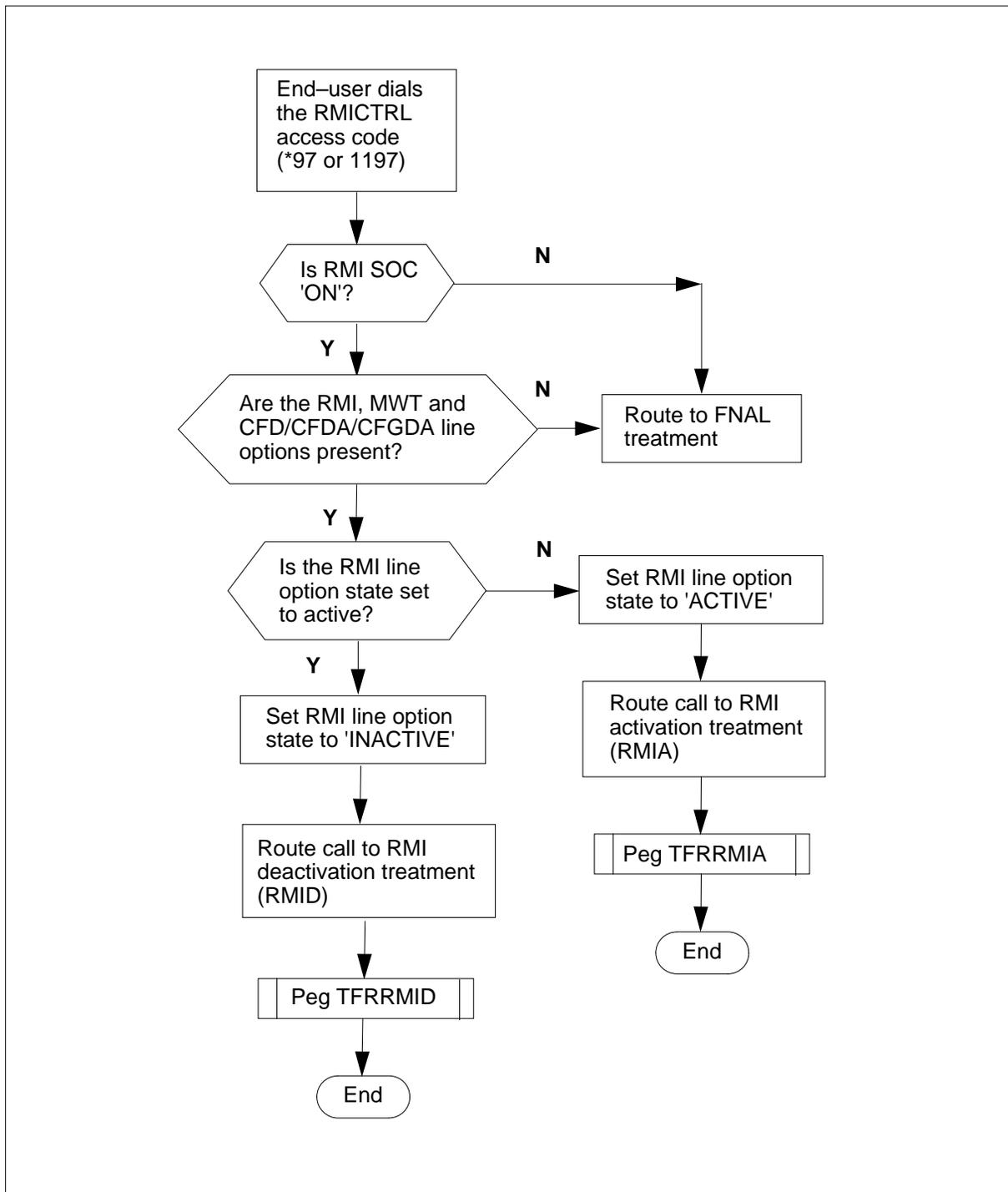
| Functionality                          | Code     |
|--|----------|
| DMS-250 Virtual Private Network (VNET) | NTX353CA |
| CLASS Selective Call Acceptance        | NTXA45AA |
| DMS-250 LEC Calling Card               | NTXG47AA |
| DMS-250 N00 Call Redirection           | NTXL86AA |
| AIN R 0 .1 SSP                         | NTXQ43AA |
| Access to Messaging                    | RES00077 |
| Enhanced Busy Call Return              | RES00076 |

### OM group TRMTFR3 registers—Query Processing



## OM group TRMTFR3 (continued)

## OM group TRMTFR3 registers



## **OM group TRMTFR3 (continued)**

---

### **Register FRRTEERR**

Register Feature-Related Exchange Routing Error

This register counts the number of feature-related treatments that are applied that build and send a release (REL) message with a cause value of ``Exchange Routing Error."`

#### **Register FRRTEERR release history**

Register FRRTEERR was assigned in CSP05.

#### **Associated registers**

None

#### **Associated logs**

None

#### **Extension registers**

None

### **Register TFRB900**

Register Treatment Feature B900

This register counts the number of times the Blocked 900 treatment (B900) is offered to the user. The caller is routed to B900 treatment when the caller is screened out by the 900FP feature. The B900 treatment is datafilled by the operating company in table TMTCNTL. The B900 treatment can be a tone or an announcement.

#### **Register TFRB900 release history**

Register TFRB900 was renamed from register FRSPR15 in NA008.

#### **Associated registers**

None

#### **Associated logs**

A LINE138 or TRK138 log is generated when the TFRB900 OM is pegged if table TMTCNTL is properly datafilled.

#### **Extension registers**

None

### **Register TFRCMGA**

Register Treatment Call Management Group Activation

---

**OM group TRMTFR3** (continued)

---

This register counts the number of times the Call Management Group (CMG) end-user line routes to CMG activation (CMGA) treatment. In order to route this treatment, the end user must dial the CMG control (CMGRCTRL) or CMG activation (CMGRACT) access code. Also, the CMG simultaneous ringing functionality must pass from inactive to active.

**Register TFRCMGA release history**

Register TFRCMGA was assigned in NA010.

**Associated registers**

None

**Associated logs**

None

**Extension registers**

None

**Register TFRCMGD**

Register Treatment Call Management Group Deactivation

This register counts the number of times the CMG end-user line routes to CMG deactivation (CMGD) treatment. In order to route this treatment, the end user must dial the CMGRCTRL or CMG deactivation (CMGRDACT) access code. Also, the CMG simultaneous ringing functionality must pass from active to inactive.

**Register TFRCMGD release history**

Register TFRCMGD was assigned in NA010.

**Associated registers**

None

**Associated logs**

None

**Extension registers**

None

**Register TFRICSD**

Register Treatment Feature Related ICS Deactivation

## OM group TRMTFR3 (continued)

---

This register counts the number of connections to the In Call Service Activation (ICSD) treatment - a treatment associated with the Sustained Deactivation capability (the ICCTRL feature).

*Note:* The purpose of this treatment is to notify the user that the service offering has been deactivated on the line. Typically, this is accomplished by routing the call to a confirmation tone followed by call disconnection, or to an announcement followed by the normal dial tone. The operating company defines this treatment using table TMTCNTL.

### Register TFRICSD release history

Register TFRICSD was assigned in NA007.

### Associated registers

None

### Associated logs

The ICSD treatment is associated with log LINE138. If the field LOG of tuple ICSD in subtable LNT.TREAT (table TMTCNTL) is set to Y, a LINE138 log is generated every time the ICSD treatment is activated.

### Extension registers

None

## Register TFRICSA

Register Treatment Feature Related ICS Activation

This register counts the number of connections to the In Call Service Activation (ICSA) treatment - a treatment associated with the Sustained Deactivation capability (the ICCTRL feature).

*Note:* The purpose of this treatment is to notify the user that the service offering has been re-activated on the line. Typically, this is accomplished by routing the call to a confirmation tone followed by call disconnection, or to an announcement followed by the normal dial tone. The operating company defines this treatment using table TMTCNTL.

### Register TFRICSA release history

Register TFRICSA was assigned in NA007.

### Associated registers

None

---

**OM group TRMTFR3** (continued)

---

**Associated logs**

The ICSA treatment is associated with log LINE138. If the field LOG of tuple ICSA is subtable LNT.TREAT (table TMTCNTL) is set to Y, a LINE138 log is generated every time the ICSA treatment is activated.

**Extension registers**

None

**Register TFRNDISC**

Register Treatment Disconnect

This register counts the number of originating calls that are routed to the normal disconnect treatment.

**Register TFRNDISC release history**

Register TFRNDISC was introduced in GSM06.

**Associated registers**

None

**Associated logs**

None

**Extension registers**

None

**Register TFRPSNF**

Register PSN Call Treatment

This register counts the number of programmable service node (PSN) call failures that resulted in a call treatment being applied.

**Register TFRPSNF release history**

Register TFRPSNF was introduced as FRSPARE4 IN CSP06.

**Associated registers**

None

**Associated logs**

TRKT214

**Extension registers**

None

## OM group TRMTFR3 (continued)

---

### Register TFRINER

Register IN (Intelligent Networking) error

This register counts the number of originating calls that are routed to an IN error treatment.

#### Register TFRINER release history

Register TFRINER was introduced in CSP05.

#### Associated registers

None

#### Associated logs

None

#### Extension registers

None

### Register TFRRMIA

Treatment RMI (Remote Message Indicator) Activate

Register TFRRMIA is pegged each time the subscriber line routes to RMIA treatment. In order to route to this treatment, the subscriber line must dial the RMICTRL access code (\*97/1197) and the RMI line option state must pass from active to inactive. The following conditions must exist before a subscriber is routed to RMIA treatment:

- RMI SOC state is set to ON
- RMI and MWT line options are assigned to the subscriber's line
- CFD or CFDA is assigned to the subscriber's line or the subscriber's line is a member of a hunt group and CFGDA is assigned on the pilot line
- RMI line option is set to active

#### Register TFRRMIA release history

Register TFRRMIA was introduced in NA008.

#### Associated registers

None

#### Associated logs

A LINE138 log can be generated if the operating company datafills the RMIA extended treatment to be logged.

---

**OM group TRMTFR3** (continued)

---

**Extension registers**

None

**Register TFRRMID**

Treatment RMI (Remote Message Indicator) De-activate

Register TFRRMID is pegged each time the subscriber's line routes to RMID treatment. In order to route to this treatment, the subscriber line must dial the RMICTRL access code (\*97/1197) and the RMI line option state must pass from active to inactive. The following conditions must exist before a subscriber is routed to RMID treatment:

- RMI SOC state is set to ON
- RMI and MWT line options are assigned to the subscriber line
- CFD or CFDA is assigned to the subscriber line or the subscriber line is a member of a hunt group and CFGDA is assigned to the pilot line
- RMI line option state is set to active.

**Register TFRRMID release history**

Register TFRRMID was introduced in NA008.

**Associated registers**

None

**Associated logs**

A LINE138 log is generated if the operating company datafills the RMID extended treatment to be logged.

**Extension registers**

None

**Register ISAEXIT**

Register In-Session Activation services exit

This register counts the number of originating agents that are routed to the ISAX treatment.

*Note:* The ISAX treatment is used only when more than one level of ISA announcements is datafilled. The treatment is applied to the originating agent when the ISA service is rejected by the caller in the second or higher level of ISA announcement.

## OM group TRMTFR3 (continued)

---

### Register ISAEXIT release history

Register ISAEXIT was introduced in CNA06.

Released under the old name FRSPARES6 in CNA05.

### Associated registers

None

### Associated logs

None

### Extension registers

None

## Register TFRUNPM

Register Unprogrammed mobile

This register counts the number of times that the "Unprogrammed\_Mobile\_treatment" is applied to a CDMA (Code Division Multiple Access) unprogrammed mobile.

### Register TFRUNPM release history

Register TFRUNPM was introduced as FRSPARE8 in MTX05.

### Associated registers

None

### Associated logs

In MTX05 and MTX06, every UNPROGRAMMED\_MOBILE treatment is accompanied by a CELL900 "possible SERVCHNG entry missing for 000000XXXX" log.

### Extension registers

None

## Register TFRPNUN

Register Private Networks are Unavailable

This register counts the number of times that the "Private\_Networks\_are Unavailable" treatment is applied to a CDMA unprogrammed mobile. Specifically, this means that the Virtual Private Network (VPN) cannot be accessed.

---

**OM group TRMTFR3 (end)**

---

**Register TFRPNUN release history**

Register TFRUNPM was introduced as FRSPARE9 in MTX04.

**Associated registers**

None

**Associated logs**

None

**Extension registers**

None

**Register FRMISRTE**

Register Misrouted call to ported DN treatment

This register counts the number of call attempts to ported DN's that terminate to an unallocated number treatment in the terminating switch.

**Register FRMISRTE release history**

Register FRMISRTE was introduced in CSP07.

**Associated registers**

None

**Associated logs**

None

**Extension registers**

None

## OM group TRMTPR

---

### OM description

Protocol-related treatments (TRMTPR)

The OM group TRMTPR counts calls the system routes to a treatment because of protocol violations or ill-formed protocol messages.

### Release history

The OM group TRMTPR was introduced in BCS33.

### Registers

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

|         |         |         |         |
|---------|---------|---------|---------|
| TPRNOBC | TPRNORA | TPRPER1 | TPRPER2 |
| TPRPER3 | TPRPER4 | TPRPER5 | TPRCER1 |

This OM group contains spare registers that are not used but are visible to the user. Later software releases will make use of these registers. The registers will be documented at that time. The following spare registers appear on the MAP terminal:

|         |         |         |         |
|---------|---------|---------|---------|
| PRSPR1  | PRSPR2  | PRSPR3  | PRSPR4  |
| PRSPR5  | PRSPR6  | PRSPR7  | PRSPR8  |
| PRSPR9  | PRSPR10 | PRSPR11 | PRSPR12 |
| PRSPR13 | PRSPR14 | PRSPR15 | PRSPR16 |
| PRSPR17 | PRSPR18 | PRSPR19 | PRSPR20 |
| PRSPR21 | PRSPR22 | PRSPR23 | PRSPR24 |

When a spare register is first put to use, the register will retain the name that appears in the preceding MAP terminal. With the release of the next Northern Telecom software, the register name will change to reflect the use.

### Group structure

The OM group TRMTPR provides one tuple for each office.

**Key field:**

There is no key field.

**Info field:**

There is no info field.

---

**OM group TRMTPR (continued)**


---

**Associated OM groups**

The OM group TRMTCM contains treatments that explain call conditions related to customer action but not related to authorization. The OM group TRMTCM does not include treatments that mark the development or completion of call features.

The OM group TRMTER contains treatments that handle failures that occur because of switching equipment failure. The OM group TRMTPR does not cover failures to allocate hardware or software resources that are not present.

The OM group TRMTFR and TRMTFR2 contain treatments that explain call conditions related to certain call features. The OM groups do not cover treatments that deny access to features for authorization reasons.

The OM group TRMTRS contains treatments that handle failures that occur because not enough hardware or software resources are present. The register does not include treatments that handle switching equipment failures.

The OM group TRMTCU and TRMTCU2 contain treatments that describe call failure conditions. The failure conditions result from a denial for a feature because of customer authorization.

**Associated functional groups**

There are no associated functional groups.

**Associated functionality codes**

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

| Functionality | Code     |
|---------------|----------|
| Common Basic  | NTX001AA |

**Register TPRCER1**

CUG error 1 (TPRCER1)

Register TPRCER1 increases when the closed user group information for a call is not defined correctly.

**Register TPRCER1 release history**

Register TPRCER1 was introduced in BCS33.

## **OM group TRMTPR (continued)**

---

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates TRK138 if a call that is call processing busy routes to a treatment.

The system generates TRK343 if an IBN7 message does not contain the transported Digital Private Network Signaling System (DPNSS) message.

## **Register TPRNOBC**

No BC available (TPRNOBC)

Register TPRNOBC increases when the bearer capability (BC) is indicated, but no BC is included in the received setup message.

### **Register TPRNOBC release history**

Register TPRNOBC was introduced in BCS33.

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates TRK138 if a call that is call processing busy routes to a treatment.

The system generates TRK343 if an IBN7 message does not contain the transported DPNSS message.

## **Register TPRNORA**

No routing available (TPRNORA)

Register TPRNORA increases when the system expects the routing information, but none appears in the received setup message.

### **Register TPRNORA release history**

Register TPRNORA was introduced in BCS33.

### **Associated registers**

There are no associated registers.

---

**OM group TRMTPR (continued)**

---

**Associated logs**

The system generates TRK138 if a call that is call processing busy routes to a treatment.

The system generates TRK343 if an IBN7 message does not contain the DPNSS message.

**Register TPRPER1**

Protocol error 1 (TPRPER1)

Register TPRPER1 increases when the signaling capability of the requested call conflicts with the attributes of the signaling path chosen.

**Register TPRPER1 release history**

Register TPRPER1 was introduced in BCS33.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates TRK138 if a call that is call processing busy routes to a treatment.

The system generates TRK343 if an IBN7 message does not contain the DPNSS message.

**Register TPRPER2**

Protocol error 2 (TPRPER2)

Register TPRPER2 increases when the signaling path the system chooses for the call cannot support the information transfer capability requested.

**Register TPRPER2 release history**

Register TPRPER2 was introduced in BCS33.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates TRK138 if a call that is call processing busy routes to a treatment.

## **OM group TRMTPR (continued)**

---

The system generates TRK343 if an IBN7 message does not contain the DPNSS message.

### **Register TPRPER3**

Protocol error 3 (TPRPER3)

Register TPRPER3 increases when the system receives messages in a forward direction. This increase occurs when the control indicators for the protocol in use do not follow the guidelines the protocol specification sets.

#### **Register TPRPER3 release history**

Register TPRPER3 was introduced in BCS33.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

The system generates TRK138 if a call that is call processing busy routes to a treatment.

The system generates TRK343 if an IBN7 message does not contain the DPNSS message.

### **Register TPRPER4**

Protocol error 4 (TPRPER4)

Register TPRPER4 increases when the system receives messages in a backward direction. This increase occurs when the control indicators for the protocol in use do not follow the guidelines the protocol specification sets.

#### **Register TPRPER4 release history**

Register TPRPER4 was introduced in BCS33.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

The system generates TRK138 if a call that is call processing busy routes to a treatment.

The system generates TRK343 if an IBN7 message does not contain the DPNSS message.

## **Register TPRPER5**

Protocol error 5 (TPRPER5)

Register TPRPER5 increases when the associated signaling protocol cannot handle the class of call requested.

### **Register TPRPER5 release history**

Register TPRPER5 was introduced in BCS33.

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates TRK138 if a call that is call processing busy routes to a treatment.

The system generates TRK343 if an IBN7 message does not contain the DPNSS message.

## OM group TRMTRS

---

### OM description

Resource shortage treatment group (TRMTRS)

The OM group TRMTRS counts calls the system routes to a treatment because a shortage of software or hardware resources causes a failure.

The OM group TRMTRS contains one register for each call treatment. The registers are named TRSnnnn, where nnnn is the external treatment abbreviation. The register increases each time a call goes through that treatment.

### Release history

The OM group TRMTRS was introduced before BCS20.

#### GL04

A treatment was added to the register section for DMS-100G.

DMS-100G was added to register descriptions EMR1, EMR2, GNCT, NBLH, NBLN, NCRT, and NOSC.

#### MTX06

Register TRSOTAR was introduced in MTX06.

#### BCS31

Register TRSCHNF was introduced in BCS31.

### Registers

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

|         |         |         |         |
|---------|---------|---------|---------|
| TRSNOSC | TRSNBLH | TRSNBLN | TRSEMR1 |
| TRSEMR2 | TRSCQOV | TRSNCRT | TRSNECG |
| TRSFECG | TRSTOVD | TRSEMR3 | TRSEMR4 |
| TRSSORD | TRSGNCT | TRSEMR5 | TRSEMR6 |
| TRSNOSR | TRSCGRO | TRSCHNF | TRSOTAR |

This OM group contains spare registers which are not used but are visible to the user. Later software releases will make use of these registers. The registers will be documented at that time. The following spare registers appear on the MAP terminal:

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**OM group TRMTRS (continued)**


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|         |         |         |         |
|---------|---------|---------|---------|
| RSSPR5  | RSSPR6  | RSSPR4  | RSSPR8  |
| RSSPR9  | RSSPR10 | RSSPR7  | RSSPR12 |
| RSSPR13 |         | RSSPR11 |         |

When a spare register is in use, the register will retain the name that appears in the preceding MAP terminal. With the release of the next Northern Telecom software, the register name will change to reflect the use of the register.

The following treatments apply to DMS-100 local switching offices:

- NOSC
- NBLH
- FECG
- NBLN
- EMR1
- EMR2
- CQOV
- NCRT
- TOVD
- EMR3
- EMR4
- GNCT
- EMR5
- EMR6
- NOSR
- CGRO
- CHNF

The following treatments apply to DMS-200 toll switching offices:

- NOSC
- NBLH
- FECG

**OM group TRMTRS** (continued)

---

- NBLN
- EMR1
- EMR2
- CQOV
- NCRT
- EMR3
- EMR4
- GNCT
- EMR5
- EMR6
- NOSR
- CGRO

The following treatments apply to DMS-100/200 combined local and toll switching offices:

- NOSC
- NBLH
- FECG
- NBLN
- EMR1
- EMR2
- CQOV
- NCRT
- TOVD
- EMR3
- EMR4
- GNCT
- EMR5
- EMR6
- NOSR
- CGRO
- CHNF

---

**OM group TRMTRS** (continued)

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The following treatments apply to DMS-MTX mobile telephone exchanges:

- NOSC
- NBLH
- FECG
- NBLN
- NCRT
- OTASP
- GNCT

The following treatments apply to DMS-250 tandem switching offices:

- NOSC
- NBLH
- FECG
- NCRT
- SORD
- GNCT

The following treatments apply to DMS-300 Gateway switching offices:

- NBLH
- NCRT
- NECG
- FECG
- GNCT

The following treatments apply to DMS-100G switching offices:

- EMR1
- EMR2
- GNCT
- NBLH
- NBLN
- NCRT
- NOSC

## OM group TRMTRS (continued)

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### Group structure

The OM group TRMTRS provides one tuple for each office.

**Key field:**

There is no key field.

**Info field:**

There is no info field.

Table TMTCNTL defines all treatments.

The operating company uses subtable TMTCNTL.TREAT to define the tones, announcements, and/or states to return to the originator of a call. This sequence follows a specified treatment code during translation of the call. If a treatment code does not apply to an office type, the treatment is redundant. The treatment must be set to overflow or for the like tone.

Table OFRT lists the sequence of tones, announcements, and/or states to return to the originator of a call. The sequence follows a specified treatment code during translation of a call.

Table CLLI defines the common language location identifier (CLLI) of each tone and announcement. The following tables define each treatment CLLI. The tables do not define fixed treatment CLLIs, IDLE (idle), LKOUT (lockout), and COPP (cutoff on permanent signal and partial dial).

Table TONES defines the CLLI for software-generated tones.

Table STN defines the CLLI for hardware-generated tones.

Table ANNS defines the CLLI for recorded announcements.

Table DRAMS defines the CLLI for digital recorded announcements.

A call can terminate to a specified treatment code under the following two conditions:

- the operating company supplies translations that lead the call to a treatment
- the DMS detects fixed conditions and prescribes a treatment code without reference to the operating company translations

These conditions are not normal and prevent the completion of the call.

At times the treatment code is part of a normal call completion process. This process includes, for example, an announcement to the originator before the call ends.

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**OM group TRMTRS** (continued)

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When the DMS determines that the call must terminate to a specified treatment code, the DMS accesses subtable TRTCNTL.TREAT. The table shows the tone, announcement, or state to return to the originator. The table also shows the route in table OFRT that lists the sequence of tones, announcements, and/or states to return to the originator.

**Associated OM groups**

The OM group TRMTCM counts calls the system routes to a treatment that explains a call condition. The condition relates to a customer action but not authorization.

The OM group TRMTCU counts calls the system routes to a treatment that notifies the subscriber that the action of the subscriber is not appropriate. The action is not appropriate because of authorization reasons.

The OM group TRMTCU2 is an extension of group TRMTCU. The OM group TRMTCU2 counts calls the system routes to a treatment that notifies the subscriber that the action of the subscriber is not appropriate. The action is not appropriate because of authorization reasons.

The TRMTER counts calls the system routes to a treatment because a switching equipment failure causes a failure.

The TRMTFR counts calls the system routes to a treatment that is a normal sequence of a call.

The OM group TRMTFR2 is an extension of group TRMTFR. The OM group TRMTFR2 counts calls the system routes to a treatment that notifies the subscriber the action of the subscriber is not appropriate. The action is not appropriate because of authorization reasons.

**Associated functional groups**

The following functional groups associate with OM group TRMTRS:

- DMS-100 Local
- DMS-200 Toll
- DMS-100/200 Combined Local and Toll
- DMS-300 International Gateway for North America
- DMS-250 Tandem Switching Office for Common Carriers
- DMS-MTX Mobile Telephone Exchange

## OM group TRMTRS (continued)

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### Associated functionality codes

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

| Functionality                            | Code     |
|--|----------|
| Common Basic                             | NTX001AA |
| ISDN Functional Mode Basic Rate Services | NTX753AA |

### Register TRSCGRO

Customer group resource overflow (CGRO) treatment (TRSCGRO)

Register TRSCGRO counts calls that routed to the customer group resource overflow treatment for the following offices:

- DMS-100 local
- DMS-200 toll
- DMS-100/200 local/toll offices

An MDC call routes to the CGRO treatment when shortages occur on resources for a customer group, for example six-port conference circuits.

### Register TRSCGRO release history

Register TRSCGRO was introduced before BCS20.

### Associated registers

There are no associated registers.

### Associated logs

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

### Register TRSCHNF

Channel negotiation failure (CHNF) treatment (TRSCHNF)

For DMS-100 local, and DMS-100/200 local/toll offices, TRSCHNF counts calls that the system routes to channel negotiation failure treatment. This action occurs because B-channel negotiation fails at the terminating interface or because a link failure occurs.

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**OM group TRMTRS** (continued)

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**Register TRSCHNF release history**

Register TRSCHNF was introduced in BCS31.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TRSCQOV**

CAMA queue overflow (CQOV) treatment (TRSCQOV)

Register TRSCQOV counts calls the system routes to CAMA queue overflow treatment when the CAMA queue overflows for the following offices:

- DMS-100 local
- DMS-200 toll
- DMS-100/200 local/toll with TOPS or AOSS

**Register TRSCQOV release history**

Register TRSCQOV was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates TRK138 if the system routes a call to a treatment after being call processing busy.

**Register TRSEMR1**

Emergency treatment 1 (TRSEMR1)

Register TRSEMR1 counts calls the system routes to emergency treatment 1 for the following offices:

- DMS-100 local
- DMS-100G
- DMS-200 toll
- DMS-100/200 local toll

A call that code blocking, destination code cancellation, or alternate route control deflects routes to emergency treatment 1. This action occurs if the

## OM group TRMTRS (continued)

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operating company sets deflected calls to route to EA1. The operating company sets deflected calls to route to the EA1 at the network management (NWM) level of a MAP display.

### Register TRSEMR1 release history

Register TRSEMR1 was introduced before BCS20.

### Associated registers

Register TRSEMR2 counts calls the system routes to emergency treatment 2. A call that code blocking, destination code cancellation, or alternate route control deflects routes to emergency treatment 2. This action occurs if the operating company sets deflected calls to route to EA2 at the NWM level of a MAP display.

### Associated logs

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

The system generates TRK138 if the system routes a call to a treatment after being call processing busy.

## Register TRSEMR2

Emergency treatment 2 (TRSEMR2)

Register TRSEMR2 counts calls that go to emergency treatment 2 for the following offices:

- DMS-100 local
- DMS-100G
- DMS-200 toll
- DMS-100/200 local/toll

A call that code blocking, destination code cancellation, or alternate route control deflects routes to emergency treatment 2. This action occurs if the operating company sets the deflected calls to route to EA2 at the NWM level of a MAP display.

### Register TRSEMR2 release history

Register TRSEMR2 was introduced before BCS20.

### Associated registers

Register TRSEMR1 counts calls the system routes to emergency treatment 1. A call that code blocking, destination code cancellation, or alternate route

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**OM group TRMTRS** (continued)

---

control deflects routes to emergency treatment 1. This action occurs if the operating company sets deflected calls to route to EA1 at the NWM level of the MAP display.

**Associated logs**

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

The system generates TRK138 if the system routes a call to a treatment after being call processing busy.

**Register TRSEMR3**

Emergency treatment 3 (TRSEMR3)

Register TRSEMR3 counts calls the system routes to emergency treatment 3 for the following offices:

- DMS-100 local
- DMS-200 toll
- DMS-100/200 local/toll with TOPS

This action occurs because the digits dialed were other than 0-. The call exceeds the deflect call threshold for the queue, as assigned in the queue length threshold tables (QT0 to QT5).

**Register TRSEMR3 release history**

Register TRSEMR3 was introduced before BCS20.

**Associated registers**

Register TRSEMR4 counts calls the system routes to emergency treatment 4. This action occurs because the digits dialed were 0-. The call exceeds the deflect call threshold for the queue, as assigned in the queue length threshold tables (QT0 to QT5).

**Associated logs**

The system generates TRK138 if the system routes a call to a treatment after being call processing busy.

**Register TRSEMR4**

Emergency treatment 4 (TRSEMR4)

## OM group TRMTRS (continued)

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Register TRSEMR4 counts calls the system routes to emergency treatment 4 for the following offices:

- DMS-100 local
- DMS-200 toll
- DMS-100/200 local/toll with TOPS

This action occurs because the digits dialed were 0-. The call exceeds the deflect call threshold for the queue, as assigned in the queue length threshold tables (QT0 to QT5).

### Register TRSEMR4 release history

Register TRSEMR4 was introduced before BCS20.

### Associated registers

Register TRSEMR3 counts calls the system routes to emergency treatment 3. This action occurs because the digits dialed were other than 0-. The call exceeds the deflect call threshold for the queue, as assigned in the queue length threshold tables (QT0 to QT5).

### Associated logs

The system generates TRK138 if the system routes a call to a treatment after being call processing busy.

## Register TRSEMR5

Emergency treatment 5 (TRSEMR5)

Register TRSEMR5 counts directory help (411, 555, 131) calls that go to emergency treatment 5 for the following offices:

- DMS-100 local
- DMS-200 toll
- DMS-100/200 local/toll with AOSS

### Register TRSEMR5 release history

Register TRSEMR5 was introduced before BCS20.

### Associated registers

There are no associated registers.

### Associated logs

The system generates TRK138 if the system routes a call to a treatment after being call processing busy.

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**OM group TRMTRS (continued)**

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**Register TRSEMR6**

Emergency treatment 6 (TRSEMR6)

Register TRSEMR6 counts intercept calls the system routes to emergency treatment 6 for the following offices:

- DMS-100 local
- DMS-200 toll
- DMS-100/200 local/toll with AOSS

**Register TRSEMR6 release history**

Register TRSEMR6 was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates TRK138 if a call routes to a treatment after being call processing busy.

**Register TRSFECG**

Far-end congestion (FECG) treatment (TRSFECG)

Register TRSFECG counts calls the system routes to the far-end congestion treatment.

The system routes the following calls to FECG treatment:

- calls incoming on a private line
- calls incoming on an R1 signaling trunk
- calls incoming on an international 101 test trunk
- call outgoing on a No. 5 signaling trunk

## OM group TRMTRS (continued)

---

The system routes the calls to FECEG treatment for the following reasons:

- the far-end office encounters congestion in the network or outgoing trunks, while the system connects the call on the first attempt
- the system fails to connect the call on the first attempt for the following reasons:
  - the proceed to send was not received
  - the proceed to send was removed before the seizure was removed
  - the proceed to send was not removed
  - the release guard was not received
  - on the second attempt the far-end office encounters congestion in the network or outgoing trunks

### Register TRSFECG release history

Register TRSFECG was introduced before BCS20.

### Associated registers

There are no associated registers.

### Associated logs

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

The system generates TRK138 if the system routes a call to a treatment after being call processing busy.

## Register TRSGNCT

Generalized no circuit (GNCT) treatment (TRSGNCT)

Register TRSGNCT counts calls the system routes to the generalized no circuit treatment for the following offices:

- DMS-100 local
- DMS-100G
- DMS-200 toll
- DMS-100/200 local/toll

A call that originates on a line or trunk routes to the generalized no circuit treatment under the following conditions. The trunk group (other than trunk group type operator verification) is the last route in the route list and all trunks are busy.

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**OM group TRMTRS** (continued)

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If the trunk group type is operator verification (VR), the call routes to no service circuit treatment.

For DMS-300 gateway offices, TRSGNCT counts calls the system routes to the generalized no circuit treatment. This action occurs because call processing detected a no circuit condition, excluding receivers and verification trunks.

If the system detects a no circuit condition for receivers or verification trunk, the call routes to NOSC treatment.

For DMS-250 tandem offices, TRSGNCT counts calls the system routes to the generalized no circuit treatment. A call that originates on an incoming or two-way trunk routes to the GNCT treatment when all trunks associated with the outgoing route are busy.

For DMS-MTX offices, TRSGNCT counts calls the system routes to the generalized no circuit treatment. This action occurs because no direct outward dial (DOD) trunk is available for a mobile-to-land call.

**Register TRSGNCT release history**

Register TRSGNCT was introduced before BCS20.

**Associated registers**

Register TRSNOSC counts calls the system routes to the no service circuit (NOSC) treatment.

**Associated logs**

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

The system generates TRK138 if the system routes a call to a treatment after being call processing busy.

**Register TRSNBLH**

Network blockage heavy traffic (NBLH) treatment (TRSNBLH)

Register TRSNBLH counts calls that go to the network blockage heavy traffic treatment for the following offices:

- DMS-100 local
- DMS-100G
- DMS-200 toll

## OM group TRMTRS (continued)

---

- DMS-100/200 local/toll
- DMS-MTX

This action occurs because a path through the network is not available on one of the following types of calls:

- CAMA position, operator or receiver call, after the second attempt
- a three-way call
- from conference circuit to trunk
- from operator to line
- to metallic access trunk
- to line test unit on station ringer test call
- from conference port to called line

For DMS-300 gateway offices, TRSNBLH counts calls the system routes to the NBLH treatment.

Calls incoming on a private line go to the NBLH treatment for one of the following reasons:

- a second failure to prepare a call occurs for the following reasons:
  - the outgoing trunk is not idle
  - an input/output control block (IOCB) cannot link to the available outgoing trunk
  - a network connection is not available
- call control block is not available during preparation of the call
- the call cannot connect to a trunk during preparation because no network connection is available or the network connection lacks integrity
- a second failure to get a network connection occurs during preparation of a call

Calls incoming on an R1 signaling trunk route to the NBLH treatment for one of the following reasons:

- a second failure to prepare the call occurs for the following reasons:
  - the outgoing trunk is not idle
  - an IOCB cannot link to the available outgoing trunk
  - a network connection is not available
- call condense blocks are not available during preparation of the call

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**OM group TRMTRS** (continued)

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- the call cannot connect to a trunk during preparation because no network connection is available, or the network connection lacks integrity
- a second failure to get a network connection occurs during preparation of the call
- a failure to find a network connection or connect to an announcement occurs during supervision of the call
- the call connects to an announcement for the maximum number of announcement cycles during supervision of the call

The system routes incoming calls on an international 101 test line to the NBLH treatment for one of the following reasons:

- call condense blocks are not available during preparation of the call
- the call fails to connect to a trunk during preparation because a network connection is not available, or the network connection lacks integrity. A network connection is not available, or the network connection lacks accuracy

The system routes outgoing calls on a terminating 102 test line to the NBLH treatment after two failures to prepare the call.

The failures occur for three reasons:

- the outgoing trunk is not idle
- an input/output control block (IOCB) cannot connect to the available outgoing trunk
- a network connection is not available.

The system routes outgoing calls on a No. 5 or a No. 6 signaling trunk to the NBLH treatment because call condense blocks are not available during preparation of the call.

The system routes outgoing calls on an International 101 test line to the NBLH treatment for one of the following reasons:

- call control blocks are not available during preparation of the call
- the call cannot connect to a trunk during preparation because a network connection is not available or the network connection lacks integrity
- a second failure to get a network connection occurs during preparation of the call

## OM group TRMTRS (continued)

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The system routes outgoing calls on a terminating 104 test line to the NBLH treatment. This action occurs because a network connection is not available during preparation of the call.

The system routes outgoing calls on a transmission test unit (ATME2) to the NBLH treatment. This action occurs because a network connection is not available or the network connection lacks integrity during preparation.

For DMS-250 tandem office, TRSNBLH counts calls the system routes to the NBLH treatment for one of the following reasons:

- two attempts fail to reserve a network path from an incoming trunk to an outgoing trunk
- two attempts fail to reserve a network path from an outgoing trunk to an audio tone detector

### Register TRSNBLH release history

Register TRSNBLH was introduced before BCS20.

### Associated registers

There are no associated registers.

### Associated logs

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

The system generates TRK138 if the system routes a call to a treatment after being call processing busy.

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

The system generates NET136 when an attempt occurs to connect two network ports with no in-service plane available.

## Register TRSNBLN

Network blockage normal traffic (NBLN) treatment (TRSNBLN)

Register TRSNBLN counts calls that route to NBLH treatment for the following offices:

- DMS-100 local
- DMS-100G
- DMS-200 toll

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**OM group TRMTRS** (continued)

---

- DMS-100/200 local/toll
- DMS-MTX

This action occurs after the system aborts the calls because of failure to get a channel in the terminating peripheral module.

**Register TRSNBLN release history**

Register TRSNBLN was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

The system generates TRK138 if the system routes a call to a treatment after being call processing busy.

**Register TRSNCRT**

No circuit (NCRT) treatment (TRSNCRT)

Register TRSNCRT counts calls the system routes to the no circuit treatment for the following offices:

- DMS-100 local
- DMS-100G
- DMS-200 toll
- DMS-100/200 local/toll
- DMS-250 tandem
- DMS-MTX offices

A routine call that network management deflects will route to no circuit treatment. This action occurs if the operating company sets the deflected calls to route to NCA at the NWM level of a MAP display.

A network manager can also specify the no circuit treatment as an alternative to EMR1 or EMR2. This alternative applies to calls aborted through operation of cancel-from (CANF), or cancel-to (CANT) network management controls.

For DMS-300 gateway offices, TRSNCRT counts calls the system routes to the no circuit treatment.

## OM group TRMTRS (continued)

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The system routes the following calls to NCRT treatment:

- calls incoming on a private line
- calls incoming on an R1 signaling trunk
- calls incoming on an international 101 test line

The system routes these calls to the NCRT treatment for one of the following reasons:

- While the system connects the call, glare occurs on the outgoing trunk. Another attempt to connect is not possible.
- While the system connects the call, glare occurs between the CC and the N5 peripheral module (PM). Glare also occurs between the N5 PM and the far end PM. Another attempt to connect is not possible.
- While the system connects the call, the outgoing trunk detects a call failure. Another attempt to connect is not possible.
- While the system routes the call or performs translation verification, all routes in the route list are not available.
- While the call is in supervision, or during a repeat call attempt, the call attempt fails because of network system congestion.

The system routes outgoing calls on an R1 signaling trunk to the NCRT treatment for one of the following reasons:

- While the the system connects the call, glare occurs on the outgoing trunk. Another attempt to connect is not possible.
- While the system connects the call, glare occurs between the CC and the N5 peripheral module (PM). Glare also occurs between the N5 PM and the far end PM. Another attempt to connect is not possible.
- While the system connects the call, the outgoing trunk detects a call failure. Another attempt to connect is not possible.

### **Register TRSNCRT release history**

Register TRSNCRT was introduced before BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

---

**OM group TRMTRS** (continued)

---

The system generates TRK138 if the system routes a call to a treatment after being call processing busy.

**Register TRSNECG**

Near end congestion (NECG) treatment (TRSNECG)

For DMS-300 gateway offices, TRSNECG counts calls the system routes to the near-end congestion treatment.

The system routes incoming calls on a private line or an international 101 test line to NECG treatment. The system uses these routes for one of the following reasons:

- while the system routes a call or verifies translation, routes in the route list are not available
- while in supervision or on a repeat attempt to originate a call, a call attempt fails because of network system congestion

The system routes incoming calls on an R1 signaling trunk to the NECG treatment. The system uses this route because while the system routes calls or verifies translation, routes in the route list are not available.

**Register TRSNECG release history**

Register TRSNECG was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

The system generates TRK138 if the system routes a call to a treatment after being call processing busy.

**Register TRSOTAR**

Over The Air Services Provisioning (OTASP) Resources Unavailable treatment (TRSOTAR)

For DMS-MTX offices, TRSOTAR counts the OTASP\_RESOURCES\_UNAVAILABLE treatments.

## **OM group TRMTRS** (continued)

---

An OTASP origination receives this treatment when:

- the system cannot allocate a temporary MIN (TMIN)
- the system cannot allocate a temporary reference number (TRN)
- the system cannot allocate a TMIN-related VLR entry

### **Register TRSOTAR release history**

Register TRSSORD was introduced in MTX06.

### **Associated registers**

Register TMINUNAV and TRNUNAVL in OTASYS OM group.

### **Associated logs**

There are no associated logs.

## **Register TRSNOSC**

No service circuit (NOSC) treatment (TRSNOSC)

Register TRSNOSC counts calls the system routes to NOSC treatment for the following offices:

- DMS-100 local
- DMS-100G
- DMS-200 toll
- DMS-100/200 local/toll
- DMS-MTX

The system routes the calls to NOSC treatment for one of the following reasons:

- all receivers, senders, or verification 90 trunks are busy
- The trunks that queue for a CAMA position trunk is equal to or greater than the quantity specified in field DEFLECT. The specified quantity is in table CAMACSW
- CAMA positions are not available after the second try
- the operator queue overflows
- conference circuits are not available
- a timeout in CAMA queue occurs
- metallic test access connections are not available
- resources for 108 testline calls are not available

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**OM group TRMTRS** (continued)

---

- tone or announcement is not available on an intercom call
- the last operator verification trunk group in a route list encounters an all-trunks-busy condition

For DMS-250 tandem offices, TRSNOSC counts calls the system routes to NOSC treatment for one of the following reasons:

- the recording units are not available for call detail recording billing. The system blocks the call as specified by office parameter CDR\_UNAVAIL\_BLOCK in table OFCVAR
- echo suppression is specified but not available for test line calls
- resources for conference calling are not available when the feature is activated

**Register TRSNOSC release history**

Register TRSNOSC was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

The system generates TRK138 if the system routes a call to a treatment after being call processing busy.

**Register TRSNOSR**

No software resource (NOSR) treatment (TRSNOSR)

For DMS-100 local, DMS-200 toll, and DMS-100/200 local/toll offices, TRSNOSR counts calls that route to the no software resource treatment.

This treatment occurs when the system cannot schedule a CPWAKEUP request or when software resources are all busy. These resources include multiblocks, recording units, custom calling feature extension blocks, supplementary data blocks, or feature data blocks.

**Register TRSNOSR release history**

TRSNOSR was introduced prior to BCS20.

**Associated registers**

There are no associated registers.

## OM group TRMTRS (continued)

---

### Associated logs

The system generates LINE138 if the system routes a call to a treatment after being call processing busy.

The system generates TRK138 if the system routes a call to a treatment after being call processing busy.

## Register TRSSORD

Storage overflow reorder (SORD) treatment (TRSSORD)

For DMS-250 tandem offices, TRSSORD counts calls that go to the storage overflow reorder treatment for one of the following reasons:

- the DMS-250 runs out of network communications service system (NCS) extension blocks while the system translates a virtual private network (VPN) call
- the DMS-250 runs out of feature control blocks at the time of a travel card number service (TCN) call origination

### Register TRSSORD release history

Register TRSSORD was introduced before BCS20.

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

## Register TRSTOVD

Toll overload (TOVD) treatment (TRSTOVD)

For DMS-100 local, and DMS-100/200 local/toll offices, TRSTOVD counts calls that go to the toll overload treatment.

A call that originates on a line goes to the toll overload treatment if the calling line is denied access to the toll network. Access is denied because the toll network protection feature is activated.

### TRSTOVD release history

TRSTOVD was introduced before BCS20.

### Associated registers

None

**OM group TRMTRS (end)**

---

**Associated logs**

LINE138 is generated if the system routes a call to a treatment after being call processing busy.

TRK138 is generated if the system routes a call to a treatment after being call processing busy.

## OM group TROUBLEQ

---

### OM description

System referred line diagnostic queue (TROUBLEQ)

The OM group TROUBLEQ provides data on trouble queues. Trouble queues are ordered lists of line equipment that require troubleshooting. If the system detects a fault on a line, the line needs maintenance tests and the system attempts to put the line in a trouble queue.

The OM group TROUBLEQ has three registers. Two of the registers (TRBQATT and TRBQOVL) count successful and unsuccessful attempts to place a line on a trouble queue. The other register (TRBQOCC) records the number of lines in a trouble queue.

### Release history

The OM group TROUBLEQ was introduced before BCS20.

#### NA002

This release added a key value for the ISDN incoming message overload (ICMO) line queue.

#### BCS34

Registers decreased in size because of a software change to reduce log volume. This also reduces the number of lines in the shower queue.

#### BCS33

You can convert register TRBQOCC from 100 call seconds (CCS) to deci-erlangs before the usage count displays. Use the OMSHOW command on the ACTIVE class to display the usage count.

#### BCS22

Two key values are added for the repeat offender and incoming message overload line queues.

#### BCS23

Eight key values are added for ISDN lines.

### Registers

The OM group TROUBLEQ registers appear on the MAP (maintenance and administration position) terminal as follows:



TRBQATT      TRBQOCC      TRBQOVFL

---

**OM group TROUBLEQ** (continued)

---

**Group structure**

The OM group TROUBLEQ provides one tuple for each of the key field values shown below.

**Key field:**

TROUBLEQ\_TYPES identifies the type of trouble queue.

**Associated OM groups**

There are no associated OM groups.

**Associated functional groups**

The following functional products provide OM group TROUBLEQ:

- DMS-100 Local
- DMS-100/200 Local/Toll
- DMS-100/200 TOPS
- DMS-100 Military System or Military PBX
- DMS-100 Meridian
- DMS-MTX
- Meridian SL-100 PBX

**Associated functionality codes**

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

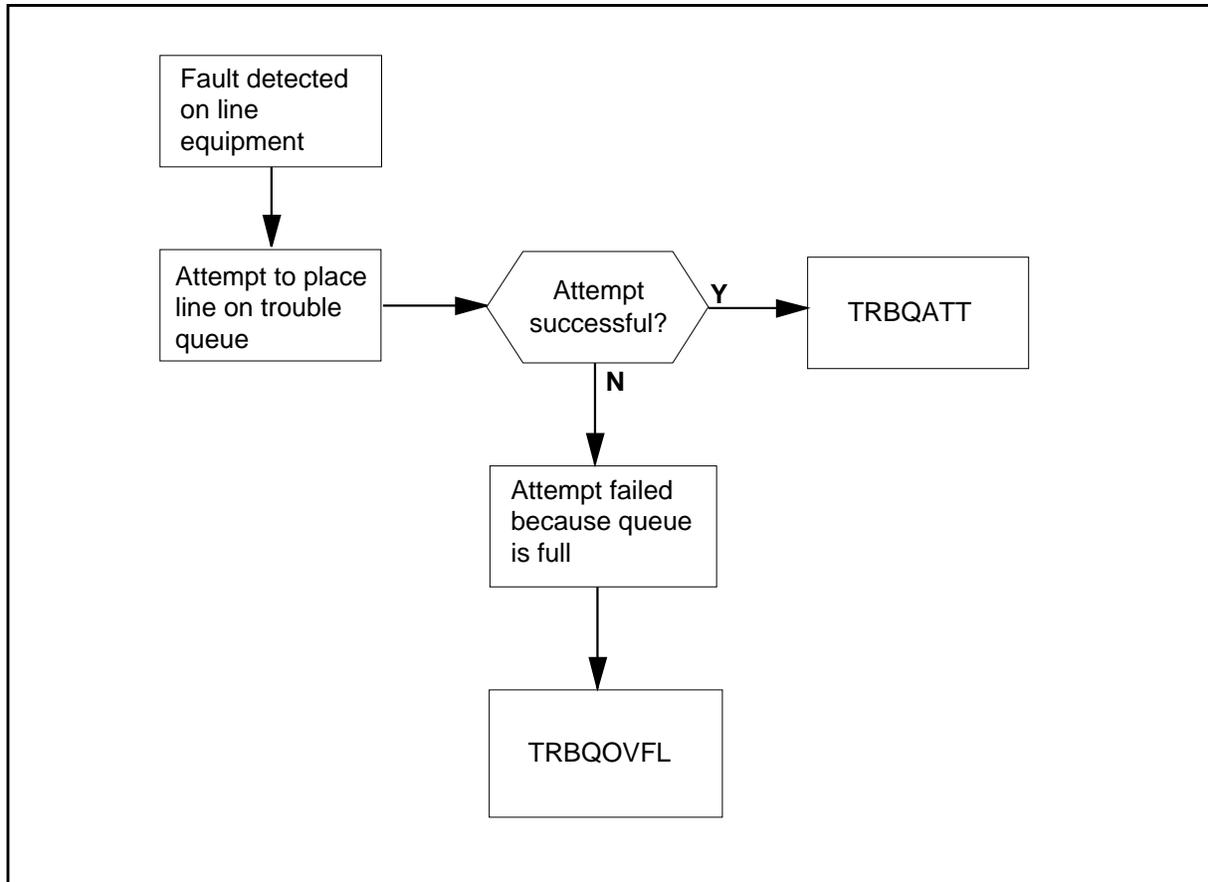
| Functionality | Code     |
|---------------|----------|
| BASE          | BASE0001 |
| NI0 ISDN Base | NI000007 |
| BAS Generic   | BAS00003 |

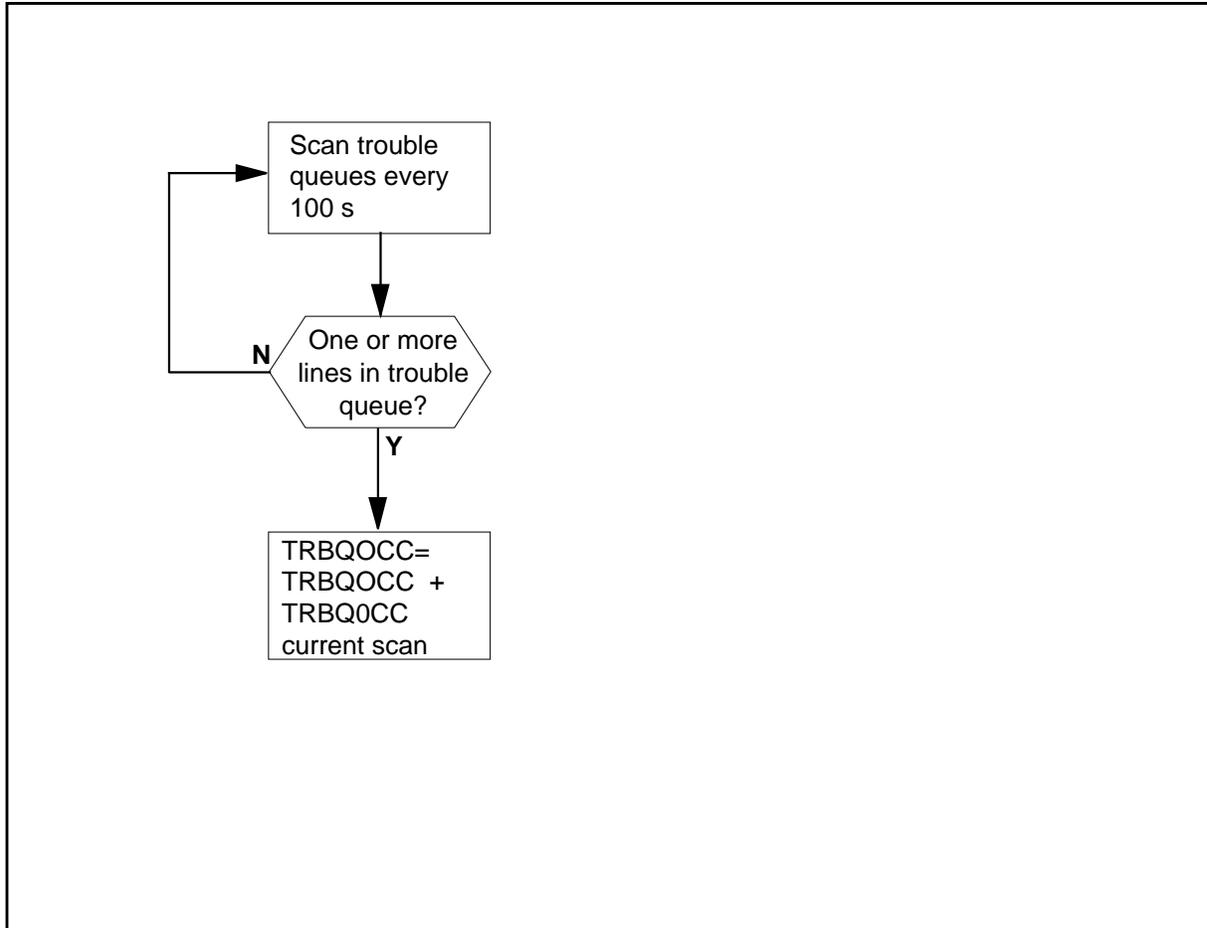
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## OM group TROUBLEQ (continued)

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### OM group TROUBLEQ registers



**OM group TROUBLEQ (continued)****OM group TROUBLEQ usage registers****Register TRBQATT**

Trouble queue attempts (TRBQATT)

Register TRBQATT is an event register. The count in register TRBQATT increases when the system attempts to place a line in a trouble queue.

If an ISDN line fails an in-service self-test, the line goes to a shower queue for full out-of-service maintenance tests.

**Register TRBQATT release history**

Register TRBQATT was introduced before BCS20.

**Associated registers**

There are no associated registers.

## OM group TROUBLEQ (continued)

---

### Associated logs

The system generates a LINE100 log when a system-initiated self-test passes.

The system generates a LINE101 log when a system-initiated self-test fails.

The system generates a LINE204 log when trouble arises during call processing.

The system generates a LINE205 log under the following conditions:

- four or more function-key hits come from a subscriber within 2 s
- an ISDN line babbles

### Register TRBQOCC

Trouble queue occupancy (TRBQOCC)

Register TRBQOCC is a usage register. Every 100 s this register adds the average number of lines in a trouble queue for the scan interval to an existing record of lines in the trouble queue. The register is cleaned after the transfer of the data to HOLDING class.

### Register TRBQOCC release history

Register TRBQOCC was introduced before BCS20.

### BCS33

When you set office parameter OMINERLANGS to Y, you can convert the use count from CCS to deci-erlangs before the count displays. Use the OMSHOW command on the ACTIVE class to convert the use count. The value held in the active registers remains in CCS. This value also converts to deci-erlangs before the transfer from ACTIVE to HOLDING and is held in deci-erlangs in HOLDING class.

### Associated registers

There are no associated registers.

### Associated logs

The system generates a LINE100 log when a system-initiated self-test passes.

The system generates a LINE205 log under the following conditions:

- four or more function-key hits come from a subscriber set within 2 s
- an ISDN line babbles

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**OM group TROUBLEQ (end)**

---

**Register TRBQOVFL**

Trouble queue overflows (TRBQOVFL)

Register TRBQOVFL increases if the system fails to place a line in a trouble queue because the queue is full.

If the system cannot place a line in the following trouble queues, alternate action does not result:

- shower (SHOWERQ)
- incoming message overload lines (ICMOLINESQ)
- ISDN in service (ISDN\_INSVDGQ)

**Register TRBQOVFL release history**

Register TRBQOVFL was introduced before BCS20.

**Associated registers**

There are no associated registers.

**Associated logs**

The system generates a LINE204 log when the system encounters trouble during call processing.

The system generates a LINE205 log under the following conditions:

- four or more function keys come from a subscriber within 2 s
- an ISDN line babbles

## OM group TS

---

### OM description

Time switch (TS)

The OM group TS records the use of the peripheral-side (P-side) time switches. Eight usage registers for each network module record the use of a separate time switch within the network module. New network modules have data in fields TS0 through TS3. Registers TS4 through TS7 apply to offices equipped with NT0X48 networks.

These registers record use of both the transmit (A) and receive (B) sides of a network module. The total of the registers (either TS0 to TS3, or TS4 to TS7) does not equal the true total use of the network module. The true total equals half the sum of the registers.

Register TS is provided for all types of DMS offices.

### Release history

The OM group TS was introduced before BCS20.

#### BCS33

This release allows conversion of registers TS0 through TS7 from CCS to deci-erlangs display with the `OMSHOW` command on the `ACTIVE` class.

#### BCS31

This release removed TS for offices equipped with an enhanced network (ENET).

#### BCS21

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

### Registers

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

|     |     |     |     |
|-----|-----|-----|-----|
| TS0 | TS1 | TS2 | TS3 |
| TS4 | TS5 | TS6 | TS7 |

### Group structure

The OM group TS provides one tuple for each network module.

#### Key field:

There is no key field.

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**OM group TS** (continued)

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**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.

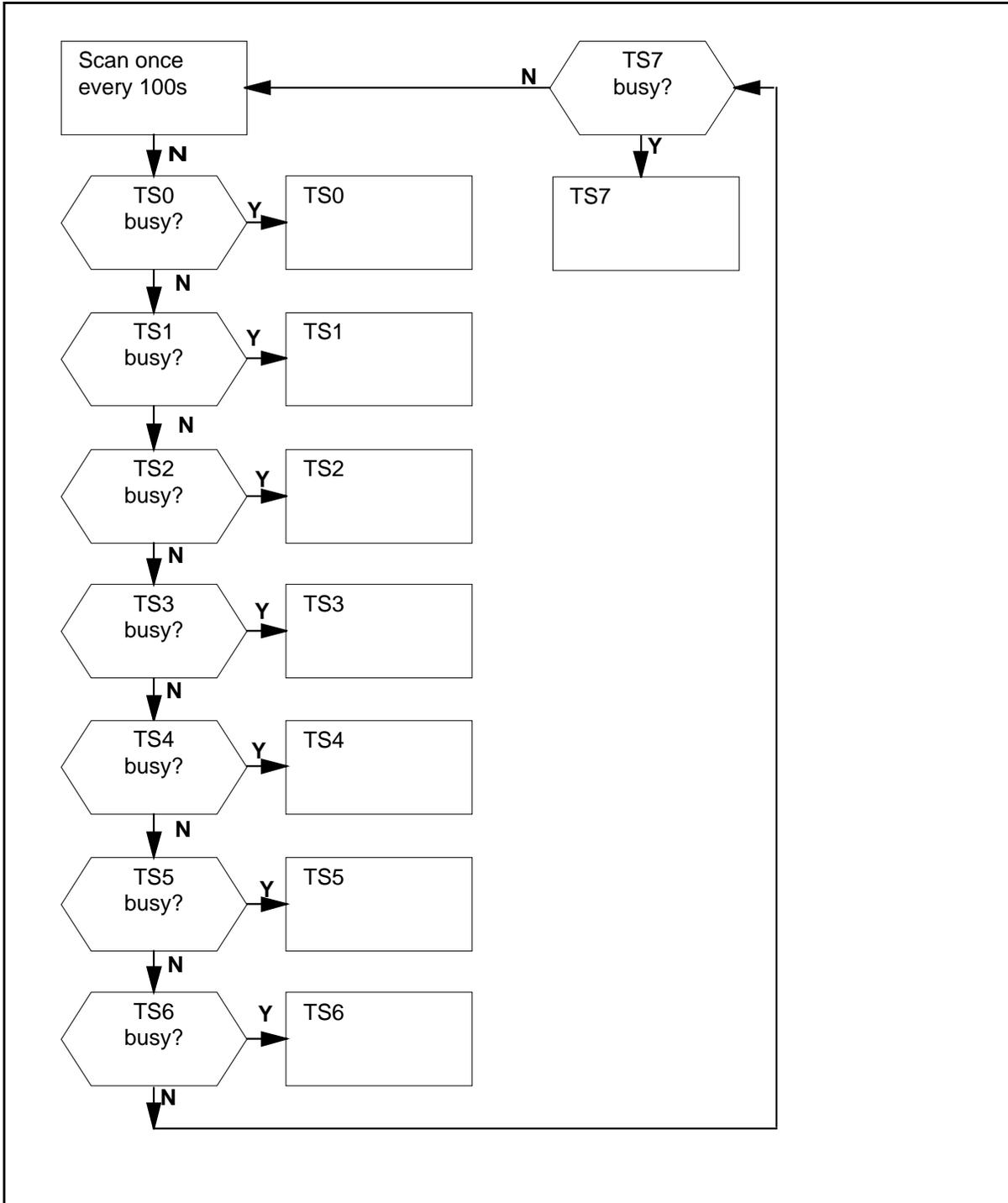
**Associated functionality codes**

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

| <b>Functionality</b>   | <b>Code</b> |
|------------------------|-------------|
| Enhanced Network-Basic | NTXE01AA    |
| Common Basic           | NTX001AA    |
| OMs in Erlangs         | NTX664AA    |

## OM group TS (continued)

### OM group TS registers



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**OM group TS** (continued)

---

**Register TS0**

Time switch 0 (TSO)

Register TSO is a usage register. The scan rate is 100 s. Register TS0 records the use of P-side time switch 0.

**Register TS0 release history**

Register TS0 was introduced before BCS20.

**BCS33**

When office parameter OMINERLANGS is set to Y, you can convert the use count from CCS to deci-erlangs before the count displays. Use the OMSHOW command on the ACTIVE class to convert use count. The value held in the active registers remains in CCS.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TS1**

Time switch 1 (TS1)

Register TS1 is a usage register. The scan rate is 100 s. Register TS1 records the use of P-side time switch 1.

**Register TS1 release history**

Register TS1 was introduced before BCS20.

**BCS33**

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

**BCS21**

Software changes provides use counts in CCS or deci-erlangs.

**Associated registers**

There are no associated registers.

## OM group TS (continued)

---

### Associated logs

There are no associated logs.

## Register TS2

Time switch 2 (TS2)

Register TS2 is a usage register. The scan rate is 100 s. Register TS2 records the use of P-side time switch 2.

### Register TS2 release history

Register TS2 was introduced prior to BCS20.

#### BCS33

When office parameter OMINERLANGS is set to Y, you can convert the use count from CCS to deci-erlangs before the count displays. Use the OMSHOW command on the ACTIVE class to convert the use count. The value held in the active registers remains in CCS.

#### BCS21

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 TS3

Time switch 3 (TS3)

Register TS3 is a usage register. The scan rate is 100 s. Register TS3 records the use of P-side time switch 3.

### Register TS3 release history

Register TS3 was introduced before BCS20.

#### BCS33

When office parameter OMINERLANGS is set to Y, you can convert the use count from CCS to deci-erlangs before the count displays. Use the OMSHOW command on the ACTIVE class to convert the use count. The value held in the active registers remains in CCS.

#### BCS21

Software changes provide use counts in CCS or deci-erlangs.

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**OM group TS** (continued)

---

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TS4**

Time switch 4 (TS4)

Register TS4 is a usage register. The scan rate is 100 s. Register TS4 records the use of P-side time switch 4.

**Register TS4 release history**

Register TS4 was introduced before BCS20.

**BCS33**

When office parameter OMINERLANGS is set to Y, you can convert the use count from CCS to deci-erlangs before the count displays. Use the OMSHOW command on the ACTIVE class to convert the use count. The value held in the active registers remains in CCS.

**BCS21**

Software changes provide use counts in CCS or deci-erlangs.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register TS5**

Time switch 5 (TS5)

Register TS5 is a usage register. The scan rate is 100 s. Register TS5 records the use of P-side time switch 5.

**Register TS5 release history**

Register TS5 was introduced before BCS20

**BCS33**

When office parameter OMINERLANGS is set to Y, you can convert the use count from CCS to deci-erlangs before the count displays. Use the OMSHOW

## OM group TS (continued)

---

command on the ACTIVE class to convert the use count. The value held in the active registers remains in CCS.

### **BCS21**

Software changes provide use counts in CCS or deci-erlangs.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## Register TS6

Time switch 6 (TS6)

Register TS6 is a usage register. The scan rate is 100 s. Register TS6 records the use of P-side time switch 6.

### **Register TS6 release history**

Register TS6 was introduced before BCS20.

### **BCS33**

When office parameter OMINERLANGS is set to Y, you can convert the use count from CCS to deci-erlangs before the count displays. Use the OMSHOW command on the ACTIVE class to convert the use count. The value held in the active registers remains in CCS.

### **BCS21**

Software changes provide use counts in CCS or deci-erlangs.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

## Register TS7

Time Switch 7 (TS7)

Register TS7 is a usage register. The scan rate is 100 s. Register TS7 records the use of P-side time switch 7.

**OM group TS** (end)

---

**Register TS7 release history**

Register TS7 was introduced before BCS20.

**BCS33**

When office parameter OMINERLANGS is set to Y, you can convert the use count from CCS to deci-erlangs before the count displays. Use the OMSHOW command on the ACTIVE class to convert the use count. The value held in the active registers remains in CCS.

**BCS21**

Software changes provide use counts in CCS or deci-erlangs.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## OM group TTCCARR

---

### OM description

TTC carrier (TTCCARR)

The OM group TTCCARR provides information about alarms and state changes that occur on Telecommunication Technical Committee interface standard (TTC) carriers. The TTC is a Japanese 30-channel frame structure with 32 timeslots, used to package digital voice/data in a format acceptable for communication at a rate of 2048 kbits/s.

The TTC standard is like the Consultative Committee on International Telephony and Telegraphy (CCITT) pulse code modulation 30 (PCM30) standard and the Japanese M20 standard.

### Release history

The OM group TTCCARR was introduced in BCS31.

### Registers

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

|          |          |          |          |
|----------|----------|----------|----------|
| FAERROR  | MAERROR  | SBERROR  | AISERROR |
| SLPERROR | FAFAULT  | MAFAULT  | SBFAULT  |
| AISFAULT | SLPFAULT | SYSBCARR | MANBCARR |
| CBSYCARR |          |          |          |

### Group structure

The OM group TTCCARR provides one tuple for each office.

**Key field:**

There is no key field.

**Info field:**

TTCOMINF

### Associated OM groups

There are no associated OM groups.

### Associated functional groups

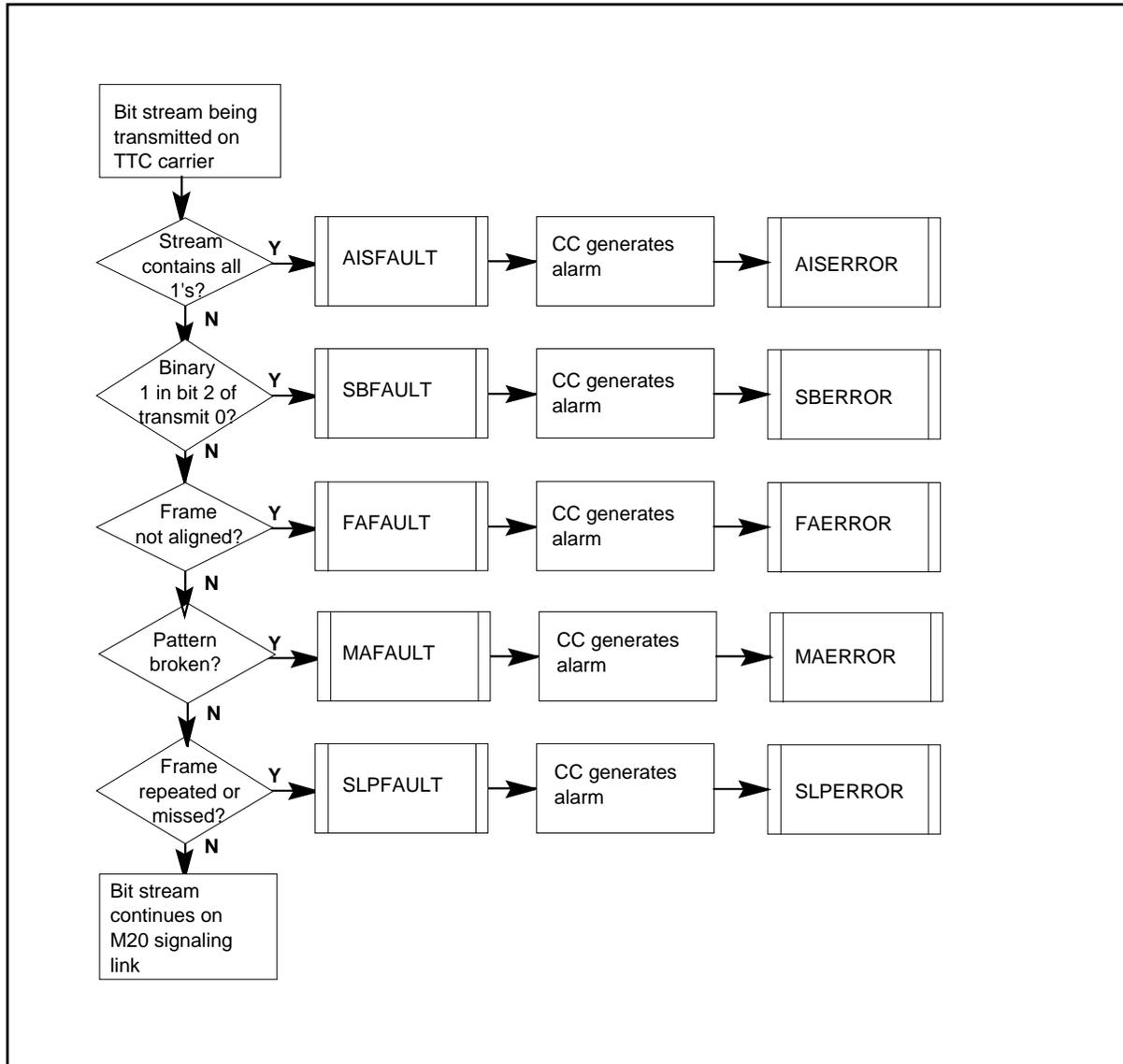
There are no associated functional groups.

### Associated functionality codes

There are no associated functionality codes.

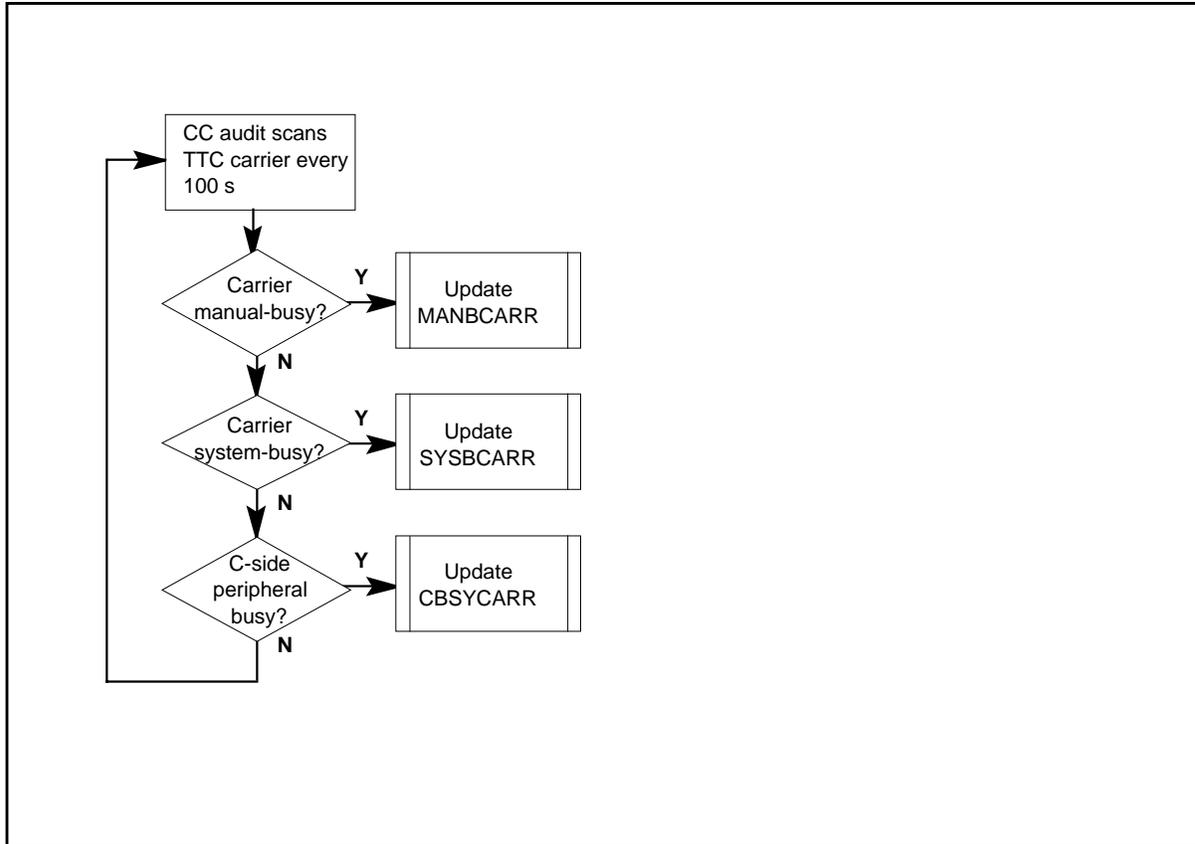
## OM group TTCCARR (continued)

## OM group TTCCARR registers



## OM group TTCCARR (continued)

### OM group TTCCARR usage registers



## Register AISERROR

Alarm indication signal error (AISERROR)

Register AISERROR increases when the central control (CC) generates an alarm when the system detects an alarm indication signal (AIS) fault on a TTC carrier. The fault occurs when the system detects a continuous stream of 1s on the incoming carrier. The stream indicates that the link is in a manual-busy state. Before the system raises an AIS, the system must receive at least one frame of 1s.

### Register AISERROR release history

Register AISERROR was introduced in BCS31.

### Associated registers

Register AISFAULT increases when the system detects an AIS fault on an incoming TTC carrier.

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**OM group TTCCARR** (continued)

---

**Associated logs**

There are no associated logs.

**Register AISFAULT**

AIS fault (AISFAULT)

Register AISFAULT increases when the system detects an AIS fault on an incoming TTC carrier. The fault occurs when the system detects a stream of 1s on the incoming carrier. The stream indicates that the link is in a manual-busy state.

**Register AISFAULT release history**

Register AISFAULT was introduced in BCS31.

**Associated registers**

Register AISERROR increases when the central control (CC) generates an alarm and detects an AIS fault on a TTC carrier.

**Associated logs**

There are no associated logs.

**Register CBSYCARR**

C-side peripheral busy carrier (CBSYCARR)

Register CBSYCARR updates every 100 s. Register CBSYCARR records the amount of time the TTC 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 CBSYCARR release history**

Register CBSYCARR was introduced in BCS31.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register FAERROR**

Frame alignment error (FAERROR)

Register FAERROR increases when the central control (CC) generates an alarm and detects a frame alignment (FA) fault on a TTC carrier. This fault

## **OM group TTCCARR** (continued)

---

occurs when a code violation bit is missing or when two bits are not positioned correctly on the carrier. This means that 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 FAERROR release history**

Register FAERROR was introduced in BCS31.

### **Associated registers**

Register FAFAULT increases when the system detects an FA fault on an incoming TTC carrier.

### **Associated logs**

There are no associated logs.

## **Register FAFAULT**

Frame alignment fault (FAFAULT)

Register FAFAULT increases when the system detects a FA fault on an incoming TTC carrier. The fault occurs when a code violation bit is missing or when two bits are not positioned correctly on the carrier. This means that the two bits are less or more than 125 us apart.

### **Register FAFAULT release history**

Register FAFAULT was introduced in BCS31.

### **Associated registers**

Register FAERROR increases when the CC generates an alarm and detects an FA fault on a TTC carrier.

### **Associated logs**

There are no associated logs.

## **Register MAERROR**

Multiframe alignment error (MAERROR)

Register MAERROR increases when the central control (CC) generates an alarm when the system detects a multiframe alignment (MA) fault on a TTC carrier. This fault occurs when the correct multiframe pattern breaks in bit 1 of timeslot 0. The MA alarm indicates a local loss of multiframe alignment.

### **Register MAERROR release history**

Register MAERROR was introduced in BCS31.

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**OM group TTCCARR** (continued)

---

**Associated registers**

Register MAFAULT increases when the system detects an MA fault on a TTC carrier.

**Associated logs**

There are no associated logs.

**Register MAFAULT**

Multiframe alignment fault (MAFAULT)

Register MAFAULT increases when the system detects a MA fault on a TTC carrier. The fault occurs when the correct multiframe pattern breaks in bit 1 of timeslot 0.

**Register MAFAULT release history**

Register MAFAULT was introduced in BCS31.

**Associated registers**

Register MAERROR increases when the CC generates an alarm and detects an MA fault on a TTC carrier.

**Associated logs**

There are no associated logs.

**Register MANBCARR**

Manual-busy carrier (MANBCARR)

Register MANBCARR updates every 100 s. Register MANBCARR records the amount of time the TTC carrier is in a manual-busy (ManB) state. The maintenance personnel at a MAP terminal place the carrier in this state.

**Register MANBCARR release history**

Register MANBCARR was introduced in BCS31.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register SBERROR**

Signaling bit error (SBERROR)

## **OM group TTCCARR** (continued)

---

Register SBERROR increases when the CC generates an alarm and detects a signaling bit (S-bit) fault on a TTC carrier. This fault occurs when the system finds a binary 1 in bit 2 of timeslot 0. In this event, the system cannot receive the incoming 2048 kbits/s signal on the TTC carrier.

### **Register SBERROR release history**

Register SBERROR was introduced in BCS31.

### **Associated registers**

Register SBFAULT increases when an incoming TTC carrier detects an S-bit fault.

### **Associated logs**

There are no associated logs.

## **Register SBFAULT**

Signaling bit fault (SBFAULT)

Register SBFAULT increases when the system detects a S-bit fault on a TTC carrier. This fault occurs when the system finds a binary 1 in bit 2 of timeslot 0. The result is that the system cannot receive the incoming 2048 kbits/s signal on the TTC carrier.

### **Register SBFAULT release history**

Register SBFAULT was introduced in BCS31.

### **Associated registers**

Register SBERROR increases when the CC generates an alarm when the system detects an S-bit fault on a TTC carrier.

### **Associated logs**

There are no associated logs.

## **Register SLPERROR**

Slip error (SLPERROR)

Register SLPERROR increases when the CC generates an alarm when the system detects a slip fault on a TTC carrier. This fault occurs when a frame of data on the carrier repeats or slips.

### **Register SLPERROR release history**

Register SLPERROR was introduced in BCS31.

---

**OM group TTCCARR (end)**

---

**Associated registers**

Register SLPFAULT increases when the system detects a slip fault on an incoming TTC carrier.

**Associated logs**

There are no associated logs.

**Register SLPFAULT**

Slip fault (SLPFAULT)

Register SLPFAULT increases when the system detects a slip fault on an incoming TTC carrier. This fault occurs when a frame of data on the carrier repeats or slips over.

**Register SLPFAULT release history**

Register SLPFAULT was introduced in BCS31.

**Associated registers**

Register SLPERROR increases when the CC generates an alarm when the system detects a slip fault on a TTC carrier.

**Associated logs**

There are no associated logs.

**Register SYSBCARR**

System-busy carrier (SYSBCARR)

Register SYSBCARR updates every 100 s. Register SYSBCARR records the time that the TTC carrier is system busy (SysB) because of alarms or faults.

**Register SYSBCARR release history**

Register SYSBCARR was introduced in BCS31.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## OM group TWCIBN

---

### OM description

Three-way calling Integrated Business Network (TWCIBN)

The OM group TWCIBN provides information on the successes and failures in each customer group of the Integrated Business Network (IBN) features. The IBN features are Three-way Calling and Call Transfer.

Three-way Calling/Call Transfer allows a caller to include a third party in the call and transfer the call to the third party.

### Release history

The OM group TWCIBN was introduced in BCS22.

#### MMP13

Registers CXRRABAN and CXRRSUCC were updated to include pegs for IBN7 camp-on and recall.

#### NA004

Registers TWCOVRL, CXFRATT, and CXFRFAIL were modified in NA004 to include pegs for U3WC and 3WC.

#### BCS32

The Fast Transfer feature increases registers TWCATT, TWCATT2, TWCFAIL, TWCOVFL, CXFRATT, CXFRATT2, and CXFRFAIL.

#### BCS27

Software change to include counts for three-way calls and call transfers initiated through the Three-way Call Public (3WCPUB) feature.

#### BCS25

Registers CXRRSUCC and CXRRABAN were introduced in BCS25.

### Registers

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

|          |          |          |          |
|----------|----------|----------|----------|
| TWCATT   | TWCATT2  | TWCFAIL  | TWCOVFL  |
| CXFRATT  | CXFRATT2 | CXFRFAIL | CXRRSUCC |
| CXRRABAN |          |          |          |

---

**OM group TWCIBN** (continued)

---

**Group structure**

The OM group TWCIBN provides one tuple for each customer group.

**Key field:**

Customer group name

**Info field:**

OMIBNGINFO

The number of data blocks necessary for this feature specifies parameter NO\_OF\_FTR\_DATA\_BLKs in table OFCENG.

Parameter TOPS\_THRESHOLD in table OFCENG specifies the percentage of three-way conference trunks dedicated for traffic operator position system (TOPS) operation specifies .

**Associated OM groups**

OM group TWCIBN pegs OM group CF3P after a 3-port circuit request.

**Associated functional groups**

The IBN Integrated Business Network functional group associates with the OM group TWCIBN.

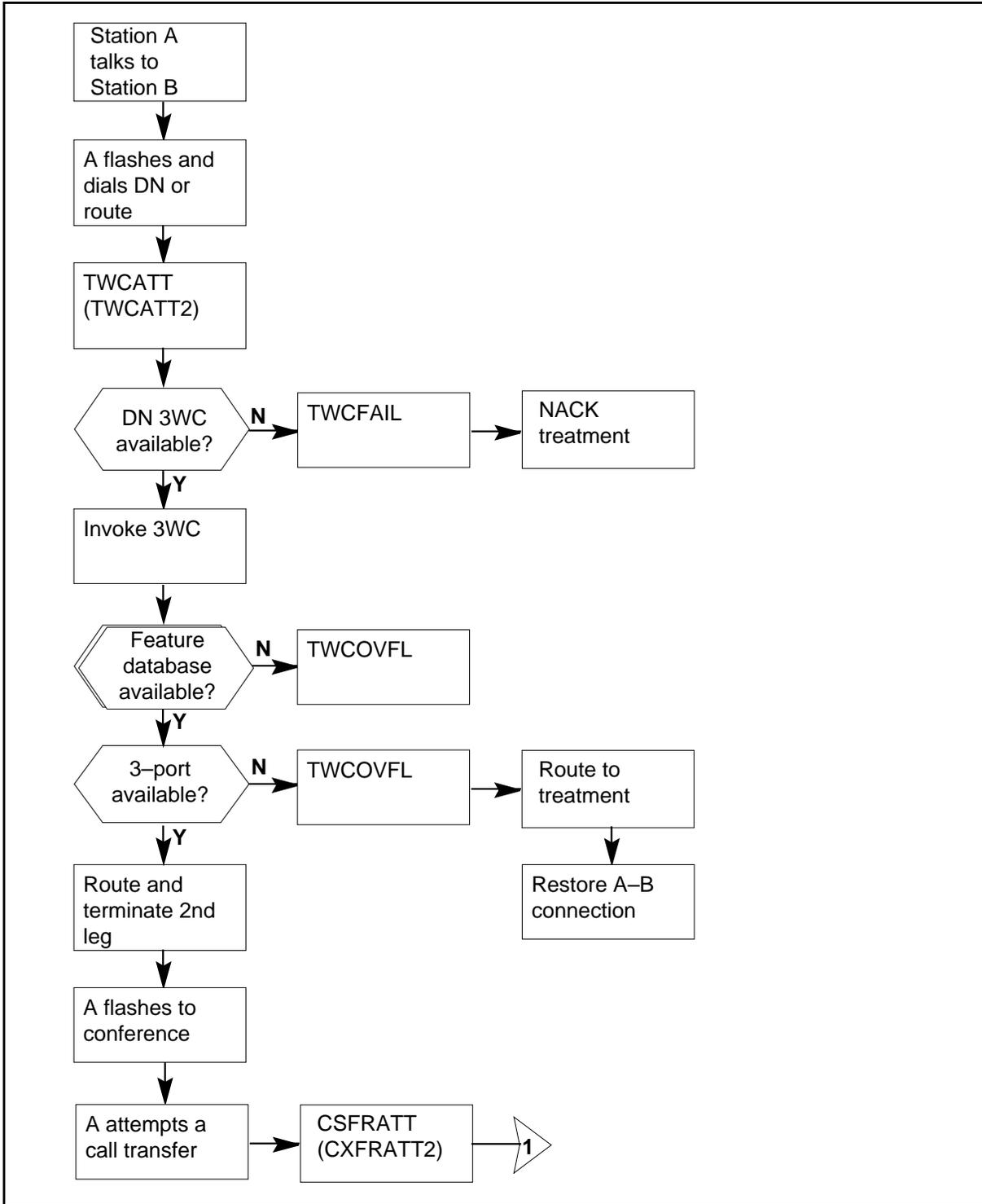
**Associated functionality codes**

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

| Functionality                        | Code     |
|--------------------------------------|----------|
| Enhanced Three Way Calling - IBN     | NTX820AA |
| Integrated Business Networks (Basic) | NTX100AA |

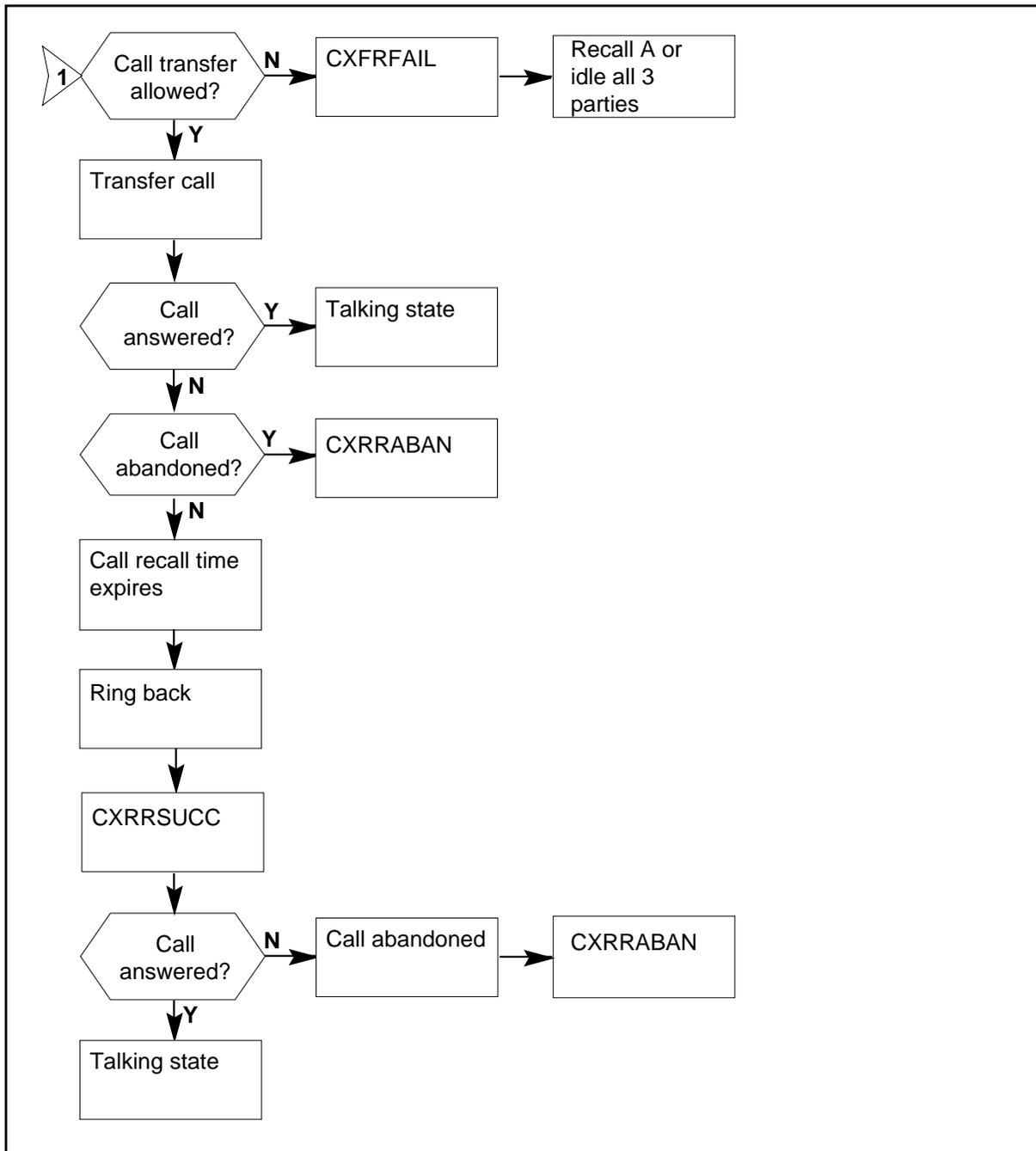
**OM group TWCIBN** (continued)

**OM group TWCIBN registers**



## OM group TWCIBN (continued)

## OM group TWCIBN registers (continued)



## OM group TWCIBN (continued)

---

### Register CXFRATT

Call transfer attempts (CXFRATT)

Register CXFRATT counts attempts to transfer a call.

#### Register CXFRATT release history

Register CXFRATT was introduced in BCS22.

##### NA004

The U3WC feature increases register CXFRATT

##### BCS32

The Fast Transfer feature increases register CXFRATT.

#### Associated registers

Register CXFRATT replaces IBNGRP\_CXFR which was deleted in BCS23.

#### Associated logs

There are no associated logs.

#### Extension registers

CXFRATT2

### Register CXFRFAIL

Call transfer failure (CXFRFAIL)

Register CXFRFAIL counts failures to transfer a call for the following reasons:

- The controlling station allows call transfers that are not compatible. The controlling station allows not compatible call transfers to the station with call transfers that the destination allows. The controlling station is an intragroup or extragroup controlling station.
- The call transfer attempt does not have enough supervision on the trunks.

#### Register CXFRFAIL release history

Register CXFRFAIL was introduced in BCS22.

##### NA004

The U3WC feature increases Register CXFRFAIL.

##### BCS32

The Fast Transfer feature increases register CXFRFAIL.

---

**OM group TWCIBN (continued)**

---

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register CXRRABAN**

Call transfer abandoned (CXRRABAN)

Register CXRRABAN increases when the system transfers a call that abandons before one of the following occurs:

- the transferring station answers the call before the recall occurs
- the transferring station answers the call after the recall occurs

This register increases when the system abandons a call over IBN7 lines after a blind transfer recall or camp-on recall.

The call transfer recall timer calls the transferring station again if the station to which the call transfers does not answer.

**Register CXRRABAN release history**

Register CXRRABAN was introduced in BCS25.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register CXRRSUCC**

Call transfer recall successful (CXRRSUCC)

Register CXRRSUCC increases when the call transfer recall timer expires before the station to which the call transfers answers. The call transfer recall timer also expires during the recall process.

## **OM group TWCIBN** (continued)

---

This register also increases when a blind transfer recall or camp-on recall occurs for a call over IBN7.

The call transfer recall timer recalls the transferring station if the station to which the call transfers fails to answer.

### **Register CXRRSUCC release history**

Register CXRRSUCC was introduced in BCS25.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register TWCATT**

Three-way calling attempts (TWCATT)

Register TWCATT counts attempts to initiate the Three-way Calling feature in a customer group.

### **Register TWCATT release history**

Register TWCATT was introduced in BCS22.

### **BCS32**

The Fast Transfer feature increases register TWCATT.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

TWCATT2

## **Register TWCFAIL**

Three-way calling failures (TWCFAIL)

Register TWCFAIL is inactive.

---

**OM group TWCIBN** (continued)

---

**Register TWCFAIL release history**

Register TWCFAIL was introduced in BCS22.

**Associated registers**

There are no associated registers.

**BCS32**

The Fast Transfer feature increases register TWCFAIL.

**Associated logs**

The system generates FTR138 when an agent uses, initiates, or attempts to initiate a feature. An agent is a line, a trunk, or an attendant console.

**Extension registers**

There are no extension registers.

**Register TWCOVFL**

Three-way call overflow (TWCOVFL)

Register TWCOTWVFL counts failures to obtain a feature database or a three-port conference circuit.

When failure to obtain a circuit occurs, the system gives the user the no service circuit (NOSC) treatment. When failure to obtain a feature database occurs, the system gives the user the no software resources (NOSR) treatment.

If this count is high, operating company personnel must make more conference circuits available for three-way calling. To make more conference circuits available, the operating company personnel decreases parameter TOPS\_THRESHOLD in table OFCENG. This creates a balance between three-way calling and TOPS use of three-port conference circuits.

**Register TWCOVFL release history**

Register TWCOVFL was introduced in BCS22.

**NA004**

The U3WC feature increases register TWCOVFL.

**BCS32**

The Fast Transfer feature increases register TWCOVFL.

**Associated registers**

When register TWCOVFL counts a failure to obtain a feature database, the EXTOM\_EXTOVFL parameter increases.

## **OM group TWCIBN (end)**

---

### **Associated logs**

The system generates FTR138 when an agent that initiates, or attempts to initiate a feature is given treatment. An agent is a link, a trunk or an attendant console.

### **Extension registers**

There are no extension registers.

---

## OM group TWCPOTS

---

### OM Description

Three-way calling in the POTS environment (TWCPOTS)

The OM group TWCPOTS contains four registers that count both attempts and failures to initiate a three-way call.

The OM group TWCPOTS determines how often the system uses Three-way Calling feature. The OM group TWCPOTS determines if the system correctly supplies hardware and software resources.

### Release history

The OM group TWCPOTS was introduced in BCS20.

### Registers

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



### Group structure

The OM group TWCPOTS provides one tuple for each office.

**Key field:**

There is no key field.

**Info field:**

There is no info field.

### Associated OM groups

OM group TWCPOTS pegs OM group CF3P after a 3-port circuit request.

## **OM group TWCPOTS (continued)**

---

### **Associated functional groups**

The following functional group associates with OM group TWCPOTS:

- All DMS offices with the POTS Three-way Calling feature provide TWCPOTS.

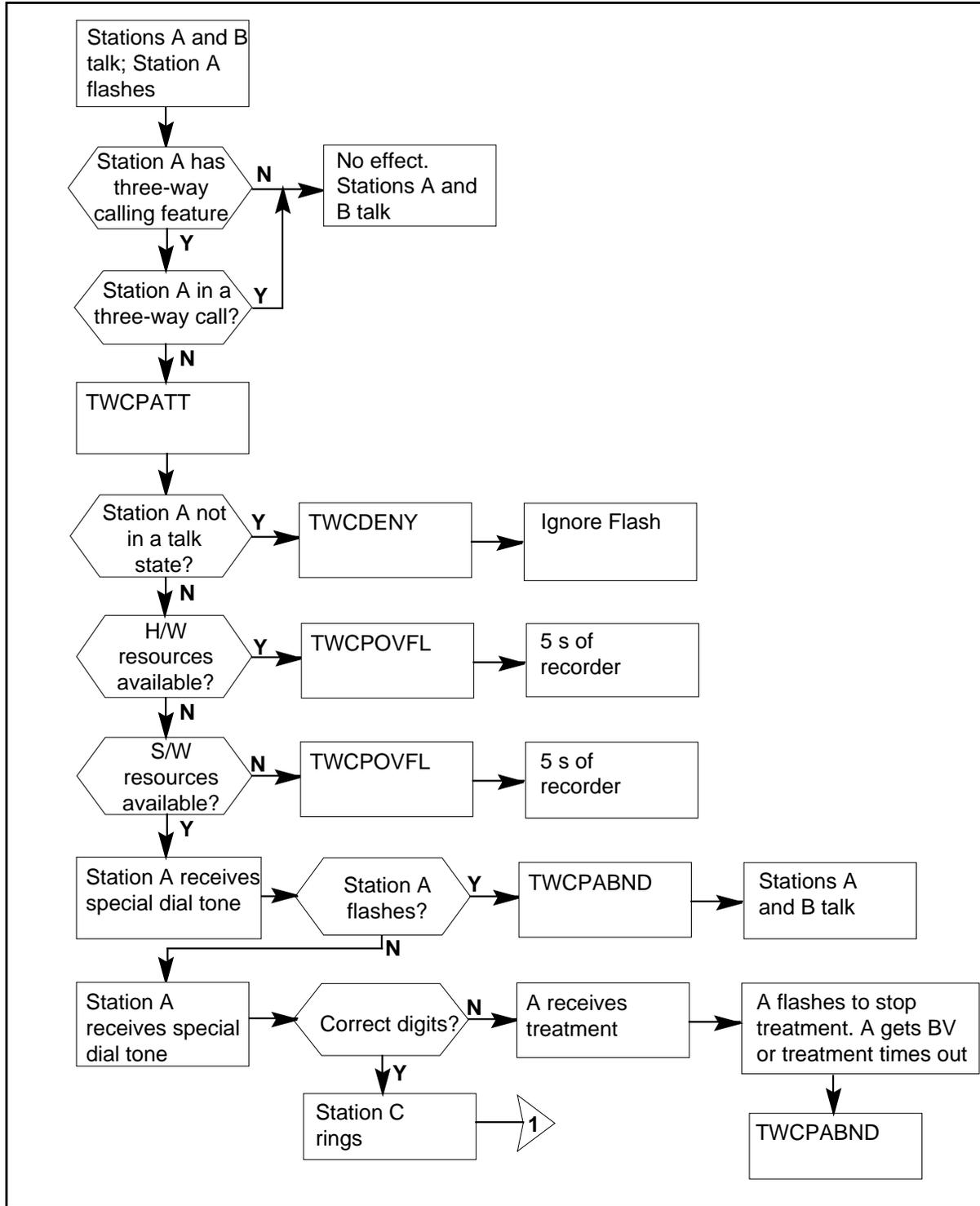
### **Associated functionality codes**

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

| <b>Functionality</b> | <b>Code</b> |
|----------------------|-------------|
| Vertical Services I  | NTX020AC    |
| Vertical Services I  | NTX020AD    |

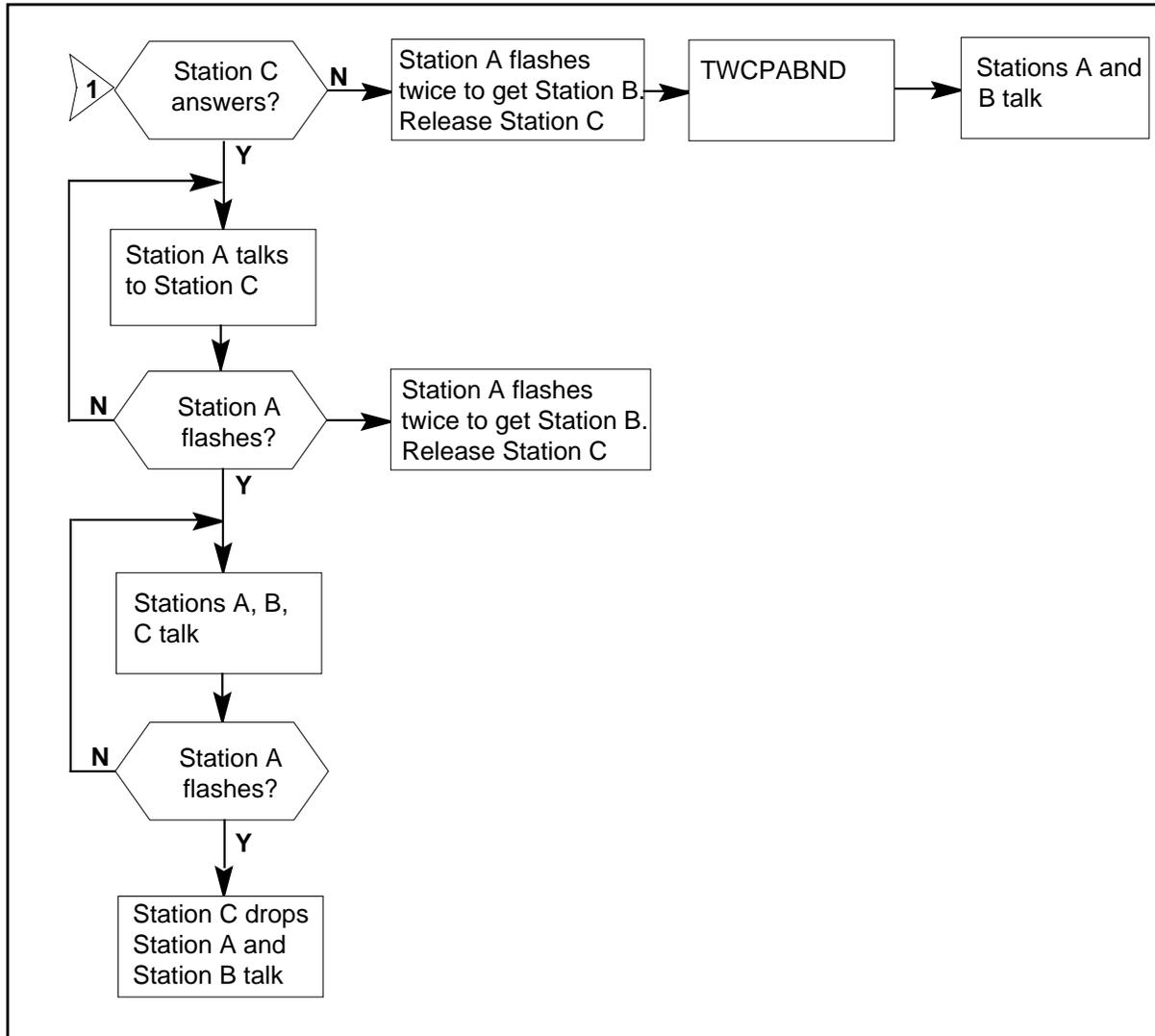
**OM group TWCPOTS (continued)**

**OM group TWCPOTS registers: Three-way call function**



**OM group TWCPOTS (continued)**

**OM group TWCPOTS registers: Three-way call function (continued)**



**Register TWCPABDN**

Register Three-way call attempt abandoned (TWCPABDN)

Register TWCPABDN increases for each abandoned three-way call.

The system abandons a call when the caller flashes to return to the original call, or when a party goes on hook. The caller can abandon a call at any time between special dial tone and the conferencing of all three parties.

---

**OM group TWCPOTS** (continued)

---

**Register TWCPABDN release history**

Register TWCPABDN 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 TWCPATT**

Register Attempt to three-way call (TWCPATT)

Register TWCPATT increases when a line flashes to activate the three-way calling feature. A call waiting flash occurs when the line that flashes has the call waiting option (CWT) and a third party waits. Three-way calling is not possible under these conditions.

**Register TWCPATT release history**

Register TWCPATT 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 TWCPDENY**

The caller is not in a talk state, three-way calling fails (TWCPDENY)

Register TWCPDENY counts three-way call attempts that fail because the calling party is not in a talk state.

**Register TWCPDENY release history**

Register TWCPDENY was introduced in BCS20.

**Associated registers**

There are no associated registers.

## **OM group TWCPOTS (end)**

---

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register TWCPOVFL**

Failure of three-way call attempt, lack of hardware or software resources (TWCPOVFL)

Register TWCPOVFL counts attempts to start a three-way call that fail because one of the following resources is not available:

- port\_perm\_blk
- network connection
- call condense block
- twc\_ext\_blocks
- CF3P ports

A special dial tone is not present. The original two-party call continues.

### **Register TWCPOVFL release history**

Register TWCPOVFL was introduced in BCS20.

### **Associated registers**

There are no associated registers.

### **Associated logs**

None

### **Extension registers**

There are no extension registers.

---

## OM group U3WC

---

### OM description

Three-way calling - usage sensitive (U3WC)

The OM group U3WC measures:

- the number of attempts made to use the U3WC feature
- the number of U3WC requests where a conference is established and the add-on party answered (true conference)
- the number of U3WC requests where a conference is not established but the add-on party answered (consultation)

### Release history

The OM group U3WC was introduced in NA004.

### Registers

The OM group U3WC registers appear on the MAP terminal as follows:

|         |          |          |
|---------|----------|----------|
| U3WCATT | U3WCCONF | U3WCCONS |
|---------|----------|----------|

### Group structure

The OM group U3WC provides one tuple for each office.

**Key field:**

none

**Info field:**

none

Parameter NO\_OF\_FTR\_DATA\_BLKs in table OFCENG specifies the number of data blocks necessary for this feature.

### Associated OM groups

The OM group TWCIBN. OM group U3WC pegs OM group CF3P after a 3-port circuit request.

### Associated functional groups

The IBN Integrated Business Network functional group associates with OM group U3WC.

**OM group U3WC** (continued)**Associated functionality codes**

The functionality codes for the OM group U3WC appear in the following table.

| Functionality                       | Code     |
|-------------------------------------|----------|
| Three-way calling - usage sensitive | RES00012 |

**OM group U3WC registers**

Tables 1 and 2 list the conditions that cause a U3WC register to increase.

*Note:* In these tables, party A is the user of the U3WC feature. Party B is the party that party A put on hold with a switch hook flash. Party C is the add-on party.

**U3WC registers pegged after the user flashes for the first time (Sheet 1 of 2)**

| EVENT(occurring immediately following the first flash)  | Office Parameter<br>U3WC_FLASH_ONLY=<br>Y | Office parameter<br>U3WC_FLASH_ONLY=<br>N |
|---|---|---|
| Party A dials the U3WC access code followed by a valid DN.  | There is no register increase             | Register U3WCATT increase                 |
| Party A dials the U3WC access code followed by a partial DN and receives the correct treatment.                               | There is no register increase             | Register U3WCATT increase                 |
| Party A dials the U3WC access code followed by an invalid DN and receives the correct treatment.                              | There is no register increase             | Register U3WCATT increase                 |
| Party A dials the U3WC access code and waits for timeout and treatment.   | There is no register increase             | Register U3WCATT increase                 |
| Party A dials the U3WC access code followed by an invalid access code (access code is not entered in the correct translator). | There is no register increase             | Register U3WCATT increase                 |
| Party A dials the U3WC access code followed by a valid access to activate another feature.                                    | There is no register increase             | There is no register increase             |

**OM group U3WC** (continued)**U3WC registers pegged after the user flashes for the first time (Sheet 2 of 2)**

| <b>EVENT(occurring immediately following the first flash)</b>                                   | <b>Office Parameter U3WC_FLASH_ONLY=Y</b> | <b>Office parameter U3WC_FLASH_ONLY=N</b> |
|---|---|---|
| Party A dials a valid DN  | Register U3WCATT increases                | There is no register increase             |
| Party A dials a partial DN and receives the correct treatment                                   | Register U3WCATT increases                | There is no register increase             |
| Party A dials an invalid DN and receives the correct treatment                                  | Register U3WCATT increases                | There is no register increase             |
| Party A waits for a timeout and treatment   | Register U3WCATT increases                | There is no register increase             |
| Party A dials an invalid access code (the access code is not entered in the correct translator) | Register U3WCATT increases                | There is no register increase             |
| Party A dials a valid access code to activate the corresponding feature                         | There is no register increases            | There is no register increase             |

**U3WC registers pegged for each call termination state**

| <b>State of U3WC call on termination of conference</b> | <b>Registers pegged</b>                 |
|--|---|
| Conference is established and party C answered         | Register U3WCATT and U3WCCONF increases |
| Conference is not established but party C answered     | Register U3WCATT and U3WCCONS increases |
| Party C did not answer                                 | Register U3WCATT increases              |

**Register U3WCATT**

Three-way calling - usage sensitive call attempts (U3WCATT)

Register U3WCATT counts the attempts to use the U3WC call feature.

*Note:* The contents of register U3WCATT can appear as follows:

## OM group U3WC (continued)

---

### U3WCATT (U3WCCONF + U3WCCONS)

#### Register U3WCATT release history

Register CXFRATT was introduced in NA004.

#### Associated registers

Register U3WCCONF

Register U3WCCONS

#### Associated logs

There are no associated logs.

#### Extension registers

There are no extension registers.

## Register U3WCCONF

Three-way calling - usage sensitive total conferences established  
(U3WCCONF)

Register U3WCCONF counts the U3WC call feature attempts where the add-on party answers and a conference is established.

*Note:* The contents of register U3WCCONF can appear as follows:

### U3WCCONF £ (U3WCATT - U3WCCONS)

#### Register U3WCCONF release history

Register U3WCCONF was introduced in NA004.

#### Associated registers

Register U3WCATT

Register U3WCCONS

#### Associated logs

There are no associated logs.

#### Extension registers

There are no extension registers.

## **Register U3WCCONS**

Three-way calling - usage sensitive total consultations (U3WCCONS)

Register U3WCCONS counts the U3WC call feature attempts where the add-on party answers but a conference is not established.

*Note:* You can express the contents of register U3WCCONS as follows:

**U3WCCONS £ (U3WCATT - U3WCCONF)**

### **Register U3WCCONS release history**

Register U3WCCONS 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 UCDGRP

---

### OM description

Uniform call distribution (UCD)

The OM group UCDGRP registers provide information on the use of the integrated business network (IBN) feature Uniform Call Distribution (UCD). The OM group UCD permits calls in IBN systems to distribute evenly to a number of specified 500/2500 stations acting as UCD agents.

If all these stations are busy, new calls queue and ringing tone returns to the caller. If the predicted delay exceeds a customer preset threshold, a recorded announcement follows.

When a station becomes idle, the station accepts the first call in the incoming queue.

### Release history

The OM group UCDGRP was introduced before BCS20.

#### NA007

Register UCDUSAGE was introduced.

#### BCS22

Register UCDBLOCK was introduced.

### Registers

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

|         |          |          |          |
|---------|----------|----------|----------|
| UCDOFFR | UCDANSR  | UCDDFLCT | UCDABNDN |
| UCDNS   | UCDPRMPT | UCDBLOCK | UCDUSAGE |

### Group structure

The OM group UCDGRP provides one tuple for each UCD group.

**Key field:**

UCDGRP\_NUMBER. The system assigns a name to the

UCD group in field UCDNAME in table UCDGRP.

**Info field:**

There is no info field.

---

**OM group UCDGRP (continued)**


---

Parameter FTRQSIZE in table OFCENG specifies the size of the feature.

Parameter FTRQ8WAREAS in table OFCENG specifies the number of eight-word areas the feature requires.

Parameter FTRQAGENTS in table OFCENG specifies the number of agents that can have this feature at a time.

Parameter NO\_OF\_FTR\_CONTROL\_BLKs in table OFCENG specifies the number of control blocks this feature requires.

Parameter NO\_OF\_FTR\_DATA\_BLKs in table OFCENG specifies the number of data blocks this feature requires.

Parameter NUMPERMEXT in table OFCENG specifies the number of permanent extension blocks this feature reserves.

### Associated OM groups

There are no associated OM groups.

### Associated functional groups

The following functional groups associate with the OM group UCDGRP:

- IBN Integrated Business Network
- 500/2500 Business Set

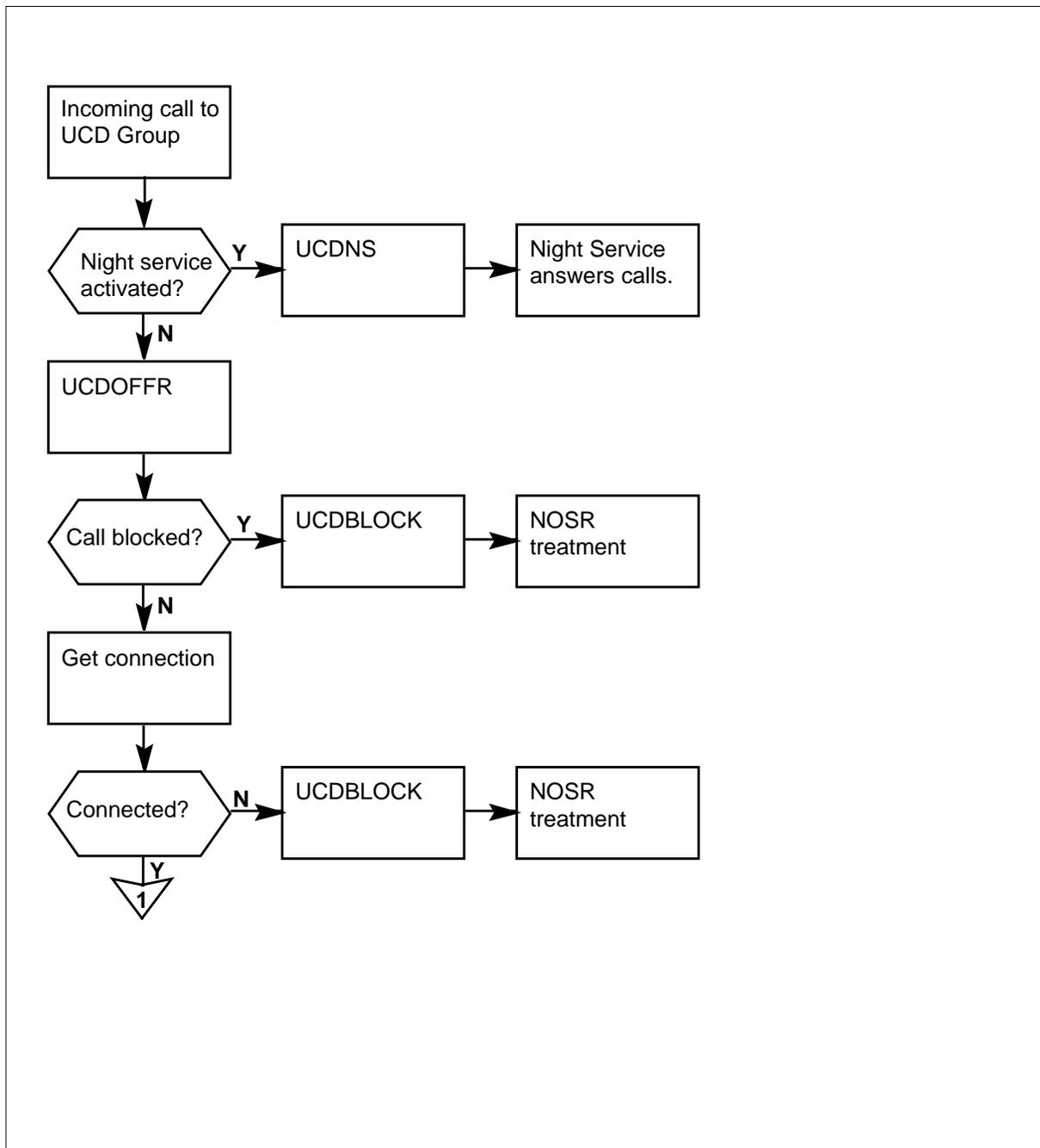
### Associated functionality codes

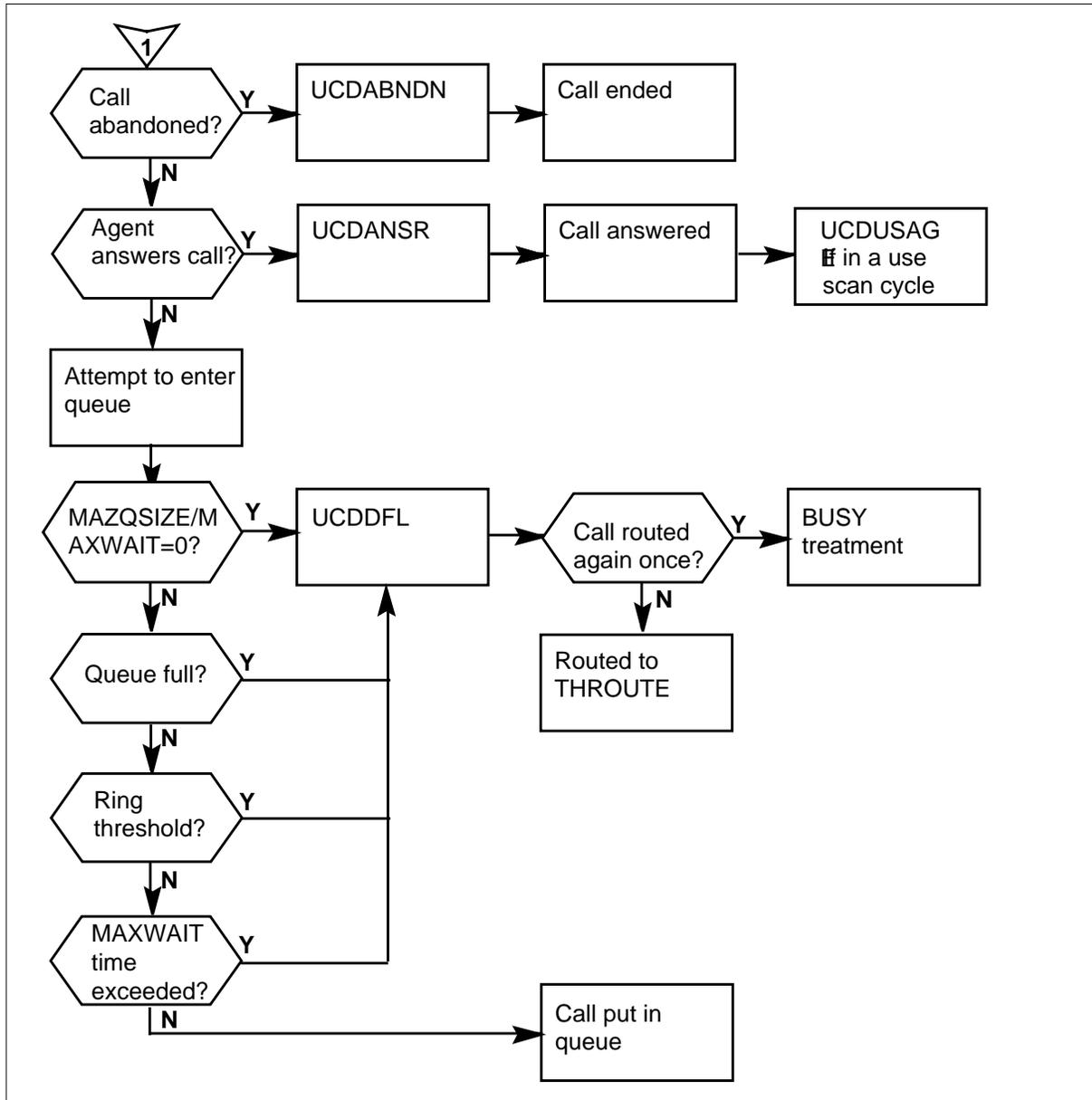
The associated functionality codes for the OM group UCDGRP appear in the following table:

| Functionality                  | Code     |
|--------------------------------|----------|
| IBN Enhanced Business Services | NTX101AA |

## OM group UCDGRP (continued)

### OM group UCDGRP registers



**OM group UCDGRP (continued)****the OM group UCDGRP registers (continued)****Register UCDABNDN**

Uniform call distribution abandoned (UCDABNDN)

Register UCDABNDN increases when a customer abandons a call while in a queue for attachment to a uniform call distribution (UCD) agent. This register also increases when the customer terminates a call to a UCD agent before the agent answers.

## OM group UCDGRP (continued)

---

### Register UCDABNDN release history

Register UCDABNDN was introduced before BCS20.

### Associated registers

Register UCDANSR counts answered calls that the system uses uniform call distribution to distribute.

Register UCDDFLCT counts calls that the system deflects while the calls attempt to reach a UCD agent. The system deflects the calls because the number of calls exceeds maximum call queue size field (MAXCQSIZ). The system also deflects the calls if the number of calls exceeds the maximum waiting time field (MAXWAIT). Both of these fields appear in table UCDGRP.

Register UCDOFFR counts calls that qualify for each uniform call distribution group.

$$\text{UCDOFFR} = \text{UCDANSR} + \text{UCDDFLCT} + \text{UCDABNDN}$$

*Note:* The above validation formula is correct if UCDGRP reports for a 24 h transfer period.

### Associated logs

There are no associated logs.

### Extension registers

There are no extension registers.

## Register UCDANSR

Uniform call distribution answered (UCDANSR)

Register UCDANSR counts answered calls that the system uses uniform call distribution to distribute.

### Register UCDANSR release history

Register UCDANSR was introduced before BCS20.

### Associated registers

Register UCDABNDN counts calls the subscriber abandons while the calls wait to connect to a UCD agent. This register also counts calls that terminate to a UCD agent before the agent answers.

Register UCDDFLCT counts calls that attempt to contact a UCD agent. The system deflects the calls because the number of calls exceeds maximum call

---

**OM group UCDGRP** (continued)

---

queue size field (MAXCQSIZ). The system also deflects the calls because the number of calls exceeds the maximum waiting time field (MAXWAIT). Both of these fields appear in table UCDGRP.

Register UCDOFFR counts calls that qualify for each uniform call distribution group.

$$\text{UCDOFFR} = \text{UCDANSR} + \text{UCDDFLCT} + \text{UCDABNDN}$$

*Note:* The above validation formula is correct if UCDGRP reports for a 24 h transfer period.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register UCDBLOCK**

Uniform call distribution blocked (UCDBLOCK)

Register UCDBLOCK counts incoming UCD calls that the system blocks for one of the following reasons:

- the system cannot provide the correct treatment to the calling party
- the system cannot establish network connection between the incoming call and the agent

**Register UCDBLOCK release history**

Register UCDBLOCK was introduced in BCS22.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register UCDDFLCT**

Uniform call distribution deflected (UCDDFLCT)

## OM group UCDGRP (continued)

---

Register UCDDFLCT increases when a call attempts to contact a uniform call distribution (UCD) agent. The system deflects the calls because the number of calls exceeds one of the following:

- UCD ringing threshold
- maximum queue length
- maximum allowed number of calls in the queue

Fields MAXQSIZE and MAXWAIT in table UCDGRP specify the maximum queue size and maximum number of calls in the queue. The field UCDRNGTH in table UCDGRP field specifies UCD ringing threshold.

The call forwards to the route that field THROUTE in table UCDGRP specifies. If the UCD group has an overflow threshold route to its own UCD directory number (DN), the call receives busy treatment. If the UCD group has an overflow threshold route to another UCD DN, the system routes the call to the new UCD group. The system can only route a call again one time. If the system does not route a call again, the call receives treatment.

### Register UCDDFLCT release history

Register UCDDFLCT was introduced before BCS20.

### Associated registers

Register UCDAABNDN counts abandoned subscriber calls while the calls wait to connect to a UCD agent. This register also increases if a call terminates to a UCD agent before the agent answers.

Register UCDAANSR counts answered calls that the system uses uniform call distribution to distribute.

Register UCDOFFR counts calls that qualify for each uniform call distribution group.

$$\text{UCDOFFR} = \text{UCDAANSR} + \text{UCDDFLCT} + \text{UCDAABNDN}$$

**Note:** The above validation formula is correct if UCDGRP reports for a 24 h transfer period.

### Associated logs

The system generates IBN125 when the system deactivates a UCD agent. The system deactivates the agent because the agent does not answer a call after a specified number of consecutive calls. The system abandons or routes the caller again when the threshold timer expires.

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**OM group UCDGRP** (continued)

---

**Extension registers**

There are no extension registers.

**Register UCDNS**

Uniform call distribution night service (UCDNS)

Register UCDNS increases when a call attempts to reach a uniform call distribution (UCD) group that has Night Service.

The call forwards to the route that field NSROUTE in table UCDGRP specifies.

**Register UCDNS release history**

Register UCDNS 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 UCDOFFR**

Uniform call distribution offered (UCDOFFR)

Register UCDOFFR counts calls that qualify for each uniform call distribution group.

This register does not count calls that qualify for Night Service.

**Register UCDOFFR release history**

Register UCDOFFR was introduced before BCS20.

**Associated registers**

Register UCDABNDN counts calls the subscriber abandons while they are in queue for connection to a UCD agent. This register also counts calls that terminate to a UCD agent before the agent answers.

Register UCDANSR counts answered calls that the system uses uniform call distribution to distribute.

## OM group UCDGRP (continued)

---

Register UCDDFLCT counts calls that attempt to reach a UCD agent. The system deflects the calls because the number of calls exceeds maximum call queue size field (MAXCQSIZ). The system also deflects these calls because the calls exceed the maximum waiting time field (MAXWAIT). Both of these fields appear in table UCDGRP.

$$\text{UCDOFFR} = \text{UCDANSR} + \text{UCDDFLCT} + \text{UCDABNDN}$$

*Note:* The above validation formula is correct if UCDGRP reports for a 24 h transfer period.

### Associated logs

There are no associated logs.

### Extension registers

There are no extension registers.

## Register UCDPRMPT

Uniform call distribution preempted (UCDPRMPT)

Register UCDPRMPT increases when a priority call preempts a call that waits for a uniform call distribution (UCD) agent.

### Register UCDPRMPT release history

Register UCDPRMPT was introduced in BCS20.

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

## Register UCDUSAGE

Uniform call distribution usage (UCDUSAGE)

The system scans each UCD group every 100 s. The system records the UCD group use. The UCDUSAGE register increases by the number of busy UCD agents the system detects in the sample time.

### Register UCDUSAGE release history

Register UCDUSAGE was introduced in NA007.

**OM group UCDGRP (end)**

---

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## OM group UNBCDC

---

### OM description

The UNBCDC OM group records measurements on USNBD CDCs.

### Release history

NA012 introduced OM group UNBCDC.

### Registers

OM group UNBCDC registers display on the MAP terminal as follows.

```
> omshow UNBCDC active

UNBCDC

CLASS: ACTIVE
START: 1998/08/08 08:00:00 SAT; STOP: 1998/08/08 08:08:41
FRI;
SLOW SAMPLES          4 ; FAST SAMPLES          35 ;

      KEY (UNB_CDC_SVC_TYPE)
      CDCGEN      CDCSNT

      1
      2           3           2
      3           0           0
      4           0           0
```

### Group structure

OM group UNBCDC provides up to 200 tuples, one for each defined CDC

**Key field:**

CDC Index Number, a number in the range 1 - 200, assigned at the CDC ADD command

**Info field:**

None

---

**OM group UNBCDC** (continued)

---

**Related OM groups**

OM groups MPCLINK2 and MPCLINK3 provide information on the traffic in links 2 and 3 respectively of the multiprotocol controller on which the CDC messages are transmitted.

**Related functional groups**

The Network Broadcast Delivery (NBD) functional group is associated with OM group UNBCDC.

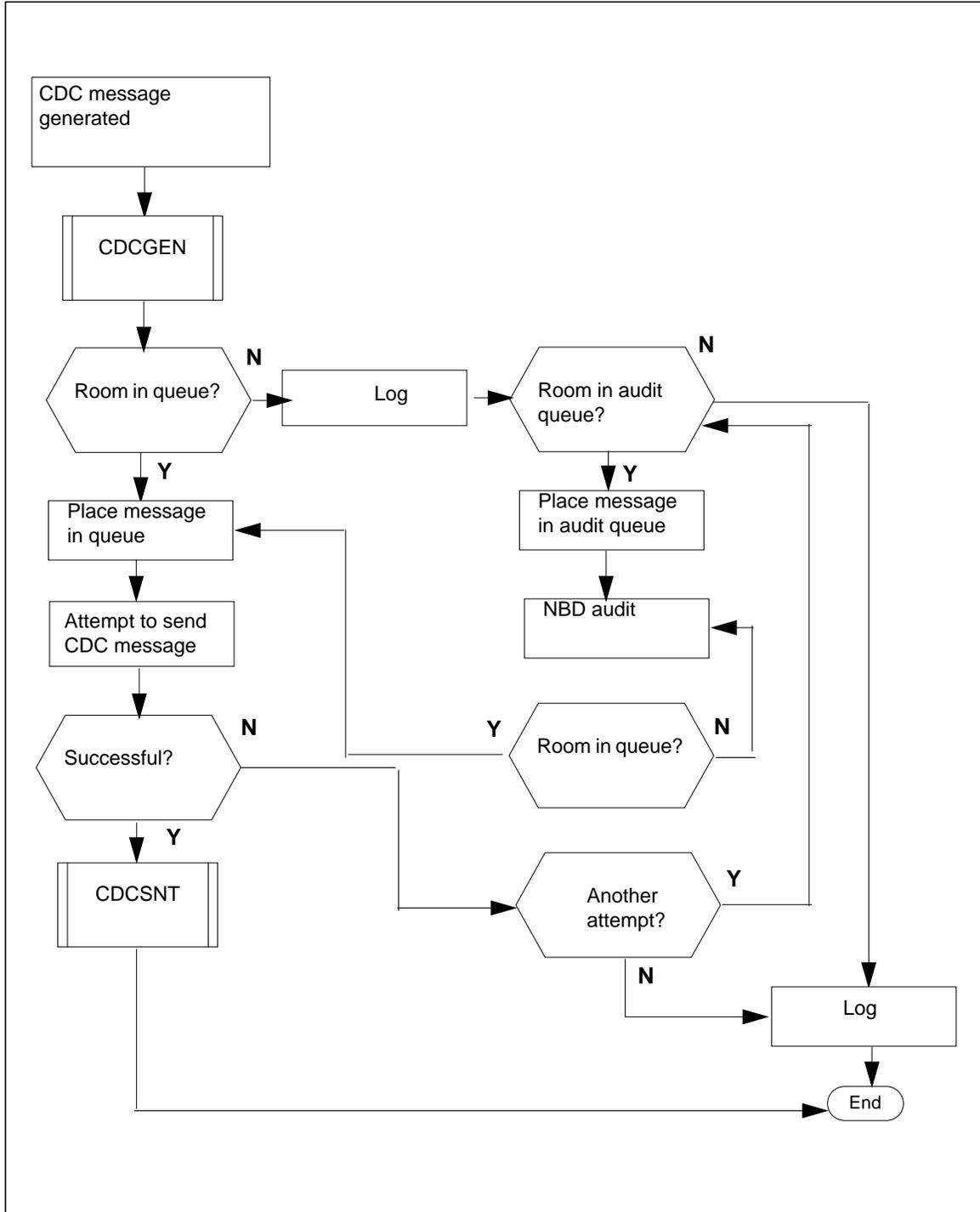
**Related functionality codes**

The table that follows lists the functionality name and codes related to OM group UNBCDC.

| Functionality | Code     |
|---------------|----------|
| NBD           | NBD00003 |

## OM group UNBCDC (continued)

### OM group UNBCDC registers



---

**OM group UNBCDC** (continued)
 

---

**Register CDCGEN**

Register CDCGEN counts the number of CDC messages generated by USNBD.

**Register CDCGEN release history**

NA012 introduced register CDCGEN.

**Related registers**

CDCSNT, the number of messages successfully sent is used with CDCGEN to calculate the percentage of generated messages actually sent using the following formula:

$$\frac{\text{CDCSNT}[i]}{\text{CDCGEN}[i]} \times 100 \% = \text{Percent of requested CDC messages transmitted}$$

where i is the index number of a particular CDC

The number of messages lost within an OM collection is defined by the following formula:

$$\text{CDCGEN} - \text{CDCSNT} = \text{Number of CDC messages lost}$$

*Note:* It is possible that during a given period CDCGEN may exceed CDCSNT even though no messages are lost. This condition occurs because the messages may be sent during the next OM collection period. CDCGEN may also be smaller than CDCSNT which may occur when messages generated during an earlier OM collection period were successfully sent during the current OM collection period.

**Related logs**

UNB301

**Extension registers**

None

**Register CDCSNT**

Register CDCSNT counts the number of USNBD CDC messages sent successfully over the X.25 link.

**OM group UNBCDC** (end)

---

**Register CDCSNT release history**

NA012 introduced register CDCSNT.

**Related registers**

CDCGEN

**Related logs**

UNB301

**Extension registers**

None

---

## OM group UNBMISC

---

### OM description

The UNBMISC OM group records miscellaneous USNBD data, including the number of monitored calls and the number of monitored calls for which monitoring was stopped because USNBD capacity is exceeded or because of non-monitored features.

### Release history

NA012 introduced OM group UNBMISC.

### Registers

OM group UNBMISC registers display on the MAP terminal as follows.

```

> omshow UNBMISC active

UNBMISC

CLASS: ACTIVE
START: 1998/08/08 08:00:00 SAT; STOP: 1998/08/08 08:08:41
FRI;
SLOW SAMPLES          16 ; FAST SAMPLES          152;

          UNBMCALL   RELNMON   RELCPCTY
0          50         1         0

```

### Group structure

OM group UNBMISC provides up to 200 tuples, one for each office.

**Key field:**

None

**Info field:**

None

### Related OM groups

None

### Related functional groups

The Network Broadcast Delivery (NBD) functional group is associated with OM group UNBCDC.

## OM group UNBMISC (continued)

---

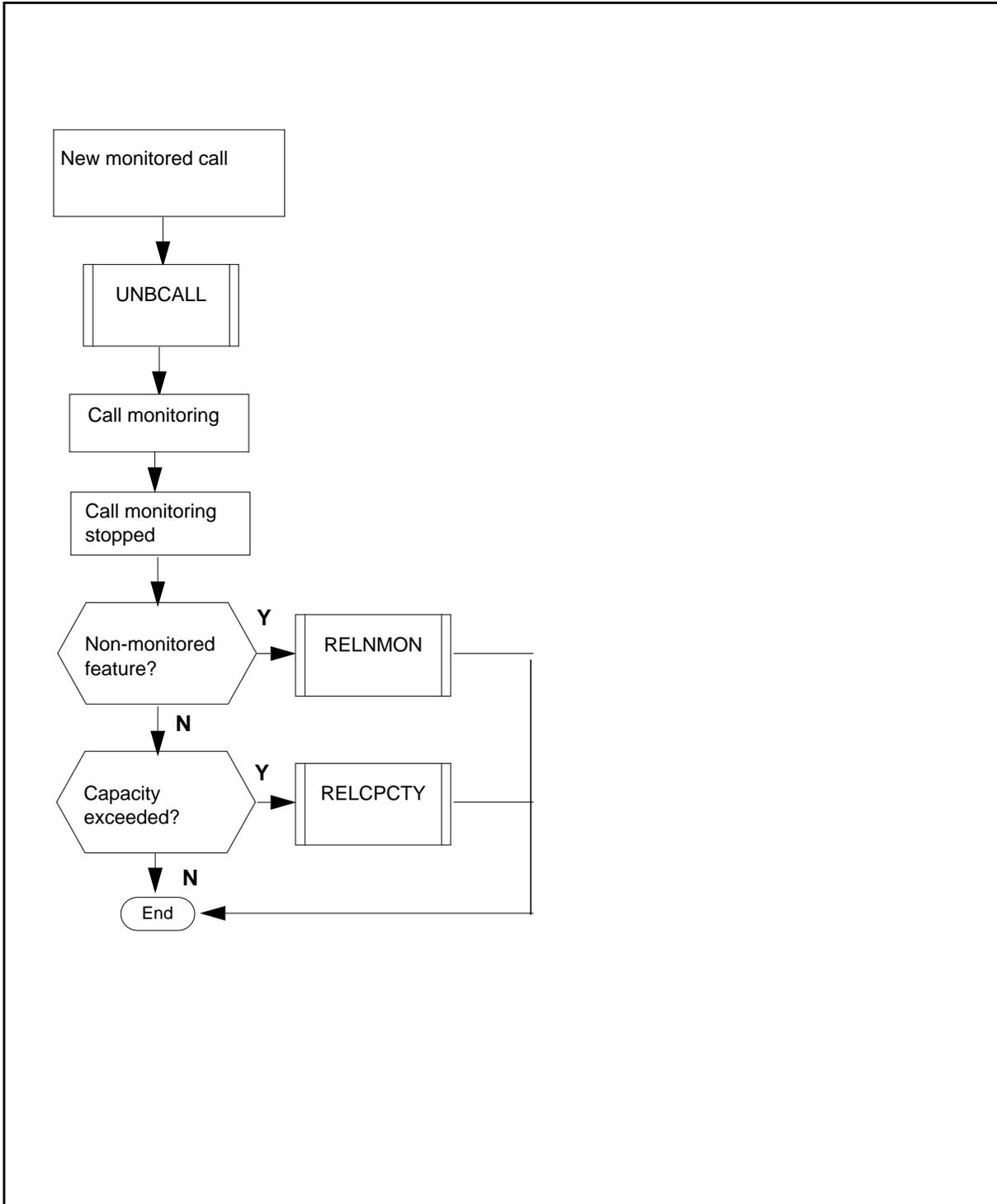
### Related functionality codes

The table that follows lists the functionality name and codes related to OM group UNBMISC.

| Functionality | Code     |
|---------------|----------|
| NBD           | NBD00003 |

**OM group UNBMISC (continued)**

**OM group UNBMISC registers**



## OM group UNBMISC (continued)

---

### Register RELCPCTY

Register RELCPCTY counts the number of monitored calls for which monitoring was stopped because USNBD capacity was exceeded.

#### Register RELCPCTY release history

NA012 introduced register RELCPCTY.

#### Related registers

UNBMCALL, the number of USNBD monitored calls is used to RELCPCTY to calculate the percentage of calls for which monitoring was stopped because USNBD capacity is exceeded, using the following formula:

$$\frac{\text{RELCPCTY}}{\text{UNBMCALL}} \times 100 \% = \text{Percent of calls released because capacity is exceeded}$$

*Note:* It is possible that during a given period RELCPCTY may exceed UNBMCALL even though no messages are lost. This condition occurs because the messages may be sent during the next OM collection period.

#### Related logs

None

#### Extension registers

None

### Register RELNMON

Register RELNMON counts the number of calls for which monitoring was stopped because of non-monitorable features, including the following:

- the subject uses a feature not monitored by USNBD
- the call is redirected and USNBD does not support this type of redirection, and cannot follow the call
- the subject is on a 2FR line, and is currently talking to the mate 2FR subscriber

#### Register RELNMON release history

NA012 introduced register RELNMON.

#### Related registers

None

---

**OM group UNBMISC** (continued)

---

**Related logs**

None

**Extension registers**

None

**Register UNBMCALL**

Register RELCPCTY counts the number of calls monitored by USNBD.

UNBMCALL is used to determine the real-time impact monitored calls make on the DMS switch. The impact is determined using the following formula:

$$\frac{\text{UNBMCALL} \times \text{average} \times \text{nmsubj}}{\text{omcp} \times \text{ncmpu} \times \text{nasurv}} \times = \text{Percent of absolute increase in CPU capacity}$$

where

**average**

is the average time added to monitored calls in milliseconds (the value 7.37 should be used in this formula)

**nmsub**

is the total number of monitored subjects on the DMS switch.

*Note:* Since there may be up to five surveillances on the same subject, the value of NMSUBJ may be up to five less than the value of NASURV.

**omcp**

is the OM collection period in milliseconds, usually 15 min (900 000 ms), 30 min (1 800 000 ms), or 60 min (3 600 000 ms)

**ncmpu**

is the number of CM CPUs on the switch (always 1 unless an XA-Core processor is used).

**nasurv**

is the total number of active surveillances on the switch.

**Register UNBMCALL release history**

NA012 introduced register UNBMCALL.

**Related registers**

RELCPCTY and RELNMON.

**OM group UNBMISC** (end)

---

**Related logs**

None

**Extension registers**

None

---

**OM group USAGSAMP-U.S. only**

---

**OM Description**

Usage sampler for engineering and administrative data acquisition system classes (USAGSAMP-U.S. only)

The OM group USAGSAMP counts fast and slow scans during an accumulation period for an engineering and administrative data acquisition system (EADAS) OM class.

The system sends the OM group USAGSAMP information to an AT&T EADAS office. The system sends the information in response to a request from the EADAS computer to the DMS.

**Release history**

Only the OM group USAGSAMP-U.S. was introduced before BCS20.

**Registers**

The OM group USAGSAMP-U.S. registers appear on the MAP terminal as follows:



SLOWSAMP                  FASTSAMP

**Group structure**

The OM group USAGSAMP-U.S. provides one tuple for each office.

**Key field:**

None

**Info field:**

None

**Associated OM groups**

There are no associated OM groups.

**Associated functional groups**

The AT&T EADAS office functional group associates with OM group USAGSAMP-U.S..

## OM group USAGSAMP-U.S. only (continued)

---

### Associated functionality codes

The functionality codes for OM group USAGSAMP-U.S. appear in the following table.

| Functionality         | Code     |
|-----------------------|----------|
| 1A/1B EADAS Interface | NTX218AA |

### Register FASTSAMP

Fast sample usage count

FASTSAMP counts fast scans (scan rate: 10 seconds) performed during an accumulation period.

#### Register FASTSAMP release history

FASTSAMP was created prior to BCS20.

#### Associated registers

There are no associated registers.

#### Associated logs

There are no associated logs

#### Extension registers

There are no extension registers.

### Register SLOWSAMP

Slow sample usage count

SLOWSAMP counts slow scans performed during an accumulation period. The slow scan rate is 100 s.

#### Register SLOWSAMP release history

SLOWSAMP was created prior to BCS20.

#### Associated registers

There are no associated registers.

#### Associated logs

There are no associated logs.

**OM group USAGSAMP-U.S. only** (end)

---

**Extension registers**

There are no extension registers.

## OM group UTR

---

### OM description

Universal tone receiver (UTR)

The UTR registers of OM group UTR count and record call processing requests from lines and trunks to UTRs. The registers of this OM group also record the activities in request-wait queues.

Digitone and multifrequency calls request UTRs for digit collection. If a UTR is not available, the system places the request in a queue until a channel is available. A UTR has 32 channels and is in an XMS-based peripheral module (XPM).

The receiver attachment delay recording (RADR) measurements calculates the time the request for a UTR channel remains in the queue. Registers UTRRADA, UTRLDLYP, and UTRUDLYP report these measurements.

The XPM counts the UTR registers and transfers the registers to the central control. This procedure occurs every 5 min. Under heavy load conditions, this process can take more than 5 min. To provide an accurate example of a 10 s time period, the system updates register UTRSAMPL when 10 s passes. A time stamp at the call processing level determines when 10 s passes. The system moves the time stamp forward 10 s. The system adds the count of UTRs in use and the current count of UTR requests in the queue to UTRTRU and UTRQOCC.

### Release history

The OM group UTR was introduced before BCS20.

#### BCS35

To count calls, the registers use:

- subscriber carrier module-100 urban (SMU)
- subscriber carrier module-100S (SMS)
- the ISDN Meridian business service (MBS) SMU

The info field includes the ADNUM field from table LTCINV.

#### BCS33

When you set office parameter OMINERLANGS to Y, convert registers UTRQOCC and UTRTRU from CCS to deci-erlangs before the count appears. Use the OMSHOW command on the ACTIVE class to display the registers. UTRRADA is changed.

**OM group UTR** (continued)**BCS29**

Current registers count network switched ISDN calls.

**BCS21**

Registers UTRTRU and UTRQOCC changed.

**BCS20**

Registers UTRRADA, UTRUDLYP, and UTRLDLYP were introduced.  
Registers UTRSAMPL, UTRTRU, and UTRQOCC changed.

**Registers**

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

|          |          |          |          |
|----------|----------|----------|----------|
| UTRSZRS  | UTROVFL  | UTRQOCC  | UTRQOVFL |
| UTRQABAN | UTRTRU   | UTRSAMPL | UTRRADA  |
| UTRLDLYP | UTRUDLYP |          |          |

**Group structure**

The OM group UTR provides one tuple for each XPM that has a UTR card. Tables LTCINV and RCCINV specify these XPMs.

**Key field:**

There is no key field.

**Info field:**

UTR\_OMINFO

This information field contains:

- the peripheral module (PM) name and number
- the fields defined
- the number of UTRs that have software for each PM

The field refers to each UTR tuple by a number. Field ADNUM in tables LTCINV and RCCINV identifies peripherals. The field uses the ADNUM identification that corresponds to the UTR equipped peripheral to refer to each

## OM group UTR (continued)

---

UTR tuple. When the ADNUM field does not identify peripherals, the system numbers the UTR tuples from 0 to a maximum of 255.

- Tuple RADTESTC contains the total of the UTRRADA registers for all XPMs with UTR.
- Tuple RADLDLYP contains the total of the UTRLDLYP registers for all XPMs with UTR.
- Tuple RADUDLYP contains the total of the UTRUDLYP registers for all XPMs with UTR.

When the operating company sets office parameter OMINERLANGS in table OFCOPT to Y (yes), usage registers UTRQOCC and UTRTRU store in deci-erlangs.

### Associated OM groups

There are no associated OM groups.

### Associated functional groups

The functional group Universal Tone Receiver associates with OM group UTR.

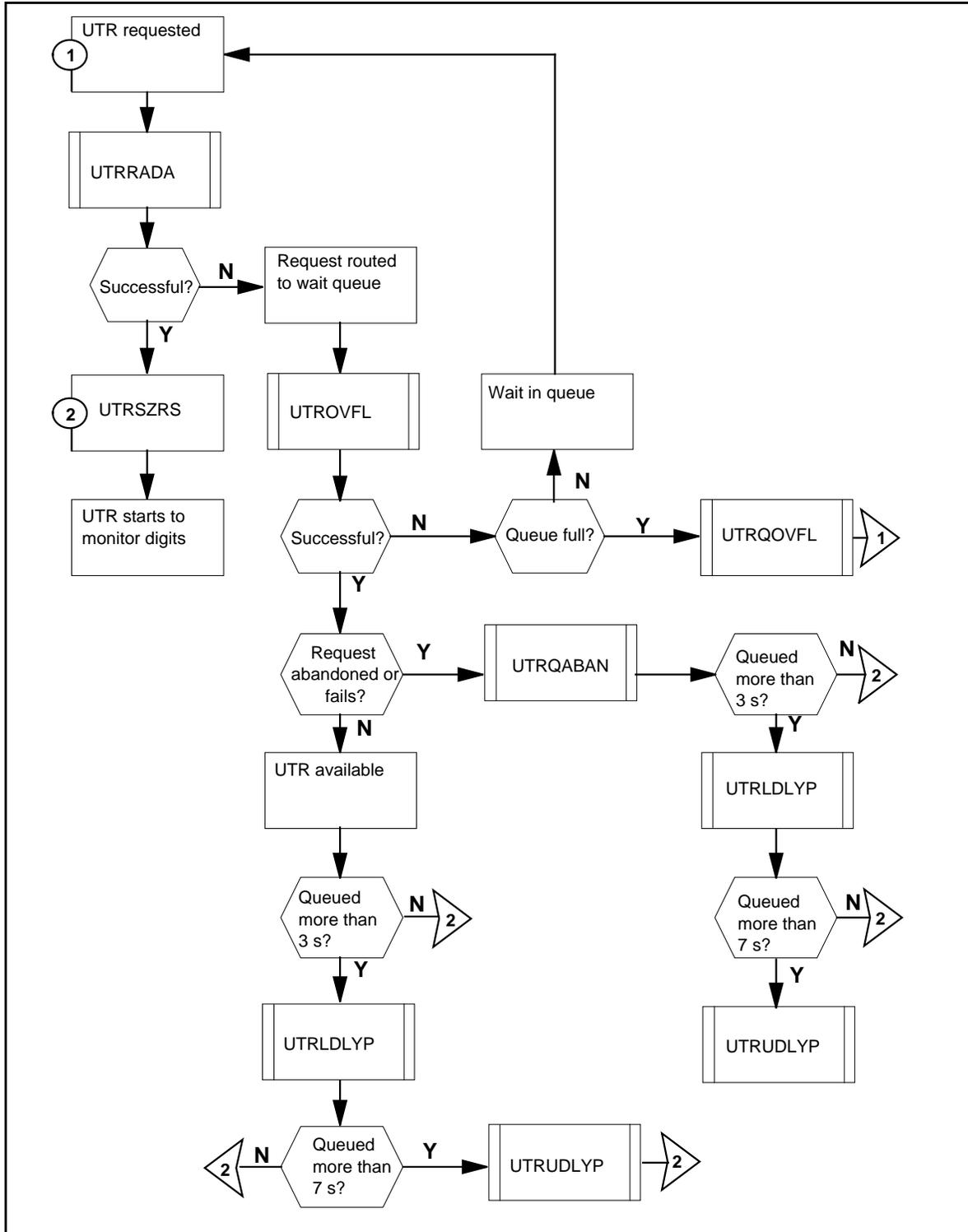
### Associated functionality codes

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

| Functionality                      | Code     |
|------------------------------------|----------|
| Universal Tone Receiver (Domestic) | NTX269AA |
| Intl Univ Tone Rcvr Support        | NTX479AA |
| Intl Call Processing System        | NTX485AA |

**OM group UTR (continued)**

**OM group UTR registers: line origination**





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**OM group UTR** (continued)

---

**Register UTRLDLYP**

UTR lower delay peg (UTRLDLYP)

Register UTRLDLYP counts requests for a UTR that are in the queue for a minimum of 3 s. Register UTRLDLYP counts the requests that the system denies and requests the system abandons after a minimum of 3 s.

Registers UTRUDLYP and UTRLDLYP increase when a request waits in the queue for a minimum of 7 s. When the system denies the request for a UTR, both registers increase.

**Register UTRLDLYP release history**

Register UTRLDLYP was introduced in BCS20.

**BCS29**

Register UTRLDLTP increases for each network-switched integrated services digital network (ISDN) call.

**Associated registers**

Registers UTRUDLYP and UTRLDLYP increase when a request waits in the queue for a minimum of 7 s. If the system denies the request for a UTR, both registers increase.

**Associated logs**

There are no associated logs.

**Register UTROVFL**

UTR overflow (UTROVFL)

Register UTROVFL increases if receivers are not available when the system requests a receiver. The count in this register represents the number of attempts to secure a position in the wait queue for the UTR. The number of calls that enter the queue equals UTROVFL subtracted from UTRQOVFL.

**Register UTROVFL release history**

Register UTROVFL was introduced in BCS20.

**BCS29**

Register UTROVFL increases for each network-switch integrated services digital network (ISDN) call.

## OM group UTR (continued)

---

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

## Register UTRQABAN

UTR queue abandon (UTRQABAN)

Register UTRQABAN increases when the system deletes a UTR request from the wait queue. The system deletes the request because the calling party abandons the call or because the incoming trunk times out.

### Register UTRQABAN release history

Register UTRQABAN was introduced in BCS20.

#### BCS29

Register UTRQABAN increases for each network-switched integrated services digital network (ISDN) call.

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

## Register UTRQOCC

UTR queue occupied (UTRQOCC)

Register UTRQOCC is a usage register. The scan rate is 10 s. This register records if requests for UTRs are present in the wait queue.

The operating company can set office parameter OMINERLANGS in table OFCOPT to Y. When OMINERLANGS is set to Y, the system stores the register count in deci-erlangs, not in hundred call seconds (CCS).

### Register UTRQOCC release history

Register UTRQOCC was 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

---

**OM group UTR** (continued)

---

active registers remains in CCS. Convert the values to deci-erlang before the values transfer from ACTIVE to HOLDING. The values remain in deci-erlangs in the HOLDING class.

**BCS29**

Register UTRQOCC increases for each network-switched integrated services digital network (ISDN) call.

**BCS21**

Register changed to count in deci-erlangs or CCS.

**Associated registers**

Register UTRQOCC represents the accumulated total of UTR requests in the queue when UTRSAMPL increases.

**Associated logs**

There are no associated logs.

**Register UTRQOVFL**

UTR queue overflow (UTRQOVFL)

Register UTRQOVFL increases when the system denies a UTR request a position in the wait queue because the queue is full. The wait queue can hold the same number of requests as the number of available UTR channels. Each UTR has 32 channels.

**Register UTRQOVFL release history**

Register UTRQOVFL was introduced before BCS20.

**BCS29**

Register UTRQOVFL increases for each network-switched integrated services digital network (ISDN) call.

**Associated registers**

Register TRK\_INFAIL increases when register UTRQOVFL increases.

**Associated logs**

There are no associated logs.

**Register UTRRADA**

UTR receiver attachment delay (UTRRADA)

Register UTRRADA counts requests for a UTR channel on which the system performs receiver attachment delay record (RADR) measurements. Not all

## OM group UTR (continued)

---

call processing and diagnostic requests are in the queue. The system cannot include these requests in the UTRRADA register.

The number of RADR calls correspond to the number of requests that call processing makes for UTR channels.

### Register UTRRADA release history

Register UTRRADA was introduced in BCS20.

#### BCS29

Register UTRRADA increases for each network-switched integrated services digital network (ISDN) call.

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

## Register UTRSAMPL

UTR samples (UTRSAMPL)

Register UTRSAMPL increases when the system takes samples of queue occupancy and the number of receivers in use. The system takes these samples every 10 s. The call processing time stamp determines when 10 s passes.

When the system takes a sample, the system adds the current count of UTRs in use to UTRTRU. The system also adds the current count of UTR requests in the queue to UTRQOCC.

### Register UTRSAMPL release history

Register UTRSAMPL was introduced before BCS20.

#### BCS29

Register UTRSAMPL increases for each network-switched integrated services digital network (ISDN) call.

### Associated registers

Register UTRTRU represents the total UTRs in use when register UTRSAMPL increases.

Register UTRQOCC represents the total UTR requests in the queue when register UTRSAMPL increases.

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**OM group UTR** (continued)

---

**Associated logs**

There are no associated logs.

**Register UTRSZRS**

UTR seizures (UTRSZRS)

Register UTRSZRS increases each time the system supplies a UTR to a call in response to a request.

**Register UTRSZRS release history**

Register UTRSZRS was introduced before BCS20.

**BCS29**

Register UTRSZRS increases for each network-switched integrated services digital network (ISDN) call.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register UTRTRU**

UTR available (UTRTRU)

Register UTRTRU is a usage register. The scan rate is 10 s. This register records the number of universal tone receivers in use.

The operating company can set the office parameter OMINERLANGS in table OFCOPT to Y. When OMINERLANGS is Y, the system stores the register counts in deci-erlangs. The system does not store the register counts in hundred call seconds (CCS).

**Register UTRTRU release history**

Register UTRTRU was introduced before BCS20.

**BCS33**

When the operating company sets the office parameter OMINERLANGS to Y, the usage count changes from CCS to deci-erlangs before the count appears. The OMSHOW command on the ACTIVE class displays the usage count. The value in the active registers remains in CCS. The values convert to deci-erlang before the values transfer from ACTIVE to HOLDING. The values remain in deci-erlangs in the HOLDING class.

## OM group UTR (end)

---

### **BCS29**

Register UTRTRU increases for each network-switched integrated services digital network (ISDN) call.

### **Associated registers**

Register UTRTRU represents the total UTRs in use when register UTRSAMPL increases.

### **Associated logs**

There are no associated logs.

## Register UTRUDLYP

UTR upper delay peg (UTRUDLYP)

Register UTRUDLYP counts requests for a UTR that are in the queue for a minimum of 7 s. The register also counts the number of requests that the system denies. This register also counts requests that the system abandoned after a minimum of 7 s.

Register UTRLDLYP increases when a request waits in the queue for a minimum of 7 s. If the system denies the request for a UTR, registers UTRUDLYP and UTRLDLYP increase.

### **Register UTRUDLYP release history**

Register UTRUDLYP was introduced in BCS20.

### **BCS29**

Register UTRUDLYP increases for each network-switched integrated services digital network (ISDN) call.

### **Associated registers**

Registers UTRUDLYP and UTRLDLYP increase when a request waits in the queue for a minimum of 7 s. If the system denies the request for a UTR, both registers increase.

### **Associated logs**

There are no associated logs.

---

## OM group VFGIWUSE

---

### OM description

Virtual facility group INWATS usage (TFGIWUSE)

The OM group VFGIWUSE provides information on the use of virtual facility group (VFG) trunks by inward wide-area telephone service (INWATS) calls.

The OM group VFGIWUSE contains two peg registers. The registers count:

- attempts to place an INWATS call to a VFG trunk
- attempts to place an INWATS call that the system blocks because a VFG trunk is not available

The OM group VFGIWUSE contains one usage register that records when a VFG trunk is busy on a INWATS call.

The OM group VFGIWUSE is only available in a switch that has the ACD-MGMT Rep 2-Way Data Stream package (NTX991AD). The ACD applications use VFGIWUSE often.

In ACD applications, the following guidelines provide an accurate evaluation of ACD VFG facilities levels:

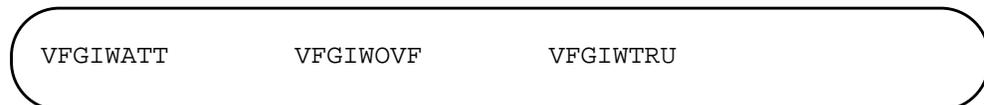
- Only one customer group must use a VFG at a time.
- A VFG must only belong to one ACD group at a time.
- A VFG must only belong to one subpool and one pool at a time.
- When a VFG user uses another VFG, both the user and the VFG in use must belong to the same ACD group.

### Release history

The OM group VFGIWUSE was introduced in BCS30.

### Registers

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



### Group structure

The OM group VFGIWUSE provides one tuple for each key.

## OM group VFGIWUSE (continued)

---

**Key field:**

VIRTUAL\_FACILITY\_GROUP is the virtual facility group key as defined in table VIRTGRPS. The name is a one to six character user-defined name.

**Info field:**

VFGINFO\_TYPE is the number of members in the virtual facility group. The range is from zero to 2047.

### Associated OM groups

The OM group VFGUSAGE provides information on the use of virtual facility groups (VFG).

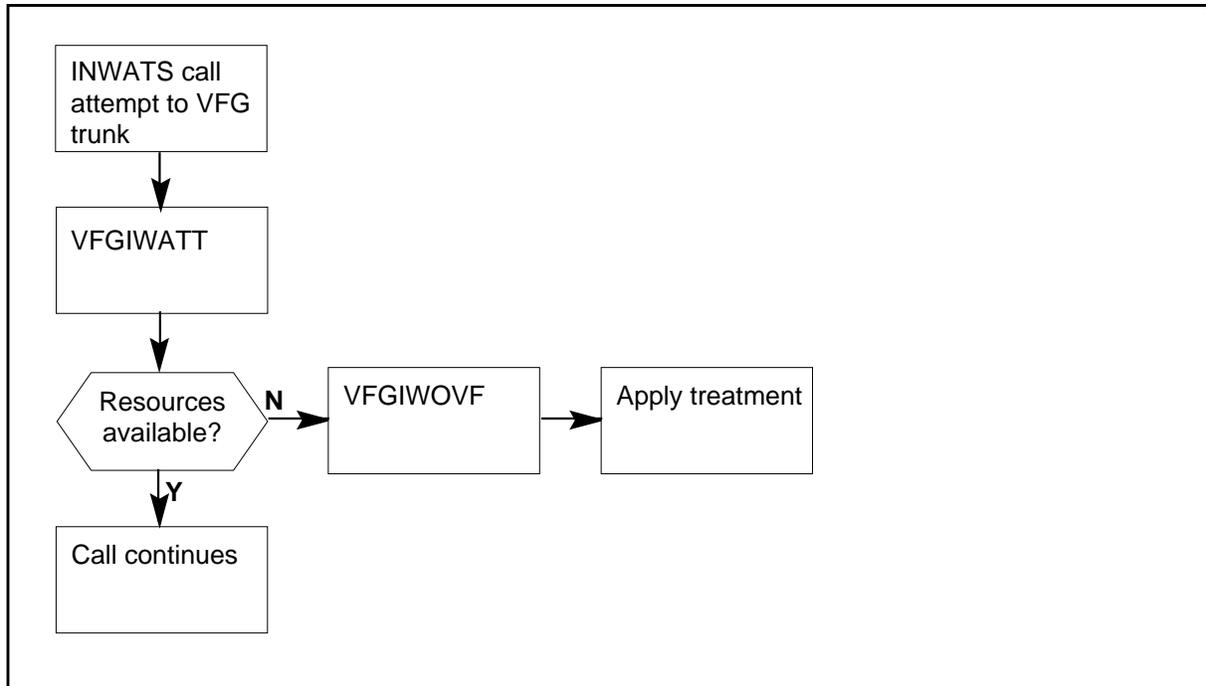
### Associated functional groups

The ACD functional group associates with OM group VFGIWUSE.

### Associated functionality codes

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

| Functionality                  | Code     |
|--------------------------------|----------|
| ACD-MGMT Rep 2-Way Data Stream | NTX991AD |

**OM group VFGIWUSE** (continued)**OM group VFGIWUSE registers****Register VFGIWATT**

Virtual facility group INWATS call attempts (VFGIWATT)

Register VFGIWATT counts attempts to place an INWATS call to a virtual facility group (VFG) trunk.

**Register VFGIWATT release history**

Register VFGIWATT was introduced in BCS30.

**Associated registers**

The following formulas are only correct when other incoming call attempts do not use VFG trunks except INWATS call attempts.

Register VFGUSAGE\_VFGTOTAL counts outgoing call attempts.

The total number of outgoing call attempts = VFGUSAGE\_VFGTOTAL - VFGIWUSE\_VFGIWATT

Register VFGIWOVF counts attempts to place an INWATS call that the system blocks. The system blocks the call because the virtual facility group trunk is not available.

## OM group VFGIWUSE (continued)

---

The VFGUSAGE\_VFGBLCKD increases when an outgoing call attempt fails because resources are not available.

Register VFGUSAGE\_VFGLSCBL counts calls that the line screening code blocked. This register also counts calls that the alternate line screening code assigned to the virtual facility group blocked.

The total number of successful outgoing call attempts =  
(VFGUSAGE\_VFGTOTAL - (VFGUSAGE\_VFGBLCKD +  
VFGUSAGE\_VFGLSCBL)) - (VFGIWUSE\_VFGIWATT -  
VFGIWUSE\_VFGIWOVF)

The total number of successful INWATS call attempts =  
VFGIWUSE\_VFGIWATT - VFGIWUSE\_VFGIWOVF

### Associated logs

There are no associated logs.

### Extension registers

There are no extension registers.

## Register VFGIWOVF

Virtual facility group INWATS call attempts blocked (VFGIWOVF)

Register VFGIWOVF counts attempts to place an INWATS call that the system blocked. The system blocks the attempts because the virtual facility group (VFG) trunk is not available.

### Register VFGIWOVF release history

Register VFGIWOVF was introduced in BCS30.

### Associated registers

The following formulas are only correct when other incoming call attempts do not use VFG trunks except INWATS call attempts.

Register VFGIWATT counts attempts to place an INWATS call to a virtual facility group trunk.

Register VFGUSAGE\_VFGBLCKD increases when an outgoing call attempt fails because no resources are available.

Register VFGUSAGE\_VFGLSCBL counts calls that the line screening code blocked. This register also counts calls that the alternate line screening code assigned to the virtual facility group blocked.

---

**OM group VFGIWUSE (end)**


---

VFGUSAGE\_VFGTOTAL counts outgoing call attempts.

The total number of successful outgoing call attempts =

$$(VFGUSAGE\_VFGTOTAL - (VFGUSAGE\_VFGBLCKD + VFGUSAGE\_VFGGLSCBL)) - (VFGIWUSE\_VFGIWATT - VFGIWUSE\_VFGIWOVF)$$

The total number of successful INWATS call attempts =

$$VFGIWUSE\_VFGIWATT - VFGIWUSE\_VFGIWOVF$$
**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register VFGIWTRU**

Virtual facility group INWATS usage count (VFGIWTRU)

Register VFGIWTRU is a usage register. The scan rate is 10 s. Register VFGIWTRU records if a virtual facility group (VFG) trunk is busy on an INWATS call.

**Register VFGIWTRU release history**

Register VFGIWTRU was 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 VFGUSAGE

---

### OM description

Virtual facility group usage (VFGUSAGE)

The OM group VFGUSAGE provides information on the use of virtual facility groups (VFG).

The VFG replaces a loop-around trunk group to implement inward wide-area telephone service (INWATS) and outward wide-area telephone service (OUTWATS) calls. The VFG is always answered, if the system does not block the VFG. The system can block the VFGs but, unlike trunk groups, the VFGs cannot fail because there is no circuit.

A VFG can have the following assigned:

- a line screening code (LSC)
- corresponding intercept treatment
- an alternate line screening code (ALSC)
- corresponding intercept treatment
- a customer group

The VFG access control (VAC) allows users to limit access to a VFG in a customer group. When the user activates VAC, access to a controlled VFG by a station or incoming trunk group can change. This change depends on the datafill of the OPTIONS field in table VIRTGRPS.

If VAC applies to a VFG and an alternate route exists, the system attempts to complete the call. The system uses the alternate route to complete the call. If the VFG with VAC active is the last or only choice in the route list, then flexible intercept treatment can apply.

### Release history

The OM group VFGUSAGE was introduced before BCS20.

### Registers

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

VFGTOTAL

VFGBLCKD

VFGLSCBL

VFGTRU

---

**OM group VFGUSAGE** (continued)

---

**Group structure**

The OM group VFGUSAGE provides one tuple for each virtual facility group.

**Key field:**

VIRTUAL\_FACILITY\_GROUP is one to six characters as defined in table VIRTGRPS.

**Info field:**

VFGINFO\_TYPE is the number of members in the virtual facility group.

**Associated OM groups**

There are no associated OM groups.

**Associated functional groups**

The IBN Integrated Business Network functional group associates with OM group VFGUSAGE.

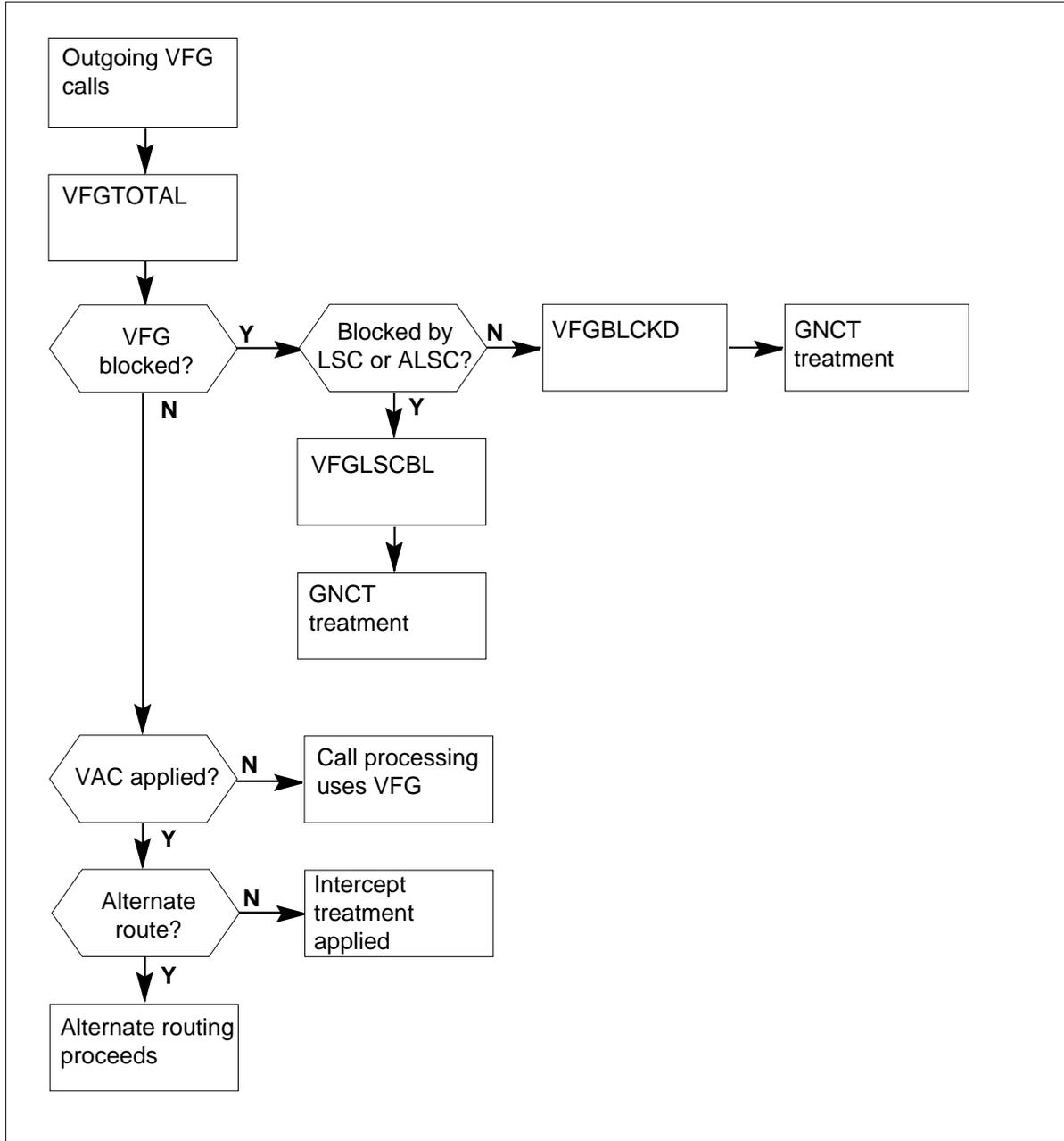
**Associated functionality codes**

The associated functionality codes for OM group VFGUSAGE are in the following table.

| Functionality               | Code     |
|-----------------------------|----------|
| IBN—Virtual Facility Groups | NTX112AA |

## OM group VFGUSAGE (continued)

### OM group VFGUSAGE registers



**OM group VFGUSAGE** (continued)**OM group VFGUSAGE usage registers****Register VFGBLCKD**

Virtual facility group (VFG) blocked (VFGBLCKD)

Register VFGBLCKD increases when an outgoing call attempt fails because resources are not available.

The call attempt goes to generalized no circuit (GNCT) treatment. If the count in this register is often large, increase the number of members in the VFG.

**Register VFGBLCKD release history**

Register VFGBLCKD was introduced before BCS20.

**Associated registers**

Register TRK\_NOVFLATB increases when an outgoing call attempt fails because resources are not available in the trunk group.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register VFGLSCBL**

Virtual facility group (VFG) line screening code blockages (VFGLSCBL)

Register VFGLSCBL counts calls blocked by one of the following:

- line screening code (LSC)
- alternate line screening code (ALSC) for the VFG and the associated LSC

## **OM group VFGUSAGE** (continued)

---

The restrictions are for the VFG and the LSC that associates with the call in field OPTIONS in table VIRTGRPS.

For this register to increase, the system must assign one of the following options to the VFG:

- VFGLSC and VFGALSC in table VIRTGRPS
- CUSTGRP in table CUSTSTN
- VAC in table FNMAP

### **Register VFGLSCBL release history**

Register VFGLSCBL was introduced before BCS20.

### **Associated registers**

$VFGTOTAL - (VFGFBLCKD + VFGLSCBL) =$  successful outgoing call attempts

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register VFGTOTAL**

Virtual facility group (VFG) total (VFGTOTAL)

Register VFGTOTAL counts outgoing call attempts.

### **Register VFGTOTAL release history**

Register VFGTOTAL was introduced before BCS20.

### **Associated registers**

$VFGTOTAL - (VFGBLCKD + VFGLSCBL) =$  successful outgoing call attempts

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register VFGTRU**

Virtual facility group (VFG) traffic busy usage (VFGTRU)

---

**OM group VFGUSAGE** (end)

---

Register VFGTRU is a usage register. The scan rate is 100 s. Register VFGTRU records if VFGs are call processing busy.

This register indicates an over-used or under-used VFG. A high or low level of use over time can indicate that you must change the number of VFG members.

**Register VFGTRU release history**

Register VFGTRU 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.

## OM group VPN

---

### OM description

Virtual private network (VPN)

This OM group measures the number of virtual private network (VPN) calls in the DMS switch. The measurements are for service switching point (SSP)-based VPN.

### Release history

The OM group VPN was introduced in BCS36.

Functionality was introduced to support interaction of a variety of Meridan Digital Centrex (MDC) features and VPN.

Functionality was introduced to support the following:

- VPN on MDC lines
- VPN on trunks that use Australian telephone user part (ATUP)
- Australian ISDN user part (AISUP) signaling

### Registers

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

|          |          |          |          |
|----------|----------|----------|----------|
| VPNSCP   | VPNALT   | VPNSCPOF | VPNSCPOS |
| VPNCITYW | VPNINTER | VPNINTRA | VPNLCR   |
| VPNDIAL  | VPNDPERR | VPNSCPGN | VPNSTDAC |
| VPNNOTON | VPNPRERR | VPNONRTE | VPNTRERR |

### Group structure

The OM group VPN provides one tuple for each office.

**Key field:**

There are no key fields.

**Info field:**

There are no info fields.

### Associated OM groups

There are no associated OM groups.

---

**OM group VPN** (continued)

---

**Associated functional groups**

The following functional groups associate with OM group VPN:

- Service control point
- Australasia/CALA/China services (AUS00015)

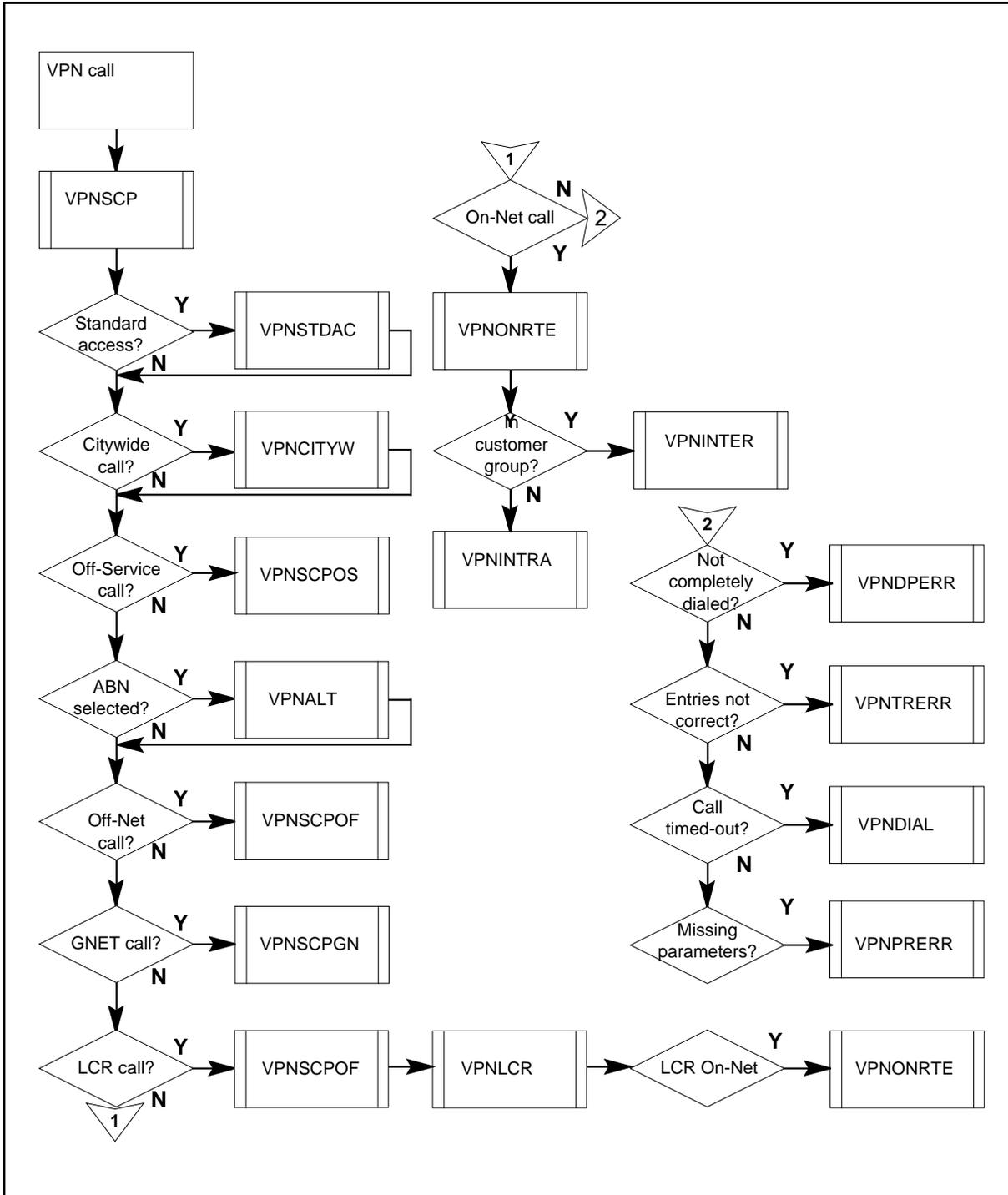
**Associated functionality codes**

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

| <b>Functionality</b> | <b>Code</b> |
|----------------------|-------------|
| VPN - SSP Based      | AUS00012    |

**OM group VPN (continued)**

**OM group VPN registers**



---

**OM group VPN** (continued)

---

**Register VPNALT**

SCP VPN calls requiring alternate billing number (VPNALT)

Register VPNALT counts the number of SCP-based VPN calls that require an alternate billing number.

**Register VPNALT release history**

Register VPNALT was introduced in BCS36.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register VPNCITYW**

VPN citywide calls (VPNCITYW)

Register VPNCITYW counts the number of SCP-based VPN citywide calls.

**Register VPNCITYW release history**

Register VPNCITYW was introduced in BCS36.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register VPNDPERR**

VPN dial plan error (VPNDPERR)

Register VPNDPERR counts the number of VPN On-Net calls that meet datafill errors or terminate without warning.

**Register VPNDPERR release history**

Register VPNDPERR was introduced in BCS36.

## **OM group VPN (continued)**

---

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register VPNINTER**

SCP VPN intersite calls (VPNINTER)

Register VPNINTER counts the number of SCP VPN intersite calls. An intersite call originates and terminates on different sites of the same business group.

### **Register VPNINTER release history**

Register VPNINTER was introduced in BCS36.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register VPNINTRA**

SCP VPN intrasite calls (VPNINTRA)

Register VPNINTRA counts the number of SCP-based VPN intrasite calls. An intrasite call originates and terminates on the same site of one business group.

### **Register VPNINTRA release history**

Register VPNINTRA was introduced in BCS36.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

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**OM group VPN** (continued)

---

**Extension registers**

There are no extension registers.

**Register VPNLCR**

SCP VPN least-cost routing calls (VPNLCR)

Register VPNLCR counts the number of SCP VPN calls that send a Least Cost Routing (LCR) query.

**Register VPNLCR release history**

Register VPNLCR was introduced in BCS36.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register VPNNOTON**

VPN not On-Net (VPNNOTON)

The system does not use this register.

**Register VPNNOTON release history**

Register VPNNOTON was introduced in BCS36.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register VPNONRTE**

VPN On-Net routed calls (VPNONRTE)

## **OM group VPN** (continued)

---

Register VPNONRTE counts the number of VPN On-Net calls that the system routes correctly. The count includes primary LCR calls that the system translates as On-Net and GNET calls.

### **Register VPNONRTE release history**

Register VPNONRTE was introduced in BCS36.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register VPNPDIAL**

VPN partial dial (VPNPDIAL)

Register VPNPDIAL counts the number of attempted VPN On-Net calls that time out while the call waits to receive more digits. This count includes incidents when the SCP does not return enough digits to translate.

### **Register VPNPDIAL release history**

Register VPNPDIAL was introduced in BCS36.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register VPNPRERR**

VPN parameter error (VPNPRERR)

Register VPNPRERR counts the number of VPN calls that fail as a result of missing conditional parameter information.

### **Register VPNPRERR release history**

Register VPNPRERR was introduced in BCS36.

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**OM group VPN** (continued)

---

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register VPNSCP**

Service control point VPN originations (VPNSCP)

Register VPMSCP counts the number of SCP-based VPN calls.

**Register VPNSCP release history**

Register VPNSCP was introduced in BCS36.

**Associated registers**

Counts in registers VPNNOTON and VPNONTRE cannot add up to more than the value of VPNSCP.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register VPNSCPGN**

VPN GNET calls (VPNSCPGN)

Register VPNSCPGN counts the number of attempted GNET calls for SCP-based VPN.

**Register VPNSCPGN release history**

Register VPNSCPGN was introduced in BCS36.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## **OM group VPN** (continued)

---

### **Extension registers**

There are no extension registers.

## **Register VPNSCPOF**

SCP VPN Off-Net calls (VPNSCPOF)

Register VPNSCPOF counts the number of SCP-based VPN Off-Net calls.

### **Register VPNSCPOF release history**

Register VPNSCPOF was introduced in BCS36.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register VPNSCPOS**

SCP VPN Offservice calls (VPNSCPOS)

Register VPNSCPOS counts the number of SCP-based Offservice VPN calls.

### **Register VPNSCPOS release history**

Register VPNSCPOS was introduced in BCS36.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register VPNSTDAC**

VPN standard access calls (VPNSTDAC)

Register VPNSTDAC counts the number of SCP-based VPN standard access calls.

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**OM group VPN (end)**

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**Register VPNSTDAC release history**

Register VPNSTDAC was introduced in BCS36.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register VPNTRERR**

VPN On-Net translation error (VPNTRERR)

Register VPNTRERR counts the number of VPN On-Net calls that fail because of entries in translation tables that are not correct.

**Register VPNTRERR release history**

Register VPNTRERR was 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 VPSC

---

### OM description

Voice processing service circuits (VPSC)

The OM group VPSC provides use and maintenance statistics for voice processing unit (VPU) service circuits. These statistics determine the performance of service circuit use and help to adjust the availability of VPU nodes and services.

### Release history

The OM group VPSC was introduced in BCS35.

### Registers

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

|         |         |         |         |
|---------|---------|---------|---------|
| VPSCSZR | VPSCMAX | VPSCUSE | VPSCMTC |
| VPSCIDL | VPSCMIS | VPSCAUD | VPSCFLT |

### Group structure

The OM group VPSC provides one tuple for each VPU service in an office.

**Key field:**

T\_VPU\_SERVICE

**Info field:**

T\_VPSC\_OMINFO

### Associated OM groups

There are no associated OM groups.

### Associated functional groups

The following functional group associates with OM group VPSC:

VPU peripherals

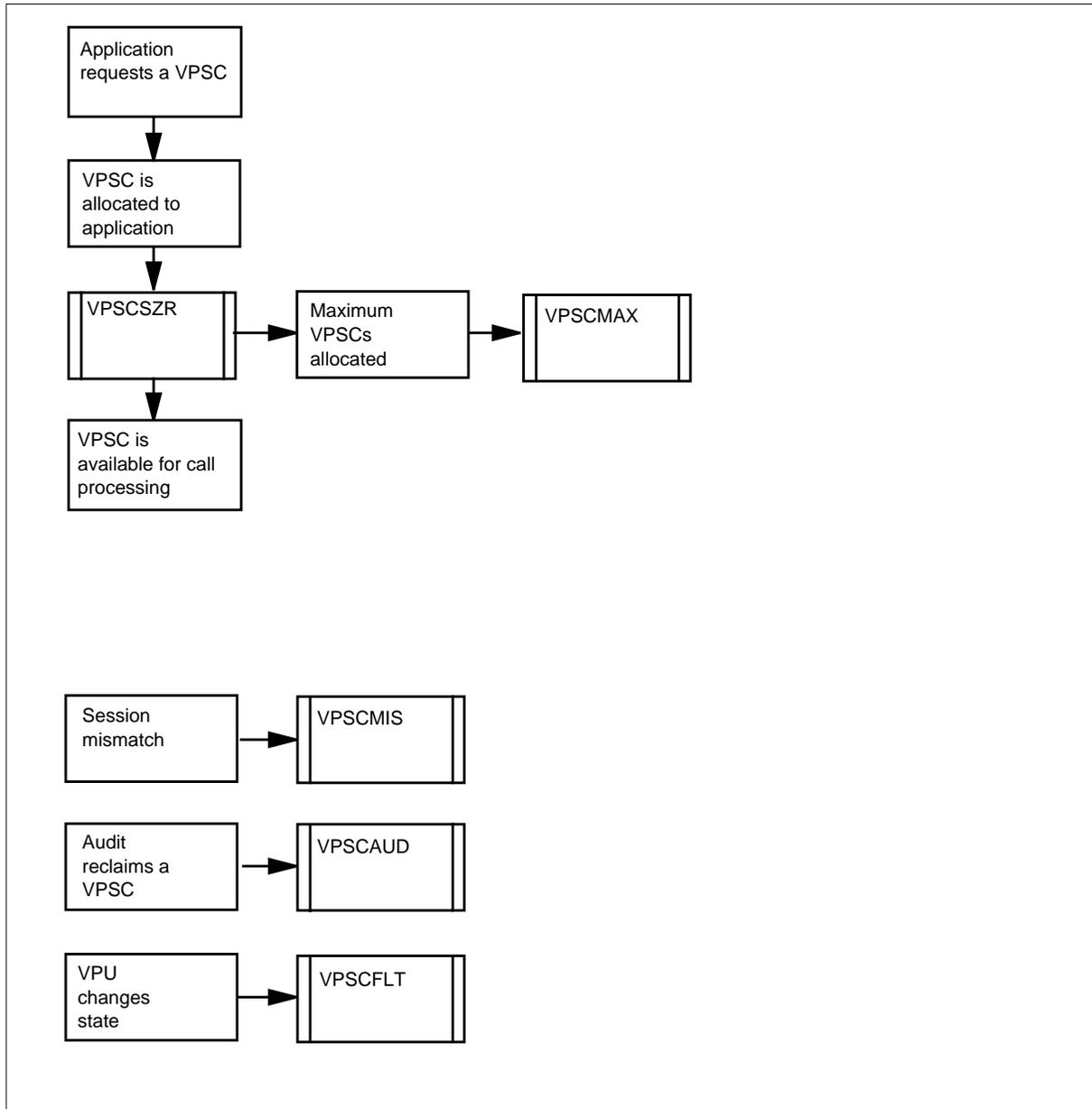
### Associated functionality codes

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

| Functionality                        | Code     |
|--------------------------------------|----------|
| Enhanced Service Resource Management | NTXS31AA |

## OM group VPSC (continued)

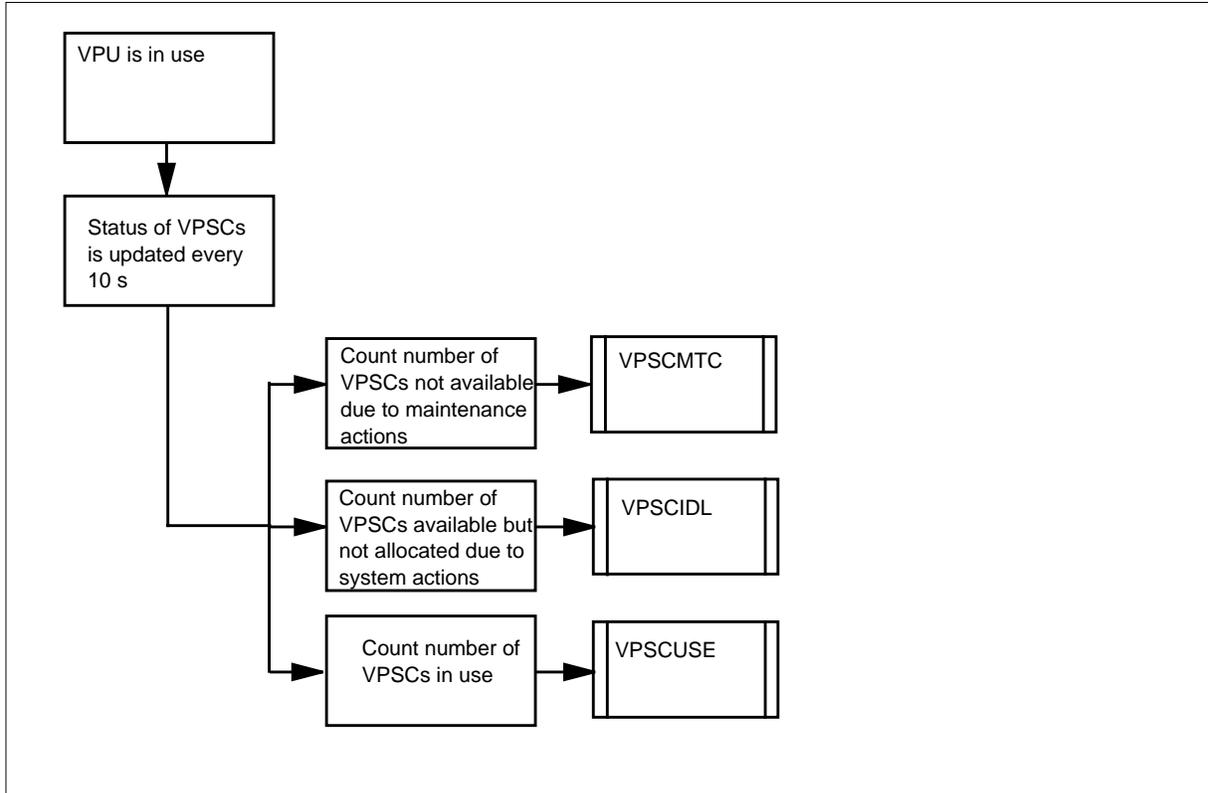
### OM group VPSC registers



## OM group VPSC (continued)

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### OM group VPSC usage registers



### Register VPSC

VPSC reclaimed by audit (VPSC)

Register VPSC increases each time an audit reclaims a VPSC.

### Register VPSC release history

Register VPSC was introduced in BSC35.

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

### Register VPSCFLT

VPSC faults (VPSCFLT)

---

**OM group VPSC** (continued)

---

Register VPSCFLT increases each time a fault affects a VPSC and causes the VPSC to fail while in use.

**Register VPSCFLT release history**

Register VPSCFLT was introduced in BCS35.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register VPSCIDL**

VPSC idle usage (VPSCIDL)

The system updates register VPSCIDL every 10 s to record the number of VPSCs available but not allocated.

**Register VPSCIDL release history**

Register VPSCIDL was introduced in BCS35.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Register VPSCMAX**

VPSC seizures (high-water mark) (VPSCMAX)

Register VPSCMAX indicates the highest number of VPSCs allocated on the VPU. The high-water mark always equals the highest count for the current OM transfer period. This register indicates how efficiently the system distributes the traffic load over the available VPUs.

**Register VPSCMAX release history**

Register VPSCMAX was introduced in BCS35.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## **OM group VPSC** (continued)

---

### **Register VPSCMIS**

VPSC session mismatch (VPSCMIS)

Register VPSCMIS increases when the system detects a VPSC session mismatch.

#### **Register VPSCMIS release history**

Register VPSCMIS was introduced in BCS35.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

There are no associated logs.

### **Register VPSCMTC**

VPSC maintenance usage (VPSCMTC)

The system updates register VPSCMTC every 10 s to record the number of VPSCs not available because of maintenance actions.

#### **Register VPSCMTC release history**

Register VPSCMTC was introduced in BCS35.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

There are no associated logs.

### **Register VPSCSZR**

VPSC seizures (VPSCSZR)

Register VPSCSZR counts the number times the system allocates a VPSC. The sum of VPSCSZR registers for all VPUs assigned to a particular service indicates the volume of traffic the service receives.

#### **Register VPSCSZR release history**

Register VPSCSZR was introduced in BCS35.

#### **Associated registers**

There are no associated registers.

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**OM group VPSC (end)**

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**Associated logs**

There are no associated logs.

**Register VPSCUSE**

VPSC traffic usage (VPSCUSE)

The system updates register VPSCUSE every 10 s to record the number of VPSCs in use. This register measures service circuit traffic.

**Register VPSCUSE release history**

Register VPSCUSE was introduced in BCS35.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## OM group VSNCOM

---

### OM Description

Voice services node (VSNCOM)

Register VSNCOM measures call attempts and dispositions for voice services node (VSN)-related calls on an application base.

### Release history

The OM group VSNCOM was introduced in BCS33.

### Registers

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

|         |         |         |         |
|---------|---------|---------|---------|
| VSNATT  | VSNIDFL | VSNNOVL | VSNIVFL |
| VSNOPRF | VSNOPRB | VSNVABN | VSNVABA |
| VSNDABT | VSNVABT |         |         |

### Group structure

The OM group VSNCOM provides one tuple for each application entered in field XAPPLN in table TOPSVNIN.

**Key field:**

TOPS\_XAPPLN\_TYPE

**Info field:**

There is no info field.

### Associated OM groups

The OM group AABS—All the registers in VSNCOM come before the registers from OM group AABS and provide registers for multiple VSN applications.

### Associated functional groups

The following functional groups associate with OM group VSNCOM:

- Automated Alternate Billing Service (AABS)
- Automated Directory Assistance Service (ADAS)

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**OM group VSNCOM** (continued)

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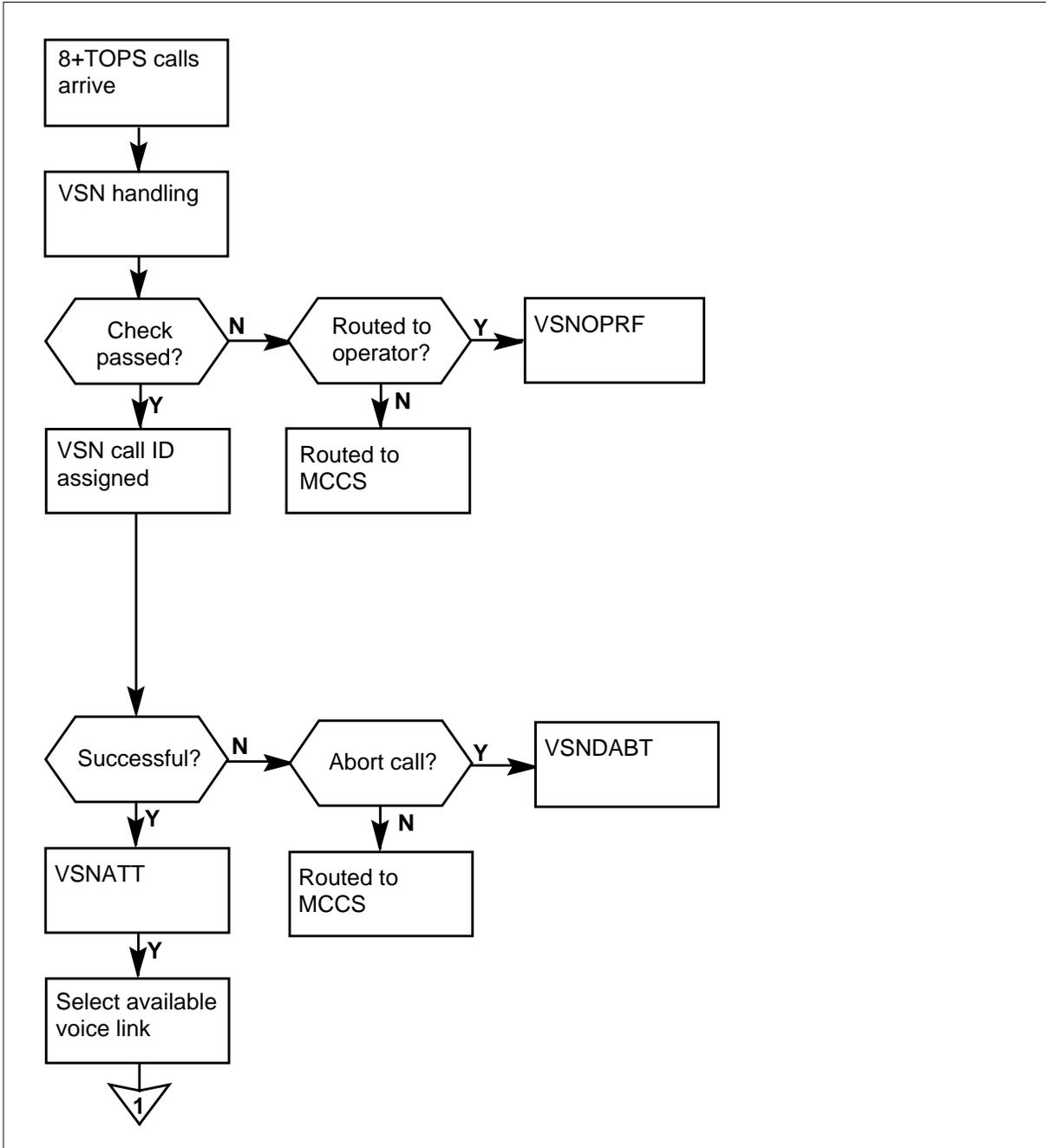
**Associated functionality codes**

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

| <b>Functionality</b>                | <b>Code</b> |
|-------------------------------------|-------------|
| Automated Alternate Billing Service | NTXA17AA    |
| TOPS ADAS                           | NTXQ23AA    |

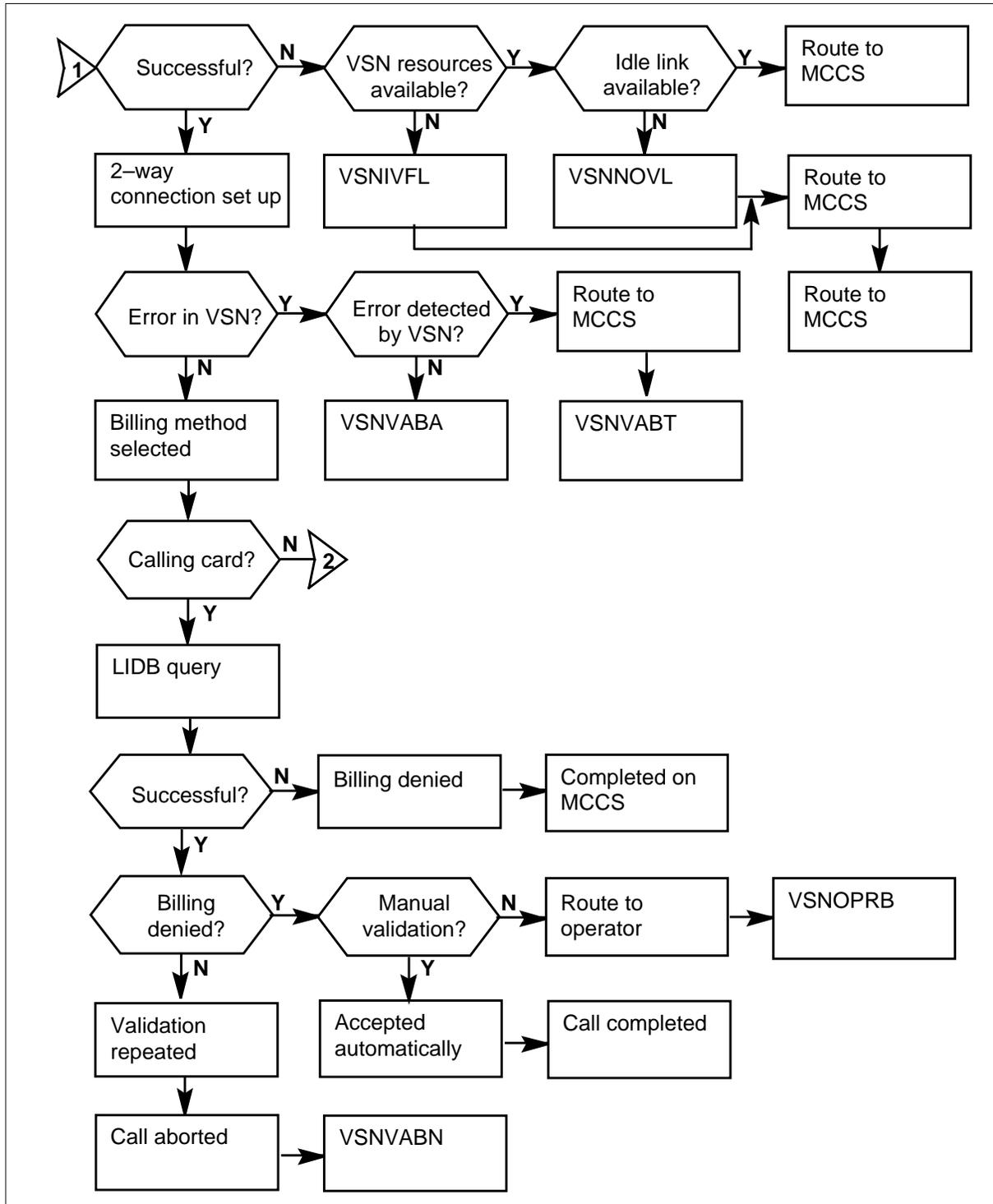
## OM group VSNCOM (continued)

### OM group VSNCOM registers



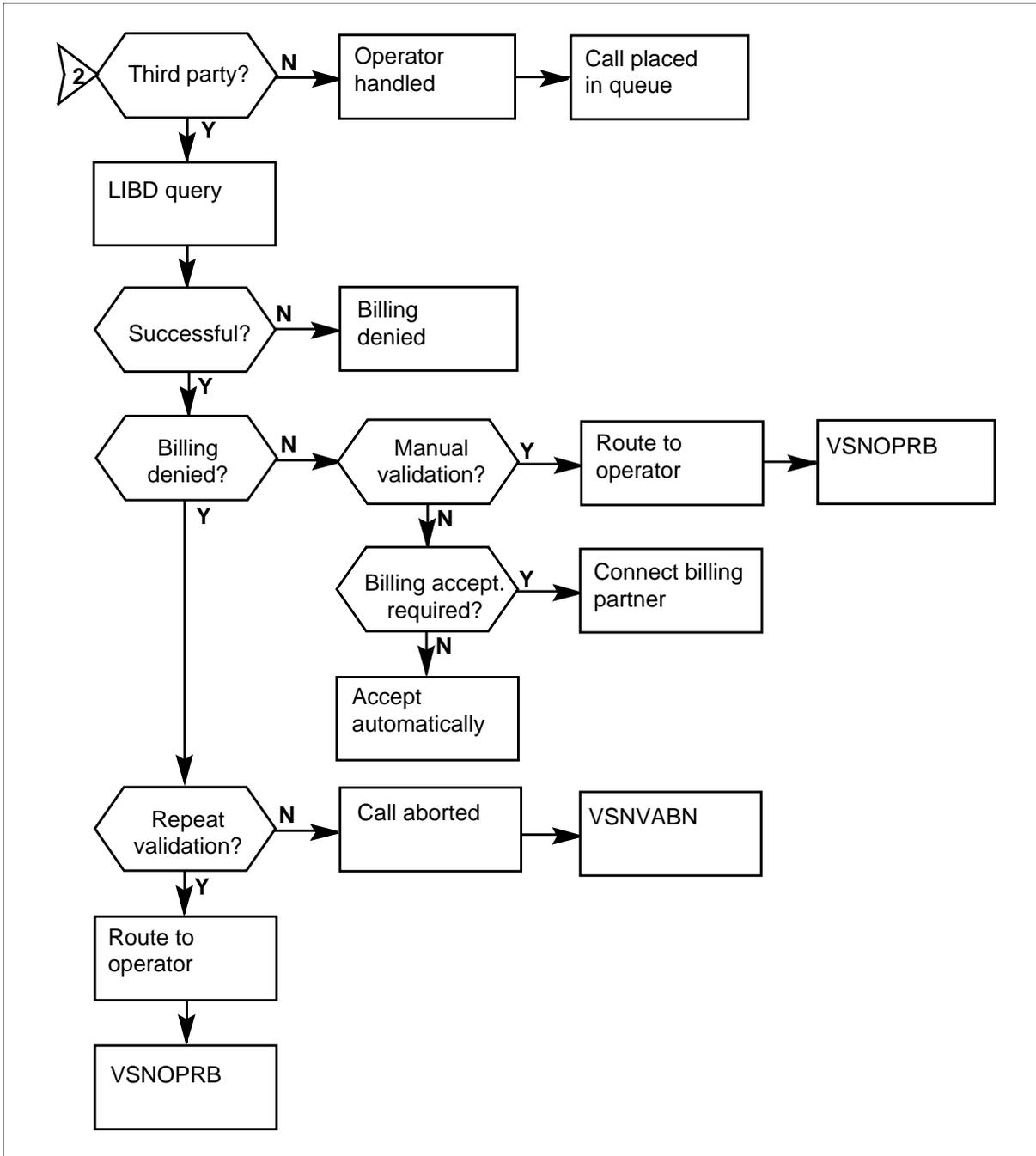
**OM group VSNCOM (continued)**

**OM group VSNCOM registers (continued)**



**OM group VSNCOM** (continued)

**OM group VSNCOM registers** (continued)



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**OM group VSNCOM** (continued)

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**Register VSNATT**

VSN call attempts (VSNATT)

Register VSNATT counts the number of calls in which the DMS switch attempts to provide VSN application handling. This action occurs at the point at which all originating station treatment checks have passed, and coin signaling is complete. The DMS switch must be ready to select a voice link to a VSN for the call.

**Register VSNATT release history**

Register VSNATT 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 VSNDABT**

VSN calls aborted due to abnormal condition in DMS (VSNDABT)

Register VSNDABT counts the number of aborted VSN application calls an error condition in the DMS switch causes. When this register increases, inspect the DMS central control logs to determine the time of the occurrence.

**Register VSNDABT release history**

Register VSNDABT 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 VSNIDFL**

VSN call failures due to the DMS switch (VSNIDFL)

## **OM group VSNCOM** (continued)

---

Register VSNIDFL counts the number of times the DMS switch fails to provide VSN application handling. This register applies to calls designated to receive VSN application handling during the initial connection to the VSN.

An increase in this register indicates that an error condition reduced the availability of resources in the DMS switch. Possible abnormal conditions include no available voice link, or no network connection.

### **Register VSNIDFL release history**

Register VSNIDFL 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 VSNIVFL**

VSN call failures due to the VSN (VSNIVFL)

Register VSNIVFL counts the number of times the VSN fails to provide initial VSN application handling. This register applies to calls designated to receive VSN application handling.

An increase in this register indicates an error condition, which can cause a potential capacity limit or resource failure in a VSN.

### **Register VSNIVFL release history**

Register VSNIVFL 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.

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**OM group VSNCOM** (continued)

---

**Register VSNNOVL**

VSN call failure due to no voice link (VSNNOVL)

Register VSNNOVL counts the number of times the DMS switch fails to provide VSN application handling for eligible calls. This condition occurs because an idle voice link is not available.

An increase in this register indicates possible availability problems with the voice links between the DMS and VSN.

**Register VSNNOVL release history**

Register VSNNOVL 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 VSNOPRB**

VSN calls routed to operator during back end of call (VSNOPRB)

Register VSNOPRB counts the number of times a VSN application call goes to an operator during the back-end handling of the call. This register increases when the system routes a VSN application call to an operator. The system routes the call to the operator after the VSN that handles the call sends a connection request.

**Register VSNOPRB release history**

Register VSNOPRB 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.

## **OM group VSNCOM** (continued)

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### **Register VSNOPRF**

VSN calls routed to operator during front end of call (VSNOPRF)

Register VSNOPRF counts the number of times a VSN application call goes to an operator during the front-end handling of the call. This register increases when the system routes a VSN application call to an operator. The system routes the call to the operator after the VSN that handles calls sends a forward connection request.

#### **Register VSNOPRF release history**

Register VSNOPRF 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 VSNVABA**

VSN calls aborted abnormally by VSN (VSNVABA)

Register VSNVABA counts the number of times the VSN abnormally aborts VSN application calls.

An increase in register indicates an error condition in a VSN. Check the maintenance notice logs in the DMS switch and logs in the VSN to isolate the problem.

#### **Register VSNVABA release history**

Register VSNVABA 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 VSNVABN**

VSN calls aborted normally by VSN (VSNVABN)

Register VSNVABN counts the number of times the VSN aborts VSN application calls in the normal manner.

This register increases each time the system terminates a VSN application call because of a normal call-cancellation condition. When the VSN receives message data that indicate a normal call-cancellation condition, the VSN sends an Abort Call message to the DMS CM. The DSM CM terminates the VSN application call.

**Register VSNVABN release history**

Register VSNVABN 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 VSNVABT**

VSN calls aborted due to DMS detection of an abnormal condition in VSN (VSNVABT)

Register VSNVABT counts the number of VSN application calls aborted when the DMS detects an abnormal condition in the VSN. When this register increases, inspect the DMS central control logs and VSN logs for the period.

**Register VSNVABT release history**

Register VSNVABT 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.

## OM group VSNLINK

---

### OM description

Voice services node link (VSNLINK)

The OM group VSNLINK monitors application-level activity on data links. These datalinks that connect the DMS and voice services node (VSN) in DMS-200 TOPS offices. Automated Alternate Billing Service (AABS) communicates through the DMS-to-VSN data links. The AABS automates the handling of 0+ dialed collect calls, third-number billed calls, and calling card calls. The VSN and DMS use an application protocol to exchange messages. These messages relate to billing, network connections, call dispositions, maintenance notifications, and audits.

The VSNLINK contains ten registers that count the following events:

- attempts to send messages to a VSN from the DMS central control (CC)
- successful attempts to send messages from the DMS CC to a VSN
- attempts to send messages from the DMS CC to a VSN that fail because of link failure
- messages that the DMS CC receives from a VSN
- non-call incoming messages that are not calls that the DMS cannot process. The DMS cannot process these messages because resources are not available, or because a call ID is not available
- failures by the DMS to initiate messaging with a VSN because a call ID is not available

### Release history

The OM group VSNLINK was introduced in BCS33.

#### BCS33

The number of tuples was increased from one to three for each office.

### Registers

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

|          |           |          |          |
|----------|-----------|----------|----------|
| VMSGSENT | VMSGSENT2 | VMSGSUC  | VMSGSUC2 |
| VMSGFAIL | VMSGRCV   | VMSGRCV2 | VNCALLFL |
| NOCIDNCM | NOCIDCP   |          |          |

---

**OM group VSNLINK** (continued)

---

**Group structure**

The OM group VSNLINK provides three tuples for each DMS-200 TOPS office.

**Key field:**

VSN\_DATA LINK

**Info field:**

There is no info field.

**Associated OM groups**

The OM group AABS counts calls that use AABS and VSNs.

**Associated functional groups**

The functional groups that associate with OM group VSNLINK include:

- DMS-200 TOPS
- Automated Alternate Billing Service (AABS)
- Automated Directory Assistance Service (ADAS)

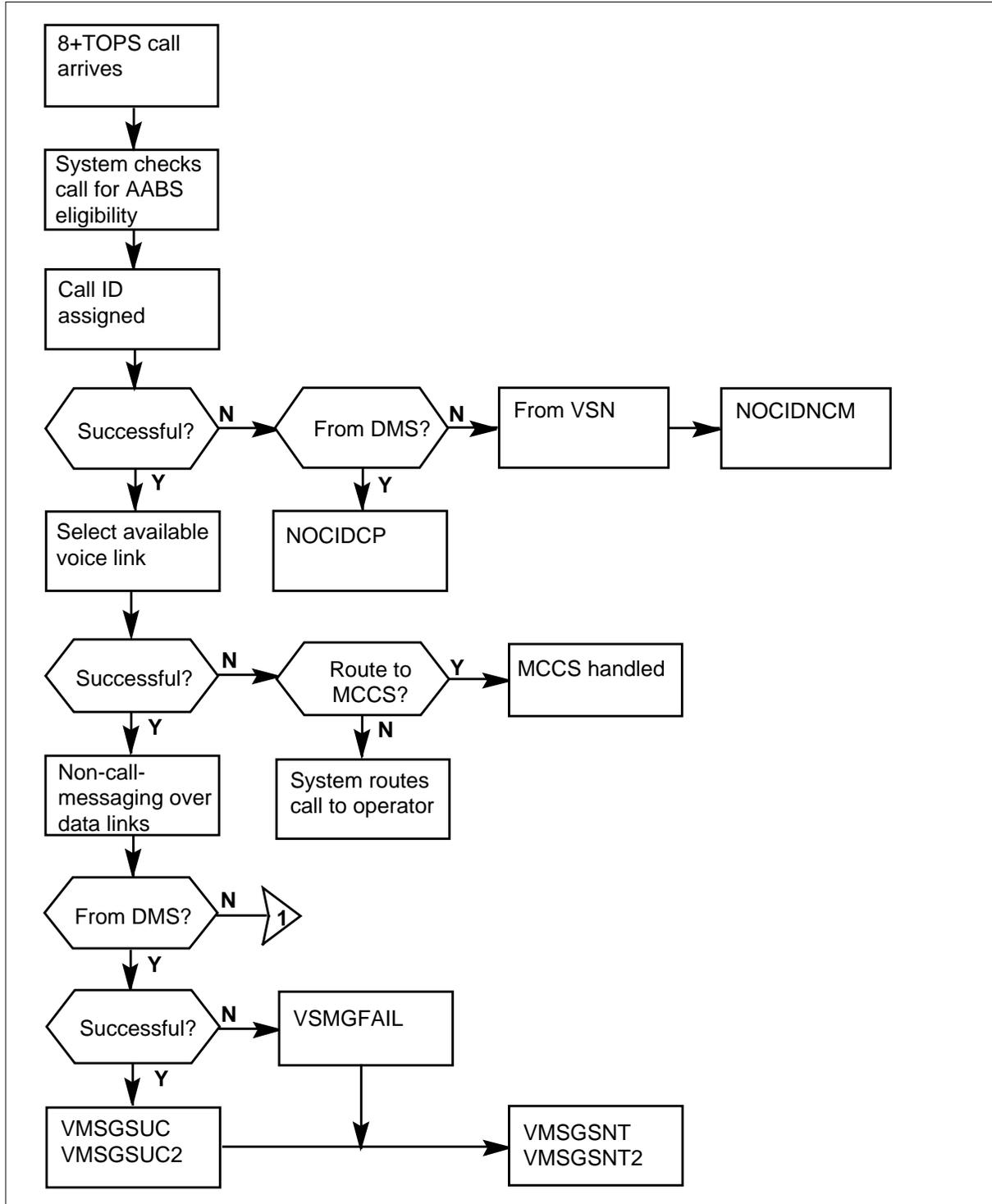
**Associated functionality codes**

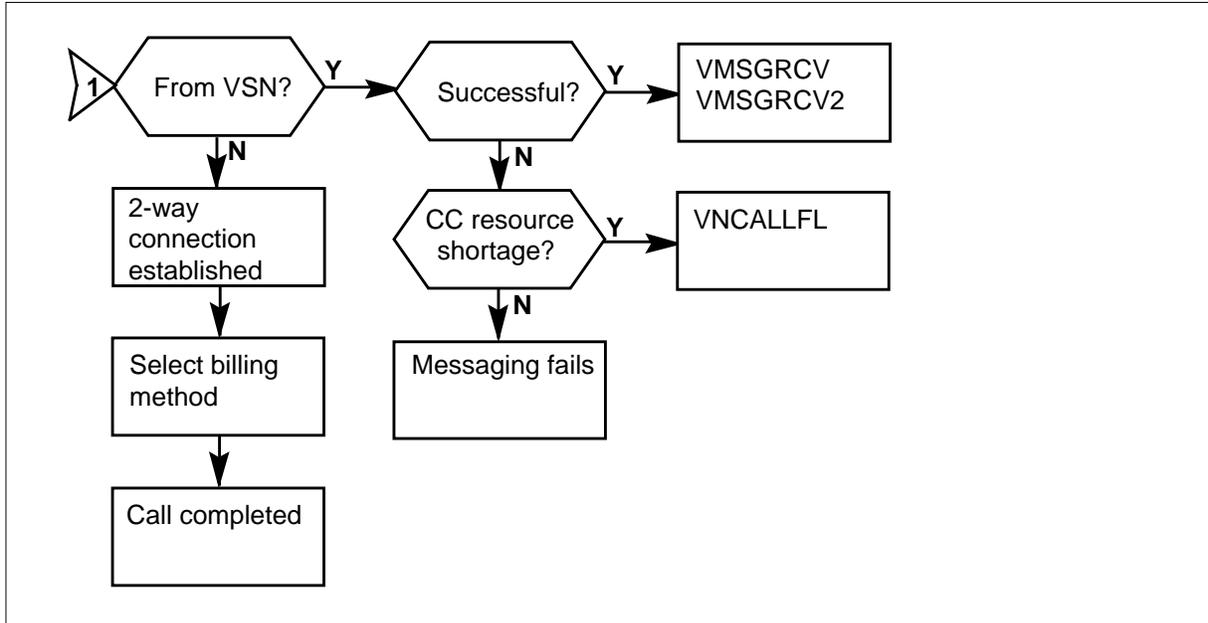
The associated functionality codes for OM group VSNLINK appear in the following table.

| Functionality                       | Code     |
|-------------------------------------|----------|
| Automated Alternate Billing Service | NTXA17AA |
| TOPS ADAS                           | NTXQ23AA |

**OM group VSNLINK** (continued)

**OM group VSNLINK registers**



**OM group VSNLINK (continued)****OM group VSNLINK registers (continued)****Register NOCIDCP**

No application call ID for DMS call processing (NOCIDCP)

Register NOCIDCP counts DMS failures to process calls that require messaging with a VSN. The failures occur because an application call ID is not available.

Counts in NOCIDCP indicate problems with VSN call ID allocation and availability in the DMS. Notify Northern Telecom if this register increases.

**Register NOCIDCP release history**

Register NOCIDCP was introduced in BCS28.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

## **OM group VSNLINK** (continued)

---

### **Register NOCIDNCM**

No call ID for non-call messages (NOCIDNCM)

Register NOCIDNCM counts DMS failures to process non-call messages from a VSN. The failures occur because an application call ID is not available.

Counts in NOCIDNCM indicate problems with VSN call ID allocation and availability in the DMS. Notify Northern Telecom if this register increases.

#### **Register NOCIDNCM release history**

Register NOCIDNCM was 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 VMSGFAIL**

Messages not sent to voice services node due to link failure

VMSGFAIL counts each time the system fails to send messages from the DMS CC to a VSN because of data link failures.

#### **Register VMSGFAIL release history**

VMSGFAIL was introduced in BCS28.

#### **Associated registers**

$VMSGSENT = VMSGSSUC + VMSGFAIL$

#### **Associated logs**

There are no associated logs.

#### **Extension registers**

There are no extension registers.

### **Register VMSGRCV**

Messages received by DMS central control from voice services node (VMSGRCV)

---

**OM group VSNLINK** (continued)

---

Register VMSGRCV counts messages that the DMS CC receives from a VSN over a data link.

**Register VMSGRCV release history**

Register VMSGRCV was introduced in BCS28.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

Register VMSGRCV2

**Register VMSGSENT**

Attempts to send messages to voice services node (VMSGSENT)

Register VMSGSENT counts attempts to send messages from the DMS CC to a VSN over a data link.

**Register VMSGSENT release history**

Register VMSGSENT was introduced in BCS28.

**Associated registers**

VMSGSENT = VMSGSENT + VMSGFAIL

**Associated logs**

There are no associated logs.

**Extension registers**

Register VMSGSENT2

**Register VMSGSENT**

Messages sent successfully to voice services node (VMSGSENT)

Register VMSGSENT counts successful attempts to send messages from the DMS CC to a VSN over a data link.

**Register VMSGSENT release history**

Register VMSGSENT was introduced in BCS28.

## **OM group VSNLINK (end)**

---

### **Associated registers**

VMSGSENT = VMSGSSUC + VMSGFAIL

### **Associated logs**

There are no associated logs.

### **Extension registers**

Register VMSGSSUC2

## **Register VNCALLFL**

DMS failures to process non-call messages due to unavailable resources (VNCALLFL)

Register VNCALLFL counts failures of the DMS CC to process non-call messages from a VSN because of DMS CC resource shortages.

Register VNCALLFL increases when the DMS CC receives an audit request, audit reply, or maintenance notice message from a VSN. The DMSCC receives the messages over the datalink. The DMSCC does not process the message. This event occurs when DMS CC cannot obtain a centralized automatic message accounting (CAMA) TOPS recording unit (CTRU) resource. An increase in VNCALLFL indicates not enough CTRUs are available.

### **Register VNCALLFL release history**

Register VNCALLFL was introduced in BCS28.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

---

## OM group WBTRK

---

### OM description

Wideband Trunk

The OM group WBTRK provides three Dialable Wideband Service (DWS) OM registers. The user installs the DWS on registers for each trunk group. The OM group WBTRK supports a group of trunks and keeps a separate count for each trunk supported. A trunk group defines the OM group WBTRK only for wideband trunks.

The WBTRK OM registers indicate the number and size of calls that a wideband trunk group handles. The registers count the number of DS0 channels on a DS1 link that calls use. Calls can occur on all trunks in the wideband trunk group.

When a call of size  $n$ , pegs the WBTRK OM registers, the registers increases by  $n$  increments. A call on a wideband trunk group can be of size  $n$ , where  $n = 1-24$  and corresponds to the number of DS0s that call uses. The value,  $n = 1$  corresponds to a narrowband call and  $n = 2-24$  corresponds to a wideband call. Traffic engineers use these measurements to provision wideband trunk groups more efficiently.

The WBTRK OM registers are for wideband trunk groups only. The registers gather information on trunks that the user enters in table TRKGRP with the wideband option selected (SELSEQ=WIDEBAND). The system treats attempts to use OMSHOW to display WBTRK peg counts for trunks other than wideband trunks as invalid.

### Release history

OM group WBTRK was introduced in NA005.

### Registers

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

| EQINCTOT     | EQATTMPT | EQOVATB |
|--------------|----------|---------|
| 1021 PRIFLX1 |          |         |
| 4            | 8        | 4       |

---

## OM group WBTRK (continued)

---

### Group structure

The number of WBTRK OM tuples equals the number of wideband trunk groups in table TRKGRP.

**Key field:**

None

**Info field:**

Trunk group CLI name

### Associated OM groups

The following OM groups are for WBTRK.

- TRK
- WIDEBAND

The WBTRK OMs and TRK OMs are trunk group OMs and increase under the same conditions. These OM groups have some differences. When a call pegs the TRK OMs, the call causes the register to increase by one increment. The size of the call does not determine the number of increments. A call of size  $n$  that pegs the WBTRK OMs causes the register to increase by  $n$  increments. All trunk groups have TRK OM tuples. Only wideband trunk groups have WBTRK OM tuples.

The following table shows the comparison of like WBTRK and TRK OM registers and the conditions that increase both associated registers.

#### Associated WBTRK and TRK registers

| WBTRK    | TRK      | Conditions that increase both   |
|----------|----------|---|
| EQINCTOT | INCATOT  | Any size incoming call attempt on a wideband trunk group.   |
| EQATTMPT | NATTMPT  | Any size terminating call attempt on a wideband trunk group.  |
| EQOVATB  | NOVFLATB | Any size terminating overflow all trunks busy (OVATB) call attempt on a wideband trunk group.                                   |
|          |          | <b>Note:</b> The OVATB occurs when the availability of too few circuits causes the trunk to reroute a termination call attempt. |

The OM group WBTRK is also like the OM group WIDEBAND. Both OM groups provide data on the sizes of wideband calls. The OM group

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**OM group WBTRK (continued)**


---

WIDEBAND only provides data for each office. Register WBTRK provides information on narrowband calls. Register WIDEBAND does not provide information on narrowband calls.

The following table shows the comparison of like registers WBTRK and WIDEBAND OM and the conditions that increase both associated registers.

**Associated registers WBTRK and WIDEBAND**

| WBTRK    | WIDEBAND                     | Conditions that increase both                                 |
|----------|------------------------------|---|
| EQINCTOT | TWBATMPT                     | Incoming wideband call attempt on a wideband trunk group.     |
| EQINCTOT | WBATn ,where<br>n=2,3,...24. | An incoming wideband call of size n.                          |
| EQOVATB  | TWBATB                       | Terminating OVATB wideband attempt on a wideband trunk group. |

**Associated functional groups**

Dialable Wideband Services (DWS)

**Associated functionality codes**

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

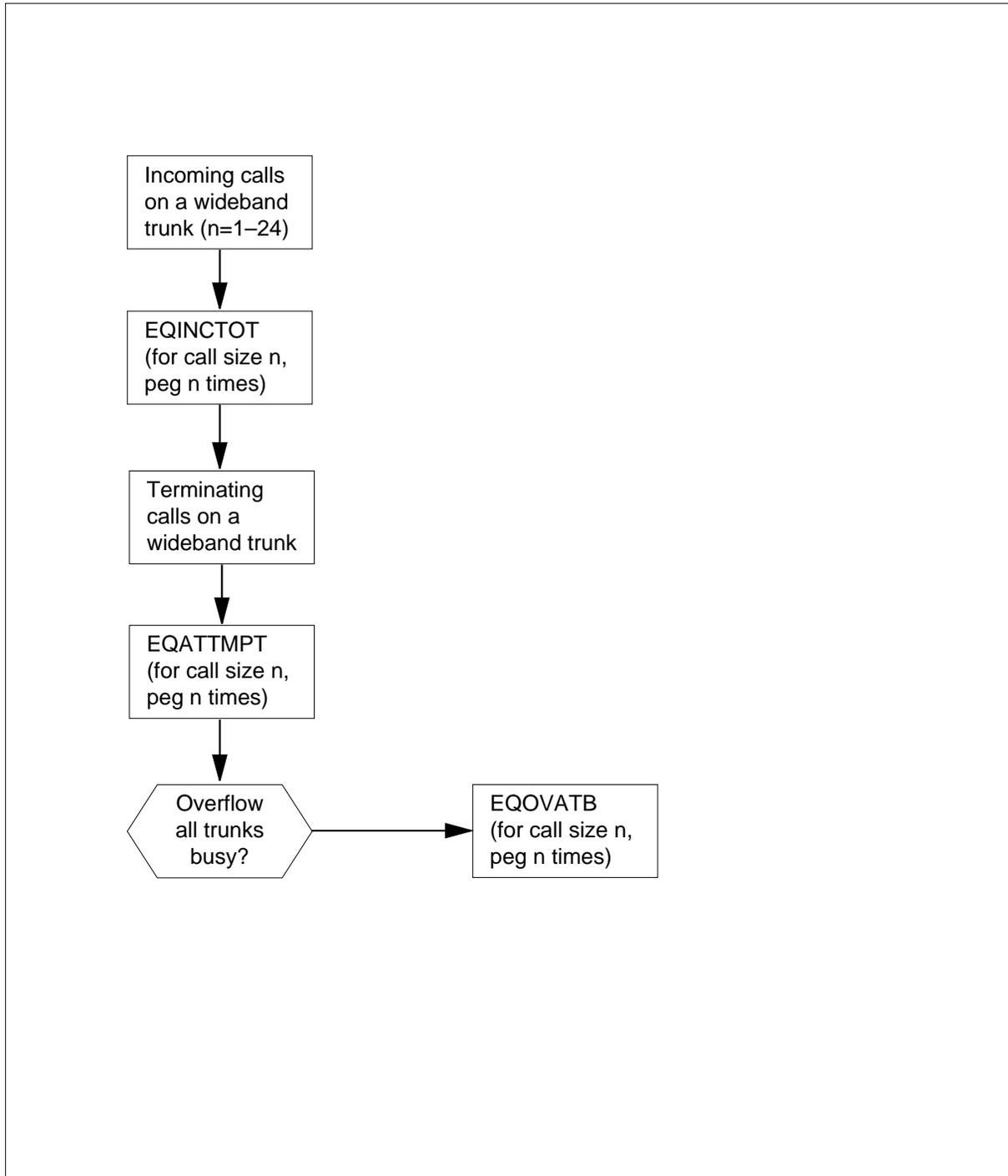
**Functionality codes**

| Functionality                         | Code     |
|---------------------------------------|----------|
| DWS Access to Carrier (Access Tandem) | NTXR66AA |
| DWS PRI                               | NTXR49AA |
| DWS Intertoll ISUP                    | NTXS28AA |

## OM group WBTRK (continued)

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### OM group WBTRK registers



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**OM group WBTRK** (continued)

---

**Register EQINCTOT**

Equivalent incoming total attempts

Incoming call attempts use DS0 channels on a wideband trunk group. Register EQINCTOT counts the number of DS0 channels that the incoming calls use.

**Register EQINCTOT release history**

Register EQINCTOT was introduced in NA005.

**Associated registers**

Registers INCATOT, TWBATMPT, WBATn (n=2, 3,...24)

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register EQATTMPT**

Equivalent terminating attempts

Calls that attempt termination on a trunk in the wideband trunk group request DS0 channels. Register EQATTMPT counts the number of DS0 channels that the calls request.

**Register EQATTMPT release history**

Register EQATTMPT was introduced in NA005.

**Associated registers**

NATTMPT

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register EQOVATB**

Equivalent overflow all trunks busy terminating attempt

Calls can request DS0 channels and fail to terminate on a trunk in a wideband trunk group because all trunks are busy. Register EQOVATB counts the number of DS0 channels that these calls request .

**OM group WBTRK (end)**

---

**Register EQOVATB release history**

The introduction of Register EQOVATB occurs in NA005.

**Associated registers**

NOVFLATB, TWBATB

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

---

## OM group WC

---

### OM description

The OM group who's calling (WC) contains thirteen peg registers that count call actions that occur related to the WC feature. The registers are:

- WCABDN
- WCATT
- WCCON
- WCDNERR
- WCOFR
- WCPRST
- WCREC
- WCSCRN
- WCT1
- WCT2
- WCT3
- WCT4
- WCT5

### Release history

NA013 introduced OM group WC.

### Registers

OM group WC registers display on the MAP terminal as follows.

```

WC
CLASS: ACTIVE
START:1999/07/07 12:15:00 WED: 1999/07/07 12:22:59 WED;
SLOWSAMPLES:          5;FASTSAMPLES:   48;

      WCATT      WCCON      WCREC      WCPRST
      WCOFR      WCSCRN      WCDNERR      WCABDN
      WCT1       WCT2       WCT3       WCT4
      WCT5

          1          1          1          1
          1          1          0          0
          0          0          0          0

```

## OM group WC (continued)

---

### Group structure

OM group WC

**Key field:**

None

**Info field:**

None

### Related OM groups

There are no related OM groups for OM group WC.

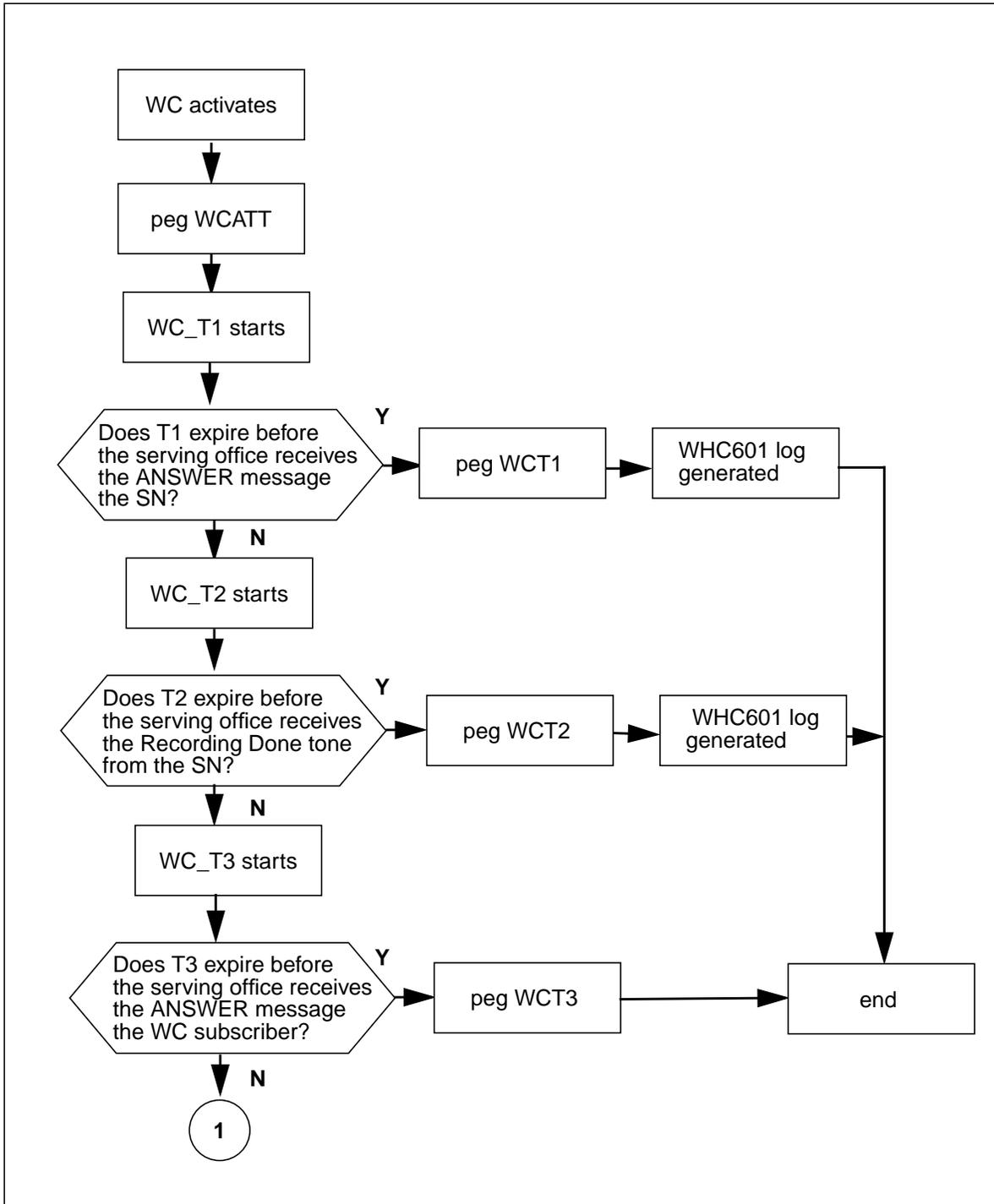
### Related functional groups

There are no related functional groups for OM group WC.

### Related functionality codes

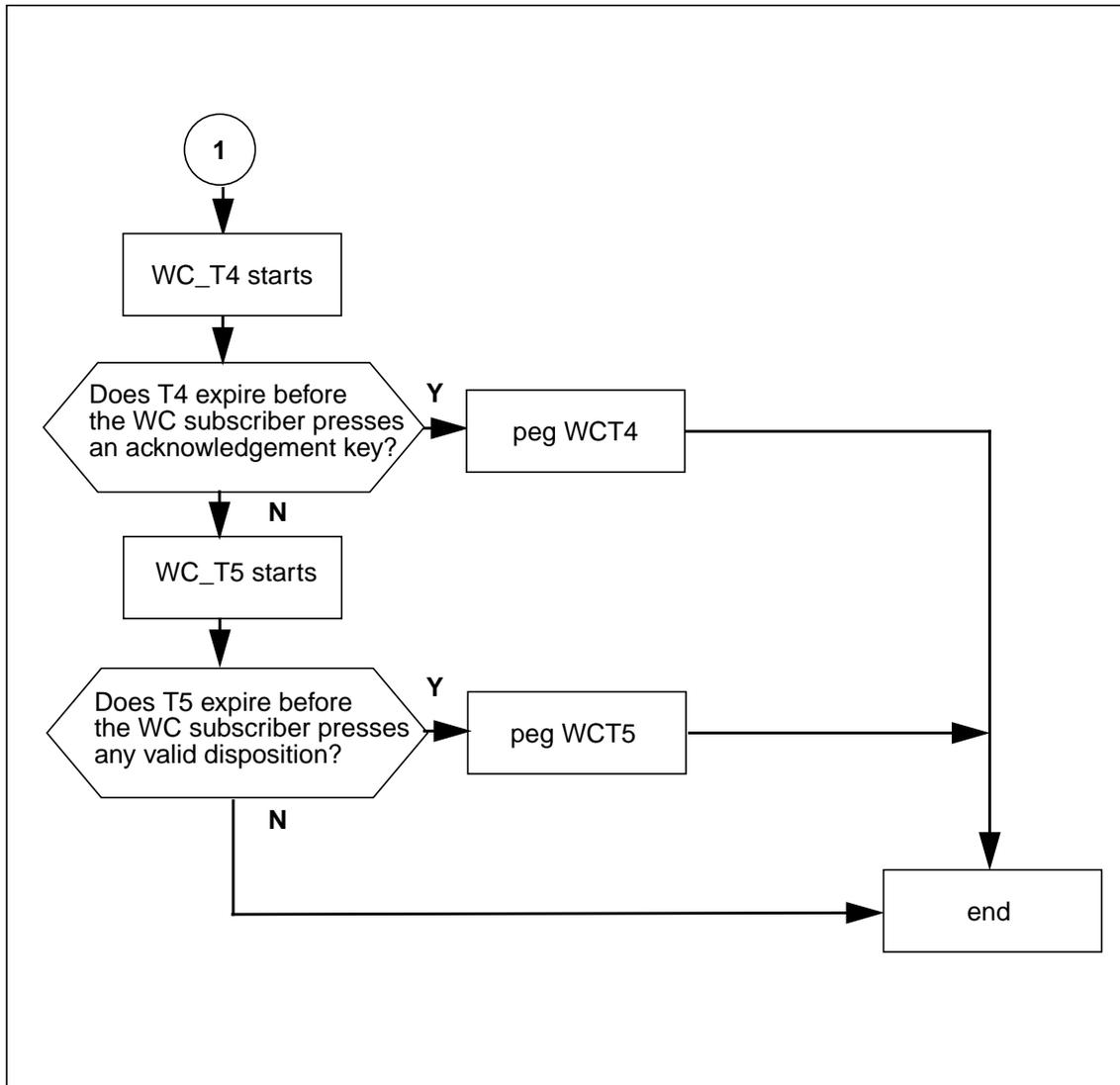
The table that follows lists the functionality name and codes related to OM group WC.

| Functionality | Code     |
|---------------|----------|
| Who's Calling | RES00094 |

**OM group WC** (continued)**OM group WC registers for timer events (sheet 1 of 2)**

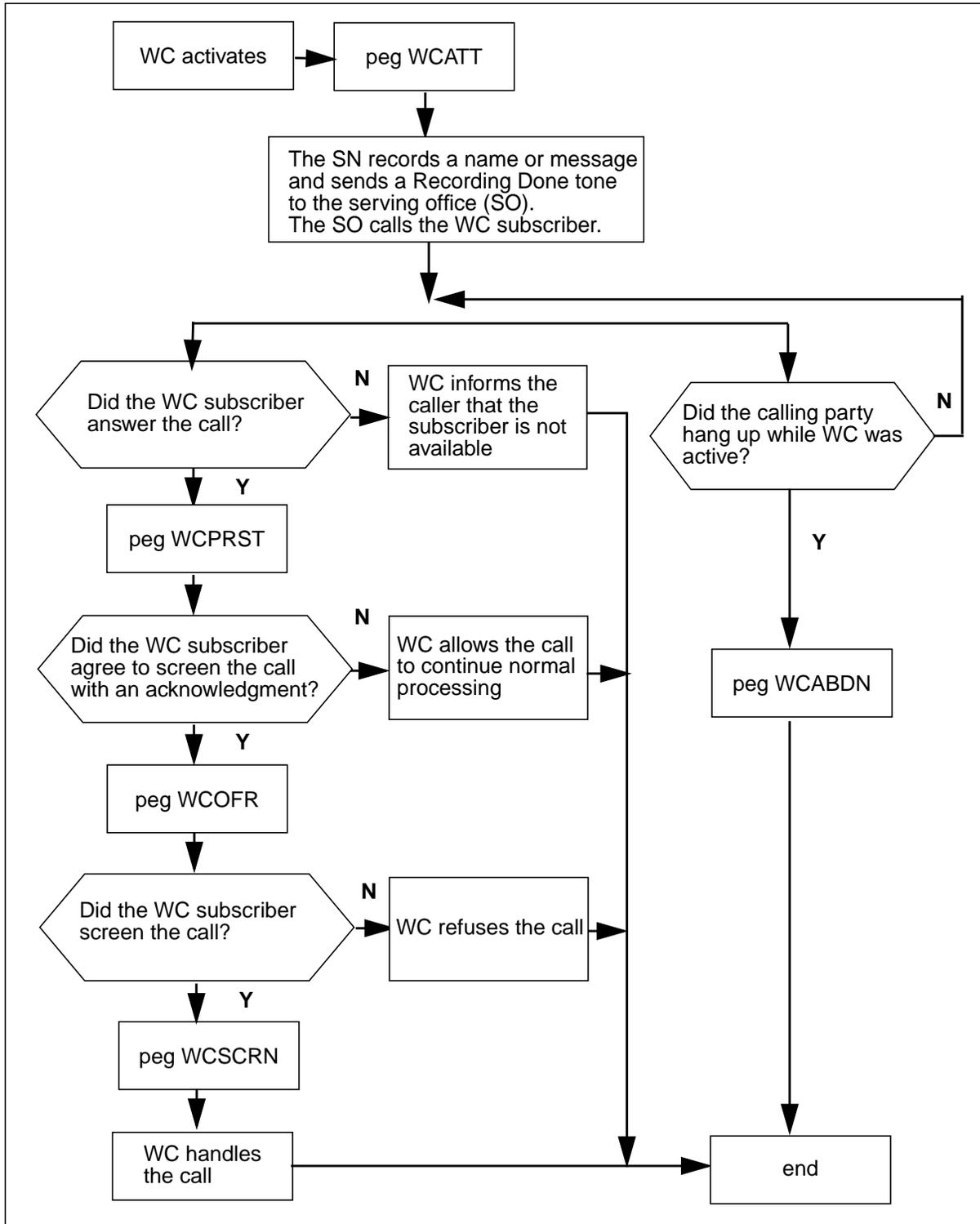
## OM group WC (continued)

### OM group WC registers for timer events (sheet 2 of 2)



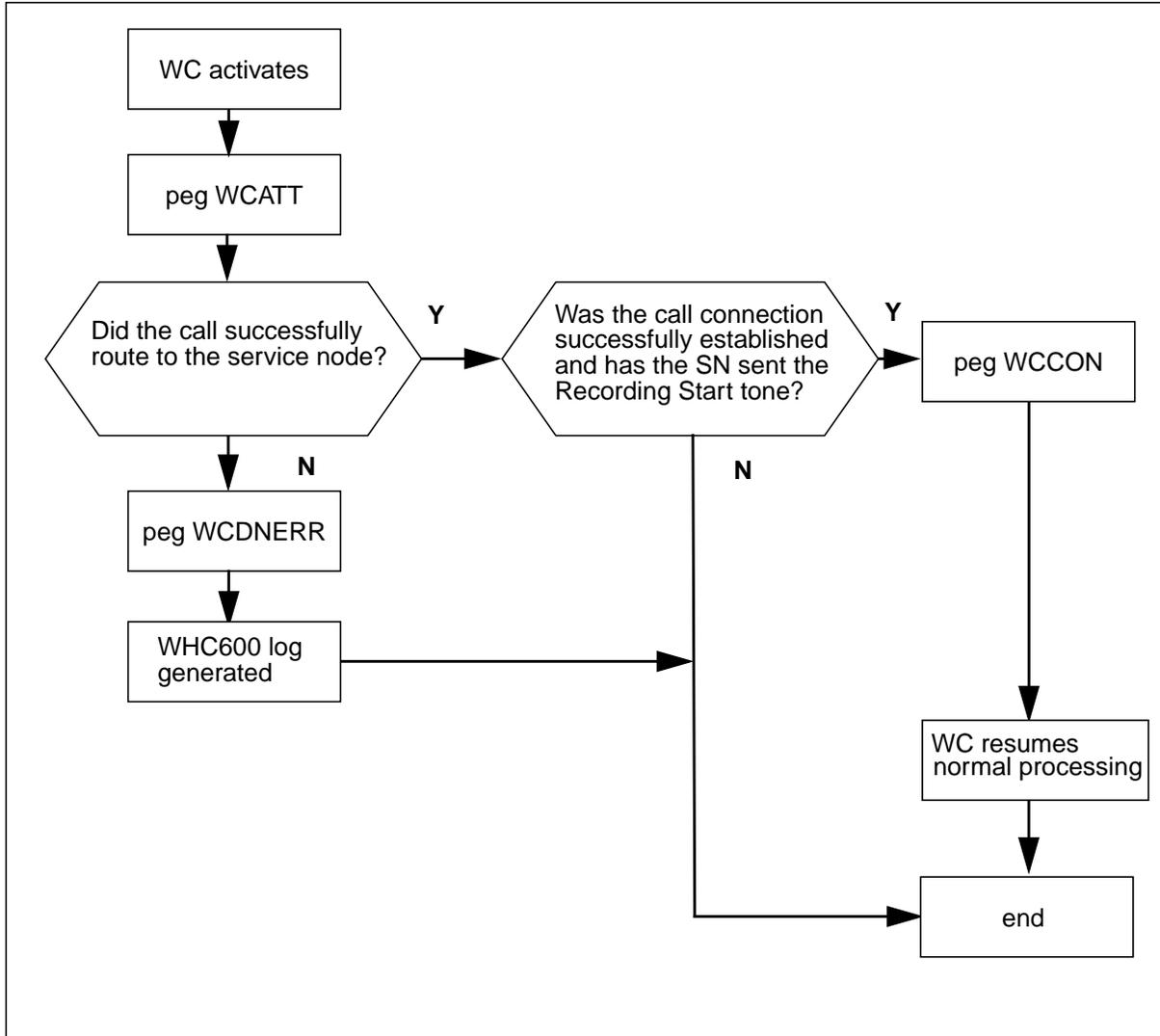
**OM group WC** (continued)

**OM group WC registers for end-user events**



## OM group WC (continued)

### OM group WC registers for connection events



### Register WCABDN

The who's calling abandoned calls (WCABDN) register counts the number of times a calling party hangs up. The WCABDN register increments when the calling party hangs up after WC activation but before the subscriber screens the call.

### Register WCABDN release history

NA013 introduced the WCABDN register.

---

**OM group WC** (continued)

---

**Related registers**

There are no related registers.

**Related logs**

There are no related logs.

**Extension registers**

There are no extension registers.

**Register WCATT**

The who's calling request attempt (WCATT) register counts the WC feature activation attempts. The WCATT register increments when an incoming private or unavailable call terminates on a WC subscriber which causes WC feature activation.

**Register WCATT release history**

NA013 introduced the WCATT register.

**Related registers**

There are no related registers.

**Related logs**

There are no related logs.

**Extension registers**

There are no extension registers.

**Register WCCON**

The who's calling connected to SN (WCCON) register counts the WC feature established SN connections. The WCCON register increments when an incoming private or unavailable call connection establishes at an SN and the SN sends the Recording Start tone.

**Register WCCON release history**

NA013 introduced the WCCON register.

**Related registers**

There are no related registers.

**Related logs**

There are no related logs.

## **OM group WC** (continued)

---

### **Extension registers**

There are no extension registers.

### **Register WCDNERR**

The who's calling routing DN error (WCDNERR) register counts WC feature DN routing errors. The WCDNERR register increments when an incoming private or unavailable call cannot route to the SN.

### **Register WCDNERR release history**

NA013 introduced the WCDNERR register.

### **Related registers**

There are no related registers.

### **Related logs**

The WHC600 log generates when a call cannot route to the SN. The WHC601 log generates when the WC feature cannot allocate a resource to route the call to the SN.

### **Extension registers**

There are no extension registers.

### **Register WCOFR**

The who's calling to offer dispositions (WCOFR) register counts WC feature subscriber answered calls. The WCOFR register increments when the WC subscriber presses any digit to acknowledge the SN call that contains the calling party's recorded name.

### **Register WCOFR release history**

NA013 introduced the WCOFR register.

### **Related registers**

There are no related registers.

### **Related logs**

There are no related logs.

### **Extension registers**

There are no extension registers.

---

**OM group WC** (continued)

---

**Register WCPRST**

The who's calling to present recorded name (WCPRST) register counts WC feature subscriber answers. The WCPRST register increments when the WC subscriber answers the SN call that contains the call party's recorded name.

**Register WCPRST release history**

NA013 introduced the WCPRST register.

**Related registers**

There are no related registers.

**Related logs**

There are no related logs.

**Extension registers**

There are no extension registers.

**Register WCREC**

The who's calling name recorded (WCREC) register counts WC feature SN recordings. The WCREC register increments when a calling party completes a name recording through the SN and the SN sends the Recording Done tone.

**Register WCREC release history**

NA013 introduced the WCREC register.

**Related registers**

There are no related registers.

**Related logs**

There are no related logs.

**Extension registers**

There are no extension registers.

**Register WCSCRN**

The who's calling screened call (WCSCRN) register counts the number of times that subscribers screen WC calls. The WCSCRN register increments when the WC subscriber presses a valid key to screen a call.

**Register WCSCRN release history**

NA013 introduced the WCSCRN register.

## OM group WC (continued)

---

### Related registers

There are no related registers.

### Related logs

There are no related logs.

### Extension registers

There are no extension registers.

## Register WCT1

The who's calling timer one (WCT1) register increments when the T1 timer expires. The T1 timer determines the maximum delay for the SN to accept a call from the switch.

### Register WCT1 release history

NA013 introduced the WCT1 register.

### Related registers

There are no related registers.

### Related logs

The WHC601 log generates when the T1 timer expires.

### Extension registers

There are no extension registers.

## Register WCT2

The who's calling timer two (WCT2) register increments when the T2 timer expires. The T2 timer determines the maximum delay of recording the calling party's name at the SN.

### Register WCT2 release history

NA013 introduced the WCT2 register.

### Related registers

There are no related registers.

### Related logs

The WHC601 log generates when the T2 timer expires.

### Extension registers

There are no extension registers.

---

**OM group WC** (continued)

---

**Register WCT3**

The who's calling timer three (WCT3) register increments when the T3 timer expires. The T3 timer determines the maximum delay for the WC subscriber to answer a WC call.

**Register WCT3 release history**

NA013 introduced the WCT3 register.

**Related registers**

There are no related registers.

**Related logs**

There are no related logs.

**Extension registers**

There are no extension registers.

**Register WCT4**

The who's calling timer four (WCT4) register increments when the T4 timer expires. The T4 timer determines the maximum delay for the SN to wait for a WC subscriber acknowledgment.

**Register WCT4 release history**

NA013 introduced the WCT4 register.

**Related registers**

There are no related registers.

**Related logs**

There are no related logs.

**Extension registers**

There are no extension registers.

**Register WCT5**

The who's calling timer five (WCT5) register increments when the T5 timer expires. The T5 timer determines the maximum delay for the SN to wait for a WC subscriber to make a valid screening choice.

**Register WCT5 release history**

NA013 introduced the WCT5 register.

## **OM group WC (end)**

---

### **Related registers**

There are no related registers.

### **Related logs**

There are no related logs.

### **Extension registers**

There are no extension registers.

---

## OM group WIDEBAND

---

### OM description

Wideband

The WIDEBAND counts the number of wideband call attempts on intertoll (IT) trunks on a DMS. The 23 different wideband possibilities are defined by  $n \times 64$  kbytes for each value of  $n$ , from 2 to 24. One register increases for each value of wideband.

*Note:* Register WBAT1 is not used.

### Release history

OM group WIDEBAND was introduced in BCS34.

#### DMSCCM04

Register TNBLOCK added for WIDEBAND ISUP IT and ISUP ATC trunks.

#### BCS36

Registers TWBINTRA, TWBINTER, and TWBSWTCH added.

#### BCS35

Registers TWBCONNT, TWBFAIL, TWBATB, and TWBGLR added for new measurements.

### Registers

The following OM group WIDEBAND registers appear on the MAP terminal:

|          |          |          |          |
|----------|----------|----------|----------|
| TWBATMPT | TWBCONNT | WBAT2    | WBAT3    |
| WBAT4    | WBAT5    | WBAT6    | WBAT7    |
| WBAT8    | WBAT9    | WBAT10   | WBAT11   |
| WBAT12   | WBAT13   | WBAT14   | WBAT15   |
| WBAT16   | WBAT17   | WBAT18   | WBAT19   |
| WBAT20   | WBAT21   | WBAT22   | WBAT23   |
| WBAT24   | TNBLOCK  | TWBFAIL  | TWBATB   |
| TWBGLR   | TWBSWTCH | TWBINTER | TWBINTRA |

### Group structure

OM group WIDEBAND provides one tuple for each office.

#### Key field:

None

**OM group WIDEBAND** (continued)

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**Info field:**

None

**Associated OM groups**

There are no associated OM groups.

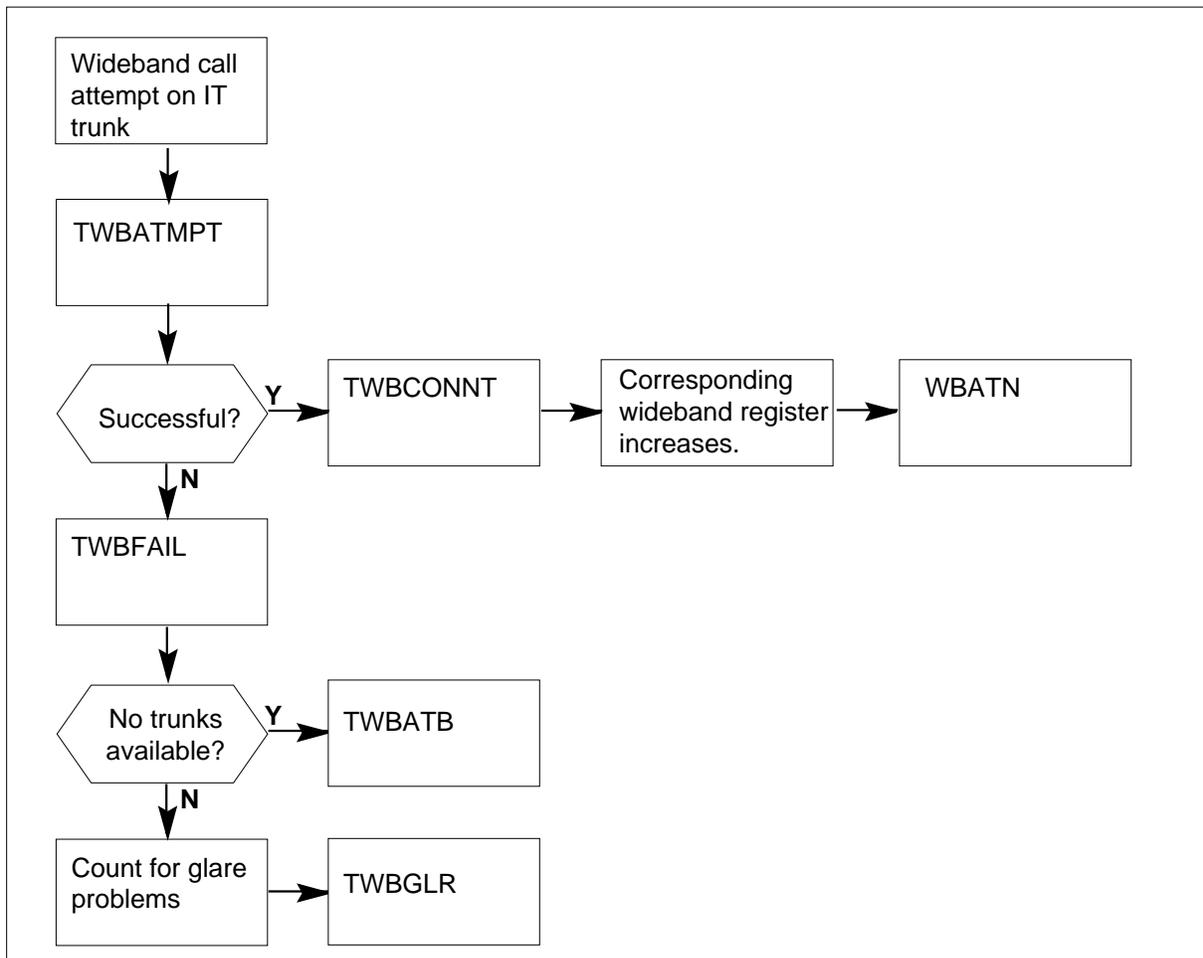
**Associated functional groups**

The LEC Wideband operating group is for OM group WIDEBAND.

**Associated functionality codes**

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

| <b>Functionality</b>                  | <b>Code</b> |
|---------------------------------------|-------------|
| Dialable Wide Band Service            | NTXR49AA    |
| DWS Access to Carrier (Access Tandem) | NTXR66AA    |
| DWS Intertoll ISUP                    | NTXS28AA    |
| DMS-250 MIMT ISUP Agency              | NTXM45AA    |
| DMS-250 MPRI Agency                   | NTXM44AA    |

**OM group WIDEBAND** (continued)**OM group WIDEBAND registers****Register TNBLOCK**

Total number blocked

Register TNBLOCK counts the total number of narrowband calls that the system blocks. The narrowband calls originate or terminate on the DWS ISUP IT or ISUP ATC trunk group. The user selects option BLOCKNB for this action to occur.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## **OM group WIDEBAND (continued)**

---

### **Register TWBATB**

Total wideband call attempts blocked

When trunks are not available, overflow problems cause the wideband call attempts to fail. Register TWBATB counts the total number wideband call attempts that fail.

#### **Register TWBATB release history**

Register TWBATB was introduced in BCS35.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

There are no associated logs.

#### **Extension registers**

There are no extension registers.

### **Register TWBATMPT**

Total wideband call attempts

Register TWBATMPT counts the total number of wideband call attempts.

#### **Register TWBATMPT release history**

Register TWBATMPT was introduced in BCS34.

#### **Associated registers**

Registers WBAT1 through to WBAT24

Register TWBATMPT = the sum of all WBATn.

#### **Associated logs**

There are no associated logs.

#### **Extension registers**

There are no extension registers.

### **Register TWBCONNT**

Total wideband call connections

Register TWBCONNT counts the number of successful wideband call connections.

---

**OM group WIDEBAND** (continued)

---

**Register TWBCONNT release history**

Register TWBCONNT was introduced in BCS35.

**Associated registers**

Register TWBATMPT counts the total number of wideband attempts. The register counts all types of wideband attempts.

Register TWBFAIL counts the number of wideband attempts that fail.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register TWBFAIL**

Total wideband call failures

Register TWBFAIL counts the total number of wideband call attempts that fail.

**Register TWBFAIL release history**

Register TWBFAIL was introduced in BCS35.

**Associated registers**

Register TWBATMPT counts the total number of wideband call attempts. The register counts all types of wideband call attempts.

Register TWBCONNT counts the number of successful wideband call connections.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register TWBGLR**

Total wideband call glare problems

Register TWBGLR counts the number of wideband calls that have glare problems. Glare occurs when different users seize both ends of a line or trunk

## **OM group WIDEBAND** (continued)

---

at the same time. The wideband calls can continue to complete through route advance.

### **Register TWBGLR release history**

Register TWBGLR was introduced in BCS35.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register TWBINTER**

Total number of wideband inter-LATA call attempts

Register TWBINTER is increases for each wideband inter-LATA call attempt.

### **Register TWBINTER release history**

Register TWBINTER was introduced in BCS36.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register TWBINTRA**

Total number of wideband intra-LATA call attempts

Register TWBINTRA increases for each wideband intra-LATA call attempt.

### **Register TWBINTRA release history**

Register TWBINTRA was introduced in BCS36.

### **Associated registers**

There are no associated registers.

---

**OM group WIDEBAND** (continued)

---

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register TWBSWTCH**

Total number of wideband intraswitch call attempts

Register TWBSWTCH increases for each wideband intraswitch call attempt.

**Register TWBSWTCH release history**

Register TWBSWTCH was introduced in BCS36.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register WBAT2**

$2 \times 64$  kbyte wideband call attempts

Register WBAT2 increases for each  $2 \times 64$  kbyte wideband call attempt.

**Register WBAT2 release history**

Register WBAT2 was introduced in BCS34.

**Associated registers**

TWBATMPT

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register WBAT3**

$3 \times 64$  kbyte wideband call attempts

## **OM group WIDEBAND** (continued)

---

Register WBAT3 increases for each  $3 \times 64$  kbyte wideband call attempt.

### **Register WBAT3 release history**

Register WBAT3 was introduced in BCS34.

### **Associated registers**

TWBATMPT

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register WBAT4**

$4 \times 64$  kbyte wideband call attempts

Register WBAT4 increases for each  $4 \times 64$  kbyte wideband call attempt.

### **Register WBAT4 release history**

Register WBAT4 was introduced in BCS34.

### **Associated registers**

TWBATMPT

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register WBAT5**

$5 \times 64$  kbyte wideband call attempts

Register WBAT5 increases for each  $5 \times 64$  kbyte wideband call attempt.

### **Register WBAT5 release history**

Register WBAT5 was introduced in BCS34.

### **Associated registers**

TWBATMPT

---

**OM group WIDEBAND** (continued)

---

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register WBAT6**

6 × 64 kbyte wideband call attempts

Register WBAT6 increases for each 6 × 64 kbyte wideband call attempt.

**Register WBAT6 release history**

Register WBAT6 was introduced in BCS34.

**Associated registers**

TWBATMPT

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register WBAT7**

7 × 64 kbyte wideband call attempts

Register WBAT7 increases for each 7 × 64 kbyte wideband call attempt.

**Register WBAT7 release history**

Register WBAT7 was introduced in BCS34.

**Associated registers**

TWBATMPT

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register WBAT8**

8 × 64 kbyte wideband call attempts

## **OM group WIDEBAND** (continued)

---

Register WBAT8 increases for each  $8 \times 64$  kbyte wideband call attempt.

### **Register WBAT8 release history**

Register WBAT8 was introduced in BCS34.

### **Associated registers**

TWBATMPT

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register WBAT9**

$9 \times 64$  kbyte wideband call attempts

Register WBAT9 increases for each  $9 \times 64$  kbyte wideband call attempt.

### **Register WBAT9 release history**

Register WBAT9 was introduced in BCS34.

### **Associated registers**

TWBATMPT

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register WBAT10**

$10 \times 64$  kbyte wideband call attempts

Register WBAT10 increases for each  $10 \times 64$  kbyte wideband call attempt.

### **Register WBAT10 release history**

Register WBAT10 was introduced in BCS34.

### **Associated registers**

TWBATMPT

---

**OM group WIDEBAND** (continued)

---

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register WBAT11**

11 × 64 kbyte wideband call attempts

Register WBAT11 increases for each 11 × 64 kbyte wideband call attempt.

**Register WBAT11 release history**

Register WBAT11 was introduced in BCS34.

**Associated registers**

TWBATMPT

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register WBAT12**

12 × 64 kbyte wideband call attempts

Register WBAT12 increases for each 12 × 64 kbyte wideband call attempt.

**Register WBAT12 release history**

Register WBAT12 was introduced in BCS34.

**Associated registers**

TWBATMPT

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers

**Register WBAT13**

13 × 64 kbyte wideband call attempts

## **OM group WIDEBAND** (continued)

---

Register WBAT13 increases for each  $13 \times 64$  kbyte wideband call attempt.

### **Register WBAT13 release history**

Register WBAT13 was introduced in BCS34.

### **Associated registers**

TWBATMPT

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register WBAT14**

$14 \times 64$  kbyte wideband call attempts

Register WBAT14 increases for each  $14 \times 64$  kbyte wideband call attempt.

### **Register WBAT14 release history**

Register WBAT14 was introduced in BCS34.

### **Associated registers**

TWBATMPT

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register WBAT15**

$15 \times 64$  kbyte wideband call attempts

Register WBAT15 increases for each  $15 \times 64$  kbyte wideband call attempt.

### **Register WBAT15 release history**

Register WBAT15 was introduced in BCS34.

### **Associated registers**

TWBATMPT

---

**OM group WIDEBAND** (continued)

---

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register WBAT16**

16 × 64 kbyte wideband call attempts

Register WBAT16 increases for each 16 × 64 kbyte wideband call attempt.

**Register WBAT16 release history**

Register WBAT16 was introduced in BCS34.

**Associated registers**

TWBATMPT

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register WBAT17**

17 × 64 kbyte wideband call attempts

Register WBAT17 increases for each 17 × 64 kbyte wideband call attempt.

**Register WBAT17 release history**

Register WBAT17 was introduced in BCS34.

**Associated registers**

TWBATMPT

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register WBAT18**

18 × 64 kbyte wideband call attempts

## **OM group WIDEBAND** (continued)

---

Register WBAT18 increases for each  $18 \times 64$  kbyte wideband call attempt.

### **Register WBAT18 release history**

Register WBAT18 was introduced in BCS34.

### **Associated registers**

TWBATMPT

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register WBAT19**

$19 \times 64$  kbyte wideband call attempts

Register WBAT19 increases for each  $19 \times 64$  kbyte wideband call attempt.

### **Register WBAT19 release history**

Register WBAT19 was introduced in BCS34.

### **Associated registers**

TWBATMPT

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register WBAT20**

$20 \times 64$  kbyte wideband call attempts

Register WBAT20 increases for each  $20 \times 64$  kbyte wideband call attempt.

### **Register WBAT20 release history**

Register WBAT20 was introduced in BCS34.

### **Associated registers**

TWBATMPT

---

**OM group WIDEBAND** (continued)

---

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register WBAT21**

21 × 64 kbyte wideband call attempts

Register WBAT21 increases for each 21 × 64 kbyte wideband call attempt.

**Register WBAT21 release history**

Register WBAT21 was introduced in BCS34.

**Associated registers**

TWBATMPT

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register WBAT22**

22 × 64 kbyte wideband call attempts

Register WBAT22 increases for each 22 × 64 kbyte wideband call attempt.

**Register WBAT22 release history**

Register WBAT22 was introduced in BCS34.

**Associated registers**

TWBATMPT

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register WBAT23**

23 × 64 kbyte wideband call attempts

## **OM group WIDEBAND (end)**

---

Register WBAT23 increases for each  $23 \times 64$  kbyte wideband call attempt.

### **Register WBAT23 release history**

Register WBAT23 was introduced in BCS34.

### **Associated registers**

TWBATMPT

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register WBAT24**

$24 \times 64$  kbyte wideband call attempts

Register WBAT24 increases for each  $24 \times 64$  kbyte wideband call attempt.

### **Register WBAT24 release history**

Register WBAT24 was introduced in BCS34.

### **Associated registers**

TWBATMPT

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

---

## OM group XLIUL3

---

### OM description

XLIU layer 3 OMs (XLIUL3)

The OM group XLIUL3 counts the number of packets that the XLIU receive and transmits. The OM group XLIUL3 also counts the number of originating, terminating, and not complete virtual call attempts.

The system can use these measurements to monitor packet traffic on the XLIU, and to indicate problems on XLIU links.

### Release history

Registers PKTINT and PKTINT2 were added in NA014.

Registers DWCGST, DWCGST2, CALLCGST, CALLCGS2, PKTDROP, and PKTDROP2 were introduced in NA005.

The OM group XLIUL3 was introduced in NA002.

### Registers

The OM group XLIUL3 registers appear on the MAP terminal as follows:

|          |          |          |          |
|----------|----------|----------|----------|
| PKTRXRR  | PKTRXRR2 | PKTRXRNR | PKTRXRN2 |
| PKTRXDAT | PKTRXDA2 | PKTTXRR  | PKTTXRR2 |
| PKTTXRNR | PKTTXRN2 | PKTTXDAT | PKTTXDA2 |
| VCORIG   | VCTERM   | VCBLOCK  | VCDENY   |
| VCCLEAR  | VCOVLD   | DWCGST   | DWCGST2  |
| CALLCGST | CALLCGS2 | PKTDROP  | PKTDROP2 |
| PKTINT   | PKTINT2  |          |          |

### Group structure

The OM group XLIUL3

Table XLIUL3 provides one tuple for each XLIU datafiled in table LIUINV.

**Key field:**

Integer value, range 0 to total number of tuples minus one.

**Info field:**

Node name and number. Node name is XLIU. Number ranges from 0 to 511.

## **OM group XLIUL3** (continued)

---

### **Associated OM groups**

There are no associated OM groups.

### **Associated functional groups**

The DMS Packet Handler functional group associates with OM group XLIUL3.

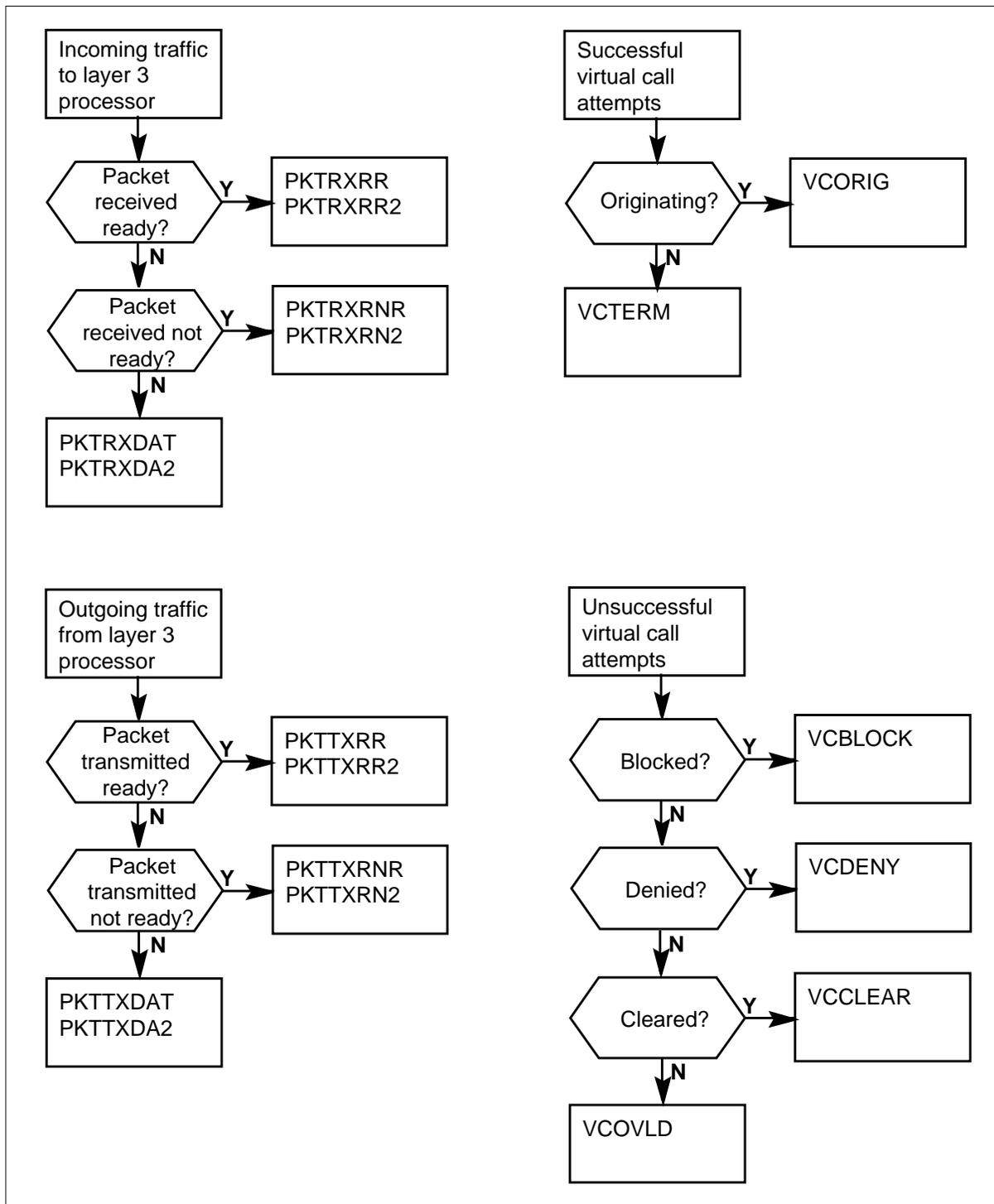
### **Associated functionality codes**

The associated functionality codes for the OM group XLIUL3 appear in the following table.

| <b>Functionality</b> | <b>Code</b> |
|----------------------|-------------|
| NI0 NI-1 Packet      | NI000010    |

**OM group XLIUL3 (continued)**

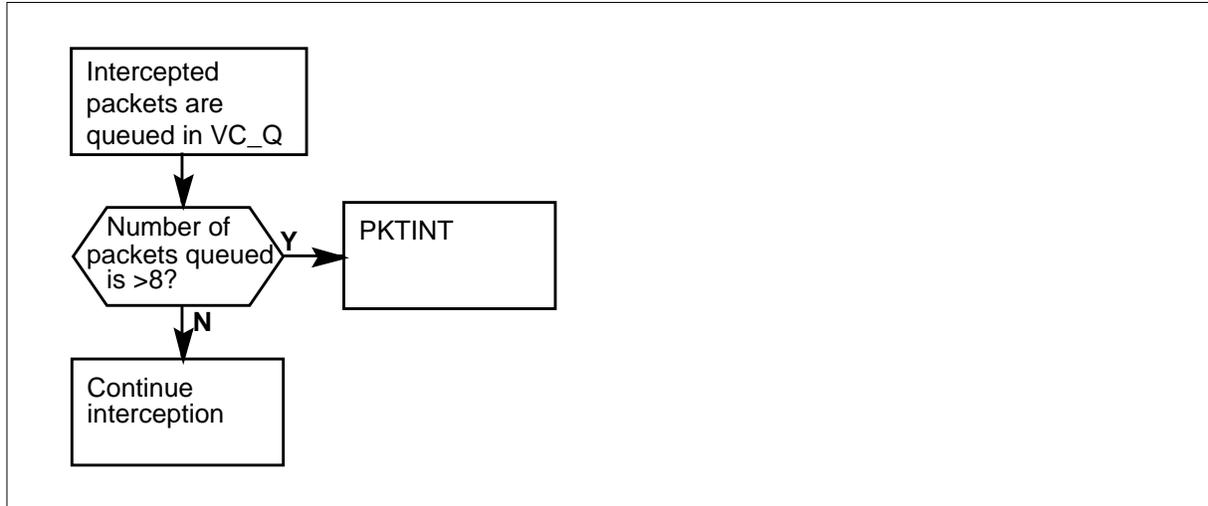
**The OM group XLIUL3 registers**



## OM group XLIUL3 (continued)

---

### The OM group XLIUL3 registers (continued)



### Register PKTINT

Register intercepted packets dropped: (PKTINT)

Register PKTINT is the total number of intercepted packets dropped due to congestion or overflow of VC\_Q from virtual FSM.

#### Register PKTINT release history

Register PKTINT was introduced in NA014.

#### Associated registers

There are no associated registers.

#### Associated logs

There are no associated logs.

#### Extension registers

Register PKTINT2

### Register PKTINT2

Register intercepted packets dropped: (PKTINT2)

To determine total intercepted packets dropped, multiply register PKTINT2 by 65 536 and add register PKTINT

#### Register PKTINT2 release history

Register PKTINT2 was introduced in NA014.

---

**OM group XLIUL3** (continued)

---

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

None

**Register PKTRXRR**

Register packets received: RR (PKTRXRR)

Register PKTRXRR is the total number of Received Ready (ACK) packets that the layer 3 processor receives.

**Register PKTRXRR release history**

Register PKTRXRR was introduced in NA002.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

Register PKTRXRR2

**Register PKTRXRR2**

Register packets received: RR (extension) (PKTRXRR2)

To determine total received RR packets, multiply register PKTRXRR2 by 65 536 and add register PKTRXRR.

**Register PKTRXRR2 release history**

Register PKTRXRR2 was introduced in NA002.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## OM group XLIUL3 (continued)

---

### Extension registers

There are no extension registers.

### Register PKTRXRNR

Register packets received: RNR (PKTRXRNR)

Register PKTRXRNR is the total number of Received Not Ready (NACK) packets that the layer 3 processor receives.

### Register PKTRXRNR release history

Register PKTRXRNR was introduced in NA002.

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

### Extension registers

Register PKTRXRN2

### Register PKTRXRN2

Register packets received: RNR (extension) (PKTRXRN2)

To determine total RNR received packets, multiply register PKTRXRN2 by 65 536 and add register PKTRXRNR

### Register PKTRXRN2 release history

Register PKTRXRN2 was introduced in NA002.

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

### Extension registers

There are no extension registers.

### Register PKTRXDAT

Register packets received: data (PKTRXDAT)

---

**OM group XLIUL3** (continued)

---

Register PKTRXDAT is the total number of data packets that the layer 3 processor receives.

**Register PKTRXDAT release history**

Register PKTRXDAT was introduced in NA002.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

Register PKTRXDA2

**Register PKTRXDA2**

Register packets received: data (extension) (PKTRXDA2)

To determine total received data packets, multiply register PKTRXDA2 by 65 536 and add register PKTRXDAT.

**Register PKTRXDA2 release history**

Register PKTRXDA2 was introduced in NA002.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register PKTTXRR**

Register packets transmitted: RR (PKTTXRR)

Register PKTTXRR is the total number of Received Ready (ACK) packets transmitted that the layer 3 processor transmits.

**Register PKTXRR release history**

Register PKTTXRR was introduced in NA002.

## OM group XLIUL3 (continued)

---

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

### Extension registers

Register PKTTXRR2

## Register PKTTXRR2

Register packets transmitted: RR (extension) (PKTTXRR2)

To determine total transmitted RR packets, multiply register PKTTXRR2 by 65 536 and add register PKTTXRR.

### Register PKTTXRR release history

Register PKTTXRR2 was introduced in NA002.

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

### Extension registers

There are no extension registers.

## Register PKTTXRNR

Register packets transmitted: RNR (PKTTXRNR)

Register PKTTXRNR is the total number of Received Not Ready (NACK) packets that the layer 3 processor transmits.

### Register PKTTXRNR release history

Register PKTTXRNR was introduced in NA002.

### Associated registers

There are no associated registers.

### Associated logs

There are no associated logs.

---

**OM group XLIUL3** (continued)

---

**Extension registers**

Register PKTTXRN2

**Register PKTTXRN2**

Register packets transmitted: RNR (extension) (PKTTXRN2)

To determine total transmitted RNR packets, multiply register PKTTXRN2 by 65 536 and add register PKTTXRNR.

**Register PKTTXRN2 release history**

Register PKTTXRN2 was introduced in NA002.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register PKTTXDAT**

Register packets transmitted: data (PKTTXDAT)

Register PKTTXDAT is the total number of data packets that the layer 3 processor transmits.

**Register PKTTXDAT release history**

Register PKTTXDAT was introduced in NA002.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

Register PKTTXDA2

**Register PKTTXDA2**

Register packets transmitted: data (extension) (PKTTXDA2)

## OM group XLIUL3 (continued)

---

To determine total transmitted data packets, multiply register PKTTXDA2 by 65 536 and add register PKTTXDAT.

### **Register PKTTXDA2 release history**

Register PKTTXDA2 was introduced in NA002.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register VCORIG**

Register virtual call attempts: originating (VCORIG)

Register VCIORG is the total number of call request packets that the layer 3 processor sends to the computing module (CM). This total includes call request packets that are both complete and not complete.

### **Register VCORIG release history**

Register VCORIG was introduced in NA002.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register VCTERM**

Register virtual call attempts: terminating (VCTERM)

Register VCTERM is the total number of call request packets the CM receives from the layer 3 processor. This total includes call request packets that are both complete and not complete.

### **Register VCTERM release history**

Register VCTERM was introduced in NA002.

---

**OM group XLIUL3** (continued)

---

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register VCBLOCK**

Register unsuccessful virtual call attempts: blocking (VCBLOCK)

Register VCBLOCK is the total number of blocked call request packets for switched virtual circuits (SVC). This total includes:

- outgoing DTE call requests. No call slot and the system cannot assign LCN.
- incoming DTE call requests. The system cannot get User Data Area (UDA), cannot assign LCN, and extension byte does not match.

**Register VCBLOCK release history**

Register VCBLOCK was introduced in NA002.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register VCDENY**

Register unsuccessful virtual call attempts: denied (VCDENY)

Register VCDENY is the total number of denied call request packets for SVCs that the system clears. The system clears in direct response to the SVC call.

**Register VCDENY release history**

Register VCDENY was introduced in NA002.

**Associated registers**

There are no associated registers.

## **OM group XLIUL3** (continued)

---

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register VCCLEAR**

Register unsuccessful virtual call attempts: clearing (VCCLEAR)

Register VCCLEAR is the total number of call request packets for SVCs that the system clears. These are packets that a link clear message clears. The layer 3 processor generates the link clear message.

### **Register VCCLEAR release history**

Register VCCLEAR was introduced in NA002.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register VCOVLD**

Register unsuccessful virtual call attempts: overload (VCOVLD)

Register VCOVLD is the total number of call request packets that the system discards. The system discards the packets because of system overload for both SVCs and permanent virtual circuits (PVC).

### **Register VCOVLD release history**

Register VCOVLD was introduced in NA002.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

---

**OM group XLIUL3** (continued)

---

**Register DWCGST**

Register Mild XLIU Congestion (DWCGST)

Register DWCGST counts the number of times free buffer pools in layers 2 and 3 drop below the weak congestion threshold. This condition causes the dynamic window algorithm to take effect. The dynamic window algorithm reduces the layer 3 processor window size to throttle the traffic rate.

**Register DWCGST release history**

Register DWCGST was introduced in NA005.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

Register DWCGS2

**Register DWCGS2**

Register Mild XLIU Congestion (extension) (DWCGS2)

To determine the total number of times free buffer pools drop below the weak congestion threshold, perform the following calculation. Multiply register DWCGS2 by 65 536 and add register DWCGST. The free buffer pools are in layers 2 and 3.

**Register DWCGST release history**

Register DWCGST was introduced in NA005.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register CALLCGST**

Register Call Congestion (CALLCGST)

## **OM group XLIUL3** (continued)

---

Register CALLCGST counts the number of times the system delays a call in congestion. The system delays the calls because packets in the XLIU layer 3 wait for reception by the data terminal equipment (DTE).

### **Register CALLCGST release history**

Register CALLCGST was introduced in NA005.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

Register CALLCGS2

## **Register CALLCGS2**

Register Call Congestion (extension) (CALLCGS2)

To determine total number of times the system delays a call in congestion because packets must wait for reception, perform the following calculation. Multiply register CALLCGS2 by 65 536 and add register CALLCGST.

### **Register PKTTXDA2 release history**

Register CALLCGS2 was introduced in NA005.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register PKTDROP**

Register Packets Dropped Due to Congestion (PKTDROP)

---

**OM group XLIUL3 (end)**

---

Register PKTDROP counts the number of packets that the system drops at layer 3 because of XLIU congestion. Congestion in the XLIU can have the following causes:

- excessive incoming traffic
- traffic congestion in the layer 2 processor
- traffic that the system drops because the DTE transmits an RNR.

**Register PKTDROP release history**

Register PKTDROP was introduced in NA005.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

Register PKTDROP2

**Register PKTDROP2**

Register Call Congestion (extension) (PKTDROP2)

To determine the total number of packets that the system drops at layer 3 because of XLIU congestion, perform the following calculation. Multiply register PKTDROP2 by 65 536 and add register PKTDROP.

**Register PKTTXDA2 release history**

Register PKTDROP2 was introduced in NA005.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

## OM group XPMLNK

---

### OM description

XMS-based peripheral module link (XPMLNK)

The XPMLNK records one-way and two-way link blockage and use for all extended multiprocessor system (XMS)-based peripheral modules (XPM) with switched lines.

### Release history

The OM group XPMLNK was introduced in BCS34.

### Registers

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

|        |        |       |       |
|--------|--------|-------|-------|
| CSLCBU | PSLCBU | CSLAA | PSLAA |
| CSLBLK | PSLBLK | CSLMU | PSLMU |

### Group structure

The OM group XPMLNK provides one tuple for each XPM that has LCDs.

**Key field:**

PM\_TYPE PM\_NO

**Info field:**

There is no info field

### Associated OM groups

LMD Line module device for use with line controlling module (LCM) OMs

RSCIS Remote switching center (RSC) intraswitching measurement

RLCDIS Remote line controlling device intraswitching measurement

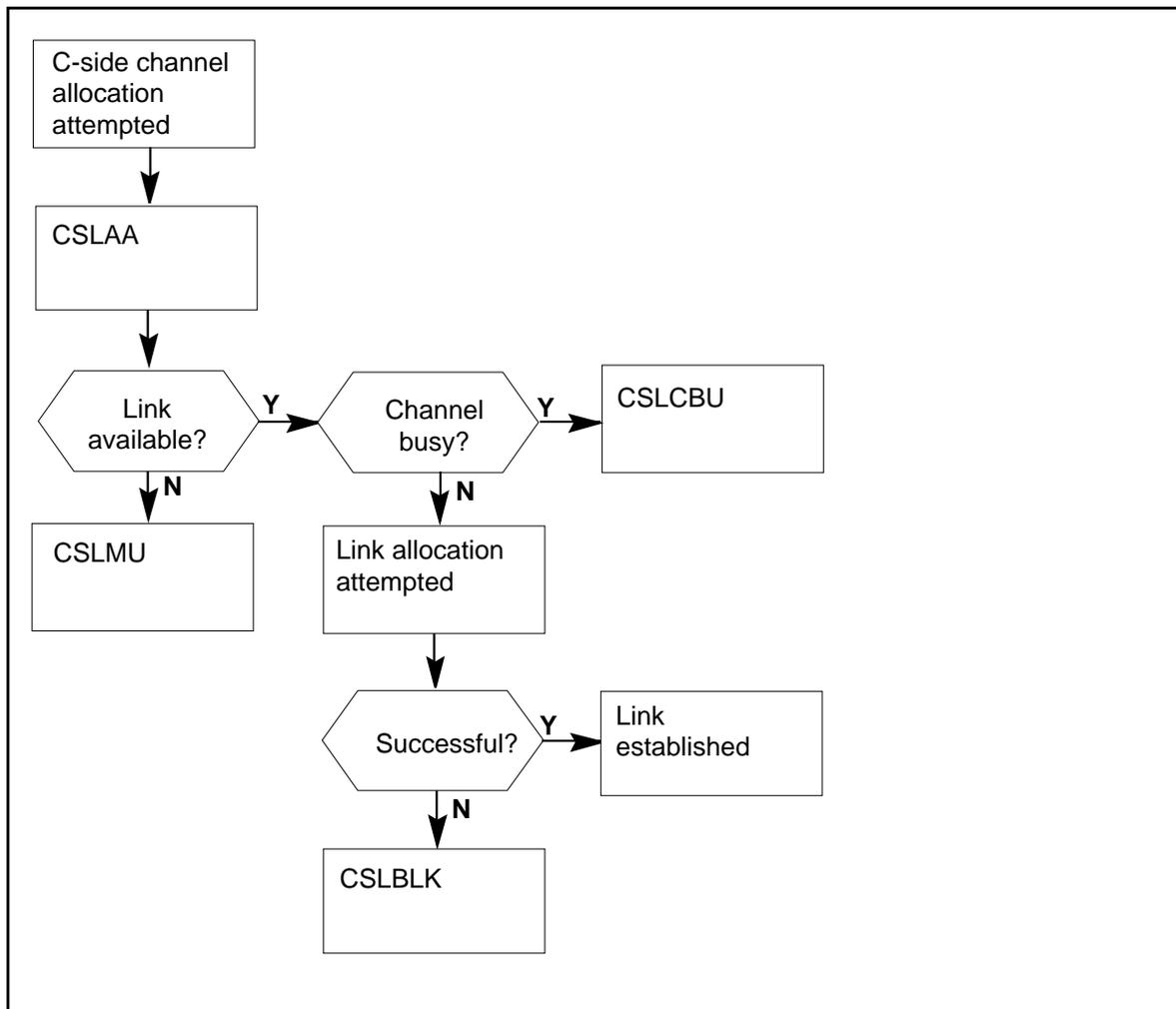
### Associated functional groups

The Peripheral module functional groups associate with OM group XPMLNK.

**OM group XPMLNK (continued)****Associated functionality codes**

The associated functionality codes for OM group XPMLNK are in the following table.

| Functionality                      | Code     |
|------------------------------------|----------|
| New Peripheral Maintenance Package | NTX270AA |

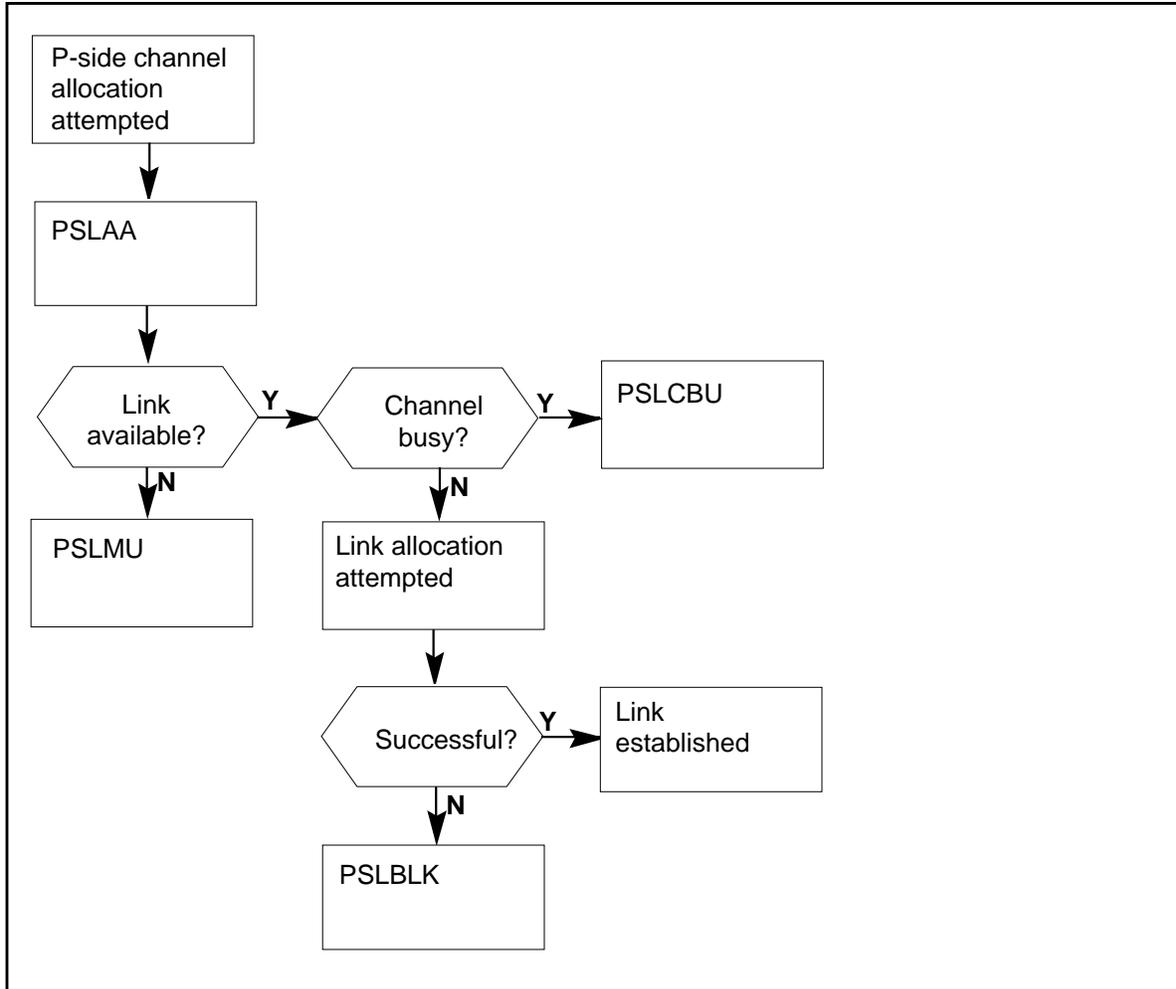
**OM group XPMLNK registers**

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## OM group XPMLNK (continued)

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### OM group XPMLNK registers (continued)



### Register CSLAA

C-side link allocation attempts (CSLAA)

Register CSLAA increases when the network attempts to allocate a channel to the XPM.

### Register CSLAA release history

Register CSLAA was introduced in BCS34.

### Associated registers

There are no associated registers.

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**OM group XPMLNK** (continued)

---

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register CSLBLK**

C-side link blockage (CSLBLK)

Register CSLBLK increases for each failed attempt to allocate a channel between the network and the XPM.

**Register CSLBLK release history**

Register CSLBLK was 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 CSLCBU**

C-side link call busy usage (CSLCBU)

Register CSLCBU records the time that C-side links are busy because of call processing. This register records the time in hundred call seconds (CCS).

**Register CSLCBU release history**

Register CSLCBU was introduced in BCS34.

**Associated registers**

LMD\_LMTRU, RSCIS\_RSCISCBU, RLCDIS\_ISTOTTRU

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

## **OM group XPMLNK** (continued)

---

### **Register CSLMU**

C-side link maintenance busy use (CSLMU)

Register CSLMU records the time in CCS that the C-side links are not available for call processing.

#### **Register CSLMU release history**

Register CSLMU was 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 PSLAA**

P-side link allocation attempts (PSLAA)

Register PSLAA increases when the system allocates a channel between an XPM and the subtending nodes.

#### **Register PSLAA release history**

Register PSLAA was introduced in BCS34.

#### **Associated registers**

LMD\_NTERMATT, LMD\_NORIGATT

#### **Associated logs**

There are no associated logs.

#### **Extension registers**

There are no extension registers.

### **Register PSLBLK**

P-side link blockage (PSLBLK)

Register PSLBLK increases for each attempt that fails to allocate a channel between the XPM and one of the subtending nodes.

---

**OM group XPMLNK** (continued)

---

**Register PSLBLK release history**

Register PSLBLK was introduced in BCS34.

**Associated registers**

LMD\_PMTRMBLK

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register PSLMU**

P-side link maintenance busy use (PSLMU)

Register PSLMU records the time that the links between the XPM and subtending nodes are not available for call processing. The register records the time in CCS.

**Register PSLMU release history**

Register PSLMU was 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 PSLCBU**

P-side link call busy use (PSLCBU)

Register PSLCBU records the time (in CCS) that P-side links are busy because of call processing.

**Register PSLCBU release history**

Register PSLCBU was introduced in BCS34.

**Associated registers**

There are no associated registers.

**OM group XPMLNK (end)**

---

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

---

**OM group XPMMSGOC**


---

**OM description**

Extended Peripheral Module Messaging Occupancy (XPMMSGOC) data measures the percentage of time each messaging interface places a message in its holding queue. This data can predict and monitor XPM overload conditions.

**Release history**

OM Group XPMMSGOC was introduced in TL10.

**Registers**

The following OM Group XPMMSGOC registers display on the MAP terminal as follows:

```

XPMMSGOC
CLASS: HOLDING
START:1998/02/20 17:00:00 FRI; STOP: 1998/02/20 17:30:00
FRI;SLOWSAMPLES:          0 ; FASTSAMPLES:          0 ;

INFO (XPMMSGOC_OM_KEY)
HQ00          HQ05          HQ10          HQ20
HQ30          HQ40          HQABV40       AVGRATE
MAXRATE      NUMREPTS
LTC
0             0             0             0
0             0             0             0
0             0             0             0
1            LTC          9 NETY
0             0             0             0
0             0             0             0
0             0             0             0
2            LTC          9 IMC
0             0             0             0
0             0             0             0
0             0             0             0
3            LTC          9 SPCHBUS
0             0             0             0
0             0             0             0
0             0             0             0
4            LTC          9 HDLC
0             0             0             0
0             0             0             0
0             0             0             0

```

**Group structure**

OM Group XPMMSGOC

**Key field:**

NIL

**Info field:**

XPMMSGOC\_OM\_KEY

## **OM group XPMMSGOC** (continued)

---

There are 5 tuples of information for each supported XPM.

### **Associated OM groups**

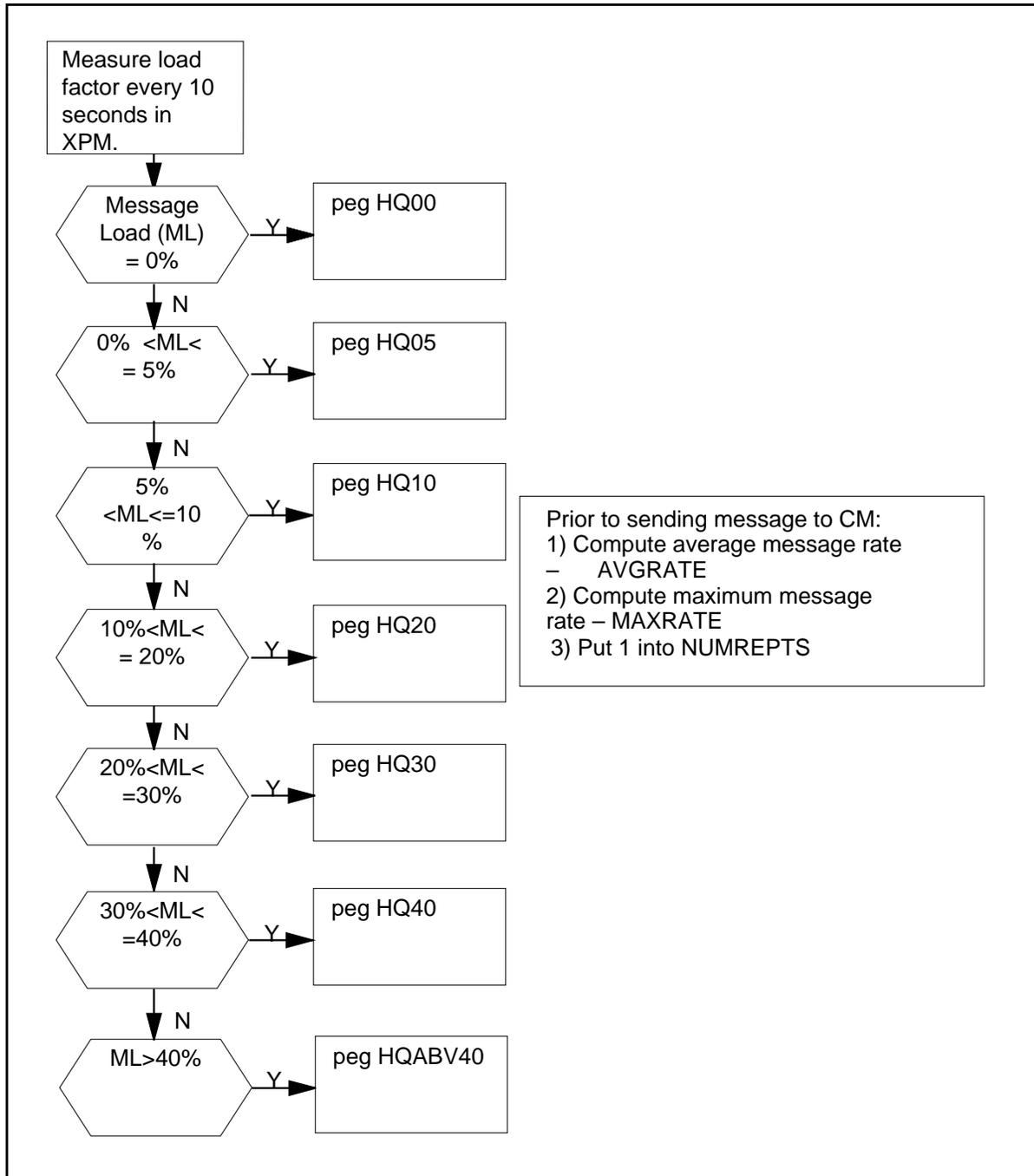
Does not apply

### **Associated functional groups**

All the functional groups available in the DMS software loads are associated with OM Group XPMMSGOC.

### **Associated functionality codes**

OM Group XPMMSGOC is not dependent on any other order code.

**OM group XPMMSGOC (continued)****OM Group XPMMSGOC registers****Register HQ00**

The Holding Queue 0% register is pegged when the message load factor computed is 0%.

## **OM group XPMMSGOC** (continued)

---

### **Register HQ00 release history**

Register HQ00 was introduced in TL10

### **Associated registers**

None

### **Associated logs**

None

### **Extension registers**

None

## **Register HQ05**

The Holding Queue 5% register is pegged when the message load factor computed is greater than 0% and less than or equal to 5%.

### **Register HQ05 release history**

Register HQ05 was introduced in TL10.

### **Associated registers**

None

### **Associated logs**

None

### **Extension registers**

None

## **Register HQ10**

The Holding Queue 10% register is pegged when the message load factor computed is greater than 5% and less than or equal to 10%.

### **Register HQ10 release history**

Register HQ10 was introduced in TL10.

### **Associated registers**

None

### **Associated logs**

None

### **Extension registers**

None

---

**OM group XPMMSGOC** (continued)

---

**Register HQ20**

The Holding Queue 20% register is pegged when the message load factor computed is greater than 10% and less than or equal to 20%.

**Register HQ20 release history**

Register HQ20 was introduced in TL10.

**Associated registers**

None

**Associated logs**

None

**Extension registers**

None

**Register HQ30**

The Holding Queue 30% register is pegged when the message load factor computed is greater than 20% and less than or equal to 30%.

**Register HQ30 release history**

Register HQ30 was introduced in TL10.

**Associated registers**

None

**Associated logs**

None

**Extension registers**

None

**Register HQ40**

The Holding Queue 40% register is pegged when the message load factor computed is greater than 30% and less than or equal to 40%.

**Register HQ40 release history**

Register HQ40 was introduced in TL10.

**Associated registers**

None

## **OM group XPMMSGOC (continued)**

---

### **Associated logs**

None

### **Extension registers**

None

## **Register HQABV40**

The Holding Queue Above 40% register is pegged when the message load factor computed is greater than 40%.

### **Register HQABV40 release history**

Register HQABV40 was introduced in TL10.

### **Associated registers**

None

### **Associated logs**

None

### **Extension registers**

None

## **Register AVGRATE**

The Average Message Rate register records the average message rate in messages per second. This rate is sampled between two successive reporting instants.

### **Register AVGRATE release history**

Register AVGRATE was introduced in TL10.

### **Associated registers**

None

### **Associated logs**

None

### **Extension registers**

None

## **Register MAXRATE**

The Maximum Message Rate register records the maximum transfer rate in messages per second. This rate is sampled between two successive reporting instants.

---

**OM group XPMMSGOC (end)**

---

**Register MAXRATE release history**

Register MAXRATE was introduced in TL10.

**Associated registers**

None

**Extension registers**

None

**Register NUMREPTS**

The Number of Reports register records the number of reports between two successive instants.

**Register NUMREPTS release history**

Register NUMREPTS was introduced in TL10.

**Associated registers**

None

**Associated logs**

None

**Extension registers**

None

## OM group XPMOCC

---

### OM description

PM central processing unit (CPU) occupancy (XPMOCC)

Register XPMOCC provides processor occupancy measurements for all extended multiprocessor system (XMS)-based peripheral modules (XPM).

### Release history

The OM group XPMOCC was introduced in CSP02.

### Registers

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

|          |          |         |          |
|----------|----------|---------|----------|
| CPUCP30  | CPUCP40  | CPUCP50 | CPUCP60  |
| CPUCP70  | CPUCP80  | CPUCP85 | CPUCP90  |
| CPUCP95  | CPUCP100 | CPUTOTL | AVGCPOCC |
| AVGLPOCC | NUMRPTS  | PMORIGS | PMTERMS  |

### Group structure

The OM group XPMOCC for each XPM based on the unified processor (UP) provides one tuple for occupancy information on UP. The system provides an additional tuple for processors with an enhanced ISDN signaling preprocessor (EISP) processor for occupancy information on EISP.

**Key field:**

There is no key field.

**Info field:**

XPMOCC\_OM\_KEY

### Associated OM groups

PM, PM1, PM2, PMMSGCNT, PMOVL, PMSTAT, XPMLNK, XPMOVL

### Associated functional groups

The following functional groups associate with OM group XPMOCC:

- Automated Directory Assistance Service (ADAS)
- DMS-100 local office
- DMS-100/200 combined local/toll office
- DMS-100/200 combined local/toll office with TOPS
- DMS-200 toll office

**OM group XPMOCC** (continued)

- DMS-200 with TOPS
- DMS-100 Meridian
- DMS-MTX mobile telephone exchange
- DMS-250 toll/tandem switch
- DMS-300 gateway
- Meridian 1 (options 111-211) PABX

**Associated functionality codes**

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

(Sheet 1 of 2)

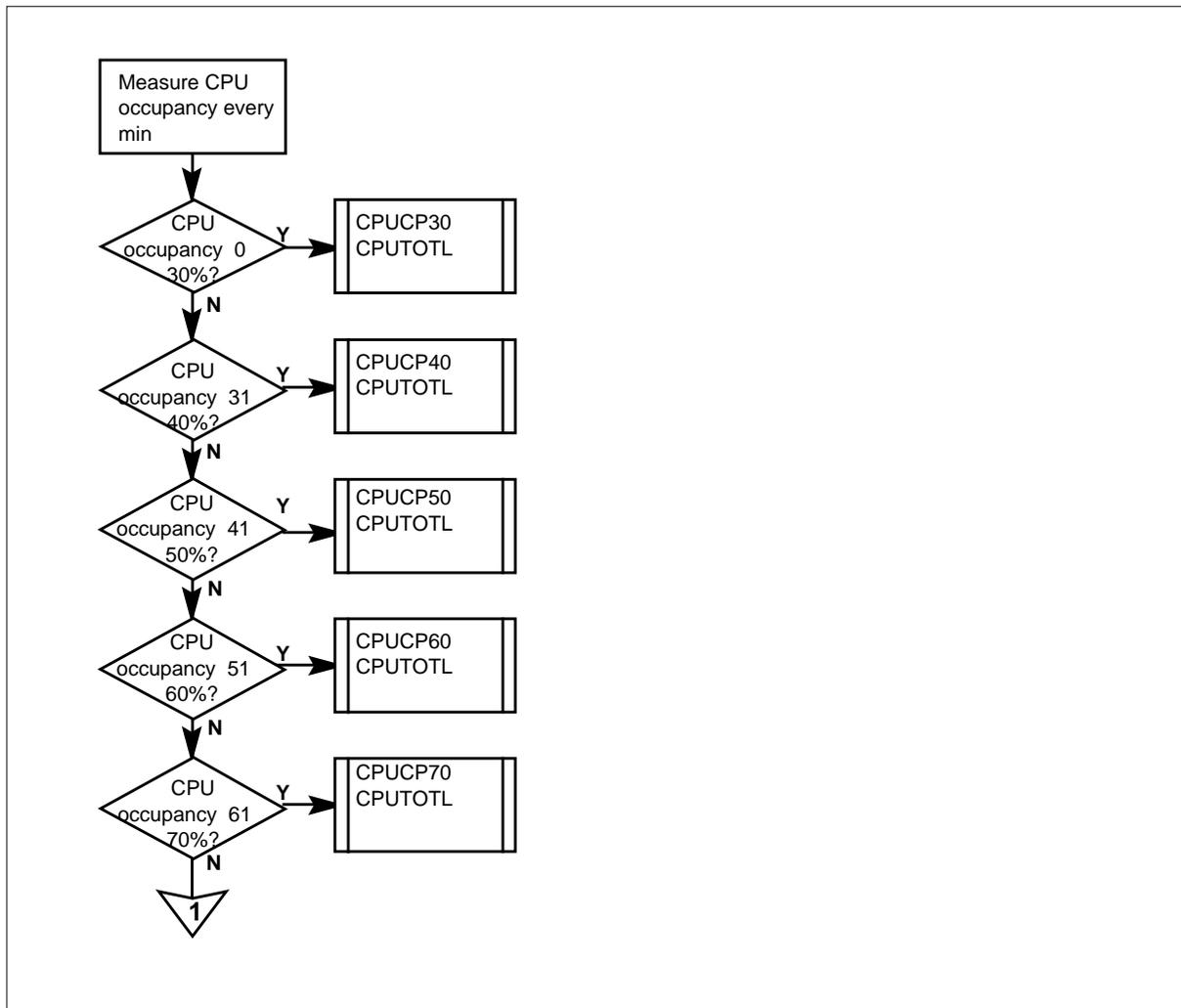
| Functionality                              | Code     |
|--|----------|
| EIU Peripheral Load for SuperNode OPC      | NTG310AA |
| Common Basic                               | NTX001AA |
| Common Channel Interoffice Signaling-Basic | NTX040AA |
| CCS7-MTP/SCCP                              | NTX041AA |
| RLCM-Emergency Stand-alone Operation       | NTX154AA |
| DMS-250 Call Processing Type XIII          | NTX222AA |
| New Peripheral Maintenance Package         | NTX270AA |
| International Switching Center-Basic       | NTX300AA |
| SMU-Subscriber Module Urban                | NTX387AA |
| International-Local Basic                  | NTX472AB |
| Digital Phone M2000-Basic                  | NTX640AA |
| OMs in Erlangs                             | NTX664AA |
| ISDN Basic Access (upgrade of NTX750AA)    | NTX750AB |
| STP Operations                             | NTX833AA |
| Mercury Centrex PCM30 Peripherals          | NTX913AA |
| Meridian SL-100 Cabinetized Software       | NTXA10AA |
| CC MNTCE                                   | NTXB58AA |

## OM group XPMOCC (continued)

(Sheet 2 of 2)

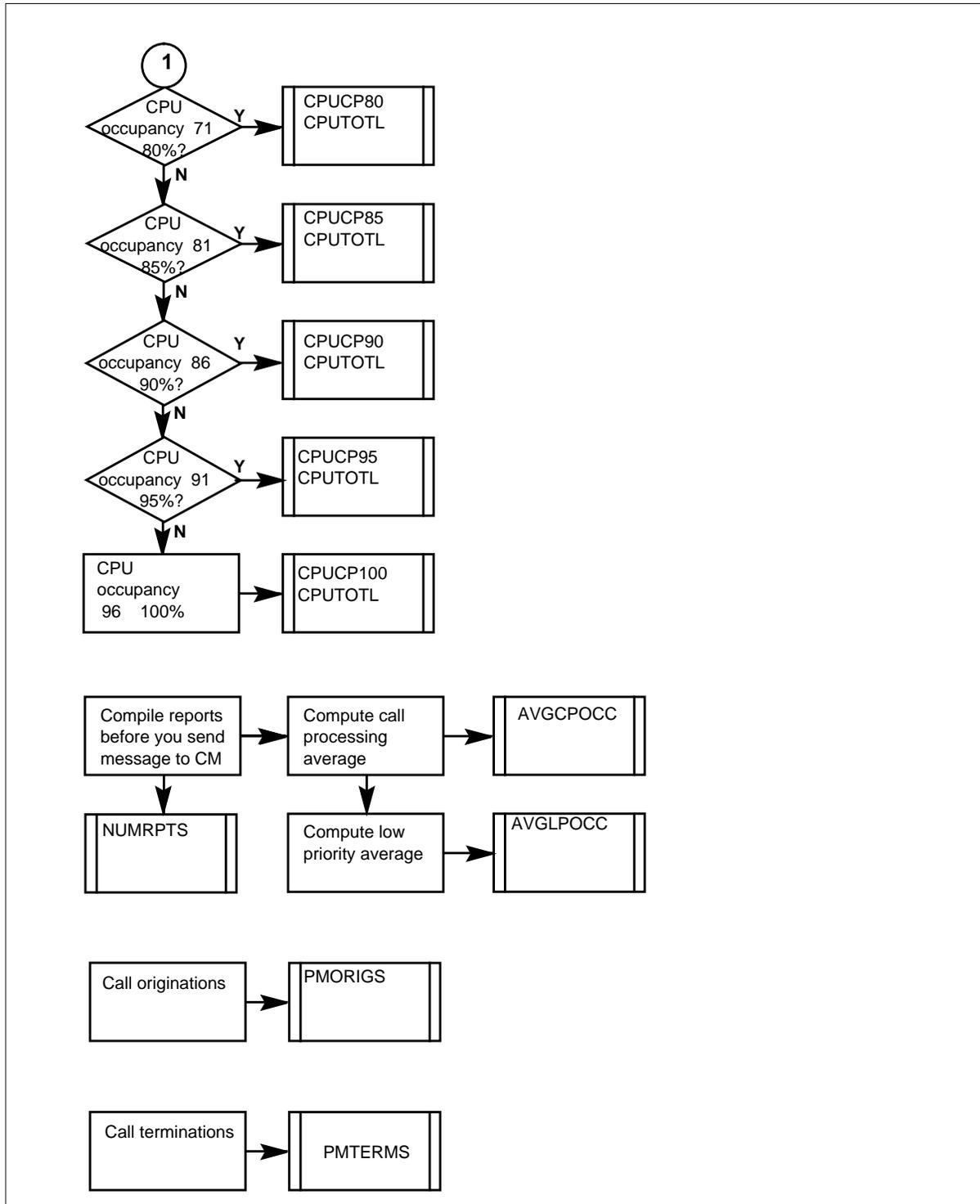
| Functionality                        | Code     |
|--------------------------------------|----------|
| PCM30 RSCO Support                   | NTXH52AA |
| Extended Peripheral Equipment        | NTXN25AA |
| UAE, UNIX Conversant Software        | NTXS30AA |
| Enhanced Service Resource Management | NTXS31AA |

### The OM group XPMOCC registers



**OM group XPMOCC (continued)**

**The OM group XPMOCC registers (continued)**



## **OM group XPMOCC (continued)**

---

### **Register AVGCPOCC**

Average call processing occupancy (AVGCPOCC)

Register AVGCPOCC is a usage register that measures average call processing occupancy.

#### **Register AVGCPOCC release history**

Register AVGCPOCC was introduced in BCS37.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

There are no associated logs.

#### **Extension registers**

There are no extension registers.

### **Register AVGLPOCC**

Average low occupancy processing (AVGLPOCC)

Register AVGLPOCC is a usage register for unified processors. Register AVGLPOCC measures average low priority occupancy. Enhanced ISDN signaling processors (EISN) have a zero in this register.

#### **Register AVGLPOCC release history**

Register AVGLPOCC was introduced in CSP02.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

There are no associated logs.

#### **Extension registers**

There are no extension registers.

### **Register CPUCP100**

CPU call processing 100 (CPUCP100)

Register CPUCP100 counts the number of times call processing occupancy is in the 96 to 100% range.

---

**OM group XPMOCC** (continued)

---

**Register CPUCP100 release history**

CPUCP100 was introduced in CSP02.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register CPUCP30**

CPU call processing 30 (CPUCP30)

Register CPUCP30 counts the number of times call processing occupancy is in the 0 to 30% range.

**Register CPUCP30 release history**

Register CPUCP30 was introduced in CSP02.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register CPUCP40**

CPU call processing 40 (CPUCP40)

Register CPUCP40 counts the number of times call processing occupancy is in the 31 to 40% range.

**Register CPUCP40 release history**

Register CPUCP40 was introduced in CSP02.

**Associated registers**

There are no associated registers.

## **OM group XPMOCC (continued)**

---

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register CPUCP50**

CPU call processing 50 (CPUCP50)

Register CPUCP50 counts the number of times call processing occupancy is in the 41 to 50% range.

### **Register CPUCP50 release history**

Register CPUCP50 was introduced in CSP02.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register CPUCP60**

CPU call processing 60 (CPUCP60)

Register CPUCP60 counts the number of times call processing occupancy is in the 51 to 60% range.

### **Register CPUCP60 release history**

Register CPUCP60 was introduced in CSP02.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

---

**OM group XPMOCC** (continued)

---

**Register CPUCP70**

CPU call processing 70 (CPUCP70)

Register CPUCP70 counts the number of times call processing occupancy is in the 61 to 70% range.

**Register CPUCP70 release history**

Register CPUCP70 was introduced in CSP02.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register CPUCP80**

CPU call processing 80 (CPUCP80)

Register CPUCP80 counts the number of times call processing occupancy is in the 71 to 80% range.

**Register CPUCP80 release history**

Register CPUCP80 was introduced in CSP02.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register CPUCP85**

CPU call processing 85 (CPUCP85)

Register CPUCP85 counts the number of times call processing occupancy is in the 81 to 85% range.

## **OM group XPMOCC** (continued)

---

### **Register CPUCP85 release history**

Register CPUCP85 was introduced in CSP02.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register CPUCP90**

CPU call processing 90 (CPUCP90)

Register CPUCP90 counts the number of times call processing occupancy is in the 86 to 90% range.

### **Register CPUCP90 release history**

Register CPUCP90 was introduced in CSP02.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register CPUCP95**

CPU call processing 95 (CPUCP95)

Register CPUCP95 counts the number of times call processing occupancy is in the 91 to 95% range.

### **Register CPUCP95 release history**

Register CPUCP95 was introduced in CSP02.

### **Associated registers**

There are no associated registers.

---

**OM group XPMOCC** (continued)

---

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register CPUTOTL**

CPU total (CPUTOTL)

Register CPUTOTL accumulates the totals in registers CPUCP30, CPUCP40, CPUCP50, CPUCP60, CPUCP70, CPUCP80, CPUCP85, CPUCP90, CPUCP95, and CPUCP100.

**Register CPUTOTL release history**

Register CPUTOTL was introduced in CSP02.

**Associated registers**

CPUCP30, CPUCP40, CPUCP50, CPUCP60, CPUCP70, CPUCP80, CPUCP85, CPUCP90, CPUCP95, CPUCP100

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register NUMRPTS**

Number reports (NUMRPTS)

Register NUMRPTS counts the number of 15 min reports added to accumulation registers to normalize registers AVGCPOCC and AVGLPOCC.

**Register NUMRPTS release history**

Register NUMRPTS was introduced in CSP02.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

## **OM group XPMOCC (end)**

---

### **Register PMORIGS**

Total call origination attempts (PMORIGS)

Register PMORIGS counts the total call origination attempts. Register PMORIGS reports on an XPM by XPM basis. This register contains a value only for tuples that associate with the unified processor. Register PMTERMS always contains a zero for enhanced ISDN signaling processor (EISP) tuples.

#### **Register PMORIGS release history**

Register PMORIGS was introduced in CSP02.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

There are no associated logs.

#### **Extension registers**

There are no extension registers.

### **Register PMTERMS**

PM terminations (PMTERMS)

Register PMTERMS counts total call termination attempts. Register PMORIGS reports on an XPM by XPM basis. This register contains a value only for tuples that associate with the unified processor. Register DMTERMS always contains a zero for enhanced ISDN signaling processor (EISP) tuples.

#### **Register PMTERMS release history**

Register PMTERMS was introduced in CSP02.

#### **Associated registers**

There are no associated registers.

#### **Associated logs**

There are no associated logs.

#### **Extension registers**

There are no extension registers.

---

## OM group XPMOVLD

---

### OM description

XPM overload (XPMOVLD)

The OM group XPMOVLD reports the number of terminations and delays for extended multiprocessor system (XMS)-based peripheral modules (XPM). Although XPMOVLD monitors the same events as PMOVLD, XPMOVLD provides several new categories of overload indicator classes. This OM group increases the amount of information about XPM call processing overload events. This OM group also increases the amount of information about the severity of XPM call processing overload events. As a result, XPMOVLD enables quick analysis of these events.

### Release history

The OM group XPMOVLD was introduced in CPS02.

### Registers

The following OM group XPMOVLD registers appear on the MAP terminal:

|          |         |          |          |
|----------|---------|----------|----------|
| PORGDLY  | PTRMDLY | PORGMSG  | PTRMMSG  |
| PORGIPC  | PMSGIPC | PORGPTQ  | PTRMPTQ  |
| PORGSLLC | PORGLCM | PORGMISC | PTRMMISC |

### Group structure

The OM group XPMOVLD provides one tuple for each office.

**Key field:**

There is no Key field.

**Info field:**

There is no Info field.

### Associated OM groups

PMOVLD

### Associated functional groups

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

- Automated Directory Assistance Service (ADAS)
- DMS-100 local office
- DMS-100/200 combined local/toll office
- DMS-100/200 combined local/toll office with TOPS

**OM group XPMOVL** (continued)

- DMS-200 toll office
- DMS-200 with TOPS
- DMS-100 Meridian
- DMS-MTX mobile telephone exchange
- DMS-250 toll/tandem switch
- DMS-300 gateway
- Meridian 1 (options 111-211) PABX

**Associated functionality codes**

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

(Sheet 1 of 2)

| Functionality                              | Code     |
|--|----------|
| EIU Peripheral Load for SuperNode OPC      | NTG310AA |
| Common Basic                               | NTX001AA |
| Common Channel Interoffice Signaling—Basic | NTX040AA |
| CCS7—MTP/SCCP                              | NTX041AA |
| RLCM—Emergency Stand-alone Operation       | NTX154AA |
| DMS-250 Call Processing Type XIII          | NTX222AA |
| New Peripheral Maintenance Package         | NTX270AA |
| International Switching Center-Basic       | NTX300AA |
| SMU—Subscriber Module Urban                | NTX387AA |
| International—Local Basic                  | NTX472AB |
| Digital Phone M2000—Basic                  | NTX640AA |
| OMs in Erlangs                             | NTX664AA |
| ISDN Basic Access (upgrade of NTX750AA)    | NTX750AB |
| STP Operations                             | NTX833AA |
| Mercury Centrex PCM30 Peripherals          | NTX913AA |
| Meridian SL-100 Cabinetized Software       | NTXA10AA |

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**OM group XPMOVL** (continued)

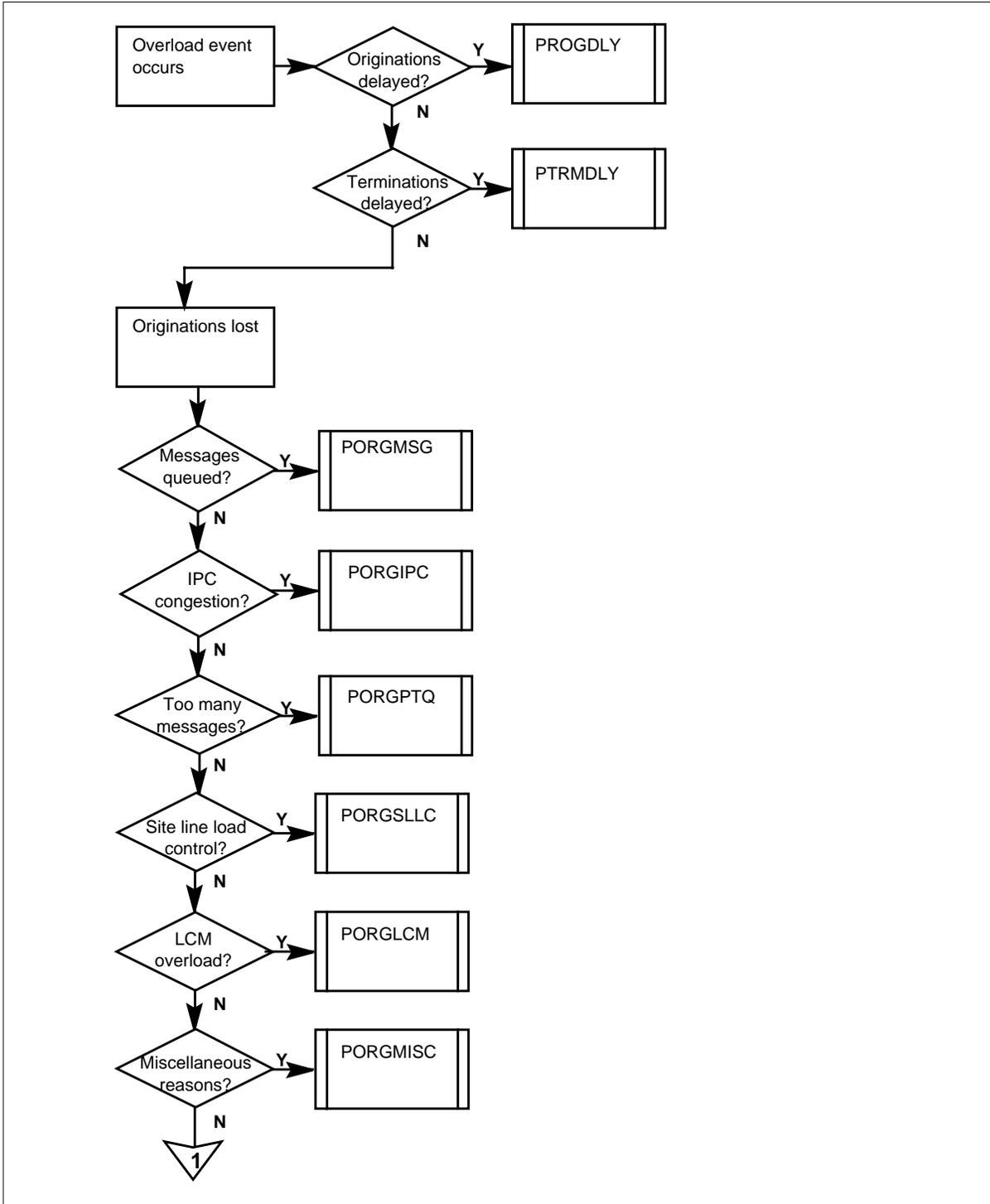
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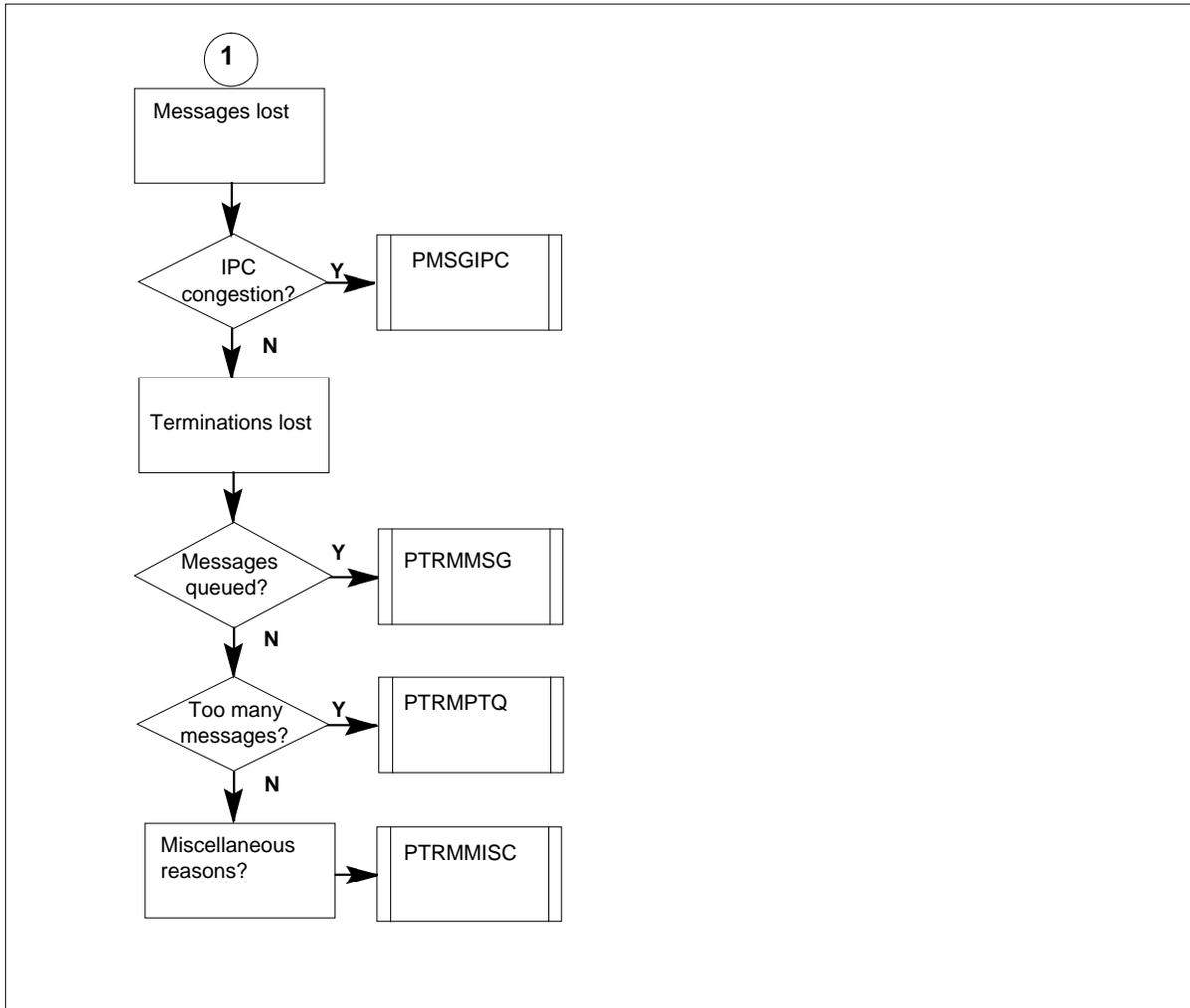
**(Sheet 2 of 2)**

| <b>Functionality</b>                 | <b>Code</b> |
|--------------------------------------|-------------|
| CC MNTCE                             | NTXB58AA    |
| PCM30 RSCO Support                   | NTXH52AA    |
| Extended Peripheral Equipment        | NTXN25AA    |
| UAE, UNIX Conversant Software        | NTXS30AA    |
| Enhanced Service Resource Management | NTXS31AA    |

## OM group XPMOVL D (continued)

### The OM group XPMOVL D registers



**OM group XPMOVL** (continued)**The OM group XPMOVL registers (continued)****Register PMSGIPC**

PM messages interprocess communication (IPC) buffer congestion (PMSGIPC)

Register PMSGIPC counts the number of messages lost as a result of IPC buffer congestion. The messages that this register counts include messages other than originations.

**Register PMSGIPC release history**

Register PMSGIPC was introduced in BCS37.

## **OM group XPMOVL** (continued)

---

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register PORGDLY**

Number of originations delayed (PORGDLY)

Register PORGDLY counts the number of originations delayed.

### **Register PORGDLY release history**

Register PORGDLY was introduced in CSP02.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register PORGIPC**

PM originations interprocess communication (IPC) buffer congestion (PORGIPC)

Register PORGIPC counts the number of originations lost as a result of IPC buffer congestion.

### **Register PORGIPC release history**

Register PORGIPC was introduced in CSP02.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

---

**OM group XPMOVL** (continued)

---

**Extension registers**

There are no extension registers.

**Register PORGLCM**

PM originations line concentrating module (PORGLCM)

Register PORGLCM counts the number of originations lost as a result of line concentrating module overload.

**Register PORGLCM release history**

Register PORGLCM was introduced in CSP02.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register PORGMISC**

PM originations miscellaneous (PORGMISC)

Register PORGMISC counts the number of originations lost for miscellaneous reasons. An interprocess communication buffer (IPC) index that is not correct is an example of a miscellaneous reason.

**Register PORGMISC release history**

Register PORGMISC was introduced in BCS37.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register PORGMSG**

PM origination messages lost (PORGMSG)

## **OM group XPMOVL** (continued)

---

Register PORGMSG counts the number of originations lost because too many messages are present in the flow control system.

### **Register PORGMSG release history**

Register PORGMSG was introduced in CSP02.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register PORGPTQ**

PM originations terminal quota (PORGPTQ)

Register PORGPTQ counts the number of originations lost because of the limit on the number of messages allowed per terminal in the flow control system.

### **Register PORGPTQ release history**

Register PORGPTQ was introduced in CSP02.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register PORGSLLC**

PM originations site line load control (PORGSLLC)

Register PORGSLLC counts the number of originations lost as a result of site line load control.

### **Register PORGSLLC release history**

Register PORGSLLC was introduced in CSP02.

---

**OM group XPMOVL** (continued)

---

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register PTRMDLY**

Number of terminations delayed (PTRMDLY)

Register PTRMDLY counts the number of terminations delayed.

**Register PTRMDLY release history**

Register PTRMDLY was introduced in BCS37.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

**Extension registers**

There are no extension registers.

**Register PTRMMISC**

PM terminations miscellaneous (PTRMMISC)

Register PTRMMISC counts the number of terminations for miscellaneous reasons. An interprocess communication buffer (IPC) index that is not correct is an example of a miscellaneous reason.

**Register PTRMMISC release history**

Register PTRMMISC was introduced in CSP02.

**Associated registers**

There are no associated registers.

**Associated logs**

There are no associated logs.

## **OM group XPMOVL D (end)**

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### **Extension registers**

There are no extension registers.

## **Register PTRMMSG**

PM terminations lost (PTRMMSG)

Register PTRMMSG counts the number of terminations lost because there are too many messages in the flow control system.

### **Register PTRMMSG release history**

Register PTRMMSG was introduced in CSP02.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.

## **Register PTRMPTQ**

PM terminations terminal quota (PTRMPTQ)

Register PTRMPTQ counts the number of terminations lost because of the limit on the number of messages allowed per terminal in the flow control system.

### **Register PTRMPTQ release history**

Register PTRMPTQ was introduced in CSP02.

### **Associated registers**

There are no associated registers.

### **Associated logs**

There are no associated logs.

### **Extension registers**

There are no extension registers.



DMS-100 Family  
**North American DMS-100**  
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OM Groups TCAPERRS-XPMOVL

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