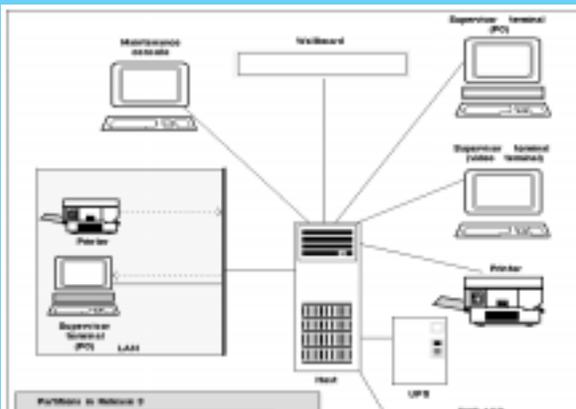


CC MIS System Description

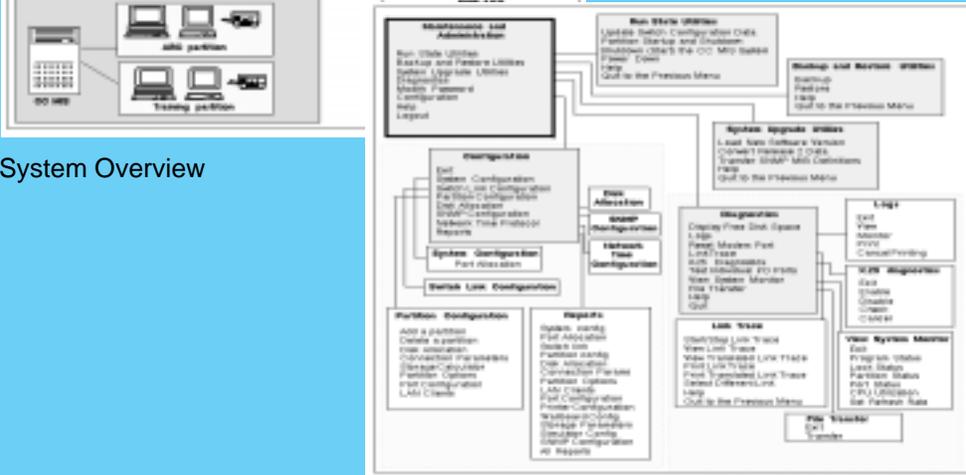
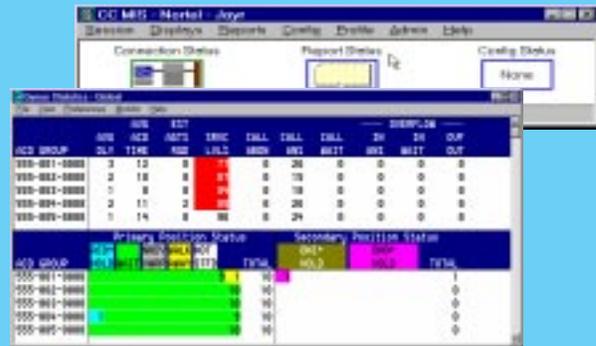
Standard 297-2671-150.03.06

CC MIS Maintenance Release 3.2

Overview of Supervisor Interface



System Overview



Overview of Maintenance Interface

Overview of CC MIS Maintenance & Supervisor's Interfaces

CC MIS System Description Guide

System Description

CC MIS Maintenance Release 3.2

NTP: 297-2671-150.03.06

Status: Standard

Date: Nov 1996

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Printed in the United States of America.

Publication History

Nov 1996

Standard version for Maintenance Release 3.2.

June 1996

Preliminary version for Maintenance Release 3.2 for use at VO Sites.

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About this Guide

This document provides a high-level overview of the Call Center Management Information System (CC MIS) as it is used with the Meridian SL-100 and DMS-100 switch. In this book, the MSL-100 and DMS-100 are referred to as DMS-ACD.

Introduction



How to use this book

This book provides descriptive information about CC MIS. It contains the following information:

- Chapter 1: How to use this book - Provides an overview of this book and lists the documentation related to the product.
- Chapter 2: System components - Introduces the product and provides information about each hardware component, including hardware requirements and purchasable options.
- Chapter 3: Functions and features - Describes the functions and the software features of the product.
- Appendix A: System capacities - Identifies the upper limit for all system entities.
- Appendix B: Example reports - Contains an example of each standard report format, agent event report, and system report.
- Appendix C: Acronyms and abbreviations - Lists the acronyms and abbreviations used in this book.

Applicability of this document

This book applies to CC MIS Release 3.2 running on a Motorola 88000 series computer. CC MIS Release 3 supports the BCS 32 and 35 software release. Unless the document is revised, it also applies to DMS-ACD systems with software releases greater than BCS32 and BCS35, but the MIS protocol must be BCS32 or BCS35.

Related documentation

Where appropriate, references to documents specific to a particular component are listed in the description sections.

For more information on ACD, refer to the following Northern Telecom Publications (NTP):

- ACD Product Guide (NTP 297-2041-010)
- ACD Server Product Guide (NTP 297-2041-011)
- ACD Planning and Engineering Guide (NTP 297-2041-101)
- ACD Planning and Engineering Guide - Canada (NTP 297-2041-104)
- ACD Administration Guide (NTP 297-2041-301)
- ACD Translations (NTP 297-2041-350)
- ACD Maintenance Guide (NTP 297-2041-500)
- ACD Trouble Locating and Clearing Procedures (NTP 297-2041-503)
- M5212 ACD Set General Description (NTP 297-2041-900)
- ACD End-User Load Management (NTP 297-2041-901)
- Network ACD General Description (up to BCS 34) (NTP 555-8101-100)

For more information on CC MIS, refer to the following NTPs:

- Call Center MIS Maintenance and Administration Guide (NTP 297-2671-545)
- Call Center MIS Supervisor's Guide (NTP 297-2671-340)
- Call Center MIS Release Notes (NTP 297-2671-211)
- Call Center MIS Getting Started Guide (Quick Start) (NTP 297-2671-175)

System Components

2

Introduction to ACD

Automatic Call Distribution (ACD) is a feature that makes it possible for a relatively small number of operators-called agents-to efficiently handle a large number of incoming calls. The ACD feature resides on the DMS-ACD switch that receives incoming calls. The ACD feature accepts and equitably routes calls to available agents.

Introduction to CC MIS

Call Center Management Information System (CC MIS) is a tool for managing the agents who handle ACD calls. It helps supervisors plan, manage, and monitor their ACD operation by collecting statistics on the performance of network configuration and personnel.

CC MIS reports these statistics to supervisors in one of three ways:

- in a numeric or graphic, real-time, online display
- in a series of standard management reports
- in custom management reports

CC MIS provides a variety of features, and as a result, not all features may be available in your area. Check with your local sales representative to learn the features available to you.

CC MIS consists of the following components, illustrated in Figure 2.1.

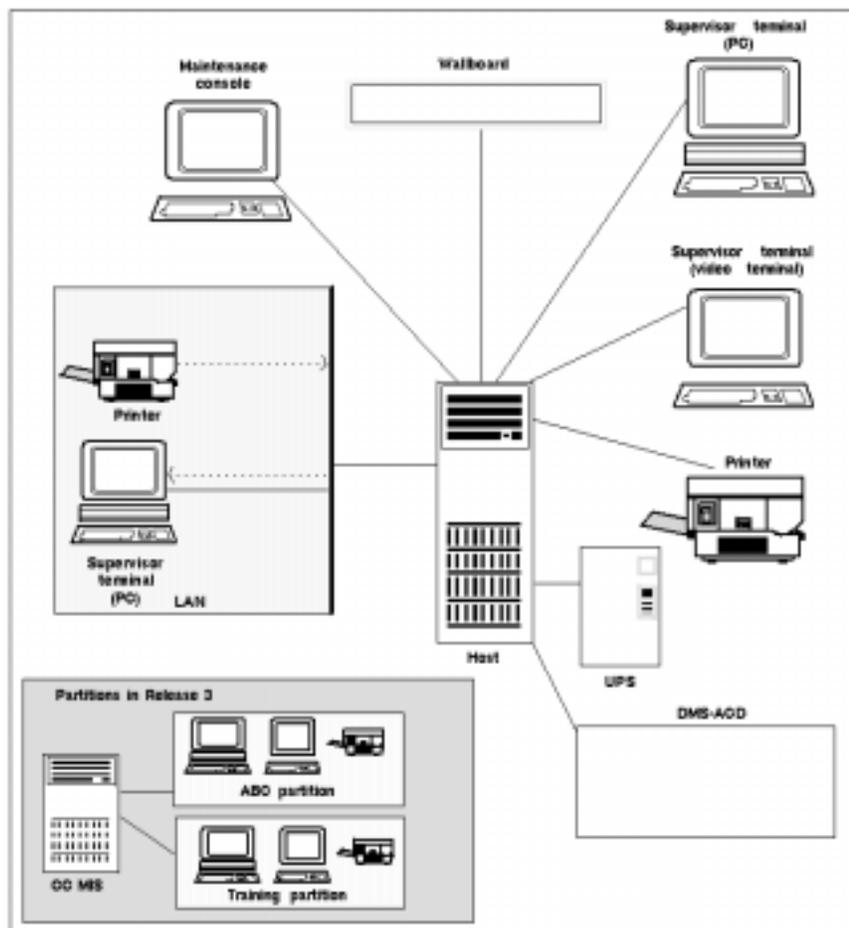
- host computer (VME-based)
- Uninterruptable power supply (UPS)
- link to DMS-ACD switch
- maintenance console
- supervisor terminals
- printers
- wallboards

CC MIS is a downstream processor of a DMS-ACD switch.

System components

This chapter provides information about each component of CC MIS. In addition, information about the DMS-ACD as it pertains to the CC MIS is provided.

Figure 2.1 System components



DMS-ACD

CC MIS is a downstream processor of the MSL-100 or the DMS-100 ACD switch. The CC MIS database needs information from DMS-ACD tables to setup the interface to the DMS-ACD, and the pools and subpools of the ACD.

CC MIS must have the same definitions used by the DMS-ACD for

- pools and subpools
- X.25 links
- NOS Logon Parameters

You cannot change, add, or delete information in these ACD tables through CC MIS. The CC MIS X.25 and Network Operation Services (NOS) logon information must match the information in the DMS-ACD tables to establish a connection to the DMS-ACD.

The ACD data link

In order for CC MIS to communicate with the DMS-ACD, CC MIS must establish DMS-LINK connections with the DMS-ACD over which agent and call event messages can pass. An ACD datalink is associated with one and only one ACD pool.

Connection at the switch

The X.25 link between CC MIS and the DMS-ACD connect at the switch to either a 1X89AA (MPC) or 1X89AB (EMPC) card. If redundant links are used, there must be two cards.



Only EMPC supports the V.35 56 Kbyte/s connection. Refer to the section "Link to DMS-ACD switch" in this chapter for detailed information about the connection to the switch. Also, the 1X89AA (MPC) card is no longer available but is supported where needed.

Data stream supported

CC MIS supports the ACD MIS data stream that is part of BCS32 and BCS35. Although the protocol handler receives and processes any BCS32 or BCS35 message that may come from the switch, not all such messages are actually used by CC MIS. The table below identifies the messages supported by CC MIS.



For an explanation of the use and content of these messages, consult the "DMS-100/SL-100 ACD MIS Interface Specification, NIS Q209-2, Version 6.0" for BCS 32 and "DMS-100/SL-100 ACD MIS Interface Specification, NIS Q209-2, Version 9.0" for BCS35.

Table 2-1: ACD MIS Messages supported (BCS32 and BCS35)

Category	Message	Supported
Switch control	EndOfInit	yes
	SendThrottle	yes
Initialization data	SubPoolData	yes
	ACDGroupData	yes
	ACDVFGData	yes
	AudioList	yes
	RouteList	yes
	ACDSuppIDNData	yes
	ACDSubGroupData	yes
	AgentPositionData	yes
ACDNetworkGroupRouting Data	yes	
ACD VFG OM	ACDVFGOM	yes
ACD Event	ACDCall Offered	yes
	ACDCallAnswered	yes
	ACDCallNetworkAnswered	yes
	ACDCallAbandoned	yes
	ACDCallReleased	yes
	ACDCallBlocked	yes
	AgentPosition	yes
	ACDCallTransferred	yes
	ACDCallParked (BCS35)	no

Table 2-1: ACD MIS Messages supported (BCS32 and BCS35)

Category	Message	Supported
Load Management Event Note: Messages noted with an * indicate that changing the value of these variables on the switch does not cause the CC MIS to be updated. CC MIS does not change because there is no facility that generates these messages to CC MIS.	AgentPosReassigned	yes
	ACDDNReassigned	yes
	PrioProChanged*	yes
	MaxWaitChanged	yes
	TMDelOvflChanged*	yes
	OvflTypeChanged*	yes
	ServiceChanged*	yes
	MaxCqSizeChanged	yes
	MaxVqSizeChanged*	yes
	ACDDNPrioChanged	yes
	AudioGroupChanged	yes
	RANTHChanged	yes
	RIChanged	yes
	ThRouteChanged	yes
	NSRouteChanged	yes
	ACDDNNameChanged	yes
	ACDDispDigsChanged	yes
	MSQSThresholdChanged	yes
	EhOvflChanged	yes
	CIFROUTEChanged*	yes
NSAudioGroupChanged*	yes	
CTQSizeChanged	yes	
DefLOBChanged	yes	

Table 2-1: ACD MIS Messages supported (BCS32 and BCS35)

Category	Message	Supported
Load Management Event (continued)	WRPTIMEChanged	yes
	MSQSTypeChanged	yes
	TMDTHRTEChanged	yes
	TMDTHTIMEChanged	yes
	FIAUDIOGropChanged	yes
	FOAUDIOGroupChanged	yes
	ORGANNChanged	yes
	ACTIVATEChanged	no
DSP Control	AssociatePool	yes
	RequestInit	yes
	StopInit	yes
	StartTransfer	yes
	StopTransfer	no
Inquire Switch Data	QueryDateAndTOD	yes
	RequestAudioInfo	yes
	RequestRouteInfo	yes

Table 2-1: ACD MIS Messages supported (BCS32 and BCS35)

Category	Message	Supported
Load Management Request	ReassignAgentPos	yes
	ReassignACDDN	yes
	ChangeSubPool	no
	ChangePrioPro	yes
	ChangeMaxWait	yes
	ChangeWaitThreshold	yes
	ChangeTmDelOvfl	yes
	ChangeOvflType	yes
	ChangeService	yes
	ChangeMaxCqSize	yes
	ChangeMaxVqSize	yes
	ChangeQueueThreshold	yes
	ChangeACDDNPrio	yes
	ChangeAudioGroup	yes
	ChangeRANTH	yes
	ChangePWF	yes
	ChangeRI	yes
	ChangeThroute	yes
	ChangeNSRoute	yes
	ChangeACDDNName	yes
ChangeACDDispDigs	yes	
ChangeMSQSThreshold	yes	
ChangeEhOvfl	yes	

Table 2-1: ACD MIS Messages supported (BCS32 and BCS35)

Category	Message	Supported
Load Management Request (continued)	ChangeCIFRoute	yes
	ChangeNSAudioGroup	yes
	ChangeCTQSize	yes
	ChangeBestGrp	yes
	ChangeSrvRate	yes
	ChangeNumIdle	yes
	ChangeTimeIdle	yes
	ChangeDefLOB	yes
	ChangeWRPTIME	yes
	ChangeMSQSType	yes
	ChangeTMDTHRTE	yes
	ChangeTMDTHTIME	yes
	ChangeFIAUDIOGroup	yes
	ChangeFOAUDIOGroup	yes
	ChangeORGANN	yes
ChangeACTIVATE	no	

ACD Provisioning

In order for the CC MIS system to function correctly with the ACD switch, the ACD switch must have the following packages:

Table 2-2: Required packages for CC MIS

Package Number ^a	Description
NTX000AA	Bilge
NTX001AA	Common Basic
NTX901AA	Local Feature I
NTX100AA	IBN Basic
NTX106AA	IBN-P Business Set
NTX108AA	IBN Display Feature
NTX273AA	Multi-protocol controller BX.25
NTXE65AA	MPC X.25 Interface ^b
NTXE98AA	High Speed MPC ^c
NTX560AB	NOP - Generic RO Service
NTX407AB ^d	ACD Call Processing
NTX415AA ^d	ACD Basic
NTX416AJ ^d	ACD Enhanced
NTX991AF	ACD Mgmt Rep 2-way datastream
NTXA52AB	ACD Remote Load Mgmt

a. The alpha suffixes (AA,AB,AC, ...) may be incremented on an individual package basis in any BCS release. The alpha suffix for the most current generally available package associated with the BCS switch load should be utilized.

b. The package is required if the link redundancy option is used or if the link speed is greater than 19.2 BAUD. Optionally, package NTXN85AA (CCITT 1984 X.25) may be used instead of NTXE65AA without impact or benefit to CC MIS.

c. Required if the link speed is greater than 19.2 BAUD or if the switch load is pre-BCS35 and EMPC hardware is used.

d. This package is not required for CC MIS but may be required for certain ACD features which have been purchased. Refer to the appropriate ACD NTPs for details on package requirements for ACD features.

Link to the DMS-ACD switch

The link between the CC MIS and the DMS-ACD is an X.25 link. Clocking may range from 9600 byte/s to 56 Kbyte/s and may use an RS-232 or V.35 interface. The type of interface used is transparent to CC MIS. Either an MPC or an EMPC may be used on the switch end of the interface.



Only EMPC supports the V.35 56 Kbyte/s connection.

If the link fails between the CC MIS and DMS-ACD, a loss of data will occur. Using a redundant link reduces the amount of data lost, but does not prevent data loss entirely. Data loss occurs during the time it takes a redundant link to switch over (up to two minutes). When a link failure occurs, CC MIS simply retries the connection on the X.25 link.

CC MIS must have the same definitions used by the DMS-ACD for the X.25 link.

Redundant link option

The redundant link option provides two links between the DMS-ACD and CC MIS. Only one data link is active at a time. The second link is activated when

- Protocol errors determine that the X.25 session should be cleared.
- Connection request to the DMS-ACD by CC MIS times out.
- Connection to the DMS-ACD by CC MIS is refused.
- The DMS-ACD does not recognize CC MIS because the first link is not enabled on the DMS-ACD.

The redundant link is not activated for I/O errors, reset packets, or interrupt packets. These events are considered transitory and are not resolved by going to the other link.

If the redundant link is operational and the communication path is open between the DMS-ACD and CC MIS, it takes about two minutes for the redundant link to become the active link and carry data.

Maintenance engineers can test the links and disable one or both links to prevent the redundant link from attempting to re-establish a connection when there is a known link or hardware problem.

Link failures

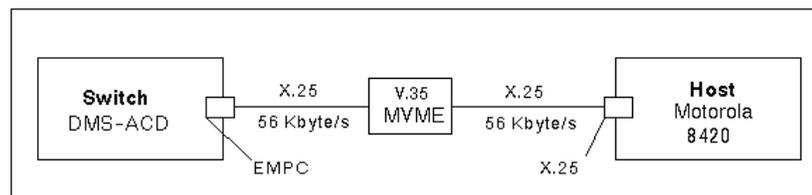
The failure of any link to the switch generates a log message in the CC MIS system log and a log in the DMS-ACD log. When the connection between the CC MIS and the DMS-ACD is lost the following occurs:

- The time field on the text-based supervisor screen is highlighted, while the connection status icon on the windows-based supervisor screen indicates link failure to the switch.
- CC MIS attempts to re-establish the link. During this time:
 - supervisors remain logged in, but their real-time screens are static.
 - no data is accumulated either historically or real-time.
- If the session is reactivated within five minutes:
 - link indicators are reset to indicate the link(s) are up.
 - CC MIS receives current event data from the switch.
 - all event data during the link outage is lost.
- If the session is not reactivated within five minutes the system will perform an automatic configuration update after the link is restored.

X.25 link requirements

If the DMS-ACD switch and the host are less than 100 cable feet apart (co-located), one V.35 Modem Eliminator (MVME) set to 56 Kbyte/s is required between the DMS-ACD switch and the VME host.

Figure 2.2 Link requirements when host and switch are co-located



If the switch and the Motorola 8420 are not co-located, one of two options is required:

- Option 1 requires two 56 Kbyte/s Channel Service Unit (CSU) connections to a T1 channel.
- Option 2 requires two Data Service Units (DSU) or two V.35 modems set to 56 Kbyte/s and attached to a conditioned leased line.

Figure 2.3 Link requirements when host is remote from switch (Option 1)

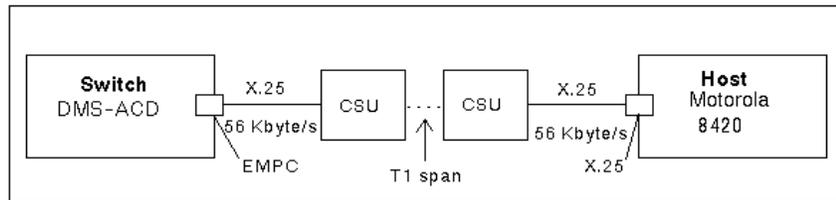
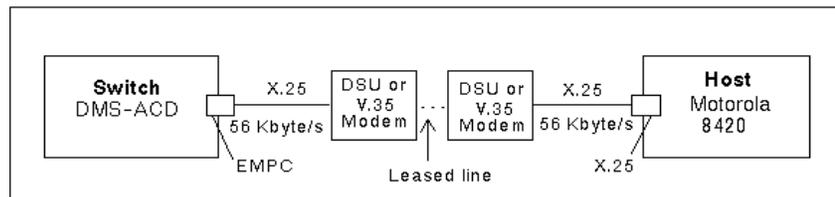


Figure 2.4 Link requirements when host is remote from switch (Option 2)



Tape drives**8420**

QIC-150 to load OS
and software
DAT for backups

XR VME

DAT to load OS and
software and for backups

Host

The CC MIS host is either a Motorola VME, Model 8420 or an XR VME Model XR 9112, using the Motorola UNIX operating system. It contains the CPU, operating system, tape drives, and hard disk. The host interfaces with the DMS-ACD and the serial and parallel devices used in the product.



The XR VME is shipped with all new CC MIS systems installed in Release 3.1 and 3.2. (The VME 8420 model is no longer shipped for new systems.)

The host is available in different configurations, from 8 ports to 50 ports (VME 8420) and 8 to 64 (XR VME). The configuration depends on the number of devices in the application connected serially to the host.

Uninterruptable Power Supply

Uninterruptable Power Supply (UPS) can be purchased as an option (highly recommended if AC is used) to prevent power failure to the host. The UPS provides about 20 minutes of power to the host after the normal power supply fails. CC MIS monitors the amount of time it has been powered by the UPS and gracefully terminates its processes if power is not returned to the system before the UPS fails. The UPS lessens the possibility of database problems due to power failure.

Tape drives

The host computer has a QIC-150 tape drive (only on 8420) and a DAT drive is also provisioned. On the VME 8420 the QIC-150 tape was used to load software and if needed, to back up the customer database. This configuration is applicable only on systems configured prior to Release 3.1.



Starting in Release 3.1, new systems (XR VME) are configured and shipped with only the DAT tape drive. The OS and software upgrade tapes are available on DAT tape.

Hard disk

CC MIS stores historical data on the host hard disk(s). The disk can be one of three sizes: 520 Mbyte (discontinued), 1 Gbyte, 2 Gbyte, or 4 Gbyte. The size of the drive required is based on customer configuration and database requirements, such as the number of agents, ACD groups, and the required storage retention for historical data. Additional space (approximately 500 MBytes) is needed for the new OS.

XR VME

The XR VME uses the Motorola RAID.

Disk mirroring

Disk mirroring for VME Systems is provided by the RAID hardware (MicroDFT-1) and two identical SCSI disks. Disk mirroring performs the following functions:

- maintains two sets of identical data, protecting from temporary loss of access due to disk failure
- mirrors operating system, application software, and databases
- provides the ability to synchronize data if a disk fails or for backup purposes



Disk mirroring does not eliminate the possibility of database integrity problems that may occur due to a power failure while the database is active. If a problem does occur, the database must be restored from the most recent backup. Use of the Oneac 900 Uninterruptable power supply (in conjunction with the Motorola Environmental Board) allows CC MIS to accomplish a graceful shutdown when backup power can no longer be sustained.

System interfaces

The host provides the following interfaces:

- Ethernet LAN interface (optional) - Used to connect PCs (used as a supervisor terminal).
- Serial interface - Used to connect the maintenance console, supervisor terminals (PCs and video terminals), printers, and wallboards. The number of serial interfaces provided depends upon the size of the host (8 to 50 ports on 8420 and 8 to 64 on XR VME). An X.25 interface is used to connect to the DMS-ACD. A system can be configured to provide redundant links to the DMS-ACD.

Note: Link redundancy is a purchasable option.

- Parallel Printer Interface - for a parallel printer.

Minimum upgrade requirements

The minimum requirements for upgrade from CC MIS Release 2.x to 3.2 are as follows:

- at least 32 Mbyte RAM
- approximately 400 Mbyte space for operating system and CC MIS software
- New version of UNIX operating system - SVR4.3 (NTOS 2.x)

Discontinued

MVME8420 is no longer available. New systems ordered in Release 3.1 and 3.2 are shipped the XR VME.

Configuration of the host

The figures below show the VME Model 8420 configuration for a system with 16 or more ports and eight or fewer ports. This configuration may be used for a system utilizing LAN connectivity for terminals. The XR VME Model XR 9112 is shipped for new systems starting in Release 3.1. The XR VME configuration is shown later in this chapter.



The RAID disk mirroring hardware is not shown in the figures below.

Figure 2.5 Maximum VME configuration

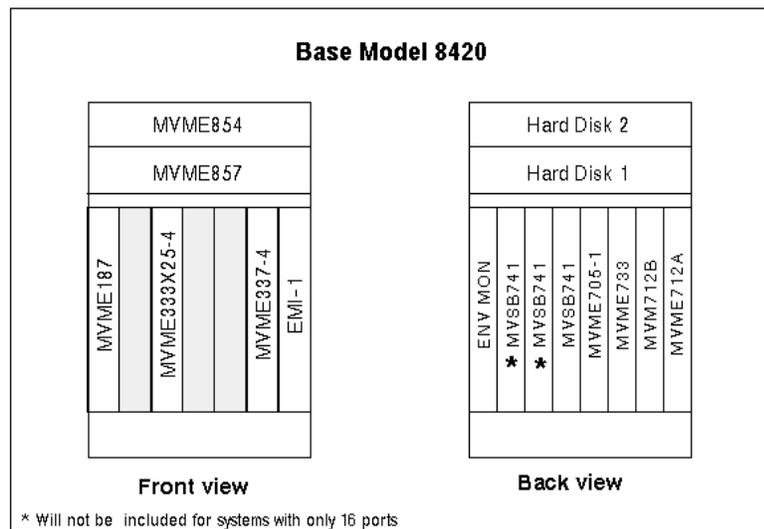
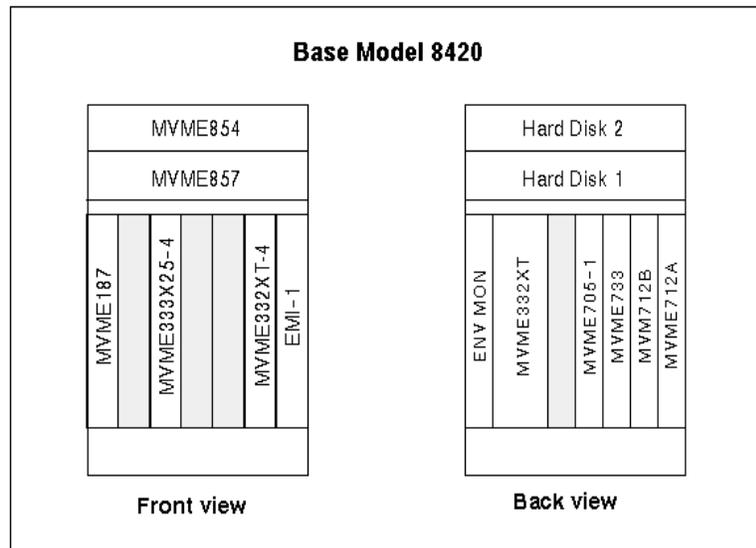


Figure 2.6 Eight or fewer port configuration



The following table describes the components shown in the figures above:



The RAID disk mirroring hardware is not listed in the table below.



The VME 8420 model is no longer shipped for new systems. The XR VME is shipped with CC MIS systems ordered and installed for Release 3.2.

Table 2-3: MVME 8420 Component Descriptions

Component	Description
Model 8420 (includes MVME187)	6-Slot Deskside Enclosure Auto-ranging power supply Single 25 MHz 88100 processor with 32K cache (no longer available) (or) Single 33 MHz 88100 processor SCSI bus interface Four serial interfaces (used for console, dial-up maintenance, printer (optional), wallboards (optional), and supervisor terminals (optional)) Ethernet LAN interface One parallel interface (may be used for parallel attached printer)
MVMECORDxxx	(not shown) - power cord; xxx indicates country (US, UK, FR)
MVME712A	Transition module containing four db9 serial I/O connectors, a db25 Parallel Port, and a 4-pin phone jack for the remote service modem. (Attaches to MVME187)
MVME712B	Transition module containing the Ethernet (for use with external transceiver) and external SCSI ports. This component is required even if LAN connectivity is not utilized due to the SCSI port. (Attaches to MVME187)

Table 2-3: MVME 8420 Component Descriptions

Component	Description
MVME733	9600 baud service modem; used for dial-up maintenance/diagnostics. Usable in US and Canada only.
MVME257C or MVME259FD	32 Mbyte, or 64 Mbyte memory - memory requirements are based on the maximum number of active supervisor terminals. Note: If the number of terminals exceeds 32 or more than 4 partitions are defined, then 64 Mbytes of memory is required.
MVME854	525 Mbyte SCSI QIC-525 Tape Drive
MVME866 or MVME868 or MVME877	520 Mbyte (discontinued), 1 Gbyte or 2 Gbyte Hard disk drive. The size of the disk drive required is based on the customer configuration and database requirements (number of groups, agents, and storage retention). CC MIS will work with other SCSI disk drives including RAID.
MVME857	4mm Digital Audio Tape (DAT) drive
MVME332XT-4	8-port serial/1-port parallel controller with transition module; used for supervisor terminals, printers, or both. This component is not required if MVME337-4 is used (see below) or if four or fewer serial connections are needed (small configuration or LAN connectivity).
MVME337-4 (includes MVME337-1 and MVME705-1)	Communications I/O Kit - EVSB I/O Controller (MVME337-1) and 4-slot transition module (MVME705-1). This component and the MVS741 provide up to 48 serial ports for supervisor terminals, wallboards, and printers. Note: CC MIS limits the number of active supervisor terminals to 64 or less (depending on purchased options).

Table 2-3: MVME 8420 Component Descriptions

Component	Description
MVSB741	16-channel EVSB transition module (attaches to MVME337-4) - each module provides 16 ports which may be used for terminals, wallboards, or printers; up to four may be attached to a MVME337-4.
MVMECBL330	(not shown) - crossover cables (attaches to MVME337-4 or MVME337-4) - one is required for each serial connection (supervisor terminal, wallboard, or printer).
MVMECBLSA2	DB9 to DB25 cable (attaches to MVME712A) - one is required for each serial connection (supervisor terminal, wallboard, or printer).
MVME333X25-4 (includes MVME333S-2 and MVME705-1)	X.25 Kit - includes the X.25 Communication Controller (MVME333S-2) and transition module (MVME705-1).
MVME703V35	V.35 cable connection. Required only if V.35 is used on the switch interface - one for each link (that is, two are required if link redundancy options are utilized.)
TM 5000AA	(not shown) Amber Text Monitor (console)
KB0220	(not shown) DEC VT220-style keyboard
MVMECBLT25	(not shown) console cable
ENVMON EMI-1	Environmental Monitor Board - detects environmental conditions and allows software to take appropriate action.
ON900	(not shown) 900Vac Uninterruptable power supply (UPS)

XR VME hardware

Figure 2.7 Minimum XR VME configuration

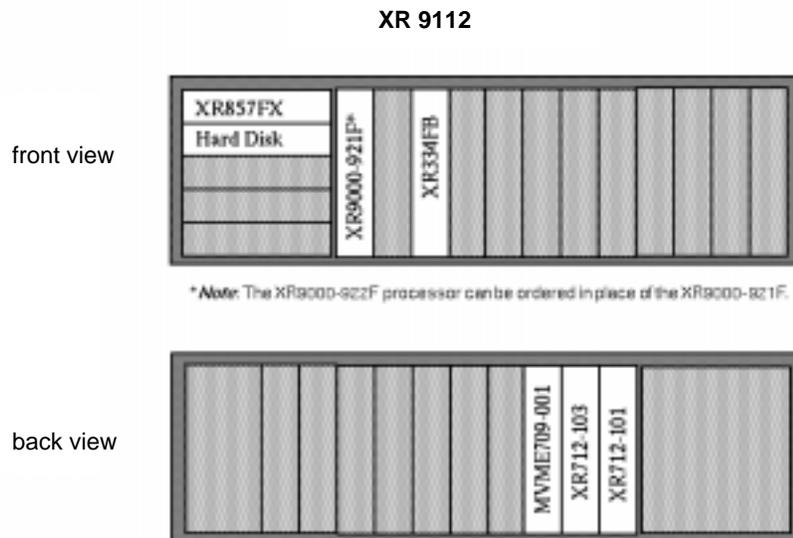
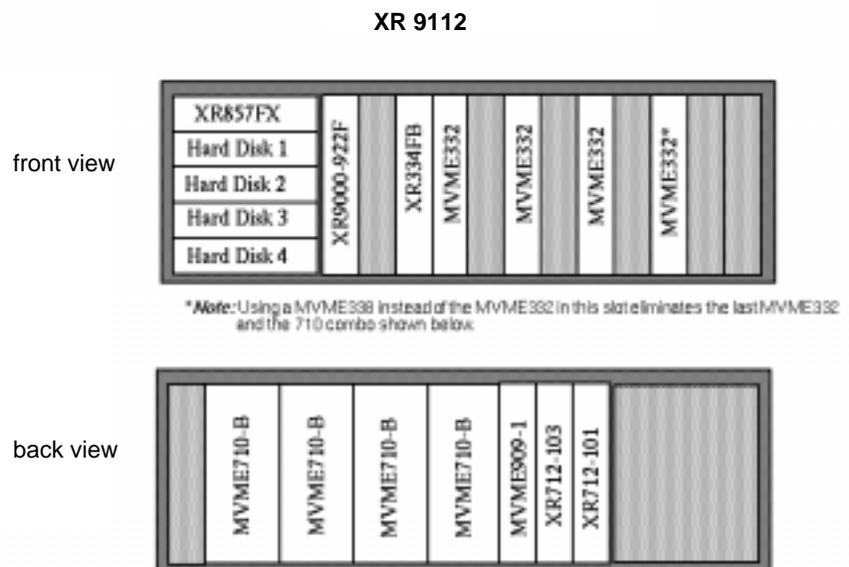


Figure 2.8 Maximum XR VME hardware configuration



The following table describes the XR VME components shown in the figures above.



The RAID disk mirroring hardware is not listed.

Table 2-4: XR VME Component Descriptions

Component	Description
Model XR 9112 XR9000-922F (197-50/64) or XR9000-921F (197-50/32)	12-Slot Deskside Enclosure Auto-ranging power supply Single 50 MHz 88100 processor with 32K or 64 K cache SCSI bus interface Four serial interfaces (used for console, dial-up maintenance, printer (optional), wallboards (optional), and supervisor terminals (optional)) Ethernet LAN interface One parallel interface (may be used for parallel attached printer)
MC1000F-AC700 or MC1000F-DC700	(not shown) - 700W AC Power Supply. (not shown) - 700W DC Power Supply.
XR712-101F (MVME712-101 spare kit)	Transition module containing four db9 serial I/O connectors, a db25 Parallel Port, and a 4-pin phone jack for the remote service modem.
XR712-103F (MVME712-103 spare kit)	Transition module containing the Ethernet (for use with external transceiver) and external SCSI ports. This component is required even if LAN connectivity is not utilized due to the SCSI port.
MVME297KC (32MB)	32 Mbyte memory - memory requirements are based on the maximum number of active supervisor terminals. Note: If the number of terminals exceeds 32 or more than 4 partitions are defined, then 64 Mbytes of memory is required. (64 Mbytes is achieved using two 32 Mbytes modules.)

Table 2-4: XR VME Component Descriptions

Component	Description
XR867BF (1G) or XR868AF (2G) or XR869F (4G)	1 Gbyte, 2 Gbyte, or 4 Gbyte Hard disk drive. The size of the disk drive required is based on the customer configuration and database requirements (number of groups, agents, and storage retention). CC MIS will work with other SCSI disk drives including RAID.
XR857XF	4mm Digital Audio Tape (DAT) drive
XR332FXT Package consists of: MVME332XTS MVME710-B	8-port serial/1-port parallel controller with transition module; used for supervisor terminals, printers, or both. This component is not required for small configuration (eight or fewer ports) or LAN connectivity.
MVME338 (optional)	Terminal Server controller connection interface card.
SYS338S16P	(not shown) Terminal Server.
MVMECBL330	(not shown) - crossover cables - one is required for each serial connection (supervisor terminal, wallboard, or printer).
XR334FA Package consists of: MVME334B MVME709-001	X.25 Communication Controller Bundle. (RS-232)
MVME334B	X.25 Communication Controller only.
MVME709-001	Card for MVME334A.
MVME710B (optional)	Transition module - use with XR332FXT.
SMMCCMIS-V35 (MVME709JMPRS MVSbv35) (optional)	V.35 cable connection. Required only if V.35 is used on the switch interface - one for each link (that is, two are required if link redundancy options are utilized.)

Table 2-4: XR VME Component Descriptions

Component	Description
TM5005AA	(not shown) Amber Text Monitor (console)
KB-0220	(not shown) DEC VT220-style keyboard
ON900A-SA88-PSS (optional)	(not shown) 900Vac Uninterruptable power supply (UPS)

Power and space requirements

The following summarize the power requirements and space requirements for CC MIS.

Figure 2.9 CC MIS space requirements

Entity	Space required
Cabinet type: XR VME	
Height	21.48 in.
Width	18.96 in.
Depth	18.50 in.

Entity	Power required
Voltage tolerance	120V - 240Vac
Rated amperes	9.0 amps for 115Vac
Frequency range	50.0 - 60.0 Hz

Maintenance console

Engineers maintain CC MIS through the maintenance console. Through this console, engineers can perform the following functions:

- install or upgrade CC MIS application software
- perform diagnostics
- adjust CC MIS configuration and logon parameters to the DMS-ACD
- access the error log
- perform routine backups

These maintenance functions are accessible only on the maintenance console. One maintenance console is provided per CC MIS system; the maintenance console is a VT220. The system also allows for one dial-up maintenance interface (VT220 compatible recommended).

The CC MIS maintenance and administration software allows you to perform maintenance functions. By logging into this software, you are logging into UNIX.

Supervisor terminals

Supervisors manage their agents through menus accessed at a supervisor terminal.

The terminal can be one of the following types:

- DEC VT420, 320, 220 (Text only)
- HP 700/22
- IBM PC or compatible
 - For Text: 286, 386, or 486 CPU
 - For Windows: 486 CPU (minimum 33 MHz)

User interface

There are two types of interfaces available for PCs used as a supervisor terminal: Windows or Text. The type of user interface places certain requirements on the PC. These requirements are summarized in the table below.

Table 2-5: PC Requirements

Item	Windows Interface	Text Interface
CC MIS application software	WCCMIS	TCCMIS
MS-DOS (Version 6.2)	x	x
EGA or VGA card with 256 K	x	x
EGA or VGA Color monitor	x	x
RAM Note: 8 Mbytes is required for Windows 95.	4 Mbytes	384 Kbytes
One serial communication port for connection to the CC MIS or LAN	x	x
One parallel or serial port for attaching a local printer (optional)	x	x
Mouse device supported by Microsoft Windows Note: If a serial mouse is used, one serial port for attaching mouse	x	not required

Table 2-5: PC Requirements

Item	Windows Interface	Text Interface
CPU 286 or 386 486 CPU minimum of 33 MHz	not supported x x	x x not required
MS Windows, version 3.1, 3.11, or Windows 95	x	not required

Connection to the host

Terminals may be attached directly to the host or through error detecting and correcting modems. Any non-standard use of modem signals, such as that required by some line drivers, should be verified through your host technical support and design.

In addition, PCs used as supervisor terminals may be connected to the host using a serial connection or a LAN connection. LAN connectivity places certain requirements on the PC. These requirements are summarized in the table below.

Table 2-6: Requirements for LAN connected PCs

Item	Windows Interface	Text Interface
FTP PC/TCP Network Software for DOS, Version 2.1 Note: Not required when using Windows 95.	x	x
3 Com Etherlink III LAN adaptor card	x	x
1 Mbyte memory and 20 Mbyte hard disk (minimum)		x

Printers

CC MIS has provisions for system printers, and as a purchasable option, local printers. These printers print the reports and displays.

System printers

CC MIS supports multiple dedicated system printers. The number is limited only by the number of available ports. The types of printers supported are:

- HP RuggedWriter
- HP LaserJet 4 or 4+
- Epson LQ 850
- Epson FX 850 or FX 870
- DEC LA100, LA120, and LA210 with RS232 interface (supported when running in an Epson emulation mode)

Connection to the host

System printers may be attached directly to the host or through error detecting and correcting modems using a serial connection. One parallel connection is supported.



Any non-standard use of modem signals, such as that required by some line drivers, should be verified through your host's technical support and design.

The maintenance printer is connected using either the parallel or a serial port on the VME.

Local printers

Printers can be attached to PCs used as supervisor terminals. These printers can be configured into the system and used by any or all supervisors.

Local printers are not intended to be used as high-volume report printers. They are intended to be used primarily by the supervisor assigned to the PC to which the printer is attached. PC attached printers cannot be used by the maintenance interface.

Connection to the PC

Local printers may be attached through any one of the standard parallel printer ports or a serial port, depending on the interface provided on the printer.



If the PC is connected to the host using a serial connection, the PC must have two serial ports to use a serial printer. If the PC is connected to the host by way of a LAN connection, the PC need only have one serial port to use a serial printer.

Wallboards

A wallboard is a Silent Radio message board that displays a one-line LED with up to 24 2-inch characters. Supervisors can display information on wallboards that are mounted on the wall of an ACD group office. Supervisors use the wallboard to notify agents of statistical and administrative information.

CC MIS supports multiple wallboard ports defined through the maintenance interface. The number is limited only by the number of available ports.

Wallboards may be connected to the host in three ways: attached directly to individual ports on the host, multiple wallboards (up to five) chained together on one port, or multiple wallboards (up to six) connected to a y-cable.

CC MIS requires the following hardware for the wallboard configuration:

- Cybernetic Data Products ADT 3502/24 T version 3 wallboard unit using version 4.xx firmware
- 2 back-to-back modems if unit is over 50 feet from CC MIS system
- A vendor supplied custom EPROM is required to display characters in French (Note: Language is a purchasable option in CC MIS)

Purchasable options

The following table summarizes the features in the baseline product and the software options that can be purchased, and the area of the baseline product the option affects.

Table 2-7: Purchasable options

Baseline Product	Purchasable Options					
	Windows Interface	Local Print	Formula Definition	Link Redundancy	Wall board	Language
Supervisor Position - Text interface and online help - LAN connectivity - Standard Queue Statistical Display - Standard Agent Status Display - Historical database - Standard reports and Custom reports - Standard statistics and formulas	X	X	X	X	X	X
Maintenance Position - Maintenance and Administration		X		X	X	
Host - X.25				X		

Hardware requirements

The following table shows the hardware requirements for the CC MIS features.

Table 2-8: Hardware requirements

Hardware	Disk Mirroring	Link Redundancy	Local Print	Text User Interf	Windows User Interf	LAN	Wall board
DMS-ACD 1 EMPC or MPC 2 EMPCs or MPC		X					
HOST 1 SCSI disk 2 SCSI disk 1 DAT drive	X						

Table 2-8: Hardware requirements

Hardware	Disk Mirroring	Link Redundancy	local Print	Text User interf	Windows User Interf	LAN	Wall board
Supervisor Terminal							
VT420, 320, 220				X			
286/386 (100% IBM PC compatible)				X			
486DX 33 Mhz (100% IBM PC compatible)				X	X		
mouse and correct port type for it					X		
Parallel or serial port			X				
Serial port to connect to host				X	X		
DOS 6.2				X	X		
MS Windows 3.1 or Windows 95					X		
FTP PC/TCP network software for DOS, v2.1 (not req. with Windows 95)				X	X	X	
3Com Etherlink III LAN adapter card				X	X	X	
1 Mbyte memory and 20 Mbyte hard disk (min)				X			
Wallboard							
DakTronics							X

Section 3: Functions and features



Introduction

CC MIS performs the following functions to assist in the management of ACD operations:

- data collection
- reporting
- configuration control

In addition to these functions, CC MIS provides the following software features:

- three modes of operation
- two user interfaces
- standard and customizable real-time displays
- parameter administration of supervisor profiles by system administrators
- maintenance and administration of the CC MIS system
- enhanced security for better control over access to CC MIS
- multiple user partitions
- multilingual capability (Canadian French is available, as well as English, in the Textual and Windows interfaces).

Note: See Chapter 2, "System components" for information on features that are hardware dependent.

CC MIS Release 3.0 standard features

The following features were added and are standard with Release 3.0 and are included in Release 3.2.

- Automatic Position Reassignment (APR)
- BCS35 Support
- enhanced agent and group status
- shift and 24 hour real-time statistics
- increased report definitions (up to 500)
- Windows based Configuration Control screens (Load Management)
- One Partition

Optional CC MIS features

The following features are optional purchases. This document or related CC MIS documents address these features. Verify with the distributor that your system is equipped with one or all of the features.

- Multiple Partitions
- Dual Data Links
- Language Options
- Link Redundancy
- Disk Mirroring
- Terminal Capacity

Maintenance Release 3.1

The following changes and enhancements were made to the Supervisor interface in the CC MIS Maintenance Release 3.1. For additional information, refer to the CC MIS Supervisor's Guide, NTP 297-2671-340.

Employee ID - The Employee ID field has been added to the Agent Definition screen. This field allows you to enter up to a 14 character employee ID for each agent. This employee ID can then be used as a key in custom tabular and graphical reports. The Employee ID field also appears in the Agent Database Report.

Group Ordering - This feature allows supervisors to set a preference for the order in which ACD Groups are presented in reports and real-time (Queue Statistics and Agent Status) displays. (This feature only applies to the Windows Interface.)

Flexible DN Formatting - This feature allows the DN formatting to be determined by a customer-defined template. Leading zeros are no longer removed from the DNs that are less than 10 digits.

Real-time Display Refresh - Real-time displays (24 hr and Shift) are no longer initialized to zero when CC MIS is shutdown. These statistics are restored immediately following system start-up. This only applies to controlled shutdowns - shutting the system down through the Maintenance interface or power down with an initialized UPS.

Maintenance Release 3.2

The following changes and enhancements were made to CC MIS in Maintenance Release 3.2:

Forced Agent Timers - Agent timers were added for agents in a forced state in the Agent Status screen.

System Reports - Two new reports: Alarm Definition and Schedule Definition database system reports.

Enhancement to Spectrum Data - Prior to Release 3.2, spectrum data was normalized and did not always add correctly. Starting in Release 3.2, the spectrum data will always add up to 100%.

SNMP feature - The Simple Network Management Protocol (SNMP) feature was added to the Supervisor and Maintenance Interfaces. This feature allows managers to view information about network components. This is a purchasable option.

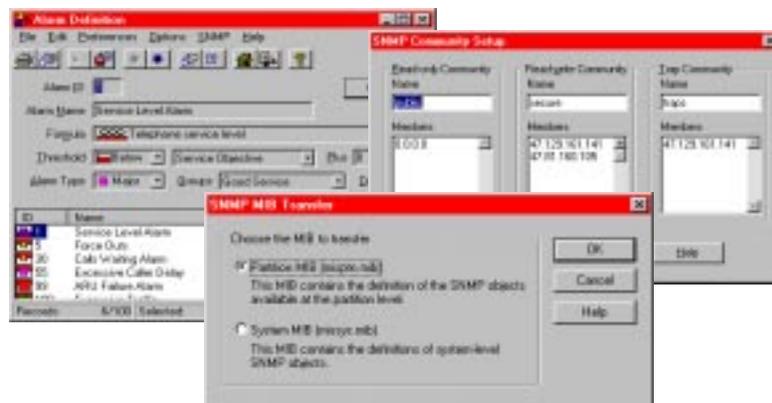


Due to the technical nature of the SNMP capability, a background in network management and the SNMP protocol is recommended for administrators and users of this feature.

The SNMP feature is accessed in the Maintenance Interface from the Configuration menu. In the Supervisor's interface, the feature is enabled in the Privilege Level Definition window and is accessed by the supervisor using the Displays / Alarms option from the CC MIS Main menu. This is the starting point for all SNMP-related activities at the partition level, including:

- alarm definition and maintenance,
- SNMP community setup and maintenance, and
- SNMP MIB file transfer.

The screens accessed to use the SNMP feature are shown below.



Network Time Protocol - Support has been added to allow administrators to specify reliable time servers for the CC MIS system.

Data collection

CC MIS collects information about the ACD operation, storing the data in a historical database. The database performs the following functions:

- maintains its data elements for the length of time needed by the customer
- allows reports to be generated for any time period for which the data has been collected and stored

CC MIS provides flexible report generation as a result of the way it collects and stores data and generates reports.

Collecting and storing data

Each day, CC MIS collects data for fixed 30-minute time periods. CC MIS stores data in the following categories:

- Interval data-data collected for fixed 30-minute time periods that is stored for a specified number of days
- Shift data-combination of the appropriate and available Interval records
- Daily data-24 hours of interval data that is stored for a specified number of days
- Period data-combination of the appropriate and available Daily records.
- Weekly data-7 days of Daily data that is stored for a specified number of weeks
- Monthly data-Weekly data for the month that is stored for a number of months

These storage intervals determine the granularity of the information used in reports.

Impact of storage parameters on reports

You identify the number of days, weeks, and months for which data is kept in these categories when you configure the database. The number of days for which you keep this data determines the time periods for which valid reports can be generated.

Reports can be requested for time periods extending beyond the data retention values set for the database. However, these reports only provide data for the time periods supported by the data retention values. Periods extending beyond the data retention values are listed, but no values are provided.

Impact of storage parameters on disk space

The length of time that you save data, in conjunction with the number of agent positions and ACD-DN groups, determines the amount of disk space required for the historical database. During installation, you calculate the amount of space needed through the Storage Calculator tool. Any available disk space is used for the CC MIS application software, the operating system, temporary storage for generated reports, log files, and other databases used by the system.

Database configuration parameters

You configure the historical database to reflect the needs of your installation. You set the configuration parameters based on the following information:

- size of your ACD operation according to the number of
 - ACD groups, positions, Supplementary DN's (SDN), and agents
 - line-of-business codes used by an ACD group
 - walkaway codes used by an ACD group
 - source and destination ACD groups used for overflow and transfers
 - agent events per day
 - position moves per day
 - ACD-DN reassigns per day
- hours of operation according to the number of
 - shifts
 - operational hours per day and week
- storage duration of data

The system ensures that the database configuration values are not exceeded for the number of ACD groups, the number of agents, and the number of positions.

When these values are exceeded, the system sends a warning log message indicating the values have been exceeded, but continues to store data until the maximum limits of the product are reached, or the database capacity is exceeded. When the configured limit (disk space for partition) is reached, the oldest data is deleted to make room for new data.



No data type has precedence over other data types with regard to storing or dropping data.

Changing the configuration parameters

While the system is operational, a maintenance engineer can view and change the database configuration. If configuration parameters are changed, you may lose data. If you downsize, you lose the oldest data.

System partition databases

CC MIS allows system partition(s) databases to be customized for a particular user. When a partition is added to the system, the administrator can adjust disk resources using the Disk Allocation command in the Partition Configuration screen. Storage allocation needs to be performed for each partition.



Prior to Release 3.0, the Storage Calculator screen was displayed when the system was initially installed. The Storage Calculator screen is now available for the administrator, as needed, to define/allocate system resources across multiple partitions.

When defining a partition, you must follow the procedure in the exact order specified. The process of defining a partition takes between 5-15 minutes.

Multi-tenant partitions

CC MIS allows you to logically partition a node so that multiple customer defined users can co-exist on a single node. There can be up to 16 customer partitions. Each partition contains its own system and historical database.

This allows for partitions that are running in varying modes. For example, a partition for User A can be running in a training mode while partition for User B is in product mode. Partitions can be added or deleted while the system is running without disturbing other existing partitions. Partitions can be started or stopped independently to allow transitions between the training, precut, and product modes without affecting other partitions.

Partitions are added or deleted using the commands on the Partition Configuration menu in the Maintenance Interface. Partitions are started and shut down by selecting the Run State Utilities command, then the Partition Startup and Shutdown option.

Reporting

CC MIS allows you to generate historical reports, agent log reports, and system reports.

- Historical reports-customizable reports that contain information about call events
- Event log reports (Agents)-non-customizable reports that contain information about agent log in and log out events and walkaways
- System reports-non-customizable reports that contain information about the CC MIS configuration



For examples of these reports, refer to Appendix A, "Example reports."

Generating historical reports

CC MIS allows you to define the presentation and contents of historical reports about call event information. You can define the statistics that are included in the report, the time period of the report, and the format of the report.

Possible statistics groups

CC MIS groups the data it collects into six statistics groups. Each group has key fields that allow control over the order and totalling of data in the reports. The groups are

- Destination ACD group statistics-maintains statistics by ACD group
- Overflow statistics-maintains statistics associated with source/destination
- ACD group pairs, such as overflow and transfer statistics
- Agent statistics-maintains statistics associated with specific agents, keeping data separately for agents that move between supervisors and groups
- Line-of-business codes-maintains statistics associated with Line-of-business (LOB) code data by group and agent
- ACD-DN-maintains statistics by ACD-DN (primary and supplementary)
- Walkaway-maintains statistics associated with walkaway codes by ACD group



Walkaway by Agent data is also kept, but not as part of a statistics group. Walkaway by Agent data is reported on by the standard Event Log reports, which are not customizable.

Report formats

The report format determines the statistics provided in the report and the format of the report, tabular or graphical. A tabular format presents data as numbers in columns. A graphical format presents data as line graphs, stacked line graphs, vertical or horizontal bar charts, and pie charts.

Standard report formats

CC MIS provides standard report formats. These formats provide information commonly used by any ACD operation. The information is either a raw statistic collected by CC MIS, or data resulting from a formula that combines the raw statistics mathematically. The table below describes the standard tabular report formats.

Table 3-1: Standard report formats

Standard Format	Description
ACD Call Duration	Identifies the duration of a call by measuring from when the call is answered by the agent until the call is released by the agent.
ACD-DN Calls Abandoned	Identifies the total number of calls abandoned per ACD-DN and the total abandon delay.
ACD-DN Calls Answered	Identifies the total number of calls answered per ACD-DN and the total answer delay.
ACD Group by Agent Performance	Identifies agent activities for each group. This report can tell if there is a problem with a particular agent or if all agents are experiencing the same difficulties.
ACD Group by Agent Transfer	Identifies agent transfer activities for each group.
ACD Group by LOB Code	Identifies the number and duration of calls by LOB code for each group.
ACD Group by Walkaway Code	Identifies the walkaway codes associated with a specific ACD group.
ACD Group Overflow	For each source and destination ACD group pair, indicates the number of calls that either queue overflowed (for example, due to exceeding maximum wait or queue size) or time overflowed from the source to the destination.
ACD Group Transfer-In	Identifies the number of calls that were transferred in to a group.
ACD Group Transfer-Out	Identifies the number of calls that were transferred out of a group.

Table 3-1: Standard report formats

Standard Format	Description
Agent Summary	Provides detail regarding the types of calls received/ made and the amount of time spent for each agent.
Agent by ACD Group Performance	Identifies the activities of all agents sorted by Agent ID through ACD group.
Agent by LOB Code	Identifies the activities of all agents sorted by LOB codes.
Agent by Subgroup Performance	Identifies the performance of each agent under different subgroups.
Delay Before Abandoning	Identifies how many calls were abandoned and how long the callers waited before they hung up.
Delay Before Answering	Provides information about the service callers receive.
LOB Code by ACD Group	Identifies call processing time for each LOB code. Breaks down information to show which ACD group received the calls associated with the LOB code.
LOB Code by Agent	Identifies call processing time for each LOB code. Breaks down information to show the LOB codes associated with specific agents.
Summarized ACD-DN Call Analysis	Identifies the ACD-DNs and summarizes the associated call activity.
Summarized ACD Group Call Analysis	Provides an overall analysis of an ACD group. Shows how calls were handled and maximum and average delays and call durations.
Summarized ACD Group Performance	Identifies groups in the system and summarizes group load performance. It shows the actual number of calls each group answered and the average time it took to handle each call.
Summarized ACD Group Transfer	Identifies the groups and summarizes transfer information for the groups.
Subgroup by Agent Performance	Provides supervisors with performance information for their agents.
Walkaway Code by ACD Group	Identifies the reason for and the total time spent in walkaway state by an agent in a specific ACD group.

The table below describes the standard graphic report formats.

Table 3-2: Standard graphical reports

Standard Format	Description
ACD Group Calls Abandoned Graphic	For each ACD Group, shows how many calls were abandoned before and after receiving a recorded announcement.
ACD Group Calls Answered Delay Graphic	For each ACD group, shows how many calls were answered before and after the delay objective.ACD Group Calls Answered Delay Graphic
ACD-DN Calls Abandoned Graphic	For each ACD-DN, shows how many calls were abandoned before and after receiving a recorded announcement.
ACD-DN Calls Answered Delay Graphic	For each ACD-DN, shows how many calls were answered before and after the delay objective.

Data Only report format

The standard reports can be generated in a Data Only format. The differences between the Data Only report and the standard format are as follows:

- The Data Only reports have no column headings, total lines or total indication lines
- The report title is the topmost line of the report
- Each key field(s) is repeated on every detail line
- No report info file is generated

The Data Only report may be directed to a printer port to which a device such as a PC or other computer is attached. This computer monitors for data and extracts it as it is sent by CC MIS. Additionally, if the Windows interface is utilized on the supervisor terminal then the report may be directed to a disk file that has been configured within the windows interface.

Creating your own report formats

In addition, CC MIS allows you to create your own report formats. By creating your own report formats, you select the statistics provided in the report and the format of the report.

Using your own formulas

When you create your own report format, you can include in it information generated by formulas that you have also defined.

Using spectrums

Reports can provide information on spectrums, which are fields that are time-based and consist of multiple time-value categories. Three different spectrums are available:

- answer delay
- abandon delay
- ACD call duration

CC MIS provides standard spectrum definitions that you can modify. When you modify the spectrums, you distribute the time values (in seconds) into a time spectrum of up to 10 categories for reporting purposes.

Report parameters

Report parameters determine the records from the database that are included in the report. The parameters identify the report format, the time-frame of the data to retrieve, the method used to sort and total the data in the report, and the specific key fields to extract.

Reporting by logical groups

The ACD switch software allows the definition of groups of agents that process ACD calls. The switch allows 256 groups with up to 256 agents allowed per group. You may, however, have more than 256 agents performing the same logical function even though they are assigned to different groups. CC MIS allows the association of multiple groups such that the historical data for all the groups is combined for reporting purposes. Thus, you may simulate for reports, the existence of groups containing more than 256 agents. In so doing, you are reporting by logical groups.

Requesting reports

Reports can be generated on an ad hoc basis, or they can be scheduled to print. In addition, historical reports can be viewed on your terminal as a soft copy or sent to a printer.

Event log reports

CC MIS provides four event log reports for agents. These reports are not customizable as are other historical reports. However, they require the definition of report parameters to determine the data to extract from the database. The table below describes the event log reports.



For examples of these reports, refer to Appendix A, "Example reports."

Table 3-3: Standard graphical reports

Report	Description
Agent First Login/Last Logout	Shows the workday activity for each agent. The first time the agent logged in and the last time the agent logged out is reported.
Agent All Login/Logout	Shows all login and logout activity for each agent.
Agent Detail	Shows all login, logout, and walkaway activities for each agent.
Agent Walkaway	Shows the walkaway reasons for the walkaway activities recorded for each agent.

System reports

CC MIS provides system reports. These reports correspond to the system administration data built through the Parameter Administration menu. These reports are not customizable, and do not require the definition of report parameters to determine the data to extract from the database. The table below describes the system reports. For examples of these reports, refer to Appendix A, "Example reports."

Table 3-4: System Reports

Report	Description
Configuration	Contains configuration data for all positions, groups, and ACD parameters as received from the ACD switch in the download information.
Supervisor	Lists profile information for all supervisors.
Privilege Level	Contains privilege level information which has been entered through Parameter Administration, Privilege Level Definition.
Scope	Contains scope information which has been entered through Parameter Administration, Scope Definition.
Shift	Contains shift information which has been entered through Parameter Administration, Time Frames Definition.

Table 3-4: System Reports

Report	Description
Period	Contains period information which has been entered through Parameter Administration, Time Frames Definition.
Threshold	Lists the thresholds defined in the database.
ACD Group	Lists the ACD groups defined in the database that have been entered through Parameter Administration, ACD Group Definition.
ACD-DN	Contains ACD-DN information which has been entered through Parameter Administration, ACD-DN Definition.
Alarm Definition	Lists all alarm definitions that have been defined through the Alarm Definition mode.
Agent	Lists the agents defined in the database.
Logical Group	Lists the groups sorted by logical group.
LOB Code	Lists the LOB codes defined in the database.
Schedule Definition	Lists the schedules defined in the database.
Walkaway Code	Lists the walkaway codes defined in the database.

Printing reports

CC MIS allows multiple dedicated system printers (number limited by available ports) and up to 64 local PC printers. The local PC printers can be configured into the system and used by any or all supervisors. Only PCs running the Text TCCMIS or Windows WCCMIS packages may have their attached printer configured as a local printer in the system.



The number of local PC printers allowed in the system is determined by the number of PC-supervisor terminals in your system. The maximum number of supervisor terminals (of any type) is 64.

CC MIS provides three types of reports:

- Historical reports
- Real-time reports (displays)
 - wallboards (see note)
 - Agent Status
 - Queue Statistics
- System reports



A wallboard is a light emitting diode (LED) message board, mounted on the walls of an ACD group office. The wallboard is used to notify agents of statistical information, such as the service level for your group, and administrative information. Queue statistics can also be displayed on a wallboard. While a message is displayed, any real-time values imbedded in the message are not recomputed and redisplayed. Values are updated only when a message is generated and sent to the wallboard.

Configuration control

CC MIS allows supervisors access to the configuration of elements controlled by the ACD switch. The table below identifies the elements that can be changed through CC MIS.

Table 3-5: Abilities provided through configuration control

Element to Control	Ability provided
Agent position assignments	<p>Reassign agents to ACD groups by changing the ACD group name or primary DN.</p> <p>Reassign agents to a subgroup by changing the supervisor number.</p>
Agent set parameters for an ACD group	<p>Specify the multi-stage Queue Threshold type as Call Queue size or Call Wait time. (Only on ACD switches using BCS32 or higher).</p> <p>Specify the threshold value that triggers the indicator on the agent set.</p> <p>Specify the number of digits displayed to agents in the ACD group.</p> <p>Specify the default LOB code for the ACD group.</p> <p>Specify the wrap-up time required by agents when they finish a call, thereby defining the amount of time an agent is considered not ready for the next call.</p>

Table 3-5: Abilities provided through configuration control

Element to Control	Ability provided
<p>Queue sizes for an ACD group</p>	<p>Specify the maximum number of calls that the incoming call queue can have at one time.</p> <p>Specify the maximum number of seconds a call can be held in the incoming call queue before being answered by an agent.</p> <p>Specify the number of logical calls that can be queued.</p> <p>Specify the number of transferred calls allowed to wait in queue for agents in a group.</p> <p>Specify the number of seconds a call waits at a given priority level before being promoted to the next higher level.</p>
<p>Time overflow parameters for an ACD group</p>	<p>Specify if priority 0 calls are the only type of calls to time overflow.</p> <p>Specify when the timer starts on overflow calls; either immediately when queued, or when the call reaches priority 0.</p> <p>Specify the number of seconds that a call remains in the incoming call queue before being offered to another group.</p> <p>Change the order in which call queues are serviced.</p> <p>Change the time delay threshold time.</p> <p>Change the table and index value that determines the time delay threshold route.</p>

Table 3-5: Abilities provided through configuration control

Element to Control	Ability provided
<p>Overflow targets for an ACD group</p>	<p>Specify the primary DN or group name of ACD groups to receive overflow calls for an ACD group.</p> <p>Change the table and index value that determines the route for new calls presented to a group that exceed the maximum queue size or wait time.</p> <p>Recorded announcements for an ACD group</p> <p>Specify the recorded announcement threshold for an ACD group.</p> <p>Specify the audio group for an ACD group.</p> <p>Specify the audio group used to give forced incoming announcements.</p> <p>Specify the audio group used to give Forced Overflow Announcements.</p> <p>Specify the ACD group to provide forced incoming announcements and delay announcements for the overflow calls in an ACD group.</p>
<p>Special routing for an ACD group</p>	<p>Specify the table and index value that determines the night service route.</p> <p>Specify the audio group providing night service announcements prior to rerouting the call over the night service route.</p> <p>Specify the table and index value for the controlled interflow route.</p>

Table 3-5: Abilities provided through configuration control

Element to Control	Ability provided
ACD-DN assignment and priorities	<p>Specify the trunk priority for primary or supplementary DNs.</p> <p>Specify the line priority for primary DNs.</p> <p>Note: Trunk priority is used only for supplementary DNs.</p> <p>Reassign supplementary ACD-DNs to another ACD group defined in the CC MIS database.</p> <p>Specify the name for the ACD-DN.</p>
Networking parameters for an ACD group	<p>Specify the number of calls that must be in the incoming call queue before new calls are networked to other groups.</p> <p>Specify the number of seconds that the oldest call must wait before new calls are networked to other groups.</p> <p>Specify the group preference weighting factor used to compute the best group to offer the networked call.</p> <p>Specify the most idle agent and number of idle agents weight factors used to calculate the resource index for the group.</p> <p>Specify the call handling time for the group.</p> <p>Specify whether the source group should be considered when determining the best target group for time overflow calls.</p>
Network targets for source/destination ACD group pairs	<p>Specify the preference weighting factor for the source/destination ACD group pair.</p> <p>View the resource index for the destination ACD group.</p>
View route and audio lists	<p>View the route list to determine the routes each ACD group may access.</p> <p>View the audio list to determine the audio groups each ACD group may access.</p>

Table 3-5: Abilities provided through configuration control

Element to Control	Ability provided
View OFRT table	View the Office Route entries that are defined on the ACD switch for all the ACD groups.
View IBNRTE table	View the International Business Route entries that are defined on the ACD switch for all the ACD groups.
View Audio table	View the list of all the audio group entries that are defined on the ACD switch for all the ACD groups.
View Transaction Log	View the Transaction Log.
Create or Modify Change Orders	Create or modify change orders, including attaching change orders to schedules.

Gaining access to configuration control

System administrators grant or deny a supervisor access to each configuration control function through the supervisor profile. When granted, a supervisor can alter the configuration of these elements at the ACD switch through CC MIS.

In the text interface, supervisors can access the configuration control screens from a real-time display (Agent Status, Queue Statistics, or custom display). This allows them to see the effect of their configuration changes.

Implementing a configuration change

Supervisors with access to configuration control can make ad hoc changes to the configuration. System administrators can schedule a group of configuration changes.

Note: The term ad hoc is used in Configuration Control to indicate that the changes can be made immediately, without defining a Change Order or scheduling, by executing the changes using the File/Execute option.

Modes of operation

CC MIS partitions operate in training mode, precut mode, and product mode. With the multi-partitions in CC MIS, one partition can be defined for training (running with a simulator link) and another running with a live link in the product mode. (When CC MIS is first installed, it is initially in the setup mode.)

Training mode

In the training mode, supervisors train on the product without affecting live calls. In this mode, there is no connection between the CC MIS and the DMS-ACD, and only training data is collected and reported.

When in training mode, CC MIS interacts with a switch simulator to provide training data. The simulator uses call scenarios and configuration control typical to the ACD environment. During training, supervisors can adjust load management values and move position assignments through the configuration control ability of CC MIS. As a result, the simulator generates ACD switch responses identical to ACD processing in a live environment.

Precut mode

Pre-cutover mode allows system engineers to enter all administration data into the new CC MIS databases in preparation for transition to product mode. During precut mode the following information is established:

- custom report and display definitions
- schedules
- ACD group and agent names
- threshold values

Product mode

By transitioning from precut mode to product mode, CC MIS collects live data based on the configuration of its ACD groups and agents. The information it receives is stored based on the configuration database. In product mode, CC MIS establishes a connection between it and the DMS-ACD.

Simultaneous training and product modes

Transition from training to product mode on a partition can occur without affecting the states of other partitions. This allows the switch simulator program to be running while an X.25 link(s) is also running. For single user installations, the multiple partitions are useful because they allow the definition of a small partition to be left in the training mode. This allows new supervisors to train on the system before moving to a live partition.

User interface

Supervisors and system administrators access the functions of the system through screens and menus, provide input to the screens through the keyboard and a mouse, and have access to online help.

CC MIS uses one of the following types of terminals for a supervisor position:

- DEC VT220, VT320, or VT420
- 286 (Text only), 386, or 486 PC

Positions that are PCs can print reports to printers attached to the PC.

Screens and menus

CC MIS provides two interfaces to the supervisor position, Text (TCCMIS) or Windows (WCCMIS). DEC VT220, VT320, and VT420 terminals are limited to the text interface. PCs can run either interface. In both interfaces, menus provide access to screens used by the supervisor to perform a function, and list the options and commands available to the supervisor at each screen.

Major differences between the Text and Windows interface

With the windows interface, you can have multiple active applications open at one time. In addition, the windows interface uses icons to communicate information about the system.

The main menu

The supervisor selects functions from the main menu, the menu that appears after logging into CC MIS. The selections available from the main menu are only the functions to which the supervisor has access, therefore the main menu may be different for each supervisor. Most of the functions on the main menu have submenus and commands to guide supervisors through CC MIS. A supervisor's main menu only displays the functions that are Enabled in the supervisor's profile.

The figures below show the main menu that has all CC MIS options Enabled.



If a system administration password has been defined, option 11 on the TEXT main menu changes to Enter system administration mode. Logout is changed to option 12.

Figure 3.10 WINDOWS main menu - all options Enabled

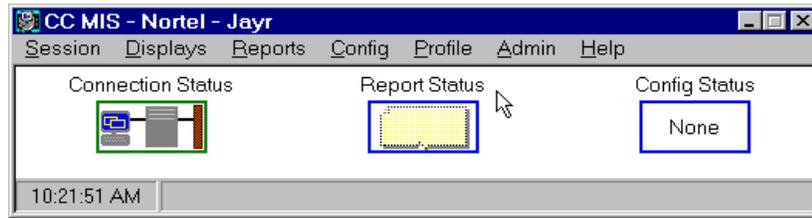
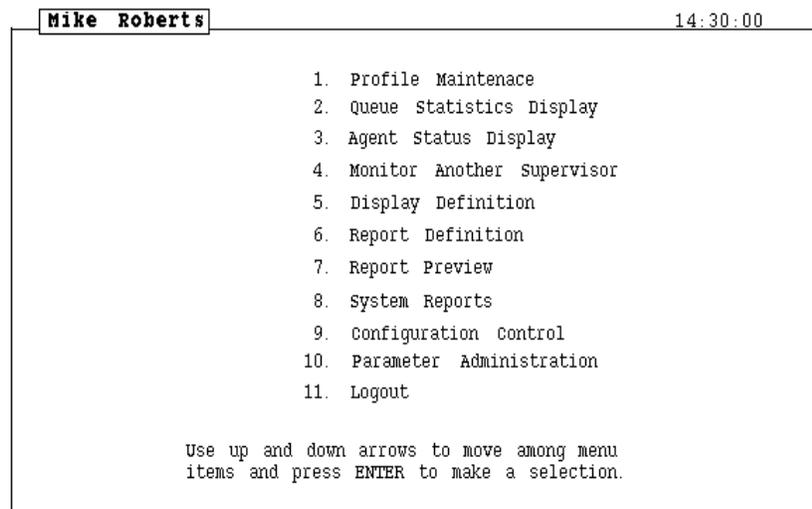


Figure 3.11 TEXT main menu - all options Enabled



Keyboard and mouse controls

The supervisor uses the keyboard to enter information into screens. In Text mode (and in some Windows screens), the screens identify function keys that give specific commands to the software with a single keystroke. The on-screen display of the function key index tells the supervisor the functions available in each screen. The Windows interface allows a supervisor to use a mouse to initiate operations in the software and allows selection of options and commands from pull-down menus.

Online help

Online help is available for both interfaces. The help system provides information about using the product and its screens to perform functions.

Using the Windows online help

The Windows online Help system is available from the main menu, accessed through the Help pull down menu. From the pull down menu, you can access the information in the Help file in three different ways, as described in the table below.

Figure 3.12 Help menu



Table 3-6: Online help options

Option	Explanation
Help Topics	Lists all the topics for which help exists. You can double click on one of these options and go right to the topic.
Window	Displays the Help screen containing information specific to the current window.
Using Help	Provides information on how to use the Help system in Windows.

Using the Text online help

To access the Help system using the Text interface, press the designated Help function key. The key designation appears at the bottom of each screen. Use arrow keys to scroll through the Help file.

Agent Status display

CC MIS provides two types of real-time displays: Agent Status and Queue Statistics. The Agent Status display provides the status of each position in an ACD group.

CC MIS updates the information on the display as soon as it is notified by the ACD switch. The figure below shows the Agent Status displays.

Thresholds for the states of an agent position can be defined so that when a position remains in the state for too long, the position is highlighted to call attention to it.

While in the Agent Status display, the supervisor selects the global, scope, or subgroup view through a command menu. The global view shows all agent positions currently monitored by the CC MIS system partition. The scope view shows all agent positions that have been assigned to any of the subgroups which have been listed in the supervisor's scope definition. The subgroup view restricts the view to all the agents within a specific subgroup in the supervisor's scope definition.



The views available to a supervisor are determined by the options enabled in the supervisor's profile.

Permanent agent detail window

In the Windows interface, single click the right mouse button on any position ID to display the Agent Detail window. This window contains an Options menu with the following real-time agent statistics:

- Call Totals
- Average Durations
- Time Allocations

Permanent ACD Group detail window

In the Windows interface, single click the right mouse button on any ACD Group ID to display the ACD Group Detail window.

Additional features for Windows only

The Windows version of CC MIS also provides the features described in the following paragraphs.

Layout of the display

In the Windows interface, you can select the layout, either vertical or horizontal, for the display. This allows you to review position status in the way most comfortable for you.

Viewing duration in the display

In the Windows interface, you can also view the amount of time spent by an agent in each ACD state. There is a timer for primary ACD states and secondary DN states for each agent. To enable this feature, the supervisor selects durations from the Agent Status display Preferences menu.

Hold time for duration in the display

In the Windows interface, you can specify the way the timers in the duration field operate. When hold time is enabled, the current elapsed time for the ACD or DN call is reset and begins to count. This value is displayed with an underline in the duration field. To enable this feature, the supervisor selects Hold Time from the Agent Status display Preferences menu.

Figure 3.13 Agent Status displays - Windows

ACD GROUP	POSN	STATUS	POSN	STATUS	POSN	STATUS	POSN	STATUS
555-001-0000	1000	WAITING	1001	WAITING	1002	WAITING	1003	WAITING
	1004	WAITING	1005	WAITING	1006	WAITING	1007	WAITING
	1008	WAITING	1009	WAITING				
555-002-0000	1010	WAITING	1011	WAITING	1012	WAITING	1013	WAIT
	1014	WAITING	1015	WAITING	1016	WAITING	1017	WAITING
	1018	WAITING	1019	WAITING				
555-003-0000	1020	WAITING	1021	WAITING	1022	WAITING	1023	WAITING
	1024	WAITING	1025	WAITING	1026	WAITING	1027	WAITING
	1028	WAITING	1029	WAITING				
555-004-0000	1030	WAITING	1031	WAITING	1032	WAITING	1033	WAITING
	1034	WAITING	1035	WAITING	1036	WAITING	1037	WAITING
	1038	WAITING	1039	WAITING				
555-005-0000	1040	WAITING	1041	WAITING	1042	WAITING	1043	WAITING
	1044	WAITING	1045	WAITING	1046	WALK RST	1047	WAITING
	1048	WAITING	1049	WAITING				
555-006-0000	1050	WAITING	1051	WAITING	1052	WAITING	1053	WAITING
	1054	WAITING	1055	WAITING	1056	WAITING	1057	WAITING
	1058	WAITING	1059	WAITING				
555-007-0000	1060	WAITING	1061	WAITING	1062	WAITING	1063	WAITING
	1064	WAITING	1065	RST	1066	WAITING	1067	WAITING
	1068	WAITING	1069	WAITING				
555-008-0000	1070	WAITING	1071	WAITING	1072	WAITING	1073	WAITING
	1074	ADD	1075	WAITING	1076	WAITING	1077	WAITING
	1078	ADD	1079	WAITING				

Queue Statistics display

The Queue Statistics display provides you with statistics that reflect the efficiency with which an ACD group handles the call load. Standard Queue Statistics displays are provided so that you can view commonly needed information about the groups you supervise. The system provides four standard Queue Statistics displays:

- Standard Tabular Queue Display
- Standard Graphic Queue Display
- Graphic Grade of Service Display
- ACD Group Summary Display

The figures below show the standard Queue Statistics displays for each interface. In addition, you can create your own display to view information specific to your ACD operation. The display you create is based on the statistics collected by CC MIS, standard formulas provided by CC MIS, and formulas created by your system administrators to support your ACD operation. Information displayed is refreshed at the rate defined by the Supervisor's Profile (2 - 60 seconds).

By providing customizable real-time displays, CC MIS gives you the flexibility you need to manage ACD operation. In addition, as ACD switch software capabilities increase, CC MIS will be able to provide you with new statistics for these software capabilities easily and efficiently.

Figure 3.14 Standard Tabular Queue Statistics Display - Windows

ACD GROUP	AUG DLY	AUG ACD TIME	EST AGTS ROD	SRUC LUL%	CALL ABDN	CALL ANS	CALL WAIT	OVERFLOW		
								IN ANS	IN WAIT	OUT
555-001-0000	1	11	0	100	0	18	0	0	0	0
555-002-0000	2	18	0	85	0	20	0	0	0	0
555-003-0000	2	11	2	98	0	21	0	0	0	0
555-004-0000	1	18	0	94	0	17	0	0	0	0
555-005-0000	2	12	0	82	0	17	0	0	0	0
555-006-0000	2	12	0	87	0	23	0	0	0	0
555-007-0000	1	11	0	95	0	21	0	0	0	0

ACD GROUP	Staffed	Spare	Primary Position Status				Secondary		
			ACD+ HOLD	NOT WAIT	UAR- WRAP	WALK AWAY	DNZ+ HOLD	DNO+ HOLD	
555-001-0000	10	0	0	9	0	0	1	0	1
555-002-0000	10	0	0	8	0	0	2	0	0
555-003-0000	10	0	1	9	0	0	0	0	0
555-004-0000	10	0	0	10	0	0	0	0	0
555-005-0000	10	0	0	10	0	0	0	0	0
555-006-0000	10	0	0	10	0	0	0	0	0
555-007-0000	10	0	0	9	0	0	1	0	1

Figure 3.15 Standard Graphic Queue Statistics Display - Windows

ACD GROUP	AUG DLY	AUG TIME	EST AGTS	SRVC RGD	CALL LUL	CALL ABDN	CALL ANS	CALL WAIT	OVERFLOW IN ANS	OVERFLOW IN WAIT	OVERFLOW OUT
555-001-0000	3	12	0	77	0	26	0	0	0	0	0
555-002-0000	2	10	0	87	0	15	0	0	0	0	0
555-003-0000	1	8	0	94	0	18	0	0	0	0	0
555-004-0000	2	11	2	85	0	26	0	0	0	0	0
555-005-0000	1	14	0	96	0	24	0	0	0	0	0

ACD GROUP	Primary Position Status					TOTAL	Secondary Position Status			
	ACD+ HOLD	ACD+ WAIT	NRD+ UMRP	MLN+ AWAY	NOT+ STFD		DNI+ HOLD	DND+ HOLD	TOTAL	
555-001-0000					9	1	10			1
555-002-0000					10		10			0
555-003-0000					10		10			0
555-004-0000	1				9		10			0
555-005-0000					10		10			0

Figure 3.16 Graphic Grade of Service Display

ACD GROUP	Service Level		Calls Abandoned	
	Before Thresh	After Thresh	Before Thresh	After Thresh
555-001-0000	78			
555-002-0000	78			
555-003-0000	83			
555-004-0000	83			
555-005-0000	95			
555-006-0000	88			

ACD GROUP	Average Call Duration		Average Answer Delay	
	Under Thresh	Over Thresh	Under Thresh	Over Thresh
555-001-0000	11		3	
555-002-0000	10		3	
555-003-0000	7		1	
555-004-0000	10		3	
555-005-0000	12		1	
555-006-0000	11		2	

Figure 3.17 ACD Group Summary Display

ACD GROUP	CALLS SRV						Call Handling Capacity			
	OFFRD	LUL	ASA	DLY	DLY	<RAN	>RAN	ACTIVE	UNUSED	SUED
555-001-0000	25	84	2	0	10	0	0	25		
555-002-0000	12	83	2	0	6	0	0	25		
555-003-0000	19	100	1	0	1	0	0	24		
555-004-0000	23	91	2	0	10	0	0	23		
555-005-0000	16	94	1	0	6	0	0	24		
555-006-0000	28	86	2	0	10	0	0	25		

ACD GROUP	Average State Durations					Agent Status Counts				
	ACD+ HOLD	ACD+ WAIT	NRD+ UMRP	DND+ HOLD	DNI+ HOLD	ACD+ HOLD	ACD+ WAIT	NRD+ UMRP	DND+ HOLD	DNI+ HOLD
555-001-0000	11	201	18	52	6	10				
555-002-0000	10	483	22	16	0	10				
555-003-0000	8	209	14	16	3	9				
555-004-0000	8	231	11	38	3	8				
555-005-0000	11	340	30	63	4	9				
555-006-0000	11	179	18	38	25	10				

Parameter administration

System administrators control the functions that are performed by CC MIS supervisors. The system administrators have access to the parameter administration feature of CC MIS in order to define supervisors and control access to features, and define system-wide parameters.

Defining a supervisor and their access

In addition to being a supervisor as defined by the DMS-ACD, individuals are defined as supervisors in the context of CC MIS. Supervisors in the CC MIS context may or may not be supervisors in the context of the switch and may not have an ACD set.

The role of the supervisor profile

A profile for each CC MIS supervisor identifies the supervisor to CC MIS and determines the capabilities allowed that supervisor. The privileges and preferences of each supervisor are stored on a per-supervisor-ID basis in the supervisor profiles. These profiles are co-administered by the supervisor and by the system administrator. The table below summarizes the capabilities that can be assigned to a supervisor.

Groups the supervisor can monitor

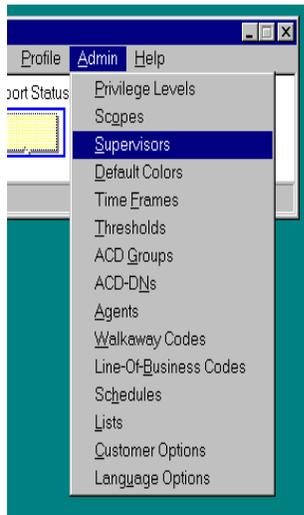
The supervisor can monitor the ACD groups assigned to the supervisor number entered in their profile. In addition, the supervisor can monitor the groups of any other supervisor defined in a group member list at their profile.

Table 3-7: Supervisor abilities

Options	Capabilities that can be assigned
Real-time display	Setting the default Queue Statistics display Setting the view of the display (Global, Group, Supervisor) Setting the default view for the displays Setting the statistics update rate for the display Using an emergency indicator or an audible alarm

Table 3-7: Supervisor abilities

Options	Capabilities that can be assigned
Available modes	Maintaining their own profile Customizing the use of color Monitoring other supervisors Defining report formats and formulas Creating their own Queue Statistics displays Accessing Configuration Control Defining group members they can monitor Printing system reports Having system administrator status Defining schedules to print reports and make configuration control changes
Default printers	Setting the tabular and graphic printers to use and enabling or disabling local printer override.



Admin menu

Defining system-wide parameters

System administrators can access and modify system parameters supporting the functions of CC MIS using the Admin menu. The listing below summarizes these parameters. These parameters can be printed out using System Reports.

Parameters maintained by system administrators

The following parameters are maintained by the system administrator:

- **Time frames definition-** Defines the number of shifts and their starting time. Defines the number of periods and their starting date. The historical reports use these definitions when accessing the database for shift, weekly, and period data summation.
- **Threshold definition -** Defines thresholds for Agent Status and Queue Statistics displays. In addition, five thresholds can be created and defined for use in highlighting values that exceed or fall below the agent status or Queue Statistics thresholds.



Thresholds defined here have no relationship with ACD thresholds defined on the ACD switch and accessed through configuration control.

- **ACD-Group definition -** Associates a name and threshold set with an ACD group; in addition to creating logical groups used in reports.
- **Agent definition-** Associates a name with an agent login ID, and an optional employee ID, and is used in agent status displays.
- **Miscellaneous options -** Defines a name to appear in report headings, a system administrator password, and the tabular and graphic printers to be used for scheduled reports.
- **Walkaway definition -** Defines the walkaway codes recognized by, and the walkaway reason associated with the code; in addition to determining if the walkaway event is stored in the agent log event database.
- **LOB definition -** Defines the LOB codes and describes each code.
- **SNMP -** The system administrator enables the SNMP feature for a supervisor by setting the Alarms option in the Privilege Level Definition window.

Maintenance and administration

Engineers maintain CC MIS through the maintenance console. Through this console, engineers perform the following functions:

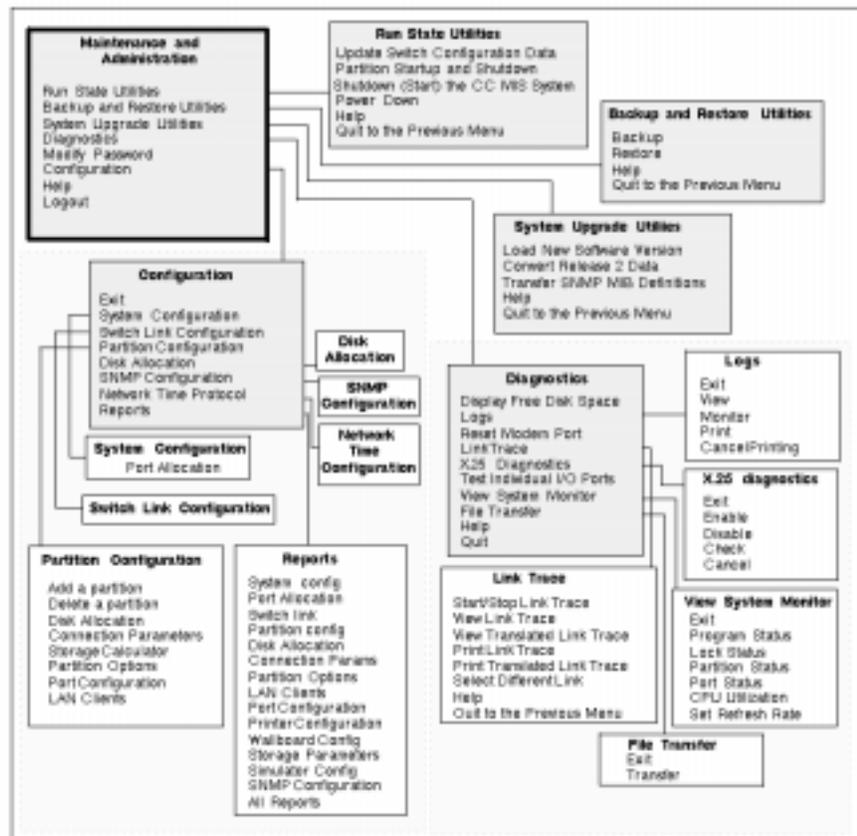
- diagnostics
- adjust CC MIS configuration and NOS logon parameters (such as pools, subpools, protocols, and acdmis password) to switch
- view and print various logs
- routine backup and software upgrade functions for the system
- install CC MIS

The maintenance console is a system console attached to the host. Maintenance functions are menu driven and are accessible only on the maintenance console or dial-up.

Maintenance and administration menus

Maintenance and administration functions are available to you through a series of menus. The figure below shows how the menus branch.

Figure 3.18 Maintenance and administration menus



The effect of maintenance functions on the system

While the majority of the functions are available at all times, some functions can only be performed when CC MIS is shut down, while other functions can only be performed when CC MIS is operating. The Maintenance and administration system takes into account the state of CC MIS, and alters its menus accordingly.

For the most part, shutdown of CC MIS is automatic. When you request such a function, the software requires you to confirm CC MIS shutdown. The confirmation gives you control over the state of CC MIS. The table below identifies the functions that require CC MIS to shut down and if the shut down is automatic.

Table 3-8: Functions requiring shutdown

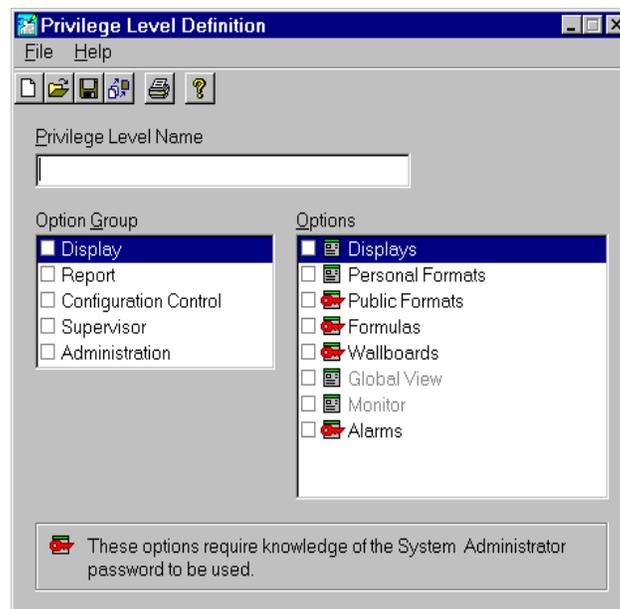
Function	Type of Shutdown
Test all the input/output ports automatically	Manual
Load new software version	Automatic
Specify Time Server	Manual

Enhanced security

The CC MIS software provides a Privilege Level Definition mode, which allows supervisor access restrictions to be defined for all supervisor functions. A privilege level definition contains settings for different classes of supervisors. The settings allow or deny access to each supervisor function, usually on a screen-by-screen basis. Access to some groups of screens, however, is controlled by a single access control option in cases where the screens combine to provide a single logical function. The new SNMP feature is enabled from this screen.

The Privilege Level Definition screen consists of a name field and a series of access control options grouped together into functional groups. Most of the access control options can be set independently, however there are some options that are dependent upon others. The figure below is an example of the Privilege Level Definition screen in the Windows interface. Up to 256 Privilege Level Definitions can be defined.

Figure 3.19 Privilege Level Definition screen



Options marked by * (in text) and the key (in Windows) require that the supervisor also know the system administrator password if one is defined. This password is defined in the Customer Options screen. If this password is defined, the supervisor must enter "system administration" mode, supplying the password in the process, before access to these modes is granted by the system.

Multilingual capability CC MIS parameter administration includes a Language Options screen which allows the enabling of multilingual capability. This screen is available only if the multilingual option has been purchased and built into the software load. The two languages supported are English and Canadian French. The multilingual interface includes support of the ISO 8859-1 (Latin-1) character set.

If the multilingual option is purchased, CC MIS provides the interface for both the text mode and windows interface. The multilingual option can be configured (enable or disable) on a per partition basis.

Some of the customization screens require the user to enter text which will be associated with the object being defined. The user-defined text must be entered in the available languages in order for the objects to appear in the supervisor's preferred language. Screens that contain text definition fields that must be entered in multiple languages contain a "toggle" field displaying the current language being used. The toggle field is used to select the language in which the title field is being displayed or defined.

If only one language has been configured, the language "toggle" field does not appear, and all other aspects of multilingual support are hidden.

Appendices

Example
Reports

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Capacities

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Example Reports



Introduction

CC MIS comes with a series of predefined standard formats used for the generation of reports. Examples of the CC MIS management reports are shown in the figures in this appendix.

Standard formats

The standard reports are formats provided by CC MIS. These formats generate tabular and graphic reports. The following describes the standard report formats. A legend following the report identifies the report fields.

Table A-1: Standard report formats

Standard Format	Explanation
ACD Call Duration	Identifies the duration of a call by measuring from when the call is answered by the agent until the call is released by the agent.
ACD-DN Calls Abandoned	Identifies the total number of calls abandoned per ACD-DN and the total abandon delay.
ACD-DN Calls Answered	Identifies the total number of calls answered per ACD-DN and the total answer delay.
ACD Group by Agent Performance	Identifies agent activities for each group. This report can tell if there is a problem with a particular agent or if all agents are experiencing the same difficulties.

Table A-1: Standard report formats

Standard Format	Explanation
ACD Group by Agent Transfer	Identifies agent transfer activities for each group.
ACD Group by LOB Code	Identifies the number and duration of calls by LOB code for each group.
ACD Group by Walkaway Code	Identifies the walkaway codes associated with a specific ACD group.
ACD Group Overflow	For each source and destination ACD group pair, indicates the number of calls that either queue overflowed (for example, due to exceeding maximum wait or queue size) or time overflowed from the source to the destination.
ACD Group Transfer-In	Identifies the number of calls that were transferred in to a group.
ACD Group Transfer-Out	Identifies the number of calls that were transferred out of a group.
Agent Summary	Provides detail regarding the types of calls received/ made and the amount of time spent for each agent.
Agent by ACD Group Performance	Identifies the activities of all agents sorted by Agent ID through ACD group.
Agent by LOB Code	Identifies the activities of all agents sorted by LOB codes.
Agent by Subgroup Performance	Identifies the performance of each agent under different subgroups.
Delay Before Abandoning	Identifies how many calls were abandoned and how long the callers waited before they hung up.
Delay Before Answering	Provides information about the service callers receive.
LOB Code by ACD Group	Identifies call processing time for each LOB code. Breaks down information to show which ACD group received the calls associated with the LOB code.
LOB Code by Agent	Identifies call processing time for each LOB code. Breaks down information to show the LOB codes associated with specific agents.
Summarized ACD-DN Call Analysis	Identifies the ACD-DNs and summarizes the associated call activity.
Summarized ACD Group Call Analysis	Provides an overall analysis of an ACD group. Shows how calls were handled and maximum and average delays and call durations.

Table A-1: Standard report formats

Standard Format	Explanation
Summarized ACD Group Performance	Identifies groups in the system and summarizes group load performance. It shows the actual number of calls each group answered and the average time it took to handle each call.
Summarized ACD Group Transfer	Identifies the groups and summarizes transfer information for the groups.
Subgroup by Agent Performance	Provides supervisors with performance information for their agents.
Walkaway Code by ACD Group	Identifies the reason for and the total time spent in walkaway state by an agent in a specific ACD group.

Table A-2: Standard graphical reports

Standard Format	Explanation
ACD Group Calls Abandoned Graphic	For each ACD Group, shows how many calls were abandoned before and after receiving a recorded announcement.
ACD Group Calls Answered Delay Graphic	For each ACD group, shows how many calls were answered before and after the delay objective. ACD Group Calls Answered Delay Graphic
ACD-DN Calls Abandoned Graphic	For each ACD-DN, shows how many calls were abandoned before and after receiving a recorded announcement.
ACD-DN Calls Answered Delay Graphic	For each ACD-DN, shows how many calls were answered before and after the delay objective.

Figure A.1 ACD Call Duration report

```

ACD Call Duration Report
Interval Report
Page 1

Your Company
Date: 12/01/95 Time: 11:05:03 AM

Intervals: 10:00 - 10:30 Day: 12/01/95

ACD INTVL CALLS -----PERCENT OF CALLS WITH DURATION (SEC)----- AVG LENO
OSUP ANSWD 0- 30- 60- 120- 180- 240- 300- 360- 420- 480- DUR DUR
<30 <60 <120 <180 <240 <300 <360 <420 <480 + SEC SEC

(555)012-0000 10:00 41 83 17 0 0 0 0 0 0 0 0 0 13 30
10:30 44 86 14 0 0 0 0 0 0 0 0 0 13 30
-----
(555)012-0000 85 89 15 0 0 0 0 0 0 0 0 0 0 13 30
-----
(555)018-0000 10:00 60 92 8 0 0 0 0 0 0 0 0 0 11 30
10:30 57 88 13 0 0 0 0 0 0 0 0 0 12 30
-----
(555)018-0000 117 90 10 0 0 0 0 0 0 0 0 0 0 11 30
-----
-----
202 88 12 0 0 0 0 0 0 0 0 0 0 12 30
    
```

Legend - Workday Periods

Field	Description
Calls Answd	The number of calls answered by agents. (CALLS ANSWD) CallsAnswered
Percent Of Call Duration (Sec)	The percentage of calls answered that had a duration within t1 to t2 time period. (DUR % CATn) $\frac{\text{DurCategoryn}}{\text{CallsCompleted}} \times 100$
Avg Dur Sec	The average duration for an ACD call. (AVG ACD TALK TIME) $\frac{\text{ACDTalkTime}}{\text{CallsAnswered}}$
Long Dur Sec	The longest duration for an ACD call. (MAX CALL DUR) MaxCallDuration

Figure A.2 ACD-DN Calls Abandoned report

```

ACD DN Calls Abandoned Report
Interval Report
Page 1

Your Company                               Date: 12/31/95 Time: 11:05:03 AM
Datebase: 10:00 - 10:30 Day: 12/31/95

ACD DN  INTVL  # OF CALLS -----
          OFFRD  ANSWD  DF  APT TIME  -- TOT ACD --  -- DELAY --  MAX  MAX  TOT
          FAN  FAN  FAN  FAN  SECS  FAN  FAN  SECS  SECS  ACD  ACD  ACD
          SECS  SECS

(555)002-0002  10:30  1  1  0  0  0  0  0  0  0  0  0
-----
(555)002-0002  1  1  0  0  0  0  0  0  0  0  0
-----
(555)003-0009  10:00  1  1  0  0  0  0  0  0  0  0
-----
(555)003-0009  1  1  0  0  0  0  0  0  0  0  0
-----
(555)005-0003  10:30  1  1  0  0  0  0  0  0  0  0
-----
(555)005-0003  1  1  0  0  0  0  0  0  0  0  0
-----
(555)006-0008  10:30  1  1  0  0  0  0  0  0  0  0
-----
(555)006-0008  1  1  0  0  0  0  0  0  0  0  0
-----
(555)009-0016  10:00  1  0  0  1  0  0  22  22  0  0
-----
(555)009-0016  1  0  0  1  0  0  22  22  0  0
-----
(555)010-0001  10:30  1  1  0  0  0  0  0  0  0  0
-----
(555)010-0001  1  1  0  0  0  0  0  0  0  0  0
-----

[Additional example report contents intentionally deleted]

-----
240  202  1  15  0  4  276  22  0  0
-----

```

Legend

Field	Description
# of Calls - OFFRD	The number of calls offered to this ACD-DN. This value includes all calls that were offered to the group including calls that were either enqueued, presented directly to agents, overflowed, or deflected. (CALLS OFFRD) CallsOffered
# of Calls - ANSWD	The number of calls answered including calls which were overflowed to the ACD-DN. (CALLS ANSWD) CallsAnswered

Legend

Field	Description
# of Calls - ABANDONED BF RAN	<p>The number of calls that were abandoned and did not receive a recorded announcement. (NUM ABD BF RAN)</p> <p>CallsAbandoned - NumAbdRcvdRAN</p>
# of Calls - ABANDONED AFT RAN	<p>The number of calls that were abandoned and received a recorded announcement. (NUM ABD RCVD RAN)</p> <p>NumAbdRcvdRAN</p>
# of Calls - ABD TIME OVFL	<p>The number of calls that were abandoned and time overflowed from this ACD-DN. (NUM ABD TOF)</p> <p>NumAbdTimeOvfl</p>
TOT ABD DELAY - BF RAN	<p>The total time all callers spent before abandoning the call without receiving a recorded announcement. (TOTAL ABD TIME NORAN)</p> <p>TotalAbandonDelay - TotalAbdRcvdRAN</p>
TOT ABD DELAY - AFT RAN	<p>The total time all callers spent before abandoning calls that received a recorded announcement. (TOTAL ABD RCVD RAN)</p> <p>TotalAbdRcvdRAN</p>
MAX ABD DLY	<p>The maximum delay experienced by any caller before abandoning the call. (MAX ABD DEL)</p> <p>MaxAbdDelay</p>
MAX ABD DLY TOVFL	<p>The maximum abandoning delay for calls that were time overflowed to another ACD group. (MAX ABD DLY TOF)</p> <p>MaxAbdDelayTimeOvfl</p>
TOT ABD DLY TOVFL	<p>The total abandoning delay for all calls that were time overflowed to another ACD group. (TOTAL ABD DLY TOF)</p> <p>TotalAbdDelayTimeOvfl</p>

Figure A.3 ACD-DN Calls Answered report

ACD DN Calls Answered Report										Page	1
Interval Report											
Your Company					Date: 12/01/95 Time: 11:05:03 AM						
Intervals: 10:00 - 10:30 Day: 12/01/95											
ACD DN	INTVL	-----	# OF	CALLS	-----	AVG	MAX	TOT			
		OFFRD	ANSWD	ANSWD	ANSWD	ANS	ANS	ANS			
				BFOR	AFTER	DLY	DLY	DLY			
				DLY OBJ	DLY OBJ	SEC	SEC	SEC			
(555)002-0002	10:30	1	1	1	0	4	4	4			
(555)002-0002		1	1	1	0	4	4	4			
(555)003-0009	10:00	1	1	1	0	3	3	3			
(555)003-0009		1	1	1	0	3	3	3			
(555)005-0003	10:30	1	1	1	0	1	1	1			
(555)005-0003		1	1	1	0	1	1	1			
(555)006-0008	10:30	1	1	1	0	1	1	1			
(555)006-0008		1	1	1	0	1	1	1			
(555)009-0016	10:00	1	0	0	0	0	0	0			
(555)009-0016		1	0	0	0	0	0	0			
(555)010-0001	10:30	1	1	1	0	4	4	4			
(555)010-0001		1	1	1	0	4	4	4			
[example report contents intentionally deleted]											
		240	202	201	1	2	15	460			

Legend

Field	Description
# of Calls - OFFRD	The number of calls offered to this ACD-DN. This value includes all calls that were offered to the group including calls that were either enqueued, presented directly to agents, overflowed, or deflected. (CALLS OFFERED) CallsOffered
# of Calls - ANSWD	The number of calls answered including calls that were overflowed to the ACD-DN. (CALLS ANSWD) CallsAnswered

Legend

Field	Description
# of Calls - ANSWD BFOR DLY OBJ	The number of calls answered within the delay objective. (ANS IN DLY OBJ) CallsAnswered - NumAnsAfterThrsh
# of Calls - ANSWD AFTER DLY OBJ	The number of calls answered after the delay objective. (ANS AFT DLY OBJ) NumAnsAfterThrsh
AVG ANS DLY	The average delay experienced by a caller before the call was answered. (AVG ANS DEL). <u>TotalAnswerDelay</u> CallsAnswered
MAX ANS DLY	The maximum delay experienced by a caller before the call was answered.(MAX ANS DEL) [Note: This does NOT include TOF delay.] MaxAnswerDelay
TOT ANS DLY	The total delay experienced by all callers. (TOT ANS DEL) [Note: This does NOT include TOF delay.] TotalAnswerDelay

Figure A.4 ACD Group by Agent Performance report

ACD Group by Agent Performance Report Page 1
Interval Report

Your Company Date: 12/01/95 Time: 11:05:03 AM

Intervals: 10:00 - 10:30 Day: 12/01/95

ACD GROUP	INTVL	AGT ID	----ACD Calls----			----NON ACD CALLS----			-TOTAL TIME-		ACD/STPFD %	
			ANSWD	TALK SEC	WAIT SEC	NUM IN	NUM OUT	TIME IN	TIME OUT	NOT RDY		STPFD
(555)012-0000	10:00	1010	23	14	46	3	6	0:00	0:02	0:00	0:30	28
		1011	18	12	49	4	7	0:00	0:12	0:00	0:30	14
	10:30	1010	20	15	45	3	13	0:00	0:08	0:00	0:30	21
		1011	24	12	41	4	9	0:00	0:07	0:00	0:30	20

(555)012-0000			85	13	45	14	35	0:01	0:29	0:00	2:00	21

(555)018-0000	10:00	1070	31	10	40	5	11	0:00	0:02	0:00	0:30	22
		1071	29	12	35	0	8	0:00	0:08	0:00	0:30	24
	10:30	1070	36	10	30	2	13	0:00	0:03	0:00	0:30	24
		1071	21	15	45	2	11	0:00	0:07	0:00	0:30	22

(555)018-0000			117	11	36	9	43	0:00	0:20	0:00	2:00	23

=====			202	12	40	23	78	0:02	0:49	0:00	4:00	22
=====												

Legend

Field	Description
ACD Calls - Num Answd	The number of calls answered by the agent. (CALLS ANSWD) CallsAnswered
ACD Calls - Avg Talk Sec	The average time an agent spent on each ACD call. (AVG ACD TALK TIME) <u>ACDTalkTime</u> CallsAnswered
ACD Calls - Avg Wait Sec	The average time an agent spent waiting between ACD calls (with no calls being processed). (AVG WAIT TIME) <u>WaitTime</u> CallsAnswered
Non-ACD Calls - Num In	The number of DN calls an agent received. (IN DN CALLS) DNCallsIn

Legend

Field	Description
Non-ACD Calls - Num out	The number of DN calls an agent made. (OUT DN CALLS) DNCallsOut
Non ACD Calls - Time In	The total time an agent spent on incoming DN calls. (TOTAL IN DN TIME) IncomingDNTime
Non ACD Calls - Time Out	The total time an agent spent on outgoing DN calls. (TOTAL OUT DN TIME) OutgoingDNTime
Total Time - Not Rdy	The total time an agent spent doing post-call work. (TOTAL NOT READY TIME) NotReadyTime
Total Time - STFD	The total time an agent spent logged onto the system. (TOTAL STFD TIME) StaffedTime
ACD STFD %	The percentage of staffed time spent on ACD calls. (WORK STFD %) $\frac{\text{ACDTalkTime} + \text{NotReadyTime}}{\text{StaffedTime}} \times 100\%$

Figure A.5 ACD Group by Agent Transfer report

```

ACD Group by Agent Transfer Report      Page    1
Interval Report

Your Company                          Date: 12/01/95  Time: 11:05:03 AM

Intervals: 10:00 - 10:30  Day: 12/01/95

      ACD      INTVL  AGT      CALLS
      GROUP    INTVL  ID       XFER'D
                               IN    OUT

(555)012-0000  10:00  1010     6      7
                               1011     9      9
                               10:30  1010     8      8
                               1011     7      8
-----
(555)012-0000                               30    32
-----

(555)018-0000  10:00  1070     11     14
                               1071     4     10
                               10:30  1070     7     10
                               1071     5     9
-----
(555)018-0000                               27    43
-----

=====
                               57    75
=====
    
```

Legend

Field	Description
Calls Xfer'd - In	The number of calls transferred to the agent. (XFER IN) TransSDNfromAgt + TransSDNfromSDN + TransSDNfromNACD + TransAgttoAgt + TransferInFromAgt + TransferInFromSDN
Calls Xfer'd - Out	The number of calls transferred from the agent. (XFER OUT) TransOutSDNtoSDN + TransOutSDNtoGrp + TransOutAgtToAgt + TransOutAgtToGrp + TransOutAgtToSDN + TransAgtToNon-ACD + TransSDNtoNon-ACD

Figure A.7 ACD Group by Walkaway Code report

ACD Group by Walkaway Code Report
Interval Report

Page 1

Your Company Date: 12/01/95 Time: 11:05:03 AM

Intervals: 10:00 - 10:30 Day: 12/01/95

ACD GROUP	INTVL	WALKAWAY CODE	WALKAWAY REASON	NUMBER OF WALKS	WALKAWAY TIME HH:MM	AVG WALK TIME SEC	
(555)012-0000	10:00	000 000		5	0:00	3	
		098	Restroom Break	5	0:14	163	
	10:30	000 000		5	0:00	3	
		098	Restroom Break	3	0:14	289	
-----				(555)012-0000	18	0:29	95
(555)018-0000	10:00	000 000		4	0:00	2	
		098	Restroom Break	2	0:07	217	
	10:30	000 000		5	0:00	3	
		098	Restroom Break	4	0:11	165	
-----				(555)018-0000	15	0:19	74
=====					33	0:47	86
=====							

Legend

Field	Description
ACD Group	The 10-digit primary DN number of the destination ACD group.
Walkaway Code	The 3-digit walk code
Walkaway Reason	The walkaway reason.
Number of Walks	The number of times that agents in this ACD group entered the walkaway state on their phone sets. (NUM WALKS) NumberOfWalkaways
Walkaway Time	The total amount of time spent in walkaway state by agents in this ACD group. (TOT WALK DUR) WalkawayDuration

Legend

Field	Description
Average Walk Time	The average amount of time that agents in this ACD group spent in walkaway state. (AVG WALK TIME) <u>WalkawayDuration</u> NumWalks

Figure A.8 ACD Group Overflow report

ACD Group Overflow Report							Page 1	
Interval Report								
Your Company				Date: 12/01/95 Time: 11:05:03 AM				
Intervals: 10:00 - 10:30 Day: 12/01/95								
DESTINATION ACD GROUP	INTVL	SOURCE ACD GROUP	NUM CALL ANS	QOF CALLS	QOF % CALLS	TOF TOF %	MAX TOF DLY	TOT TOF DLY
(555) 011-0000	10:00	(555) 012-0000	1	0	0	0	0	0
-----			1	0	0	0	0	0
(555) 012-0000	10:00	(555) 009-0000	0	0	0	0	0	0
		(555) 011-0000	1	0	0	0	0	0
		(555) 012-0000	33	0	0	0	0	0
		(555) 021-0000	1	0	0	0	0	0
		(555) 029-0000	1	0	0	0	0	0
		(555) 037-0000	1	0	0	0	0	0
		(555) 040-0000	1	0	0	0	0	0
		(555) 041-0000	1	0	0	0	0	0
		(555) 061-0000	1	0	0	0	0	0
		(555) 064-0000	1	0	0	0	0	0
	10:30	(555) 005-0000	1	0	0	0	0	0
		(555) 010-0000	1	0	0	0	0	0
		(555) 012-0000	36	0	0	0	0	0
		(555) 017-0000	1	0	0	0	0	0
		(555) 026-0000	1	0	0	0	0	0
		(555) 036-0000	1	0	0	0	0	0
		(555) 040-0000	1	0	0	0	0	0
		(555) 043-0000	0	0	0	0	0	0
		(555) 063-0000	0	0	0	0	0	0
		(555) 064-0000	1	0	0	0	0	0
		(555) 071-0000	1	0	0	0	0	0
-----			85	0	0	0	0	0

[Additional example report contents intentionally deleted]								
-----			226	0	0	17	7	21 235

Legend

Field	Description
Num Calls Ans	The number of calls answered by an agent assigned to either the source or destination groups. This value includes time overflow calls. (CALLS ANSWD) CallsAnswered
QOF Calls	The number of calls which queue count overflowed between the two groups. (QOF CALLS) NumQOFCalls
QOF %	The percentage of calls handled by either of the ACD-GRPs that were queue count overflowed calls. The calls handled include the calls that were answered by the agents of this ACD group and those that were abandoned while waiting in one of the queues. (QOF%) $\frac{\text{NumQOFCalls}}{\text{CallsAnswered} + \text{CallsAbandoned}} \times 100$

Legend

Field	Description
TOF Calls	<p>The total number of calls that time overflowed from the source group to the destination group and were answered by the destination group. (TOTAL TOF CALLS)</p> <p>NumTOFCalls</p>
TOF %	<p>The percentage of calls that time overflowed from the source group to the destination group. (TOT TOF %)</p> $\frac{\text{NumTOFCalls}}{\text{CallsAnswered} + \text{CallsAbandoned}} \times 100$
MAX TOF DLY	<p>The longest answer delay experienced of all time overflow calls. (MAX TOF DLY)</p> <p>MaxTOFDelay</p>
TOT TOF DLY	<p>The answer delay for time overflow calls that time overflowed from the source to the destination ACD group and were answered by agents in the destination ACD group. (TOT TOF DLY)</p> <p>TotalTOFDelay</p>

Figure A.9 ACD Group Transfer In report

```

ACD Group Transfer-in Report   Page   1
Interval Report

Your Company                   Date: 12/01/95   Time: 11:05:03 AM

Intervals: 10:00 - 10:30   Day: 12/01/95

      DESTINATION      INTVL      SOURCE      CALLS
      ACD              INTVL      ACD         XFER'D
      GROUP              GROUP
(555) 001-0000    10:00    (555) 018-0000    1
-----
(555) 001-0000                                1
-----

(555) 002-0000    10:00    (555) 018-0000    1
                  10:30    (555) 012-0000    1
-----
(555) 002-0000                                2
-----

(555) 004-0000    10:00    (555) 012-0000    1
                  10:30    (555) 018-0000    1
                  10:30    (555) 012-0000    1
-----
(555) 004-0000                                3
-----

[Additional example report contents intentionally deleted]
=====
                                                61
=====
    
```

Legend

Field	Description
Calls Xfer'd - In	The number of calls transferred from the intended group into the group the call overflowed to. (CALLS XFERD) TransOutAgtToAgt + TransOutAgtToGrp + TransOutAgttoSDN + TransOutSDNtoGrp

Figure A.10 ACD Group Transfer Out report

```

ACD Group Transfer-out Report      Page    1
Interval Report

Your Company           Date: 12/01/95  Time: 11:05:03 AM
Intervals: 10:00 - 10:30  Day: 12/01/95

SOURCE      INTVL      DESTINATION      CALLS
ACD         GROUP      ACD              XFER'D
GROUP                          GROUP            OUT

(555)011-0000  10:00      (555)012-0000      1
(555)018-0000      1
-----
(555)011-0000      2

(555)012-0000  10:00      (555)004-0000      1
(555)005-0000      1
(555)008-0000      1
(555)011-0000      1
(555)013-0000      1
(555)015-0000      1
(555)020-0000      1
(555)022-0000      1
(555)026-0000      1
(555)032-0000      1
(555)055-0000      1
10:30      (555)002-0000      1
(555)004-0000      1
(555)006-0000      1
(555)028-0000      1
(555)034-0000      1
(555)035-0000      1
(555)037-0000      2
(555)045-0000      1
(555)063-0000      1
-----
(555)012-0000      21

[Additional example report contents intentionally deleted]
-----
61
-----

```

Legend

Field	Description
Total Calls Xfer'd - Out	The number of calls transferred from the intended group into the group the call overflowed to. (CALLS XFERD) TransOutAgtToAgt + TransOutAgtToGrp + TransOutAgttoSDN + TransOutSDNtoGrp

Figure A.11 Agent by ACD Group Performance report

Agent by ACD Group Performance Report
Interval Report

Page 1

Your Company Date: 12/01/95 Time: 11:05:03 AM

Intervals: 10:00 - 10:30 Day: 12/01/95

AGT ID	EXTNL	ACD GROUP	---ACD Calls---			---NON ACD CALLS---		-TOTAL TIME-		ACD/STPD %		
			NUM ANSWD	AVG TALK SEC	AVG WAIT SEC	NUM IN	NUM OUT	TIME IN HH:MM	TIME OUT HH:MM			
1010	10:00	(555)012-0000	23	34	46	3	6	0:00	0:02	0:00	0:30	28
	10:30	(555)012-0000	20	15	45	3	13	0:00	0:08	0:00	0:30	21
-----			43	34	48	6	19	0:01	0:10	0:00	1:00	25
1011	10:00	(555)012-0000	18	12	49	4	7	0:00	0:12	0:00	0:30	14
	10:30	(555)012-0000	24	12	41	4	9	0:00	0:07	0:00	0:30	28
-----			42	12	44	8	16	0:01	0:19	0:00	1:00	17
1070	10:00	(555)018-0000	31	10	40	5	11	0:00	0:02	0:00	0:30	22
	10:30	(555)018-0000	36	10	30	2	13	0:00	0:03	0:00	0:30	24
-----			67	10	34	7	24	0:00	0:05	0:00	1:00	23
1071	10:00	(555)018-0000	29	12	35	0	8	0:00	0:08	0:00	0:30	24
	10:30	(555)018-0000	21	15	45	2	11	0:00	0:07	0:00	0:30	22
-----			50	13	39	2	19	0:00	0:15	0:00	1:00	23
-----			202	12	40	25	78	0:02	0:49	0:00	4:00	22

Legend

Field	Description
ACD Calls - Num Answd	The number of ACD calls an agent answered. (CALLS ANSWD) CallsAnswered
ACD Calls - Avg Talk Sec	The average time an agent spent on each ACD call. (AVG ACD TALK TIME) <u>ACDTalkTime</u> CallsAnswered
ACD Calls - Avg Wait Sec	The average time an agent spent waiting between ACD calls (with no calls being processed). (AVG WAIT TIME) <u>WaitTime</u> CallsAnswered
NON-ACD Calls - Num In	The number of DN calls an agent received. (IN DN CALLS) DNCallsIn

Legend

Field	Description
NON-ACD Calls - Num Out	The number of DN calls an agent made. (OUT DN CALLS) DNCallsOut
NON-ACD Calls - Time In	The total time an agent spent on incoming DN calls. (TOTAL IN DN TIME) IncomingDNTime
NON-ACD Calls - Time Out	The total time an agent spent on outgoing DN calls. (TOTAL OUT DN TIME) OutgoingDNTime
Total Time - Not Rdy	The total time an agent spent doing post-call work. (TOTAL NOT READY TIME) NotReadyTime
Total Time - STFD	The total time an agent spent logged onto the system. (TOTAL STFD TIME) StaffedTime
ACD STFD %	The percentage of staffed time spent on ACD calls or in NOT READY state. (WORK STFD %) $\frac{\text{ACDTalkTime} + \text{NotReadyTime}}{\text{StaffedTime}} \times 100$

Figure A.12 Agent by Line of Business Code report

Agent by Line of Business Code Report Page 1
Interval Report

Your Company Date: 12/01/95 Time: 11:05:03 AM
Intervals: 10:00 - 10:30 Day: 12/01/95

AGT ID	INTVL	LOB CODE	NUMBER OF CALLS	MAX DURATION SEC	TOTAL DURATION SEC
1010	10:00	001	13	30	139
		022	3	30	50
		031	1	5	5
		033	1	25	25
		098	1	12	12
		099	4	18	45
		231	2	5	10
	10:30	233	2	25	50
		001	7	25	133
		098	1	12	12
		099	8	18	50
		231	3	5	15
		233	3	25	75
		-----			49
1011	10:00	001	6	30	91
		022	4	10	26
		098	2	12	24
		099	5	18	49
		231	1	5	5
		233	1	25	25
		10:30	001	13	30
	022		2	25	35
	098		3	12	16
	099		7	6	16
	100		2	7	14
	231		1	5	5
	233		1	25	25
	-----			48	30
[Additional example report contents intentionally deleted]					
=====			234	30	2446
=====					

Legend

Field	Description
LOB Code	The 3-digit LOB code entered by an operator on a call. Up to three LOB codes can be associated with a single call.
Number of Calls	The number of calls that were received by agents in the group and associated with the LOB code. (NUM CHARGES) NumOccurences
Max Duration Sec	The longest call duration experienced by an ACD call that had an LOB entry for this agent. (MAX LOB DUR) MaxLOBDuration

Legend

Field	Description
Total Duration Sec	The total call duration experienced by an ACD call that had an LOB entry for this agent. (TOTAL TIME) TimeSpent

Figure A.13 Agent by Subgroup Performance report

Agent by Subgroup Performance Report Page 1
Interval Report

Your Company Date: 12/01/95 Time: 11:05:03 AM

Interval: 10:00 - 10:30 Day: 12/01/95

AGT ID	INTVL	SUBGROUP	---ACD Calls---			---NON ACD CALLS---				-TOTAL TIME-		ACD/STPD %
			NUM ANSWD	AVG TALK SEC	AVG WAIT SEC	NUM IN	NUM OUT	TIME IN	TIME OUT	NOT STDY	STPD	
1010	10:00	1110	23	14	46	3	6	0:00	0:02	0:00	0:30	28
	10:30		20	15	45	2	13	0:00	0:09	0:00	0:30	21
			43	14	45	5	19	0:01	0:10	0:00	1:00	25
1011	10:00	1110	18	12	49	4	7	0:00	0:12	0:00	0:30	14
	10:30		24	12	41	4	9	0:00	0:07	0:00	0:30	20
			42	12	44	8	16	0:01	0:19	0:00	1:00	17
1070	10:00	1170	31	10	40	5	11	0:00	0:02	0:00	0:30	22
	10:30		36	10	30	2	13	0:00	0:03	0:00	0:30	24
			67	10	34	7	24	0:00	0:05	0:00	1:00	23
1071	10:00	1170	29	12	35	0	8	0:00	0:08	0:00	0:30	24
	10:30		21	15	45	2	11	0:00	0:07	0:00	0:30	22
			50	13	39	2	19	0:00	0:15	0:00	1:00	23
			202	12	40	25	78	0:02	0:49	0:00	4:00	22

Legend

Field	Description
ACD Calls - Num Answd	The number of ACD calls an agent answered. (CALLS ANSWD) CallsAnswered
ACD Calls - Avg Talk Sec	The average time an agent spent on each ACD call. (AVG ACD TALK TIME) <u>ACDTalkTime</u> CallsAnswered
ACD Calls - Avg Wait Sec	The average time an agent spent waiting between ACD calls (with no calls being processed). (AVG WAIT TIME) <u>WaitTime</u> CallsAnswered
NON-ACD Calls - NUM IN	The number of DN calls an agent received. (IN DN CALLS) DNCallsIn

Legend

Field	Description
NON-ACD Calls - NUM OUT	The number of DN calls an agent made. (OUT DN CALLS) DNCallsOut
NON-ACD Calls - TIME IN	The total time an agent spent on incoming DN calls. (TOTAL IN DN TIME) IncomingDNTime
NON-ACD Calls - TIME OUT	The total time an agent spent on outgoing DN calls. (TOTAL OUT DN TIME) OutgoingDNTime
Total Time - NOT RDY	The total time an agent spent doing post-call work. (TOTAL NOT READY TIME) NotReadyTime
Total Time - STFD	The total time an agent spent logged onto the system. (TOTAL STFD TIME) StaffedTime
ACD STFD %	The percentage of staffed time spent on ACD calls or in NOT READY. (WORK STFD %) $\frac{\text{ACDTalkTime} + \text{NotReadyTime}}{\text{StaffedTime}} \times 100$

Figure A.14 Agent Summary report

Agent Summary Report										Page 1			
Interval Report													
Your Company					Date: 12/01/95 Time: 11:05:03 AM								
Intervals: 10:00 - 10:30 Day: 12/01/95													
ACT ID	INTVL	-----# OF CALLS-----				---AVG DURATION---				TIME ALLOCATION			
		ANS	DN IN	DN OUT	TOTAL CALLS	TALK TIME	NOT RDY	DN IN	DN OUT	WORK	DN IN	DN OUT	NOT RDY
						SEC	SEC	SEC	SEC	%	%	%	%
1010	10:00	23	3	6	32	14	0	3	21	28	1	7	0
	10:30	20	3	13	36	15	0	9	38	21	2	28	0
-----		43	6	19	68	14	0	6	33	25	1	17	0
1011	10:00	18	4	7	29	12	2	7	99	14	2	38	0
	10:30	24	4	9	37	12	2	5	49	20	1	24	0
-----		42	8	16	66	12	2	6	71	17	1	31	0
1070	10:00	31	5	11	47	10	0	2	12	22	1	7	0
	10:30	36	2	13	51	10	0	5	12	24	1	8	0
-----		67	7	24	98	10	0	3	12	23	1	8	0
1071	10:00	29	0	8	37	12	0	0	57	24	0	25	0
	10:30	21	2	11	34	15	2	0	40	22	0	25	0
-----		50	2	19	71	13	2	0	47	23	0	25	0
-----		202	23	78	303	12	2	4	38	22	1	20	0

Legend

Field	Description
# of Calls - Ans	The number of calls answered by an agent assigned to either the source or destination groups. This value includes time overflow calls. (CALLS ANSWD) CallsAnswered
# of Calls - DN IN	The number of incoming DN calls answered by all agents. (IN DN CALLS) DNCallsIn
# of Calls - DN OUT	The number of outgoing DN calls made by all agents. (OUT DN CALLS) DNCallsOut
# of Calls - TOTAL CALLS	The total number of all incoming and outgoing DN calls. (TOTAL CALLS) NumTOFCallsIn

Legend

Field	Description
Avg Duration - TALK TIME	The average length of time from when a call is answered to when it is released, including the time spent with the call on hold. (AVG ACD TALK TIME) $\frac{\text{ACDTalkTime}}{\text{CallsAnswered}}$
Avg Duration - NOT RDY	The average length of time the agents spent after a call doing work related to the call. It includes all time spent with the Not Ready key active and no call active on either the incalls or the DN key. (AVG NOT RDY TIME) $\frac{\text{NotReadyTime}}{\text{CallsAnswered}}$
Avg Duration - DN IN	The average time the agents spent on each incoming DN call. (AVG DN IN TIME) $\frac{\text{IncomingDNTime} + \text{OutgoingDNTime}}{\text{DNCallsIn} + \text{DNCallsOut}}$
Avg Duration - DN OUT	The average time the agents spent on each outgoing DN call. (AVG DN OUT TIME) $\frac{\text{OutgoingDNTime}}{\text{DNCallsOut}}$
Time Allocation - WORK %	The percentage of the total staffed time spent on ACD calls and ACD call-related work. (WORK STFD %) $\frac{\text{ACDTalkTime} + \text{NotReadyTime}}{\text{StaffedTime}} \times 100$
Time Allocation - DN IN %	The percentage of the total staffed time this agent spent handling incoming DN calls. (DN IN %) $\frac{\text{IncomingDNTime}}{\text{StaffedTime}} \times 100$
Time Allocation - DN OUT %	The percentage of the total staffed time this agent spent making outgoing DN calls. (DN OUT %) $\frac{\text{OutgoingDNTime}}{\text{StaffedTime}} \times 100$

Legend

Field	Description
Time Allocation - NOT RDY %	<p>The percentage of the total staffed time this agent spent in the not ready state. (NOT RDY %)</p> $\frac{\text{NotReadyTime}}{\text{StaffedTime}} \times 100$

Figure A.15 Delay Before Abandoning report

Delay Before Abandoning Report
Interval Report

Page 1

Your Company Date: 12/01/95 Time: 11:05:03 AM

Intervals: 10:00 - 10:30 Day: 12/01/95

ACD GROUP	INTVL	CALLS ABAND	-----PERCENT OF CALLS ABANDONED WITHIN (SEC)-----										AVG LONG			
			0-12	12-24	24-36	36-48	48-60	60-120	120-180	180-240	240-300	300+	DEL SEC	DEL SEC		
(555)012-0000	10:00	4	75	25	0	0	0	0	0	0	0	0	0	0	12	22
	10:30	7	57	14	14	14	0	0	0	0	0	0	0	0	18	38
-----		(555)012-0000	11	64	18	9	9	0	0	0	0	0	0	0	16	38
-----		(555)018-0000	10:00	2	50	0	50	0	0	0	0	0	0	0	19	28
-----		(555)018-0000	10:30	3	0	100	0	0	0	0	0	0	0	0	22	23
-----		(555)018-0000	5	20	60	20	0	0	0	0	0	0	0	0	21	28
-----			16	50	31	13	6	0	0	0	0	0	0	0	18	38

Legend

Field	Description
Calls - Aband	The number of calls abandoned. (CALLS ABAND) CallsAbandoned
Percent Of Calls Abandoned Within (Sec) - T1 < T2	The percentage of calls that were abandoned within t1 to t2 time period. (ABND % CATn) $\frac{\text{AbdCategory}_{n}}{\text{CallsAbandoned}} \times 100$
Avg Del Sec	The average time a call waited before being abandoned (in seconds). (AVG ABD DEL) $\frac{\text{TotalAbandonDelay}}{\text{CallsAbandoned}}$
Long Del Sec	The longest time a call waited before being abandoned (in seconds). (MAX ABD DEL) MaxAbandonDelay

Figure A.16 Delay Before Answering report

Delay Before Answering Report											Page 1					
Interval Report																
Your Company						Date: 12/01/95 Time: 11:05:03 AM										
Intervals: 10:00 - 10:30 Day: 12/01/95																
ACD GROUP	INTVL	CALLS ANSWD	%	-----PERCENT OF CALLS ANSWERED WITHIN (SEC)-----										AVG LONG DEL SEC		
				TOF	0- <12	12- <24	24- <36	36- <48	48- <60	60- <120	120- <180	180- <240	240- <300		300- +	
(555)012-0000	10:00	41	0	100	0	0	0	0	0	0	0	0	0	0	2	10
	10:30	44	0	100	0	0	0	0	0	0	0	0	0	0	2	11
-----		(555)012-0000	85	0	100	0	0	0	0	0	0	0	0	0	2	11
(555)018-0000	10:00	60	0	100	0	0	0	0	0	0	0	0	0	0	2	10
	10:30	57	0	98	2	0	0	0	0	0	0	0	0	0	2	15
-----		(555)018-0000	117	0	99	1	0	0	0	0	0	0	0	0	2	15
-----			202	0	100	0	0	0	0	0	0	0	0	0	2	15

Legend -

Field	Description
Calls Answd	The number of calls answered. (CALLS ANSWD) CallsAnswered
% TOF	The percentage of calls answered that were time overflowed calls. (TOF %) $\frac{\text{NumTOFCallsIn}}{\text{CallsAnswered} + \text{CallsAbandoned}}$
Percent Of Calls Answered Within (Sec) - T1 < T2	The percentage of answered calls that were answered within t1 to t2 time period. (ANSW % CATn) $\frac{\text{AnsCategoryn}}{\text{CallsAnswered}} \times 100$
Avg Del Sec	The average time a call waited before being answered (in seconds). (AVG ANS DEL) $\frac{\text{TotalAnswerDelay}}{\text{CallsAnswered}}$

Legend -

Field	Description
Long Del Sec	The longest time a call waited before being answered (in seconds). (MAX ANS DEL) MaxAnswerDelay

Figure A.18 Summarized ACD-DN Call Analysis report

Summarized ACD DN Call Analysis Report
Interval Report

Page 1

Your Company Date: 12/01/95 Time: 11:05:00 AM

Intervals: 10:00 - 10:30 Day: 12/01/95

ACD DN	INTVL	# OF CALLS					WHEAT SVG	AVG		MAX		AVG		MAX	
		OFFRD	ANSWD	ABAND	DEFLT	BLKED		TIME	CALL	TIME	CALL	TIME	CALL	TIME	
(RRR)002-0002	10:30	1	1	0	0	0	0	0	0	4	4	0	0		
(SSS)002-0002		1	1	0	0	0	0	0	4	4	0	0			
(SSS)003-0009	10:00	1	1	0	0	0	0	18	18	3	3	0	0		
(RRR)003-0009		1	1	0	0	0	0	18	18	3	3	0	0		
(SSS)005-0003	10:30	1	1	0	0	0	0	2	2	1	1	0	0		
(SSS)005-0003		1	1	0	0	0	0	2	2	1	1	0	0		
(RRR)006-0008	10:30	1	1	0	0	0	0	5	5	1	1	0	0		
(SSS)006-0008		1	1	0	0	0	0	5	5	1	1	0	0		
(SSS)009-0016	10:00	1	0	1	0	0	0	0	0	0	0	00	00		
(RRR)009-0016		1	0	1	0	0	0	0	0	0	0	00	00		
(SSS)010-0001	10:30	1	1	0	0	0	0	0	0	4	4	0	0		
(SSS)010-0001		1	1	0	0	0	0	0	0	4	4	0	0		
[Additional sample report contents intentionally deleted]															
SEC SEC SEC SEC SEC SEC															
		240	392	16	0	0	0	12	30	2	15	10	30		

Legend

Field	Description
# of Calls - Offrd	The number of calls offered to this ACD-DN. This value includes all calls that were offered to the group including calls that were either enqueued, presented directly to agents, overflowed, or deflected. (CALLS OFFRD) CallsOffered
# of Calls - Answd	The number of calls answered including calls that were overflowed to the ACD-DN. (CALLS ANSWD) CallsAnswered
# of Calls - Aband	The number of calls abandoned by all callers before being answered by an agent. (CALLS ABAND) CallsAbandoned

Legend

Field	Description
# of Calls - Dflct	<p>The number of calls that should have been offered to agents within the DN but were deflected to other destinations due to the number of calls in the queue or the wait time of the oldest call in queue. (CALLS DFLCT)</p> <p>CallsDeflected</p>
# of Calls - Blckd	<p>The number of calls that received call blocked treatment. This normally occurs when there are insufficient resources available to deliver the call to an agent. (CALLS BLCKD)</p> <p>CallsBlocked</p>
# of Calls - Night Svc	<p>The number of calls that were routed to this group while the group was in night service mode causing the call to be routed to the night service route. (NUM NS CALLS)</p> <p>NumNightSrvCalls</p>
Avg ACD Talk Time	<p>The average length of time from when a call is answered to when it is released, including the time spent with the call on hold. (AVG ACD TALK TIME)</p> <p><u>ACDTalkTime</u> CallsAnswered</p>
Max Call Dur	<p>The longest time spent on direct call processing for any single ACD call including the time the caller spent on hold. (MAX CALL DUR)</p> <p>MaxCallDuration</p>
Avg Ans Del	<p>The average delay experienced by a caller before the call was answered. (AVG ANS DEL)</p> <p><u>TotalAnswerDelay</u> CallsAnswered</p>
Max Ans Del	<p>The maximum delay experienced by a caller before the call was answered. (MAX ANS DEL)</p> <p>MaxAnswerDelay</p>

Legend

Field	Description
Avg Abd Del	The average delay experienced by a caller before they abandoned the call. (AVG ABD DEL) $\frac{\text{TotalAbandonDelay}}{\text{CallsAbandoned}}$
Max Abd Del	The maximum delay experienced by a caller before abandoning the call. (MAX ABD DEL) MaxAbandonDelay

Figure A.19 Summarized ACD Group Call Analysis report

Summarized ACD Group Call Analysis
Interval Report

Page 1

Your Company Date: 12/01/95 Time: 11:05:03 AM

Intervals: 10:00 - 10:30 Day: 12/01/95

ACD GROUP	INTVL	# OF CALLS					NIGHT SVC	AVG					
		OFFRD	ANSWD	ABAND	DPLCT	BLCKD		TALK TIME	CALL DUR	ANS DEL	ANS DEL	ABD DEL	ABD DEL
							SEC	SEC	SEC	SEC	SEC	SEC	SEC
(555)012-0000	10:00	53	41	4	0	0	0	13	30	2	10	12	22
	10:30	59	44	7	0	0	0	13	30	2	11	18	38
(555)012-0000		112	85	11	0	0	0	13	30	2	11	16	38
(555)018-0000	10:00	65	60	2	0	0	0	11	30	2	10	19	28
	10:30	63	57	3	0	0	0	12	30	2	15	22	23
(555)018-0000		128	117	5	0	0	0	11	30	2	15	21	28
		240	202	16	0	0	0	12	30	2	15	18	38

Legend

Field	Description
# of Calls - Offrd	The number of calls offered to this ACD-DN. This value includes all calls that were offered to the group including calls that were either enqueued, presented directly to agents, overflowed, or deflected. (CALLS OFFRD) CallsOffered
# of Calls - Answd	The number of calls answered including calls that were overflowed to the ACD-DN. (CALLS ANSWD) CallsAnswered
# of Calls - Aband	The number of calls abandoned by all callers before being answered by an agent. (CALLS ABAND) CallsAbandoned

Legend

Field	Description
# of Calls - Dflct	<p>The number of calls that should have been offered to agents within the DN but were deflected to other destinations due to the number of calls in the queue or the wait time of the oldest call in queue. (CALLS DFLCT)</p> <p>CallsDeflected</p>
# of Calls - Blckd	<p>The number of calls that received call blocked treatment. This normally occurs when there are insufficient resources available to deliver the call to an agent. (CALLS BLCKD)</p> <p>CallsBlckd</p>
# of Calls - Night Svc	<p>The number of calls that were routed to this group while the group was in night service mode causing the call to be routed to the night service route. (NUM NS CALLS)</p> <p>NumNightSrvCalls</p>
Avg ACD Talk Time	<p>The average length of time from when a call is answered to when it is released, including the time spent with the call on hold. (AVG ACD TALK TIME)</p> <p><u>ACDTalkTime</u> CallsAnswered</p>
Max Call Dur	<p>The longest time spent on direct call processing for any single ACD call including the time the caller spent on hold. (MAX CALL DUR)</p> <p>MaxCallDuration</p>
Avg Ans Del	<p>The average delay experienced by a caller before the call was answered. (AVG ANS DEL)</p> <p><u>TotalAnswerDelay</u> CallsAnswered</p>
Max Ans Del	<p>The maximum delay experienced by a caller before the call was answered. (MAX ANS DEL)</p> <p>MaxAnswerDelay</p>

Legend

Field	Description
Avg Abd Del	The average delay experienced by a caller before they abandoned the call. (AVG ABD DEL) $\frac{\text{TotalAbandonDelay}}{\text{CallsAbandoned}}$
Max Abd Del	The maximum delay experienced by a caller before abandoning the call. (MAX ABD DEL) MaxAbandonDelay

Figure A.20 Summarized ACD Group Performance report

Summarized ACD Group Performance Report Page 1
Interval Report

Your Company Date: 12/01/95 Time: 11:05:03 AM

Intervals: 10:00 - 10:30 Day: 12/01/95

ACD GROUP	INTVL	---Q PROFILE---			---# OF CALLS---			--AVG AGENT TIME--				
		SRV LVL%	AVG DEL SEC	DEL ANN	ANSW	OVFL IN	ABND	ACD TALK SEC	NOT RDY SEC	-NON IN SEC	ACD OUT SEC	
(555)012-0000	10:00	98	2	18	41	0	4	13	2	5	63	
	10:30	94	2	20	44	0	7	13	2	7	43	
-----		(555)012-0000	96	2	38	85	0	11	13	2	6	50
(555)018-0000	10:00	98	2	21	60	0	2	11	0	2	31	
	10:30	93	2	18	57	0	3	12	2	3	25	
-----		(555)018-0000	96	2	39	117	0	5	11	2	2	27
-----			96	2	77	202	0	16	12	2	4	38

Legend

Field	Description
Q Profile - Srv Lvl %	The percentage of calls answered or abandoned within the telephone service factor (TSF) threshold. The TSF threshold is defined for each group in Parameter Administration Threshold Definition as the maximum desired delay before answering or abandoning a call. (SRV LVL %) $\frac{\text{TotalCalls} - \text{CallsDelayed}}{\text{TotalCalls}} \times 100$
Q Profile - Avg Del Sec	The average delay before an ACD call was answered. (AVG ANS DEL) $\frac{\text{TotalAnswerDelay}}{\text{CallsAnswered}}$
Del Ans	The number of calls that received the delay announcement. (NUM RCV RAN) NumReceivedRAN

Legend

Field	Description
# Of Calls - Answ	The number of calls answered. (CALLS ANSWD) CallsAnswered
# Of Calls - Ovfl In	The number of calls that overflowed into the group. (TOF CALLS) NumTOFCallsIn
# Of Calls - Abnd	The number of calls abandoned. (CALLS ABAND) CallsAbandoned
Avg Agent Time - ACD Talk Sec	The average time an agent spent on each ACD call. (AVG ACD TALK TIME) $\frac{\text{ACDTalkTime}}{\text{CallsAnswered}}$
Avg Agent Time - Not Rdy Sec	The average time an agent spent doing post-call work (in seconds). (AVG NOT RDY TIME) $\frac{\text{TotalNotReadyTime}}{\text{NumberofNotReadyActivations}}$
Avg Agent Time - Non ACD - In Sec	The average time an agent spent on incoming DN calls (in seconds). (AVG IN DN TIME) $\frac{\text{IncomingDNTime}}{\text{DNCallsIn}}$
Avg Agent Time - Non ACD - Out Sec	The average time an agent spent on outgoing DN calls (in seconds). (AVG OUT DN TIME) $\frac{\text{OutgoingDNTime}}{\text{DNCallsOut}}$

Figure A.22 Subgroup by Agent Performance report

Subgroup by Agent Performance Report Page 1
Interval Report

Your Company Date: 12/01/95 Time: 11:05:03 AM

Intervals: 10:00 - 10:30 Day: 12/01/95

SUBGROUP	INTVL	NOT ID	---ACD Calls---			---NON ACD CALLS---				-TOTAL TIME-		ACD/STPD	ACD/STPD %
			NUM ANSWD	AVG TALK SEC	AVG WAIT SEC	NUM IN	NUM OUT	TIME IN HH:MM	TIME OUT HH:MM	NOT STDY HH:MM	STPD HH:MM		
1110	10:00	1010	23	14	46	3	6	0:00	0:02	0:00	0:30	28	
		1011	18	12	49	4	7	0:00	0:12	0:00	0:30	14	
	10:30	1010	20	15	45	3	13	0:00	0:08	0:00	0:30	21	
		1011	24	12	41	4	9	0:00	0:07	0:00	0:30	20	
-----			85	13	45	14	35	0:01	0:29	0:00	2:00	21	
1170	10:00	1070	31	10	40	5	11	0:00	0:02	0:00	0:30	22	
		1071	29	12	35	0	8	0:00	0:08	0:00	0:30	24	
	10:30	1070	36	10	30	2	13	0:00	0:03	0:00	0:30	24	
		1071	21	15	45	2	11	0:00	0:07	0:00	0:30	22	
-----			117	11	36	9	43	0:00	0:20	0:00	2:00	23	
-----			202	12	40	23	78	0:02	0:49	0:00	4:00	22	

Legend

Field	Description
ACD Calls - Num Answd	The number of ACD calls an agent answered. (CALLS ANSWD) CallsAnswered
ACD Calls - Avg Talk Sec	The average time an agent spent on each ACD call. (AVG ACD TALK TIME) <u>ACDTalkTime</u> CallsAnswered
ACD Calls - Avg Wait Sec	The average time an agent spent waiting between ACD calls (with no calls being processed). (AVG WAIT TIME) <u>WaitTime</u> CallsAnswered
Non-ACD Calls - Num In	The number of DN calls an agent received. (IN DN CALLS) DNCallsIn

Legend

Field	Description
Non-ACD Calls - Num Out	The number of DN calls an agent made. (OUT DN CALLS) DNCallsOut
Non-ACD Calls - Time In	The total time an agent spent on incoming DN calls. (TOTAL IN DN TIME) IncomingDNTime
Non-ACD Calls - Time Out	The total time an agent spent on outgoing DN calls. (TOTAL OUT DN TIME) OutgoingDNTime
Total Time - Not Rdy	The total time an agent spent in the not ready state. (TOTAL NOT READY TIME) NotReadyTime
Total Time - STFD	The total time an agent spent logged onto the system. (TOTAL STFD TIME) StaffedTime
ACD STFD %	The percentage of staffed time spent on ACD calls or in NOT READY. (WORK STFD %) $\frac{\text{ACDTalkTime} + \text{NotReadyTime}}{\text{StaffedTime}} \times 100$

Figure A.23 Walkaway Code by ACD Group report

Walkaway Code by ACD Group Report						Page 1
Interval Report						
Your Company			Date: 12/01/95 Time: 11:05:03 AM			
Intervals: 10:00 - 10:30 Day: 12/01/95						
WALKAWAY CODE	INTVL	WALKAWAY REASON	ACD GROUP	NUMBER OF WALKS	WALKAWAY TIME HH:MM	AVG WALK TIME SEC
000	10:00	000	(555)012-0000	5	0:00	3
			(555)018-0000	4	0:00	2
	10:30		(555)012-0000	5	0:00	3
			(555)018-0000	5	0:00	3
-----				19	0:01	3
098	10:00	Restroom Break	(555)012-0000	5	0:14	163
			(555)018-0000	2	0:07	217
	10:30		(555)012-0000	3	0:14	289
			(555)018-0000	4	0:11	165
-----				14	0:46	198
=====				33	0:47	86
=====						

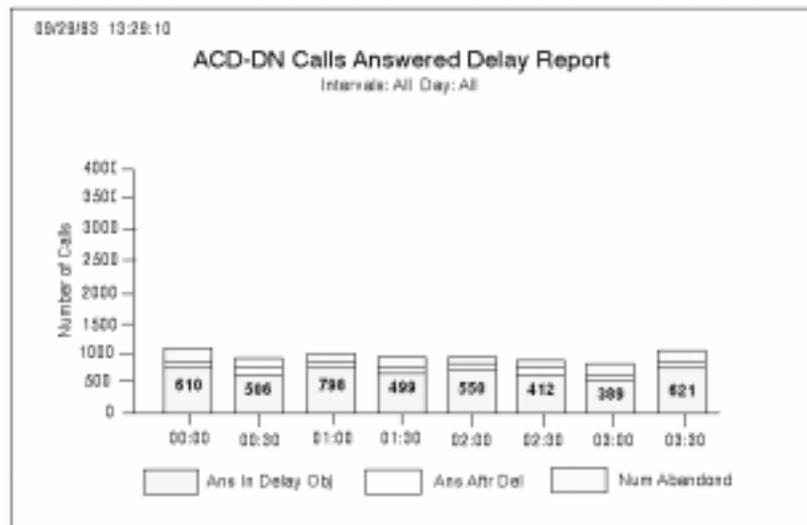
Legend

Field	Description
Walkaway Code	The 3-digit walk code.
Walkaway Reason	The walkaway reason.
ACD Group	The 10-digit primary DN number of the destination ACD group.
Number of Walks	The number of times that agents in this ACD group entered the walkaway state on their phone sets. (NUM WALKS) NumberOfWalkaways
Walkaway Time	The total amount of time spent in walkaway state by agents in this ACD group. (TOT WALK DUR) WalkawayDuration

Legend

Field	Description
Average Walk Time	The average amount of time that agents in this ACD group spent in walkaway state. (AVG WALK TIME) <u>WalkawayDuration</u> NumWalks

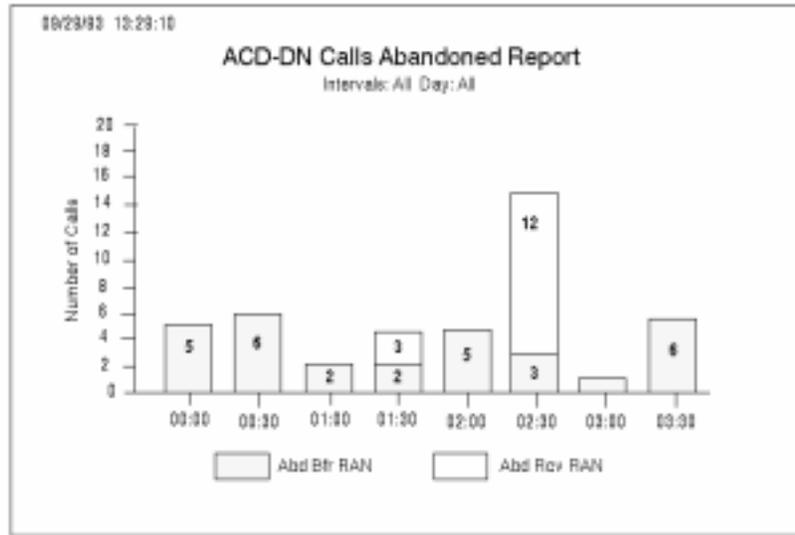
ACD-DN Calls Answered Delay Graphic report



Legend

Field	Description
Ans In Del Obj	The number of incoming calls answered by this ACD-DN that experienced an answering delay less than or equal to the Delay Objective value set for the ACD group. (ANS IN DLY OBJ) CallsAnswered - NumAnsAfterThrsh
Ans Aftr Del	The number of calls answered by this ACD-DN that experienced an answering delay greater than the Delay Objective value set for the ACD group. (ANS AFT DLY OBJ) NumAnsAfterThrsh
Num Abandonnd	The number of calls abandoned by the ACD-DN. (CALLS ABAND) CallsAbandoned

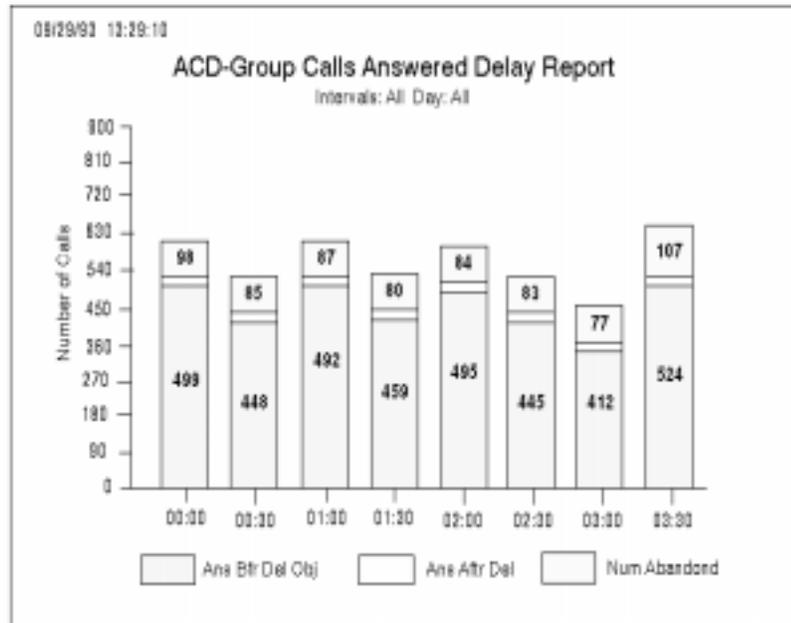
Figure A.25 ACD-DN Calls Abandoned Graphic report



Legend

Field	Description
Abd Bfr RAN	The number of calls abandoned before receiving RAN; the calls did not receive a recorded announcement. (NUM ABD BF RAN) CallsAbandoned - NumAbdRcvdRAN
Abd Rcv RAN	The number of abandoned calls that received a recorded announcement. (NUM ABD RCV RAN) NumAbdRcvdRAN

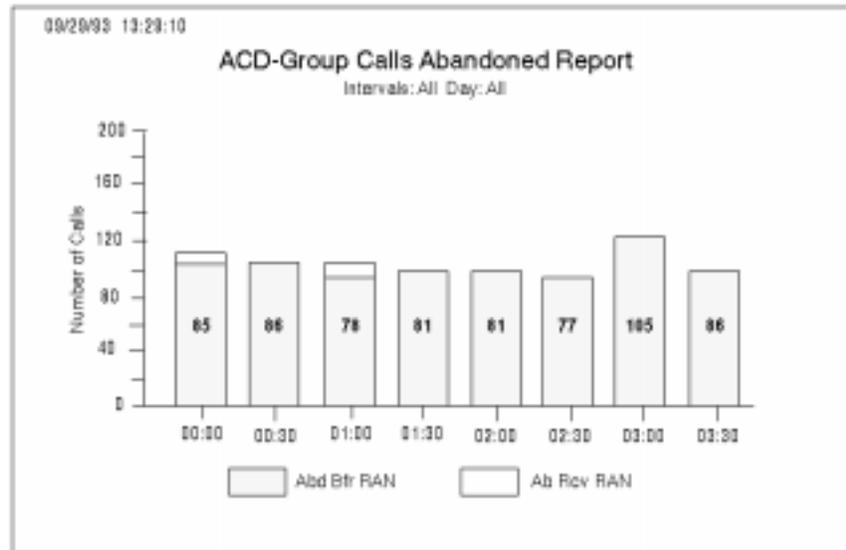
Figure A.26 ACD Group Calls Answered Delay Graphic report



Legend

Field	Description
Ans Bfr Del Obj	The number of calls answered by this ACD group that experienced an answering delay less than or equal to the Delay Objective value set for the ACD group. (ANS IN DLY OBJ) CallsAnswered - NumAnsAfterThrsh
Ans Aftr Del	The number of calls answered by this ACD group that experienced an answering delay greater than the Delay Objective value set for the ACD group. (ANS AFT DLY OBJ) NumAnsAfterThrsh
Num Abandonnd	The number of calls abandoned by the ACD group. (CALLS ABAND) CallsAbandoned

Figure A.27 ACD Group Calls Abandoned Graphic report



Legend

Field	Description
Abd Bfr RAN	The number of calls abandoned before receiving RAN; the calls did not receive a recorded announcement. (NUM ABD BF RAN) CallsAbandoned - NumAbdRcvdRAN
Abd Rcv RAN	The number of abandoned calls that received a recorded announcement. (NUM ABD RCV RAN) NumAbdRcvdRAN

Examples of Event Log reports

Figures are examples of the event log reports. A legend following the report identifies the report fields.

For each agent, there may be Staffed periods and workday periods. An agent can have multiple Staffed periods in one workday if the agent has logged in and logged out multiple times. The workday fields total all the Staffed periods during the day for the agent.

Figure A.28 Agent First Login/Logout report

Agent First Login/Last Logout Report								Page	1
Daily Report									
Your Company				Date: 12/01/95		Time: 11:05:03 AM			
Day: 12/01/95									
AGENT	PERIOD	START TIME	END TIME	LOGIN DURATN HH:MM	STAFFED TIME HH:MM	%LOGIN DURATN STAFFED	WALKAWAY TIME HH:MM	%STAFFED TIME IN WALKAWAY	
Day: 12/01/95									
1010	WORKDAY	00:00:00	11:05:03	11:05	11:05	99	2:09	19	
1011	WORKDAY	00:00:00	11:05:03	11:05	11:05	99	1:52	16	
1070	WORKDAY	00:00:00	11:05:03	11:05	11:05	99	2:11	19	
1071	WORKDAY	00:00:00	11:05:03	11:05	11:04	99	2:18	20	

Legend

Field	Description
Start Time	The time of the first login of the day.
End Time	The time of the last logout of the day.
Login Duratn	The time between the first login and the last logout of the day.
Staffed Time	The total time of each day spent logged into the system.
% Login Duratn Staffed	The percentage of the login duration time that the position was staffed.
Walkaway Time	The time spent by an agent in walkaway states.
% Staffed Time In Walkaway	The percentage of the total staffed time that the agent spent in walkaway states.

Legend - Workday Periods

Field	Description
% Login Duratn Staffed	The percentage of the login duration time that the position was staffed.
Walkaway Time	The time spent by an agent in walkaway states.
% Staffed Time In Walkaway	The percentage of the total staffed time that the agent spent in walkaway states.

Figure A.30 Agent Detail report

Agent Detail Report
Daily Report

Page 1

Your Company _____ Date: 12/01/95 Time: 11:05:03 AM

Day: 12/01/95

AGENT	F05 ID	PERIOD	START TIME	END TIME	LOGIN DURATION	STAFFED TIME	WLOGIN DURATION	WALKAWAY TIME	WSTAFFED TIME IN WALKAWAY	COMMENT
			HH:MM	HH:MM	HH:MM	HH:MM	HH:MM	HH:MM	HH:MM	
Day: 12/01/95										
1010	1118	WALKAWAY	00:03:10	00:06:10				0:05		Dept. 9210
		WALKAWAY	00:04:49	00:05:49				0:02		
		WALKAWAY	00:11:09	00:16:09				0:05		
		STAFFED	00:00:00	00:36:13		0:36		0:12	01	
		WALKAWAY	00:52:12	00:57:12				0:05		
		STAFFED	00:38:15	00:57:16		0:19		0:05	06	
		WALKAWAY	01:11:09	01:16:09				0:05		
		WALKAWAY	01:18:32	01:20:32				0:02		
		WALKAWAY	01:37:53	01:42:53				0:05		
		STAFFED	00:57:18	01:42:57		0:46		0:12	26	
		WALKAWAY	01:47:04	01:49:04				0:02		
		WALKAWAY	01:52:10	01:57:10				0:05		
		STAFFED	01:42:39	01:57:24		0:14		0:07	49	
		WALKAWAY	02:04:11	02:19:11				0:05		
		STAFFED	01:57:16	02:19:15		0:22		0:05	22	
		WALKAWAY	02:23:04	02:34:04				0:05		
		STAFFED	02:19:17	02:34:06		0:15		0:05	30	
		WALKAWAY	03:24:23	03:29:23				0:05		
		STAFFED	02:34:10	03:29:27		0:55		0:05	9	
		WALKAWAY	03:25:07	03:40:07				0:05		
		WALKAWAY	03:43:30	03:54:30				0:05		
		STAFFED	03:29:29	03:54:34		0:25		0:18	39	
		WALKAWAY	03:58:13	03:57:13				0:02		
		WALKAWAY	04:21:35	04:23:35				0:02		
		WALKAWAY	04:57:41	04:59:41				0:02		
		WALKAWAY	05:04:34	05:06:34				0:02		
		WALKAWAY	05:04:32	05:19:32				0:05		
		STAFFED	03:04:38	05:19:38		1:15		0:13	15	
		WALKAWAY	05:23:33	05:25:33				0:02		
		WALKAWAY	05:28:27	05:32:27				0:02		
		WALKAWAY	05:41:44	05:43:44				0:02		
		WALKAWAY	05:51:13	05:56:13				0:05		
		STAFFED	05:19:38	05:56:17		0:37		0:11	30	
		WALKAWAY	06:10:45	06:15:45				0:05		
		STAFFED	05:56:19	06:15:50		0:20		0:05	25	
		WALKAWAY	06:17:59	06:22:59				0:05		

[sample report contents intentionally deleted]

Legend - Walkaway Periods

Field	Description
Start Time	The time that each agent entered the walkaway state.
End Time	The time that each agent returned from the walkaway state.

Legend - Staffed Periods

Field	Description
Start Time	The time of each login throughout the day.
End Time	The time of each logout throughout the day.
Staffed Time	The total time of each day spent logged into the system.

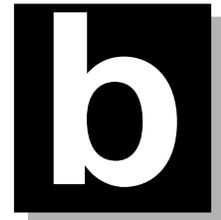
Legend - Workday Periods

Field	Description
Start Time	The time of the first login of the day.
End Time	The time of the last logout of the day.
Login Duration	The time between the first login and the last logout of the day.
Staffed Time	The total time of each day spent logged into the system.
% Login Duratn Staffed	The percentage of the login duration time that the position was staffed.
Walkaway Time	The time spent by an agent in walkaway states.
% Staffed Time In Walkaway	The percentage of the total staffed time that the agent spent in walkaway states.

Legend - Workday Periods

Field	Description
Start Time	The time of the first login of the day.
End Time	The time of the last logout of the day.

System Capacities



Introduction

Table B.1 summarizes the system capacities of the CC MIS system. Node limits are annotated in parentheses. All other entries are system partition limits.

Table B-1: System Capacities

Entity	Capacity
Supervisor terminals (node)	64 (Note 1)
Partitions (per CC MIS node)	16
Printers attached directly to CC MIS (node)	50 (Note 6)
Printers attached to PC-based supervisor terminals	1/PC
Wallboards ports (node)	50 (Note 6)
Wallboards on a single port (node)	5
Switch links (node)	4
ACD groups (node)	256 (Note 2)
ACD-DNs	4352 (Note 3)
ACD subgroups (supervisors) (node)	2000 (Note 2)
Active supervisor's sessions (node)	64 (Note 2)

Table B-1: System Capacities

Entity	Capacity
Active agent positions (node)	2000 (Note 2)
Agent IDs	4095
Line-of-business codes	1000
System disks (node)	16 (Note 5)
Walkaway codes	1000
MIS supervisor login IDs	256
Privilege Level definitions	256
Scope definitions	256
ACD groups in Scope definition	256
Subgroups in Scope definition	256
Change orders	100
Configuration control lists	100
Elements per configuration control list	100
Lists elements per partition	1000
Schedule definitions	100
Scheduled reports per schedule definition	100
Scheduled change orders per schedule definition	100
Scheduled reports in partition	1000
Scheduled change orders in partition	1000
Custom formulas (per statistical group) per partition	100
Public display quadrant definitions (graphic or tabular)	250
Personal display quadrant definitions (graphic or tabular) per supervisor	5
Public display screen definitions	250
Personal display screen definitions per supervisor	5
Public tabular report formats	100
Personal tabular report formats per supervisor	5
Public report parameter definitions	500
Personal report parameter definitions per supervisor	5

Table B-1: System Capacities

Entity	Capacity
Wallboard display definitions	250
Wallboard message definitions	250
Spectrums within each type (answer daily, abandon delay, call duration)	10
Threshold Definitions	256
Periods	13
Shifts	5
Log events per agent, per day	Max 9999 (Note 4)
Days of log event records stored	Max 9999 (Note 4)
Days of interval records stored	Max 9999 (Note 4)
Days of daily records stored	Max 9999 (Note 4)
Weeks of weekly records stored	Max 9999 (Note 4)
Months of monthly records stored	Max 9999 (Note 4)

Note 1: The system allows more than 64 terminals attached by way of LAN. However, only 64 active supervisor logins are allowed. (The maximum number of serial ports on a XR VME is 64, and 50 on the VME 8420.)

Note 2: The maximum allowed on the system is determined within the installation media.

Note 3: 256 possible ACD groups multiplied by 17 possible ACD-DNs per ACD group.

Note 4: This value is determined within the database storage calculator, which creates the historical database, with enough storage to hold the specified amount.

Note 5: This value is the logical limit. Current hardware configuration and the SCSI protocol impose a physical limit of five disks. Also, the VME accommodates only three internal disks, therefore, external disks would be required.

Note 6: This value is determined by the number of available ports.

Limits on object names

The user of the CC MIS system can specify names for certain objects. Depending on the object type, there is a specific limit to the number of characters in the object's name. Additionally, there may be display limits which prevent some of the characters from being displayed under certain conditions. For example, each ACD group may be assigned a textual name (as opposed to the DN which normally identifies the group).

In the ACD group definition screen, the user is allowed to enter up to 16 characters for the group name. However, to reduce the impact of the name length on the real-time screens in the Text interface and thus increase the amount of useful information, only the first 12 characters of the group name are displayed. In other areas of the system (for example, configuration control), all characters are displayed. In reports the column width of the report field determines the number of characters printed. For standard reports, the column width for group name fields is 16. However, the user can create custom report formats and decrease the column width.

The windows interface imposes additional limits on the number of characters that may be displayed for object names. As in typical Graphical User Interfaces (GUIs), proportional width fonts are utilized to display text. This means that some characters take up more space (for example, 'W') than other characters (for example, 'i'). The design philosophy that has been adopted for the CC MIS windows interface is that field widths will accommodate the maximum amount of characters allowed for an object's name using an average character width¹. This means that if the maximum number of characters has been chosen by the user to name an object, this name will be completely displayable in all situations only as long as the average width of all the characters chosen does not exceed the average width used to design the displays.

If the name includes a large number of capital letters (especially 'W'), there is a good chance that the name may not be completely visible on all screens. However, if the name includes mostly lower case characters, then there will likely be more than sufficient room to display the name on all screens.

The basic guideline to follow when defining names for objects should be to avoid over-use of capital letters since these letters are typically wider than the lower-case equivalent. If this guideline is followed, then all user-defined names should be completely displayable. Use of abbreviations and ensuring the displayable portion of a name is unique are also recommended techniques.

¹. The mechanism to determine the average character width has not been determined.

All names which are delivered with the product (i.e., names of standard objects) should not exceed any field width. To assist the user in entry of names in the windows interface, the entry fields are designed such that they can accommodate the largest number of characters with the average character width. Should the user enter a name which exceeds this width without exceeding the maximum number of characters for the object, the windows interface will begin horizontal scrolling as additional characters are entered.

The textual interface has no such display limits since this interface uses mono-width fonts. Any name (with certain exceptions such as the group name) will be completely displayable in all situations.

The following table contains the limits for each of the object names. In addition, the number of characters that will be displayed if the name is defined with the worst-case character width (that is, the name consists of all Ws) is also indicated.

Table B-2: Object Name Definition Limits

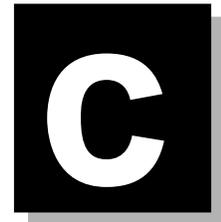
Object Type	Maximum Characters	Displayable Characters ^a
ACD Group Name ^b	16	16
Primary/Supplementary DN ^c	16	16 ^d
Logical Group Name	16	not applicable ^e
ACD-DN Name	16	not applicable
Supervisor Name	16	8
Supervisor Login ID ^c	4	4
Supervisor Password	16	not displayed ^f
Privilege Level Name	20	12
Scope Name	20	9
Agent Name	16	16
Agent ID ^c	4	4
Agent Comment	20	not applicable
User Defined Threshold Name	10	not applicable
Time Frame Period Name	16	not applicable
Customer Name	16	16
Walkaway Reason	30	not applicable
Walkaway Code Descriptor	3	3
Employee ID	14	not applicable
Line-of-Business (LOB) Code Name	30	not applicable
Schedule Name	40	25
List Name	16	11
Report Parameter Definition Name	55	20

Table B-2: Object Name Definition Limits

Object Type	Maximum Characters	Displayable Characters ^a
Report Format Definition Name	55	24
Formula Name (Reports)	64	not applicable
Graphical Report Data Axis Title	20	20
Graphical Report Key Axis Title	20	20
Tabular Report Custom Heading (each line)	132	132
Display Quadrant Definition Name	40	not applicable
Display Quadrant Custom Heading (each line)	32/65 ^g	32/65
Display Quadrant Legend	5-32/12-65 ^h	5-32/12-65
Display Screen Name	40	20
Formula Name (Displays)	64	22
Wallboard Message Definition Name	24	17
Wallboard Display Definition Name	40	23
Change Order Name	40	25
Printer Name	25	12

- a. This value applies to the Windows interface only and specifies the number of displayable characters using the worst-case character width (i.e. all characters are the letter 'W').
- b. The Queue Statistics screens will only display the first 12 characters of the group name (in Text interface) to increase the amount of real-time information available.
- c. This is a numerical value only.
- d. The DN format set in the Customer Options screen is used as a template for how the DNs will be formatted in reports and displays. Maximum of 16 characters (10 must be #'s and any 6 characters except | (vertical bar) to make the 16 character DN). Only 12 characters are displayed in the Text interface. These characters will be the first 12 characters of the formatted DN if group names are enabled but no group name is defined (that is, the formatted DN becomes the group name) or the last 12 characters if group names are not enabled (that is, all groups are identified by the primary DN).
- e. The "not applicable" indicator refers to values which are displayed only on emulation screens (since those screens have not been converted to utilize windows) and are therefore not affected by the proportional font.
- f. The supervisor password is not displayed on any screen for security purposes.
- g. The smaller value is for half-width quadrants while the larger value is for full-width quadrants.
- h. Quadrant legend text sizes are based on the number of bar segments as well as the quadrant width (half or full). The range is for half-width quadrants while the second range is for full-width quadrants. The first value in each range is for five bar segments while the last value in each range is for one bar segment.

System Reports



Introduction

System Reports provide information describing the current state of the CC MIS customer configuration including information defined through Parameter Administration and Customer Configuration.

In general, a report containing Parameter Administration or Customer Configuration data is a replica of the corresponding screen on which the data is entered.

The Configuration Report also contains configuration data received from the switch as well as configuration data modified through Configuration Control. Further detail on this data may be obtained from the MSL-100 ACD-MIS Interface Specification.

These reports are available at any time through the System Reports menu item on the supervisors main menu screen. They can be printed but not previewed, and they cannot be modified through Report Definition.

Configuration Report

This report provides load management information which is obtained from the switch as well as load management information modified through the Configuration Control facility. There are four components of this report. The first component contains information regarding ACD groups and the agent positions and supervisors within the group including an indication as to whether the position is currently staffed or unstaffed (spare).

The information is obtained from the switch and may be modified through the “Change Position Assignments” command of Configuration Control. An example report follows:

Figure C.1 Configuration Rpt - Group/Supervisor/Position assignments

CONFIGURATION REPORT GROUP/SUPERVISOR/POSITION ASSIGNMENTS					PAGE 1
Northern Telecom			Date: 11/02/89 Time: 17:38		
ACD GROUP	SPV-ID	AGENT POSN	STATUS	AGENT VARIABLE WRAP-UP TIME	
Service	3702	3702	SPARE	0	
	3702	3703	SPARE	0	
Sales	3700	3701	STAFFED	*	
Reservations	3700	3700	SPARE	100	
	3710	3710	SPARE	100	
Inquiries	3710	3709	STAFFED	20	

The second component of the Configuration Report contains load management information regarding the ACD groups including primary and supplementary DNs, group names, and trunk and line priorities. This information is obtained from the switch and may be modified through the “Change ACD-DN Assignments & Priorities” command of Configuration Control. An example report follows:

Figure C.2 Configuration Report - ACD Directory Numbers

CONFIGURATION REPORT ACD DIRECTORY NUMBERS				PAGE 1
Northern Telecom			Date: 11/02/89 Time: 17:38	
ACD GROUP	ACD-DN	-PRIORITY-- LINE TRUNK	ACD-DN NAME	
Sales	214-997-1000	0 0	Main Sales	
	214-997-1001	0 0	Special Sales	
Service	214-997-2000	1 1	Service	

The first line for each group shows the primary DN, line/trunk priorities, and ACD-DN name for the group. Subsequent lines for the same group provide information for the supplementary DNs.

The third component of the Configuration Report contains load management information for each group regarding queue sizes, thresholds, routing information, and other miscellaneous parameters. This information is obtained from the switch and may be modified through Configuration Control. An example report follows:

Figure C.3 .Configuration Report - ACD Group Parameters

```

                                CONFIGURATION REPORT                                PAGE 1
                                ACD GROUP PARAMETERS

Northern Telecom                                Date: 11/02/89 Time: 17:38

ACD GROUP      GROUP PARAMETERS

Sales          Overflow Targets:  1. SERVICE      2. INQUIRIES
                                   3. RESERVATIONS  4. PROMOTIONS

Maximum Call Queue Limit..... 300 calls
Maximum Call Queue Size..... 200 calls
Maximum Call Transfer Queue Size.... 20 calls
Maximum Overflow In Queue Limit.... 300 calls
Maximum Overflow In Size..... 50 calls
Maximum Wait Threshold..... 120 seconds
Recorded Announcement Threshold..... 0 seconds
Priority Promotion Timer..... 60 seconds
Service Rate..... 50 seconds
Variable Wrap-Up Time..... 15 seconds
Time Delay Threshold..... 600 seconds
Time Delay Threshold Time..... 60 seconds
Audio Group..... 1
Night Service Audio Group..... 1
Number of display digits..... 7
Consider Source Group..... yes
Forced Incoming Audio Group..... 2
Forced Overflow Audio Group..... 2
Original Group Provides Announcement no
Preference Weighting Factor..... 200
Resource Index..... 200
Time Delay Threshold Route..... OFRT 0
Threshold Route..... OFRT 0
Night Service Route..... OFRT 0
Controlled Interflow Route..... OFRT 0
Multi-Stage Queue Threshold Type.... Queue Size
Multi-Stage Queue Thresholds..... 20 30 40
Overflow Type..... Priority 0 only
Start Timer..... At Priority 0
call service order: outflow, call queues, inflow
    
```

Meanings for each of the above data items may be found in: *MDC Customer Data Schema* (NTP 297-2001-451), *Meridian SL-100 ACD General Description* (NTP 555-4101-100), *Meridian SL-100 ACD Load Management* (NTP 555-4101-102), and *Meridian SL-100 Network ACD General Description* (NTP 555-8101-100).

The fourth component of the report contains load management information regarding the networking targets used for Network ACD. This information is obtained from the switch and may be modified through Configuration Control. An example report follows:

Figure C.4 Configuration Report - ACD Network Targets

CONFIGURATION REPORT								PAGE 1
ACD NETWORK TARGETS								
Northern Telecom				Date: 11/02/89 Time: 17:38				
ACD GROUP	ACD NETWORK TARGETS							
	Destination	ACD-DN	PMF	RI	Destination	ACD-DN	PMF	RI
Sales	214-498-7276		20	40	214-907-7030		25	30
	214-517-6032		20	40	214-907-7031		25	30
	214-517-6033		20	40	214-907-7032		25	30
	214-517-6034		20	40	214-907-7033		25	30
	214-517-6035		20	40	214-907-7034		25	30
	214-517-6036		20	40	214-907-7035		25	30
	214-517-6037		20	40	214-907-7036		25	30
	214-517-6038		20	40	214-907-7037		25	30
	214-517-6039		20	40	214-907-7038		25	30
	214-517-6040		20	40	214-907-7039		25	30
	214-517-6041		20	40	214-907-7040		25	30
	214-517-6042		20	40	214-907-7041		25	30
	214-517-6043		20	40	214-907-7042		25	30
	214-517-6044		20	40	214-907-7043		25	30
	214-517-6045		20	40	214-907-7044		25	30
	214-517-6046		20	40	214-907-7045		25	30
	214-517-6047		20	40	214-907-7046		25	30
	214-517-6048		20	40	214-907-7047		25	30
	214-517-6049		20	40	214-907-7048		25	30
	214-517-6050		20	40	214-907-7049		25	30
	214-517-6051		20	40	214-907-7050		25	30
	214-517-6052		20	40	214-907-7051		25	30
	214-517-6053		20	40	214-907-7052		25	30
	214-517-6054		20	40	214-907-7053		25	30

Supervisor Database Report

The Supervisor Database Report provides information which has been entered through the Supervisor Definition portion of Parameter Administration. An example report follows:

Figure C.5 Supervisor Database Report

SUPERVISOR DATABASE REPORT		Page 1	
Northern Telecom		Date: 10/02/95 Time: 11:27	
<hr/>			
LOGIN ID: 11	NAME: Steve Public		
<hr/>			
PRIVILEGE LEVEL	: System Administrator		
SCOPE RESTRICTION	: Global		
ACD GROUP NAMES	: YES	TABULAR PRINTER	: RuggedWriter
EMERGENCY INDICATOR	: YES	GRAPHIC PRINTER	: LaserJet
AUDIBLE ALARM	: NO	LOCAL PRINTER OVERRIDE	: YES
DEFAULT QUEUE DISPLAY	: Standard Tabular Queue Display		
DEFAULT VIEW	: LIMITED		
DEFAULT GROUP LIST	: (NONE)		
VIEW LIST ITEMS ONLY	: NO		
UPDATE RATE	: 10		
SUBGROUP ID	: 0100		
<hr/>			
LOGIN ID: 14	NAME: Jon Smith		
<hr/>			
PRIVILEGE LEVEL	: Level 1 Supervisor		
SCOPE RESTRICTION	: Sales Dept.		
SUBGROUP ID	: 0100		
ACD GROUP NAMES	: YES	TABULAR PRINTER	: RuggedWriter
EMERGENCY INDICATOR	: NO	GRAPHIC PRINTER	: LaserJet
AUDIBLE ALARM	: NO	LOCAL PRINTER OVERRIDE	: YES
DEFAULT QUEUE DISPLAY	: Standard Tabular Queue Display		
DEFAULT VIEW	: LIMITED		
DEFAULT GROUP LIST	: (NONE)		
VIEW LIST ITEMS ONLY	: NO		
UPDATE RATE	: 10		
SUBGROUP ID	: 0100		

Privilege Level Database Report

The Privilege Level Database Report provides information which has been entered through the Privilege Level Definition portion of Parameter Administration. An example report follows:

Figure C.6 Privilege Level Database Report

```

                                PRIVILEGE LEVEL DATABASE REPORT                                Page 1
Northern Telecom                                Date: 12/02/92 Time: 11:27
=====
Level 1 Supervisor
-----
DISPLAY OPTIONS      CONFIG CONTROL OPTIONS      ADMINISTRATION OPTIONS
DISPLAYS..... YES   BASIC..... YES             SUPERVISORS/PRIVS.. NO
PERSONAL FORMATS.. YES POSITION REASSIGNS... YES  SCOPES..... NO
PUBLIC FORMATS... NO  AGENT SET PARAMS.... NO   DEFAULT COLORS.... NO
FORMULAS..... NO    QUEUE SIZES..... NO      TIME FRAMES..... NO
WALLBOARDS..... NO  TIME OVERFLOW..... NO    THRESHOLDS..... NO
ALARMS..... NO      OVERFLOW TARGETS.... NO   ACD GROUPS..... NO
GLOBAL VIEW..... NO  ANNOUNCEMENTS..... NO    AGENTS..... NO
MONITOR..... YES    SPECIAL ROUTING..... NO   WALKAWAY CODES... NO
                                NETWORK PARAMS..... NO    LOB CODES..... NO
                                ACD-DN REASSIGNS.... NO   SCHEDULES..... NO
                                NETWORK TARGETS.... NO    LISTS..... NO
                                CHANGE ORDERS..... NO    CUSTOMER OPTIONS.. NO

REPORT OPTIONS
PERSONAL REPORTS.. YES
PUBLIC REPORTS... NO
PERSONAL FORMATS.. YES
PUBLIC FORMATS... NO
FORMULAS..... NO
SPECTRUMS..... NO
SYSTEM REPORTS... NO
GLOBAL VIEW..... NO
MONITOR..... YES

                                SUPERVISOR OPTIONS
                                PROFILE..... YES
                                COLORS..... YES
    
```

Scope Database Report

The Scope Database Report provides information which has been entered through the Scope Definition portion of Parameter Administration. An example report follows:

Figure C.7 Scope Database Report

```

SCOPE DATABASE REPORT                                     Page 1
Northern Telecom                                         Date: 12/02/92 Time: 11:27
=====
Sales Dept
-----
ACD GROUPS: nnn-nnn-nnnn  nnn-nnn-nnnn  nnn-nnn-nnnn  nnn-nnn-nnnn  nnn-nnn-nnnn
            nnn-nnn-nnnn  nnn-nnn-nnnn  nnn-nnn-nnnn  nnn-nnn-nnnn  nnn-nnn-nnnn
            nnn-nnn-nnnn  nnn-nnn-nnnn  nnn-nnn-nnnn  nnn-nnn-nnnn  nnn-nnn-nnnn
            nnn-nnn-nnnn  nnn-nnn-nnnn

SUBGROUPS : nnnn nnnn
            nnnn nnnn nnnn nnnn nnnn nnnn nnnn nnnn nnnn nnnn nnnn nnnn
            nnnn nnnn nnnn nnnn nnnn nnnn nnnn nnnn nnnn nnnn nnnn

=====
Service Dept
-----
ACD GROUPS: nnn-nnn-nnnn  nnn-nnn-nnnn  nnn-nnn-nnnn  nnn-nnn-nnnn  nnn-nnn-nnnn
            nnn-nnn-nnnn  nnn-nnn-nnnn  nnn-nnn-nnnn  nnn-nnn-nnnn  nnn-nnn-nnnn
            nnn-nnn-nnnn

SUBGROUPS : nnnn nnnn
            nnnn nnnn nnnn nnnn nnnn nnnn nnnn nnnn nnnn nnnn nnnn

etc...

```

Agent Database Report

The Agent Database Report provides information which has been entered through the Agent Definition portion of Parameter Administration. This report will vary depending on whether the user partition has APR enabled or disabled. The following is an example report with APR disabled:

Figure C.8 Agent Database Report without APR

AGENT DATABASE REPORT				PAGE 1
Northern Telecom			Date: 11/02/89 Time: 17:38	
AGENT	AGENT NAME	EMPLOYEE ID	MISCELLANEOUS	
1	Smith	12345678901234	John Q. Smith	
2	Bush		George	
3	Jones		Joyce Jones	
4	White		Mark	
5	Doe		Jane Doe	
10	Hall		Mike Hall	
11	Fry		Dee	
12	Bols		Wasser	

The following is an example report with APR enabled:

Figure C.9 Agent Database Report with APR

AGENT DATABASE REPORT						PAGE 1
Northern Telecom					Date: 11/02/89 Time: 17:38	
----APR----						
AGENT	AGENT NAME	EMPLOYEE ID	SUBGRP	ON	MISCELLANEOUS	
1	Smith	12345678901234	1111	YES	John Q. Smith	
2	Bush			NO	George	
3	Jones			NO	Joyce Jones	
4	White			NO	Mark	
5	Doe			NO	Jane Doe	
10	Hall			NO	Mike Hall	
11	Fry			NO	Dee	
12	Bols			NO	Wasser	

ACD-GRP Database Report

The ACD-GRP Database Report provides information which has been entered through the ACD-GRP Definition portion of Parameter Administration. The following is an example report:

Figure C.10 ACD-GRP Database Report

ACD-GRP DATABASE REPORT			PAGE 1
Northern Telecom		Date: 11/02/89 Time: 17:38	
PRIMARY ACD-DN	ACD-GRP NAME	THRESHOLD NUMBER	LOGICAL GROUP
214-555-2885	Service	1	Sales
214-555-2888	Sales	1	Sales
214-555-2890	Reservations	1	Information
214-555-2891	Inquiries	1	Information
214-555-2896	Promotions	1	

Threshold Definition Database Report

The Threshold Definition Database Report provides information which has been entered through the Threshold Definition portion of Parameter Administration. An example report follows:

Figure C.11 Threshold Definition Database Report

THRESHOLD DATABASE REPORT				PAGE 1
Northern Telecom		Date: 11/02/89 Time: 17:38		
THRESHOLD #	AGENT THRESHOLDS	QUEUE STATISTICS THRESHOLDS		
1	ACD TALK... 11	Delay Objective...	16	UD1> Agts Rqd 100
	Not Ready... 12	Service Objective.	17	UD2>
	Wait..... 13	Avg. Answer Delay.	18	UD3>
	DN In 14	Calls Waiting.....	19	UD4>
	DN Out.... 15	Short Call.....	20	UD5>
	Walkaway... 16	DN IN Short Call..	32	
	Hold..... 17	DN Out Short Call.	32	
2	ACD TALK... 21	Delay Objective...	26	UD1> Agts Rqd 100
	Not Ready... 22	Service Objective.	27	UD2>
	Wait..... 23	Avg. Answer Delay.	28	UD3>
	DN In 24	Calls Waiting.....	29	UD4>
	DN Out..... 25	Short Call.....	30	UD5>
	Walkaway... 26	DN IN Short Call..	32	
	Hold..... 27	DN Out Short Call.	32	
5	ACD TALK... 31	Delay Objective...	36	UD1> Agts Rqd 100
	Not Ready... 32	Service Objective.	37	UD2>
	Wait..... 33	Avg. Answer Delay.	38	UD3>
	DN In 34	Calls Waiting.....	39	UD4>
	DN Out..... 35	Short Call.....	40	UD5>
	Walkaway... 36	DN IN Short Call..	32	
	Hold..... 37	DN Out Short Call.	32	

Shift Definition Database Report

The Shift Definition Database Report provides the information regarding shifts which has been entered through the Time Frames Definition portion of Parameter Administration. An example report follows:

Figure C.12 Shift Definition Database Report

SHIFT DATABASE REPORT			PAGE 1
Northern Telecom		Date: 11/02/89	Time: 17:38
SHIFT	SHIFT NAME	SHIFT START TIME	
1	Morning	00:00	
2	Day	08:00	
3	Evening	16:00	

Period Definition Database Report

The Period Definition Database Report provides the information regarding periods which has been entered through the Time Frames Definition portion of Parameter Administration. An example report follows:

Figure C.13 Period Definition Database Report

PERIOD DATABASE REPORT			PAGE 1
Northern Telecom		Date: 11/02/89 Time: 17:38	
PERIOD	PERIOD NAME	START DATE (MM/DD)	
1	January	1/01	
2	February	2/01	
3	March	3/01	
4	April	4/01	
5	May	5/01	
6	June	6/01	
7	July	7/01	
8	August	8/01	
9	September	9/01	
10	October	10/01	
11	November	11/01	
12	December	12/01	
End date of last period:		12/31	

Logical Group Database Report

The Logical Group Database Report provides the information regarding logical groups which has been entered through the ACD-GRP Definition portion of Parameter Administration. This information is also available on the ACD-GRP Database Report. On this report, however, the information is presented in logical group order. An example report follows:

Figure C.14 Logical Group Database Report

LOGICAL GROUP REPORT		PAGE 1
Northern Telecom		Date: 11/02/89 Time: 17:38
LOGICAL GROUP NAME	LOGICAL GROUP ELEMENTS	
Sales	Sales 214-555-2888	
Information	Service Complaints	

Walkaway Code Database Report

The Walkaway Code Database Report provides the information regarding logical groups which has been entered through the Walkaway Code Definition portion of Parameter Administration. An example report follows:

Figure C.15 Walkaway Code Database Report

WALKAWAY CODE DATABASE REPORT				PAGE 1
Northern Telecom		Date: 11/02/89		Time: 17:38
WALKAWAY CODE	WALKAWAY REASON	CODE DESCRIPTOR	WALK EVENT	
211	Lunch	LCH	Yes	
221	Break	BRK	Yes	
231	Assistance	AST	No	

Line of Business Code Database Report

The Line of Business Code Database Report provides the information regarding logical groups which has been entered through the Line of Business Code Definition portion of Parameter Administration. An example report follows:

Figure C.16 Line of Business Code Database Report

LOB DATABASE REPORT		PAGE 1
Northern Telecom		Date: 11/02/89 Time: 17:38
LOB	LOB Code Name	
111	Product Assistance	
121	Complaints	
125	Sales	

ACD-DN Database Report

The ACD-DN Database Report provides the information regarding ACD-DNs which has been entered through the ACD-DN Definition portion of Parameter Administration. An example report follows:

Figure C.17 ACD-DN Database Report

ACD-DN DATABASE REPORT	Page 1
Northern Telecom	Date: 11/02/89 Time: 17:38
ACD-DN	ACD-DN NAME
214-555-2885	Service Priority
214-555-2888	Sales Priority
214-555-2890	Special Deal
214-555-2891	Holiday Promo
214-555-2896	Priority Cust.

Alarm Definition Database Report

The Alarm Definition Database Report provides the information concerning the defined alarms. An example report follows:

Figure C.18 Alarm Definition Database Report

```

.....ALARM DATABASE REPORT.....Page 1
Nortel                               Date: 02/09/96 Time: 10:47
=====
ALARM ID: 1      NAME: Service Level Alarm
-----
FORMULA   : Telephone service level
THRESHOLD : Below   Service Objective      PLUS : 0
ALARM TYPE: Major   GROUPS : Good Service   DELAY : 5
=====
ALARM ID: 5      NAME: Force Outs
-----
FORMULA   : Number of positions in FORCED state
THRESHOLD : Above   (Zero)                PLUS : 1
ALARM TYPE: Minor   GROUPS : (All)          DELAY : 10
=====
ALARM ID: 30     NAME: Calls Waiting Alarm
-----
FORMULA   : Number of physical calls queued
THRESHOLD : Above   Calls Waiting         PLUS : 3
ALARM TYPE: Minor   GROUPS : (All)          DELAY : 10
=====
ALARM ID: 55     NAME: Excessive Caller Delay
-----
FORMULA   : Wait time of oldest physical call
THRESHOLD : Above   (Zero)                PLUS : 120
ALARM TYPE: Major   GROUPS : (All)          DELAY : 10
=====
ALARM ID: 99     NAME: ARU Failure Alarm
-----
FORMULA   : Number of positions in NRDY state
THRESHOLD : Above   (Zero)                PLUS : 10
ALARM TYPE: Critical GROUPS : ARU Groups   DELAY : 5
=====
ALARM ID: 100    NAME: Excessive Traffic
-----
FORMULA   : Number of calls answered
THRESHOLD : Above   (Zero)                PLUS : 600
ALARM TYPE: Poll    GROUPS : (All)          DELAY : 10
=====

```

Schedule Definition Database Report

The Schedule Definition Database Report provides the information concerning the defined schedules in the database. An example report follows:

Figure C.19 Schedule Definition Database Report

```

                                SCHEDULE DEFINITION REPORT

Northern Telecom                               Date: 04/19/96 Time: 09:48
-----
SCHEDULE NAME:jayr1
-----
DATE SELECTIONS          TIME SELECTIONS
Date: 4/15                End of each interval ;
Start of each week :      End of each shift :
Start of Each period:

Every Monday             .x
Every Tuesday            .x
Every Wednesday          .x
Every Thursday           .x
Every Friday             .x
Every Saturday           .x
Every Sunday             .x

Times in schedule :
Time Restrictions:
    
```

Acronyms and abbreviations



Introduction

This appendix contains a listing of acronyms and abbreviations

<u>Acronym</u>	<u>Meaning</u>
ACD	Automatic Call Distribution
ACD-DN	Automatic Call Distribution Directory Number
ACD FM	Automatic Call Distribution Force Management
ACD GRP	Automatic Call Distribution Group
ACD-MIS	Automatic Call Distribution Management Information System
CCITT	International Telegraph & Telephone Consultative Committee
CC MIS	Call Center Management Information System
CPU	Central Processing Unit
DAT	Digital Audio Tape

<u>Acronym</u>	<u>Meaning</u>
DMS-ACD	DMS Automatic Call Distribution
DN	Directory Number
EGA	Enhanced Graphics Adaptor
EMPC	Enhanced Multi-Protocol Controller
Gbyte	Gigabyte
HDC	Historical Data Collector
Hz	Hertz
ID	Identification
I/O	Input/Output
Kbyte	Kilobyte
Kbyte/s	Kilobytes per second
KVA	Kilovolt amperes
LAN	Local Area Network
LOB	Line of business
Mbyte	Megabyte
MIS	Management Information System
MSL-100	Meridian SL-100
NOP	Network Operations Protocol
NTP	Northern Telecom Publication
PC	Personal Computer
PWD	Preference Weighting Factor
RAID	Redundant Array of Inexpensive Disks
RAM	Random Access Memory
SNMP	Simple Network Management Protocol

<u>Acronym</u>	<u>Meaning</u>
STFD	Staffed
TSF	Telephone Service Factor
UPS	Uninterruptable Power Supply
VDT	Video Display Terminal
VGA	Virtual Graphics Adaptor
V	Volts
Vac	Volts alternating current
Windows	Short for Microsoft Windows 3.1 or Windows 95 software
X.25	Data transmission protocol as defined by the CCITT

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