Nortel Communication Server 1000

Nortel Integrated Call Director Service Implementation Fundamentals

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www.nortel.com

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New in this Release

The following sections detail what's new in *Nortel Integrated Call Director Service Implementation Fundamentals (NN43001-561)* for release 7.0.

Features

There have been no updates to the feature descriptions in this document.

Other changes

Revision History

June 2010	Standard 04.01. This document is up-issued to support Communication Server 1000 Release 7.0.
May 2009	Standard 03.04. This document is up-issued to support Communication Server 1000 Release 6.0.
February 2009	Standard 03.03. This document is up-issued to reflect editorial changes to support Communication Server 1000 Release 6.0.
November 2008	Standard 03.02. This document is up-issued Calling Party Privacy Enhancement (CPPE) feature to support Communication Server 1000 Release 6.0.
September 2008	Standard 03.01. This document is up-issued to include the Calling Party Privacy Enhancement (CPPE) for Communication Server 1000 Release 6.0.
December 7, 2007	Standard 02.01. This document is up-issued to support Communication Server 1000 Release 5.5.
May 30, 2007	Standard 01.01. This document is issued to support Communication Server 1000 Release 5.0 This document contains information previously contained in the following legacy document, now retired: *Nortel Integrated Call Director Service Implementation Guide (553-3001-361)*. No new content has been added for Communication Server 1000 Release 5.0. All references to Communication Server 1000 Release 4.5 are applicable to Communication Server 1000 Release 5.0.
September 2006	Standard 4.00. This document is up-issued for CR Q01419490, adding information on Call Park configuration.

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August 2005	Standard 3.00. This document is up-issued to support Communication Server 1000 Release 4.5.
July 2004	Standard 2.00. This document is up-issued to support Nortel Networks Integrated Call Director (ICD) Release 2.
October 2003	Standard 1.00. This document is a new NTP for Succession 3.0. It was created to support a restructuring of the Documentation Library. This document contains information previously contained in the following legacy document, now retired: *Meridian 1 Integrated Personal Call Director: Description, Installation, Administration, and Maintenance* (553-3001-117).

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How to get help

This chapter explains how to get help for Nortel products and services.

Getting help from the Nortel Web site

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This site provides quick access to software, documentation, bulletins, and tools to address issues with Nortel products. From this site, you can:

- download software, documentation, and product bulletins
- search the Technical Support Web site and the Nortel Knowledge Base for answers to technical issues
- sign up for automatic notification of new software and documentation for Nortel equipment
- open and manage technical support cases

Getting help over the telephone from a Nortel Solutions Center

If you do not find the information you require on the Nortel Technical Support Web site, and you have a Nortel support contract, you can also get help over the telephone from a Nortel Solutions Center.

In North America, call 1-800-4NORTEL (1-800-466-7835).

Outside North America, go to the following Web site to obtain the telephone number for your region:

www.nortel.com/callus

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Getting help from a specialist by using an Express Routing Code

To access some Nortel Technical Solutions Centers, you can use an Express Routing Code (ERC) to quickly route your call to a specialist in your Nortel product or service. To locate the ERC for your product or service, go to:

www.nortel.com/erc

Getting help through a Nortel distributor or reseller

If you purchased a service contract for your Nortel product from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller.

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Introduction

This document is a global document. Contact your system supplier or your Nortel representative to verify that the hardware and software described are supported in your area.

Subject

This document explains how to install, configure, and maintain Nortel Integrated Call Director (ICD). Follow the instructions in sequence.

To configure preferences in user accounts, see *Integrated Call Director User Guide*.

Note on legacy products and releases

This NTP contains information about systems, components, and features that are compatible with Nortel Communication Server 1000 Release 5.5 software. For more information on legacy products and releases, click the **Technical Documentation** link under **Support & Training** on the Nortel home page:

www.nortel.com

Applicable systems

This document applies to the following systems:

- Communication Server 1000E (CS 1000E) CP PII, CP PIV and CP PM.
- Communication Server 1000M Single Group (CS 1000M SG) CP PII, CP PIV
- Communication Server 1000M Multi Group (CS 1000M MG) CP PII, CP PIV
- Meridian 1 PBX 11C Chassis
- Meridian 1 PBX 11C Cabinet

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- Meridian 1 PBX 61CCP PII, CP PIV
- Meridian 1 PBX 81CCP PII, CP PIV

Note: When upgrading software, memory upgrades may be required on the Signaling Server, the Call Server, or both.

System migration

When particular Meridian 1systems are upgraded to run CS 1000 Release software and configured to include a Signaling Server, they become CS 1000M systems. Table 1 "Meridian 1 systems to CS 1000M systems" (page 12) lists each Meridian 1 system that supports an upgrade path to a CS 1000M system.

Table 1
Meridian 1 systems to CS 1000M systems

This Meridian 1 system...	Maps to this CS 1000M system
Meridian 1 PBX 11C Chassis	CS 1000E
Meridian 1 PBX 11C Cabinet	CS 1000E
Meridian 1 PBX 61C	CS 1000MSingle Group
Meridian 1 PBX 81C	CS 1000MMulti Group

For more information, see one or more of the following NTPs:

- *Communication Server 1000M and Meridian 1 Small System Software Upgrade (NN43011-459)*
- *CS 1000M and Meridian 1 Large System Upgrades Overview (NN43021-458)*
- *Communication Server 1000S: Upgrade Procedures (NN43031-458)*
- *Communication Server 1000E Upgrades (NN43041-458)*

Intended audience

This document is intended for individuals responsible for installation, configuration, and maintenance of the Nortel Integrated Call Director (ICD) Release 2.

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Conventions

Terminology

In this document, the following systems are referred to generically as "system":

- Communication Server 1000E (CS 1000E)
- Communication Server 1000M (CS 1000M)
- Meridian 1

The following systems are referred to generically as "Small System":

- Meridian 1 PBX 11C Chassis
- Meridian 1 PBX 11C Cabinet

The following systems are referred to generically as "Large System":

- Communication Server 1000M Single Group (CS 1000M SG)
- Communication Server 1000M Multi Group (CS 1000M MG)
- Meridian 1 PBX 61CCP PII, CP PIV
- Meridian 1 PBX 81CCP PII, CP PIV

Related information

This section lists information sources that relate to this document.

NTPs

The following NTPs are referenced in this document:

- *Features and Services Fundamentals (NN43001-106)*
- *Software Input/Output Administration (NN43001-611)*
- *Call Detail Recording: Description and Formats (NN43001-550)*
- *Communication Server 1000M and Meridian 1 Large System Maintenance (NN43021-700)*

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Product description

Contents

This section contains information on the following topics:

“Overview” (page 15)

“ICD requirements” (page 19)

“ICD card description” (page 20)

“Network configuration” (page 26)

“Dial access to ICD services” (page 27)

“Billing users” (page 30)

“Dialing restrictions” (page 30)

“Traffic data reports” (page 31)

“Event Logger reports” (page 31)

Overview

Nortel Integrated Call Director (ICD) Release 2 is an Intelligent Peripheral Equipment (IPE) card that emulates an Extended Digital Line Card (XDLC) and provides the following services:

- One Number service
- Remote Dial service

Two types of ICD users can be purchased. The two types are the following:

- Remote Dial
- Remote Dial and One Number

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Users of the first type can be subscribed to the Remote Dial service only. Users of the second type can be subscribed to either the One Number service or the Remote Dial service or both. A user is "subscribed" to a service once the system administrator registers him or her to the specific service. The total number of users on the ICD card cannot exceed 300.

Refer to “Port, user, and keycode data” (page 78) for more information on the types of subscribers and the procedure for entering the number of subscribers of each type purchased when installing or upgrading the ICD.

> ***Note:*** In this document, "user" and "subscriber" are used interchangeably. "Subscriber" is used when referring specifically to the services offered by the ICD card (namely, One Number and Remote Dial). "User" is used when referring generically to the person (subscriber) using the card.

One Number service

Each subscriber to the One Number service has a personal number and a personal database associated with that number. Callers always dial that number to reach the user, regardless of the user’s location. The user defines how and where incoming calls are routed by creating one or more Follow-me profiles. Call treatment is based on the information the user enters for each profile, and can vary according to time, date, and the calling number.

Refer to “One Number service” (page 34) for more information. Refer also to "One Number Follow-me profiles window" in the ICD User Guide.

Remote Dial service

Each subscriber to the Remote Dial service has a personal number and a personal database associated with that number. If the user also subscribes to the One Number service, the same database contains all the information for both services.

Remote Dial service enables users to use ICD from a remote location. Users have two options for dialing out using ICD:

- Call the ICD access number and immediately dial out to any destination.
- Call the ICD access number and have the ICD call them back. When ICD calls the user back, he or she dials out to any destination.

Each user can have access to either or both of these options to dial in to ICD, based on the permissions and definitions that the ICDadministrator entered for that user.

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Users dial out to any destination like they would from a digital set equipped on the same system where the ICD card is installed.

Administration and configuration

The ICD card supports three basic interfaces:

- Browser User Interface (BUI)
- Telephone User Interface (TUI)
- Command Line Interface (CLI)

Once the system is operational and connected to the corporate Local Area Network (LAN), users and the administrator can use the BUI to modify options and settings.

Users use either the BUI or TUI to change their ICDoptions and settings after the administrator has defined the users and their parameters.

System administrators use a web browser and a terminal (TTY) to change ICD options and settings. The BUI is implemented on a web server embedded in the product and reached through an Ethernet connection.

BUI

The ICD card provides a web-based BUI to users. Users use the BUI to create a personal database containing rules and other data for both outgoing dialing services. Up to ten users can simultaneously operate the BUI.

The recommended browser applications are:

- Microsoft Internet Explorer™, Version 5 or higher
- Netscape Navigator™, Version 4.5 or higher

Refer to "Configuring the ICD BUI" in the *ICD User Guide* for a detailed description of the user BUI.

ICD also provides a web-based BUI that the administrator uses to set the user and system definitions. Both the user BUI and the administrator BUI are accessible from standard desktop browsers. The BUIs do not require that any application-specific software be installed on the desktop. Windows 98TM or later is required to run the user and administrator BUIs.

TUI

A Telephone User Interface (TUI) allows the user to make changes to his or her personal database using the telephone. The TUI consists of pre-recorded prompts that lead the user through the configuration process. The TUI prompts ask for information such as the user's personal number, profile number, and password, as well as override numbers that the user

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configured in the BUI. The TUI prompts are dependent on the service to which the user subscribes. Users can enter input during or after a prompt to select options in the TUI.

To log in to the ICD TUI, users:

Step	Action
1	dial the TUI extension. The ICD administrator defines this extension.
2	enter their personal number. The administrator defines this number.
3	enter their personal password. The user defines this number in the user BUI.
4	select options from the TUI main menu: **a** record a personal greeting, up to 20 seconds in length **b** record their personal identification **c** program an override **d** change the callback number **e** change passwords **f** access their Speed Dial list, listen to the first 20 entries, and record names for the first 20 entries

--End--

Refer to "ICD configuration — using the TUI" in the *ICD User Guide* for a detailed description of the user TUI.

Note: With ICD Release 2, the administrator no longer uses the TUI.

CLI

During initial installation and setup, a terminal (TTY) is connected to the ICD serial port connector (on the I/O panel). The administrator uses the terminal's CLI to enter the basic network and system settings, such as the IP address and debugging. The administrator also watches processes from the CLI that were initiated in the administrator BUI.

Once the ICD system is connected to a LAN, the CLI commands can be entered with a Telnet connection instead of a TTY. CLI can also be accessed through the administrator BUI.

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See “CLI command description” (page 153) for information on specific commands.

ICD requirements

This section describes hardware and software requirements for ICD.

Card capacity

The ICD card is an IPE card that emulates a digital line card. It is compatible with any software release that supports IPE. For Release 22 and later and Succession 1.0 and later, the ICD card supports 32 voice ports, 0-31.

Prior to Release 22, the ICD card supported 16 voice ports, 0-15.

The port and user capacities are licensed as follows:

- 8 port, 50 user
- 16 port, 100 user
- 24 port, 150 user
- 32 port, 200 user

All of these port and user capacities can be increased to a maximum 32-port, 300-user capacity.

ICD card implementation resources

The following are required for each ICD card:

- one ACD Directory Number (DN) and its associated queue and data block
- Call Park enabled:
  - For System Park DN usage (SPDN prompt in OVL-50), the recommended minimum number of SPDN’s is shown below:
    - For 8 ports ICD card - 4 System Park DN’s
    - For 16 ports ICD card - 6 System Park DN’s
    - For 24 ports ICD card - 7 System Park DN’s
    - For 32 ports ICD card - 8 System Park DN’s.
  - For non-System Park DN usage (the SPDN prompt is 0), there is no Call Park resources limitation.
- access DNs:

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— one agentless ACD queue or Phantom Terminal Number (TN) for TUI access

— one agentless ACD queue or Phantom TN for Common Remote Dial access

— additional agentless ACD queues or Phantom TNs if Private Remote Dial access is used — one number for each user who has Private Access

— one Phantom TN for each One Number user, depending on configuration, if not using the user's physical set

- a digital set block and a DN for outgoing dialing for each configured port. This DN does not have to be accessible by Direct Inward Dialing (DID).
- one Internet Protocol (IP) address for administration and configuration purposes for each ICD card

Packaging requirements

ICD requires the following software packages:

- End-to-End Signaling (EES) package 10
- Call Park (CPRK) package 33
- Automatic Call Distribution, package B (ACDB) package 41
- Automatic Call Distribution, package A (ACDA) package 45
- Digital Sets (DSET) package 88
- Dialed Number Identification Service (DNIS) package 98 (this is optional and needed only if DNIS is used)
- Phantom TN package 254 (this is optional and needed only if Phantom TN is used)

ICD card description

One or more ICD cards can be inserted into an IPE shelf. See Figure 1 "ICD system configuration" (page 21). The following apply to ICD:

- Each ICD card serves a specific set of subscribers.
- ICD ports are configured as ACD agents (M2616 digital telephone).
- ICD cards are connected to the corporate intranet through an Ethernet Local Area Network (LAN).
- Each ICD card contains an embedded web server for BUI operation. A subscriber accesses the ICD BUI from their web browser. The BUI

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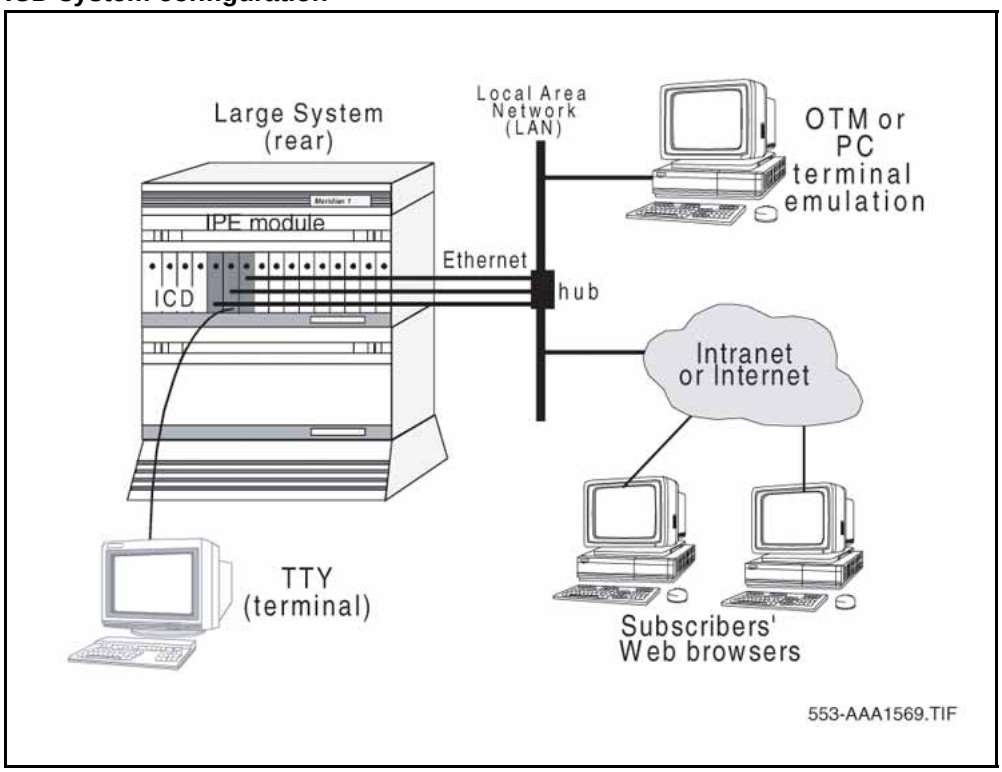
is protected by a user ID and password. Up to ten users can operate their BUI simultaneously.

- The ICD user BUI interface uses the HTTP port (80). The administrator BUI uses the following ports: HTTP (80), FTP (20, 21), Proprietary (3700).
- A TTY can be connected directly to the serial port of the ICD card for the CLI. The CLI is needed during the installation of the ICD card, but can also be used during normal operation as well. The same CLI facilities can be accessed through Telnet or through a special web page on the administrator BUI.

Figure 1 "ICD system configuration" (page 21) shows the ICD system configuration.

Figure 1
ICD system configuration



TCP/IP port requirements and use

You cannot change ICD ports requirements and use. In most cases, only users access the BUI over the Internet. The user BUI accesses only port 80, which must be opened in the firewall if users access their BUI from outside the LAN.

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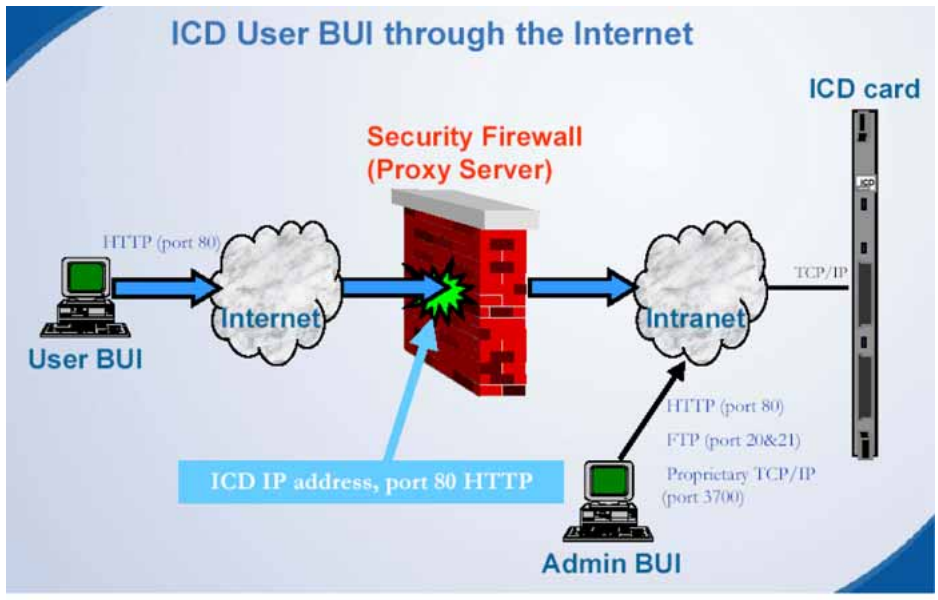
The administrator BUI is intended for intranet access only. The administrator BUI uses four ports:

- port 80 — HTTP
- ports 20, 21 — FTP. The administrator BUI uses this to access the database files on the card. This port is used for the administrator BUI work to perform such tasks as:
  - — presenting data to the administrator
  - — updating information in the database according to administrator modifications
- port 3700 for runtime communication between the administrator BUI and the ICD software. This port is also used throughout the administrator BUI operation.

Figure 2 "Port requirements" (page 22) shows the typical port requirements.

In some instances, the administrator can also be on the Internet side of the firewall. In this case, the administrator BUI ports must also be opened in the firewall.

Figure 2
Port requirements



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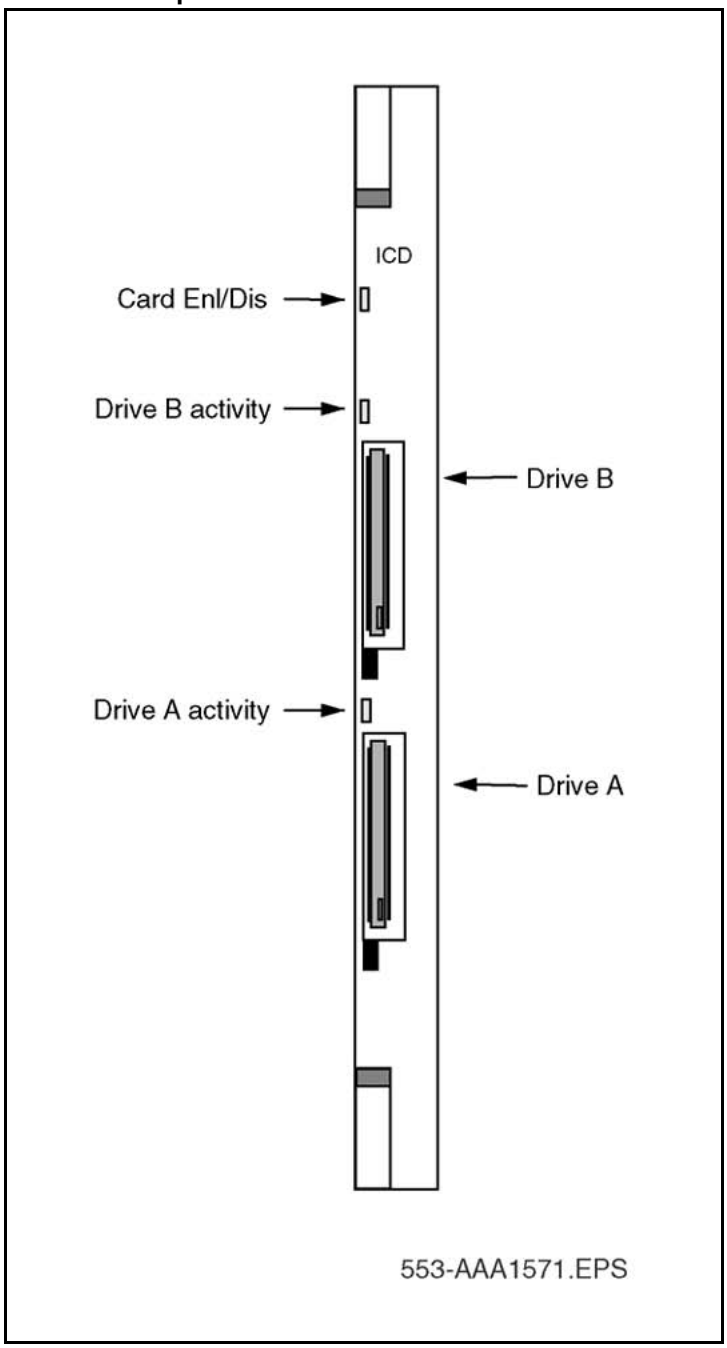
Hardware description

The ICD faceplate contains two PC Card slots. See Figure 3 "ICD card faceplate" (page 23).

Figure 3
ICD card faceplate



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Drive A

Drive A is the main operation disk. This disk contains firmware files, database and log files, and voice prompt files. This disk must be present for ICD to operate.

Drive B

Use Drive B for upgrades and backup. This disk can be removed when not in use.

External drive LEDs

Red LED ON: PC Card is disabled.

Red LED OFF: PC Card is ready for use.

Red LED blinking: PC Card is in use.

Card Enl/Dis LED

Red LED ON: ICD card is disabled.

Red LED OFF: ICD card is enabled.

Red LED blinking: ICD card is conducting a self-test.

Number of ICD cards supported in a system

The number of ICD cards supported in a system is dependant on the following:

- number of IPE shelves available
- five-volt DC power consumption required by other cards installed in the same IPE shelf
- number of ACD DNs defined (per customer)
- superloop blocking factor. For non-blocking applications, one superloop is required for every 120 TNs. Each ICD card supports up to 32 TNs (ports) defined.

ICD CPU capacity

The CPU load is similar to M2616 ACD agents. However, the volume of calls depends on the number of users, as well as the number of calls.

User capacity

If the administrator enables the Call Control features, the system establishes the Conversation stage of a call through the ICD card. ICDrequires two ports for the duration of this type of call. This can have

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an adverse impact on the capacity of the ICD card. If the administrator disables the Call Control features, the system transfers all calls and can answer new incoming calls.

Refer to “Conversation stage” (page 43) for more information on off-ICD and through-ICD calling.

Power requirements

Table 2 "ICD power requirements" (page 25) describes ICD power requirements.

Table 2
ICD power requirements

Voltage	Source	Current (A)
+5 V	Backplane	2.8
+15 V	Backplane	0.1
Total power (maximum)	Total power (maximum)	15.5 W

PC Card specifications

The mass storage interface is a PC Card-compatible disk used to store the database, voice prompts, and ICD application software.

The ICD card has two PC Card sockets. The disk drive A is the main operation disk. It contains firmware files, database files, log files, and voice prompt files. It must always be present. The disk drive B is used for upgrades and backup. It can be removed when not in use.

Firmware description

The firmware on the PC Card in Drive A enables the operation of the ICD hardware and features.

For instructions on upgrading the firmware using the administrator BUI, see “Upgrade tab procedures” (page 140).

Serial/Ethernet port adaptor description

The ICD card ships with an adaptor to connect the ICDcard to a terminal (TTY) and an Ethernet network. See Figure 4 "I/O adaptors" (page 26).

IPE module (NT5D52AC)

The adaptor attaches to the back I/O panel through a 50-pin connector to the backplane. The adaptor provides a 9-pin RS-232 serial connector and an RJ-45 Ethernet connector.

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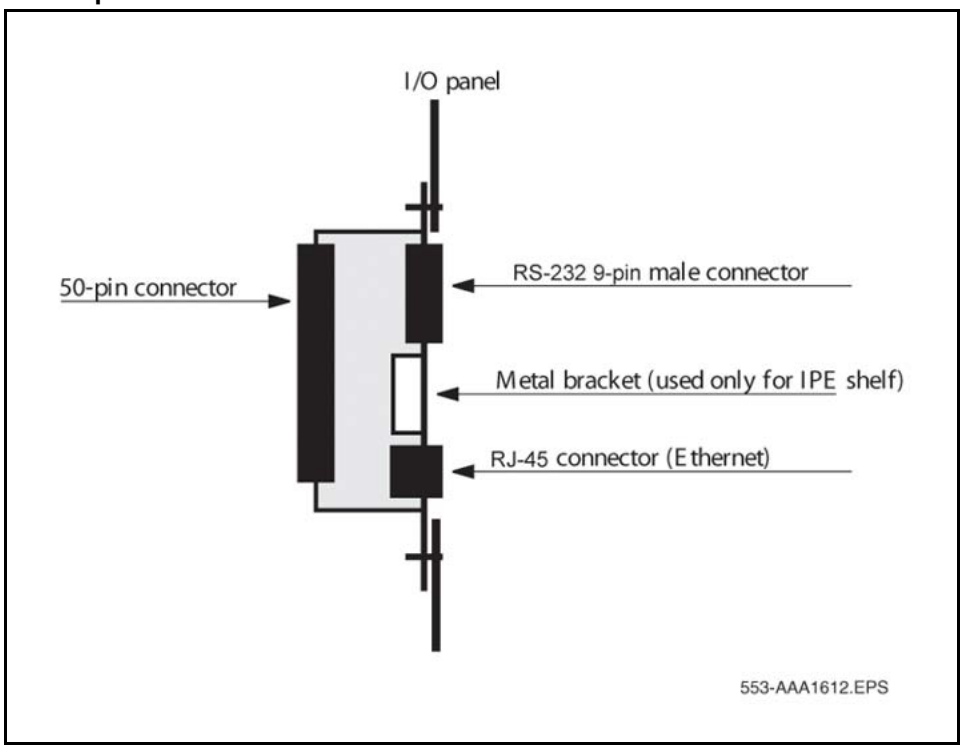
Small System (NT5D52BC)

The adaptor attaches to a 50-pin Small System I/O connector. The adapter provides a 9-pin RS-232 serial connector and an RJ-45 Ethernet connector.

Figure 4
I/O adaptors



Network configuration

In a network, the ICD cards connect as a subnet of the LAN. A router connects the subnet to the corporate network. Figure 5 "ICD connection to the network" (page 27) demonstrates the configuration of several ICD cards.

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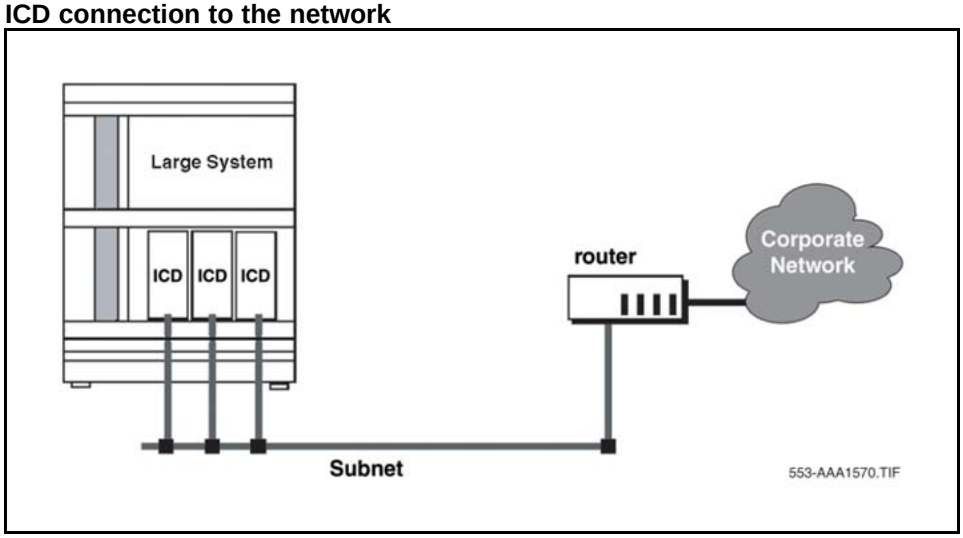
Figure 5
ICD connection to the network



For proper operation of the TCP/IP, define the following network parameters for each ICD card:

Step	Action
1	Assign each ICD card a unique IP address.
2	Define the subnet mask.
3	Define the gateway address (that is, the IP address of the router).

Note: Neither users nor the administrator can access the ICD BUI until the IP settings are defined. See "Card name and network address attributes" (page 79) for more information.

--End--

Dial access to ICD services

This section contains a general overview of how different dialed numbers are handled by the ICD. See "ICD dial access" (page 70) for specific instructions on installing and configuring the system.

User dial access

Telephone calls enter the system through external trunk lines or internal extensions.

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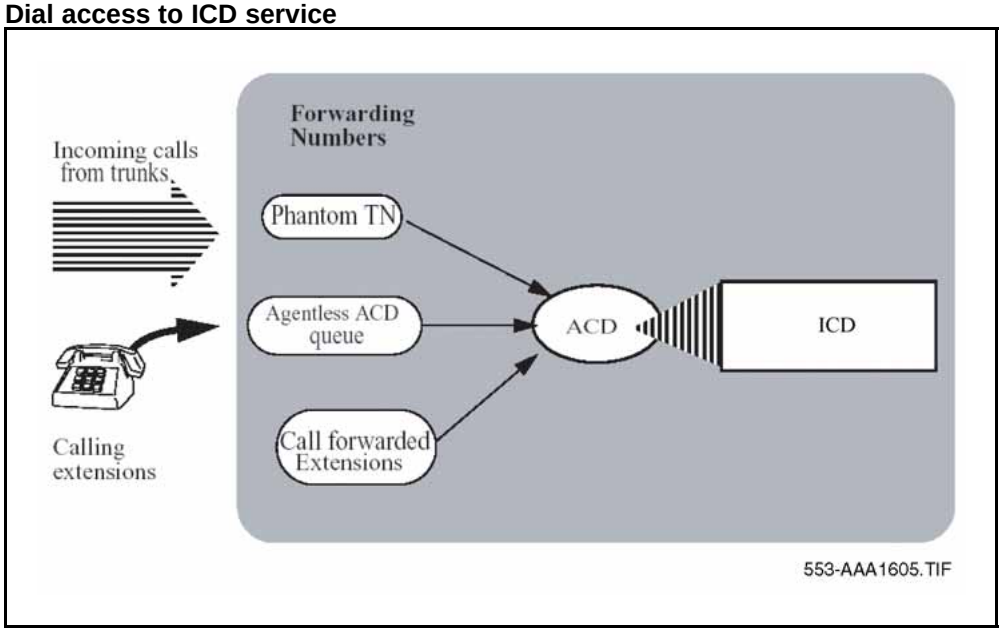
An ICD card is associated with a specific ACD queue. That queue can be reached by many different dialed numbers, implemented in different ways as forwarding numbers to the ACD DN of the ICD card.

See Figure 6 "Dial access to ICD service" (page 28) for an example of ICD dial access management.

Figure 6
Dial access to ICD service



The forwarding numbers can be implemented as:

- DNs of ACD queues with no agents (in night mode) that forward all calls to the ICD queue
- DNs of Phantom TNs forwarded to the ICDqueue
- DNs of existing extensions on the system, forwarded to the ICD queue

Each of the forwarding numbers is assigned a function on the ICD card.

Numbers can be one of the following:

- Common Access number to the Remote Dial service
- Private Access number to the Remote Dial service
- personal number of a One Number subscriber
- Direct Speed Dial access number
- TUI access number

These numbers can be agentless ACD, Control Directory Number (CDN), or Phantom TN forwarded to the ACD DN of the ICD card, or even DNIS.

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When a call reaches the ICDcard, the number from which the call was forwarded to ICD indicates which service it is requesting. The number can even identify the user with whom this call is associated.

Remote Dial Access

There are two types of access numbers for the Remote Dial service. The access numbers are the following:

- Common Access numbers
- Private Access numbers

Private Access numbers are optional. The administrator defines one forwarding number for the Common Access number, and additional numbers as Private Access numbers for individual users.

Refer to "Remote Dial service" (page 45) for more information on the Remote Dial service.

One Number Access

The One Number service handles calls where the dialed number is recognized as a personal number of a One Number user.

For One Number service, the user's number is implemented as a DN of an extension or a Phantom TN in the system.

Refer to "One Number service" (page 34) for more information.

Direct Speed Dial access

The administrator defines a continuous range of numbers that serve as the user's Direct Speed Dial access numbers. The dialed Direct Speed Dial access number has two functions:

- accesses the Remote Dial service
- dials out to a specific entry from the caller's Speed Dial list

Refer to "Speed Dialing" (page 52) for more information on the Speed Dial feature and Direct Speed Dial access.

Internal auto attendant

When ICD cannot associate an incoming call with a user or service, the caller receives the auto attendant service. The auto attendant service greets the caller and requests the input of a number. Callers can enter any of the access numbers defined on the ICD.

The auto attendant also offers callers the option to transfer to an assistant or a voicemail service. The voicemail number and assistant number must be defined by the administrator for these options to be offered.

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The auto attendant service is optional. Where the administrator has defined that the service is unavailable, a call that reaches ICD without a recognized dialed number receives a voice prompt indicating the service is unavailable. The call is then dropped.

TUI access

Users can use the TUI to change their database definitions on the card. Users access the TUI by dialing its dedicated access number.

Refer to “TUI” (page 17) for more information on the user TUI. Refer also to "ICD configuration — using the TUI" in the *ICD User Guide*.

Billing users

Call Detail Recording (CDR) bills ICD users, in conjunction with the CDR Charge Account feature. Each time ICDdials out, it operates the Charge Account feature and includes the user’s personal number preceded by a prefix. This feature allows you to relate CDR records originated by ICD, if the number dialed out is charged, to specific users.

> ***Note:*** If Charge is not activated, all the outgoing dialing numbers having Charged authorization (defined in the appropriate screening table) will work as if defined with Free authorization.

Dialing restrictions

Dialing restrictions apply to numbers that users dial out, as well as to numbers (that the system dials) defined in the user BUI. These numbers include:

- numbers used to search for One Number subscribers
- numbers used to call back Remote Dial subscribers
- numbers dialed out from the Remote Dial service
- numbers saved in personal Speed Dial lists
- numbers for assistant, voicemail, and fax

The administrator uses call screening tables to manage the dialing restrictions. The administrator defines the numbers that can be dialed freely, the numbers that are denied, and the numbers that can be dialed, but are charged. Refer to “Configuring call screening tables” (page 94) for more information on defining restrictions using call screening tables.

Dialed numbers are checked in call-process, when the call is made, and when the user defines numbers in the personal database.

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The phone numbers defined in the user BUI can be up to 20 digits in length, and can contain P or p, indicating pauses to be inserted during dialing (P' provides a 500 ms pause, p' a 100 ms pause). If a p' appears in a number to be dialed, it is ignored by the call screening algorithm.

Note: For increased security, administrators can connect a TTY directly to ICD to disable BUI access to the screening tables. Use Lock/Unlock for this procedure. Refer to "PAdmin menu" (page 155) for more information on the Lock/Unlock feature.

Traffic data reports

ICD generates a daily traffic report file and stores it on the PC Card. ICD updates the file every hour. Traffic reports tell the administrator how many calls a user or ICD card receives for a period of hours or days.

Traffic reports are a record of events for every user and for every ICD card. Refer to "Traffic Report description" (page 110).

Administrators can view the traffic data for single users, or groups of users with the BUI main administration window. Refer to "HTML summary report" (page 114) and "Daily reports" (page 115).

Administrators can view and download traffic files from the card over the BUI. The reports are available in CSV and HTML format. The administrator can also set the definitions so that the system sends automatic daily e-mail reports. Refer to "Reports tab configuration procedures" (page 133) for instructions on how to configure automatic e-mail reports.

Event Logger reports

Event Logger reports are a record of the activities in an ICD card. Events are recorded chronologically. View these reports in the BUI main administration window, or as a text file. One file record is saved for each day. Use these records for information analysis.

Refer to "Event Logger" (page 118) for more information.

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ICD services and features

Contents

This section contains information on the following topics:

“Overview” (page 33)

“One Number service” (page 34)

“Remote Dial service” (page 45)

“ICD system features” (page 51)

Overview

This chapter describes the services provided by Nortel Integrated Call Director (ICD) Release 2:

- One Number
- Remote Dial

ICD also provides access to system features that are configurable by the administrator, the user, or both:

- voice prompt interface
- voice prompt customization
- call screening
- multi-language service
- Speed Dial
- Call Control features

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One Number service

Each subscriber to the One Number service has a personal number and a personal database associated with that number. The One Number service handles calls where the dialed number is recognized as the personal number of a One Number subscriber.

The administrator defines the default settings for each user's personal database. Refer to "Configuring user accounts" (page 84) for information on the user settings that the administrator can define.

After the administrator has defined general user parameters, each user defines the treatment for incoming calls using the user BUI. The treatment can vary according to time, date, and CLID. Treatment may be the same for all callers or different according to who is calling.

The One Number user profile has three main categories:

- Follow-me profiles
- Follow-me Schedule
- Programmed or immediate overrides

Follow-me profiles

Follow-me profiles are names entered by users that assign Call Forward rules for different callers at different times of the day. If calls are to be treated in the same way regardless of when they take place, only one profile is required.

Examples of Follow-me profiles names are:

- work hours
- after-work hours
- Sunday afternoon

These named profiles are determined by the user. See Figure 7 "One Number Follow-me profiles window on the user BUI" (page 35) for an example of a One Number Follow-me profiles window.

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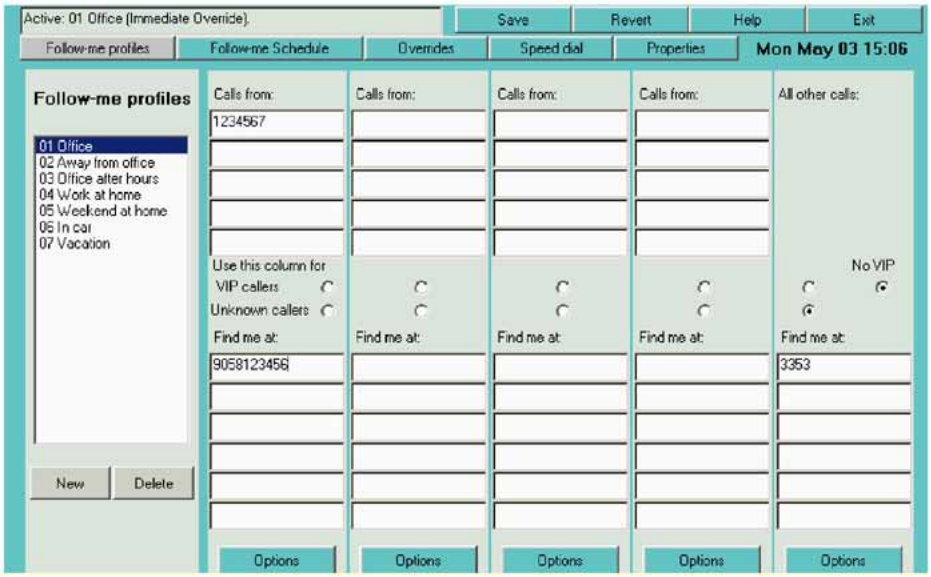
Figure 7
One Number Follow-me profiles window on the user BUI



553-AAA1962.TIF

Defining a Follow-me profile

To set up a Follow-me profile, the user:

1. defines **Calls from** lists containing the prefixes or specific callers' numbers from which calls are expected
2. defines **Find me at** lists containing telephone numbers that ICD calls in an attempt to locate the user

Each **Calls from** list has a corresponding **Find me at** list, so that calls from certain prefixes, or callers, are forwarded to specific groups of telephone numbers.

Example: A call from your boss after work can be assigned to a specific **Find me at** list, while a call from your friend during golf hours is assigned to a different list.

Refer to "One Number Follow-me profiles window" in the *ICD User Guide* for more information on user-defined Follow-me profiles.

Follow-me Schedule

The Follow-me Schedule links Follow-me profiles to actual time. For each weekday, the user specifies which Follow-me profile is active at which hour. See Figure 8 "Follow-me Schedule window on the user BUI" (page 36) for an example of the Schedule window in the user BUI.

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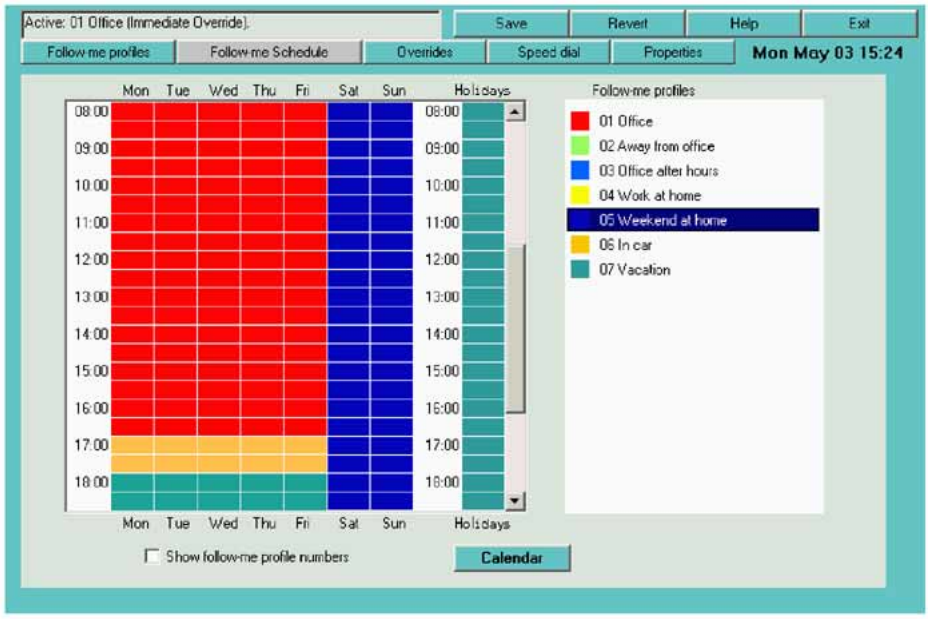
Figure 8
Follow-me Schedule window on the user BUI



Different schedules can be defined for non-working times, such as holidays. The administrator defines the holiday calendar for each year. See “Configuring One Number service parameters” (page 100) for more information on defining the holiday calendar.

Refer to "Follow-me Schedule window" in the *ICD User Guide* for more information on user-defined Follow-me schedules.

Programmed or manual overrides

Users can define schedule overrides, forcing activation of a specific Follow-me profile, or forwarding all calls to a given number, overriding the normal schedule. Users can activate overrides manually, or they can program overrides to take place automatically.

- **Programmed Override** is activated automatically for a configurable period of time. Up to eight different programs can be set.
- **Immediate Override** affects all calls, from the moment of activation until the override is canceled.

For example, if someone must stay late at work to finish an urgent Product Specification, he or she can activate the **Work hours** profile from 16:00 to 20:00 on this day, although normally the profile for this time period is **After-work hours**.

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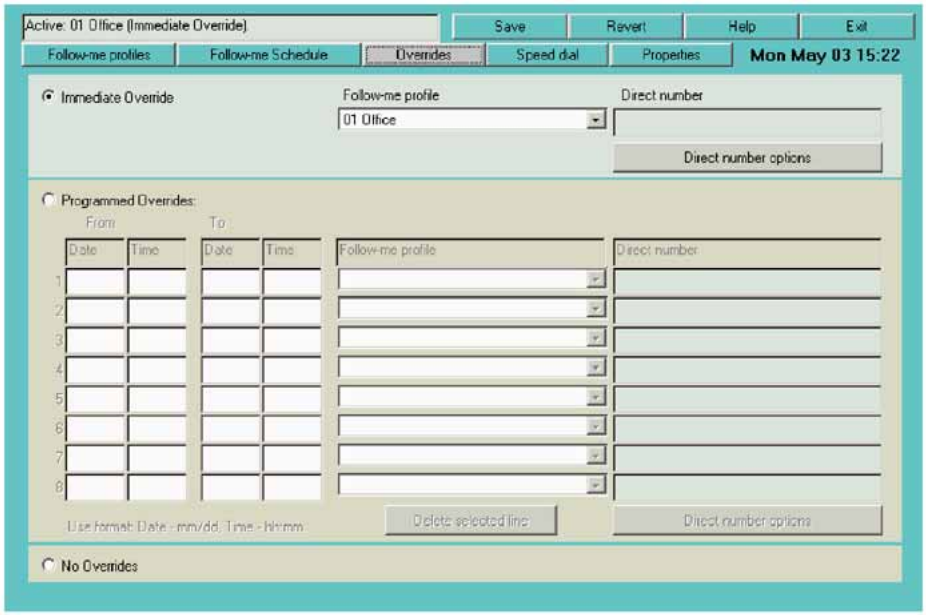
See Figure 9 "Overrides window on the user BUI" (page 37) for an example of the Overrides window in the user BUI.

Figure 9
Overrides window on the user BUI



553-AAA1964.TIF

Users can program a schedule override through either the BUI or TUI.

The administrator can allow a feature called Immediate Override Reset. A check box to enable the feature appears on the **Advanced** tab of the **Properties** window in the administrator BUI. The feature turns off the immediate override that the user set, either automatically at a predefined time set by the administrator, or when manually requested by the administrator.

The **Immediate Override Reset by Administrator allowed** check box appears on the user BUI **Overrides** window when the administrator allows the feature. Users select the check box when they want to allow the administrator to override their schedule for a profile. This applies to Immediate overrides only, and does not affect Programmed overrides.

Refer to "Overrides window" in the *ICDUser Guide* for more information on the user-defined overrides.

Refer to “Advanced tab procedures” (page 144) for information on enabling the Immediate Override Reset feature using the administrator BUI.

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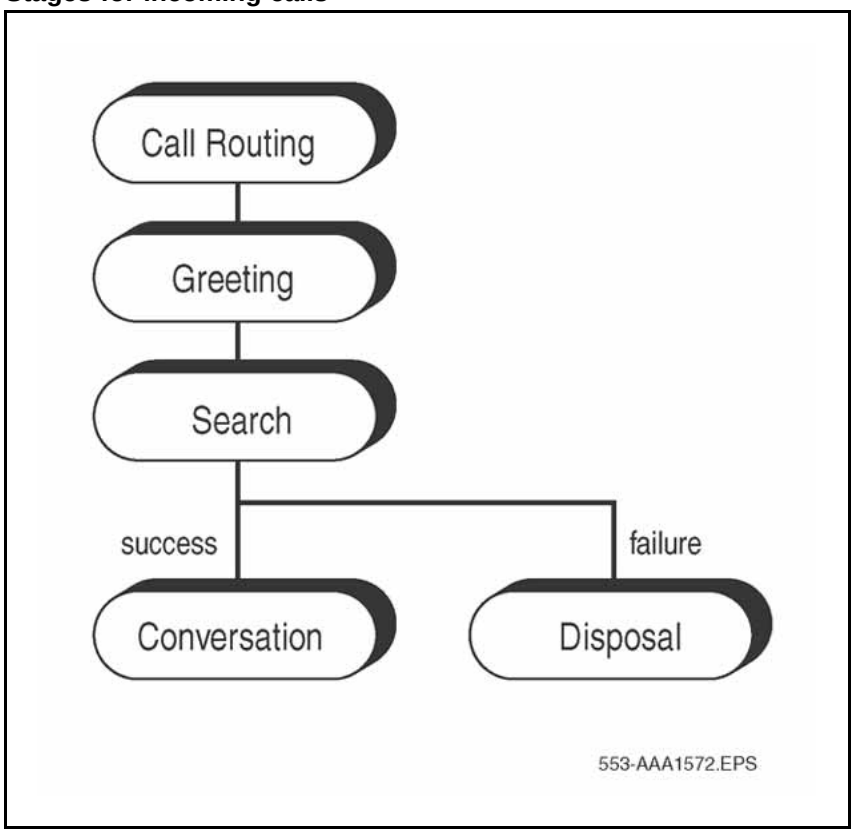
How ICD handles incoming calls

An incoming call to the One Number service goes through the stages shown in Figure 10 "Stages for incoming calls" (page 38).

Figure 10
Stages for incoming calls



Call Routing

When a call is handled by the One Number service, the call routing is determined by the dialed personal number, the caller number, and by the date and time.

The personal number determines for which user the call is intended. The rest of the routing is done according to that user's personal database.

Once the system identifies the Follow-me profile to use on a call, and the call is answered, the system continues with the further stages: Greeting, Search, Conversation, and Disposal.

The system can be configured to skip the Greeting stage and delay answering the call until the Search stage is completed, and either the called party is found and accepts the call, or the appropriate Disposal treatment is determined.

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This way the caller keeps hearing the Ring Back tone from the system, incurring no charges for the call until the final destination of the call is found. At this point, the call is answered, and passed to the Conversation or Disposal stage according to the search results.

Note: When answering is delayed, there is no incoming fax detection or routing. Also, none of the following features are used: VIP treatment, Greeting played to callers, Voice menu presented to callers, Caller name announcement.

Greeting stage

The following options are offered in the Greeting stage. The user can select either or both of the following to occur at the Greeting stage:

- The system can play a greeting.
- The system can offer a menu.

Note: The user can also turn off both options.

Greeting

A recorded Greeting Announcement is either a system default greeting or a personal greeting recorded by the user. The system default greeting is either the factory-supplied greeting or a greeting recorded by the administrator. Refer to “Customizing voice prompts” (page 104) for more information.

The user can have up to four personal greetings for different callers or times of the day. The user can also record his or her name and have the system play the name as part of a standard welcome message when a call comes in for that user.

Voice menu

The Voice menu is a fixed menu with the following options:

- Digit **1** — Begin the search for the user.
- Digit **2** — Transfer to voicemail. Available only if a voicemail number is defined in the user properties.
- Digit **3** — Transfer to assistant. Available only if the assistant number is defined in the user properties.
- Digit **4** — Transfer to fax machine. Available only if the fax number is defined in the user properties. Note that this entry is intended only for cases where a call being started as a voice call by the caller is to be switched to a fax machine from which the fax will be sent.

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- Digit **5** — Transfer to a pager. Available only if the pager number is defined in the user properties.
- * key — VIP access. This option is hidden and is not played by the menu.

  Note: A timeout occurs when callers do not enter a digit for four seconds and the search for the user begins automatically.

If users disable both the Announcement and Voice menu options, ICD immediately begins to search for the user.

VIP password entry

The user can define a VIP password and provide the password only to specific people. Callers who enter the VIP password receive the treatment the user defined for VIPs in the user BUI.

The caller presses * during or after the greeting or the menu to activate the VIP password entry prompt. If the user enables the VIP password option and disables the Greeting Announcement and Voice Menu options, ICD pauses to allow the caller to press *.

When both Greeting Announcement and Voice Menu options are disabled, ICD starts the search for the user immediately after it answers the incoming call. However, if the user has enabled VIP Password entry, the search is delayed by four seconds, so the caller has a chance to press * for VIP access.

If the user has checked the **No VIP** box for the active Follow-me profile, ICD ignores the *. In this case, ICD does not pause when the Greeting Announcement and Voice Menu options are disabled.

Note: If the menu or VIP password entry options are enabled, Dual-tone Multi-frequency (DTMF) input is expected. Playback stops immediately after entering the first digit of the menu choice.

Name entry

Before the search starts, ICD prompts the caller to say his or her name. ICD records the name in a fixed, two-second interval and plays it to the user when found.

Users can enable or disable the name entry option in their profile.

If a caller selects a menu entry different from Search (Digit **1**) or VIP access (*), the name entry does not apply.

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Incoming fax detection and routing

When a call is from a fax machine, ICD detects the incoming fax tones and automatically transfers the call to a fax number the user defined in the Follow-me profile. ICD follows the same dialing restrictions for fax numbers that apply for all dialed numbers.

This fax number can be either a fax machine, or a fax server, which requires input of a subscriber number before the call is transferred. If the destination is a fax server, the user's personal data must include a subscriber number, in addition to the fax server's number. In this case, ICD initiates the call transfer, enters the subscriber number after the fax server answers the call, and then completes the call transfer.

ICD disconnects the call if it finds no appropriate fax number.

Search stage

The ICD system dials out to the destination telephone numbers defined by the user. There are two options for the Search stage:

- **Sequential :** ICD dials one number at a time, in order, until it locates the user. ICD considers busy and unanswered lines failed tries and the system continues with other destinations. If ICD is not successful at dialing all the destination numbers, the call passes to the Disposal stage.
- **Parallel:** ICD dials all or some of the numbers at the same time. If ICD reaches the user, it disconnects all other parallel calls immediately. Busy and unanswered lines are considered failed attempts and the system continues with other destinations. If ICD tries all the destination numbers with no answer, the call goes to the Disposal stage.

The administrator defines, per user, whether the **Parallel** search mode is allowed. If **Parallel** mode is allowed, the administrator can limit the number of parallel calls (two to six).

Search stage features

Additional user features add another level of security. The features related with the Search stage are:

- **Dialing attempts:** To dial, ICD selects an idle port and sends the destination number to the switch. The result is determined according to:
  - special signaling messages from the switch
  - call-progress tone detection

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  - a busy tone or signaling message that indicates a busy condition. The search attempt to that destination fails and ICD tries the next destination.
  - an overflow tone, which also indicates call failure. In this case, ICD tries the next destination. If it is available, the call rings at the destination set, and waits for the called party to answer. For each destination, the user defines, in his or her profile, how many seconds to wait for an answer. If the call is not answered during this time, ICD considers the call unanswered and the search continues with the next destination.

- **Dialing restrictions:** Before ICD actually dials a selected destination, it checks the number against dialing restrictions defined by the administrator. ICD does not dial a restricted number and logs the attempt in a report.
- **Caller entertainment** : The caller waits while the system searches for the called party. The treatment provided to a waiting caller is defined in the user's personal data. It can be silence, music, ringback tone or an announcement saying, "Please wait".

  While waiting for the called party to be found, the caller can press * to listen to the options that are still available at this stage, or abandon the search by directly entering a menu option:

  — Digit **2** — Voicemail

  — Digit **3** — Assistant

  — Digit **4** — Fax

  — Digit **5** — Pager

  Each of these options is only offered if the appropriate phone number is defined in the user's personal data.
- **Call Answering Password:** An optional feature that requires users to enter their personal password using a touchtone telephone when answering a One Number call.

  If no password is entered, or if a wrong password is entered too many times, ICD considers the call attempt a failure and tries the other destinations. The administrator defines the number of times a user can enter the wrong password.
- **Caller Name announcement** and **Caller's Number announcement** are optional features. The Caller's Name announcement feature prompts a caller to say his or her name during the Greeting stage. ICD plays the recorded name to you when you answer the call. When the Caller's Number announcement feature is activated, ICD announces the caller's number when you answer the destination telephone.

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ICD announces the caller's name before the caller's number, when both the Caller's Name announcement and Caller's Number announcement features are enabled.

You enter a key response to select an option:

— Digit **1** — You accept the call and the call passes to the Conversation stage.

— # key — You reject the call and the call passes to the Disposal stage.

— Digit **2** — You transfer the call to voicemail.

— Digit **3** — You transfer the call to an assistant.

— Digit **5** — You transfer the call to a pager.

To allow callers to be transferred to voicemail, an assistant, or a pager, you must have defined the corresponding numbers in the **Properties** window of the user BUI.

When you enable the Call Answering password option and the Caller Name or Number announcement option, ICD plays the caller's name or number only after you enter the password to answer the call.

- **Connection upon Answer Recognition** . ICD activates Connection upon Answer Recognition when the Call Answering Password, Caller's Number announcement, and Caller's Name announcement are inactive. When ICDidentifies a voice, or understands from the signaling information that the call has been answered, the search ends, and the call passes to the Conversation stage. The administrator defines the answer recognition method on the **One Number** tab of the administrator BUI main window. Refer to"Configuring One Number service parameters" (page 100) for more information.

  Note: ICD recognizes the recorded voice on voicemail or answering machine as a voice answer.

Conversation stage

The Conversation stage begins when the Call Connection notification is played to both parties. The following options are provided for this notification:

- call connected voice prompt
- short burst of tones
- silence (no notification)

Call connection itself between the caller and the user is implemented in two modes:

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- off-ICD
- through-ICD

Off-ICD

The connection is in the switch and the ICD card is no longer involved in this call. Both ICD ports become free for new calls.

This connection is implemented by call-park/call-transfer manipulation. The called party is put in park, and then the calling party is transferred to the park DN of the called party.

If the called party parking fails, or transfer to the calling party fails, ICD automatically tries to reverse the roles: calling party is parked, and calling party is then transferred. If this attempt does not succeed, ICD makes a through-ICD connection for this call.

Through-ICD

The ports are connected by a voice path internally. Both ports are occupied for the duration of the call.

Through-ICD connection mode for a connected call enables the ICD card to offer the following special features:

- **Call Control features:** Offered to the ICD user only (the called party in the case of a One Number call and the caller in the case of a Remote Dial call).
- **Call Reconnect feature:** Offered to One Number service callers only. This feature reconnects a disconnected call. If a call is dropped by the answering party (the One Number subscriber), ICD plays a voice prompt to the caller, who can then press * to reconnect the call.

Each of these features is offered to only one end of the call.

The following BUI definitions decide the availability of the features:

- The administrator defines in the BUI, per user, whether the Call Control and Call Reconnect features are available.
- The user defines, in the Follow-me profiles, if the Call Reconnect feature is enabled or disabled. The user can enable the feature only if the administrator has defined that Call Control features are allowed for this user.

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ATTENTION
When the administrator enables the Call Control feature, calls are carried out using the through-ICD method, which means two ICD ports are required for a conversation and the system uses both ports for the duration of the call. Therefore, it can have a negative impact on the capacity of the ICD card.

Disposal stage

The purpose of the Disposal stage is to remove the call from the ICD card and free the port for new calls. The user has a choice of the following options for caller treatment when the Search stage fails to locate the user:

- **Transfer to voicemail:** ICD routes the caller to voicemail. The call is transferred and ICD ports become free.

  The user defines the voicemail number and the mailbox number in the **Properties** window of the user BUI. The mailbox number should be followed by a character, such as #, if required by the voicemail system (for example, Call Pilot).

- **Blind transfer to the assistant:** The corresponding DN is defined by the user in the **Properties** window of the user BUI. The call is transferred and ICDports become free.

- **Blind transfer to a pager:** The corresponding DN and subscriber number (if required) are defined by the user in the **Properties** window of the user BUI. The call is transferred and ICDports become free.

  The user defines the pager number and the subscriber number in the **Properties** window of the user BUI.

- **Hang up:** ICD plays a standard announcement, "The person cannot be located", and disconnects the call. ICD performs this option as a default when the other options fail.

- **Blind transfer** to another number. The call is transferred and ICD ports become free.

Handling call disconnection

When the call between the caller and the destination is made by bridging two ICD ports, ICD detects when one of the parties disconnects.

If the user chooses to hang up after learning that one of the other parties disconnected, and there is still another party on the line, the remaining party is dropped, unless he or she was the original caller, in which case the Call Reconnect feature is offered.

Remote Dial service

The Remote Dial service allows recognized users, who dial in to the ICD card, to make outgoing phone calls according to access restrictions defined by the administrator.

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This feature involves two telephone connections. One connection is that of the user to the ICD card. The other is the connection to the destination the user has dialed.

Each subscriber to the Remote Dial service has a personal number, and a personal database associated with that number. If that user also subscribes to the One Number service, the same database contains all the information for both services.

The personal number serves as the user's identification. Among other things, it defines the means to identify the user when he or she calls the system, and the restrictions to apply to his or her outgoing calls.

Connecting to the Remote Dial service

There are three ways for users to reach the Remote Dial service and three ways for the system to identify the caller.

The Remote Dial service can be reached in three ways:

- Dial a Private Remote Dial service access number. Each Private Access number is assigned to one specific user. There can be as many Private Access numbers as there are users, or less.
- Dial a Common Remote Dial service access number. This number can be dialed by all Remote Dial users.
- Dial a Direct Speed Dial access number.

ICD can identify the Remote Dial user in the following ways:

- **Private Access number dialed:** Dialed number used for identification, since it is uniquely associated with a specific user. The use of Private Access numbers to reach the Remote Dial service can be blocked by the administrator.
- **Common Access or Direct Speed Dial access number dialed:** Caller can be identified by the calling number information, if it is available on the call.
- **Callers not recognized by one of these methods:** Callers are prompted to enter their personal number and password.

ATTENTION
Identification based on Private Access number is not completely guaranteed since it is possible that the caller dialed a wrong user access number. In such a case, automatically calling back the predefined number can result in calling another user that did not ask for the callback service. Therefore assigning a private access number should be carefully considered.

The Remote Dial service can be used in two ways:

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- outgoing dialing calls made on the user's original call to the service
- outgoing dialing calls made after ICD calls the user back

The administrator defines whether or not the service can call the user back. Refer to "Configuring user accounts" (page 84) and "Configuring Remote Dialing" (page 90) for information on configuring the callback option. The user makes the decision to be called back before or after the system answers the call.

Users define the callback number when permission is granted, although the initial number in this field is a number the administrator defines. If the subscriber has not or cannot set the callback number, the number the administrator defines is used.

Connection scenarios

The following describes scenarios that are possible when connecting to the Remote Dial service.

Incoming call: recognized caller

If the caller is identified by the dialed number or the calling number information, and the user's configuration allows it (callback allowed, and number to call back is defined and valid), a call can be placed back to the caller without answering the incoming call. If the caller does not hang up, for a configurable number of seconds, the call is answered.

In this case, the caller is given the choice of immediately using the Remote Dial service to initiate an outgoing call, or hanging up, to allow the system to call back.

The callback is placed once the caller hangs up. The option to hang up and be called back is not available once any input is entered.

If the Remote Dial service is used directly on the incoming call (callback is either not allowed by the configuration, or the caller does not want to be called back), the caller can be requested to confirm his or her identification (by entering a password) before being allowed to dial a destination. The administrator can define access with no password in the administrator BUI, which means that once the caller is identified, no passwords are requested. Refer to "Configuring user accounts" (page 84) for information on configuring access with no password.

Incoming call: caller not immediately recognized

In the case, where the caller cannot be immediately recognized, the system answers the call and asks for both personal number and password.

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After the caller is identified, based on this input, the caller is given the choice of using the Remote Dial service to initiate an outgoing call, or hanging up to allow the system to call back, if the user's configuration allows it.

The callback is placed once the caller hangs up. The option to hang up and be called back is not available once any input is entered.

Identification on called-back call

When the caller answers the callback from ICD, ICDrequests a password, unless it was entered on the call made to ICD, or unless the administrator defined access with no password.

Since answer supervision on outgoing dialing calls is not dependable, the Remote Dial service repeatedly plays the prompt requesting the password, after placing the call, even before the called party has answered. Therefore, when the called party answers, he or she might not hear the prompt from the beginning. In any case, digits input at this point are accepted.

Users also have the option to disconnect after answering the callback by pressing ## when the system asks for a password, or entering <Speed Dial prefix><#> when the system asks for a number to dial.

Entering an incorrect password

If a user provides a wrong password a configurable number of times within a single call, the call is disconnected after the system plays, "You have reached the maximum number of attempts. Good-bye". A log with the details of the case is written in the system daily log file.

Incoming fax calls

There is no fax tone detection on incoming calls to the Remote Dial service. An incoming call from a fax machine is handled in the same manner as other calls, and connected to the requested destination.

Placing calls using the Remote Dial service

After the call between the Remote Dial subscriber and ICD is properly set up, the caller is prompted to enter the number he or she wishes the Remote Dial service to dial. This number can be dialed in full, or the Speed Dial or Last Number Redial features can be used to indicate the number. Refer to "Speed Dialing" (page 52) for more information on Speed Dial features.

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The menu played to the caller at this point contains the following options:

- Enter the number to be dialed followed by <end of dialing sequence>.
- Enter <Speed Dial prefix>, followed by a <NN> digit entry number for Speed Dial.
- Enter <Speed Dial prefix><**0**> to redial the last dialed number.
- Enter <Speed Dial prefix> and wait to hear the list of Speed Dial names.
- Enter <Speed Dial prefix><*> to exit this menu.

All outgoing calls are subject to the restrictions defined by the administrator in the Call Screening tables. ICD dials the destination only after the whole number is available, and has been confirmed by the user, in order to check its screening option (Free, Charged, Denied). If the wanted number is restricted, an appropriate voice prompt is played, and the number is not dialed. If the number is charged, it is dialed and a charge record is issued. If there are no restrictions on a number, ICD initiates the call to the requested number, and connects it to the user if it is successful. In case of failure, an appropriate voice prompt is played, and the caller is prompted to try another destination.

If the caller entered a Speed Dial entry, the number that is played back to the user for confirmation is the corresponding number retrieved from the user's Speed Dial list.

Refer to "Dialing restrictions" (page 30) for more information on administrator-defined dialing restrictions. Refer to "Configuring call screening tables" (page 94) for more information on defining call screening options in the administrator BUI.

Call connection itself, between the user and the called destination, can be implemented in one of two methods:

- off-ICD
- through-ICD

Refer to "Conversation stage" (page 43) for more information on connection methods.

If the administrator defines callback for a Remote Dial user, the implementation method is always through-ICD.

User simultaneous access

The administrator can define a Remote Dial account to be shared by more than one user, and can provide the same identification numbers to different people.

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When simultaneous use of an account is not allowed, the system rejects a second Remote Dial call from a user already on a Remote Dial call, and a log message is recorded.

Handling call disconnection

When the call between the caller and the destination is made by bridging two ICD ports, ICD detects when one of the parties on the call disconnects.

Disconnections can be handled in a number of ways. The following are examples of call disconnections. The scenario and how call disconnection is handled follows this list:

- calling party disconnects
- called party disconnects: called party was only other party on the line
- called party disconnects: a third party is on the call and on hold (Call Control features are being used)
- called party disconnects: called party was held party

Scenario 1: Calling party disconnects:

The called party is silently dropped.

Scenario 2: Called party disconnects: Called party was only other party on the line

The caller is notified of the disconnection and offered the original Remote Dial service outgoing dialing menu.

Scenario 3: Called party disconnects: A third party is on the call and on hold (Call Control features are being used)

The calling party is notified of the disconnection, and offered the option of connecting to the held party by pressing *.

Scenario 4: Called party disconnects: Called party was held party

Calling party is only notified about the disconnection when re-entering the Call Control access code. At this point there are two possibilities:

- If the disconnected call was the secondary call initiated by the Call Control features, the calling party is now offered the main Call Control menu.
- If the disconnected call was the one initially dialed using the Remote Dial service, the system enables the calling party (a) to exit the menu and return to the other call, or (b) to drop the remaining party and

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return to the original outgoing dialing menu provided by the Remote Dial service.

If the calling party chooses to hang up at this point, the remaining call is also disconnected.

ICD system features

Voice prompt interface

ICD provides voice prompts and menus to the callers at different stages of the call, describing the options and features available to the caller. Prompts can be customized by the administrator if different wording is desired for some functions. For example, the administrator often customizes the greeting.

Voice prompt customization

ICD uses a set of system voice prompts, provided from the factory in all the languages supported by the card. The vocal interface of the card can be customized by replacing the factory prompts with prompts recorded by the customer using independent external tools. It is also possible to export the factory prompts from the card to the customer's computer and modify them as necessary.

This allows the customer to determine the quality, style, and character of the voice prompts used on their systems to converse with their users.

The music file or ring tones played on ICD while callers wait on the line can also be easily replaced, according to customers' needs.

The administrator can import the customized voice file from a local computer to the ICD card and activate it. The customized voice file is played instead of the factory voice file.

The Voice Prompt Customization is performed over the administrator BUI. Refer to "Customizing voice prompts" (page 104).

The system greeting can now be customized like any other prompt. Users can still record their own personal greetings using the TUI, and then define in the BUI which greeting to play to callers.

On an upgraded ICD, or when restoring a database of an older ICD to a new release, customized System Greetings are preserved. They are represented in the BUI according to the new customization method.

Multi-language service

ICD supports 17 different languages. All system voice prompts are provided in each of the supported languages.

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Multi-language user interface is supported as follows:

- One Number Callers are treated in the language selected for them by the user, according to CLID. A One Number call is answered only after the system has determined which One Number user the call is for, so the correct language can be selected from the appropriate database.
- Each user can specify his or her own preferred language, to be used whenever he or she calls ICD. This language is used on the TUI and the Remote Dial service. The initial language defined in the user's personal database is determined when the administrator creates it.

  The administrator defines a default language for the system, which is used on all calls answered before the system has identified the user (caller in case of Remote Dial and TUI, destination in cases of One Number calls handled by the auto attendant). Once the identification is complete, the system switches to the appropriate language, according to the user's database.
- The BUI supports two languages: English and French. Each BUI user (that is, the administrator and each user) defines the BUI language he or she wishes to use. This customization is performed through the BUI. After changing the language, the user must reload the BUI to allow the newly defined language to be activated.

Speed Dialing

ICD users can use the Speed Dial feature for all outgoing dialing requests:

- on the Remote Dial service these can be the initial outgoing calls, or secondary outgoing calls, for Call Transfer or Conference features
- on the One Number service these can be calls made by the One Number subscriber, using the Call Transfer or Conference features

The Last Number Redial feature is provided only on regular outgoing calls over the Remote Dial service, not on calls made by the Call Transfer or Conference features.

Features operation

The Speed Dial and Last Number Redial features allow users to dial a known phone number by pressing only a small number of keys.

Speed Dialing

When a user wants to initiate outgoing dialing, and the system expects a phone number, the user can enter a special prefix, indicating the use of short dialing features, followed by one to three digits indicating which number to use. The system's voice prompts guide the user, indicating which feature is available, which prefix to enter, and how many digits must follow.

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The user defines the Speed Dial list in the user BUI. The user can record names for the first 20 entries in the Speed Dial list using the TUI.

The user has three options for dialing from the Speed Dial list:

Step	Action
1	Enter the Speed Dial prefix followed by the entry number. **a** The system plays the name, if recorded, and the number for confirmation. **b** Press # to confirm, * to leave the menu, **1** or **2** for previous or next entry.
2	Enter the Speed Dial prefix and wait. The system plays all the recorded names. The user presses # to select the number to dial.
3	Dial the Direct Speed Dial access number.
	--End--

When the user chooses a Speed Dial entry that is not defined, an appropriate prompt is played and the caller is again asked to enter a phone number.

Direct Speed Dial access number

This additional number gives users Direct Speed Dial access if they are Remote Dial service users. The Direct Speed Dial access numbers appear as a range of consecutive numbers. Dialing this number does two things:

1. accesses the Remote Dial service
2. dials the corresponding telephone number in the Speed Dial list

Note: When users dial the Direct Speed Dial access number, the system does not recognize them based on the number dialed. ICD recognizes users by their CLID or by the personal number and password that they enter.

Last Number Redial

Last Number Redial is available for Remote Dial outgoing calls. Last Number Redial is activated by selecting the 0 entry in the Speed Dial list. This dials the last number that was used by this ICD user for regular outgoing dialing only, during this particular ICD session.

If this is the first outgoing dialing on the current ICD session, an appropriate prompt is played and the caller is again asked to enter a phone number.

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After the system selects the number from the memory, it always plays the number back to the caller for confirmation, then checks for restrictions on the number. If there are no restrictions, the system dials the number. If the number is to be charged, the number is dialed and a charge record is issued.

Call Control features

During calls where ICD stays on the call for its entire duration, ICD offers the ICD user the ability to activate digital telephone features by using the keypad on a touchtone telephone set. These features are available only after an initial call between the ICD user and another party is set up. The following features are supported:

- Conference
- Call Transfer
- volume control

To access the features, users press a Call Control access code on the telephone keypad during the active call. This places the other party on hold, while the user listens to a menu offering the Call Control features. This is a fixed menu, with the following entries:

- Digit **1** — Call Transfer
- Digit **2** — Conference
- Digit **3** — Volume control
- Digit **4** — Drop the other party

  For the One Number feature, this disconnects the call completely, denying the caller the ability to use the Call Reconnect feature on this call.

  For the Remote Dial service, this allows the caller to then initiate a call to a new destination.
- Digit **5** — Drop the call
- Digit **6** — Disable this feature for the current call. This option is intended for calls when the ICD user needs to convey the Call Control access code to the other end of the call without being intercepted by ICD.
- * key — Exit from the menu and return to the call.

Choosing from this menu leads to the following more specific feature menus:

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- Call Transfer
- Conference
- volume control

Call Transfer/Conference

When the caller presses **1** or **2** in the Feature Transparency menu, the system offers a menu that allows the caller to enter the number of the desired destination. This number can be dialed in full, or the Speed Dial feature can be used to indicate the number. A voice menu guides the caller.

All outgoing calls are subject to the restrictions defined by the administrator.

If the caller enters a Speed Dial entry, the system retrieves the number from the user's Speed Dial list, plays it back for confirmation to the user, and, if the user confirms the number, checks the number for restrictions.

After confirmation, ICD places the second call, allowing the caller to hear whether the number is ringing, or is busy.

Further call handling is carried out by entering the Call Control access code again. ICD plays a prompt to that effect before placing the call.

After the secondary call is dialed, the next time the caller enters the Call Control access code, the secondary call is put on hold, and the following options are offered to the caller:

- Digit **1** — Complete Call Transfer or Conference. The option played depends on the feature in use.
- Digit **2** — Toggle between the two called parties. This option is offered only if a secondary call is established.
- Digit **3** — Volume control
- Digit **4** — Cancel the Call transfer or Conference and return to the original call.
- Digit **5** — Drop the call. This completely disconnects the user from ICD and drops all related outgoing calls.
- * key — Exit from the menu with no action.

If action fails, the system plays an appropriate voice prompt.

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Volume control

Manual volume control is carried out during the phone call by the ICD user, using the telephone keypad of a touchtone telephone set. This option is offered as one of the Call Control features, and is offered only when a call is established between an ICD user and another caller in a through-ICD scenario.

Each direction of the voice — speaking and listening — is controlled separately.

User volume control commands are reached by entering the Call Control access code defined by the administrator, and then selecting the volume control option from the menu that is played.

System volume control is defined by the administrator using the BUI, and affects all calls. Voice level management is divided into 3 parts:

- voice prompt playing
- voice recording
- conversation initial level
  - — speak direction
  - — listen direction

For each of these, the administrator defines the increase or decrease in volume to be used by the system. The available levels are +9 dB, +6 dB, +3 dB, 0, -3 dB, -6 dB, -9 dB. The default is 0. Refer also to “Advanced tab procedures” (page 144) for information on adjusting volume control using the administrator BUI.

> ***Note:*** Nortel recommends that the default setting (0 dB) or a loss setting (-3 dB, -6 dB, or -0 dB) be used as the volume level for voice prompts. This ensures compliance with regulatory standards at the trunk interface. Using a gain level for voice prompts may cause the product to be non-compliant with some regulatory standards.

Changes made by the administrator only affect calls initiated after the changes were saved, not active calls.

Calling Party Privacy Enhancement (CPPE)

The Calling Party Privacy Enhancement (CPPE) feature provides a route option to ignore the Calling Party Privacy Indicator on incoming calls received from the North American public ISDN network.

Also, the new CPPE configurable prompt is provided on an incoming route basis to override/not override calling party number presentation restriction to Auxiliary (AUX) applications (for example Contact Center Manager

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(CCM)). This applies only in the case when a calling party number is restricted. That is, if PII is set to YES and the presentation is enabled, the Auxiliary processor (AUXP) prompt has no effect. The new CPPE feature extends the PII prompt and functionality to the following interfaces for Primary Rate Interface (PRI) and Basic Rate Interface (BRI):

- Meridian Customer Defined Networking (MCDN) Enterprise networking variants
- Euro ISDN (All variants)
- APAC (All variants)
- QSIG (ISO and ETSI)
- H323 and SIP (The new feature supports the H323 and SIP protocols as they use the MCDN peer to peer version SL1 between the Call Server and the Signaling Server).

This feature is not applicable to the other numbers transported over the network such as Original called number, and Connected party number.

Limitations

By default, both PII and AUXP prompts are cleared.

Software upgrade and patches

When you upgrade the database to CS 1000 Release 7.0, the PII and AUXP options default to NO.

If you sysload/upgrade the M1 Release software with a pre-release database, the value for PII and AUXP fields in route data blocks for the new release is set to YES.

Software dependencies

The code for the existing PII prompt and the new AUXP prompt for the Call Server needs to be changed.

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Installing and configuring the ICD card

Contents

This section contains information on the following topics:

“Overview” (page 59)

“Dependencies” (page 60)

“Operating parameters” (page 60)

“Installing the card” (page 61)

“Installing the I/O adaptor for a LAN and terminal” (page 62)

“Connecting ICD to a LAN and terminal” (page 65)

“Connecting a modem to the adaptor” (page 66)

“Configuring the ICD card on the system” (page 67)

Overview

The initial configuration of Nortel Integrated Call Director (ICD) Release 2 card must be done with a Command Line Interface (CLI). The card is unable to communicate with the system or the Local Area Network (LAN) until these settings have been made.

Procedure 1
Configuring the ICD card using the CLI

Step	Action
Complete the following steps in order:	
1	“Installing the card” (page 61).
2	“Installing the I/O adaptor for a LAN and terminal” (page 62).
3	“Connecting ICD to a LAN and terminal” (page 65).

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4 “Configuring the ICD card on the system” (page 67).

--End--

Once the ICD card is configured with an Internet Protocol (IP) address, a Telnet program offering terminal emulation can be used on a Personal Computer (PC) to enter the remaining CLI commands.

Dependencies

The following are the ICD operational dependencies:

- The maximum number of available ports on the ICD card is 32 (0-31). Release 22 and later and Succession Release 1.0 and later support up to 32 ports.
- The End-to-End Signaling feature and package are required.
- Automatic Call Distribution (ACD) packages and resources are required.
- ACD resources must be taken into account in the customer’s License configuration.

Operating parameters

The following are the ICD operating parameters:

- Each ICD card is a stand-alone machine for Operation, Administration, and Maintenance (OA&M) purposes — cards do not share configuration data.
- Multi-language Browser User Interface (BUI) has limited support.
- Call transfer and trunk-to-trunk connection is subject to system limitations.
- Incoming calls from a modem are also recognized as incoming fax calls.
- Windows 98TM or later is required to run the web-based BUI. Windows 95TM is no longer supported.
- Web-based BUI can be accessed from:
  - Netscape™ browsers Release 4.5 and up
  - Internet Explorer™ browsers Release 5.0 and up

The browser must run a Java Runtime Environment (JRE) to support the BUI. A JRE can be included in the browser package and requires only activation using the toolbar, or it can be installed as a plug-in.

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Installing the card

When installing more than one card in the switch, connect each one to the Ethernet.

Procedure 2
Installing the ICD card

Step	Action

To install the ICD card:

1. Review the “ICD requirements” (page 19) for descriptions of the hardware, software, and system requirements.
2. Identify the IPE card slots selected for the ICD card. Refer to Table 3 "ICDinstallation by module type" (page 61).
3. Pull the top and bottom latches away from the ICD faceplate.
4. Insert the ICD card into the card guides. Gently push the card until it makes contact with the backplane connector.
5. Push the top and the bottom latches firmly towards the faceplate to lock the card in place.
6. Verify that the PC Card is properly seated in the external drive A:. Refer to Figure 11 "ICD card faceplate" (page 62).
7. The card Enl/Dis LED should blink three times and then remain ON. This indicates a successful self-test.
8. Repeat steps 1 through 6 for each ICD card.

--End--

Table 3
ICDinstallation by module type

System modules	ICD card slots
NT8D37BA/EC IPE modules, NT8D11BC/ED CE/PE modules	All available IPE card slots.
NT8D37AA/DC IPE modules	0, 4, 8, and 12
NT8D11AC/DC CE/PE modules	0

Figure 11 "ICD card faceplate" (page 62) shows the ICD card faceplate.

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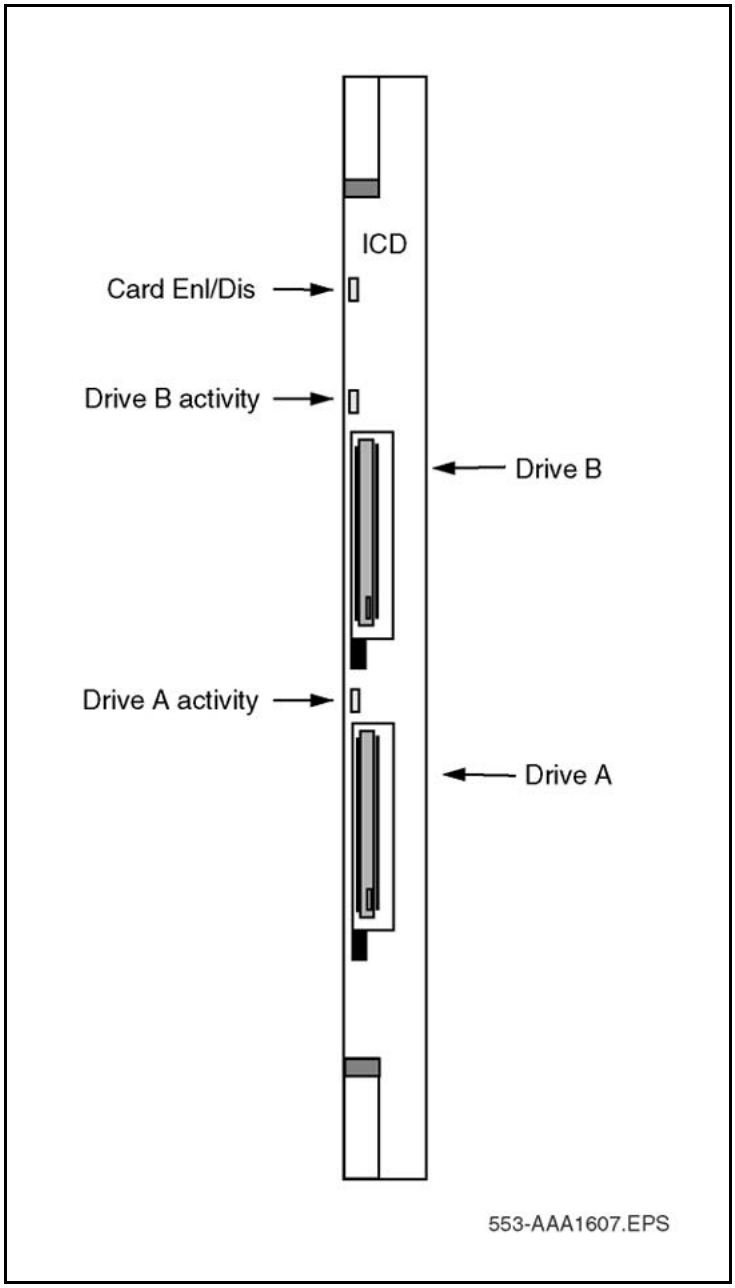
Figure 11
ICD card faceplate



Installing the I/O adaptor for a LAN and terminal

Each ICD card includes an adaptor to connect the ICDcard to a TTY terminal and a LAN.

Two different adaptors are available: the NT5D52AC for an IPE module and the NT5D52BC for a Small System.

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IPE module (NT5D52AC)

The adaptor attaches to the back input/output (I/O) panel with a 50-pin connector to the backplane. The adaptor offers a 9-pin RS-232 serial connector for a terminal and an RJ-45 Ethernet connection. Refer to Figure 14 "Ethernet adaptor in an IPE module (NT5D52AC)" (page 66).

Procedure 3
Attaching the adaptor in an IPE module

Step	Action
	To attach the adaptor to the I/O panel:
1	Remove the cover plate from the I/O panel at the rear of the IPE module.
2	Remove the retaining screws from the I/O panel and lift it from the module.
3	Disconnect the backplane cable 50-pin connector from the I/O panel filter connector.
4	Remove the existing filter connector from the I/O panel and save the retaining screws. This filter connector corresponds to the card slot designated for the ICD card installation.
5	Use the saved retaining screws to install the NT5D52AC Ethernet adaptor card into the designated I/O panel connector cutout. Refer to Figure 12 "Ethernet adaptor card (NT5D52AC) in IPE I/O panel" (page 64).
6	Replace the I/O panel on the module. Replace the cover plate of the module.

--End--

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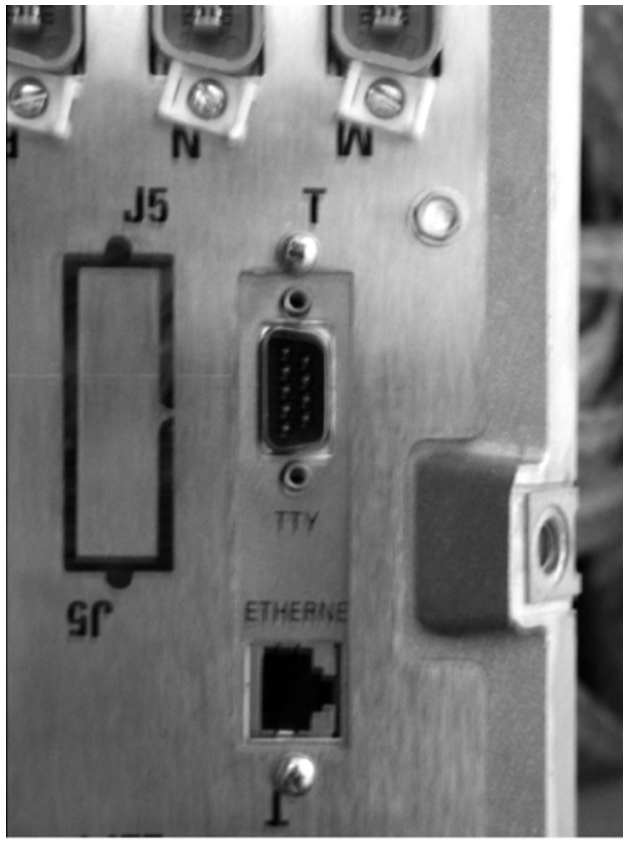
Figure 12
Ethernet adaptor card (NT5D52AC) in IPE I/O panel



Small System tip/ring connector (NT5D52BC)

The adaptor includes a 50-pin connector to the backplane, a 9-pin RS-232 serial connector for a terminal, and an RJ-45 Ethernet connection. Refer to Figure 13 "Ethernet adaptor (NT5D52BC) in a wall mount Small System" (page 65).

Procedure 4
Attaching the tip/ring connector

Step	Action
	To attach the tip/ring connector:
1	Identify the 50-pin tip/ring connector at the bottom of the Small System that corresponds to the card slot position where the ICD card will be installed.
2	Plug the 50-pin connector on the NT5D52BC Ethernet adaptor card into the 50-pin tip/ring connector on the Small System.

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3 Secure the Ethernet adaptor to the Small System.

--End--

Figure 13
Ethernet adaptor (NT5D52BC) in a wall mount Small System

Connecting ICD to a LAN and terminal

Terminal

Connect the TTY terminal to the serial port RS-232 connection on the Ethernet adaptor.

Ethernet

Connect an RJ-45 Ethernet cable from the Ethernet port on the I/O adaptor to the LAN hub. Multiple ICD cards can be connected to the same hub. Refer to Figure 14 "Ethernet adaptor in an IPE module (NT5D52AC)" (page 66)).

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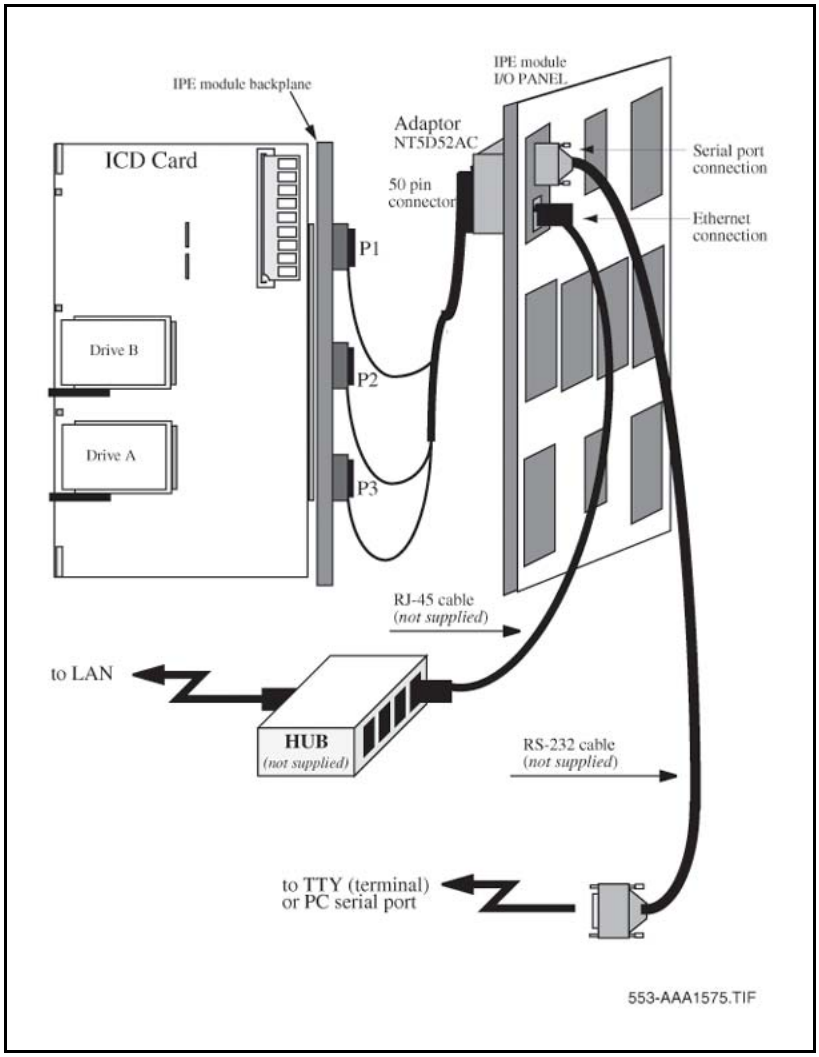
Figure 14
Ethernet adaptor in an IPE module (NT5D52AC)



Connecting a modem to the adaptor

This procedure requires a modem, a 9-pin-to-DB-25 cable, and an RJ-11 cable. It can also require a null modem. Refer to Figure 15 "ICD modem and Ethernet connection example" (page 67). Table 4 "NT5D52 connector pin description" (page 67) describes the adaptor pins.

Procedure 5
Connecting a modem to the adaptor

Step	Action

To connect a modem to the adaptor:

1 Connect the serial cable between the TTY adaptor and the modem. Use the null modem, if required.

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2 Connect the modem to a phone plug.

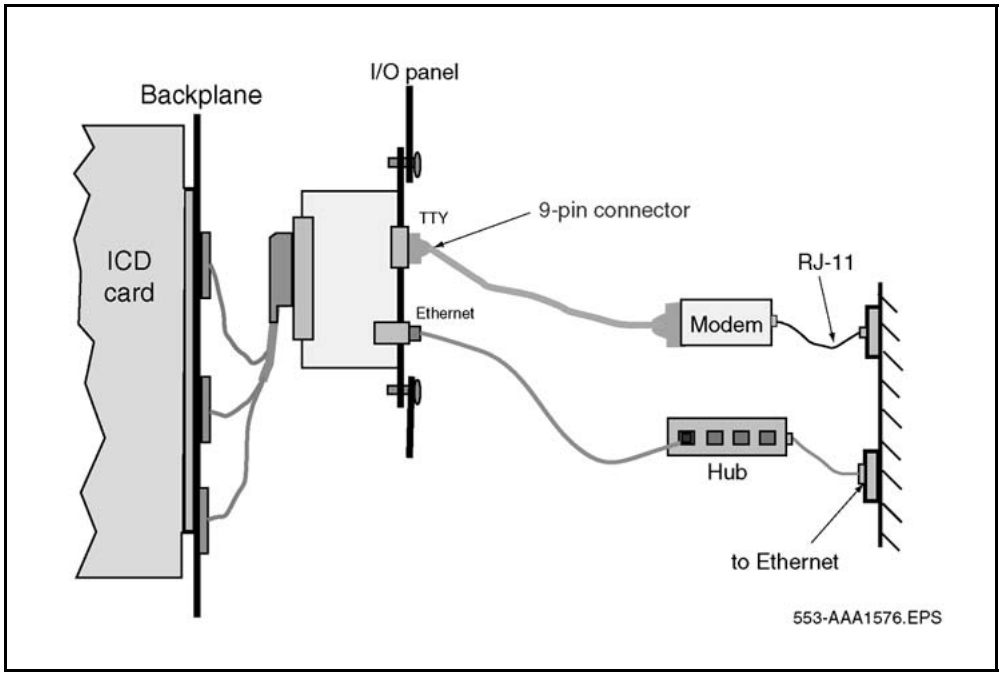
3 Connect the Ethernet cable to the adaptor. Refer to Figure 15 "ICD modem and Ethernet connection example" (page 67)).

--End--

Table 4
NT5D52 connector pin description

Connector	Pin Number	Signal Description
9-pin serial connector	2	RS-232 TX (transmit)
	3	RS-232 RX (receive)
	5	GND (ground)
RJ-45 Ethernet connector	1	LAN_TX +
	2	LAN_TX -
	3	LAN_RX +
	6	LAN_RX -

Figure 15
ICD modem and Ethernet connection example



Configuring the ICD card on the system

You must configure the system for the ICD card to operate.

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Configuring the ACD data block

To configure the ACD data block, use LD 23 with the system TTY and enter the appropriate responses to the prompts. Responses are listed in Table 5 "LD 23 - Define an ACD data block." (page 68). Also refer to Figure 16 "ACD definitions (LD 23)" (page 68).

Table 5
LD 23 - Define an ACD data block.

Prompt	Response	Description
REQ	NEW	Add new data.
TYPE	ACD	Automatic Call Distribution
CUST	xx	Customer number, as defined in LD 15
ACDN	xxx...x	Main ACD directory number (DN) of the ICD card
MAXP	32	Maximum ports (the upper range)

Figure 16
ACD definitions (LD 23)

```
TYPE ACD
CUST 0
ACDN xxxx
MWC  NO
DSAC NO
MAXP 32
SDNB NO
BSCW NO
ISAP NO
AACQ NO
RGAI NO
ACAA NO
FRRT
SRRT
NRRT
FROA NO
NCFW
FNCF NO
CWTT NONE
HMSB YES
ACPQ NO
FORC NO
SPCP NO
OBTN NO
CWTH 1
NCWL NO
BYTH 0
OVTH 2047
TOFT NONE
HPQ  NO

OCN  NO
OVDN
IFDN
OVBU LNK LNK LNK LNK
EMRT
MURT
RTPC NO
RAGT 4
DURT 30
RSND 4
FCTH 20
CRQS 100
IVR  NO
CWNT NONE

MEM AVAIL: (U/P): 390467     USED: 199356     TOT:
589823
DISK RECS AVAIL: 414
ACD DNS  AVAIL: 32728    USED:    39    TOT: 32767
```

553-AAA1608.TIF

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Agent ID and MQA parameters

If applicable, define Agent Identification (ID) and Multiple Queue Assignment (MQA) parameters. Use LD 23 with the system TTY, and enter the appropriate responses to the prompts as listed in Table 6 "LD 23 - Define Agent ID and MQA parameters" (page 69). Increase the Agent ID Upper Boundary (IDUB) as required for the ICD ports for the customer. Add 32 ports for every ICD card. For example, if Agent ID Lower Boundary (IDLB) is 2000 and you add one ICD card, enter 2032 as the limit. If the IDLB is 2500, change the IDUB to 2532.

Table 6
LD 23 - Define Agent ID and MQA parameters

Prompt	Response	Description
REQ	NEW	Add new data.
TYPE	ADS	Auxiliary Data System
CUST	xx	Customer number, as defined in LD 15
AID	(NO) YES	Agent ID mode
- IDLB	(1)-9999	Agent ID Lower Boundary
- IDUB	IDLB-(9999)	Agent ID Upper Boundary
- MQA	(NO) YES	(Don't allow) Allow agents to use MQA functionality.

Configuring Call Park

To configure Call Park, use LD 15 and LD 50. If the System Park DN is disabled, there are no special requirements for the Call Park definition. If the System Park DN is to be defined, the recommended minimum number of System Park DN's is shown below:

- For 8 ports ICD card - 4 System Park DN's
- For 16 ports ICD card - 6 System Park DN's
- For 24 ports ICD card - 7 System Park DN's
- For 32 ports ICD card - 8 System Park DN's

Enter the Call Park definitions in accordance with the following tables:

Table 7
LD 15 Enable or disable Call Park.

Prompt	Response	Description
REQ:	CHG	Change existing data.
TYPE:	FTR	Features and options
CUST		Customer number

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Table 7
LD 15 Enable or disable Call Park. (cont'd.)

Prompt	Response	Description
	0-99	Range for Large System and CS 1000E system.
	0-31	Range for Small System, CS 1000S system, Media Gateway 1000B, and Media Gateway 1000T.
- OPT	CPA	Enable Call Park.

Table 8
LD 50 Add/change or print Call Park. This overlay must be defined for Call Park operation.

Prompt	Response	Description
REQ	CHG	Change existing data.
TYPE	CPK	Call Park data block.
CUST	xx	Customer number, as defined in LD 15
CPTM	30-(45)-240 30-(45)-480	Call Park Timer (in seconds). Call Park recall time (in seconds) if CPRK package 33 is equipped. The amount of time a call is held in the parked state before recalling the parking set or the attendant.
SPDN	(0)-50 xxxx	Number of contiguous System Park DNs and the first System Park DN. The default 0 (zero) disables System Park DN capability, but allows Telephone Park DNs. If the DN Expansion package is equipped, the System Park DN can have up to seven digits.
MURT	0-511 0-127	Music route number for parked calls. For Large Systems For Small Systems and CS 1000Ssystems

ICD dial access

An ICD card is associated with a specific Automatic Call Distribution (ACD) queue. That queue can be reached by many different dialed numbers, implemented in different ways as forwarding numbers to the ACD queue of the ICD card.

The forwarding numbers can be implemented as:

- Directory Numbers (DNs) of agentless ACD queues, the night DN leading to the ACD DN defined as the main ACD DN in LD 23
- DNs of Phantom Terminal Numbers (TNs) forwarded to the ICD queue — all calls forwarded. Define the Phantom TN as an analog (500/2500-type) set on the Phantom Loop in LD 10.
- DNs of existing extensions on the system forwarded to the ICD queue.

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The access DNs are as follows:

- One Number In-House service: each subscriber has a personal extension on the switch. The extensions are forwarded to the ACD DN of the ICD card.
- One Number Service Provider: the system owner provides One Number service to outside customers. Use DNs of the Phantom TNs, which have call forward to the ACD DN of the ICD card.
- Remote Dial service: each user has a Common or Private access number. Users can also have a direct Speed Dial number range with which they access the card.
- TUI access number

These numbers can be agentless ACD, CDN, Dialed Number Identification System (DNIS), or Phantom TN forwarded to the ACD DN of the ICD card. The DNIS number appears on the screen display in addition to the CDN. If the system fails to read or recognize the CDN, it checks the DNIS number for identification.

Table 9
LD 23 - Define access DNs

Prompt	Response	Description
REQ	NEW	Add new data.
TYPE	ACD	Automatic Call Distribution
CUST	xx	Customer number, as defined in LD 15.
ACDN	xxx...x	Main ACD DN of the ICD card
...	...	
NCFW	xxx...x	Main ACD DN (defined in Table 5 "LD 23 - Define an ACD data block." (page 68))

Figure 16 "ACD definitions (LD 23)" (page 68) provides an example of the definitions for ACD. ACDN is the Main ACD DN.

Phantom TN

Enter the definitions for the Phantom TN (LD 10) as shown in Figure 17 "Phantom TN definitions (LD 10)" (page 72).

Note 1: The specific TN and DN vary by site. Those variables are represented by x in Figure 17 "Phantom TN definitions (LD 10)" (page 72).

Note 2: The last four variables in the screen, under FTR, identify the main ACD DN in LD 23.

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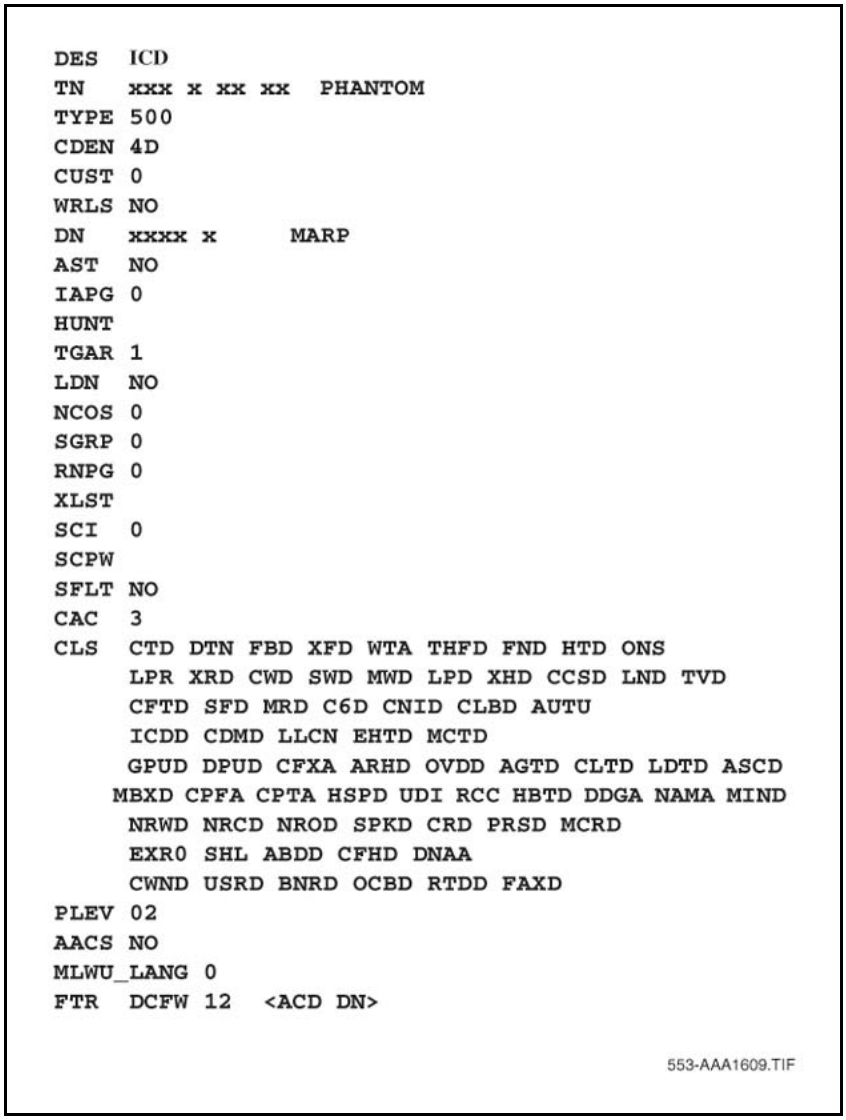
Figure 17
Phantom TN definitions (LD 10)



Defining each unit of the ICD card as an M2616 digital set

In LD 11, define each unit of the ICD card as an M2616 digital set. The ACD DN is defined in Table 10 "LD 11 - Define each unit of the ICD card as an M2616 digital set" (page 73).

ICD does not support the auto-configuration feature. You must define each ICD unit manually before the card can be used.

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Table 10
LD 11 - Define each unit of the ICD card as an M2616 digital set

Prompt	Response	Description
REQ:	NEW	Add new data.
TYPE:	2616	Digital telephone set.
TN		Terminal number
	l s c u	Format for CS 1000M Large System, Meridian 1 Large System, Call Server 1000E, and Media Gateway 1000E, where l = loop, s = shelf, c = card, u = unit.
	c u	Format for CS 1000M Small System, Meridian 1 Small System, CS 1000S system, Media Gateway 1000B, and Media Gateway 1000T, where c = card and u = unit.
DES	a...x	Designator
CUST	xx	Customer number, as defined in LD 15
CLS	CFXA	Call Forward External Allowed
...	...	
KEY	0 ACD xxx yyy	xxx = Main ACD DN, yyy = CLID <any DN>
KEY	1 SCN xxx	xxx = any DN of the port
KEY	2 NRD	
KEY	3 MSB	
KEY	4 TRN	
KEY	5 A03	
KEY	6 NHC	
KEY	8 PRK	See the **Call Park** feature in *Features and Services Fundamentals (NN43001-106)*.
KEY	9 CHG	

Figure 18 "ICD port definitions in LD 11" (page 74) shows an example of the definitions for ICD ports.

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Figure 18
ICD port definitions in LD 11

```
TN    xxx x xx xx                                    HUNT
TYPE 2616                                            PLEV 02
CDEN 8D                                              SPID NONE
CUST 0                                               AST
AOM  0                                               IAPG 0
FDN                                                  AACS NO
TGAR 7                                               ITNA NO
LDN  NO                                              DGRP
NCOS 6                                               PRI  01
SGRP 0                                               MLWU_LANG 0
RNPG 0                                               DNDR 0
SCI  0                                               KEY  00 ACD xxxx 0   863702
SSU                                                           AGN
XLST                                                      01 SCN 863703 0      MARP
SCPW                                                      02 NRD
SFLT NO                                                   03 MSB
CAC  3                                                    04 TRN
CLS  UNR FBD WTA LPR MTD FND HTD ADD HFD                  05 AO3
     MWD AAD IMD XHD IRD NID OLD VCE DRG1                 06 NHC
     POD DSX VMD CMSD CCSD SWD LND CNDD                   07
     CFTD SFD MRD DDV CNID                                08 PRK
     ICDD CDMD LLCN MCTD CLBD AUTU                        09 CHG
     GPUD DPUD DNDD CFXA ARHD CNTD CLTD ASCD              10
      CPFA CPTA HSPD ABDD DELD CFHD FICD NAID DNAA        11
RDLA                                                      12
     UDI RCC HBTD AHD DDGA NAMA MIND PRSD NRWD NRCD       13
NROD                                                      14
     EXR0                                                 15
     USRD ULAD RTDD OCBD FLXD
CPND_LANG ENG
```

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Note 1: CFXA is the Class of Service (CLS) that enables Call Forward.

Note 2: Access restrictions defined on the unit should take into consideration that ICD handles outdial screening.

Note 3: If only a subset of the card's units are configured, they must begin from Unit 0 and on.

Enabling the ICD card

After you configure the ACD block of ICD, you can enable the ICDcard.

Procedure 6
Enabling the ICD card

Step	Action
	To enable the ICD card, do the following:
1	Use LD 32.
2	Enable the ICD card.

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a For CS 1000M Large System, Meridian 1 Large System, Call Server 1000E, and Media Gateway 1000E, use the system TTY to execute the **ENLC l s c** command, where l is the loop, s is the module or shelf, and c is the card to be enabled.

b For CS 1000M Small System, Meridian 1 Small System, CS 1000S System, Media Gateway 1000B, and Media Gateway 1000T, use the **ENLC c** command, where c is the card to be enabled.

--End--

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Configuration procedures on the ICD card

Contents

This section contains information on the following topics:

“Overview” (page 77)

“Configuring ICD with the BUI” (page 80)

“Logging in to the ICD administrator BUI” (page 81)

“Administrator BUI main window” (page 83)

“Configuring user accounts” (page 84)

“Configuring Remote Dialing” (page 90)

“Configuring call screening tables” (page 94)

“Configuring One Number service parameters” (page 100)

“Customizing voice prompts” (page 104)

“Viewing reports and logs” (page 108)

“Configuring system properties” (page 124)

Overview

The Browser User Interface(BUI) is used to configure each Nortel Integrated Call Director (ICD)Release 2 card and its associated users. Refer to “Operating parameters” (page 60) for full browser requirements.

Port, user, and keycode information, as well as the IP address for the card, must all be configured before the administrator or users can access the BUIs.

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Port, user, and keycode data

The card performs a self-test once it is inserted in the system module and powered up. At the end of the test, a system prompt asks for the number of ports, the number of Remote Dial users, the number of One Number and Remote Dial users, and the keycode.

Note 1: Up to 300 users, in increments of 50, are supported by a single ICD card. The maximum number of users for your card is listed on the keycode label.

Note 2: Users can subscribe to the One Number service, the Remote Dial service, or both. The system prompts you for the maximum number of Remote Dial users, as well as the maximum number of One Number and Remote Dial users. Enter the number of each type that has been purchased.

Note 3: For the card to successfully power up, you must correctly enter the keycode that matches the number of users and ports purchased.

Procedure 7
Entering port, user, and keycode data

Step	Action
	To enter port, user, and keycode data:
1	Configure the terminal: • Transmission speed: 9600 bps • Data bits: 8 • Stop bit: 1 • Parity: No • Flow control: none. Do not use X-on/X-off flow control.
2	Verify that the terminal is connected to the TTY adaptor serial port.
3	Locate the keycode in the ICD shipping carton.
4	At the **Modify, Save, Cancel** prompt, type **M**, and press **Enter**.
5	At the **max ports (0):** prompt, enter the number of ICD prompts listed on the keycode label, and press **Enter**. You can define 8, 16, 24, or 32 ports on an ICD card.
6	At the **num of RD users (0):** prompt, enter the number of Remote Dial users and press **Enter**.
7	At the **num of ON+RD users (0):** prompt, enter the number of One Number and Remote Dial users on the card, and press **Enter**.
8	At the **Modify, Save, Cancel** prompt, type **S**, and press **Enter**.

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9 Type in **keycode1**, and press **Enter**.

10 Type in **keycode2**, and press **Enter**.

11 Type in **keycode3**, and press **Enter**.

12 The ICD terminal displays a keycode confirmation message.

13 ICD displays the user login prompt.

14 Type the default user login, **user**, and then ICD. ICD displays the Main menu.

--End--

Card name and network address attributes

You must configure the network address attributes of the card for BUI access. The administrator uses the BUI to configure individual user and system parameters. The IP address can initially be entered only with a terminal connected directly to the serial port of the card through the I/O panel.

Procedure 8
Changing the card name and entering network address attributes

Step	Action

To change the card name and enter the network address attributes, follow these steps:

1 From the Main menu, type **SA SY**.

2 At the cursor, type **M**, and press **Enter**.

3 Change the card name, if required, and press **Enter**.

4 Type in the subnet mask, gateway address, and IP address.

- The subnet mask has the XXX.XXX.XXX.XXX format, where every XXX is in the range of 0-255. When represented as 32-bit binary, the first eight digits of the subnet mask are always 1, and the last digit is always 0.
- The gateway address has the **XXX.XXX.XXX.XXX** format, where every **XXX** is in the range of 0-255.
- The IP address refers to the IP address of the ICD card. It has the same format as the gateway address.

Note: If the IP address and gateway address defined are identical, this indicates there is no established gateway. In this case, define the subnet mask as 255.0.0.0 or 255.255.0.0.

5 Enter the mail server address.

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ICD uses the mail server address to send daily Event Logger and Traffic Report files through e-mail. See Procedure 39 "Setting traffic reports definitions" (page 135).

Note: The mail server address must also have the **XXX.XXX.XXX.XXX** format.

6 Enter the e-mail from address, if your e-mail server requires it.

7 At the **Modify, Save, Cancel** prompt, type **S** and press **Enter** to save changes.

8 ICD prompts the system message **Restart card (Y or N)?**. Type **Y**. The external drive LED flashes.

--End--

ICD presents a login prompt when the restart process is complete.

Configuring ICD with the BUI

The BUI has two branches, one for users and one for the administrator. This section describes how to use the administration BUI to configure:

- system properties
- Remote Dial and One Number services
- call screening tables
- user accounts and properties
- voice prompts
- traffic and log reports

These parameters must be set before users can access and configure the user BUI and Telephone User Interface (TUI).

The administrator BUI windows are presented here in a sequential order. The tabs of the main window are presented first, followed by the system properties windows.

Procedure 9
Configuring the administrator BUI

Step	Action

For initial configuration, complete the steps in sequence:

1 Configure ICD system parameters:

   a Define general configuration parameters.

   b Define administration configuration parameters.

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c Define card-level configuration.

d Define traffic and event logger reports configuration.

2 Configure Remote Dial access.

3 Customize call screening tables.

4 Customize the calendar for One Number service, if necessary.

5 Define users.

6 Set detailed parameters, if necessary:

a Customize voice prompts.

b Customize answer recognition.

c Customize volume levels.

--End--

Note: If you define a specific ICD card, using a keycode, to have only Remote Dial subscribers, the windows, tabs, and frames related to One Number subscribers are disabled.

Logging in to the ICD administrator BUI

Once the ICD card is configured and the IP address is defined, the administrator can use the BUI to define user and system parameters.

To use the administrator BUI, you must first log in. Figure 19 "ICD administrator BUI Login window" (page 82) shows the administrator BUI login screen.

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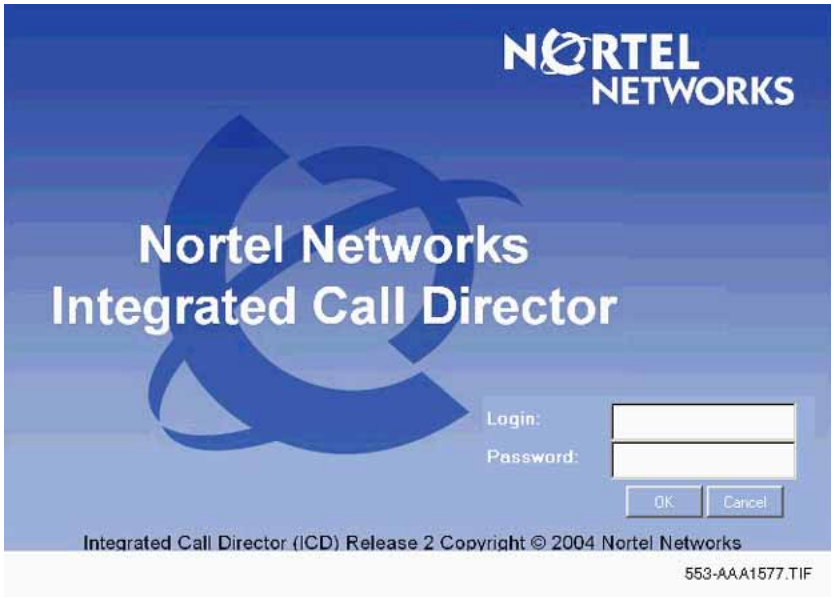
Figure 19
ICD administrator BUI Login window



Procedure 10
Logging in

Step	Action
	To log in to the administrator BUI:
1	Open a web browser.
2	Enter the IP address of the ICD card in the **Location** or **Address** field, depending on your browser: **http://xxx.xxx.xxx.xxx**, where xxx.xxx.xxx.xxx is the IP address assigned to the ICD card. Example: **http://47.82.46.92** The ICD BUI login window appears. See Figure 19 "ICD administrator BUI Login window" (page 82).
3	Enter the administrator login and password — the default login and password are both **admin**.
4	Press **Enter**, or click **OK**.
	--End--

To change default passwords, see “Administration tab configuration procedures” (page 129).

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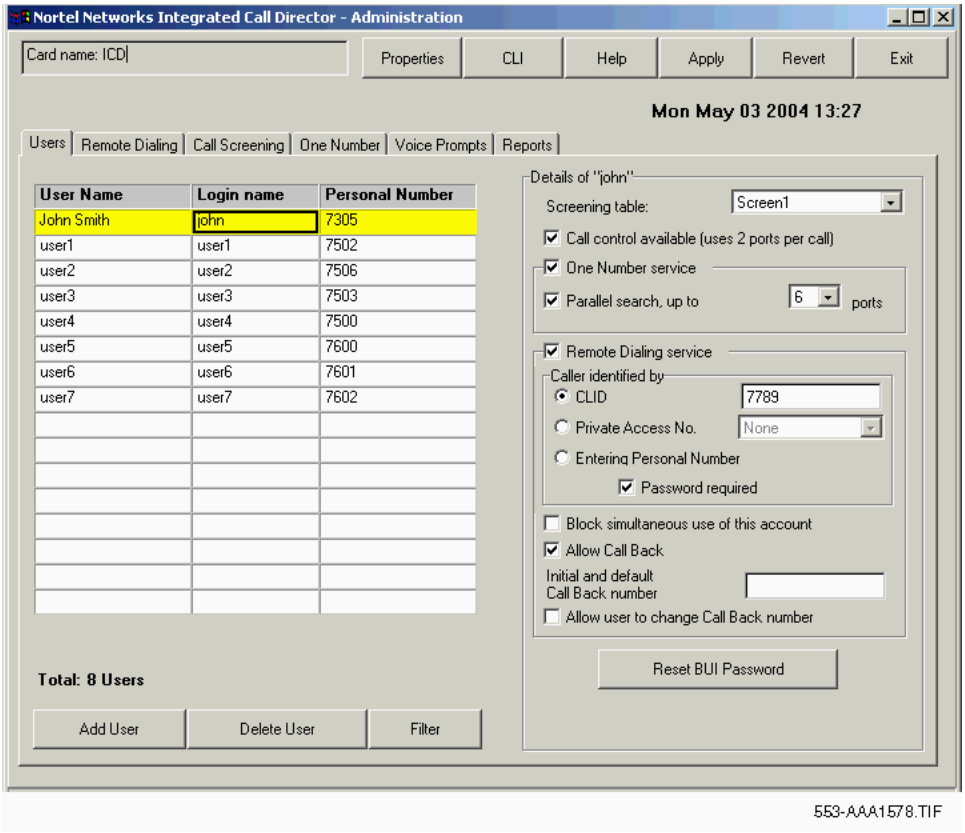
Administrator BUI main window

The BUI main window provides access to system and user configuration windows. See Figure 20 "Users tab on the administrator BUI main window" (page 83). The parameters entered in these windows are only used for this specific ICD card and its associated users. System and user configurations must be made for each installed ICD card.

Figure 20
Users tab on the administrator BUI main window



Tabs

The BUI main window provides access to six main pages. Click the appropriate tab to access a specific page. Refer to Table 11 "BUI Main window tabs" (page 83) for descriptions of the tabs.

Table 11
BUI Main window tabs

Tab	Description
Users	Use to add, delete, and configure individual user accounts. This tab is active when you access the BUI Main window.

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Table 11
BUI Main window tabs (cont'd.)

Tab	Description
Remote Dialing	Define access numbers and timeouts for the Remote Dial service.
Call Screening	Use to configure the call screening tables. These tables define users' dialing restrictions. One table can be assigned to many users. Each user is assigned one table.
One Number	Define holidays and Answer Recognition mode for One Number subscribers.
Voice Prompts	Customize the system voice prompts.
Reports	Use to view operational measurements describing card and service use. The system collects measurements in traffic and log reports.

Buttons

The BUI main window includes buttons along the top right side of the window. The current time and date appear under this row of buttons. Refer to Table 12 "BUI Main window buttons" (page 84) for descriptions of the buttons.

Table 12
BUI Main window buttons

Button	Description
Properties	Opens the ICD system **Properties** window, which is used to set the global parameters for each ICD card and its associated users. "Configuring system properties" (page 124) describes the fields available in this window.
CLI	Opens a separate browser window accessing the ICD Command Line Interface (CLI).
?Help	Opens a separate Internet browser window that contains a user guide in pdf file format.
Apply	Saves the configuration changes permanently. ICD remains in service throughout the process.
Revert	Clears the configuration changes made since the last **`Apply`** command. Changes made in the session are erased, and the previously saved changes are used.
Exit	Ends the ICD BUI session.

Configuring user accounts

This section describes how to use the administration BUI to add and configure user accounts

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When a new ICD 2 has been installed, the administrator must create user accounts and assign users to one or both of the services before they can use ICD. When upgrading from MIPCD 1 to ICD 2, all users remain subscribed to the One Number service only, until the administrator registers them specifically to the Remote Dial service (where applicable).

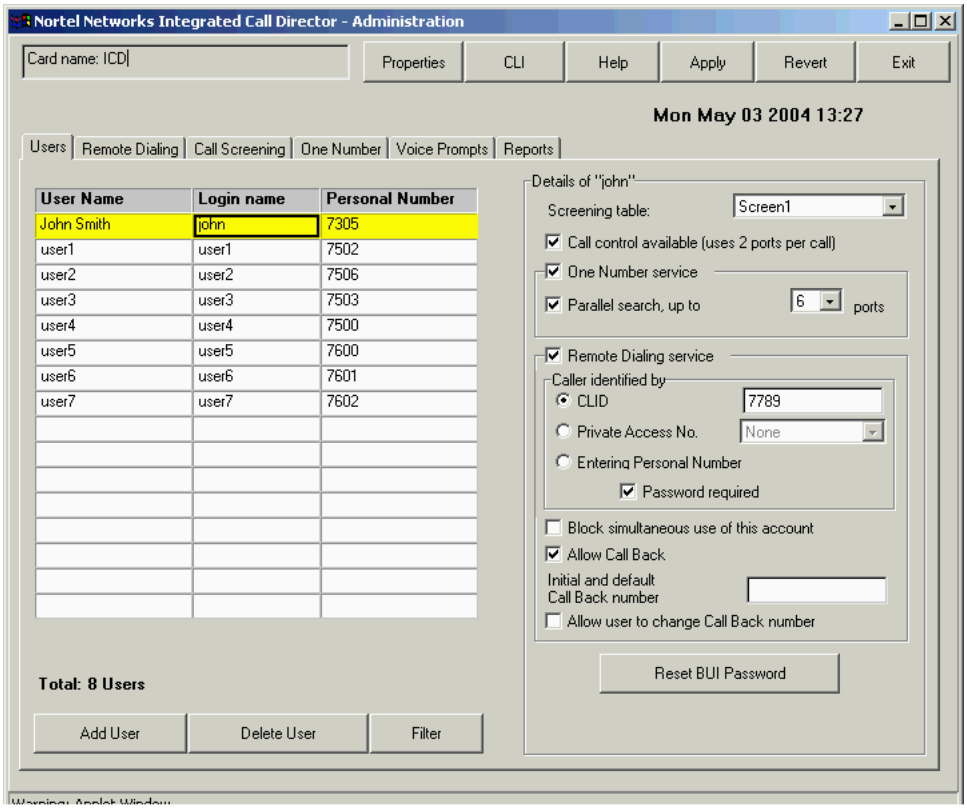
All system properties must be set before individual user accounts are configured. System properties contain the parameters that apply to all users. Refer to “Configuring system properties” (page 124) for instructions.

Users window

The Users window opens automatically when you access the administration BUI (see Figure 21 "Main window Users tab" (page 85)).

Use the **Users** tab to add, delete, and configure individual user accounts.

Figure 21
Main window Users tab



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Users table

The Users table on the left lists all users assigned to the current ICD card:

- Select a line with a single click.
- Double-click a line to edit the line.

After you add a new user, select the user in the Users table, and configure the **Details** parameters for that user.

Procedure 11
Adding users

Step	Action

Add users to the ICD card as follows:

1 From the **Users** tab, click **Add User**. The **New User** window opens (see Figure 22 "New user window" (page 86)).

Figure 22
New user window

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2 Enter the user's information in the appropriate fields:

a **New User Name:** The user's actual name.

b **BUI Login Name:** The user's BUI login identification.

c **Personal Number:** The number dialed by callers to reach the One Number subscriber (this is the Directory Number [DN] from which the call is forwarded to ICD). This number is used for caller identification, and is the number used to access the TUI. This number is also used for user identification in CDR records, if they are output.

Note: Numbers used to reach the ICD have to be defined as they appear on a digital set (connected on the same switch as the ICD). The dialing plan and setup of the system determine if the leading H and location code appear in the display. If a number is from another network node and begins with an H, and the **Include leading H in numbers** check box is selected in the **Properties > General** window, the H must be included in the number. If the **Include leading H in numbers** check box is not selected, omit the H when defining numbers, even if it appears on a digital set.

3 Choose one of the following:

a Click the **Based on** option button in the **Initial user data** section if you want to use the **Details** parameters of another user. You must then choose the user whose **Details** parameters are to be copied.

b Click the **Blank** option button if an existing set of parameters is not used.

4 Click **OK**.
The user account is now created.

--End--

Procedure 12
Configuring a new user account

Step	Action

*Complete the **Details** section on the **Users** tab after adding a new user:*

1 Choose a call screening table from the **Screening table** drop-down list.

2 Select the **Call control available** check box to allow call connection over an internal bridge within the ICD card.

When this option is active (the check box is selected), connected calls occupy two ports on the ICD card for the duration of the

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call. This enables the additional Call Control and Call Reconnect features.

3 Select the **One Number service** check box or **Remote Dialing service** check box or both, based on the service or services to which this user subscribes.

4 Select the **Parallel search** check box to enable parallel searches for a One Number user.

5 Select the maximum number of ports allowed in the parallel search from the **ports** drop-down list.

6 Complete the details for a Remote Dial user, if applicable:

a Select the caller recognition method and, if necessary:

1. Define the Calling Line Identification (**CLID**) by which the system recognizes the user, when he or she calls the Remote Dial Common Access number.

   Note: The CLID must be defined exactly as it appears on a digital set (connected on the same switch as the ICD). The dialing plan and setup of the system determine if the leading H and location code appear in the display. If a number is from another network node and begins with an H, and the **Include leading H in numbers** check box is selected in the **Properties > General** window, the H must be included in the number. If the **Include leading H in numbers** check box is not selected, omit the H when defining numbers, even if it appears on a digital set.

2. Select a Private Remote Dial Access Number from the **Private access No**. drop-down list.

b Select the **Entering Personal Number** option button if callers are to be prompted to enter their personal number.

c Select the **Password required** check box if callers are to be prompted for a password on the call.

Leave the check box clear for access with no password.

d Select the **Block simultaneous use of this account option** button if the user account supports only one incoming Remote Dial call at a time.

e Select the **Allow Call Back** option button to enable the system to call the user back.

f To define a callback number for a Remote Dial user, type the number in the **Initial and default Call Back number** text

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box. This number is used if the user is not allowed to define one, or has not done so.

Note: Numbers must be entered exactly as they are when they are dialed from a regular set connected to the same system in which the ICD card is installed.

g Select **Allow user to change Call Back number** if the user is permitted to define his or her callback number in the user BUI and TUI.

7 Click **Apply** to save the changes, or **Revert** to restore the original settings.

--End--

Procedure 13
Deleting users

Step	Action

To delete users from the ICD card:

1 Click once on the user entry in the Users table to select the user line.

2 Click **Delete** to delete the user entry.

3 Click **Apply** to save the changes, or **Revert** to restore the original settings.

If you accidently deleted a user and applied that change, you must redefine it using the **Add new user** steps.

--End--

Procedure 14
Filtering users

Step	Action

To find and display a selected subset of users:

1 Click the **Filter** button.

The **Filter** window opens.

2 Enter the text to search for in the **Text to find** text box.

3 Select the column in which to search from the **In Column** drop-down list.

4 Select the **Case Sensitive** check box if you want the search to be case sensitive.

5 Select the **Whole words only** check box if you want the search to be performed for whole words only.

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6 Click **Filter**.

The appropriate entries are displayed in the **Users** table on the main window.

7 Click **Show all** to redisplay all the users on the ICD card.

--End--

Note: You can close the **Filter** window by clicking the **X** button in the top right-hand corner.

Procedure 15
Modifying user configurations

Step	Action

To modify a user's configuration:

1 Click once on the user entry in the Users table to select the user line.

2 Modify the user information in the appropriate text boxes.

3 Revise the **Details** section in the **Users** tab.

4 Click **Apply** to save the changes, or **Revert** to restore the original settings.

--End--

Procedure 16
Resetting a BUI password for a user

Step	Action

To reset a user's BUI password to the default value:

1 Select the required user in the Users table.

2 Click **Reset BUI password**.

The default user password is defined in the **Properties** window on the **Administration** tab.

--End--

Configuring Remote Dialing

Click the **Remote Dialing** tab in the administrator BUI main window. The **Remote Dialing** window opens (see Figure 23 "Main window Remote Dialing tab" (page 91)).

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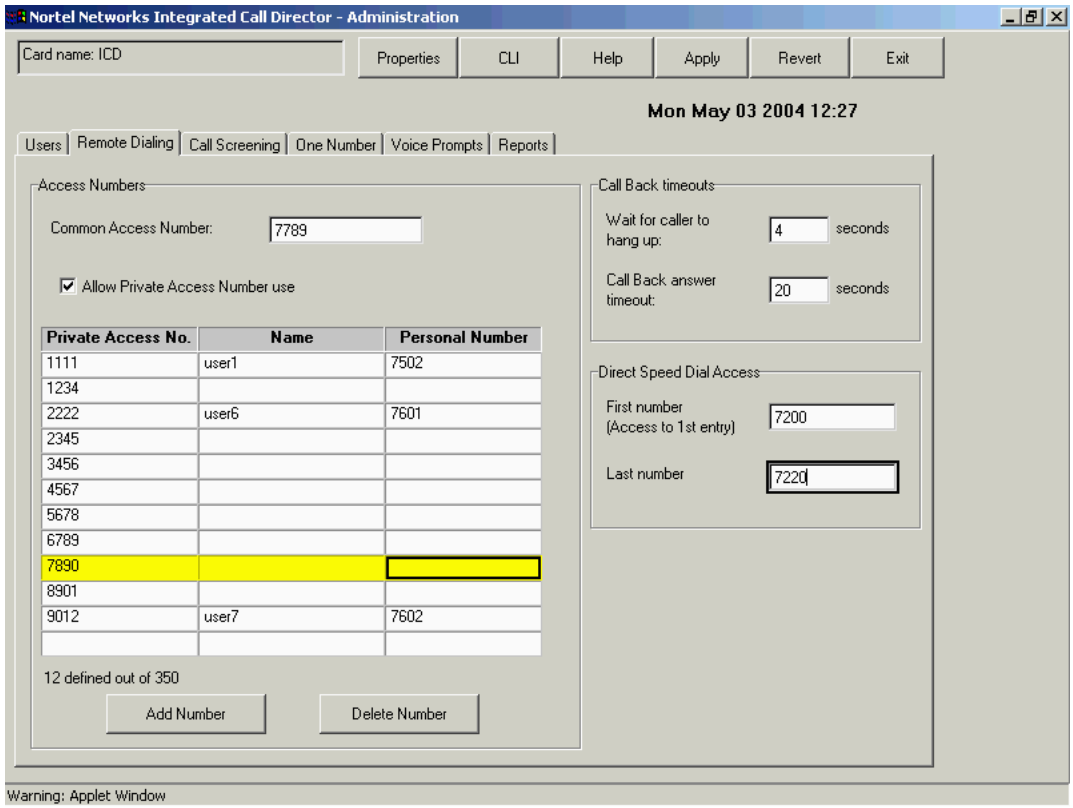
Use the **Remote Dialing** window to set parameters for the users of the Remote Dial service.

Figure 23
Main window Remote Dialing tab



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Procedure 17
Configuring Remote Dialing

Step	Action

To configure Remote Dialing for users:

1 Define the DN for all subscribers to access the Remote Dial service in the **Common Access Number** text box.

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When dialing this number, identification can be done based on CLID, defined in the **Users** window, or by a caller entering his or her personal number and password on the call.

Note: Numbers used to reach ICD must be defined as they appear on a digital telephone (connected on the same switch as ICD). The dialing plan and setup of the system determine if the leading H and location code appear in the display. If a number is from another network node and begins with an H, and the **Include leading H in numbers** check box is selected in the **Properties > General** window, the H must be included in the number. If the **Include leading H in numbers** check box is not selected, omit the H when defining numbers, even if it appears on a digital telephone.

2 Select **Allow Private Access Number use** to allow users to access the Remote Dial service by Private Access numbers.

The administrator assigns unique Remote Dial access numbers to different users in the **Users** tab, thereby allowing the service to recognize callers by the number they dial.

The Private Access number table is only active if this box is selected.

Note: If this check box is cleared after numbers are assigned to users, the assignments remain intact, but the user cannot view the number in the user BUI, or use it on calls.

3 Select a Private Access number to edit.

The Private Access Numbers table displays all Private Remote Dial access numbers defined on the card and the user assigned to each number. It includes three columns, as follows:

- **Private access No.**: Contains the Private Remote Dial access number. The numbers must be DNs defined in the

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switch to reach the ICD (unless access is through the auto attendant option).

Note: Numbers used to reach ICD must be defined as they appear on a digital telephone (connected on the same switch as the ICD). The dialing plan and setup of the system determine if the leading H and location code appear in the display. If a number is from another network node and begins with an H, and the **Include leading H in numbers** check box is selected in the **Properties > General** window, the H must be included in the number. If the **Include leading H in numbers** check box is not selected, omit the H when defining numbers, even if it appears on a digital telephone.

- **Name:** Contains the name of the user to whom this access number is assigned, if any.
- **Personal Number:** Contains the personal number of the user to whom this access number is assigned, if any.

4 Click one of the following buttons to edit a Private Access number:

- **Add Number:** Adds a new, empty line to the table. You only need to use this button if all the existing lines in the table are full. The amount of numbers allowed is the same as the maximum number of users defined by the keycode. The total number of items defined in the table, and the maximum allowed, are shown beneath the table.
- **Delete Number:** Erases the selected number. To delete a number that is assigned to a user, go to the Private Access No. field of the appropriate user in the Users Tab on the Main window and remove the assignment. Once it is unassigned, click **Delete Number**.

5 Define timeouts used by the Remote Dial callback feature:

- **Wait for caller to hang up:** Insert the number of seconds that the Remote Dial service waits before it answers a call. When the Remote Dial service recognizes the caller, and he or she is allowed a callback, the call is not answered immediately. This allows the caller to hang up, after hearing the ringback tone, and be called back without incurring any

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expenses. If the caller does not hang up for the length of time specified in this text box, the call is answered.

Note: If a user calls the system and hangs up so the system can call the user back, but it does not call back, the user can try calling the system again and waiting longer before hanging up. The user can also try waiting for the system to answer the call and then request the callback.

- **Call Back answer timeout:** Insert the number of seconds that the Remote Dial service waits for the user to answer on a callback.
  The Remote Dial service waits for initial input, on a callback to the user, before it gives up. This time is measured from three seconds after the time the call is initiated, not from when it is answered.

6 Click **Apply** to save the changes, or **Revert** to restore the original settings.

--End--

Configuring call screening tables

Click the **Call Screening** tab in the ICD main window. The **Call Screening** window opens (see Figure 24 "Main window Call Screening tab" (page 95)).

Use the **Call Screening** window to configure a maximum of 32 call screening tables. These tables define a user's dialing restrictions. One table is assigned to each user. Restrictions apply to numbers that callers dial out, as well as numbers defined in the user BUI that the system dials out on behalf of the user (for example, **Find me at** numbers in Follow-me profiles).

Note: For increased security, administrators can use a TTY directly connected to the ICD card to disable BUI access to the screening tables.

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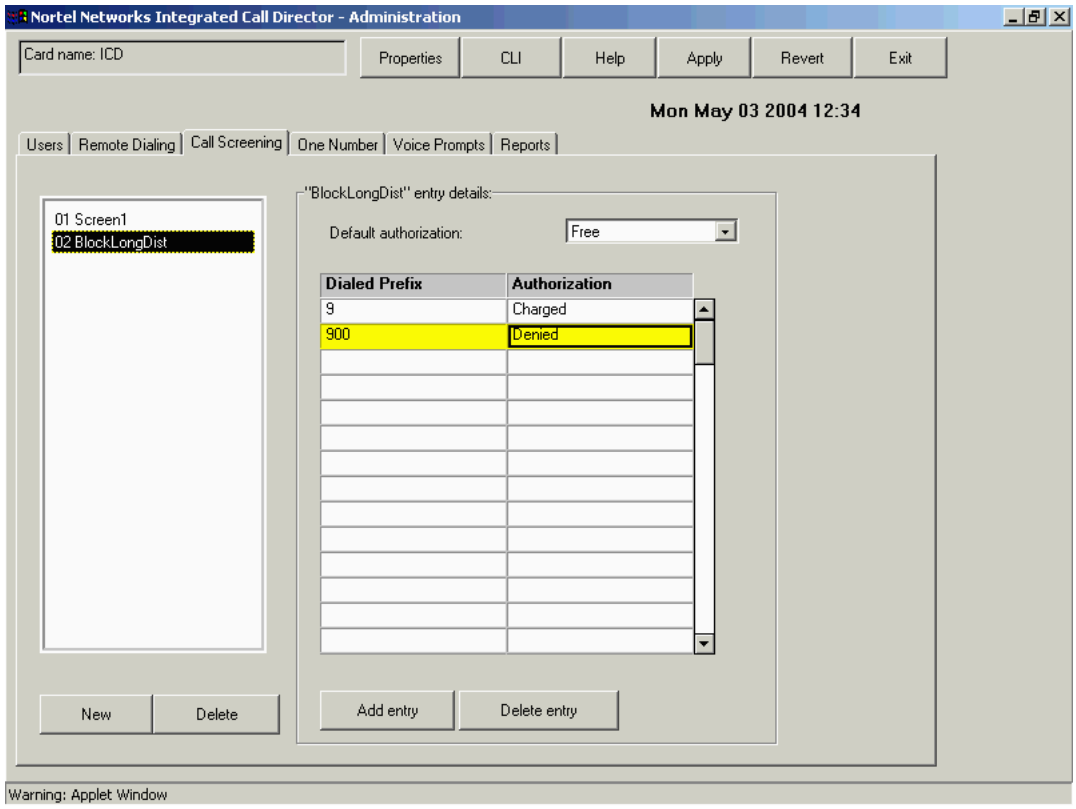
Figure 24
Main window Call Screening tab



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Call screening options

Each entry in the call screening table contains a prefix and the associated action. Possible actions for each entry are:

- **Free:** The call can be placed.
- **Charged:** The call is allowed, but charged to the recipient.
- **Denied:** The call cannot be placed.

Default authorization

Choose the appropriate **Default authorization** from the drop-down list for numbers not covered by the table (default is **Free**).

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Guidelines

The following guidelines apply to call screening tables:

- The length of the defined prefixes can be up to 20 digits.
- Tables can contain up to 100 entries.
- An entry can be the prefix of another entry.

Screening table restrictions examples

A screening table can contain several prefixes that start with the same digits, but that have different authorization categories. For each prefix, the defined authorization category applies.

The following examples describe situations where the administrator has defined call restrictions and explain how those restrictions affect the user.

Example 1

Table 13 "Screening table example 1" (page 96) shows a call screening table based on the following preferences:

- The customer wants to allow access to all local numbers (default).
- Calls through ESN access code 6 are to be denied, except calls to ESN location 646, which are allowed.
- Calls through trunk access code 9 are allowed, but charged.

Table 13
Screening table example 1

Dialed Prefix	Authorization
Default	Free
6	Denied
6646	Free
9	Charged

Example 2

Table 14 "Screening table example 2" (page 96) shows the definitions for another call screening table.

Table 14
Screening table example 2

Dialed Prefix	Authorization
Default	Denied
100	Charged

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Table 14
Screening table example 2 (cont'd.)

Dialed Prefix	Authorization
10012	Denied
100123	Free

The effects of these restrictions on users are:

- Users can only dial outgoing numbers that start with 100.
- Users cannot dial numbers starting with 10012, although they can dial outgoing numbers starting with 100123.
- Users can dial outgoing numbers starting with 100, but the calls are charged.
- Users can dial outgoing numbers starting with 100123, and the calls are free of charge.
- Users can dial outgoing numbers starting with 1002, 1003, 1004, and so on, but the calls are charged.
- Users are not allowed to dial outgoing numbers starting with 0, 2–9, 101, 102, 103, and so on.

Therefore, a user is allowed to dial the following outgoing numbers:

- 1001231111
- 1002256789

Users are charged for calls forwarded to 1002256789, but not for calls forwarded to 1001231111.

Add a table

The **Screening Table**s field lists the currently defined tables.

Procedure 18
Adding a call screening table

Step	Action

To add a call screening table:

1 Click **New**. The **New Screening Table** window opens (see Figure 25 "New Screening Table window" (page 98)).

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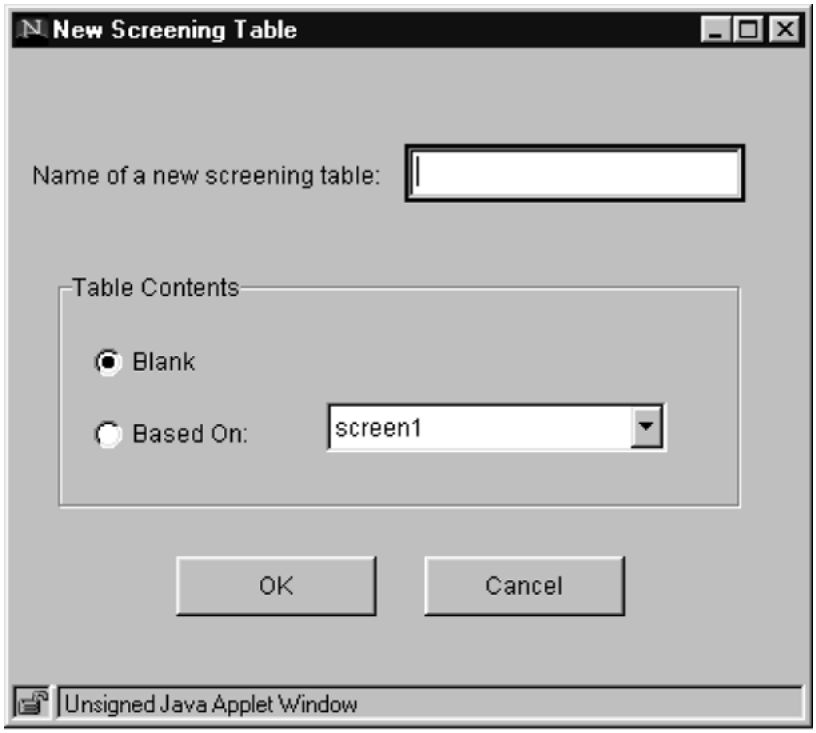
Figure 25
New Screening Table window



2 Name the table.

3 Click the appropriate option button to choose either a blank table, or one based on an existing table, in the **Table Contents** section.

4 Click **OK** to create the table, or **Cancel** to exit the window.

Once you click **OK**, the **New Screening Table** window closes. The **Call Screening window** now contains the new screening table name in the **Screening Tables** field.

5 Add, modify, or delete restrictions in the **Details** section to the right of the **Screening Tables** field.

a Add an entry by doing the following:

1. Select an empty line, if one is available. Click **Add Entry** to add a new restriction line, if all existing lines in the table are full.
2. Enter the prefix in the **Dialed Prefix** line on the left.
3. Select **Free, Denied**, or **Charged** from the drop-down list in the **Authorization column**.
   Refer to “Screening table restrictions examples” (page

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96) for additional information on the authorization categories.

b Delete an entry by doing the following:

1. Click once on a restriction line to select it.
2. Click **Delete Entry**.

c Modify an existing restriction line by changing the **Default authorization, Dialed Prefix**, or **Authorization** settings.

6 Click **Apply** at the top of the window to save the changes.

--End--

Procedure 19
Deleting a call screening table

Step	Action

To delete a call screening table:

1 Click once on the table name to highlight it in the **Call Screening** field.

2 Click **Delete**.

Note: To delete a table that is assigned to a user, you must first remove the assignment. Remove the assignment from the **Screening table** drop-down list of the appropriate user on the **Users** tab (**Details** section) in the main window.

3 Click **Apply** to save the changes.

--End--

Procedure 20
Modifying a call screening table

Step	Action

To modify a call screening table:

1 Click once on the table name in the **Call Screening** field to highlight it. The details for that table appear in the **<Table name> entry details** section.

2 Click on the line you want to modify.

To change the **Dialed Prefix**, clear the existing value and insert the new value.
To change the **Authorization** category, click once in the field and select from the drop-down list.

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3 Add prefixes to the table, or delete prefixes.

4 Click **Apply** to save the changes.

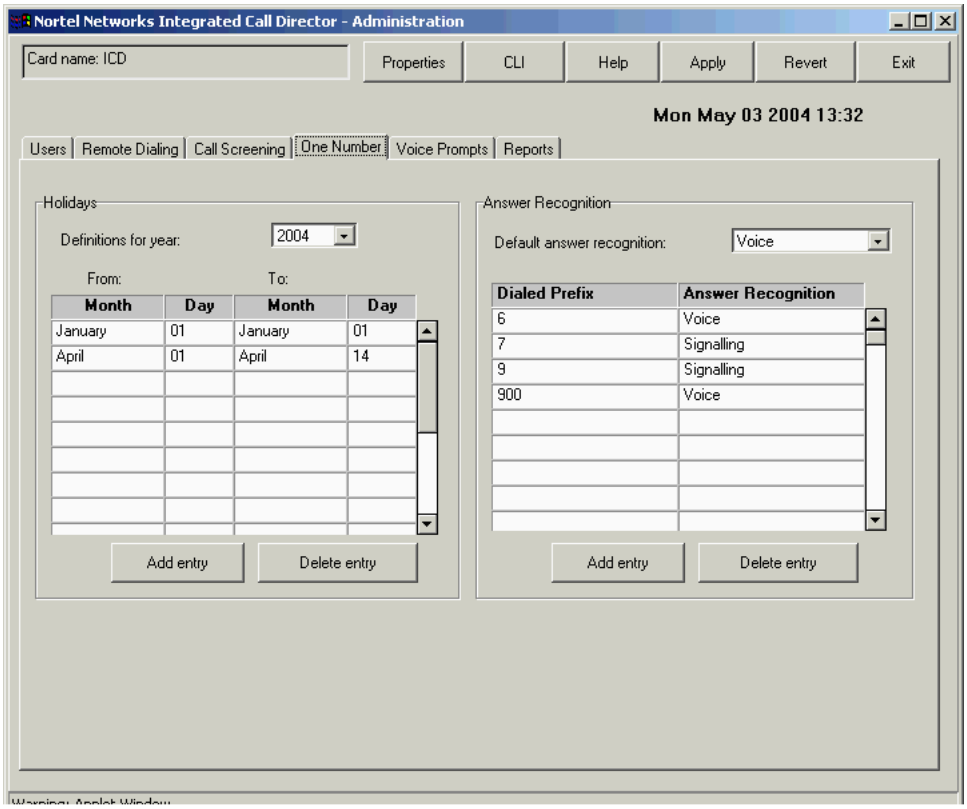
--End--

Configuring One Number service parameters

Click the **One Number** tab in the ICD main window. The **One Number** window opens (see Figure 26 "Main window One Number tab" (page 100)).

Use the One Number window to define parameters for the One Number service.

Figure 26
Main window One Number tab



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Procedure 21
Adding holidays

Step	Action
	To define a holiday for a specific year:
1	Select the year in which you wish to enter a holiday from the **Definitions for year** drop-down list.
2	Select an empty row in the list of holidays, if one is available. Click the **Add entry** button to add a new row to the table, if all existing lines in the list are full.
3	Choose the month in which the first day of the holiday occurs from the drop-down list.
4	Enter the date for the start of the holiday in dd format.
5	Choose the month in which the last day of the holiday occurs from the drop-down list.
6	Enter the date for the end of the holiday in dd format. ***Note:*** For a single-day holiday, the **From** date is required. You can leave the **To** date blank — it is automatically filled with the same date as **From**.
7	Click **Apply** to save the changes, or **Revert** to restore the original settings.

--End--

Procedure 22
Modifying holidays

Step	Action
	To modify a holiday definition:
1	Select the year in which you wish to modify a holiday from the **Definitions for year** drop-down list.
2	Change the month in which the holiday starts or ends by choosing a new month from the corresponding drop-down list.
3	Change the date for a holiday by selecting its current entry and entering the new start or end date for that holiday.
4	Click **Apply** to save the changes, or **Revert** to restore the original settings.

--End--

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Procedure 23
Deleting holidays

Step	Action
	To delete a holiday definition from a specific year:
1	Select the year in which you wish to delete a holiday from the **Definitions for year** drop-down list.
2	Click once on the holiday entry to select the holiday line.
3	Click **Delete entry** to delete the holiday entry.
4	Click **Apply** to save the changes, or **Revert** to restore the original settings.

--End--

Note: If you accidently deleted a holiday and applied that change, you must redefine it using the **Adding holidays** steps.

Answer recognition

The ICD 2 allows answer recognition to be based on voice or signaling information. Signaling Answer Recognition allows the ICD to rely on signals from the switch to the digital port of the ICD to recognize that an outgoing One Number call is answered. This provides faster results than voice recognition (the method normally used by ICD) and can be used to improve the response time of the ICD to answered outgoing One Number calls.

Signaling Answer Recognition sent by the switch to a digital set is not always reliable, depending on the type of call taking place. The answer recognition feature allows the administrator to define which outgoing calls, in this system, are of types where the Signaling Answer Recognition:

- is reliable
- can be used instead of voice recognition

Signaling Answer Recognition is reliable on local calls (local to the switch), and on calls where the whole call travels on Meridian Customer Defined Network (MCDN) and Integrated Services Digital Network (ISDN) lines.

The definition is made based on the dialed prefixes and what they mean in the switch.

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Procedure 24
Configuring answer recognition

Step	Action

To configure answer recognition:

1 Select the **Default answer recognition** from the drop-down list: **Voice** or **Signaling**.

Note: If a number does not appear explicitly in the table, it is treated according to the definition chosen by the administrator as the default.

2 Select an empty row, if one is available. Click the **Add entry** button to add a new row to the table if all existing rows are full.

3 Define a **Dialed Prefix** for outgoing dialing.

4 Define the **Answer Recognition** method for the dialed prefix.

5 Click **Apply** to save the changes, or **Revert** to restore the original settings.

--End--

Procedure 25
Deleting prefix definitions

Step	Action

To delete a prefix definition:

1 Click once on the answer recognition entry to select the answer recognition line.

2 Click **Delete entry** to delete the answer recognition entry.

3 Click **Apply** to save the changes or click **Revert** to restore the original settings.

--End--

Note: If you accidently deleted an answer recognition entry and applied that change, you must redefine it using the **Configuring answer recognition** steps.

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Customizing voice prompts

ATTENTION
Voice prompt level regulatory requirements
The power level of the custom voice prompts are subject to regulatory requirements. Nortel recommends you set the power level of the recorded custom language prompts to a maximum of -12 dBm when averaged over a 3-second interval. The customer must ensure that any custom language prompts they record and install meet these regulatory requirements.

The language prompts supplied by Nortel are within the specified regulatory limits.

Click the **Voice Prompts** tab in the ICD main window. The **Voice Prompts** window opens (see Figure 27 "Main window Voice Prompts tab" (page 105)).

Use the **Voice Prompts** window to customize the ICD voice prompts. When voice prompts are loading, most of the window is gray — only the **Export from card** button is active.

Nortel recommends that you back up the voice prompts after customizing them. Refer to “Manual Backup tab procedures” (page 138) for information on manually backing up the customized voice prompts.

Select the **Enable customization** check box to activate the table. Perform all customization before enabling.

Each cell in this window contains one of the following contents:

- **Drop-down list:** Selection consists of active, inactive, delete, or skip.
- **Empty:** No customized file exists for this prompt.
- **Inactive:** A customized file exists but is not active.
- **Active:** A customized file exists and is active (that is, played by the system instead of the factory prompt).
- **Skip:** Prompt not played at all.
- **Loading:** You have started an import action on this file. It must be verified by an export before save can be done. In this state, only the **Export from card** button is available. The remainder of the window is gray.

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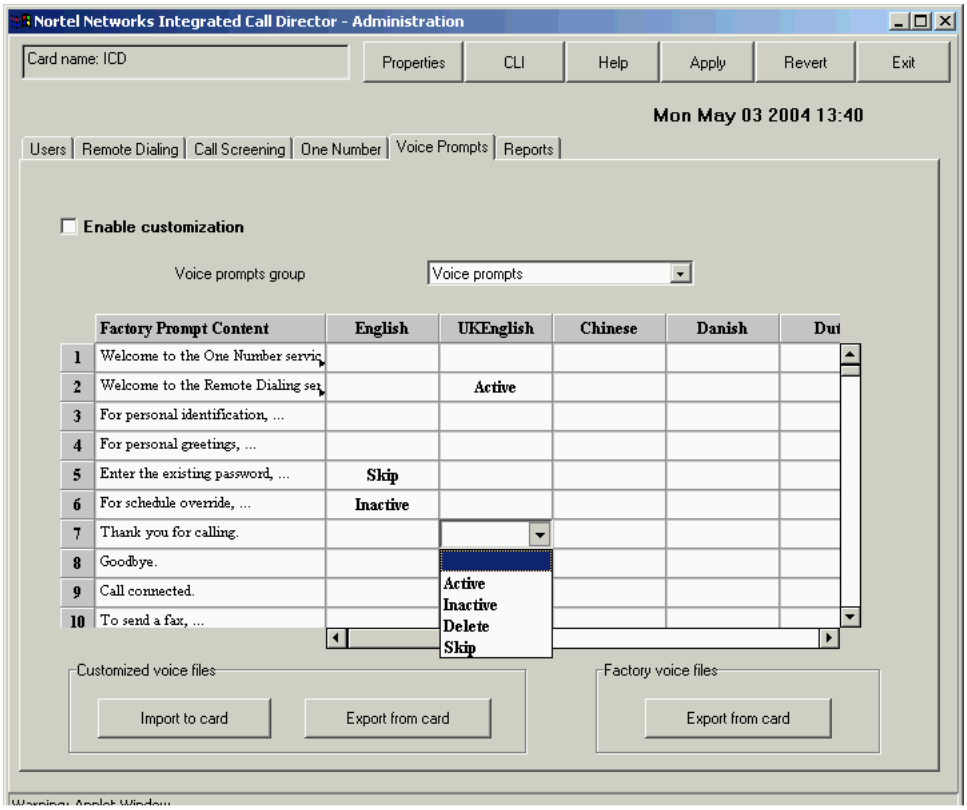
Figure 27
Main window Voice Prompts tab



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Procedure 26
Customizing voice prompts

Step	Action

To customize voice prompts:

1 Select one of the following prompt groups from the **Voice prompts group** drop-down list:

- Voice prompts
- Music & Tones

Note: Dates, digits, and numbers cannot be customized.

2 Click a Voice prompt cell in one of the languages columns in the Voice Prompts table.

A drop-down list is activated.

3 Click one or more of the following buttons:

a From the customized voice files section:

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Import to card: Click this button to upload a voice file to be used instead of the factory version of the selected voice file. The file uploads from the administrator's computer to the ICD card. After clicking this button, the **Voice File Import** window opens (see Figure 28 "Import voice prompt window" (page 107)). Import actions must be verified by an Export action before any other action can be carried out on the window. This validates that the prompt has been properly installed on the card. If Export is attempted before the Import process is completed, the administrator is given a choice of waiting, or abandoning the process. This does not abort the import, but ICD ignores it. Any subsequent actions carried out in that **Import** window are also ignored.

Export from card: Click this button to export the customized version of the selected voice file from the ICD card.

b From the factory voice files:

Export from card: Click this button to download the factory version of the selected voice file from the ICD card.

When exported, the customized or factory voice file opens in a separate Internet browser window, based on the capabilities of the browser. The file can be saved to the customer's computer, or opened using an application associated with WAV-type files. Listening to the file, or modifying it, depends on the ability of the application (for example, Cooledit and MS Media Player).

4 Select one of the following options from the drop-down list:

- **Active**: Select this to make the system play the customized voice file instead of the factory prompt.
- **Inactive**: Select this to make the system play the factory prompt.
- **Delete**: Select this to delete the customized voice file.
- **Skip**: Select this to make the system skip playing this prompt completely.

Note: Selecting **Skip** irreversibly removes a customized file, if one existed for this prompt. The administrator is requested to confirm.

5 Do one of the following:

a Click **Apply** to save the changes, or **Revert** to restore the original settings.

b Continue with Step 6.

6 Check **Enable customization** to enable the Voice Prompt Customization feature.

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7 Click **Apply** to save the changes, or **Revert** to restore the last stored settings.

--End--

Volume configuration

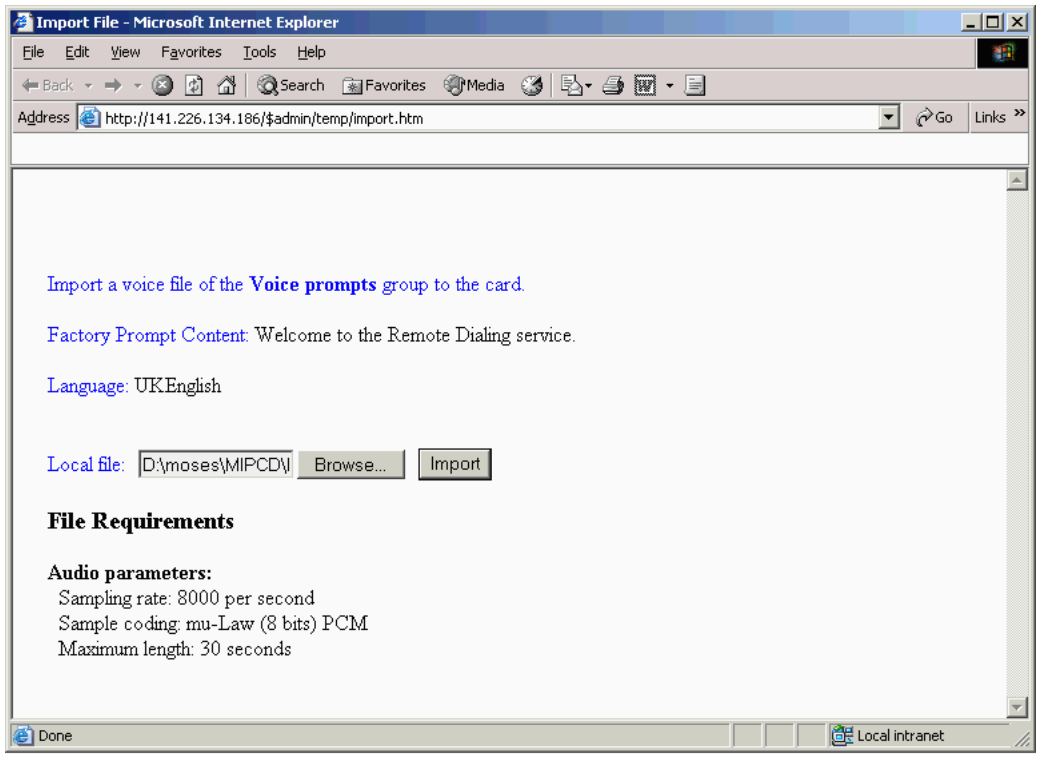
Nortel recommends that you use the default setting (0 dB) or a loss setting (-3 dB, -6 dB, or -9 dB) for both voice prompts volume levels: played level and recorded level. This ensures compliance with regulatory standards at the trunk interface. Using a gain level for voice prompts may cause the product to be non-compliant with some regulatory standards.

Voice File Import

Click the **Import to Card** button on the **Voice Prompts** window. The **Voice File Import** window opens (see Figure 28 "Import voice prompt window" (page 107)).

The **Voice File Import** window is used to import voice files from the customer's computer to the ICD card.

Figure 28
Import voice prompt window



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The window displays the following information:

- **Import a Voice file of the...group to the card**: Displays the voice prompt group of the selected prompt.
- **Factory Prompt Content:** Indicates the meaning of the prompt.
- **Language:** Language in which the voice prompt is used, where relevant.
- **Local File:** Displays the voice filename selected for import.
- **File Requirements:** The imported file must comply with the requirements listed on the bottom of the window.

Procedure 27
Importing voice files

Step	Action
To import a voice file:	
1	Click the **Browse** button to select the desired file from the customer's computer or network.
2	Click the **Import** button to bring the file onboard the ICD card. A message is displayed when the process is complete indicating failure (for example, the file did not meet the requirements) or success.
3	Click **Export** on the BUI window to verify a customized file. After you click **Import**, you must click **Export** before you can do anything else, whether you imported anything or not.
4	Click **Apply** to save the changes, or **Revert** to restore the original settings.

--End--

Viewing reports and logs

Click the **Reports** tab on the ICD main window. The Reports window opens (see Figure 29 "Main window Reports tab" (page 109)).

The administrator accesses system reports and logs from the **Reports** window. Click the **Traffic** button to view traffic reports. Click the **Event Logger** button to view event logs.

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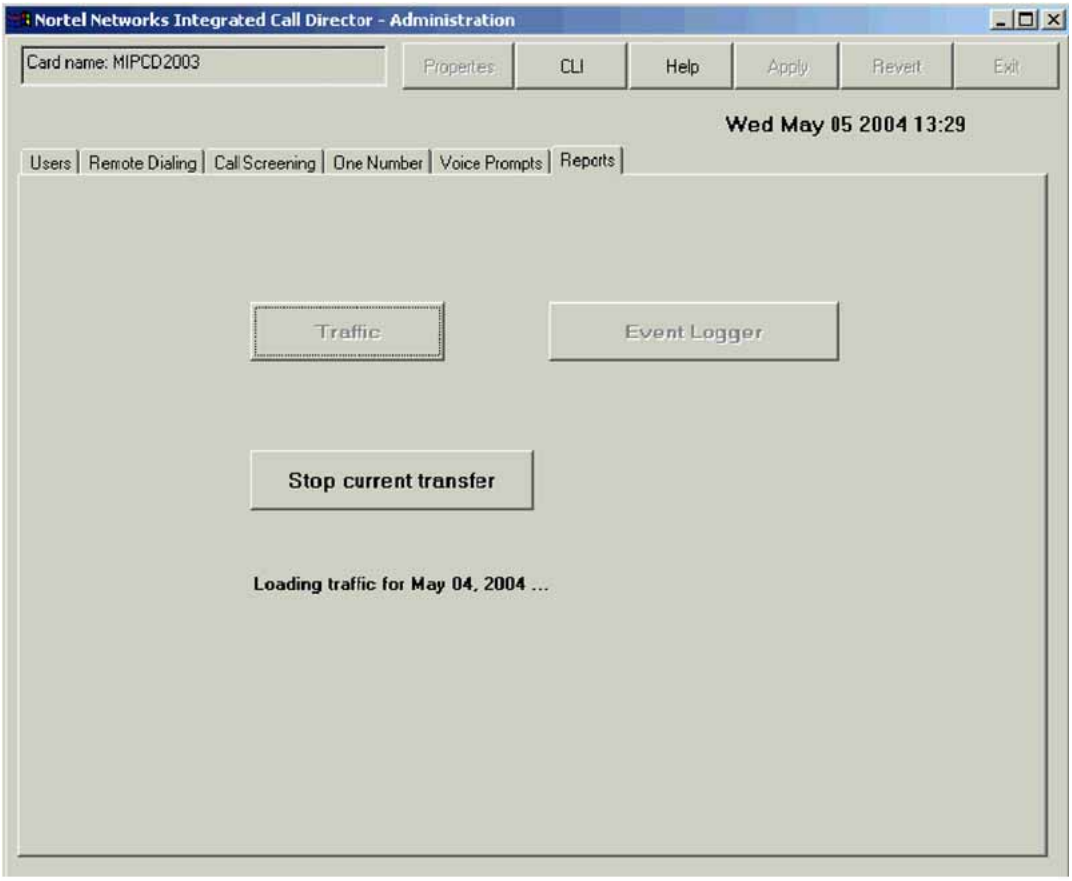
Figure 29
Main window Reports tab



Traffic reports

The traffic report is presented in HTML format and opens in a separate Internet browser window. Save or print the reports using the toolbar on the browser.

The report is presented in a table format:

- **Counters:** Displays the traffic data; each row represents a measured item. The report has four sections:
  - — general card information
  - — Remote Dial service information

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— One Number service information

— user traffic data

- **Date:** One column for today and one column for each past day in reversed order.

Traffic Report description

Traffic Reports display a summary of the number of events that occur for each user and for the ICD card. The report has four sections: general card information, Remote Dial service information, One Number service information, and user traffic data.

Refer to Table 15 "General card information" (page 110), Table 16 "One Number service information" (page 111), Table 17 "Remote Dialing service information" (page 112), and Table 18 "Per user data" (page 113) for the list of items measured in traffic reports.

Table 15
General card information

Counter	Description
Total calls	Total number of incoming calls
TUI calls	Number of TUI calls—the user calls to change his or her database
Service busy (seconds)	Number of seconds (in an hour) that ICD could not answer additional calls because all ports were in use, or disabled on the switch side
Restricted number dialed	Attempts to call a number with a prefix that is prohibited by the administrator (callback, Remote Dial outgoing call, One Number call according to Follow-me profiles, Call Transfer or Conference feature).
Auto attendant option success	Successful calls through the auto attendant option.
Auto attendant option failure	Calls through the auto attendant option failed.
Transfer feature use	Number of times the Call Transfer feature was used.
Conference feature use	Number of times the Conference feature was used.
Volume control use	Number of times users adjusted the volume on their calls.

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Table 16
One Number service information

Counter	Description
One Number calls	Number of calls to the One Number service seeking a user.
Abandoned calls	Number of times caller disconnected before reaching the wanted destination.
Sequential searches	Number of sequential searches.
Parallel searches	Number of parallel searches.
Search time exceeded	Number of calls on which the called party was not found within the maximum search time defined by the administrator.
Shortage of outdialing ports	Number of times there were no more ports available for outdialing, that is, for searching for a user. If there were no ports at all for this search, the system retries for 30 seconds, in case a port becomes free. If parallel search was required and there were not enough ports available for full parallel search, part of the search is carried out sequentially.
Reoriginations	Number of reoriginations when call was disconnected and immediately successfully reconnected, at the caller's request.
User not found	Called party not found. The call passes to the disposal stage.
Rejected calls	Called party found, but did not accept the call.
Caller chose redirection	Number of times the caller chose not to wait for the called party, but chose an option from the menu. This counter does not include cases when the caller chose the fax menu option.
Express Messaging	Calls in which the caller requested to be transferred directly to voicemail, or the decision to transfer to voicemail was made under disposal treatment.
Outdial attempts	This number includes all outdialing calls made from the One Number service: system attempts to find the user, Disposal calls when user is not found, fax calls, and calls the user dials with the Call Transfer and Conference features.

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Table 16
One Number service information (cont'd.)

Counter	Description
Outdial attempts charged	Number of outdial attempts, charged. This number includes all charged outdialing calls made from the One Number service: system attempts to find the user, Disposal calls when the user is not found, fax calls and calls the user dials with the Call Transfer and Conference features.
Connections through card	Number of successful connections made through-ICD, where the call remains on the ICD card.
Connections off card	Number of successful off-ICD connections, where call is transferred off the ICD card.
Calls through override	Number of incoming calls handled according to Override definitions.
Incoming fax calls	Number of fax calls, either automatically recognized as fax calls, or cases when the caller selected the fax menu option.
Average time to connect	Average time to connect, in seconds, for successful searches.
Late connections	Number of calls in which time to connect was longer than the threshold as set by the administrator.

Table 17
Remote Dialing service information

Counter	Description
Remote Dialing calls	Number of incoming calls to the Remote Dial service.
Number of calls back	Number of calls the Remote Dial service made back to users.
Number of outdialing calls	Number of outgoing calls initiated by Remote Dial users (straightforward, or using Call Transfer/Conference features).
Outdial attempts charged	Number of charged outdial attempts. This number includes charged callbacks, as well as charged calls placed by the user (straightforward, or with Call Transfer/Conference features).

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Table 17
Remote Dialing service information (cont'd.)

Counter	Description
Connections through card	Number of successful connections made onboard, where the call remains on the ICDcard.
Connections by transfer	Number of successful connections made off-ICD, according to definitions.
Shortage of dialing ports	Number of times there was no port available for outdialing, when through-ICD connection was required. When possible, the call is then made off-ICD, in spite of the definitions.

Table 18
Per user data

Counter	Definition
Total calls	Total number of incoming calls.
TUI calls	Number of TUI calls (the user calls to change his/her database).
One Number calls	Number of calls to the One Number service (seeking this user).
Remote dialing calls	Number of calls to the Remote Dial service.
RD Calls Back	Number of calls the Remote Dial service placed back to the user.
RD Outdialing attempts	Number of outgoing calls initiated over the Remote Dial service. This number includes calls made using the Transfer of Conference features. It does not include calls back.
RD Charged calls	Number of charged outdialing attempts. This number includes charged callbacks as well as charged calls placed by the user.
ON outdialing attempts	Number of outgoing calls initiated over the One Number service. This number includes outdialing attempts to find the user, disposal' calls, fax calls and calls the user dials with the Call Transfer and Conference features.

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Table 18
Per user data (cont'd.)

Counter	Definition
ON charged calls	Number of charged outdialing attempts. This number includes outdialing attempts to find the user, Disposal calls, fax calls and calls the user dials with the Call Transfer and Conference features.
ON abandoned calls	Number of times One Number caller disconnected before reaching the wanted destination.
ON User not found	Called party not found: call passes to disposal stage.
ON rejected calls	Called party found, but did not accept the call.
ON Calls through override	Number of incoming One Number calls handled according to Override definitions.
ON Search Time Exceeded	Number of calls on which the called party was not found within the maximum search time defined by administrator.
ON Late Connection	Number of calls in which time to connect was longer than the threshold as set by the administrator.

HTML summary report

The summary report is presented in HTML format (see Figure 30 "HTML summary report" (page 115)). The report first shows the traffic summary, showing the total daily counts for each measured item. After a specific day is selected, a report for that day is presented, showing the information on an hourly basis.

Click the + button beside a report type to expand the report (for example, click + beside **General** to view the list of measured items under that heading). The + button becomes a – button, once it is clicked. Click the – button to close the list of measurements again for that report type.

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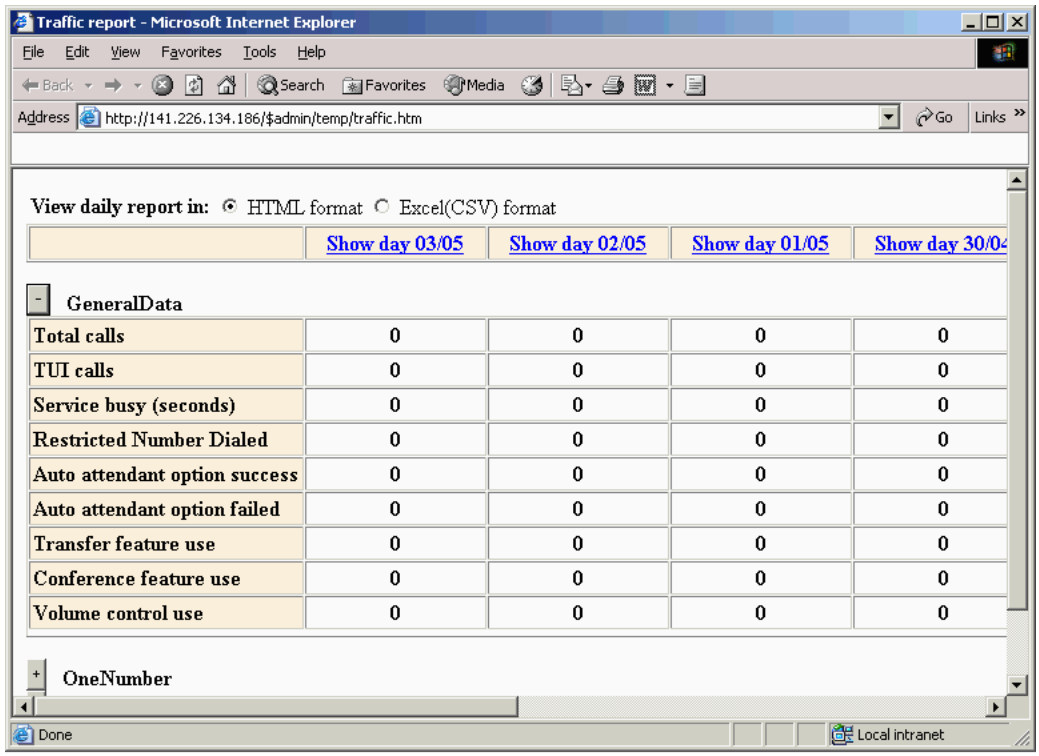
Figure 30
HTML summary report



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Daily reports

The daily report is presented in one of two formats:

- HTML
- CSV (for example, Microsoft Excel format)

HTML daily report

This report is opened in a separate web browser window (see Figure 31 "HTML daily traffic report format" (page 116)). It displays the information for a selected day in a table similar to the summary report. Each column represents an hour, and an additional column shows the daily total counts for each measured item.

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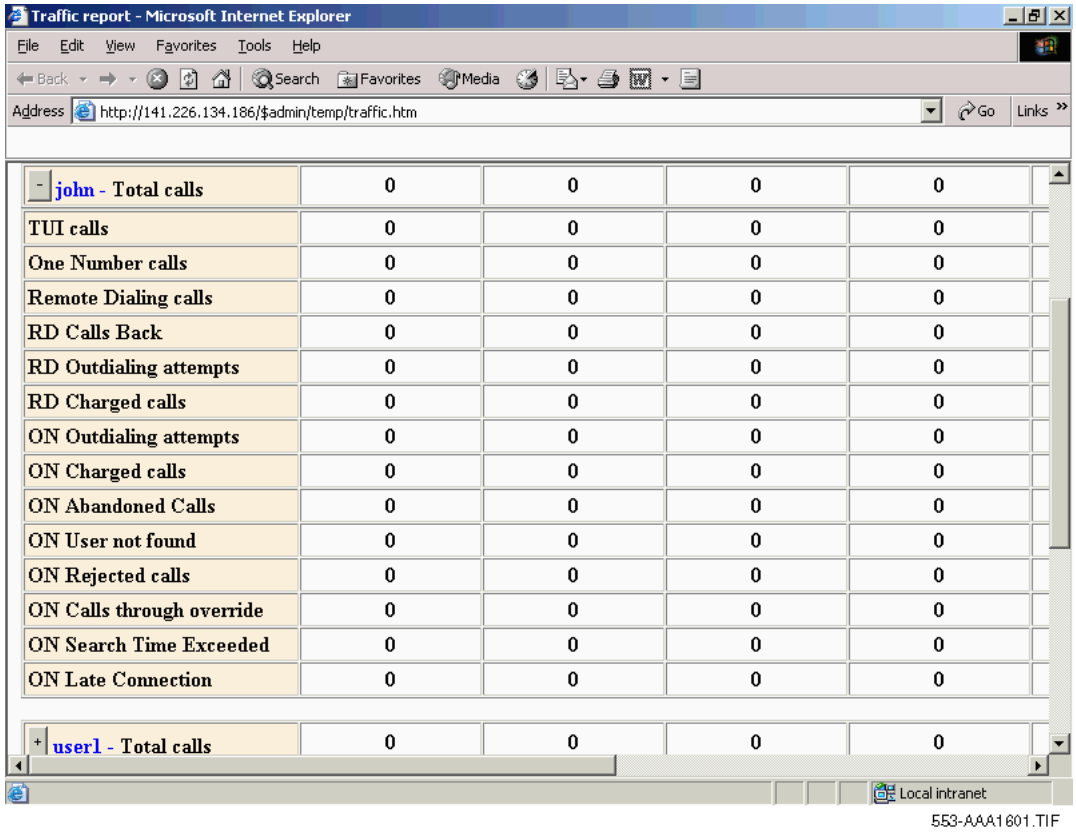
Figure 31
HTML daily traffic report format



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CSV daily report

This report is opened in a separate Internet browser window (see Figure 32 "CSV daily traffic report format" (page 117)). In this report, the columns represent the counters, and the rows represent the hours. The report can be saved to the customer's computer, or opened using an application associated with CSV-type files. Analyzing, saving, and printing the file depend on the capabilities of the application.

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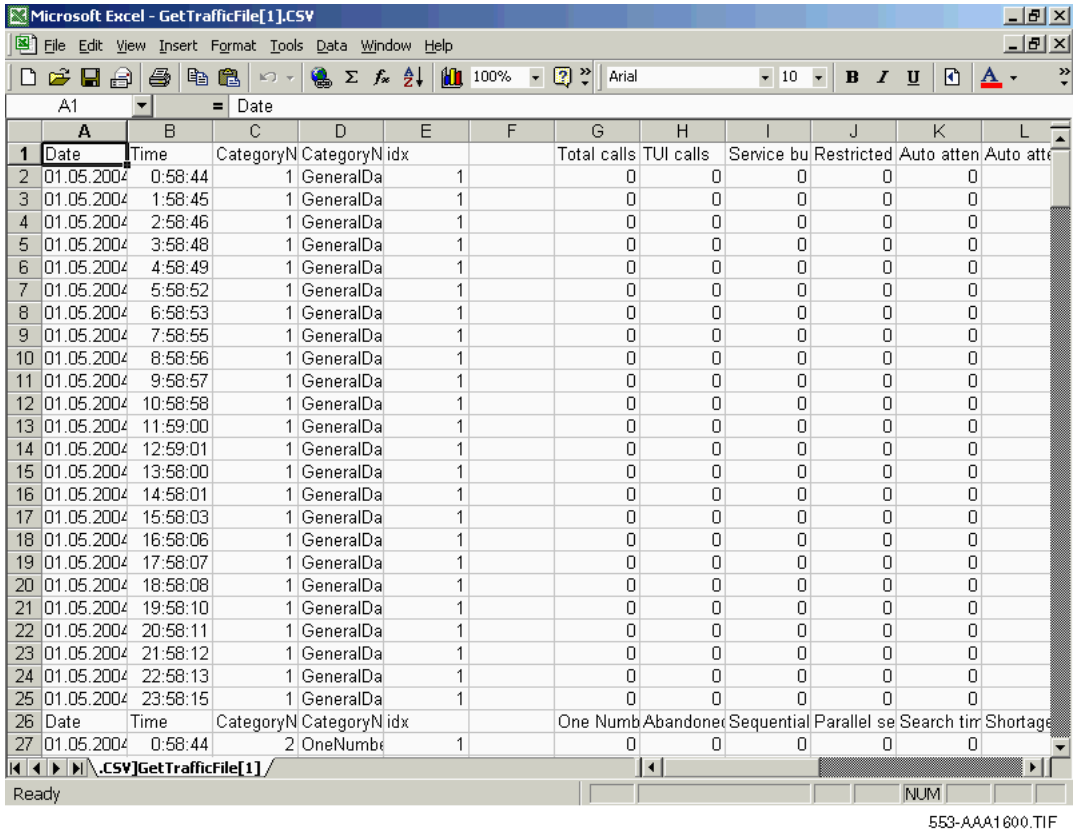
Figure 32
CSV daily traffic report format



	A	B	C	D	E	F	G	H	I	J	K	L
1	Date	Time	CategoryN	CategoryN	idx		Total calls	TUI calls	Service bu	Restricted	Auto atten	Auto atte
2	01.05.2004	0:58:44	1	GeneralDa	1		0	0	0	0	0	
3	01.05.2004	1:58:45	1	GeneralDa	1		0	0	0	0	0	
4	01.05.2004	2:58:46	1	GeneralDa	1		0	0	0	0	0	
5	01.05.2004	3:58:48	1	GeneralDa	1		0	0	0	0	0	
6	01.05.2004	4:58:49	1	GeneralDa	1		0	0	0	0	0	
7	01.05.2004	5:58:52	1	GeneralDa	1		0	0	0	0	0	
8	01.05.2004	6:58:53	1	GeneralDa	1		0	0	0	0	0	
9	01.05.2004	7:58:55	1	GeneralDa	1		0	0	0	0	0	
10	01.05.2004	8:58:56	1	GeneralDa	1		0	0	0	0	0	
11	01.05.2004	9:58:57	1	GeneralDa	1		0	0	0	0	0	
12	01.05.2004	10:58:58	1	GeneralDa	1		0	0	0	0	0	
13	01.05.2004	11:59:00	1	GeneralDa	1		0	0	0	0	0	
14	01.05.2004	12:59:01	1	GeneralDa	1		0	0	0	0	0	
15	01.05.2004	13:58:00	1	GeneralDa	1		0	0	0	0	0	
16	01.05.2004	14:58:01	1	GeneralDa	1		0	0	0	0	0	
17	01.05.2004	15:58:03	1	GeneralDa	1		0	0	0	0	0	
18	01.05.2004	16:58:06	1	GeneralDa	1		0	0	0	0	0	
19	01.05.2004	17:58:07	1	GeneralDa	1		0	0	0	0	0	
20	01.05.2004	18:58:08	1	GeneralDa	1		0	0	0	0	0	
21	01.05.2004	19:58:10	1	GeneralDa	1		0	0	0	0	0	
22	01.05.2004	20:58:11	1	GeneralDa	1		0	0	0	0	0	
23	01.05.2004	21:58:12	1	GeneralDa	1		0	0	0	0	0	
24	01.05.2004	22:58:13	1	GeneralDa	1		0	0	0	0	0	
25	01.05.2004	23:58:15	1	GeneralDa	1		0	0	0	0	0	
26	Date	Time	CategoryN	CategoryN	idx		One Numb	Abandone	Sequential	Parallel se	Search tim	Shortage
27	01.05.2004	0:58:44	2	OneNumbe	1		0	0	0	0	0	

Procedure 28
Using traffic reports

Step	Action

To view the traffic report:

1 Click the **Traffic** button on the **Reports** window.

Note: While the system is loading, a temporary **Stop current transfer** button is available. Click this button to stop loading the remaining files. The system builds the report based only on the files that were loaded. When the transfer is complete, the traffic report opens in a separate Internet browser window.

2 Click **+** beside the data type to expand the report and show all relevant counters.

3 Select an option button to indicate your preference for **View daily report in**:

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- HTML format
- Excel (CSV) format

4 Click once at the top of a column to view the measurements for a specific day.

The day is selected and the report displays information based on each hour of that day.

5 Print or save the report using the Internet browser toolbar.

--End--

Traffic report filenames

The traffic report filenames are based on the date of creation. The format is T<yyymmdd>.TRF. Refer toTable 19 "Traffic report filename description" (page 118) for the filename definition.

Table 19
Traffic report filename description

Component	Definition
Initial y	0 represents 1900–1999 1 represents 2000–2100 2 represents 2100–2200, and so on.
Remaining yy	Last two digits of the year
mm	Month
dd	Day

Event Logger

Click the **Event Logger** button on the **Reports** tab. The **Event Logger** window opens (see Figure 33 "Event Logger window" (page 119)).

Event Logger reports are a record of various activities in a single ICD card. View these reports in the administrator BUI window, or as a text file. Use these records for information analysis.

Events are recorded chronologically. One report file is saved for each day.

Each file contains the log records accumulated for up to 24 hours, from midnight to midnight, in order of occurrence. Each line stands for one event, containing a time stamp of the moment it occurred and a description of the event.

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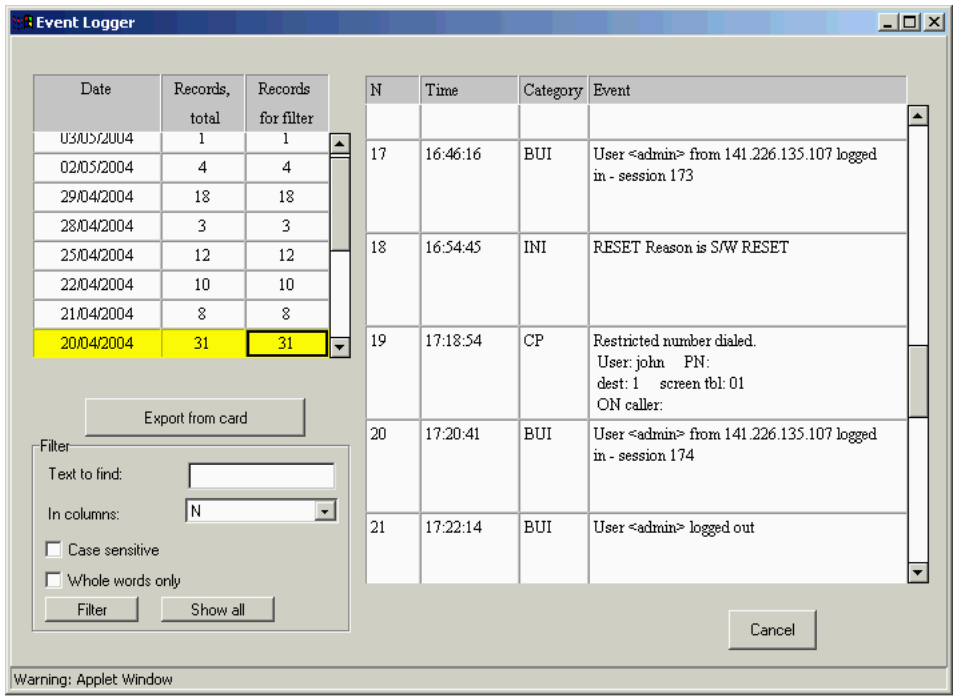
A list of dates appears on the left side of the window. The list of records for the selected date appears on the right side of the window. For each record, the time of its occurrence, category, and the event itself are provided.

Figure 33
Event Logger window



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Events recorded in log files

Each event belongs to a specific category, indicated by a mnemonic that appears at the beginning of the log record (for example, CP means Call Process).

Table 20
BUI events

Event	Description	Parameters shown
BUI New user added	A new user was added by administrator.	Login name
BUI user deleted by the administrator		Login name
BUI User pswd changed by the user		Login name

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Table 20
BUI events (cont'd.)

Event	Description	Parameters shown
BUI Successful login		Login name, IP address session ID
BUI Successful logout		Login name
BUI Non-existent login	An incorrect login name was attempted.	Attempted login name, IP address
BUI User pswd violation, further login blocked	A BUI password was newly blocked, the successive login failure counter for the user reached the maximum level set by administrator.	Attempted login name Number of failed attempts IP address
BUI Administrator successive login failure violation.	The successive login failure counter for the administrator reached the maximum level set by the administrator.	Attempted login name Number of failed attempts IP address
BUI User pswd reset	User password reset by administrator to initial value.	Login name
BUI User Session deleted on password reset	When administrator reset a user's password, there was an active user BUI session for that user. It was terminated.	Login name Session number
BUI User Password change failed	Can indicate database corruption	Login name
BUI Login session polling disconnect	Card lost connection with user's BUI application. Indicates a problem in network connectivity.	Login name

Table 21
Call Process (CP) events

Event	Description	Parameters shown
CP Restricted Number Dialed	An attempt was made to call a number with a prefix that is prohibited by the administrator (callback, Remote Dial outgoing dialing call [manual, or using Speed Dial], Call Transfer/ Conference features, or One Number call according to search profiles).	Login name Personal Number Destination Screening table ON or RD

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Event	Description	Parameters shown
		CLID (if available, and only on a Remote Dial call)
CP ON Answering pswd failure	Dialed party (on a One Number call) failed to enter a valid password, a maximum number of times, and search moved on to next call or to disposal.	Login name Personal Number Destination Last entered pswd
CP ON VIP pswd failure	Hacker Alert: A VIP password attempt was denied during a One Number call, due to the user failing to enter the correct VIP password, a maximum number of times in a row, and as a result the ICDsession was cut off.	Login name Personal Number Last entered pswd CLID (if available)
CP RD attempt to access a busy account	Hacker Alert: A Remote Dial service call arrived from a user already involved in a Remote Dial call—when this is forbidden.	Login name Personal Number CLID (if available)
CP RD Authorization failure	Hacker Alert: A Remote Dial caller was disconnected, due to the maximum number of unsuccessful authorization data being entered for a specific user.	Login name (if found) Personal Number Last entered pswd Dialed number CLID (if available)
CP RD Call Back Pswd failure	Hacker Alert: A callback was disconnected, due to the maximum number of invalid passwords being entered.	Login name Personal Number Callback number Last entered pswd RD access number

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Event	Description	Parameters shown
		CLID of original call
CP RD Call Back by Private access number unanswered	Hacker Alert: A callback, made after a call came in on a Private Access number, was not accepted. This might mean the wrong person called this private access number.	Login name Personal Number Callback number RD access number CLID of original call

Table 22
TUI events

Event	Description	Parameters shown
TUI Authorization failure	Hacker Alert: A TUI call was disconnected, due to the maximum number of unsuccessful attempts to enter Personal Number and password.	Login name Personal Number Last entered pswd CLID (if available)
TUI User Call Back number changed	A user changed his or her callback number using the TUI.	Login name Personal Number Old CB number New CB number CLID (if available)

CLI events include:

- CLI Screening table locking/unlocking
- CLI Administrator BUI password reset
- CLI password reset
- CLI password changed

The Initialize/Reset (INI) event records the reset reason. Examples of events that cause the reset are:

- Watchdog
- software reset

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- cardlan reset
- BUS error
- dongle reset
- malloc reset
- power up

Procedure 29
Using the Event Logger

Step	Action

To view and use the Event Logger report:

1 Click the **Event Logger** button in the **Reports** window. The system loads the event report files starting with the most recent.

> ***Note:*** While the system is loading, a temporary **Stop current transfer** button is available. Click this button to stop loading the remaining files. The logger builds the report based only on the files that were loaded. When the transfer is completed, the Event Logger window opens.

2 Select a specific day in the **Date** column to view the information associated with that day.

3 Click **Export from card** to save or print the information for the selected day. The report opens in text format in a separate Internet browser window.

Use the browser toolbar to save or print the log report.

4 Click **Filter** to display a subset of the selected information. Refer to "Event Logger filter" (page 123).

5 Click the **Show All** button to return to the entire report.

6 Click **Cancel** to exit the **Event Logger** window.

--End--

Event Logger filter

Use the Event Logger filter to search for and display selected information contained in a **Number**, **Category**, **Time**, or **Event** column for a specific date.

Procedure 30
Using the event logger filter

Step	Action

To find and display specific event logger information:

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1. Click on a date in the **Event Logger** window.
2. Enter the information for which you wish to search in the **Text to find** field.
3. Select **N**, **Time**, **Category**, or **Event** from the **In columns** drop-down list.
4. Click **Case Sensitive** or **Whole words only**, as required.
5. Click **Filter**.

   ICD searches for the text and displays the selected records. The number in the **Records for filter** column changes to reflect the number of records found in the search.
6. Click **Show All** to return to the default Event Logger display.

--End--

Configuring system properties

Click the **Properties** button at the top of the BUI main window. The ICD**Properties** window opens (see Figure 34 "ICD system Properties window — General tab" (page 125)).

The **Properties** window provides access to nine main pages. Click the appropriate tab to access a specific page.

Click **OK** on the **Properties** window to close it. To save changes you made on any of the tabs in this window, you must click **Apply** on the BUI main window.

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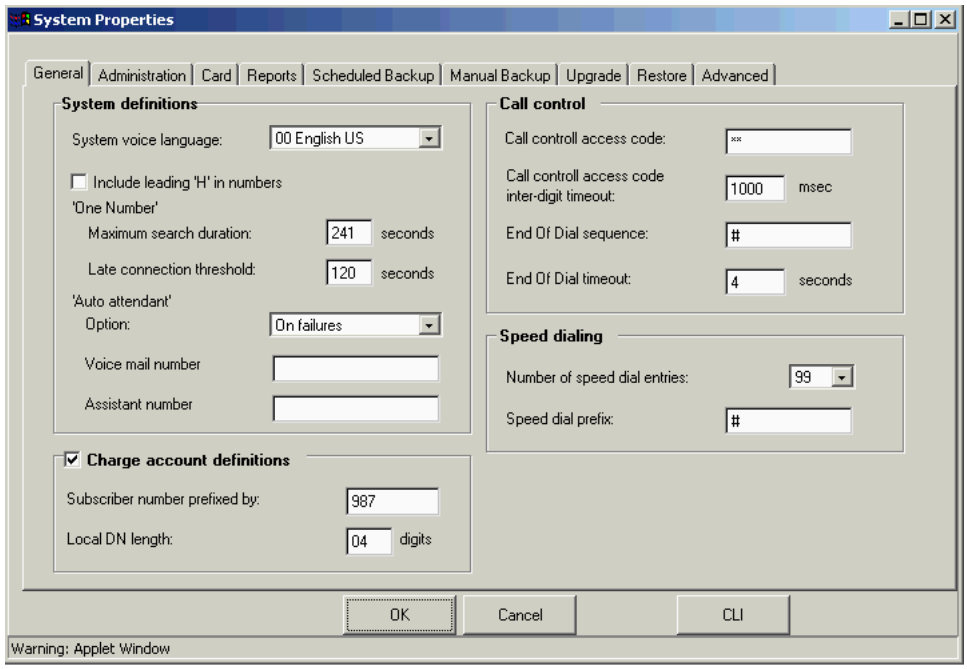
Figure 34
ICD system Properties window — General tab



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General tab configuration procedures

The **General** tab opens by default when you click the **Properties** button.

Procedure 31
Setting system definitions

Step	Action

To set system definitions:

1 Select a language from the **System voice language** drop-down list.

Note: The language selected is used for all voice prompts played to a caller prior to user identification.

2 Select an activation mode from the **Auto attendant' Option** drop-down list:

- **Not used:** System never activates the auto attendant. Only calls to automatically recognized numbers (that is, the TUI DN, One Number personal numbers, or Remote Dial access

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numbers) are serviced. All other calls hear, "System is unavailable".

- **On failures:** System activates the auto attendant option when automatic recognition is unsuccessful (that is, no such number is found in the ICD database or no dialed number information is present on the incoming call).
- **All calls:** Disables automatic recognition of the dialed number. The caller is immediately connected to the auto attendant.

3 Type the number, in the **Voice Mail** number text box, to which callers should be directed if they choose the Transfer to Voicemail option in the auto attendant.

The number can consist of two parts separated by a "w". In this case, ICD dials the first part, waits for a voice answer and then enters the second part. This may be required when the destination number is made up of a switchboard number followed by an extension, or a phone number where a password must be entered to get through.

4 Type the number, in the **Assistant number** text box, to which callers are directed if they choose the Transfer to Assistant option in the auto attendant.

The number can consist of two parts separated by a "w" as described in Step 3 above.

5 Select the **Include leading H' in numbers** check box to enable entering the leading H on personal access numbers and Remote Dial users' CLIDs.

Note 1: The **Include leading H' in numbers** check box does not have to be selected if the extension numbers on the different network nodes are unique.

Note 2: If the **Include leading H' in numbers** check box is selected, then when defining numbers in the BUI (personal numbers, Remote Dial numbers, and CLIDs), the leading H must be entered for numbers coming from another node, if the dialing plan of the system is set up so that such numbers are presented on the set display preceded by an H.

6 Type the maximum number of seconds, in the **Maximum search duration** text box, that the system is allowed to search for a One Number called party and establish the connection. If the search takes longer than the time defined here, the caller is treated in the same manner as if the called party could not be found.

7 Type the maximum number of seconds, in the **Late connection threshold** text box, that define a normal connection waiting period.

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If the search for the user takes longer than the time you define here, the system records it in a Traffic report.

--End--

CDR Charge Account operation

The Call Detail Recording (CDR) issues reports that are used to bill ICD users, in conjunction with the CDR Charge Account feature. Every time ICD dials out, it operates the Charge Account feature if the number dialed is marked as charged in the screening table. The system enters the user's personal number preceded by a prefix. This feature allows you to relate CDR records originated by ICD to specific users.

Note: If Charge is not activated, all the outgoing dialing numbers having Charged authorization (defined in the appropriate screening table) will work as if defined with Free authorization.

For information on CDR Charge Account Reports, see the *Call Detail Recording: Description and Formats (NN43001-550)* NTP.

Procedure 32
Setting Charge Account definitions

Step	Action

To set the Charge Account definitions:

1. Select the **Charge account definitions** check box to enable the charge account operation on the card.
2. Type the prefix, in the **Subscriber number prefixed by** text box, that is to be added to the user's Personal Number in the charge account records. This number applies to all users.
3. Type the number of digits that identify the length of the local DNs in the **Local DN length** text box.

   This is identical to the local DN length in the switch. The range is 2–7; the default is 4. The system recognizes that any number it dials up to this specific length is an internal number — no charge is applied and the Charge Account operation is not activated.

--End--

Procedure 33
Defining the Call Control access code

Step	Action

To define the Call Control access code:

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1 Type the digit/key sequence, in the **Call control access code** text box, that users use during a call to reach the transfer, conference, and volume control features.

If this field is unpopulated, the Call Control features are disabled.

2 Type the maximum number of milliseconds (ms), in the **Call control access code inter-digit timeout** text box, to wait between digit/key input.

Once this time has been exceeded, the system no longer recognizes the input as being part of one sequence.

3 Type the digit/key sequence, in the **End Of Dial sequence** text box, that signifies the end of the number when the user enters a number for outgoing dialing.

The End Of Dial (EOD) sequence is the same as is in the switch. It is not necessary to make an entry in this text box. If the EOD sequence is not defined, the end is recognized based on timeout.

4 Type the number of seconds, in the **End Of Dial timeout** text box, that the system waits before recognizing the end of a dialing sequence (when the user dials an outgoing number).

--End--

Procedure 34
Defining the Speed Dial attributes

Step	Action

To define Speed Dial attributes:

1 Type the digit or key, in the **Speed dial prefix** text box, that users press to dial numbers defined in their Speed Dial lists.

The speed dial prefix cannot interfere with the dialing plan of the system.

If this text box is unpopulated, the following items are affected:

- speed dialing is disabled
- the Disconnect from Callback feature and the Last Number Redial feature are disabled
- the user cannot dial out from ICD to numbers beginning with a *.

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2 Select the maximum number of Speed Dial entries users can define from the **Number of speed dial entries** drop-down list. The choices in the list are 9, 99, and 999.

Note: Depending on what you choose from the list, the system will request a one-, two-, or three-digit speed dial entry on calls.

3 Click **OK** to accept all field entries or **Cancel** to exit without saving changes.

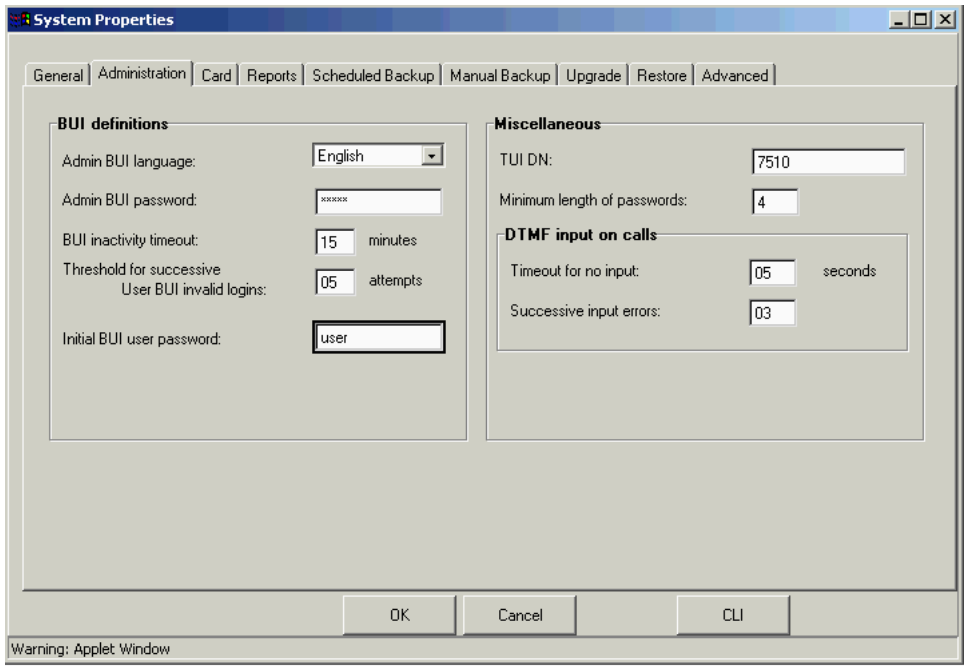
4 Click **Apply** to save changes.

--End--

Administration tab configuration procedures

Click the **Administration** tab in the ICD**Properties** window. The Administration window opens (see Figure 35 "ICD system Properties window Administration tab" (page 129)).

Figure 35
ICD system Properties window Administration tab



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Procedure 35
Setting BUI Definitions

Step	Action

To set BUI definitions:

1 Select the language for the administrator BUI presentation from the **Admin BUI language** drop-down list.

Note: The default value is English US. If you change the system language, click **OK** in the **Properties > Administration** window, click **Apply** in the main window and re-access the ICD BUI.

2 Type up to 10 characters or digits, or a combination of both, in the **Admin BUI password** text box to replace the administrator BUI password.

Note: It is recommended to change the password from the default "admin". There is a special CLI command by which the administrator BUI password can be reset to the default value. Refer to “Remedy for forgotten passwords” (page 152).

3 Type the maximum inactivity period (in minutes) in the **BUI inactivity timeout** text box.

If no **`Apply/Revert`** command is issued during this time, a warning window opens to inform the user or administrator that the BUI session will be automatically disconnected in 60 seconds.

Note: The user or administrator can press the **OK** button in this window to prolong the session for one additional period (the value set in this field). If no action is taken during the 60 seconds after opening the warning window, the BUI session automatically terminates. If you change the time in this text box, it takes effect only in the next BUI session.

4 Type the number of consecutive erroneous BUI login attempts, in the **Threshold for successive User BUI invalid logins** text box, that can be made before a user’s BUI access is automatically disabled.

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This is a security feature to prevent unauthorized access.

Note: If a user's BUI access is disabled, that user's row in the Users table (on the **Users** window) turns to pink and the only way to grant the user BUI access again is for the administrator to reset the user password. To reset a user password, click the **Reset password** button in the **Users** window. The user's password is reset to the value set in the **Initial BUI user password** text box.

5 Type the default BUI password for users in the **Initial BUI user password** text box.

This is the password for newly defined users, as well as the default password when the administrator resets a user's BUI password.

--End--

Procedure 36
Setting Miscellaneous definitions

Step	Action

*To set the **Miscellaneous** definitions:*

1 Type the DN callers use to access the TUI in the **TUI DN** field.

2 Type the minimum length required for the administrator's BUI password and both user passwords (BUI and personal [used for all cases when user identification is requested on a call]) in the **Minimum length of passwords** text box.

--End--

Procedure 37
Defining Dual-tone Multi-frequency (DTMF) input on calls

Step	Action

To set DTMF input definitions:

1 Type the number of seconds, in the **Timeout for no input** text box, that the system waits for DTMF input from the caller after being prompted, (also used as indication of end of input if input was started, but not followed by #).

2 Type the number of DTMF successive erroneous inputs that are allowed in the **Successive input errors** text box

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Exceeding this number causes call disconnection.

Note: In the case of the Call Control features, when the user has pressed the Call Control access code and entered the menu, successive erroneous input beyond the limit defined by the administrator means the user is reconnected to the call (removed from the menu), rather than disconnected.

3 Click **OK** to accept the settings once the administration variables have been selected.

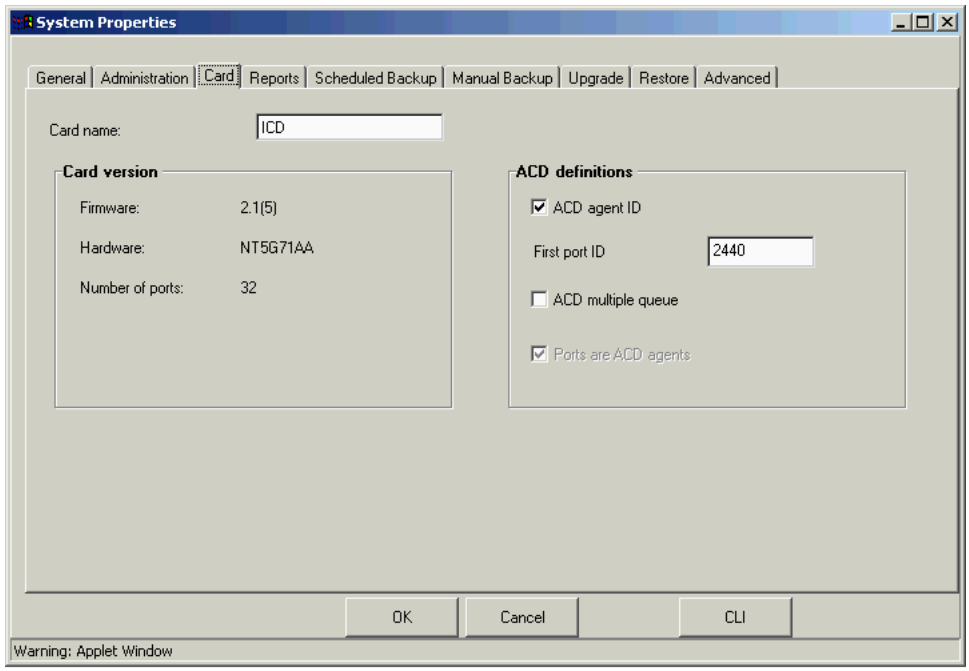
4 Click **Apply** to save changes.

--End--

Card tab configuration procedures

Click the **Card** tab in the ICD**Properties** window. The Card **window** opens (see Figure 36 "ICD system Properties window — Card tab" (page 132)).

Figure 36
ICD system Properties window — Card tab



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Card name

In the **Card name** text box, type the text to be displayed in the BUI main window.

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Card version

The **Card version** panel displays the hardware version and firmware version, as well as the number of ports. These fields are read-only.

Automatic Call Distribution (ACD) definitions

The parameters for ACD definition setup must match the system configuration.

The ACD definitions are as follows:

- **ACD Agent ID:** Indicates if the ACD is configured with the agent ID option. The default is **OFF**.
- **First port ID:** If the agent ID is enabled (the **ACD Agent ID** check box is selected), enter the four-digit first agent ID for ICD ports in the **First port ID** text box. The other ports use the succeeding agent IDs. For example, if the first agent ID is 3000 and ICD has 24 ports, the system uses agent IDs 3000 through 3023.
- **ACD multiple queue:** Indicates if the ACD is configured with the multiple queue option. This is required because it affects the agent login process. The default is **OFF**.
- **Ports are ACD agents:** Check box is always selected and is read-only.

Click **OK** to accept field entries, and **Apply** to save changes.

Reports tab configuration procedures

Click the **Reports** tab in the ICD**Properties** window. The Reports window opens (see Figure 37 "ICD system Properties window — Reports tab" (page 134)).

Use the **Reports** window to activate and deactivate traffic and log reports, to identify events to record, and to determine how long to save the log reports. Refer to “Viewing reports and logs” (page 108) for descriptions of the traffic and log report categories.

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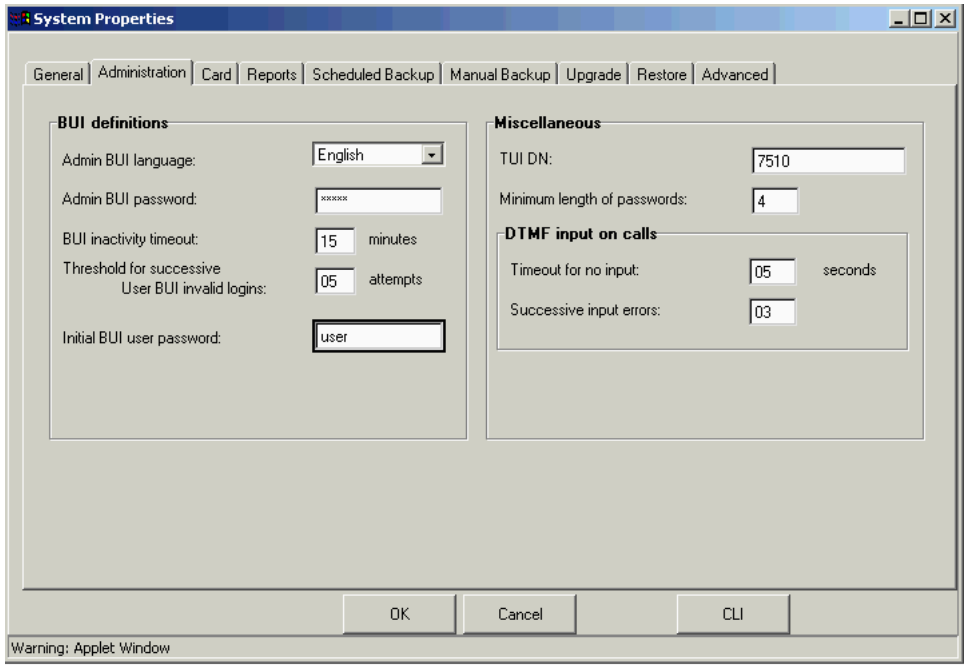
Figure 37
ICD system Properties window — Reports tab



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Procedure 38
Setting Event Logger definitions

Step	Action

To set Event Logger definitions:

1. Select the **Event Logger** check box to enable Event Logger reports.
2. Type the number of days between 2 and 32 that ICD keeps the Event Logger records.
3. Select the **Send daily e-mail to** check box to receive daily e-mails of the Event Logger reports, and type the address of the person who receives the daily Event Logger file.
4. Type the maximum size, in kilobytes (1 to 100), of the daily report (approximately 100 bytes for one event).
5. Select the applicable **Event Categories Filter** check boxes to specify the Event Logger reports to be recorded.

--End--

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Procedure 39
Setting traffic reports definitions

Step	Action
	To set traffic reports definitions:
1	Select the **Traffic** check box to enable traffic reports.
2	Type the number of days between 2 and 32 that ICD keeps traffic records.
3	Select the **Send daily e-mail to** check box to receive daily e-mails of the traffic reports, and type the address of the person who receives the reports.
4	Select **CSV** or **HTML** from the **Format of e-mailed report** drop-down list.
5	Click **OK** to accept the settings.
6	Click **Apply** to save changes.

--End--

Scheduled Backup tab configuration procedures

Click the **Scheduled Backup** tab in the ICD**Properties** window. The **Scheduled Backup** window opens (see Figure 38 "ICD system Properties window — Scheduled Backup tab" (page 136)).

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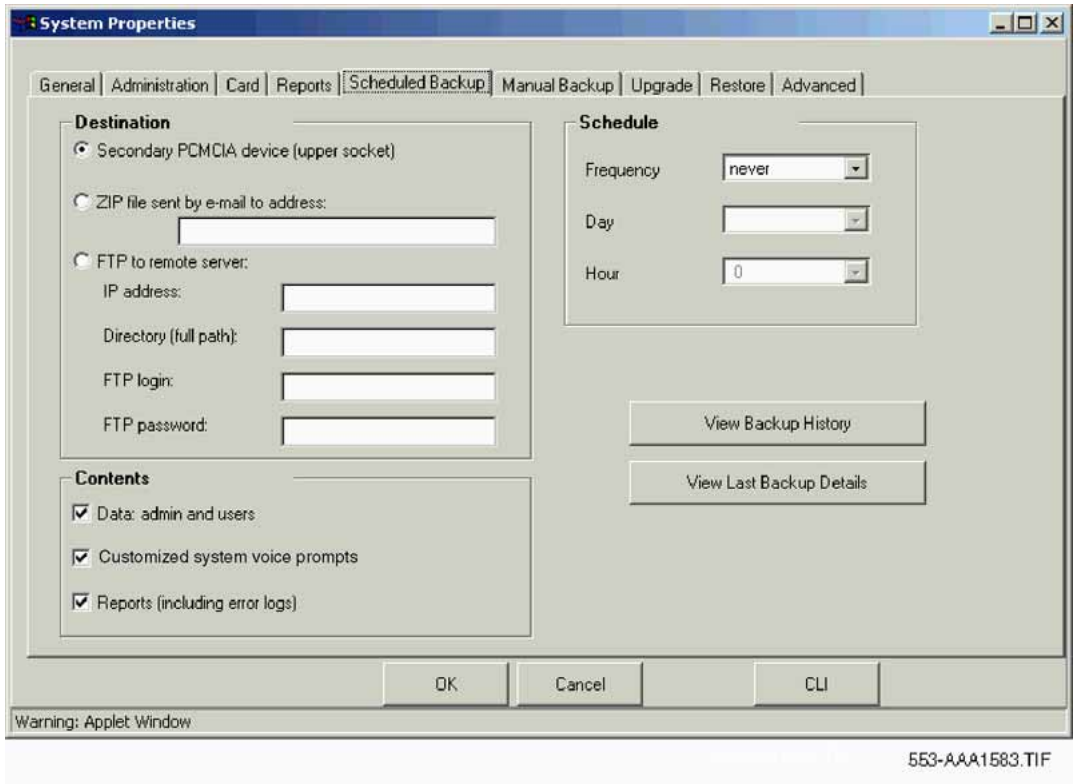
Figure 38
ICD system Properties window — Scheduled Backup tab



Procedure 40
Setting a scheduled database backup

Step	Action

To set a scheduled backup of the database:

1 Define the destination for the backup of the database. There are three options:

- Select the **Secondary PCMCIA device** option button to copy the database to the secondary PC Card on the ICD card. If you select this destination for backup, ensure that the backup PC Card is inserted in Drive B.
- Select the **Zip file sent by e-mail to address** option button to have the system backup the database and e-mail the file to a specific address.

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Type the e-mail address to which the database is sent in the text box.

Note: The e-mail address must be defined in the text box. The filename that the card gives the zipped database is automatic, based on the date of its creation (for example, B1030226.ZIP, created on February 26, 2003). For this option to work, you must have **E-mail server address**, which is mandatory, and E-mail from address (if required by your e-mail server) defined on the card. These are defined on the CLI using the ICD`SAdmin SYstem` command. Refer to "SAdmin menu" (page 154) for more information on the CLI command.

- Select the **FTP to remote server** option button to back up the database by FTP to a remote server.
  Type the appropriate information in the text boxes to define the FTP site. The zipped database that is sent by e-mail is also transferred to the defined remote server.

  Note: If you want to place the backup file in the directory you enter when you first log in to the FTP server, enter dot (.) in the **Directory (full path)** text box. You cannot leave this text box empty.

2 Select the appropriate check boxes to define the contents to include in backup:

- **Data: admin and users**
- **Customized system voice prompts**
- **Reports (including error logs)**

3 Select from the following drop-down lists to define the backup schedule:

- **Frequency**: How often the backup takes place (monthly, weekly or daily).
- **Day**: The day of the week or date of the month when backup is carried out.
- **Hour**: The hour of the day for activating the backup process.

4 Click **OK**.

5 Click Apply in the main window to save your changes.

--End--

Note 1: Click the **View Backup History** button to view the log file summary of the last 20 backup procedures.

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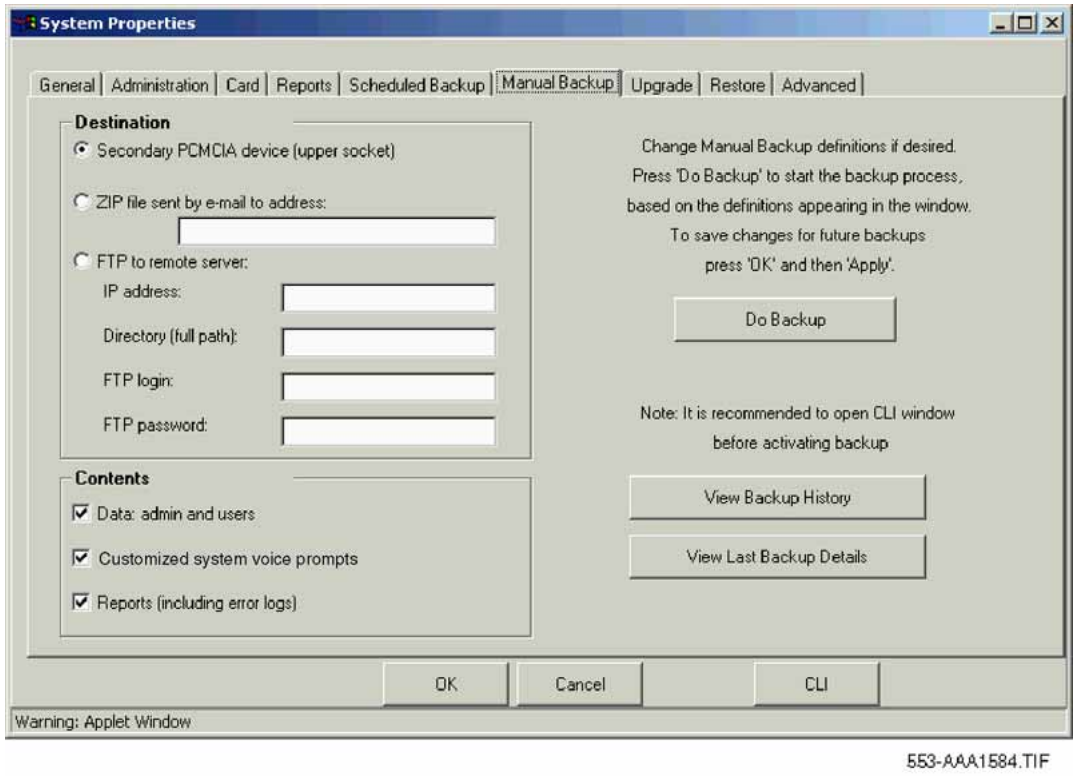
Note 2: Click the **View Last Backup Details** button to see the log file containing the progress information of the last backup process.

Manual Backup tab procedures

Click the **Manual Backup** tab in the ICD**Properties** window. The **Manual Backup** window opens (see Figure 39 "ICD system Properties window — Manual Backup tab" (page 138)).

Figure 39
ICD system Properties window — Manual Backup tab



553-AAA1584.TIF

Procedure 41
Backing up the database manually

Step	Action

To back up the database manually:

1 Define the destination for the manual backup of the database. There are three options:

- Select the **Secondary PCMCIA device** option button to copy the database to the secondary PC Card on the ICD card. If

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you select this destination for backup, ensure that the backup PC Card is inserted in Drive B.

- Select the **Zip file sent by e-mail to address** option button to have the system backup the database and e-mail the file to a specific address.
  Type the e-mail address to which the database is sent in the text box.

  Note: The e-mail address must be defined in the text box. The filename the card gives the zipped database is automatic, based on the date of its creation (for example, B1030226.ZIP, created on February 26, 2003). For this option to work, you must have **E-mail server address**, which is mandatory, and E-mail from address (if required by your e-mail server) defined on the card. These are defined on the CLI using the ICD**`SAdmin SYstem`** command. Refer to "SAdmin menu" (page 154) for more information on the CLI command.

- Select the **FTP to remote server** option button to back up the database by FTP to a remote server.
  Type the appropriate information in the text boxes to define the FTP site. The zipped database that is sent by e-mail is also transferred to the defined remote server.

  Note: If you want to place the backup file in the directory you enter when you first log in to the FTP server, enter dot (.) in the **Directory (full path)** text box. You cannot leave this text box empty.

2 Select the appropriate check boxes to define the contents to include in backup:

- **Data: admin and users**
- **Customized system voice prompts**
- **Reports (including error logs)**

3 Click the **Do Backup** button to activate the database backup process based on selected settings.

  Note: It is recommended to open the CLI window before initiating the backup process. The card can continue to handle calls during the backup process, but database changes (for example, TUI access, BUI access, and CLI login) are temporarily blocked.

4 Click **OK**.

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5 Click **Apply** in the main window to save your settings.

--End--

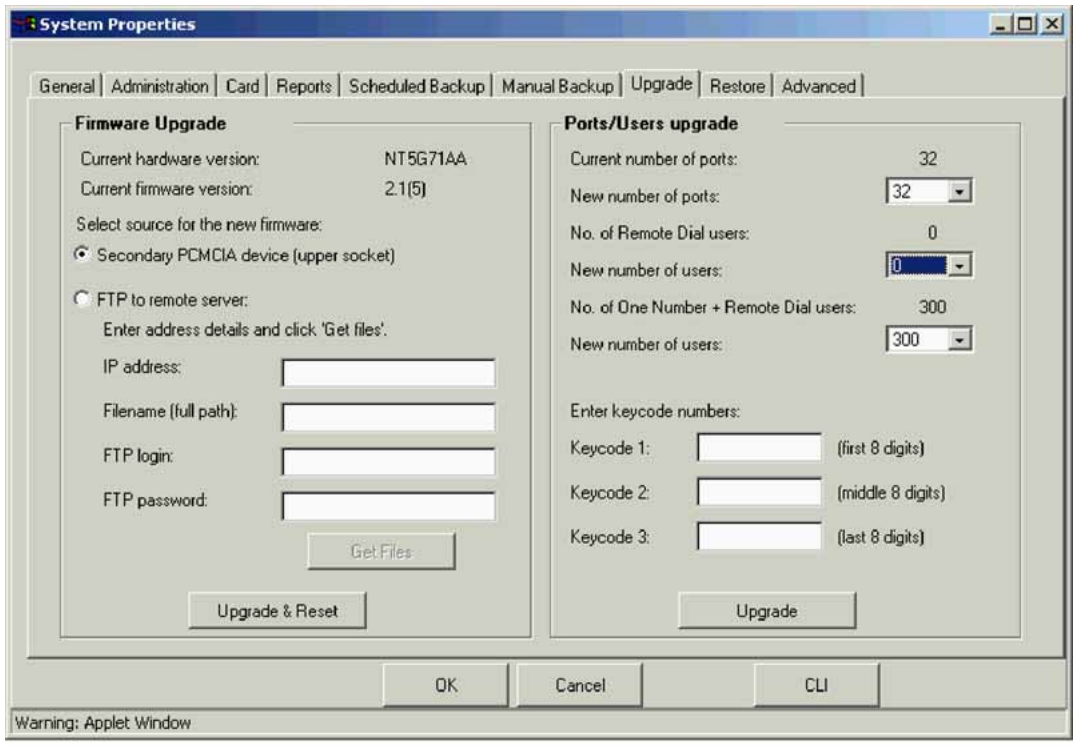
Note 1: Click the **View Backup History** button to view the log file summary of the last 20 backup procedures.

Note 2: Click the **View Last Backup Details** button to see the log file containing the progress information of the last backup process.

Upgrade tab procedures

Click the **Upgrade** tab in the ICD**Properties** window. The **Upgrade** window opens (see Figure 40 "ICD system Properties window — Upgrade tab" (page 140)).

Figure 40
ICD system Properties window — Upgrade tab



553-AAA1585.TIF

Procedure 42
Upgrading firmware

Step	Action

To define the location of the upgrade firmware and activate the upgrade process:

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1 Retrieve the upgrade firmware/software and place it in the location from which you will perform the upgrade process. There are two options for retrieving the upgrade software:

- Buy a PC Card that contains the upgrade software. Use it in the secondary device Drive B of the ICD card.
- Get the upgrade file from the Nortel web site. You can use it on an FTP server, or unzip the file and place it on a PC Card. If you put it on a PC Card, you must maintain the directory structure.
  You can also place the zip file on an empty PC Card without extracting it, and then select the **Secondary PCMCIA device** option in the next step.

2 Select one of the following options as the location of the upgrade firmware, and transfer the files to the ICD card:

- Select the **Secondary PCMCIA device** option button if the new firmware is on the secondary PC Card. Ensure that the PC Card is inserted in Drive B.
- Select the **FTP to remote server** option button to retrieve the new firmware upgrade set by FTP from a remote server. Type the appropriate information in the text boxes to define the FTP site. You need to give the full path for the filename (location for zip file). The filename can be up to eight characters long with an optional extension of three characters (for example, upgrade.zip).

  Note: The ICD card itself can be used as an FTP server. Place the zip file on a PC Card and insert it in Drive B. Use the ICD card address as the FTP server address, or use the standard 127.0.0.1 (indicates to the ICD card that it is to connect to itself). The full path for the filename is e:\<upgrade filename.zip>.
- Click the **Get Files** button to initiate the process of transferring the firmware from the file server to the ICD card prior to activating the upgrade.

3 Click the **Upgrade & Reset** button to activate the upgrade process.

Note 1: Nortel recommends that you open the CLI window before initiating the upgrade process. The card is restarted at the end of this process. During the process, calls are not answered and all active calls are dropped. Also, TUI access, BUI access, and CLI login are blocked.

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Note 2: You can click **OK** at any point before you click **Upgrade & Reset** if you want to exit the **System Properties** window without upgrading the firmware.

--End--

Procedure 43
Upgrading the number of ports and users

Step	Action

To upgrade the number of ports and users:

1. Select the number of ports from the **New number of ports** drop-down list.
2. Select the number of users for the Remote Dial service from the **New number of users** drop-down list.
3. Select the number of users for the One Number + Remote Dial services from the **New number of users** drop-down list.

   Note: Users upgrade is allowed only for increasing the number of users, or converting Remote Dial users to One Number + Remote Dial users.

4. Type the keycode numbers in the appropriate text boxes.
5. Click the **Upgrade** button to initiate the upgrade process.

--End--

Note: There are two types of subscribers to the One Number and Remote Dial services (Remote Dial and Remote Dial + One Number). You define the number of subscribers for each type. The total number of users on the ICD card cannot exceed 300.

Restore tab procedures

Click the **Restore** tab in the ICD**Properties** window. The **Restore** window opens (see Figure 41 "ICD system Properties window — Restore tab" (page 143)).

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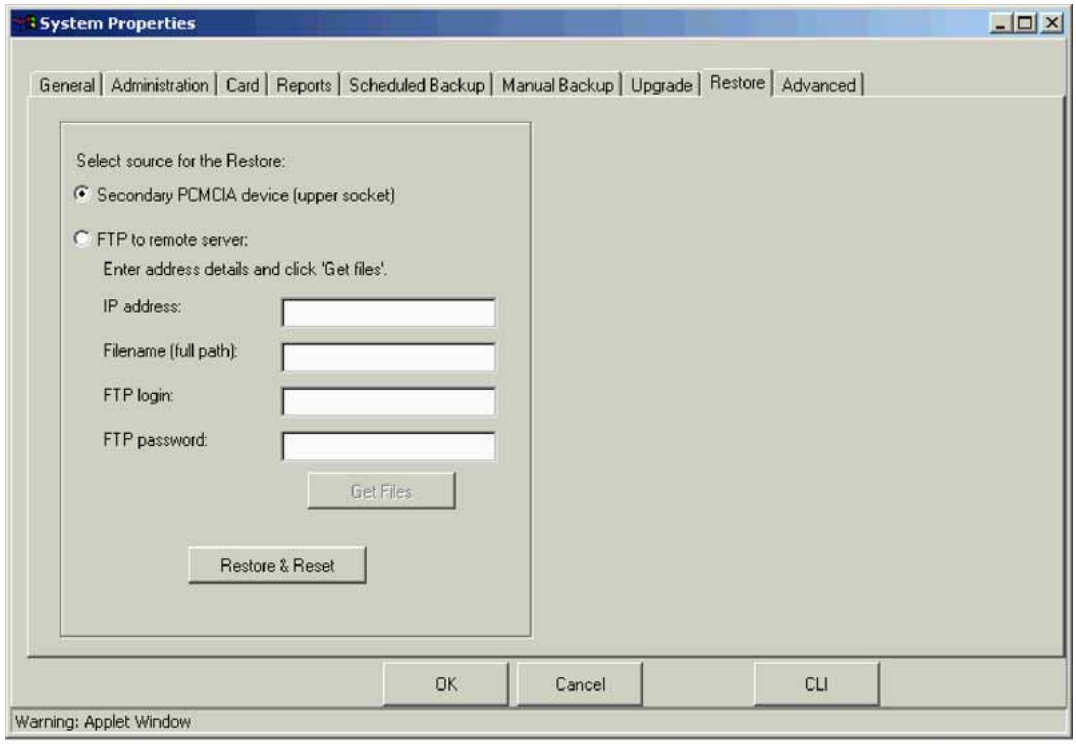
Figure 41
ICD system Properties window — Restore tab



Procedure 44
Restoring a database

Step	Action

To define the location of the database to be restored and activate the restore process:

1 Select one of the following options as the location of the database to be restored and transfer the file to the ICD card:

- Select the **Secondary PCMCIA device** option button if the database is on the secondary PC Card — ensure that the PC Card is inserted in Drive B.
  If you select this option, the PC Card in Drive B can be either a device onto which a backup has been carried out in the past, or one that had previously been used as a primary ICD device. When restoring from the latter, you are always restoring the full database. If you use a PC Card onto which a backup has been carried out in the past, you just restore what you have backed up.
- Select the **FTP to remote server** option button to retrieve the database by FTP from a remote server.

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Type the appropriate information in the text boxes to define the FTP site. You need to give the full path for the filename (location for zip file). The filename can be up to eight characters long with an optional extension of three characters (for example, restore.zip).

— Click the **Get Files** button to initiate the process of transferring the backup data to be restored from the file server to the ICDcard prior to activating the restore.

Note: Open the CLI window before initiating the restore process. The card is restarted at the end of the process.

2 Click the **Restore & Reset** button to activate the restore process.

Note 1: During the process, calls are not answered and all active calls are dropped. CLI login, TUI access, and BUI access are blocked as well, to prevent database changes.

Note 2: You can click **OK** at any point before you click **Restore & Reset** if you want to exit the **System Properties** window without restoring the database.

--End--

Advanced tab procedures

Click the **Advanced** tab in the ICD**Properties** window. The **Advanced** window opens (see Figure 42 "ICD system Properties window — Advanced tab" (page 145)).

Use the **Advanced** window to define reset of users' immediate overrides, and to set the volume of voice prompts, as well as the initial volume of speech on calls.

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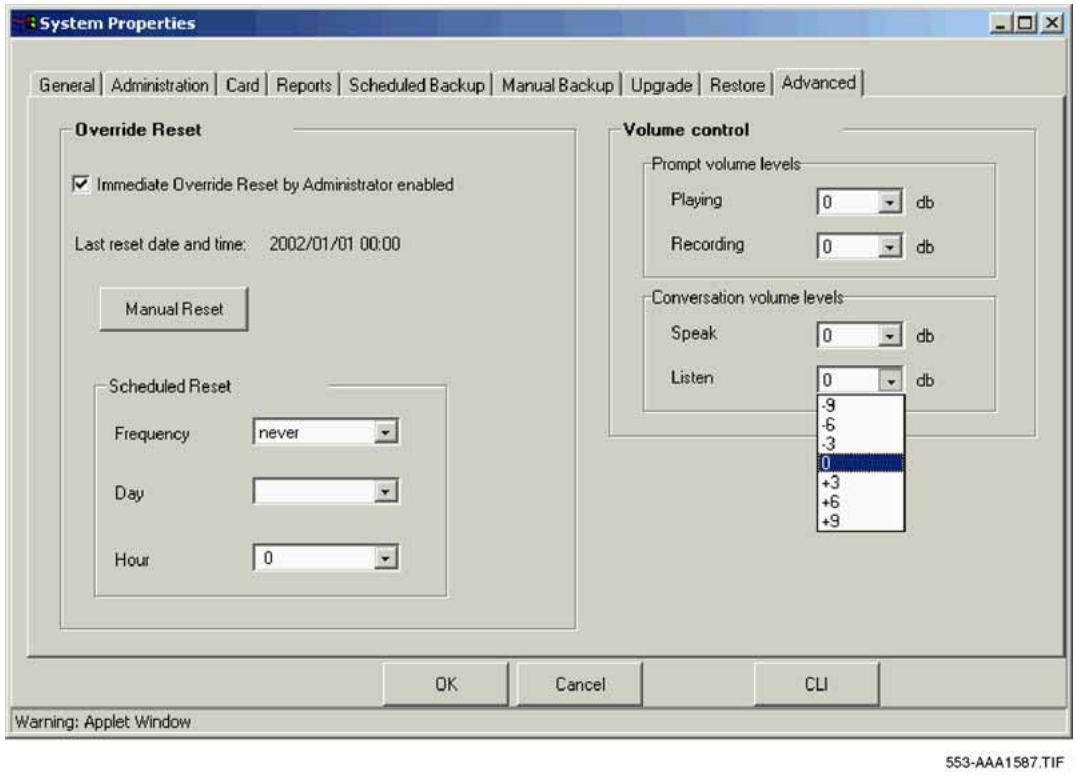
Figure 42
ICD system Properties window — Advanced tab



553-AAA1587.TIF

Defining the Override Reset

Select the **Immediate Override Reset by Administrator enabled** check box to activate the feature that allows the administrator to reset the user's immediate override. This is inactive by default. When this check box is selected, the override reset only affects users who have allowed (in their databases) the administrator to reset their immediate overrides.

Manual Reset

Click the **Manual Reset** button to reset the Immediate Overrides that are defined by One Number users.

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Scheduled Reset

The Immediate Overrides for One Number users are automatically reset based on the frequency and times selected from the **Scheduled Reset** drop-down lists:

- **Frequency:** If the chosen frequency is **never**, no automatic reset of overrides occurs.
- **Day:** If frequency is **weekly** or **monthly**, select a day of the week or month for automatic reset of the Immediate Overrides from the drop-down list.
- **Hour:** If frequency is **daily**, select an hour of the day for automatic reset of the Immediate Overrides from the drop-down list.

Volume control

Follow the steps in Procedure 45 “Adjusting the volume control” (page 146) to adjust the volume for speech and listening.

Procedure 45
Adjusting the volume control

Step	Action
	To adjust the volume for speech and listening:
1	Select the volume level (in decibels [dB]) for prompts from the **Playing** and **Recording** drop-down lists. ***Note 1:*** The number selected represents the degree of amplification or reduction of volume, relative to the base level of the system. The options are -9 dB, -6 dB, -3 dB, 0 dB (default), +3 dB, +6 dB, +9 dB. ***Note 2:*** Nortel recommends that you use the default setting (0 dB) or a loss setting (-3 dB, -6 dB, or -9 dB) for both voice prompts volume levels: played level and recorded level. This ensures compliance with regulatory standards at the trunk interface. Using a gain level for voice prompts may cause the product to be non-compliant with some regulatory standards.
2	Select the volume level (in dB) for speech for Remote Dial callers and One Number called parties from the **Speak** and **Listen** drop-down lists.

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- **Speak:** Controls the volume at which the subscriber's speech is initially presented to the other party.
- **Listen:** Controls the volume at which the subscriber initially hears the other party.

Note: The number selected represents the degree of amplification or reduction of volume, relative to the system's base level. The options are -9 dB, -6 dB, -3 dB, 0 dB (default), +3 dB, +6 dB, +9 dB.

ICD users can further manually adjust the conversation volume during the call using the Call Control features.

3 Click **OK**.

4 Click **Apply** in the main window, to save your changes.

--End--

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Maintenance

Contents

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“Changing or resetting ICD CLI administration passwords” (page 151)

“CLI command description” (page 153)

“Backing up or restoring the ICD configuration database” (page 157)

“Upgrading the firmware or voice files with CLI” (page 158)

“Automatic daily maintenance” (page 158)

“Identifying the card type in the field” (page 158)

“Replacing the ICD card” (page 158)

“Diagnostic tools” (page 160)

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“Viewing maintenance reports” (page 162)

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Overview

This chapter explains how to administer, troubleshoot, upgrade, and back up Nortel Integrated Call Director (ICD) Release 2. Most of the ICD administration, configuration, and maintenance is done through the administrator Browser User Interface (BUI). A connection for Cathode Ray Tube (CRT) is supported, as well. Use it for initial installation and debugging purposes.

Command Line Interface (CLI)

When using the ICD card Release 2, the main functions of the CLI are installation and watching processes that the administrator initiated from the administrator BUI. To watch processes, you must be connected to the CLI, but not logged into it.

Password editing, checking port status, and troubleshooting are still done from the CLI, as well.

Logging in to the CLI Main menu

Access the Command Line Interface (CLI) in one of the following ways:

- CRT connected to the serial input/output (I/O) port of the ICD card.
- Telnet session from a client computer to the Telnet Server implemented on the ICD card.
- special HTML page opened through the administrator BUI.

Note: Telnet and HTML access to the CLI is possible only after the IP address for the ICD card has been defined.

If you use a terminal emulation program to access the CLI, configure the terminal to the settings listed below:

- Transmission speed: 9600 bps
- Data bits: 8
- Stop bit: 1
- Parity: No
- Flow control: none
  Do not use X-on/X-off flow control.

The login prompt appears after you connect to the ICDcard. The default login is **`user`**.

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Changing or resetting ICD CLI administration passwords

Procedure 46
Changing the default administrator password

Step	Action
	To change the default administrator password:
1	Access the ICD CLI with the default password **user**.
2	Enter **/ ICD** to access the main menu.
3	From the main menu, access the Password Editor (PSweditor) menu command from the Protected Administration (PAdmin) menu. PSweditor allows modification of the CLI, Telnet, and File Transfer Protocol (FTP) login names and passwords.
4	Follow the instructions on the screen to change the default password.

--End--

Example:

To modify the administrator passwords, the screen displays the following:

```
PSweditor, FUpgrade, SWupgrade, CONvert/, ABReset, SCReen,
?: ps

section [CLI]
Administrator user name: user
Administrator password:
Maximum allowed login attempts: 3
Cooling time seconds after login failures: 60
CLI idle timeout in seconds: 1200

Modify, Next section, Cancel:
n

section [Telnet]
Telnet user name:
Telnet password:
Maximum allowed Telnet login attempts: 3
Cooling time seconds after login failures: 60
Telnet idle timeout in seconds: 1200
Telnet login timeout in seconds: 60

Modify, Next section, Cancel:
n
```


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```
section [FTP]
FTP user name:  user
FTP password:  user
FTP idle timeout in seconds:  900

Modify, Cancel:
m
section [FTP]
FTP user name:  user (4-30 characters) :
FTP password:  user (8-30 characters) :
FTP idle timeout in seconds:  900 (60 .  .  86400) :

section [FTP]
FTP user name:  user
FTP password:  user
FTP idle timeout in seconds:  900

Modify, Cancel:
m
section [FTP]
FTP user name:  user (4-30 characters) :  tamar
FTP password:  user (8-30 characters) :
FTP idle timeout in seconds:  900 (60 .  .  86400) :

section [FTP]
FTP user name:  tamar
FTP password:  user
FTP idle timeout in seconds:  900

Modify, Save, Cancel:
s

File was saved.
```

Remedy for forgotten passwords

The administrator BUI password can be reset to its default by using the CLI administrator level command, **ICD PAdmin ABReset**.

When you forget system passwords (Telnet, CLI administrator level, and FTP), the passwords can be viewed and changed at the CLI debugging level: / **ICDPAdmin PSweditor**.

The administrator can reset any user BUI password using the administrator BUI.

When you need to restore the CLI debugging level password, a special emergency process exists for accessing the CLI.

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Procedure 47
Restoring the CLI debugging level password

Step	Action

To restore the CLI debugging level password:

1. Ensure a direct connection to the serial port of the card and power up the card.
2. Type the token **default** using the CLI after the card prints **Running MAIN CODE!!!**.

   During this time, the reset process continues, and more lines can be printed on the screen. When this token is entered, the card allows one-time debugging CLI access with the factory default name and password: the name is **`debug`** and the password is empty (press **Enter**).
3. Enter the debugging level login, and view and edit the passwords.

--End--

After logout from this CLI session, normal login resumes according to the edited names & passwords.

CLI command description

This section describes the CLI commands available for control of the ICD functions. These commands are under the ICD menu. Refer to Figure 43 "CLI command hierarchy" (page 154) for the CLI command hierarchy.

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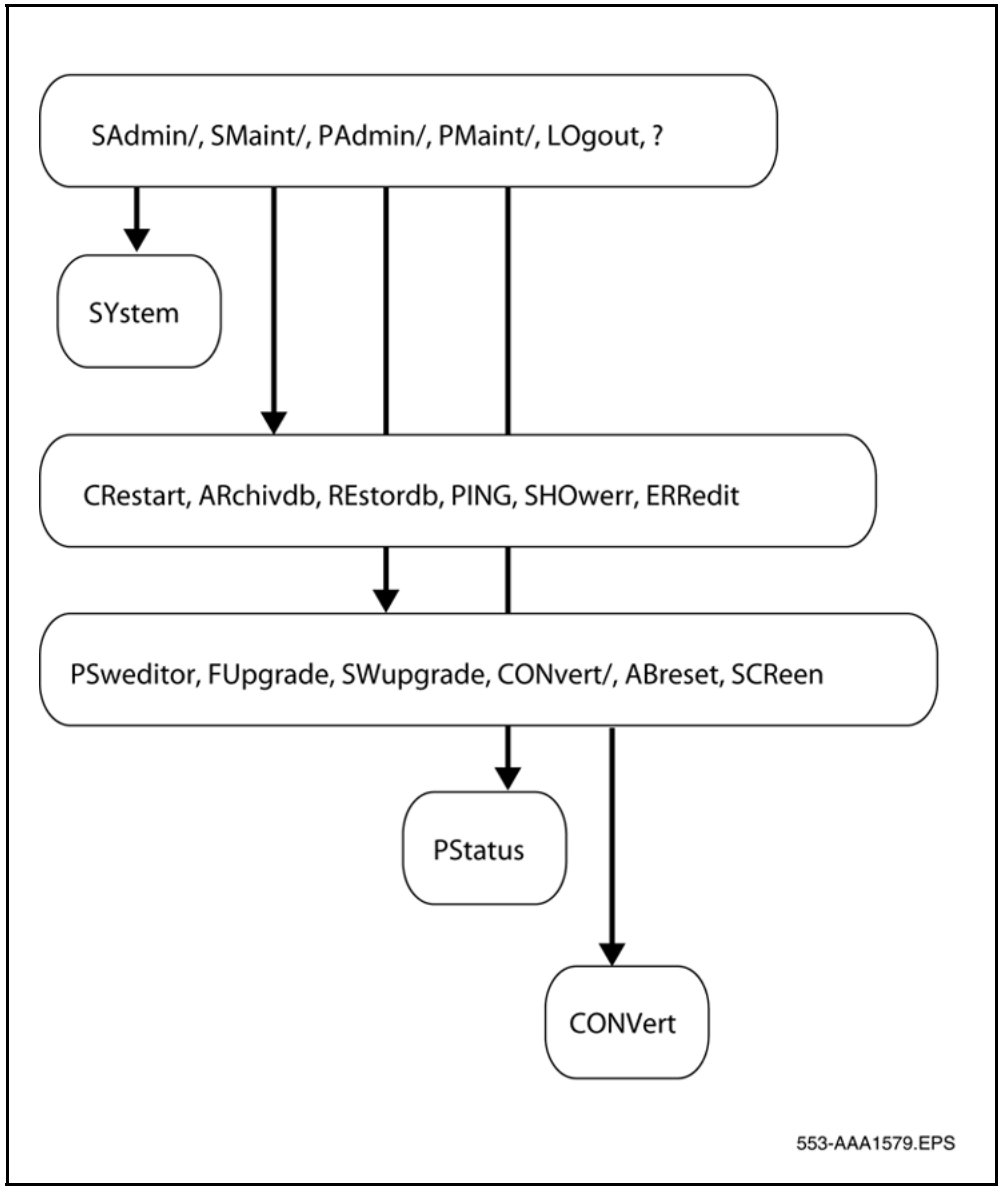
Figure 43
CLI command hierarchy



SAdmin menu

SYstem defines the following:

- card name displayed on CLI
- card identification on the LAN
  - — Subnet mask
  - — Gateway address
  - — IP address

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The following definitions are required if the ICD card is to send e-mails, such as midnight reports or database backups:

- **E-mail Server address:** The IP address of the customer's e-mail server. This address can be obtained from the network administrator. ICD cannot send any e-mails without it.
- **E-mail From address:** The name or address that appears in the From line of the e-mail. This field is not mandatory for ICD, but can be required by the customer's e-mail server to successfully send e-mails.

SMaint menu

Access the following commands in the SMaint directory:

- **Archive Database (ARchivdb):** Backs up the database from the active external Drive A to a PC Card in Drive B. This command backs up only voice, data, and report files, not application, firmware, or BUI.

  Note: Archiving the database can be done using the administrator BUI.

- **Restore Database (REstordb):** Restores the database from a backup disk in the external Drive B to the active external Drive A. It can also restore the database from an FTP server.

  Note: Restoring the database can be done using the administrator BUI.

- **Card Restart (CRestart):** Use this command to reset the ICD card.
- **PING:** Use this command to verify the IP connection of ICD to the network. It sends a standard ping' packet to a given IP address, to test round-trip path. Use this command to test if the LAN connection is installed and configured properly.
- **Show Error (SHOwerr) and Edit Error handling (ERRedit):** Use these commands for tracking and interpretation of error messages. These commands are typically used by technicians and support people.

PAdmin menu

Access the following commands in the PAdmin directory:

- **Password Editor (PSweditor):** Allows modification of the CLI, FTP, and Telnet passwords.
- **Functionality Upgrade (FUpgrade):** Allows modification of the number of ports being used on the card, as well as the number of

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users on the card. To save the modification, a new keycode must be entered. Restart the card at the end of the process for the change to take effect.

Note: Upgrading the number of ports and users can be done using the administrator BUI.

- **`Software Upgrade (SWupgrade):`** Use to upgrade the card firmware. The new firmware is copied from the external Drive B, or from an FTP server, to the active external Drive A. New firmware takes effect after you restart ICD. The system requests a new keycode upon reset with a major feature change.

  Note: Upgrading firmware/software can be done using the administrator BUI.

- **`Administrator BUI Reset (ABreset):`** Returns the administrator BUI password to its default value — admin.
- **`Screening Table Lock/Unlock (SCReen):`** Used to lock or unlock screening tables. This prevents or allows their modification from the administrator BUI. This command has one parameter: enter **`u`** for unlock, **`l`** for lock, and **`p`** for print. It prints the current state. The default setting for screening tables is unlocked.
- **`CONvert:`** Used to convert an old database to match a newer release.

  — Command is carried out automatically after restore or software upgrade commands. It detects the version of the firmware and database, and carries out any necessary database changes. Sometimes this stage is skipped—for example, if the user chooses to skip it—and the user is instructed to carry it out manually.

PMaint menu

The PMaint directory contains the **`PStatus:`** command. This command prints the port status of the ICD card.

LOgout

`LOgout` allows the user to log out of the CLI.

? Help

Type **`?`** to access the **Help** menu, which provides short explanations of the CLI commands. This can be used in all menus.

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Backing up or restoring the ICD configuration database

When you back up the ICD configuration database, you do not have to re-enter the data when you upgrade the PC Card. Use the backup procedure to back up the database from the active external Drive A to a card in Drive B. Use a PC Card — Type II and Type III cards — as the target backup disk. Be sure you select a backup disk with enough space to store the entire database. The backup procedure backs up only voice, data, and report files, not application, firmware, or BUI files. Disable the ICD card for this procedure.

Note: If the target backup PC Card memory is too small to accept the entire database, the CLI displays an error indicating that there is not enough memory.

Procedure 48
Backing up the database

Step	Action
To backup the database:	
1	Place a PC Card in the secondary Drive B of the first ICD.
2	Type **/ICD**.
3	Type the SMaint (**SM**) command to access the **System Maintenance** menu.
4	Type the ARchivdb (**AR**) command and follow the prompts.

--End--

Use the procedure below to restore the customer database to the ICD PC Card in the external Drive A. The files from the backup PC Card in Drive B are copied to the active PC Card in Drive A.

Procedure 49
Restoring the ICD configuration database

Step	Action
To restore the customer database to the PC Card:	
1	Place the backup PC Card in the ICD secondary Drive B.
2	Type **/ICD**.
3	Type the **SM** command.
4	Type the REstordb (**RE**) command and follow the prompts.

--End--

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Upgrading the firmware or voice files with CLI

To upgrade the firmware or voice files, type the / **ICD PA SW** command and follow the prompts.

Automatic daily maintenance

Every midnight the card performs daily routines:

- Traffic, log, and error report files that are too old to keep are removed. The administrator configures the amount of time to keep files.
- Traffic report files are reformatted into a format more convenient for viewing.
- Traffic file or log file, or both, of the last day are e-mailed to a configurable destination, if required.

Refer also to “Traffic reports” (page 109) and “Event Logger” (page 118).

Identifying the card type in the field

Although ICD emulates a digital set card, and is configured as such, there is a method to check that it is an ICD card, without looking at the faceplate.

The ICD card has a specific NT code burned in its Identification (ID) Electrically Erasable Programmable Read-Only Memory device (EEPROM). The contents of this EEPROM can be read by the core software, through the card-LAN.

In the system, the contents of the ID EEPROM is displayed by the ICD command in LD 32.

Replacing the ICD card

Replace the ICD card when upgrading, or when problems persist that indicate the current card is faulty.

Procedure 50
Replacing an ICD card

Step	Action

To replace an ICD card:

1 Disable the faulty ICD card by loading the Network and PE Diagnostic program LD 32 and executing the **DISC** command:

a For CS 1000M Large System, Meridian 1 Large System, Call Server 1000E, and Media Gateway 1000E, use the system TTY to execute the **DISC l s c** command, where **l** is the loop, **s** is the module or shelf, and **c** is the card to be enabled.

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b For CS 1000M Small System, Meridian 1 Small System, CS 1000S System, Media Gateway 1000B, and Media Gateway 1000T, use the **DISC c** command, where **c** is the card to be enabled.

2 Remove the faulty ICDcard.

3 Remove all PC Cards from the faulty ICD card. Insert the PC Card or Cards into the replacement ICD card. The keycode installed on the original PC Card is reused.

4 Transfer the Security Device from the faulty ICD card to the replacement.

5 Locate the card slot for installation of the replacement ICD card. Table 23 "ICD installation by Peripheral Equipment (PE) type" (page 159) lists the system module slots suitable for ICD installation.

6 Pull the top and bottom latches away from the ICD faceplate.

7 Insert the replacement ICD card into the card guides. Gently push the card until it makes contact with the backplane connector.

8 Push the top and the bottom latches towards the faceplate to insert, and lock the card into the faceplate connector.

9 To enable the ICD card, use LD 32:

a For CS 1000M Large System, Meridian 1 Large System, Call Server 1000E, and Media Gateway 1000E, use the system TTY to execute the **ENLC l s c** command, where **l** is the loop, **s** is the module or shelf, and **c** is the card to be enabled.

b For CS 1000M Small System, Meridian 1 Small System, CS 1000S System, Media Gateway 1000B, and Media Gateway 1000T, use the **ENLC c** command, where **c** is the card to be enabled.

--End--

Table 23
ICD installation by Peripheral Equipment (PE) type

System modules	ICD card slots
NT8D37BA/EC IPE modules, NT8D11BC/ED CE/PE modules	All available IPE card slots.
NT8D37AA/DC IPE modules	0, 4, 8, and 12

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Diagnostic tools

Use the diagnostic tools to troubleshoot problems with ICD. More than one of these tools can be used to diagnose a problem. Most troubleshooting is done from the card, but some troubleshooting is also done from the switch.

System diagnostic tools

System diagnostic tools include the following:

- “LED indicators” (page 160)
- “Sanity monitoring” (page 160)
- “Overlay commands” (page 160)

LED indicators

The LED indicator at the top of the ICD faceplate indicates the status of the card:

- If the ICD card functions correctly during start up, the LED blinks three times and stays ON.
- If the ICD card does not function correctly during start up, the LED turns ON and stays ON without blinking.
- The LED turns OFF when the card is software-enabled.
- If the LED stays ON when the card is software-enabled, the card is faulty or disabled.

Sanity monitoring

Sanity monitoring is a background routine that checks the operation of system resources, such as Central Processing Unit (CPU) activity and memory allocation:

- If the system performance has degraded to an unacceptable level, this background routine attempts to restore normal system operation.
- If normal operations cannot be restored, this routine resets the system.
- If the system reset is not effective, a full-board level reset is initiated.
- If the board level reset is unsuccessful, the maintenance LED stays ON.

Overlay commands

The system recognizes the ICD card as an Extended Digital Line Card (XDLC). All relevant system maintenance commands for an XDLC are used with ICD. See Table 24 "LD 32 - Enable/disable ICD channels" (page 161).

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System diagnostics are performed for every card as part of the daily routines. See *Communication Server 1000M and Meridian 1 Large System Maintenance (NN43021-700)* for more information.

Use LD 32 to enable and disable ACD digital telephone set M2616.

Table 24
LD 32 - Enable/disable ICD channels

Command	Operation performed
DISC/ENLC	Disable/Enable specified card.
DISU ENLU	Disable/Enable specified channel.
LOOP	Performs a network memory test, continuity test, and signaling test on the specified loop.
STAT	Get status of specified card/channel.

Table 25
LD 30 - Enable/disable ICD channels

Command	Operation performed
UNTT	Performs self-test on ICD.

ICD fault isolation and correction

ICD faults are cleared with the same procedures as other Intelligent Peripheral Equipment (IPE) cards. Refer to *Communication Server 1000M and Meridian 1 Large System Maintenance (NN43021-700)* for more information.

Table 26 "ICD equipment problems" (page 161) details service problems specific to ICD cards. Use the two test procedures below to resolve these problems. Also refer to *Software Input/Output Administration (NN43001-611)* for a list of messages and their description. Based on the description of the code, take the appropriate action to resolve the problem.

If the problem is not resolved after all available diagnostic tools and test procedures are attempted, make a list of all the symptoms and contact the field service representative.

Table 26
ICD equipment problems

Symptoms	Diagnosis	Solution
Red LED on the ICD card is permanently on.	Card is disabled or faulty.	Check the card status.

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Table 26
ICD equipment problems (cont'd.)

Symptoms	Diagnosis	Solution
Display on the controller card shows fault codes.	Card faulty, failed self-test, or communication problem with peripheral equipment.	Refer to *Software Input/Output Administration (NN43001-611)* for a list of codes.
Error messages printed on the terminal or the system TTY.	Hardware or software problems with ICD.	Note various error messages. Refer to *Software Input/Output Administration (NN43001-611)* for a list of these messages and their description. Based on the description of the code, take the appropriate action to resolve the problem.

Viewing maintenance reports

There are three types of maintenance reports:

- traffic files
- logger files
- error reports

View traffic and logger reports from the administrator BUI. See "Viewing reports and logs" (page 108) for more information.

Retrieve error files from the PC Card of the ICD using FTP and the OAM/ERR directory. The files have the format S<yyymmdd>.ERR, where the first "y" is 0 for 1900–1999, 1 for 2000–2100, 2 for 2100–2200, and so on. The following "yy" are the last two digits of the year, and "mm" and "dd" are the month and day.

Consult these files when the card has a problem. Supply the files to the support person when reporting a problem.

Error message handling

ICD is equipped with tools for tracking and interpretation of error messages. Look for error messages on the switch TTY and on the card TTY. Error messages on the card appear as text and are printable.

The first ten error messages that appear after reset display on the screen. Additional error messages are logged in error files. To show more error messages on the screen, access the CLI debugging level and use the SAdmin SYstem to modify **num of swerrs to print**.

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Message categorization

Table 27 "Severity levels for error messages" (page 163) lists the severity levels for error messages.

Table 27
Severity levels for error messages

Level	Definition
Critical	This severity indicates that immediate corrective action is required. Such a severity is reported, for example, when an application could not continue to run and one or all of the following are true: • card must be restarted • card or disk must be changed • disk must be formatted
Major	This severity indicates that urgent corrective action is required. The customer is affected and cannot continue to use one of the features. For example, the BUI does not work, but call process continues to run.
Minor	This severity indicates the existence of fault condition and corrective action should be taken to prevent a more serious fault. The customer is affected, but can continue to use the product meanwhile. For example, a problem affecting only a single channel can be considered minor as long as the system is still fully operational.
Warning	This severity indicates a low level failure—the customer is barely affected. No corrective action should be taken because auto-recovery is performed. Frequent appearance of a Warning can indicate a more severe problem, however.
Info	This severity is used for normal operation events notification such as state changes in critical hardware or software, time and date changing. It does not indicate any failure.
Debug	This level is for designers only.

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Message filtering

This feature allows suppressing output of messages according to given criteria. It is useful when the administrator or technician needs to focus on a specific group of messages, or when a certain message keeps appearing due to known circumstances and is not necessary.

The filtering criteria are:

- **Severity of messages:** Only messages of the selected severity levels appear. Any combination is possible.
- **Firmware component:** Only messages of the selected firmware component appear. Any combination of components is possible.
- **Detailing level:**
  - **Low:** The message appears without the <error text> part. A full description can be retrieved based on the error code.
  - **High:** The full message appears.

All filtering criteria can be defined separately for appearance on CLI and for storage in error log files. In other words, a selected group of messages can be defined to appear on the CLI, but not in the error log, or vice versa. The filters are defined by the / **`ICD SMaint ERRedit`** CLI command.

Filters setup is stored on the PC Card, so it survives card power-up. On power-up, the last filter setup is reloaded and activated.

Additional tools

Additional tools are provided for troubleshooting and debugging based on error messages. The following tools are intended for technical staff and are set using the / **`ICD SMaint ERRedit`** CLI command:

- Automatic trace back can be printed for a configurable list of error codes.
- Automatic e-mail notification can be sent to the administrator, or another address, for a predefined list of error codes.
- Automatic card restart can be done for a configurable list of error codes. This can be used for automatic recovery, in case the reported problem blocks the card and it can be recovered only by restart.

All the automatic actions above can be limited to a pre-defined number of occurrences with a separate limit for each automatic action.

Troubleshooting

Troubleshooting examples are given in Table 28 "Troubleshooting Scenarios" (page 165).

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Table 28
Troubleshooting Scenarios

Problem	Symptoms	Actions
Caller identification not treated correctly.	Callers who have a special treatment defined, such as the greeting, language, and menu, do not get the treatment and are treated like All other calls.	The Calling Line Identification (CLID) may not be visible to ICD. Forward the call to a regular 2616 set instead of the ICDACD and view the display contents when the call is presented. Activate TBLS monitor (designer on-line support is mandatory)
User forgot the BUI password or user BUI account was blocked after too many unsuccessful attempts to login.	**Invalid password** message printed when attempting to log in as user through browser. **Login blocked** message printed when attempting to log in. User's line in the **Users** table of the administrator BUI appears pink.	Log in to the Administrator BUI. Select the problematic user on the Users tab. For **Invalid login attempts limit exceeded**, the system automatically displays **Reset Password** under the **Reset BUI Password** button. Click the **Reset BUI Password** button.
Applicable to any problem.	SWerrs regarding missing or corrupted voice or data files.	Print disk error statistics: **disk>geterr 0/1**. Replace the PC Card with a new one, preserving the current data base by backup/restore, or copy manually the necessary files using FTP (designer on-line support is mandatory).
Admin BUI: Impossible to make changes in the Screening Tables.	The entire **Call Screening** tab window of the administrator BUI acts as read-only.	The screening tables were locked through the CLI. To unlock them, log in to the CLI as user. Enter the **`ICD>PAdmin>SCReen u`** command.

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Table 28
Troubleshooting Scenarios (cont'd.)

Problem	Symptoms	Actions
BUI not working.	BUI stops working (for example, it does not complete download of a database).	Capture the Java Console content and send it to support. It can contain important information that is not stored on the card. Always use the web browser with Java Console enabled (you do not have to open it until the problem occurs, but it must be enabled). If you are using a Java plug-in, no action is required to enable the Java Console. Open it, when necessary, by selecting **Sun Java Console** from the **Tools** menu. If you are not using a Java plugin, make sure the **Java Console** option appears in the **View** menu of Internet Explorer. If the option does not appear there, enable it by opening the **Tools > Internet Options > Advanced** window and selecting the three check boxes associated with **Microsoft VM**. Then reopen the browser. Open the Java console, when necessary, from the **View** menu of the browser.

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Table 28
Troubleshooting Scenarios (cont'd.)

Problem	Symptoms	Actions
Calls are not answered as anticipated.	Calls ring and do not get answered, or they ring longer than usual before being answered.	Print the port status. There are two methods for printing port status: • **PMaint > PStatus** command. • Use the **phth thss** command at the debugging level of the CLI. When contacting support people, also report the application status. To print this information, use the CLI administration login and the **/ AAdmin MAnaging List** command.
Remote Dial user does not receive expected callback.	The Remote Dial user calls the system, expects to be identified by the system, and hangs up in anticipation of a callback. The system does not, however, call the user back.	Users have the following two options: • Wait longer before hanging up. • Wait until the card answers the call.

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Upgrading ICD

Contents

This section contains information on the following topics:

“Overview” (page 169)

“Upgrading from MIPCD 1 to ICD 2” (page 169)

“Upgrading from ICD 2 to ICD 2 up-issue” (page 171)

Overview

You can upgrade Nortel Integrated Call Director (ICD)from Meridian Integrated Personal Call Director (MIPCD) Release 1 to ICDRelease 2. You can also upgrade from ICD 2 to an ICD 2 up-issue.

When upgrading an MIPCD 1 to ICD 2, all users remain subscribed to the One Number service only, until the administrator registers them specifically to the Remote Dial service (where applicable). When installing a new ICD 2, the administrator must create user accounts and assign users to one or both services before they can use the ICD. See “Configuring user accounts” (page 84) for information on assigning users to services.

Upgrading from MIPCD 1 to ICD 2

During the installation, you must enter the number of required ports, number of Remote Dial users, number of One Number + Remote Dial users and the appropriate keycode. Therefore, you must connect the CRT to the ICD serial port before upgrading.

Procedure 51
Upgrading from MIPCD 1 to ICD 2

Step	Action
To upgrade from MIPCD 1 to ICD 2:	
1	Ensure you have an operational MIPCD 1.5.31 card.
2	Connect to the serial port of the card and log in to the CLI.

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3 Write down the IP information of the card from the MIPCD **`SAdmin System`** command. You need the Subnet mask, Gateway address, and IP address.

4 Pull the MIPCD 1 card out of the shelf.

5 Replace the MIPCD 1 PC Card from Drive A with the new ICD 2 PC Card received from the factory.

6 Insert the card into the shelf. The card is reset.

7 When the card starts, it prompts for a keycode. Enter the number of ports and users and the keycode received with the new release.

8 When the reset process is complete, log in to the CLI with the default login **user** and the default password, which is empty (press **Enter**). Define the IP address of the card in the **`ICD SAdmin System`** command.

9 Enter the administrator BUI and perform a database restore.

Note: The database can be restored from the original MIPCD 1 PC Card inserted in the secondary Drive B.

10 At the end of this process, the card restarts.

11 As part of the reset process, a database conversion occurs. It occurs about 30 seconds after the CLI login prompt appears. Do not log in to the CLI before it is carried out.

12 To complete the database conversion you must enter the Admin BUI and press the **Apply** button.

--End--

Note: In order to make sure the new BUI is the one opened by the browser, be sure to first close existing browser windows, then open a new one.

The original MIPCD 1 PC Card can be used as an alternative if this process is not successful. Simply put it in the card and reseat the card to cause it to reset.

ATTENTION
Never perform backup from an MIPCD 1 to an ICD 2 PC Card cartridge. This damages the data.

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ATTENTION
Do not perform MIPCD 1 upgrade procedures to an ICD 2. Moving from MIPCD1 to ICD 2 must be done by installing a new PC Card with the ICD2 card, and then restoring MIPCD 1 data to it.

Upgrading from ICD 2 to ICD 2 up-issue

ICD upgrade is carried out using the Admin BUI **Properties** window, **Upgrade** tab. Refer to "Upgrade tab procedures" (page 140).

Nortel recommends that you prepare a serial connection to the card, if possible: the CLI can request input when the card is reset after the upgrade. If you do not set up a serial connection, open the CLI window in the administrator BUI before initiating the upgrade process.

The upgrade can be carried out from one of two sources:

- A PC Card in Drive B of the ICDcard.
- A remote FTP server.

The administrator specifies the upgrade source by selecting one of the option buttons on the BUI **Upgrade** tab. The process then depends on the source selected.

Procedure 52
Upgrading from ICD Card Drive B

Step	Action

To upgrade from a PC Card in Drive B:

1 Retrieve the upgrade software using one of the following methods:

a Obtain a PC Card that has the upgrade software (ICD upgrade PC Card).

b Download the ICD upgrade zip file from the Nortel web site. You can then do one of the following to place the upgrade file on a PC Card:

1. Extract the zip file to an empty PC Card, retaining the directory structure.
2. Place the zip file on an empty PC Card without extracting it. Name the file upgrade.zip.

2 Insert the PC Card in Drive B of the ICD card.

3 Click the **Upgrade and Restart** button on the administrator BUI **Upgrade** tab.

4 At the end of the process, the card restarts.

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5 As part of the reset process, a database conversion occurs. It happens about 30 seconds after the CLI login prompt appears. Do not log in to the CLI before the conversion finishes.

6 After the database conversion is complete, you must enter the administrator BUI and click the **Apply** button.

--End--

When the card restarts, the BUI session is lost. To re-enter the BUI, you must log in again when the card is ready.

Note: To ensure the new BUI is the most current, first close existing browser windows, then open a new one.

Procedure 53
Upgrading from an FTP server

Step	Action

To upgrade from an FTP server:

1 Download the ICDupgrade zip file from the Nortel web site.

2 Place the upgrade zip file on a server that the ICD card can access.

3 Fill in the additional parameters required for the FTP session.

Note: The ICD card itself can be used as an FTP server. Place the zip file on a PC Card in Drive B. Give the ICD card address as the FTP server address (127.0.0.1). The full path for the filename is E:<filename>.

The FTP parameters are:

- IP address of the remote FTP server where the upgrade file is stored.
- Filename — includes the full path to the upgrade file. The filename can be up to eight characters in length with an optional extension of three characters (for example, upgrade.zip). The full path is relative to the initial directory after login.
- Login name for FTP.
- Password for FTP login.

4 Click the **Get Files** button on the administrator BUI **Upgrade** tab to start the FTP session for retrieving the files.

5 Click the **Upgrade & Restart** button after the previous step completes successfully.

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6 At the end of the process, the card restarts.

7 As part of the reset process, a database conversion occurs. It happens about 30 seconds after the CLI login prompt appears. Do not log in to the CLI before the conversion finishes.

8 After the database conversion is complete, you must enter the administrator BUI and click the **Apply** button.

--End--

When the card restarts, the BUI session is lost. To re-enter the BUI, you must log in again when the card is ready.

Note: To ensure the new BUI is the most current, first close existing browser windows, then open a new one.

Replacing an ICD 2 PC Card with a newer one

This procedure is only possible when upgrading from one ICD 2 release to an up-issue. It is not possible when upgrading from MIPCD 1 to ICD 2.

Procedure 54
Restoring a database

Step	Action
	If you install a new PC Card in your ICD card, and want to restore the old database to it, do the following:
1	Insert the new PC Card in Drive A and the old one in Drive B. When you power up the card, you do not have to enter the keycode, or IP address, the card takes these from the PC Card in Drive B.
2	Restore the database from the PC Card in Drive B to the PC Card in Drive A using the regular restore process. Refer to “Restore tab procedures” (page 142).

--End--

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Security

Contents

This section contains information on the following topics:

"Overview" (page 175)

"Security Solutions" (page 176)

Overview

Hackers can try to steal telephone calls by gaining access to a user's account and forwarding calls to their destinations. The potential areas of access are:

- user TUI
- user and administrator BUIs
- CLI
- Telnet or FTP

An intruder can try to steal a user's TUI password.

An intruder can try to steal a user's or administrator's BUI password.

An intruder can try to steal an administrator's CLI passwords. There is a password for the administration level and for the debugging level.

An intruder can try to access ICD directly through Telnet or FTP and damage the files.

> ***Note:*** Most corporate networks are protected from the global Internet by firewalls or other security measures.

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Security Solutions

The following apply for ICD administration access interfaces:

- Files containing login names, passwords, and other security parameters are encrypted.
- The minimum length for login names and passwords can be defined in the debugging level of the CLI (**`ICD PAdmin PSweditor`** command). By default, the minimum login name length is four characters. By default, the minimum password length is eight characters. The minimum is enforced when the name/password is changed. It applies to all names/passwords mentioned in this section.
- Maximum length of password is 30 characters.
- IP/LAN connectivity only allows LAN access through HTTP, Telnet and FTP. The only accessible IP ports are the standard ports of these protocols.

There are also security solutions to protect users of one or both services (One Number, Remote Dial). When a new ICD 2 has been installed, the administrator must create user accounts and assign users to one or both of the services before they can use ICD. When upgrading from MIPCD 1 to ICD 2, all users remain subscribed to the One Number service only, until the administrator registers them specifically to the Remote Dial service (where applicable). See “Configuring user accounts” (page 84) for information on assigning users to services.

Invalid login attempt handling

For each invalid login attempt, a message is issued in the error log and the CLI. This applies to all access types:

- BUI
- TUI
- CLI
- Telnet
- FTP

ICD counts consecutive faulty login attempts. When the count reaches the maximum number of faulty login attempts, as defined by the administrator, defensive actions are taken:

- After consecutive invalid user or administrator BUI login attempts, where the login name is correct, but the password is incorrect, this login name is blocked. The administrator must reset the account to resume normal log in function.
- After consecutive invalid CLI login attempts, the CLI is blocked for a time period defined by the administrator.

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- After consecutive invalid Telnet login attempts, the connection is closed. Any new Telnet connection is not allowed for a period of time defined by administrator.
- After consecutive invalid FTP login attempts, the connection is closed.

Login activity file

ICD records all TUI and BUI login tries (successful and unsuccessful) in the Event Logger files. ICD stores one Event Logger file per day on the PC Card for a configurable amount of time.

The administrator can view the information through the BUI or receive automatic daily e-mails of the Event Logger. The administrator sets the automatic e-mail parameter through the administrator BUI. Refer to both "Event Logger reports" (page 31) and "Viewing reports and logs" (page 108) for more information.

BUI web access before log in

The initial URL (login screen) is the only resource accessible before passing authentication.

The only other files accessible prior to logging in are insignificant ones, such as error messages and help files.

CLI direct RS-232 connections

There are two login levels: administrator and debugging. Each level has a login name and password. CLI debugging level access is reserved for Nortel support organizations.

- Logins are changeable through the CLI.
- Name and password can include letters and digits.
- Minimum login name and password lengths can be modified, using the CLI debugging level access.
- Password is not displayed when typed.
- Every successful login is recorded as an information message in the error log.
- Inactivity timeout automatically closes the session. The administrator defines the timeout parameter.

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Telnet Server

A dedicated login name and password are required for remote access by Telnet. Correct data entry at this login grants access to the CLI, which in turn requires its own login and password.

- Name and password can include letters and digits.
- Each successful login is recorded as an information message in the error log. The message is also printed on the CLI terminal.
- Inactivity timeout automatically closes the session. The administrator defines the timeout parameter.

FTP server access

- A dedicated login name and password are required for remote access by FTP.
- Name and password can include letters and digits.
- Each successful login is recorded as an information message in the error log. The message is also printed on the CLI terminal.
- Inactivity timeout automatically closes the session. The administrator defines the timeout parameter.

Setting system passwords and parameters using CLI

To define passwords and parameters using CLI, log in to the CLI and enter the following command: / **`pa psweditor`**. Make changes as appropriate following the command line editor dialog.

Note 1: When accessing through the administrator CLI login, the login and password of the debugging CLI access are hidden and cannot be viewed or changed. The same is true for the minimum length of login names and passwords.

Note 2: Enter the space character to denote an empty value.

Note 3: Enter dot (.) to skip to the end of the current section.

Note 4: Select an action (modify/save/next_section/cancel) by entering one or more beginning characters of the desired action (for example, "m" for modify, "s" for save, and "n" for next_section).

Refer to “Remedy for forgotten passwords” (page 152) for information on restoring forgotten passwords.

Default Security Settings

The following initial definitions for security data are provided:

- CLI Administrator access login: user
- CLI Administrator access password: empty (press the **Enter** key)

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- Telnet login: empty (press the **Enter** key)
- Telnet password: empty (press the **Enter** key)
- FTP login: user
- FTP password: user

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Appendix Maintenance terminal cable pin assignments

Table 29 "Pin assignments for the A0660348 maintenance cable" (page 181) lists the pin assignments for the A0660348 maintenance terminal cable that connects the IPE module I/O panel connector to the null modem for direct terminal connection. Use this table to connect a modem for a remote maintenance terminal connection.

Table 29
Pin assignments for the A0660348 maintenance cable

J2 Pin Number (DB 25-pin Connector)	J1 Pin Number (50-pin I/O Panel Connector)	Description
1	25	Reserved
2	22	RS-232 Tx
3	20	RS-232 Rx
4	18	Reserved
5	10	Reserved
6	16	Reserved
7	21	GND
8	17	Reserved
9	11	Reserved
10	24	LAN_Tx+
11	49	LAN_Tx-
12	12	Reserved
13	23	LAN_Rx+
14	48	LAN_Rx-
15	13	Reserved

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Table 29
Pin assignments for the A0660348 maintenance cable (cont'd.)

J2 Pin Number (DB 25-pin Connector)	J1 Pin Number (50-pin I/O Panel Connector)	Description
16	14	Reserved
17	15	Reserved
18	36	Reserved
19	37	Reserved
20	19	Reserved
21	38	Reserved
22	39	Reserved
23	40	Reserved
24	41	Reserved
25	N.C.	Not Connected

NT5D52AC/BC Ethernet adapter pinout

Table 30 "NT5D52AC/BC Ethernet adapter pinout" (page 182) lists the pinout for the

Table 30
NT5D52AC/BC Ethernet adapter pinout

Connector	Pin	Description
9-pin for CRT	2	RS-232 TX
	3	RS-232 RX
	5	GND
RJ-45 Ethernet	1	LAN_TX +
	2	LAN_TX -
	3	LAN_RX +
	6	LAN_RX -

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Appendix Product integrity

Contents

This section contains information on the following topics:

“Reliability” (page 183)

“Environment specifications” (page 183)

“Electrical regulatory standards” (page 184)

Reliability

The ICD card Mean Time Between Failure (MTBF) is more than 20 years.

Environment specifications

Measurements of performance in regards to temperature and shock were made under test conditions as described in Table 31 "ICD environmental specifications" (page 184).

The ICD card is capable of withstanding the following environmental conditions without any performance degradation or damage. The phrase "short term" means 72 consecutive hours with a maximum of 15 days per year. The temperatures indicated in Table 31 "ICD environmental specifications" (page 184) are used for the environment of the circuit pack and not for the total system. The following environmental parameters are affected by the presence of the PC Card (Viper 8340PA of INTEGRAL). The card without the disk has better performance.

Temperature-related conditions

Table 31 "ICD environmental specifications" (page 184) displays the acceptable temperature and humidity ranges for the ICDcard.

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Table 31
ICD environmental specifications

Specification	Minimum	Maximum
Normal Operation		
Operating temperature	0° C	45° C
Short-term operating temperature	0° C	50° C
Relative humidity	5% to	95% (non- condensing)
Rate of change	Less than 1° C per three minutes	
Storage		
Relative Humidity	5%	95% (non- condensing)
Temperature	-40° C to +70° C, non-condensing	
Temperature Shock		
In three minutes	-40° C	25° C
In three minutes	25° C	70° C
	-40° to 70° C, non-condensing	

Electrical regulatory standards

The following three tables list the safety and electromagnetic compatibility regulatory standards for the ICD card by geographic region. Specifications for the ICD card meet or exceed the standards listed in these regulations.

Safety

Table 32 "Safety regulations" (page 184) lists the safety regulations met by the ICD card by country/region.

Table 32
Safety regulations

Regulation Identifier	Country/Region
UL 1459	Safety, United States, CALA
CSA 22.2 225	Safety, Canada
EN 41003	Safety, International Telecom
EN 70950/IEC 950	Safety, International
BAKOM SR 784.103.12/4.1/1	EMC/Safety (Switzerland)
AS3260, TS00–TS004, TS006	Safety/Network (Australia)
JATE	Safety/Network (Japan)

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Electromagnetic Compatibility (EMC)

Table 33 "Electromagnetic emissions" (page 185) lists electromagnetic emissions regulations met by the ICD card.

Table 33
Electromagnetic emissions

Regulation Identifier	Standard
FCC part 15 Class A	United States Radiated Emissions
CSA C108.8	Canada Radiated Emissions
EN50081-1	European Community Generic Emission Standard
EN55022/CISPR 22 CLASS B	Radiated Emissions (Basic Standard)
BAKOM SR 784.103.12/4.1/1	EMC/Safety (Switzerland)
SS-447-20-22	Sweden EMC standard
AS/NZS 3548	EMC (Australia/New Zealand)
NFC 98020	France EMC standard

Table 34 "Electromagnetic immunity" (page 185) lists electromagnetic immunity regulations met by the ICD card.

Table 34
Electromagnetic immunity

Regulation Identifier	Standard
CISPR 22 Sec. 20 Class B	I/O conducted noise
IEC 801-2 (level 4)	ESD (Basic Standard)
IEC 801-3 (level 2)	Radiated Immunity (Basic Standard)
IEC 801-4 (level 3)	Fast transient/Burst Immunity (Basic Standard)
IEC 801-5 (level 4, preliminary)	Surge Immunity (Basic Standard)
IEC 801-6 (preliminary)	Conducted Disturbances (Basic Standard)
BAKOM SR 784.103.12/4.1/1	EMC/Safety (Switzerland)
SS-447-20-22	Sweden EMC standard
AS/NZS 3548l	EMC (Australia/New Zealand)
NFC 98020	France EMC standard

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Appendix Voice prompts

Contents

This section contains information on the following topics:

“Supported languages” (page 187)

“Recording” (page 188)

“Translation” (page 188)

“Voice files needed in each language” (page 189)

“Languages other than English and French” (page 207)

“North American and United Kingdom English only” (page 211)

“Canadian French and Euro French only” (page 215)

“Non-recordings” (page 219)

Supported languages

ICD supports the following languages:

- North American English
- United Kingdom English
- Chinese (Mandarin)
- Danish
- Dutch
- European French
- Canadian French
- German

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- Japanese
- Korean
- Norwegian
- Brazilian Portuguese
- Russian
- CALA Spanish
- Finnish
- Swedish

Recording

The recording recommendations, explanations, and rules are as follows:

- File numbers must be preserved as they appear in the tables.
- The numbers of menu choices will be added by the system, therefore they are not part of the prompt. For convenience, these numbers appear in the Translating and Recording notes column.

Translation

Translation must take into consideration the order in which some prompts are put together to make sentences.

For all European countries, the date is played in ddmm format. For North American English and all Far East languages (Japanese, Chinese, and Korean), the date is played in mmdd format (this is relevant in the TUI when the user defines programmed overrides).

The voice files below are arranged in tables. In each language, four tables have to be recorded as shown in Table 35 "Tables containing files to record in each language" (page 188).

Table 35
Tables containing files to record in each language

Tables	Languages		
	English (US & UK)	French (Canadian & European)	Other
Voice prompts	Table 36 "Voice prompts used in every language" (page 190)	Table 36 "Voice prompts used in every language" (page 190)	Table 36 "Voice prompts used in every language" (page 190)

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Tables	Languages		
	English (US & UK)	French (Canadian & European)	Other
	189 files	189 files	189 files
Digits	Table 37 "Digits voice files used in every language" (page 206) 27 files	Table 37 "Digits voice files used in every language" (page 206) 27 files	Table 37 "Digits voice files used in every language" (page 206) 27 files
Numbers	Table 40 "Numbers voice files NA and UK English" (page 211) 34 files	Table 42 "Numbers voice files for Canadian and Euro French" (page 216) 50 files	Table 38 "Numbers voice files for languages other than English and French" (page 208) 55 files
Dates	Table 41 "Date voice files NA and UK English" (page 213) 86 files	Table 43 "Date voice files Canadian and Euro French" (page 218) 43 files	Table 39 "Date voice files languages other than English and French" (page 210) 43 files

Voice files needed in each language

Voice prompts

These files are kept in A:MLAW\USER\MIPCD.LXX directory (XX: language ID number). Files are recorded and supplied in all languages supported by ICD.

File names in the directory are s<segment no.>.wav.

Table 36 "Voice prompts used in every language" (page 190) contains 196 entries, but in each language there are seven prompts that do not have to be recorded:

- s50 and s82 are not recorded in any language.
- s171–s174 and s 194 are for Japanese only.
- s25, s35, s70, s103, and s114 are not recorded in Japanese.

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Table 36
Voice prompts used in every language

N	Filename	Contents	Translating & recording notes	Meaning/use
1	s1.wav	Welcome to the One Number service.		
2	s2.wav	Welcome to the Remote Dialing service.		
3	s3.wav	For personal identification,...	...press zero.	New prompt for Main user TUI menu. Leads to procedure for recording name (see s12).
4	s4.wav	For personal greetings,...	...press one.	New prompt: Main user TUI menu. Leads to procedure for recording greeting (see s12).
5	s5.wav	Enter the existing password,...	...followed by number sign.	Used in TUI before entering new password.
6	s6.wav	For schedule override,...	...press two.	New prompt: Main user TUI menu (see s12).
7	s7.wav	Thank you for calling.	Always followed by s8.	
8	s8.wav	Goodbye.		
9	s9.wav	Call connected.		
10	s10.wav	To send a fax,...	...press four.	
11	s11.wav	To return to the previous menu,...	...press star.	
12	s12.wav	For passwords,...	...press three.	
13	s13.wav	The call is being transferred to voice mail.		
14	s14.wav	To accept the call,...	...press one.	New prompt: menu offered to One Number subscriber when call arrives. Used with s19.

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Table 36
Voice prompts used in every language (cont'd.)

N	Filename	Contents	Translating & recording notes	Meaning/use
15	s15.wav	You have a call.		Followed by s16, when answering password is required on One Number call.
16	s16.wav	Enter your password,...	...followed by number sign.	Used for all cases when password is required for identification.
17	s17.wav	Incorrect. Please try again.	***Note:*** Used for all incorrect input (for example, wrong choice in menu, invalid input in TUI, wrong personal ID or password, and wrong number in auto attendant).	
18	s18.wav	You have a call from...	...followed by caller's name or number. ***Note:*** This prompt is always at the beginning of the sentence.	
19	s19.wav	To reject the call,...	...press two.	Menu offered to One Number subscriber when call arrives.
20	s20.wav	The called party has been disconnected.		
21	s21.wav	The call is being transferred.		Used before s96.
22	s22.wav	The number cannot be reached.		
23	s23.wav	To reconnect the call,...	... press star.	Add to s20.
24	s24.wav	Please enter the number,...	...followed by number sign.	Used in TUI for override and callback number.

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Table 36
Voice prompts used in every language (cont'd.)

N	Filename	Contents	Translating & recording notes	Meaning/use
25	s25.wav	...press... ***Note:*** In Japanese, leave this one empty.	...star, star.	
26	s26.wav	You have reached the maximum service time.		
27	s27.wav	To play the recording,...	...press one.	Part of menu for recording greeting and name. Add parts "to change" (s30) and "to save" (s68).
28	s28.wav	Please say your name after the tone.		Used for personal identification. s28 + s32 + #
29	s29.wav	Please record the greeting after the tone.		
30	s30.wav	To change,...	...press two.	Part of the TUI process, "To confirm/save/hear, to change, to delete..."
31	s31.wav	Password.	***Note:*** This is an invitation to enter the password.	Used on callback.
32	s32.wav	End recording by pressing number sign.		Appended to s28 or s29
33	s33.wav	To route all calls to a given number,...	...press two.	Part of immediate override activation menu. (See s41.)
34	s34.wav	There is nothing to play.		
35	s35.wav	...followed by... ***Note:*** In Japanese, leave this one empty.		Used after s128.

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Table 36
Voice prompts used in every language (cont'd.)

N	Filename	Contents	Translating & recording notes	Meaning/use
36	s36.wav	The password is too short. The minimum length for a password is...	...four	Used for passwords in TUI.
37	s37.wav	The password is too long. The maximum length for a password is ten.		Used for passwords in TUI.
38	s38.wav	Enter the new password,...	...followed by number sign.	After it's entered, check length. Use s36 or s37, where necessary.
39	s39.wav	To forward the call,...	...press one.	One Number subscriber can bounce an incoming call before answering.
40	s40.wav	To place the call,...	...press number sign. ***Note:*** This means, "To start dialing." This is used when the caller is requested to confirm a number to call.	
41	s41.wav	To force activation of a specific Follow-me profile,...	...press one.	Used for immediate override activation menu.
42	s42.wav	Please enter the number of the Follow-me profile you wish to activate,...	...followed by number sign.	
43	s43.wav	Enter the date for start of activation.		
44	s44.wav	Enter the time for start of activation.		
45	s45.wav	Enter the date for end of activation.		
46	s46.wav	Enter the time for end of activation.		
47	s47.wav	Two digits for the month and two digits for the day.		Use: s43 or s45 + s47 + s170
48	s48.wav	Two digits for the hour and two digits for the minutes.		Use: s43 or s45 + s47 + s170
49	s49.wav	System error.		

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Table 36
Voice prompts used in every language (cont'd.)

N	Filename	Contents	Translating & recording notes	Meaning/use
50	s50.wav	— (One second of silence.)	No need to record.	
51	s51.wav	Welcome to the Integrated Call Director.		Used with the TUI and auto attendant
52	s52.wav	Please wait.		
53	s53.wav	The call is being transferred to an assistant.		
54	s54.wav	Password accepted.	***Note:*** Caller hears this whenever he or she enters the correct password.	Used for VIP on One Number call.
55	s55.wav	To record,...	...press one.	Menu for recording. (See s56)
56	s56.wav	To play,...	...press two.	
57	s57.wav	To delete,...	...press three.	Menu for recording. (See s56.)
58	s58.wav	For VIP password,...	...press one.	
59	s59.wav	Please re-enter the new password,...	...followed by number sign.	After it's entered, check length. Add use of s36 or s37.
60	s60.wav	Once you choose a valid command, you will be returned to the call.		Explanation to follow volume control menu.
61	s61.wav	For personal password,...	...press three.	TUI menu for editing passwords. (See s58.)
62	s62.wav	Up to four greeting messages are available. Please enter the greeting number from one to four.		
63	s63.wav	For number to call back,...	...press four.	Used in main user TUI menu.

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Table 36
Voice prompts used in every language (cont'd.)

N	Filename	Contents	Translating & recording notes	Meaning/use
64	s64.wav	Please enter the number.		Part of the TUI process.
65	s65.wav	The service is unavailable.	Used in cases such as when there are no users defined, or the dialed number is not recognized and auto attendant is disabled, or number is a private Remote Dial access number, with no user assigned to it.	
66	s66.wav	For immediate override, press zero, for programmed override enter the override program number from one to eight.		
67	s67.wav	All calls will be forwarded to:...	...<phone number>... "profile number X." ***Note:*** Order of prompts is number at the end — translate accordingly.	TUI override. Add use with s83.
68	s68.wav	To save,...	...press one. (Or "press three, depending on the menu.)	
69	s69.wav	The schedule override will be active...	...from <date and time> until <date and time>. ***Note:*** Prompt s69 will start the sentence.	Used for TUI programmed override.
70	s70.wav	...until... ***Note:*** In Japanese, leave empty.		
71	s71.wav	To confirm,...	...press one.	
72	s72.wav	The caller has disconnected.	Followed by "Goodbye."	Add s8.
73	s73.wav	You have reached the maximum number of attempts.	Followed by "Goodbye."	Add s8.

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Table 36
Voice prompts used in every language (cont'd.)

N	Filename	Contents	Translating & recording notes	Meaning/use
74	s74.wav	The requested number is not supported on this service.		Used on auto attendant in case of too many errors.
75	s75.wav	You currently have no callback number.		Used for TUI callback number.
76	s76.wav	The number is:...	...<phone number to confirm> ***Note:*** Order of prompts is number at the end — translate accordingly.	Used whenever a number has to be confirmed (for example, the number to call back, or to dial out).
77	s77.wav	No input received.		
78	s78.wav	This Personal Number is busy.	***Note:*** This has two meanings: Remote Dial account in use, or One Number party is on a call.	Used for second simultaneous Remote Dial user attempt. Followed by s80.
79	s79.wav	To check,...	...press one. ***Note:*** The user can hear the existing number or data, before changing it.	Part of the TUI process.
80	s80.wav	Please contact your administrator.		Used after s78.
81	s81.wav	Request completed.	***Note:*** Means the recording or changes were made in the TUI were saved successfully.	

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Table 36
Voice prompts used in every language (cont'd.)

N	Filename	Contents	Translating & recording notes	Meaning/use
82	s82.wav	— (Customized system greeting.) ***Note:*** This is not pre-recorded. It is reserved for MIPCD1 recordings made with the Administrator TUI.		
83	s83.wav	...Follow-me profile number:...	All calls will be forwarded to profile number eight. ***Note:*** The order of prompts is number at the end — translate accordingly.	...<number of profile>. TUI override. Use with s67.
84	s84.wav	To locate the person you dialed,...	...press one.	
85	s85.wav	This number is restricted.	***Note:*** Used when a Remote Dial user tries to dial out a restricted number.	Used for Remote Dial restricted number.
86	s86.wav	The call is being transferred to the requested destination.		
87	s87.wav	To leave a voice message,...	...press two.	
88	s88.wav	To connect to an assistant,...	...press three.	
89	s89.wav	Please try again.		
90	s90.wav	The call is being transferred to a fax machine.		
91	s91.wav	Call rejected.	***Note:*** Played to the called party when he or she refuses the call.	
92	s92.wav	The number is busy.		
93	s93.wav	Please try again later.		Used after s92.

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Table 36
Voice prompts used in every language (cont'd.)

N	Filename	Contents	Translating & recording notes	Meaning/use
94	s94.wav	You are being returned to the call.		Used when application decides to exit the call control menu (for example, after maximum successive errors), so the caller knows what happens.
95	s95.wav	Otherwise,...		Use: s110 + s95 + <s128 to s133>
96	s96.wav	Due to load, call control menu and redialing will not be available.		Explanation when call is transferred instead of being kept onboard. Played after s21.
97	s97.wav	To reach the call control menu, after the call is initiated,...	...press star, star.	...press... <call control access code> Used in the menu asking for confirmation of number to dial out (for Call Control features and Remote Dial).
98	s98.wav	day:		
99	s99.wav	month:		
100	s100.wav	Welcome. Locating...	...John Smith. ***Note:*** The order of prompts is name at the end — translate accordingly.	Followed by a One Number user's name recording. Can be played to One Number callers.
101	s101.wav	hour:		
102	s102.wav	minutes:		
103	s103.wav	...from... ***Note:*** In Japanese, leave empty.	***Note:*** Used for "schedule will be active from time until time".	

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Table 36
Voice prompts used in every language (cont'd.)

N	Filename	Contents	Translating & recording notes	Meaning/use
104	s104.wav	...an unknown number.	***Note:*** After, "You have a call from..."	Follows s18.
105	s105.wav	For Call Transfer,...	...press one.	Feature transparency main menu.
106	s106.wav	For Conference,...	...press two.	Feature transparency main menu.
107	s107.wav	For volume control,...	...press three.	Feature transparency main menu.
108	s108.wav	To drop the other party,...	...press four.	Feature transparency main menu.
109	s109.wav	To disable this menu, for this call,...	...press five.	Feature transparency main menu.
110	s110.wav	If you would like the system to call you back, disconnect now.		Played with password request when caller is identified by call info. Played with request of number to dial when caller entered full identification.
111	s111.wav	To return to the call,...	...press star.	Used for leaving a menu.
112	s112.wav	To exit from the menu,...	...press star.	Used for menu containing s138 or s139, if s111 might be confusing.
113	s113.wav	For leading H,...	...press star. ***Note:*** Played after s119 and s120.	

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Table 36
Voice prompts used in every language (cont'd.)

N	Filename	Contents	Translating & recording notes	Meaning/use
114	s114.wav	Welcome... ***Note:*** In Japanese, leave empty.	...John Smith. ***Note:*** Used to welcome a caller after he or she has entered identification. Order of prompts is name at the end — translate accordingly.	Followed by a One Number user's name recording.
115	s115.wav	To connect to a pager,...	...press five.	
116	s116.wav	Enter the number you wish to call.		Used for Remote Dial service, Call Control features.
117	s117.wav	For more options,...	...press star.	
118	s118.wav	The call is being transferred to a pager.		
119	s119.wav	Enter your personal number,...	...followed by number sign.	Sometimes append s113. Used for identification in TUI and Remote Dial.
120	s120.wav	Enter the number you want to reach,...	...followed by number sign.	Sometimes append s113. Used in auto attendant.
121	s121.wav	To increase your speech volume,...	...press three.	Volume control menu.
122	s122.wav	To decrease your speech volume...	...press one.	Volume control menu.
123	s123.wav	To increase your listening volume,...	...press six.	Volume control menu.
124	s124.wav	To decrease your listening volume,...	...press four.	Volume control menu.

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Table 36
Voice prompts used in every language (cont'd.)

N	Filename	Contents	Translating & recording notes	Meaning/use
125	s125.wav	To restore initial speech and listening volumes,...	...press two.	Volume control menu.
126	s126.wav	Volume is already at maximum level.		Tried to increase too much
127	s127.wav	Volume is already at minimum level.		Tried to decrease too much
128	s128.wav	Enter the number you wish to call,...	...followed by number sign.	... <EOD> Outdialing menu.
129	s129.wav	For speed dial,...	...press number sign... + s130.	...<Speed Dial Prefix> Outdialing menu.
130	s130.wav	Followed by a one-digit entry number.	***Note:*** Use after s129 + s170.	Outdialing menu.
131	s131.wav	Followed by a two-digit entry number.	***Note:*** Use after s129 + s170.	Outdialing menu.
132	s132.wav	Followed by a three-digit entry number.	***Note:*** Use after s129 + s170.	Outdialing menu.
133	s133.wav	To redial the last dialed number,...	...press #00.	<press> <Speed Dial Prefix> <zeros> Outdialing menu.
134	s134.wav	No number found.	When chosen Speed Dial number has no entry.	
135	s135.wav	To complete the transfer,...	...press one.	Feature transparency second menu.
136	s136.wav	To complete the conference,...	...press one.	Feature transparency second menu.
137	s137.wav	To switch between active and held parties,...	...press two.	Feature transparency second menu.
138	s138.wav	To cancel the transfer and return to the original call,...	...press number sign.	Feature transparency second menu.
139	s139.wav	To cancel the conference and return to the original call,...	...press number sign.	Feature transparency second menu.

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Table 36
Voice prompts used in every language (cont'd.)

N	Filename	Contents	Translating & recording notes	Meaning/use
140	s140.wav	The other party has disconnected.	***Note:*** This is sometimes followed by "Goodbye".	For One Number and Call Control features when active call party disconnects.
141	s141.wav	The held party has disconnected.		When call control access code pressed after held party disconnected.
142	s142.wav	To drop the call,...	...press one.	
143	s143.wav	To return to the current call,...	...press star.	Used after s141.
144	s144.wav	To return to the held call,...	...press star.	When active call disconnected, but there is a held call.
145	s145.wav	The request cannot be processed at this point.		When M1 refuses transfer or conference, or when connection to voice mail failed.
146	s146.wav	To drop the call, and prevent the caller from reconnecting,...	...press four.	For Call Control features menu in One Number case.
147	s147.wav	To drop the call, and place a new one,...	...press four.	For Call Control features menu in Remote Dial case.
148	s148.wav	To change the callback number,...	...press star five.	To change callback number on a Remote Dial call.
149	s149.wav	For Speed Dial list,...	...press three.	To define Speed Dial list in TUI and to hear the list of Speed Dial names on a call.
150	s150.wav	Enter the one-digit entry number.		
151	s151.wav	Enter the two-digit entry number.		
152	s152.wav	Enter the three-digit entry number.		
153	s153.wav	To forward the call to voice mail,...	...press three.	For One Number subscriber to bounce an incoming call before answering.
154	s154.wav	To forward the call to an assistant,...	...press four.	
155	s155.wav	To forward the call to a pager,...	...press five.	

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Table 36
Voice prompts used in every language (cont'd.)

N	Filename	Contents	Translating & recording notes	Meaning/use
156	s156.wav	For a pause,...	...press star, number sign.	Used to allow pauses when entering numbers to dial.
157	s157.wav	Due to load, service is temporarily unavailable.		
158	s158.wav	...press star.		
159	s159.wav	...press number sign.		
160	s160.wav	...press zero.		
161	s161.wav	...press one.		
162	s162.wav	...press two.		
163	s163.wav	...press three.		
164	s164.wav	...press four.		
165	s165.wav	...press five.		
166	s166.wav	...press six.		
167	s167.wav	...press seven.		
168	s168.wav	...press eight.		
169	s169.wav	...press nine.		
170	s170.wav	...followed by number sign.	***Note:*** This means, "At the end, press number sign."	
171	s171.wav	...press.	***Note:*** Only for Japanese. "<*#> press."	For Japanese. Use pre-post.
172	s172.wav	...followed by.	***Note:*** Only for Japanese. Means, "At the end, press <##> followed by."	
173	s173.wav	...from...	***Note:*** Only for Japanese. Used for "from time until time."	

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Table 36
Voice prompts used in every language (cont'd.)

N	Filename	Contents	Translating & recording notes	Meaning/use
174	s174.wav	...until.	***Note:*** Only for Japanese. Used for "from time until time." Must translate "made" ("Kara" is incorrect).	
175	s175.wav	Enter the number or...	...press star.	New prompt for beginning of callback that allows access with no password. In the future, this may be replaced by "press <SDP>*", in which case use pre-post.
176	s176.wav	The call was dropped.		New prompt.
177	s177.wav	The person cannot be located.		New prompt to use instead of "number cannot be reached.
178	s178.wav	Enter your choice.	Means "Choose a menu option."	
179	s179.wav	To hear the menu,...	...press star.	
180	s180.wav	...or wait.	***Note:*** Used for "To place the call, press # or wait." This prompt is at the end of the sentence.	Direct Speed Dial
181	s181.wav	...and wait.	***Note:*** Used for "For Speed Dial list, press # or wait." This prompt is at the end of the sentence.	(For future use.) s149 + s25 + SD prefix + s181. Use pre-post.

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Table 36
Voice prompts used in every language (cont'd.)

N	Filename	Contents	Translating & recording notes	Meaning/use
182	s182.wav	For the next entry...	...press one.	For traversing Speed Dial list. (For future use.)
183	s183.wav	For the previous entry...	...press two.	
184	s184.wav	To choose an entry...	...press number sign.	
185	s185.wav	To exit...	...press star.	
186	s186.wav	To play the number...	...press one.	
187	s187.wav	To play the name...	...press two.	
188	s188.wav	To change the number...	...press three.	
189	s189.wav	To record a name...	...press four.	
190	s190.wav	To delete the name...	...press five.	
191	s191.wav	To delete the entry,...	...press six.	
192	s192.wav	Please say the name after the tone.		
193	s193.wav	Maximum recording capacity reached.		
194	s194.wav	...welcome.	John Smith... Used to welcome a caller after he or she has entered identification. ***Note:*** Only for Japanese.	Preceded by a One Number user's name recording.
195	s195.wav	...p...	***Note:*** This is the name of the English letter "p" (as part of a series of letters).	New prompt: for playing pauses in numbers to dial.
196	s196.wav	...w...	***Note:*** This is the name of the English letter "w" (as part of a series of letters).	New prompt: for playing the character that separates the outgoing dialed number and the extension.

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Digits voice files

The following table lists the prerecorded digit voice files that are used by the Telephone User Interface (TUI) for playing numeric information: numbers, dates, times.

These files are kept in A:MLAW\BASE\DIGITS.LXX directory (XX: language ID number).

Files are recorded and supplied in all languages supported by ICD.

Recording instructions:

- Number 1 through 15: Pronounce in a tone as if this is a digit in the middle of a series of digits.
- Number 16 through 27: Pronounce in a tone as if this is the last digit in a series of digits.

Table 37
Digits voice files used in every language

Number	Filename	Contents
1	s1.wav	One
2	s2.wav	Two
3	s3.wav	Three
4	s4.wav	Four
5	s5.wav	Five
6	s6.wav	Six
7	s7.wav	Seven
8	s8.wav	Eight
9	s9.wav	Nine
10	s10.wav	Zero
11	s11.wav	Star
12	s12.wav	Number sign
13	s13.wav	Silence for 500 ms.
14	s14.wav	Silence for one second.
15	s15.wav	And
16	s16.wav	One (for a suffix)
17	s17.wav	Two (for a suffix)
18	s18.wav	Three (for a suffix)
19	s19.wav	Four (for a suffix)
20	s20.wav	Five (for a suffix)

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Table 37
Digits voice files used in every language (cont'd.)

Number	Filename	Contents
21	s21.wav	Six (for a suffix)
22	s22.wav	Seven (for a suffix)
23	s23.wav	Eight (for a suffix)
24	s24.wav	Nine (for a suffix)
25	s25.wav	Zero (for a suffix)
26	s26.wav	Star (for a suffix)
27	s27.wav	Number sign (for a suffix)

Languages other than English and French

Numbers voice files

Table 38 "Numbers voice files for languages other than English and French" (page 208) lists the prerecorded numbers voice files that are used by the TUI for playing numbers and times.

These files are kept in A:MLAW\BASE\NUMBER.LXX directory (XX: language ID number).

These files are recorded and supplied in all languages except English and French.

In each language consider the following, if necessary:

- Select the gender of the recorded number by the specified use. Hours and minutes means the prompt is used to announce a time. Profile means the number will be placed at the end of the sentence: "Calls will be forwarded to Follow-me profile no.: X"
- In prompts intended for hours, also include the appropriate word for "hour", if required.
- In prompts intended for minutes, also include the word for "minutes", if required.
- A time is always pronounced by playing a prompt for the hour and then a prompt for the minutes. Take this into consideration when translating the prompts. For prompts for minutes and hours that include "zero", translate them according to how you would pronounce a time like 16:00 or 00:25 in your language.

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Table 38
Numbers voice files for languages other than English and French

Number	Filename	Contents	Use
1	s1.wav	One	Hours
2	s2.wav	Two	Hours
3	s3.wav	Three	Hours
4	s4.wav	Four	Hours
5	s5.wav	Five	Hours
6	s6.wav	Six	Hours
7	s7.wav	Seven	Hours
8	s8.wav	Eight	Hours
9	s9.wav	Nine	Hours
10	s10.wav	Ten	Hours
11	s11.wav	Eleven	Hours
12	s12.wav	Twelve	Hours
13	s13.wav	Thirteen	Hours
14	s14.wav	Fourteen	Hours
15	s15.wav	Fifteen	Hours
16	s16.wav	Sixteen	Hours
17	s17.wav	Seventeen	Hours
18	s18.wav	Eighteen	Hours
19	s19.wav	Nineteen	Hours
20	s20.wav	Twenty	Hours
21	s21.wav	Twenty-one	Hours
22	s22.wav	Twenty-two	Hours
23	s23.wav	Twenty-three	Hours
24	s24.wav	Zero	Hours
25	s25.wav	Five	Minutes
26	s26.wav	Ten	Minutes
27	s27.wav	Fifteen	Minutes
28	s28.wav	Twenty	Minutes
29	s29.wav	Twenty-five	Minutes
30	s30.wav	Thirty	Minutes
31	s31.wav	Thirty-five	Minutes
32	s32.wav	Forty	Minutes

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Table 38
Numbers voice files for languages other than English and French (cont'd.)

Number	Filename	Contents	Use
33	s33.wav	Forty-five	Minutes
34	s34.wav	Fifty	Minutes
35	s35.wav	Fifty-five	Minutes
36	s36.wav	Fifty-nine	Minutes
37	s37.wav	Zero	Minutes
38	s38.wav	One	Profiles
39	s39.wav	Two	Profiles
40	s40.wav	Three	Profiles
41	s41.wav	Four	Profiles
42	s42.wav	Five	Profiles
43	s43.wav	Six	Profiles
44	s44.wav	Seven	Profiles
45	s45.wav	Eight	Profiles
46	s46.wav	Nine	Profiles
47	s47.wav	Ten	Profiles
48	s48.wav	Eleven	Profiles
49	s49.wav	Twelve	Profiles
50	s50.wav	Thirteen	Profiles
51	s51.wav	Fourteen	Profiles
52	s52.wav	Fifteen	Profiles
53	s53.wav	Sixteen	Profiles
54	s54.wav	a.m.	In relevant languages, if required.
55	s55.wav	p.m.	In relevant languages, if required.

Date voice files

Table 39 "Date voice files languages other than English and French" (page 210) lists the prerecorded voice files that are used by the TUI for playing dates.

These files are kept in A:MLAW\BASE\DATE.LXX directory (XX: language ID number).

Files are recorded and supplied in all languages except English and French.

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Translation instructions: The system can play the month before the day, or vice versa, according to each language's rules. However, if connecting words are needed, they should be included in the names of months or days for that language (for example, if there is a language in which one must say "The 4th of October" then prompt 10 must be "of October", prompt 16 "the 4th", and so on).

Table 39
Date voice files languages other than English and French

Number	Filename	Contents
1	s1.wav	January
2	s2.wav	February
3	s3.wav	March
4	s4.wav	April
5	s5.wav	May
6	s6.wav	June
7	s7.wav	July
8	s8.wav	August
9	s9.wav	September
10	s10.wav	October
11	s11.wav	November
12	s12.wav	December
13	s13.wav	First
14	s14.wav	Second
15	s15.wav	Third
16	s16.wav	Fourth
17	s17.wav	Fifth
18	s18.wav	Sixth
19	s19.wav	Seventh
20	s20.wav	Eighth
21	s21.wav	Ninth
22	s22.wav	Tenth
23	s23.wav	Eleventh
24	s24.wav	Twelfth
25	s25.wav	Thirteenth
26	s26.wav	Fourteenth
27	s27.wav	Fifteenth

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Table 39
Date voice files languages other than English and French (cont'd.)

Number	Filename	Contents
28	s28.wav	Sixteenth
29	s29.wav	Seventeenth
30	s30.wav	Eighteenth
31	s31.wav	Nineteenth
32	s32.wav	Twentieth
33	s33.wav	Twenty-first
34	s34.wav	Twenty-second
35	s35.wav	Twenty-third
36	s36.wav	Twenty-fourth
37	s37.wav	Twenty-fifth
38	s38.wav	Twenty-sixth
39	s39.wav	Twenty-seventh
40	s40.wav	Twenty-eighth
41	s41.wav	Twenty-ninth
42	s42.wav	Thirtieth
43	s43.wav	Thirty-first

North American and United Kingdom English only

Numbers voice files

Table 40 "Numbers voice files NA and UK English" (page 211) lists the prerecorded numbers voice files that are used by the TUI for playing numbers and times.

These files are kept in A:MLAW\BASE\NUMBER.LXX directory. (XX: language ID number; 00 - NA English, 04 - UK English).

These files are recorded and supplied in NA English and UK English only.

Table 40
Numbers voice files NA and UK English

Number	Filename	Contents	Use
1	s1.wav	One	Hours, profiles
2	s2.wav	Two	Hours, profiles
3	s3.wav	Three	Hours, profiles
4	s4.wav	Four	Hours, profiles

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Table 40
Numbers voice files NA and UK English (cont'd.)

Number	Filename	Contents	Use
5	s5.wav	Five	Hours, profiles, minutes
6	s6.wav	Six	Hours, profiles
7	s7.wav	Seven	Hours, profiles
8	s8.wav	Eight	Hours, profiles
9	s9.wav	Nine	Hours, profiles
10	s10.wav	Ten	Hours, profiles, minutes
11	s11.wav	Eleven	Hours, profiles
12	s12wav	Twelve	Hours, profiles
13	s13.wav	Thirteen	
14	s14.wav	Fourteen	
15	s15.wav	Fifteen	Hours, profiles, minutes
16	s16.wav	Sixteen	Hours, profiles
17	s17.wav	Seventeen	Hours
18	s18.wav	Eighteen	Hours
19	s19.wav	Nineteen	Hours
20	s20.wav	Twenty	Hours, minutes
21	s21.wav	Thirty	Minutes
22	s22.wav	Forty	Minutes
23	s23.wav	Fifty	Minutes
24	s24.wav	Sixty	Currently unused.
25	s25.wav	Seventy	
26	s26.wav	Eighty	
27	s27.wav	Ninety	
28	s28.wav	Hundred	
29	s29.wav	Thousand	
30	s30.wav	Million	
31	s31.wav	And	
32	s32.wav	Zero	Hours
33	s33.wav	a.m.	Hours
34	s34.wav	p.m.	Hours

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Date voice files

Table 41 "Date voice files NA and UK English" (page 213) lists the prerecorded voice files which are used by the TUI for playing dates.

These files are kept in A:MLAW\BASE\DATE.LXX directory (XX: language ID number; 00 - NA English, 04 - UK English).

Files are recorded and supplied in NA English and UK English only.

Table 41
Date voice files NA and UK English

Number	Filename	Contents
1	s1.wav	January
2	s2.wav	February
3	s3.wav	March
4	s4.wav	April
5	s5.wav	May
6	s6.wav	June
7	s7.wav	July
8	s8.wav	August
9	s9.wav	September
10	s10.wav	October
11	s11.wav	November
12	s12.wav	December
13	s13.wav	of January
14	s14.wav	of February
15	s15.wav	of March
16	s16.wav	of April
17	s17.wav	of May
18	s18.wav	of June
19	s19.wav	of July
20	s20.wav	of August
21	s21.wav	of September
22	s22.wav	of October
23	s23.wav	of November
24	s24.wav	of December
25	s25.wav	the first
26	s26.wav	the second

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Table 41
Date voice files NA and UK English (cont'd.)

Number	Filename	Contents
27	s27.wav	the third
28	s28.wav	the fourth
29	s29.wav	the fifth
30	s30.wav	the sixth
31	s31.wav	the seventh
32	s32.wav	the eighth
33	s33.wav	the ninth
34	s34.wav	the tenth
35	s35.wav	the eleventh
36	s36.wav	the twelfth
37	s37.wav	the thirteenth
38	s38.wav	the fourteenth
39	s39.wav	the fifteenth
40	s40.wav	the sixteenth
41	s41.wav	the seventeenth
42	s42.wav	the eighteenth
43	s43.wav	the nineteenth
44	s44.wav	the twentieth
45	s45.wav	the twenty-first
46	s46.wav	the twenty-second
47	s47.wav	the twenty-third
48	s48.wav	the twenty-fourth
49	s49.wav	the twenty-fifth
50	s50.wav	the twenty-sixth
51	s51.wav	the twenty-seventh
52	s52.wav	the twenty-eighth
53	s53.wav	the twenty-ninth
54	s54.wav	the thirtieth
55	s55.wav	the thirty-first
56	s56.wav	First
57	s57.wav	Second
58	s58.wav	Third

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Table 41
Date voice files NA and UK English (cont'd.)

Number	Filename	Contents
59	s59.wav	Fourth
60	s60.wav	Fifth
61	s61.wav	Sixth
62	s62.wav	Seventh
63	s63.wav	Eighth
64	s64.wav	Ninth
65	s65.wav	Tenth
66	s66.wav	Eleventh
67	s67.wav	Twelfth
68	s68.wav	Thirteenth
69	s69.wav	Fourteenth
70	s70.wav	Fifteenth
71	s71.wav	Sixteenth
72	s72.wav	Seventeenth
73	s73.wav	Eighteenth
74	s74.wav	Nineteenth
75	s75.wav	Twentieth
76	s76.wav	Twenty-first
77	s77.wav	Twenty-second
78	s78.wav	Twenty-third
79	s79.wav	Twenty-fourth
80	s80.wav	Twenty-fifth
81	s81.wav	Twenty-sixth
82	s82.wav	Twenty-seventh
83	s83.wav	Twenty-eighth
84	s84.wav	Twenty-ninth
85	s85.wav	Thirtieth
86	s86.wav	Thirty-first

Canadian French and Euro French only

Numbers voice files

Table 42 "Numbers voice files for Canadian and Euro French" (page 216) lists the prerecorded numbers voice files that are used by the TUI for playing numbers and times.

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These files are kept in A:MLAW\BASE\NUMBER.LXX directory (XX: language ID number; 09 for Can French, 16 for Eu French).

These files are recorded and supplied in French only.

Table 42
Numbers voice files for Canadian and Euro French

Number	Filename	Contents	Meaning/use
1	s1.wav	Un	1/profiles
2	s2.wav	Deux	2/profiles
3	s3.wav	Trois	3/profiles
4	s4.wav	Quatre	4/profiles
5	s5.wav	Cinq	5/profiles, minutes
6	s6.wav	Six	6/profiles
7	s7.wav	Sept	7/profiles
8	s8.wav	Huit	8/profiles
9	s9.wav	Neuf	9/profiles
10	s10.wav	Dix	10/profiles, minutes
11	s11.wav	Onze	11/profiles
12	s12.wav	Douze	12/profiles
13	s13.wav	Treize	13/profiles
14	s14.wav	Quatorze	14/profiles
15	s15.wav	Quinze	15/profiles, minutes
16	s16.wav	Seize	16/profiles
20	s20.wav	Vingt	20/minutes
25	s25.wav	Vingt-cinq	25/minutes
30	s30.wav	Trente	30/minutes
35	s35.wav	Trente-cinq	35/minutes
40	s40.wav	Quaronte	40/minutes
45	s45.wav	Quaronte-cinq	45/minutes
50	s50.wav	Cinqonte	50/minutes
55	s55.wav	Cinqonte-cinq	55/minutes
113	s113.wav	Zero	0
114	s114.wav	Minuit	Midnight (0) — same as s138
115	s115.wav	Une heure	1 o’clock
116	s116.wav	Deux heure	2 o’clock

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Table 42
Numbers voice files for Canadian and Euro French (cont'd.)

Number	Filename	Contents	Meaning/use
117	s117.wav	Trois heure	3 o'clock
118	s118.wav	Quatre heure	4 o'clock
119	s119.wav	Cinq heure	5 o'clock
120	s120.wav	Six heure	6 o'clock
121	s121.wav	Sept heure	7 o'clock
122	s122.wav	Huit heure	8 o'clock
123	s123.wav	Neuf heure	9 o'clock
124	s124.wav	Dix heure	10 o'clock
125	s125.wav	Onze heure	11 o'clock
126	s126.wav	Midi	12 o'clock
127	s127.wav	Treize heure	13 o'clock
128	s128.wav	Quatorze heure	14 o'clock
129	s129.wav	Quinze heure	15 o'clock
130	s130.wav	Seize heure	16 o'clock
131	s131.wav	Dix-sept heure	17 o'clock
132	s132.wav	Dix-huit heure	18 o'clock
133	s133.wav	Dix-neuf heure	19 o'clock
134	s134.wav	Vingt heure	20 o'clock
135	s135.wav	Vingt et une heure	21 o'clock
136	s136.wav	Vingt-deux heure	22 o'clock
137	s137.wav	Vingt-trois heure	23 o'clock
138	s138.wav	Minuit	Midnight (24) — same as s114

Note: Play profiles in masculine, minutes in masculine, hours in feminine (special "hour number" prompts).

Date voice files

Table 43 "Date voice files Canadian and Euro French" (page 218) lists the prerecorded voice files that are used by the TUI for playing dates.

These files are kept in A:MLAW\BASE\DATE.LXX directory (XX: language ID number; 09 for Can French, 16 for Euro French).

Files are recorded and supplied in French only.

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Table 43
Date voice files Canadian and Euro French

Number	Filename	Contents
1	s1.wav	Janvier
2	s2.wav	Fevrier
3	s3.wav	Mars
4	s4.wav	Avril
5	s5.wav	Mai
6	s6.wav	Juin
7	s7.wav	Juillet
8	s8.wav	Aout
9	s9.wav	Septembre
10	s10.wav	Octobre
11	s11.wav	Novembre
12	s12.wav	Decembre
13	s13.wav	Premier
14	s14.wav	Deux
15	s15.wav	Trois
16	s16.wav	Quatre
17	s17.wav	Cinq
18	s18.wav	Six
19	s19.wav	Sept
20	s20.wav	Huit
21	s21.wav	Neuf
22	s22.wav	Dix
23	s23.wav	Onze
24	s24.wav	Douze
25	s25.wav	Treize
26	s26.wav	Quatorze
27	s27.wav	Quinze
28	s28.wav	Seize
29	s29.wav	Dix sept
30	s30.wav	Dix huit
31	s31.wav	Dix neuf
32	s32.wav	Vingt

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Table 43
Date voice files Canadian and Euro French (cont'd.)

Number	Filename	Contents
33	s33.wav	Vingt et un
34	s34.wav	Vingt deux
35	s35.wav	Vingt trois
36	s36.wav	Vingt quatre
37	s37.wav	Vingt cinq
38	s38.wav	Vingt six
39	s39.wav	Vingt sept
40	s40.wav	Vingt huit
41	s41.wav	Vingt neuf
42	s42.wav	Trente
43	s43.wav	Trente et un

Non-recordings

Table 44 "Non-recorded sound files" (page 219) lists additional tones and music files used on the ICD card:

Beep.wav is in A:MLAW\BASE\. Use it for the recording procedure.

The files in Table 44 "Non-recorded sound files" (page 219) are kept in A:MLAW\USER\MIPCD directory.

Table 44
Non-recorded sound files

Number	Filename	Contents
1	s100.wav	Music
2	s101.wav	Ring back
3	s102.wav	Call connection tone notification
4	s103.wav	Confirmation tone (or use 102)

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Appendix Administrator BUI input

Table 45 "Data requirements, ranges, and defaults" (page 221) lists the data requirements, ranges, and defaults for administrator Browser User Interface (BU) input.

Table 45
Data requirements, ranges, and defaults

Window	Field	Valid content	Default
New user	New User Name	Up to 20 characters	None
New user	BUI Login name	Up to 8 letters and digits	None
New user	Personal Number	Up to 20 digits, plus optional leading H	None
Main - users	CLID	Up to 20 digits, plus optional leading H	None
Main - users	Caller recognized by:	Option button: CLID, Private access number, or Personal Number	Personal Number
Main - users	Block simultaneous use of this account	Yes or No	Yes
Main - users	Initial and default callback number	Up to 20 of the following: 0–9, P, p, *, #	None
Main - Remote Dialing	Common access number	Up to 12 digits: 0–9	None
Main - Remote Dialing	Allow Private access number use	Yes or No	Yes
Main - Remote Dialing	Private access number	Up to 12 digits: 0–9	None
Main - Remote Dialing	Wait for caller to hang up	1–60	4

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Table 45
Data requirements, ranges, and defaults (cont'd.)

Window	Field	Valid content	Default
Main - Remote Dialing	Callback answer timeout	1–60	20
Main - Remote Dialing	Password	Select option button	Required on all calls
Main - Call Screening	Default Authorization	Free, Charged, or Denied	Free
Main - Call Screening	Dialed Prefix	Up to 20 keypad characters: 0–9, *, #	None
New Call Screening	Name of table	Up to 20 characters	None
Main - Voice prompts	Enable customization	Yes or No	No
Main - Reports - Traffic	Show Daily reports in	Option button: CSV or HTML	HTML
Properties - General	System voice language	Select from menu	English US
Properties - General	Auto attendant option	Not used, On failures, or All calls	On failures
Properties - General	Personal Number with leading H allowed	Yes or No	No
Properties - General	Maximum search duration	10–999	180
Properties - General	Late connection threshold	10–300	120
Properties - General	CDR charge account	Yes or No	Yes
Properties - General	Subscriber number prefix	Up to 8 digits	None
Properties - General	Local DN length	1–99	4
Properties - General	Call control access code	Up to 5 keypad characters	**
Properties - General	Call control access code inter-digit timeout	100–500	300
Properties - General	End of Dial sequence	Up to 4 keypad characters	#
Properties - General	End of Dial timeout	1–10	4
Properties - General	Speed Dial prefix	Up to 3 keypad characters.	#
Properties - General	Number of Speed Dial entries	9, 99, or 999	9

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Table 45
Data requirements, ranges, and defaults (cont'd.)

Window	Field	Valid content	Default
Properties - Administration	Admin BUI language	Select from menu	English US
Properties - Administration	Admin BUI password	Up to 10 characters	admin
Properties - Administration	BUI inactivity timeout	10–30	15
Properties - Administration	Threshold for successive BUI invalid logins	1–99	5
Properties - Administration	Initial user BUI password	Up to 10 characters	user
Properties - Administration	TUI DN	Up to 12 digits	N/A
Properties - Administration	Minimum length of passwords	1–9	4
Properties - Administration	Timeout for no input	1–99	4
Properties - Administration	Successive input errors	1–99	3
Properties - Card	Card name	Up to 20 characters	ICD
Properties - Card	ACD agent ID	Yes or No	No
Properties - Card	First port ID	Up to 4 digits	None
Properties - Card	ACD multiple queue	Yes or No	No
Properties - Reports	Store history for	2–32	32
Properties - Reports	Maximum size of daily report	1–100	20
Properties - Backup, Report	e-mail address	Up to 64 characters	None
Properties - Backup, Restore, Upgrade	FTP address	Up to 25 characters	None
Properties - Backup, Restore, Upgrade	directory/file	Up to 64 characters	None
Properties - Backup, Restore, Upgrade	FTP user	Up to 30 characters	N/A

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Table 45
Data requirements, ranges, and defaults (cont'd.)

Window	Field	Valid content	Default
Properties - Backup, Restore, Upgrade	FTP password	Up to 30 characters	N/A
Properties - Advanced	Voice levels	-9 dB, -6 dB, -3 dB, 0 dB, +3 dB, +6 dB, +9 dB	0

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Appendix Administrator BUI new user defaults

When the administrator creates a new user not based on any other, this user account is set up with the definitions described in the following tables. Access the settings described in Table 46 "Factory defaults for new user administrator BUI settings" (page 225) in the administrator Browser User Interface (BUI).

Table 46
Factory defaults for new user administrator BUI settings

Definition	Factory default
Subscribed to which service?	Neither
Screening table assigned	First in the list of tables
Keep call onboard?	No
Parallel search allowed?	No
Caller identified by...	Entering Personal Number
Callback allowed?	No

Settings that are accessible from the user BUI are described in Table 47 "Factory defaults for new user BUI settings" (page 225).

Table 47
Factory defaults for new user BUI settings

Definition	Factory default
BUI language	English (US)
TUI language	English (US)
Personal password	0000
VIP password	00
Treatment provided to waiting caller	Music
Call connection notification	Tone

Note 1: Fields that do not appear in the tables are initially empty.

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Note 2: The initial BUI login password for new users is defined on the **Administration** tab of the **Properties** window.

Note 3: The administrator can define a fictitious user to serve as a template, complete its definitions in the user BUI (even creating a Speed Dial list), and create all new users based on that template.

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List of terms

ACD
Automatic Call Distribution

AS
American Standard

BUI
Browser User Interface

BUS
Broadcast and Unknown Server

CALA
Caribbean and Latin America

CDR
Call Detail Recording

CE
Common Equipment

CFXA
Call Forward eXternal Allow

CLI
Command Line Interface

CLID
Calling Line IDentification

CO
Central Office (Public Switch)

CP
Call Process

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CPU
Central Processing Unit (Main Processor)

CRT
Cathode Ray Tube

CSA
Canadian Standards Association

dB
Decibel

DID
Direct Inward Dialing (from CO to PABX)

DN
Directory Number

DSP
Digital Signal Processor

DTMF
Dual-Tone Multi-Frequency

EEPROM
Electrically Erasable Programmable Read-Only Memory device

EES
End-to-End Signaling

EMC
Electromagnetic Compatibility

ESD
Electro-Static Discharge

ESN
Electronic Switched Network

FCC
Federal Communication Commission

FTP
File Transfer Protocol

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ID
IDentification

INI
INItialization

IEC
International Electro-Technical Commission; based in Geneva, Switzerland

I/O
Input/output

IP
Internet Protocol (layer of TCP/IP)

IPE
Intelligent Peripheral Equipment (i.e. Viking)

ISDN
Integrated Services Digital Network

LAN
Local Area Network

LED
Light Emitting Diode

Mbps
Megabits per second

Mbyte
1,048,576 megabytes

MCDN
Meridian Customer Defined Network

MPU
Micro Processor Unit on cards (not the CPU)

MSD
Mass-Storage Device (for example, a disk)

MTBF
Mean Time Between Failure

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NFC
New Flexible Code

NICD
Nortel Integrated Call Director

NTP
Nortel Technical Publication

OA&M
Operation, Administration, and Maintenance

PBX
Private Branch Exchange

PC
Personal Computer

PCI
Present Call Information

PCM
Pulse Coded Modulation

PRD
Product Requirements Document

ROM
Read-Only Memory

R/W
Read-Write

SCC
Serial Communication Channel

SR
Service Request

TN
Terminal Number

TCP/IP
Transmission Control Protocol / Internet Protocol.

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TTY
Teletypewriter

TUI
Telephone User Interface

User
An NNICD user; the NNICD administrator defines the list of users

XDLC
eXtended Digital Line Card

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Nortel Communication Server 1000

Nortel Integrated Call Director Service Implementation Fundamentals

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