Nortel Communication Server 1000

Integrated Call Assistant Fundamentals

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New in this release

There have been no updates to the document in this release

Other
Revision History

May 2009	Standard 03.01. This document has been up-issued to support Communication Release 6.0.
December 2007	Standard 02.02. This document has been up-issued to support Communication Server Release 5.5.
June 2007	Standard 01.02. 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: Integrated Call Assistant Fundamentals (NN43001-562). 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.
May 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: Integrated Call Assistant Fundamentals (NN43001-562). 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.

How to get help

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

Getting help from the Nortel web site

The best way to get technical support for Nortel products is from the Nortel Technical Support web site:

http://www.nortel.com/support

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:

http://www.nortel.com/callus

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:

http://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.

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 engineer, install, configure, administer and maintain the NT5G01 and NT5G03 NortelIntegrated Call Assistant. The Integrated Call Assistant is an Intelligent Peripheral Equipment (IPE) card that provides automated call attendant functionality.

Note on legacy products and releases

This technical document 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

- Meridian 1 PBX 61C CP PII, CP PIV

- Meridian 1 PBX 81C CP 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 software
and configured to include a Signaling Server, they become CS 1000
systems. Table 1 "Meridian 1 systems to CS 1000 systems" (page 14) lists
each Meridian 1 system that supports an upgrade path to a CS 1000
system.

Table 1
Meridian 1 systems to CS 1000 systems

This Meridian 1 system	Maps to this CS 1000 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

Intended audience

This document is intended for individuals responsible for administering CS
1000 and Meridian 1 systems.

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 61C CP PII, CP PIV

- Meridian 1 PBX 81C CP PII, CP PIV

Related information

This section lists information sources that relate to this document.

Technical Documentation

The following technical documents are referenced in this document:

- *Software Input Output Administration (NN43001-611)* ()

- *Software Input Output Reference — Maintenance (NN43001-711)* ()

Online

To access Nortel documentation online, click the **Technical Documentation** link under **Support & Training** on the Nortel home page:

www.nortel.com

CD-ROM

To obtain Nortel documentation on CD-ROM, contact your Nortel customer representative.

Description

Contents

This section contains information on the following topics:

Introduction

The Integrated Call Assistant is an Intelligent Peripheral Equipment (IPE) card that automatically answers incoming calls. Based on caller input and other information, Integrated Call Assistant routes callers to their desired destination. There are several ways to configure the Integrated Call Assistant, from basic, menu-driven call handling to complex Automatic Call Distribution (ACD) applications. This section contains three Integrated Call Assistant configuration examples.

Integrated Call Assistant features allow customers to:

- specify which greetings and menus are presented to callers, based on time-of-day, day-of week, and holidays.

- designate which telephone keypad keys callers press to answer menu prompts

- transfer calls to a specific number

- auto-terminate calls to single or multiple DNs

- route calls to call center agents based on caller's language

- route calls to call center agents based on the number dialed by the caller

- receive FAXes

- record personalized greetings and menus

- make personal verification recordings for dial-by-name calling

- record override greetings for emergencies
- import a telephone data base for dial-by-name functionality

All Integrated Call Assistant firmware and customer database information is stored on a Personal Computer Memory Card Interface Association (PCMCIA) device, which is installed in the Integrated Call Assistant card.

Menu-driven ACD scenario

This example shows how Integrated Call Assistant works in a menu-driven ACD application. In this scenario, City Power Inc. has one number that auto-terminates on a Integrated Call Assistant DN (800-555-1000). Integrated Call Assistant provides an initial greeting and offers menu choices. Because the trunk route that this customer called into has 32 trunks, an Integrated Call Assistant 32-port configuration is set up so all ports can play the same menus. The assignment of Integrated Call Assistant ports to trunks is optional, depending on your application.

City Power Inc. provides a single phone number for sales, service, incoming faxes and emergencies. A customer finds an AC power line that has fallen off a pole during a storm and is live and sparking in her back yard. She calls the company at 800-555-1000 and is greeted by an announcement from the Integrated Call Assistant:

"Welcome to City Power.
For Sales, press 1
For a Service Emergency, press 2
For normal Service, press 3
For name dialing by spelling, press 4
If you know the extension number, press 5"

The customer presses 2 and Integrated Call Assistant routes the call to an emergency service technician. If the customer selects "1" for Sales, they are then instructed to press 1 for commercial sales and 2 for residential sales. Integrated Call Assistant transfers the call to an ACD queue.

CLID and DNIS ACD scenarios

In these ACD call center scenarios, all incoming call center trunks are auto-terminated to one or more Integrated Call Assistants, depending on the number of incoming trunks. Integrated Call Assistant plays specific greetings and menus and routes calls based on information provided by the Dialed Number Identification Service (DNIS) and Caller Line Identification (CLID).

Note: CLID can include the ISDN protocol CLID and any caller identification on the telephone display.

Integrated Call Assistant ACD call routing using DNIS

Customer A calls 1-800-555-2000 to buy a Moore Super Vacuum Cleaner as advertised on television. The trunk they are terminated on (route 1 unit 3) is auto-terminated to an Integrated Call Assistant port. Integrated Call Assistant sees the incoming DNIS 1-(800)-555-2000 and plays a special message:

> "Thank you for calling the Moore Super Vacuum Cleaner order desk. Please hold for the next available operator".

The call is then placed into an ACD queue.

Customer B calls 1-800-222-3000 to buy a pair of Moore Super Boots as advertised on television. The trunk they are terminated on (route 1 unit 3) is auto-terminated to an Integrated Call Assistant port. Integrated Call Assistant sees the incoming DNIS (800) 222-3000 and plays a special message:

> "Thank you for calling the Moore Super Boots order desk. Please hold on to order your new boots."

The call is then placed into an ACD queue.

Integrated Call Assistant ACD call routing using CLID and DNIS

Customer A in Quebec, Canada wants to buy a Moore Super Vacuum Cleaner as advertised on television. She calls 1-800-555-2000 from her home phone (514) 321-1234. The trunk she is terminated on (route 1 unit 3) is auto-terminated to an Integrated Call Assistant port. Integrated Call Assistant sees the incoming CLID of (514) 555-1234 and the DNIS 1-(800)-555-2000 and plays a special French message:

> "Thank you for calling the Moore Super Vacuum Cleaner order desk. Please hold for the next available operator".

The call is then placed into an ACD queue. Integrated Call Assistant transmits CLID information so the ACD agent knows to answer the call in French.

Customer B in Toronto, Canada wants to buy a Moore Super Vacuum Cleaner as advertised on television. He calls 1-800-555-2000 from his home phone (416) 321-1234. The trunk they are terminated on (route 1 unit 3) is auto-terminated to an Integrated Call Assistant port. Integrated Call Assistant sees the incoming CLID of (416) 321-1234 and the DNIS 1-(800)-555-2000 and plays an English message:

> "Thank you for calling the Moore Super Vacuum Cleaner order desk. Please hold for the next available operator".

The call is then placed into an ACD queue. Integrated Call Assistant
transmits CLID information so the ACD operator knows to answer the call
in English.

Engineering

Contents

This section contains information on the following topics:

Introduction

This section provides engineering and technical information to help configure and provision the Integrated Call Assistant.

Equipment compatibility

The Integrated Call Assistant can be installed in:

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

- Meridian 1 PBX 51C, Meridian 1 Option 61C

- Meridian 1 Option 61C, Meridian 1 PBX 61C

- Meridian 1 PBX 81, Meridian 1 Option 81C, Meridian 1 PBX 81C

- CS 1000M HG, CS 1000M SG, CS 1000M MG

Table 2 "Integrated Call Assistant-compatible card slots" (page 22) lists the modules and card slots suitable for Integrated Call Assistant. Integrated Call Assistant cards are installed in the IPE shelf and defined in software as a digital line card.

Table 2
Integrated Call Assistant-compatible card slots

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

Power requirements

The maximum number of Integrated Call Assistant cards per IPE module is affected by all other cards located on the IPE shelf and their usage of the IPE 5V power supply. The Integrated Call Assistant uses a 3 Amp current from the 5V supply. The IPE power supply provides 28 Amp current. The IPE power supply provides 22 Amp current for the Small System cabinet.

The maximum IPE module per slot power budget is 30 Watts, with an effective limitation of 20 Watts for thermal compensation. The Integrated Call Assistant card does not exceed the power allocated for each card slot in the IPE module. This means there is no power limitation for the number of Integrated Call Assistant cards you can place in an IPE shelf.

Note: Power requirements limit the number of Integrated Call Assistant cards in a Small System cabinet to six.

Card and adapter specifications

Integrated Call Assistant electrical and environmental specifications are identical to other single-slot IPE cards. The Integrated Call Assistant faceplate provides two slots (A and B) to hold the PCMCIA devices.

Slot A must contain a PCMCIA device for the Integrated Call Assistant to function. Slot B is reserved for another PCMCIA device, used during database backup and upgrades. Integrated Call Assistant has one red card status LED and two amber PCMCIA LEDs. The card status LED is ON when the card is disabled, OFF when card is enabled and blinks when Integrated Call Assistant performs a self-test. The PCMCIA LEDs blink when the PCMCIA device is in use.

The Integrated Call Assistant adapters provide serial and Ethernet communication. You install the NT5D52AB adapter in IPE modules. You install the NT5D52BB in Small System cabinets. Table 3 "NT5D52 connector pin description" (page 23) provides the adapter TTY and Ethernet pin description. Serial and Ethernet cables are customer-provided.

Table 3
NT5D52 connector pin description

	Pin Number	Signal Description
9-pin serial connector	2	RS232 TX (transmit)
	3	RS232 RX (receive)
	5	GND (ground)
RJ-45 Ethernet connector	1	LAN_TX +
	2	LAN_TX -
	3	LAN_RX +
	6	LAN_RX -

Integrated Call Assistant PC card description

Integrated Call Assistant uses a PC card device to store all application-related functions in firmware. Integrated Call Assistant requires a PC card device to operate. The PC card device can be a Flash card or a hard disk. Table 4 "PC card characteristics and specifications" (page 23) outlines the specifications and characteristics of the Flash and hard disk PC card configuration.

Table 4
PC card characteristics and specifications

	Specification	
Characteristic	PC card Flash card	PC card disk
Voice menus	16	32

Table 4
PC card characteristics and specifications (cont'd.)

Characteristic	Specification	
	PC card Flash card	PC card disk
Maximum number of services	eight	32
Maximum number of call screening tables	eight	32
Language capacity	one	eight
Incoming FAX auto detection	Yes	Yes
Name dialing	Yes	Yes
Name dialing database upgradeable via FTP	Yes	Yes
Database name capacity	1000	10,000
Predefined voice menus	14	22
Personal verification recordings	not available	3000 subscribers (up to three seconds in length)
Number of predefined services	four	five

Network engineering recommendations

This section describes the network components, cables, terminals and other information recommended to configure, administer, and maintain the Integrated Call Assistant. Site-specific requirements may be different.

Serial network recommendations

You enter the Integrated Call Assistant keycode and configure IP address through a serial connection. You can also use a serial connection for routine maintenance and system troubleshooting. The following items are required for Integrated Call Assistant serial communication:

- 9-pin female serial cable. If you use a modem to communicate with Integrated Call Assistant, you need a straight 9-pin to 25-pin cable, or a 9-pin cable with a null modem.

- A TTY or computer with terminal emulation software. Use the following RS232 interface parameters:

    — Transmission speed: 9600 bps

    — Data bits: 8

    — Stop bit: 1

— Parity: No

— Flow control: none

— Do not use XON/XOFF flow control.

Ethernet (TCP/IP) network recommendations

Nortelrecommends that you connect the Integrated Call Assistant card to the Nortel server subnet. Tasks performed through the Ethernet TCP/IP connection include Integrated Call Assistant Organization, Administration and Maintenance (OA&M), routine card administration (firmware upgrade, and refreshing or replacing database files) and maintenance and troubleshooting procedures. The items in the following list are required for an Integrated Call Assistant Ethernet connection:

- One RJ-45 cable required per card for permanent connection

- A separate IP address for each Integrated Call Assistant. Subnet mask and gateway address information must be identical for all Integrated Call Assistants on one subnet.

- Router if required for connection to enterprise IP network

Application engineering

Integrated Call Assistant supports two Auto Attendant application options. Auto-attendant means that Integrated Call Assistant answers the incoming call and presents the customer with the option to dial-by-name, or dial-by-number to set up a call transfer. The two options are:

- Auto-attendant using circular hunt

- Auto-attendant using ACD features

   Two ACD front-end call-handler application options are available. A front-end call-handler application means that Integrated Call Assistant answers the call and then presents menus that give customers multiple choices for call transfer, FAX, and other services. You can also handle calls differently depending on the incoming number:

- Call routing by menus only

- Call routing by dialed number

Software engineering

- Integrated Call Assistant ports defined as ACD agents require ACD packages and ACD resources. Take the ACD resources into account in the License customer configuration.

- Customer definitions for the hunt feature apply if the circular hunt configuration is used.

- The Pilot DN feature requires the Pilot DN package, and Pilot DN operating parameters apply.

- Activate the End-to-End Signaling feature to enable DTMF dialing from system proprietary telephones. This applies even when the caller's telephone is in the same PBX switch as the Integrated Call Assistant card.

- Integrated Call Assistant supports up to 32 ports.

Software requirements for Auto-attendant using circular hunt

- Digital Set (DSET) package 88

- Enhanced End-to-End Signaling (EES) package 10

Software requirements for Auto-attendant using ACD features

- Digital Set (DSET) package 88

- Enhanced End-to-End Signaling (EES) package 10

- Automatic Call Distribution, Package A (ACDA) package 45

- Automatic Call Distribution, Package B (ACDB) package 41

Software requirements for ACD front-end Call routing using menus

- Digital Set (DSET) package 88

- Enhanced End-to-End Signaling (EES) package 10

- Automatic Call Distribution, Package A (ACDA) package 45

- Automatic Call Distribution, Package B (ACDB) package 41

Software requirements for ACD front-end call routing using DNIS

- Digital Set (DSET) package 88

- Enhanced End-to-End Signaling (EES) package 10

- Automatic Call Distribution, Package A (ACDA) package 45

- Automatic Call Distribution, Package B (ACDB) package 41

- Dialed Number Identification System (DNIS) package 98

System resources

You must consider the use of system ACD resources. If applicable, you must review the License for the specifics ystem option. Each Integrated Call Assistant card requires an ACD DN that defines the ACD queue; each Integrated Call Assistant port represents an ACD agent that requires a TN and a DN for Key 0 and a DN for Key 1. You can use a Multiple Appearance DN for the Key 1 DN.

If you do not use ACD, then each Integrated Call Assistant port represents a 2616 telephone that requires a TN and a DN for system resources used for Key 0 and a DN for Key 1. You can use a Multiple Appearance DN for the Key 1 DN.

For example, a Integrated Call Assistant card configured to the maximum capacity of 32 ports requires the following system resources:

- 1 ACD DN assigned to the Integrated Call Assistant card

- 32 TNs assigned to the 32 ports

Redundancy engineering rules

Integrated Call Assistant redundancy requires the ACD configuration. You can define one Integrated Call Assistant as a backup for another in the following manner:

- Define different ACD-DNs for the two Integrated Call Assistants.

- Define access numbers to the first ACD-DN, and define Night Call Forward (NCFW) on it to forward calls to the second ACD-DN.

- Download identical databases to both Integrated Call Assistant PC drives.

Multiple card engineering rules

You can configure multiple Integrated Call Assistants to work together so that customers have more ports serving the same service numbers in the following manner:

- Define different ACD-DNs for the Integrated Call Assistants.

- Define different trunks from the same DNIS trunk group to terminate on a different Integrated Call Assistant ACD. Or define another ACD queue with time overflow, distributing the calls between the different Integrated Call Assistant ACDs, and have all trunks terminating on the Time Overflow ACD.

- Download identical databases to each Integrated Call Assistant PC drives.

For more information,

Personal verification recordings are *not* re-usable and must be made for each card. Define two different service DNs for recording purposes, with one leading to each Integrated Call Assistant ACD-DN. The subscribers record their names twice, once on each card. You can copy personal verification recordings from one Integrated Call Assistant PC drive to another.

Configuration engineering rules

The Integrated Call Assistant administrator must know the language serial number in the customer's telephone. It serves as the language ID for Integrated Call Assistant Telephone User Interface (TUI) recording. The language serial number can be derived from the BUI. In the Treatments window, when the list of languages is presented, it is in the order of the languages in the customer telephone.

The Database for name dialing is one table. It holds to 10,000 entries on the hard disk and up to 1,000 in the Flash configuration. The database uses English spelling only. If you have a name dialing database that has more than 10,000 names, Integrated Call Assistant only uses the first 10,000.

Only subscribers with DNs of up to seven digits can record personal verifications. Three seconds is the maximum length of a personal verification recording. In the hard-disk configuration, Integrated Call Assistant supports personal subscriber recordings for up to 3000 subscribers. The Flash configuration does not support personal subscriber recordings.

If the caller selects name dialing and the input keys match more than one name, up to five names are announced. If there are more than five names with the same keypad spelling, those subscribers cannot be reached by name dialing.

In the Name Dialing Database, the maximum length of name is 20 characters, including the space between the last and first name. The maximum DN length in this database is 20 digits.

In the Call Screening Table, the DN prefixes defined can be up to 20 digits and there can be up to 100 entries in the table. The maximum length of the FAX DN is 20 digits.

Call transfer is subject to system limitations. For incoming calls on non-supervised trunks, the system allows transfer completion only after the called party has answered. In this case the Integrated Call Assistant continues to retry the transfer for up to 15 seconds. During this time, the caller is on hold and receives the hold treatment defined in the system.

The customer can define up to 32 different service profiles (assigned to service DNs), which lead to 32 different menus and 32 different call screening tables, based on 16 different time types and 16 different CLID types, to a maximum of 26 CLID digits.

Flash customer may define up to 8 different service profiles (assigned to service DNs), which lead to 16 different menus and 8 different call screening tables, based on 16 different time types and 16 different CLID types, up to a maximum of 26 CLID digits.

External equipment requirements

There are three interfaces available to interact with the Integrated Call Assistant:

- The Command Line Interface (CLI), for performing initial setup and configuration and performing upgrades

- The Browser User Interface (BUI), which uses a common web browser to create and manage services and treatments

- The Telephone User Interface (TUI), where you record greetings and menus

The following paragraphs describe the external equipment necessary to use each of these interfaces.

To access the CLI

A VT100 terminal or a personal computer emulating a terminal is used to perform Integrated Call Assistant administration, configuration, maintenance, and diagnostic functions through the CLI.

For initial setup and configuration, connect the terminal to the Integrated Call Assistant RS-232 interface or to the DB-9 connector on the NT5D52 Ethernet Adapter card installed on the I/O panel. For long-term administration and maintenance (through the CLI) telnet to the card over your LAN. Telneting requires the connection of the Integrated Call Assistant card to the LAN through the RJ-45 jack on the Ethernet adapter.

The terminal interface must be configured to 9600 baud, 8 data bits, 1 stop bit, and no parity. The flow control is hard wired (never use XON/XOFF flow control).

To access the BUI

Access to the Browser User Interface (BUI) requires three things:

- a Local Area Network (LAN)

- a web server to house the BUI

- a web browser on a PC to access the BUI

LAN characteristics

Ethernet implementation over the Integrated Call Assistant has the following LAN characteristics.

The Ethernet adapter options for Integrated Call Assistant are:

- NT5D52AB for the IPE module

- NT5D52BB for the Small System cabinet

The network administrator assigns the IP address for the Integrated Call Assistant. The IP address is entered over the VT100 terminal during initial setup.

The PC you use to access the BUI must have the following requirements:

- minimum of 166 MHz PC Pentium processor

- minimum of 32 MB RAM

- minimum of 1 GB for the hard drive

Web browser characteristics

The BUI operates from a Java 1.1 level. This requires the user to have one of the following web browsers:

- Netscape 4.5 (or later)

- Internet Explorer 4.01 (or later) with Service Pack 1 (SP1)

About caller input

Integrated Call Assistant accepts digit input while playing a greeting, so an experienced caller can immediately input the appropriate digit and reach the desired option.

In the TUI, the * key can send users to the previous menu. In voice menus, the default definition for the * key is to replay the previous menu.

For system menus, such as dial-by-name or dial-by-number, press the * key to return to the main menu as long as the system prompt is playing.

If you have custom menus, you can define a customized function for the * key.

Callers who use dial-by-number can press the # key twice to bypass the "call is being transferred to" announcement.

Callers who use dial-by-name can press 1 after name dialing to skip the announcement preceding the call transfer.

The # has specific meaning in name dialing and cannot be used to skip the announcement.

Defining an Integrated Call Assistant service number

Contents

This section contains information on the following topics:

Introduction

This section explains how to enter and define a service number.

You define service numbers on the PBX only for those numbers to be routed to the Integrated Call Assistant card, and only numbers that will appear on the display of the Integrated Call Assistant units, so Integrated Call Assistant can recognize the number.

If the service number uses ACD queues with their night DNs NCFW forwarding to an Integrated Call Assistant ACD queue, then Integrated Call Assistant requires a dedicated ACD queue for each service and is Night Call Forwarded (NCFW) to the main card queue.

You can forward your phone to an Integrated Call Assistant queue and build a service in the browser for your phone. You do not have to build a queue for every service. For example, you can forward a 1-800 number of a four-digit extension to a queue.

There are two ways that Integrated Call Assistant ports can be defined and each one has matching types of Integrated Call Assistant service numbers that you can use.

Integrated Call Assistant ports defined as ACD agents

Service numbers can be:

- ACD queues with no agents that have their night DN leading to the Integrated Call Assistant card DN. The Integrated Call Assistant ACD DN itself cannot be used if the Integrated Call Assistant is to distinguish it as a specific number. It can be used to reach the Integrated Call Assistant and will receive the Default Service treatment.

- DNIS on an incoming route auto-terminating on the Integrated Call Assistant card ACD queue.

Both kinds of service numbers can be used simultaneously on the same Integrated Call Assistant but not on the same call. If a call is received with DNIS, the DNIS is considered the service number. Otherwise, the service number is the dialed ACD DN.

Integrated Call Assistant ports defined as 2616 telephones in a hunt circle

In this configuration, you use one service number to access the Integrated Call Assistant. All calls reach the default service. The number can be a pilot DN or the DN of one of the Integrated Call Assistant ports.

If you require multiple access DNs, you can define more than one pilot DN/hunt group leading to the same ports. Or you can define a phantom loop (this requires the PHTN software package) with phantom TNs leading to the Integrated Call Assistant hunt circle.

Do not use the port DNs for multiple DN access and service differentiation.

You can forward any DN to Integrated Call Assistant for Hunt and ACD options.

Installing Integrated Call Assistant card, adapter, and cables

Contents

This section contains information on the following topics:

Introduction

This section outlines the steps to install the Integrated Call Assistant circuit card, the Small System adapter, and cables.

Card and adapter description

The Integrated Call Assistant is a single-slot IPE card. It emulates a digital line card. The Integrated Call Assistant requires serial and Ethernet connections. You install an adapter with TTY and Ethernet ports to provide these connections. In the IPE module, the adapter connects to the

backplane cable that connects to the Integrated Call Assistant card slot. In the Small System cabinet, the adapter plugs into the 50-pin I/O connector in the cabinet.

Prepare for installation

Step	Action
1	Select an IPE module card slot for Integrated Call Assistant (see Table 5 "Integrated Call Assistant-compatible card slots" (page 37)).
2	Locate the backplane I/O connector or cabinet connector for the slot. If you don't know how to find the I/O connector for your module, "I/O panel slot charts" (page 191).
3	Assemble tools.
4	Locate adapter.
5	Make sure module or cabinet has anti-static wrist strap, or attach anti-static shoe straps.

--End--

Tools for adapter installation

You need the following tools to install the adapter:

- 3/16th socket wrench
- small slotted screwdriver
- small Phillips screwdriver
- Ty-wrap cutter (only required if IPE module I/O panel has pre-installed Telco cables.)

Equipment compatibility

Integrated Call Assistant is supported on the following systems:

- Meridian 1 PBX 11C Chassis, Meridian 1 PBX 11C Cabinet
- Meridian 1 PBX 51C, Meridian 1 Option 61C
- Meridian 1 Option 61C, Meridian 1 PBX 61C
- Meridian 1 PBX 81, Meridian 1 Option 81C, Meridian 1 PBX 81C
- CS 1000M HG, CS 1000M SG, CS 1000M MG

Table 5 "Integrated Call Assistant-compatible card slots" (page 37) lists the IPE modules and card slots suitable for Integrated Call Assistant.

Table 5
Integrated Call Assistant-compatible card slots

Modules	Integrated Call Assistant card slots
NT8D37BA/EC IPE modules, NT8D11BC/ED CE/IPE modules	All available IPE card slots.
NT8D37AA/DC IPE modules	0, 4, 8, and 12
NT8D11AC/DC CE/IPE modules	0

Figure 1 "Integrated Call Assistant controls, indicators, and connectors" (page 38) describes the Integrated Call Assistant controls, indicators and connectors. Figure 2 "NT5D52 adapter for IPE modules" (page 39) and Figure 3 "NT5D52 adapter for Small System cabinets" (page 39), show the IPE module and Small System cabinet Integrated Call Assistant adapters. The adapters provide the Ethernet and serial interface to Integrated Call Assistant.

Figure 1
Integrated Call Assistant controls, indicators, and connectors

Figure 2
NT5D52 adapter for IPE modules

553-8631

Figure 3
NT5D52 adapter for Small System cabinets

553-8633
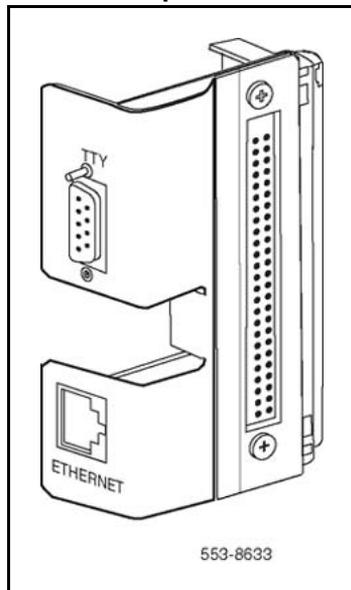
Install Integrated Call Assistant

Step	Action
1	Remove the IPE module cover or Small System cabinet cover.
2	Attach the anti-static wrist strap to your wrist, or discharge static electricity on the cabinet or module's bare metal surface.
3	Select the module or cabinet card slot according to work order, or see Table 5 "Integrated Call Assistant-compatible card slots" (page 37).
4	Flip the Integrated Call Assistant top locking latch up and the bottom locking latch down.
5	Insert the Integrated Call Assistant card into card-aligning guides in the card cage.
6	Gently push the Integrated Call Assistant into the slot until you feel resistance.
7	Lock the card in the cardcage by simultaneously pushing ends of the locking latches against the faceplate.
8	If the module or cabinet is turned on, the Integrated Call Assistant status LED and PCMCIA LED flash as Integrated Call Assistant conducts a self-test. If the self-test is successful, the PCMCIA LED goes out and the ENL/DIS LED remains ON until Integrated Call Assistant is software-enabled in LD 32.

--End--

Install adapter in IPE module

Step	Action
1	Identify the I/O panel connector that corresponds to the Integrated Call Assistant card slot.
2	Remove the I/O panel safety cover.

> **DANGER**
> **DANGER OF ELECTRIC SHOCK**
> When you remove the I/O safety panel to install the adapter. You can be exposed you to high voltages (-48 Vdc) present in the IPE module backplane.

Step	Action
3	Use a 3/16th socket wrench and slotted screwdriver to disconnect the filter from I/O panel.
4	Pull the filter and backplane cable through the slot toward the backplane.

5 Unsnap the clips that connect the filter to the cable and discard the filter (see Figure 4 "Disconnect filter from backplane cable" (page 42))

> **WARNING**
> The filter connected to the NT8D81BA cable cannot be removed.
>
> If you have the NT8D81BA cable, you must replace it with the NT8D81AA cable to continue the procedure.

> **WARNING**
> Do not drop fasteners into the system column. Loose metal hardware can cause serious power problems.

6 Use a small Phillips screwdriver to remove the two screws and washer from the adapter. Retain the screws and washers.

7 Plug the adapter 50-pin connector into the backplane cable 50-pin connector. Press down on the clips to snap the adapter into place (see Figure 5 "Install adapter 50-pin connector in backplane 50-pin cable connector" (page 43)).

8 Position the adapter in the I/O panel slot, with the TTY adapter on top.

9 Attach the adapter to the I/O panel using the two small screws and washers (see Figure 6 "Install adapter in IPE module I/O panel" (page 44)).

Figure 4
Disconnect filter from backplane cable

553-9075

Figure 5
Install adapter 50-pin connector in backplane 50-pin cable connector
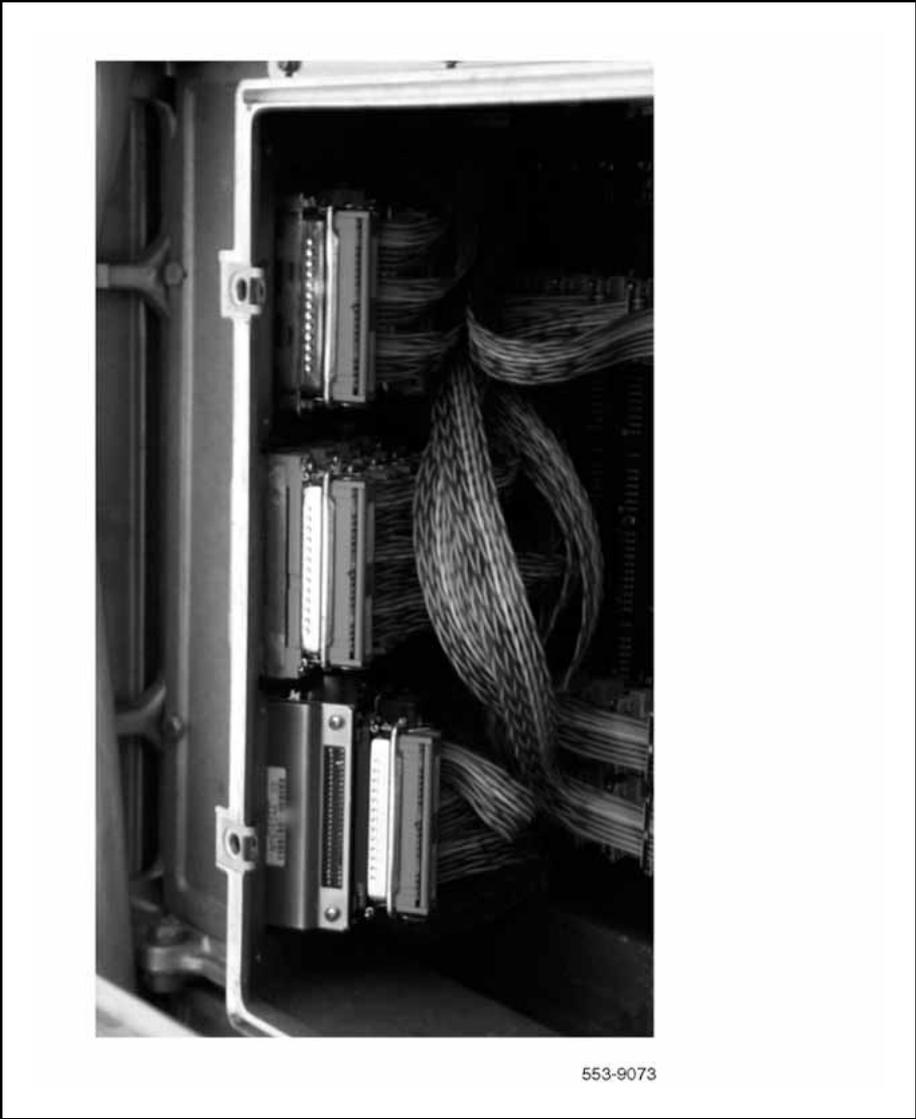
553-9073

Figure 6
Install adapter in IPE module I/O panel

553-9074

--End--
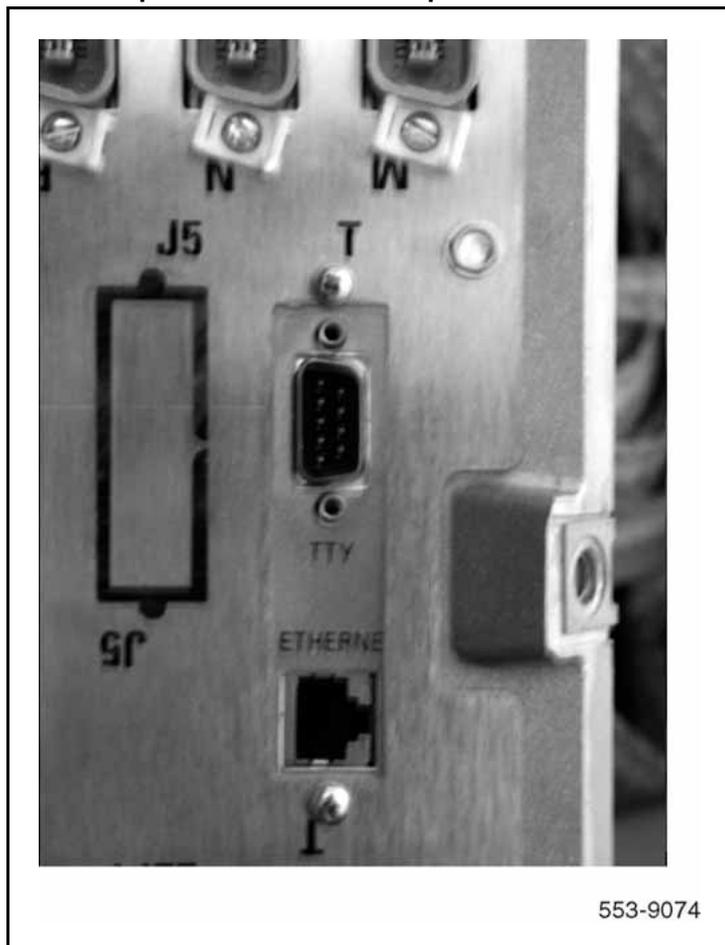
Install adapter in Small System cabinet

Step	Action
1	Remove cabinet cover.
2	Remove I/O panel protective strip.
3	Select the I/O connector that corresponds to the slot containing the Integrated Call Assistant card.
4	Plug the 50-pin side of the adapter into the I/O connector. Be sure the port labeled TTY is facing you and is on top.

5   Replace the I/O panel protective strip when you finish installing the adapters.

--End--

Connect local terminal and Ethernet cables to adapter

Step	Action
1	Connect a DB-9 to DB-25 cable from the adapter TTY port to the terminal serial port.
2	Configure the terminal or terminal emulation program settings: • 9600 baud • 8 data bits • 1 stop bit • no parity Integrated Call Assistant displays the key code prompt on the terminal screen as soon as you connect the terminal to the adapter.
3	Connect an RJ-45 cable from the adapter Ethernet port to the Ethernet hub (see Figure 7 "Integrated Call Assistant local terminal and Ethernet connections" (page 46)).
4	Connect Integrated Call Assistant to your network using standard Ethernet connection rules.

Figure 7
Integrated Call Assistant local terminal and Ethernet connections
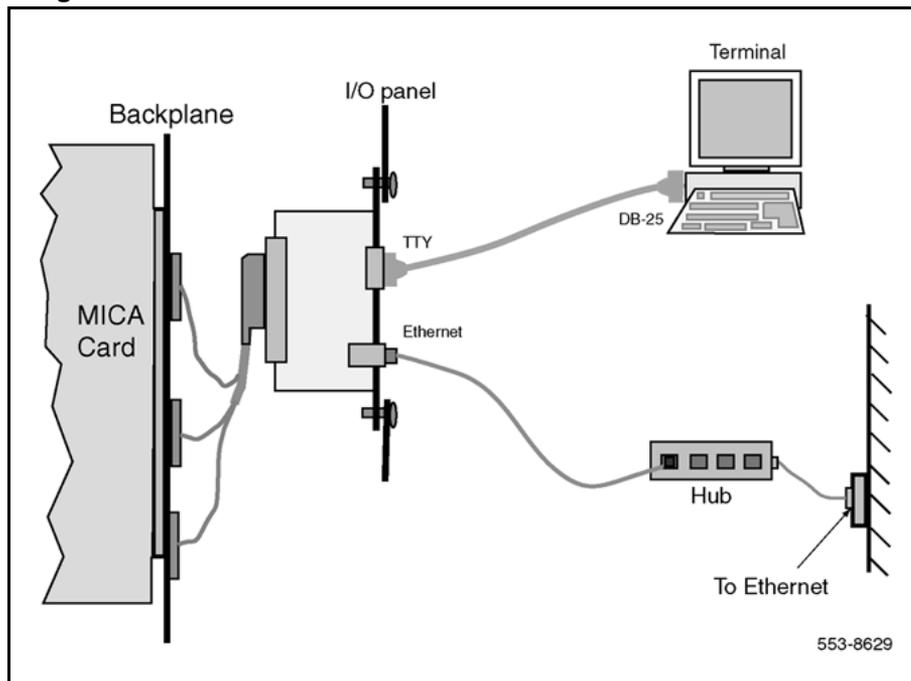
--End--

Connect a modem to the adapter

This procedure requires a modem, a 9-pin to DB-25 cable, an RJ11 cable and a null modem, if required (see Figure 8 "Integrated Call Assistant modem and Ethernet connection example" (page 47)). "Symptom: Unable to establish modem communicationwith Integrated Call Assistant" (page 181) if you need help with modem settings. Table 6 "NT5D52 connector pin description" (page 46) describes the adapter pins.

Table 6
NT5D52 connector pin description

	Pin Number	Signal Description
9-pin serial connector	2	RS232 Tx (transmit)
	3	RS232 Rx (receive)
	5	GND (ground)
RJ-45 Ethernet connector	1	LAN_Tx +
	2	LAN_Tx -

Table 6
NT5D52 connector pin description (cont'd.)

Pin Number	Signal Description
3	LAN_Rx +
6	LAN_Rx -

Step	Action
1	Connect cable between TTY adapter and modem. Use null modem if required.
2	Connect the modem to the phone plug.
3	Connect the Ethernet cable to the adapter (see Figure 8 "Integrated Call Assistant modem and Ethernet connection example" (page 47)).

Figure 8
Integrated Call Assistant modem and Ethernet connection example

--End--
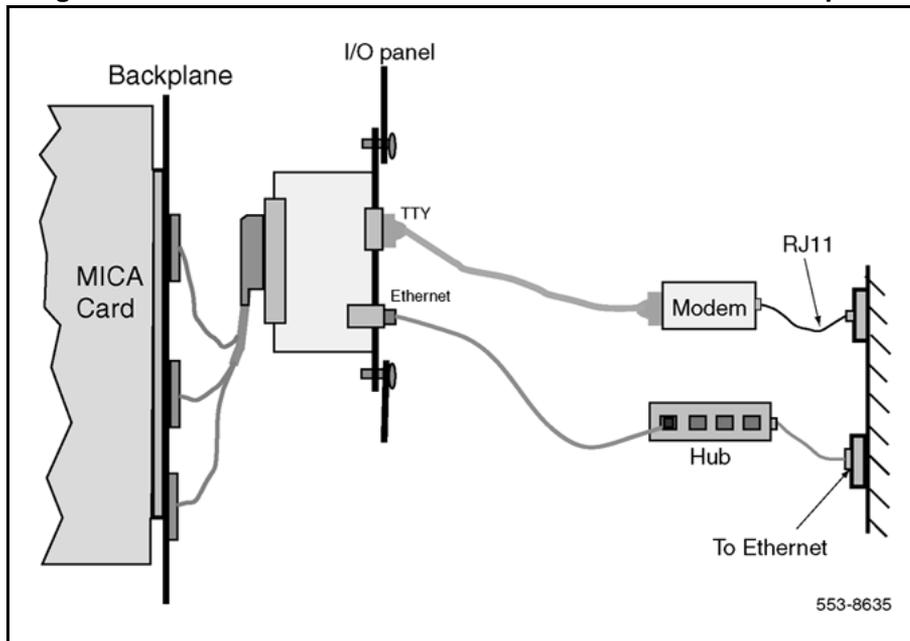
Configuring Integrated Call Assistant initial settings

Contents

This section contains information on the following topics:

Introduction

This procedure explains how to:

- enter the Integrated Call Assistant keycode to activate the Integrated Call Assistant ports
- log in to the Command Line Interface
- enter IP address information
- configure ACD parameters, if required

Integrated Call Assistant IP address, subnet mask, and gateway address requirements

Obtain the following information for each Integrated Call Assistant from your network administrator or other source:

- **IP address** is the Integrated Call Assistant Internet Protocol address. It has the same format as the gateway address.

- **subnet mask** has XXX.XXX.XXX.XXX format, where every XXX is in the range 0-255. Subnet mask in binary presentation of 32 bits has at least the first eight digits "1" and the last digit is "0".

- **gateway address** has XXX.XXX.XXX.XXX format, where every token is in the range 0-255.

Enter the key code and login

Integrated Call Assistant displays a key code prompt screen the first time you install Integrated Call Assistant and connect a terminal (see Figure 9 "Integrated Call Assistant key code screen example" (page 51)). Integrated Call Assistant requires a key code to activate the ports.

Step	Action
1	Establish a serial connection to Integrated Call Assistant through the adapter TTY port. Configure the terminal or computer terminal emulation program to the following parameters: Transmission speed: 9600 bps; Data bits: 8; Stop bit: 1 Parity: No; Flow control: none (Do not use XON/XOFF flow control).
2	Locate the key code label in the Integrated Call Assistant shipping carton.
3	At the **Modify, Save, Cancel:** prompt, type **M** and press Return.
4	At the **max ports(0):** prompt, type in the number of Integrated Call Assistant ports listed on the keycode label and press **Return**.
5	At the prompt **Modify, Save, Cancel:** prompt, type **s** and press Return.
6	Type in keycode1, then press Return. Type in keycode2, press Return. Type in keycode3, then press **Return**.
7	At the prompt **Modify, Save, Cancel:** prompt, type in **s** and press Return.
8	Integrated Call Assistant continues the start-up process and displays the Command Line Interface (CLI) login screen (see

Figure 10 "Command Line Interface login screen" (page 51)). At the login prompt, type **user** and press Return.

--End--

Figure 9
Integrated Call Assistant key code screen example

```
Modify, Save, Cancel: M

max ports( o ): 8

Modify, Save, Cancel: S

Enter key-code1(8 characters): 12345678

Enter key-code2(8 characters): 11223344

Enter key-code3(8 characters): 99887766█
```

Figure 10
Command Line Interface login screen

```
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

login: user

previous user login:

SAdmin/, SMaint/, PAdmin/, PMaint/, AAdmin/, ADebug/, MICA/, LOgout, ?:
```

Disable Acquire Failed prompts

Integrated Call Assistant displays "Acquire Failed" prompts the first time you log in because the card is not enabled. To disable the prompts, perform steps 1-4 (see Figure 11 "AAdmin menu" (page 52)).

Step	Action
1	At the CLI Main Menu prompts - SAdmin/, SMaint/, PAdmin/, AAdmin/, ADebug/, MICA/, LOgout, ?: enter AA
2	At the prompt - LOading/, MAnaging/, BAckup/,?: enter m
3	At the prompt - LIst, SHdow, TErmin, RUn,?: enter sh 0

4   Press /, to return to the CLI Main Menu.

--End--

Figure 11
AAdmin menu

```
××××××××××××××××××××××××××××××××××××××××××××××××××××××××××××××××××××
                    APPLICATION PLATFORM
                    --------------------
Card name: MPK

Dongle: 10010166

××××××××××××××××××××××××××××××××××××××××××××××××××××××××××××××××××××

login: user

previous user login: Jul. 20, 1999 20:04

 SAdmin/, SMaint/, PAdmin/, PMaint/, AAdmin/, ADebug/, MICA/, LOgout, ?: AA


 LOading/, MAnaging/, BAckup/, ?: m


 LIst, SHdown, TErmin, RUn, ?: sh0
```

Enter IP address for non-ACD configuration

Step	Action
1	At the CLI Main Menu prompt (see Figure 12 "Enter IP address - non-ACD configuration" (page 53)):
	a Select **MICA** and press Return.
	b Select **SA** and press Return.
	c Select **SY** and press Return.
2	At the prompt **card name:** enter up to ten characters to change the default card name for Integrated Call Assistant, if required.
3	At the prompt **subnet mask:** enter the subnet mask data.
4	At the prompt **gateway address:** enter the gateway address.
5	At the prompt **IP address:** enter the IP address.
6	At the prompt **Modify, Save, Cancel:** type **S** and press Return.
7	At the prompt **Restart AP? (Yes, (No))** type **Y**.
8	The Integrated Call Assistant automatically restarts

--End--

Figure 12
Enter IP address - non-ACD configuration

```
    SAdmin/, SMaint/, PAdmin/, PMaint/, AAdmin/, ADebug/, MICA/, LOgout, ?:(MICA)

    SAdmin/, SMaint/, PAdmin/, PMaint/, LOgout, ?:(SA)

  SYstem, ?:(SY)

  System Attributes:
  card name:
  subnet mask:
  gateway address:
  IP address:
  Modify, Save, Cancel: █
```

Enter IP address and ACD settings for ACD configuration

In this procedure, you select SA/SY directory from the CLI main menu (see circled items in Figure 13 "Enter IP address and ACD settings" (page 54)). Integrated Call Assistant presents a window that contains 18 prompts. You only respond to the prompts listed below, which are highlighted by a square box in Figure 13 "Enter IP address and ACD settings" (page 54):

- card name (change card name if desired)

- card_acd: Press return to configure ACD definitions. The default setting is Y.

- Agent ID: if you use Agent ID, enter the first number of the Agent ID. For example, if you have a group of 32 agent IDs that begins with 2000, enter 2000

- Multiple queue: Enter a Y or N

- subnet mask:

- gateway address:

- IP address:

IP address and ACD settings procedures

Step	Action
1	Login to Integrated Call Assistant. At the main menu prompt (refer to Figure 13 "Enter IP address and ACD settings" (page 54)):

   a   select **SA** and press Return

   b   Select **SY** and press Return

2   At the prompt **card name:** enter up to ten characters to change the default card name for Integrated Call Assistant, if required.

Press **Return** until you reach **card_acd**

3   At the prompt **card_acd:** press Return if you use ACD, or enter N if you use Hunt.

4   At the prompt **agent ID:** enter the first number of the Agent ID group

5   At the prompt **acd multiple queue:** enter Y or N.

Press **Return** until you reach **subnet mask**.

6   At the prompt **subnet mask:** enter the subnet mask data.

7   At the prompt **gateway address:** enter the gateway address.

8   At the prompt **IP address:** enter the IP address.

9   At the prompt **Modify, Save, Cancel:** type s and press Return.

10   At the prompt **Restart AP? (Yes, (No))** type Y.

11   Integrated Call Assistant automatically restarts.

--End--

Figure 13
Enter IP address and ACD settings

```
   SAdmin/, SMaint/, PAdmin/, PMaint/, AAdmin/, ADebug/, MICA/, LOgout, ?:(SA)

   SYstem, CAT, USDN, CADence/, ?:(sy)

 System Attributes:
 card name: MPK
 idle timeout minutes: 20
 report aging days: 7
 short occupancy seconds: 5
 card_acd : defined
 agent id: not defined
 acd multiple queue: no
 revert dn:
 application traffic report hours: 0
 default coding law: Mu_law
 complete trnsf delay seconds: 1
 number of charge digits: 23
 subnet mask: 255.255.240.0
 gateway address: 47.82.32.1
 IP address: 47.82.45.97
 DBG IPaddress:
 DBG port: not defined
 CAS IPaddress:
 Modify, Save, Cancel: █
```

Preparing to configure Integrated Call Assistant

Contents

This section contains information on the following topics:

Introduction

In this section, you learn how to prepare for Integrated Call Assistant configuration. Configure Integrated Call Assistant in two steps:

Step	Action
1	Step 1 - Build phone sets in LD 11, build the ACD queue in LD 23 (if you use the ACD applications), and software-enable Integrated Call Assistant in LD 32.
2	Step 2 - Log in to the Integrated Call Assistant Browser User Interface (BUI) and build treatments for Integrated Call Assistant service(s). An Integrated Call Assistant treatment contains a set of instructions that tell Integrated Call Assistant how to handle a call to an Integrated Call Assistant service DN.

--End--

Preparation tasks

Step	Action
1	Select a Integrated Call Assistant application:

Integrated Call Assistant supports two Auto Attendant application options. Auto-attendant means that Integrated Call Assistant answers the incoming call and presents the customer with the option to dial-by-name, or dial by number to set up a call transfer. The two options are:

- Auto-attendant using circular hunt

- Auto-attendant using ACD features
  Two ACD front-end call-handler application options are available. A front-end call-handler application means that Integrated Call Assistant answers the call and then presents menus that give customers multiple choices for call transfer, FAX, and other services. You can also route calls differently depending on the incoming number.

- Call routing by menus only

- Call routing by dialed number.

2 Verify that you have the required software packages to support your Integrated Call Assistant application.

3 If you use Agent ID, get a block of sequential Agent IDs. The quantity of Agent IDs equals the amount of Integrated Call Assistant ports.

4 If you use ACD scheduled data blocks, then the agent IDs must be consecutive numbers within the lower and upper limit starting with the number assigned to the first agent ID. If you use Agent ID, Integrated Call Assistant ports do not login until you enter ACD definitions in the Properties window of the Browser User Interface.

5 If you use ADS or SCB, the maximum number of agents who are allowed to login at once must also be adjusted to allow the Integrated Call Assistant agents to login. This is done in the LOG prompt in the SCB or ADS block.

6 Find out if you use Multiple Queue Assignment (MQA).

7 Decide if you will use the RPRT in LD 23. You cannot change these settings once you build your phones. If the RPRT is set to NO, it is not necessary to configure MQA on Integrated Call Assistant to YES.

--End--

Configuration guidelines

Step	Action
1	Define the ACD block. The administrator can define RAN routes, timers, overflow and other attributes.
2	Define access DNs: - ACD queues with no agents, their night DN leading to the ACD DN defined in the first step, or - Define an incoming route with DNIS, and its trunks auto-terminating on ACD defined in the first step.
3	Define each unit of the card as a digital telephone (2616), agent of the ACD DN defined in the first step. Define keys as: - Key 0 - ACD - Key 1 - SCN (Single Call Not-Ringing) with a dedicated DN. - Key 2 - NRD (Not Ready) - Key 3 - MSB (Make Set Busy) - Key 4 - TRN (Transfer)
4	Consider that Integrated Call Assistant handles call transfer screening when you define access restrictions.
5	If only a subset of the card's units are configured, they should begin from unit 0 and on. Voice units can be configured for units 17-31.
6	After defining all ports, enable the card.

--End--

Configuring Integrated Call Assistant (non-ACD)

Contents

This section contains information on the following topics:

"Introduction" (page 59)

" Enable Integrated Call Assistant" (page 60)

"Check the configuration" (page 60)

Introduction

These procedures explain how to configure Integrated Call Assistant ports as digital telephones and enable the Integrated Call Assistant if you have a non-ACD configuration. Follow the prompts and responses in Table 7 "LD 11" (page 59) to configure each Integrated Call Assistant port as a digital telephone. In LD 11, do not define Calling Name Allowed (CNA) on the Integrated Call Assistant port. Use the default setting Calling Name Denied.

Table 7
LD 11

Prompt	Response	Description
REQ:	NEW	Add new data.
TYPE:	2616	M2616 Digital Touchphone.
TN		Terminal Number Format for Large System and CS 1000E system, where l = loop,
	l s c u	s = shelf, c = card, u = unit.

Table 7
LD 11 (cont'd.)

Prompt	Response	Description
	c u	Format for Meridian 1 Small Systems and Media Gateway 1000B where c = card and u = unit.
CUST	xx	Customer number, as defined in LD 15.
CLS		Class of Service options.
	FLXA	Flexible voice/data Allowed. Used for ports 16-31 on a 32-port card.
	(VCE)	Voice Terminal.
	(WTA)	Warning Tone Allowed.
HUNT	x...x	Hunt DN of next station in hunt chain.
EHT	x...x	External Hunt DN (optional).
LHK	(0) -69	Last Hunt Key number limit.
KEY	0 SCR <DN>	Single Call Ringing.
KEY	1 SCN <DN>	Single Call Non-Ringing.
KEY	3 MSB	Make Set Busy. *Note:* KEY 2 is not used.
KEY	4 TRN	Transfer.

Enable Integrated Call Assistant

Load LD32 to enable Integrated Call Assistant:

LD 32	to load the program
ENLC l s c	l s c - l = loop, s = shelf, c = card
****	to exit the program

Check the configuration

Load LD 20 to check the configuration:

LD 20	to load the program
REQ	PRT
TYPE	TNB
TN	l s c, where l=loop, s=shelf, c=card
****	to exit the program

Configuring Integrated Call Assistant (ACD)

Contents

This section contains information on the following topics:

Introduction

These procedures explain how to build an ACD queue, build the ACD agents, and enable the Integrated Call Assistant.

Note: Be sure to read "Preparing to configure Integrated Call Assistant" (page 55) before you configure the ACD queue and agents.

Define Agent ID and other parameters in the Browser User Interface or the Command Line Interface. You must define the settings or the ACD agents cannot log in.

Determine sequential Agent ID numbers, and MQA settings.

If your application uses Agent ID, perform steps 1 and 2. If you do not use Agent ID, start with step 2.

Step	Action
1	If your application uses Agent ID, determine a new range of sequential four-digit Agent ID numbers for Integrated Call Assistant. You can use CPND for queues forwarded to the Integrated Call Assistant queue. The quantity of Agent IDs required depends on the number of Integrated Call Assistant ports you purchased. The number of ports is printed on the keycode label. For example, if you have an 8-port Integrated Call Assistant, you need eight **sequential** four-digit Agent ID numbers.
2	If you use MQA, do not define Calling Party Name Display (CPND) for the ACD queue used for Integrated Call Assistant. If you do not use MQA, you can use CPND. Use LD 23 to find out the Agent ID range that exists and to find out the Multiple Queue Agent (MQA) settings (MQA = yes or MQA = no):

LD 23	to load the program
REQ	PRT
TYPE	SCB or ADS, depending on your application.
	SCB Schedule data Block for ACD Management Reports
	ADS Auxiliary Data System data block
	Note: Determine the maximum number of agents that can be logged in, including queues and voicemail.
****	to exit the program

--End--

Determine ACD agent DN range and assign queue DN

Procedure 1
Determining the ACD agent DN range and assigning the queue DN

Step	Action
1	Determine a group of unused DNs for your ACD agents equal to the number of ports you purchased:

LD 22	to load the program
REQ	PRT

	TYPE	LUDN — List Unused Directory Numbers
	****	to exit the program

2   Determine the Integrated Call Assistant queue DN.

--End--

Build an ACD queue in LD23
Procedure 2
Building an ACD queue

Step	**Action**

---

1   Open LD 23.

2   Build the ACD queue for Integrated Call Assistant. Figure 14 "LD 23 sample configuration for Integrated Call Assistant (Part 1 of 2)" (page 66), and Figure 15 "LD 23 sample configuration for Integrated Call Assistant (Part 2 of 2)" (page 67), show an example of an ACD queue programmed in LD 23. The prompts and responses are highlighted with a black square.

--End--

Table 8
LD 23 Build an ACD queue

Prompt	**Response**	**Description**
REQ	NEW	Add new data.
	CHG	Change existing data.
	PRT	Print data.
TYPE	ACD	Automatic Call Distribution
CUST	xx	Customer number associated with this data block.
ACDN	x...x	ACD Directory Number assigned to the Integrated Call Assistant card. This is the ACD queue DN.
		Up to four digits, up to seven digits with Directory Number Expansion (DNXP) package 150.

Table 8
LD 23 Build an ACD queue (cont'd.)

Prompt	Response	Description
MAXP	xxxx	Maximum Number of Agent Positions. This number equals the maximum available ports on Integrated Call Assistant. MAXP value can be increased to the allowed maximum or decreased to the current agents.
RPRT	(NO) YES	Management reporting and status display.

Figure 14
LD 23 sample configuration for Integrated Call Assistant (Part 1 of 2)

```
>LD 23
ACD000
MEM AVAIL: (U/P): 4866496    USED: 1850943    TOT: 6717439
DISK SPACE NEEDED: 751 KBYTES
2MB BACKUP DISKETTE(S) NEEDED: 1  (PROJECTED LD43 - BKO)
ACD DNS  AVAIL:   889    USED:   111    TOT:  1000
REQ  PRT
TYPE ACD
CUST 0
ACDN 4004

TYPE ACD
CUST 0
ACDN 4004
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
FORC NO
RTQT 0
SPCP YES
OBTN NO
```

Figure 15
LD 23 sample configuration for Integrated Call Assistant (Part 2 of 2)

```
RAO  NO
CWTH 1
NCWL NO
BYTH 0
OUTH 2047
TOFT NONE
HPQ  NO
OCN  NO
OUDN
IFDN
OUBU LNK LNK LNK LNK
EMRT
MURT
RTPC NO
HOML YES
RDNA NO
ACNT
NRAC NO
DAL  NO
RPRT YES
RAGT 4
DURT 30
RSND 4
FCTH 20
CRQS 100
IUR  NO

MEM AVAIL: (U/P): 4866496   USED: 1850943   TOT: 6717439
DISK SPACE NEEDED: 751 KBYTES
2MB BACKUP DISKETTE(S) NEEDED: 1  (PROJECTED LD43 - BKO)
ACD DNS  AVAIL:   889    USED:   111   TOT:  1000
REQ  END
```

Build ACD agents

In LD 11, do not define Calling Name Display Allowed (CNDA) on the
Integrated Call Assistant port. Use the default setting Calling Name
Display Denied (CNDD).

Note: If calls are directed to Integrated Call Assistant (using DNIS
digits on ISDN) and routed to a Phantom DN before going to the ACD
group, the Class of Service CNDA must be configured for the ACD
agent. In this configuration, the Phantom DN is presented to the
associated ACD group before the DNIS digits and calls are processed
based on the Phantom DN.

Procedure 3
Building ACD agents

Step	Action
1	Open LD 11 to configure ACD agents. See Table 9 "LD 11 ACD agent configuration" (page 68).
2	Repeat the steps in Table 9 "LD 11 ACD agent configuration" (page 68) for each ACD agent

Table 9
LD 11 ACD agent configuration

Prompt	Response	Description
REQ:	NEW	Add new data.
TYPE:	2616	M2616 Digital Touchphone.
TN		Terminal Number.
	l s c u	Format for Large System and CS 1000E system, where l = loop, s = shelf, c = card, u = unit.
	c u	Format for Meridian 1 Small Systems and Media Gateway 1000B where c = card and u = unit.
CUST	xx	Customer number, as defined in LD 15
CLS		Class of Service options.
	FLXA	Flexible voice/data Allowed. Used for ports 16-31 on a 32-port card.
	(VCE)	Voice Terminal.
	(WTA)	Warning Tone Allowed.
KEY	0 ACD <ACD DN> <POS DN>	Automatic Call Distribution. *Note:* You need to input a 0 in between the queue and the Position ID.
KEY	1 SCN	Single Call Non-Ringing with a dedicated DN.
KEY	2 NRD	Not Ready key. AGN class of service must be assigned.
KEY	3 MSB	Make Set Busy.
KEY	4 TRN	Transfer

--End--

Enable the Integrated Call Assistant

Open LD 32 and software-enable the Integrated Call Assistant card:

LD 32	to load the program
ENLC l s c	l s c - l = loop, s = shelf, c = card
****	to exit the program

Check the configuration

Open LD 20 to check the Integrated Call Assistant configuration. Figure 16 "LD 20 Integrated Call Assistant Configuration (part 1 of 2)" (page 70), and Figure 17 "LD 20 Integrated Call Assistant Configuration (part 2 of 2)" (page 71), show a sample LD 20 printout of a configured Integrated Call Assistant card.

LD 20	to load the program
REQ	PRT
TYPE	TNB
TN	l s c, where l = loop, s = shelf, c = card
****	to exit the program

Figure 16
LD 20 Integrated Call Assistant Configuration (part 1 of 2)

```
>LD 20

PT0000
REQ: PRT
TYPE: TNB
TN   76 0 8 0
SPWD
DATE
PAGE
DES

DES  MICA
TN   076 0 08 00
TYPE 2616
CDEN 8D
CUST 0
AOM  0
FDN
TGAR 1
LDN  NO
NCOS 0
SGRP 0
RNPG 0
SCI  0
SSU
XLST 0
SCPW
CLS  CTD FBD WTA LPR MTD FND HTD ADD HFD
     MWD LMPN RMMD SMWD AAD IMD XHD IRD NID OLD VCE DRG1
     POD DSX VMD CMSD CCSD SWD LND CNDD
     CFTD SFD DDV CNID CDCA MSID DAPA BFED RCBD
     ICDD CDMD MCTD CLBD AUTU
     GPUD DPUD DNDD CFXD ARHD FITD CNTD CLTD ASCD
     CPFA CPTA ABDD CFHD FICD NAID BUZZ AHD
     DDGA NAMA
     USRD ULAD RTDD RBDD RBHD PGND OCBD FLXD FTTC DNDY DN03
```

Figure 17
LD 20 Integrated Call Assistant Configuration (part 2 of 2)

```
              CPND_LANG ENG
              HUNT
              PLEV 02
              SPID NONE
              AST
              IAPG 0
              AACS NO
              ITNA NO
              DGRP
              PRI  01
              DNDR 0
              KEY  00 ACD 4004 0  4939210
                        AGN
                   01 SCN 4939250 0     MARP
                   02 NRD
                   03 MSB
                   04 TRN
                   05
                   06
                   07
                   08
                   09
                   10
                   11
                   12
                   13
                   14
                   15
          DATE  8 APR 1999


          NACT END
```

Integrated Call Assistant application examples

Contents

This section contains information on the following topics:

Introduction

This section gives examples of three Integrated Call Assistant applications.

Example 1 - An ACD menu-driven application

In Example 1, Integrated Call Assistant is installed at City Power, a utility company. Integrated Call Assistant answers calls with a customized greeting, plays menus to callers, and routes calls depending on keypad digits entered by customers.

City Power Inc. provides a single phone number for sales, service, incoming faxes, and emergencies. A customer finds that an AC power line has fallen off a pole during a storm and is live and sparking in her back yard. She calls the company at 1(800) 234-1000 and is greeted by an announcement from Integrated Call Assistant:

> "Welcome to City Power.
> For Sales, press 1
> For a Service Emergency, press 2
> For normal Service, press 3
> For name dialing, press 4
> If you know the extension number, press 5"

When the customer presses 2, Integrated Call Assistant routes the call to an emergency service technician. When the customer selects "1" for Sales, Integrated Call Assistant plays a menu script telling customers to press 1 for commercial sales and 2 for residential sales. Then they are placed into an ACD queue.

Example 2 - ACD front-end call handler using DNIS

In these ACD call center scenarios, all incoming call center trunks are auto-terminated to one or more Integrated Call Assistants, depending on the number of incoming trunks. Integrated Call Assistant plays specific greetings and menus and routes calls based on information provided by the Dialed Number Identification Service (DNIS).

Customer A calls 1-800-555-2000 to buy a Moore Super Vacuum Cleaner as advertised on television. The trunk they are terminated on (route 1 unit 3) is auto-terminated to an Integrated Call Assistant port. Integrated Call Assistant sees the incoming DNIS 1-(800)-555-2000 and plays a special message:

> "Thank you for calling the Moore Super Vacuum Cleaner order desk. Please hold for the next available operator".

The call is then placed into an ACD queue.

Customer B calls 1-800-222-3000 to buy a pair of Moore Super Boots as advertised on television. The trunk they are terminated on (route 1 unit 3) is auto-terminated to an Integrated Call Assistant port. Integrated Call Assistant sees the incoming DNIS (800) 222-3000 and plays a special message:

> "Thank you for calling the Moore Super Boots order desk. Please hold on to order your new boots."

The call is then placed into an ACD queue.

Example 3 - ACD front-end call handler using DNIS and CLID

Customer A in Quebec, Canada wants to buy a Moore Super Vacuum Cleaner as advertised on television. She calls 1-800-555-2000 from her home phone (514) 321-1234. The trunk she is terminated on (route 1 unit 3) is auto-terminated to an Integrated Call Assistant port. Integrated Call Assistant sees the incoming CLID of (514) 555-1234 and the DNIS 1-(800)-555-2000 and plays a special French message:

> "Thank you for calling the Moore Super Vacuum Cleaner order desk. Please hold for the next available operator".

Example 3 - ACD front-end call handler using DNIS and CLID   **75**

The call is then placed into an ACD queue. Integrated Call Assistant transmits CLID information so the call is answered in French.

Customer B in Toronto, Canada wants to buy a Moore Super Vacuum Cleaner as advertised on television. He calls 1-800-555-2000 from his home phone (416) 321-1234. The trunk they are terminated on (route 1 unit 3) is auto-terminated to an Integrated Call Assistant port. Integrated Call Assistant sees the incoming CLID of (514) 555-1234 and the DNIS 1-(800)-555-2000 and plays an English message:

> "Thank you for calling the Moore Super Vacuum Cleaner order desk. Please hold for the next available operator"

The call is then placed into an ACD queue. Integrated Call Assistant transfers the call to an English speaking agent. Integrated Call Assistant transmits CLID information so the call is answered in English.

BUI configuration summary

Contents

This section contains information on the following topics:

Introduction

The Integrated Call Assistant Browser User Interface (BUI) is a Web server installed on the Integrated Call Assistant PC card. Access the BUI using Netscape or Microsoft Internet Explorer.

Procedure 4
Configure the Integrated Call Assistant BUI

Step	Action
1	Configure Properties and Special Days (usually done once during initial Integrated Call Assistant installation and configuration).
2	Create services and assign treatments that tell Integrated Call Assistant how to handle incoming calls to the services.
3	Import, create, or modify a name dialing database.

--End--

Properties procedure summary

Log in to Integrated Call Assistant, click the **Properties** tab, and configure four types of properties:

- General: Settings in this tab include Time-out periods, the number of dialed digits allowed in a valid DN, enabling Personal Recorded messages for all users, and setting the Voice Mail, Operator.

- Administration: Includes Interface Passwords and the login window title.

- Card: Displays the card's identity and version and allows you to configure ACD-related data.

- Reports: Determines which statistical reports to collect for Integrated Call Assistant and how long to keep the reports.

Special days procedure summary

Log in to Integrated Call Assistant, click the **Special Days** tab, and configure Holidays, Vacations, and any Special Day as required. Also define Weekdays and Holidays.

Service configuration procedure summary

When you configure a service, you define the parameters Integrated Call Assistant uses to handle customer calls.

Name dialing database procedure summary

Use the Name Dialing tab in the BUI to:

- import a name dialing database

- create a name dialing database

- edit a name dialing database

Logging in to the Browser User Interface (BUI)

Contents

This section contains information on the following topics:

Introduction

These procedures explain how to login to the Integrated Call Assistant Browser User Interface (BUI).

PC requirements

The PC you use to access the BUI must have the following requirements:

- minimum of 166 MHz PC Pentium processor
- minimum of 32 MB RAM
- minimum of 1 GB for the hard drive

Web browser characteristics

The BUI operates from a Java 1.1 level. This requires the user's PC to have one of the following web browsers:

- Netscape 4.5 (or later)
- Internet Explorer 4.01 (or later)

How to login to the Integrated Call Assistant BUI

Procedure 5

Logging into the Integrated Call Assistant BUI

Step	Action
1	Open your web browser.
2	Enter the Integrated Call Assistant IP address in the following format, where x represents your IP network address for Integrated Call Assistant (see Figure 18 "Enter Integrated Call Assistant IP address in Netscape" (page 80) and Figure 19 "Enter Integrated Call Assistant IP address in Internet Explorer" (page 80)): http://xx.xxx.xxx/mica_bui.html

Figure 18
Enter Integrated Call Assistant IP address in Netscape

Figure 19
Enter Integrated Call Assistant IP address in Internet Explorer
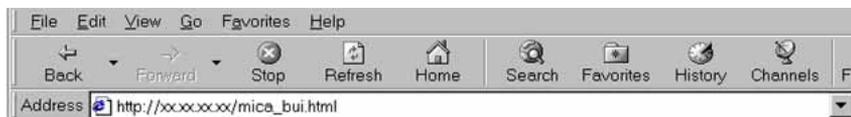
3	The Integrated Call Assistant Login window appears (see Figure 20 "Integrated Call Assistant Login window" (page 81)). Enter the default login and password and press Return or Enter. • Login - admin • Password - 000000
4	You can change the default Login and Password in the Properties Administration tab.

Figure 20
Integrated Call Assistant Login window
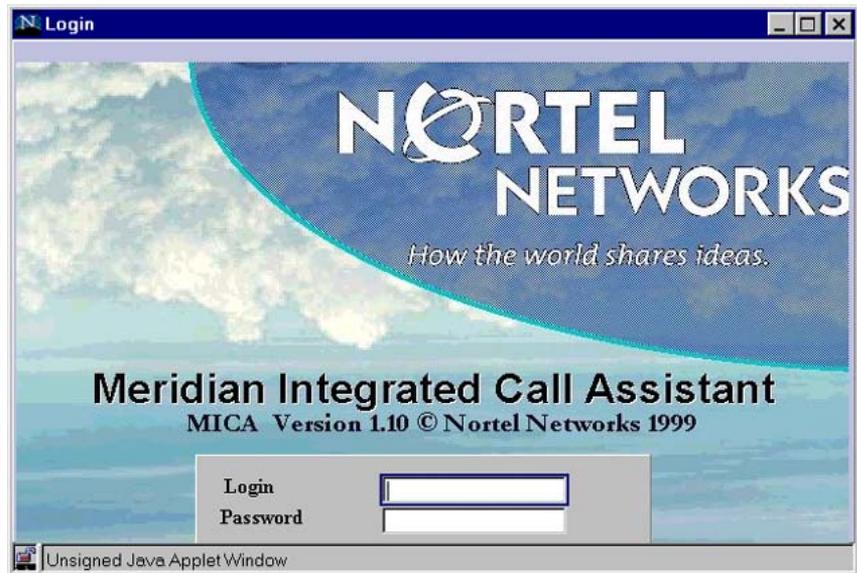
--End--

Defining Properties and Special Days

Contents

This section contains information on the following topics:

Introduction

These procedures explain how to configure Integrated Call Assistant properties and define Special Days.

Define properties

In this step, you configure four Integrated Call Assistant card properties:

- General: Settings in this tab include Time-out periods, the number of dialed digits allowed in a valid DN, enabling Personal Recorded messages for all users and setting the Voice Mail Operator.

- Administration: Includes Interface Passwords, and login window title.

- Card: Displays the card's identity and version, and allows you to configure ACD-related data.

- Reports: Determine which statistical reports to collect for Integrated Call Assistant and how long to keep the reports.

   Note: Configure the Properties in all four windows and then press OK.

Configure the General Properties window
Procedure 6
Configuring the General Properties window

Step	Action
1	Login to Integrated Call Assistant.

2   From the Main window, press the **Properties** button. The **Properties** window **General** tab appears. See Figure 21 "Properties window General tab" (page 85).

3   Configure the Integrated Call Assistant card **DN definitions** for Voice Mail, Operator Assistance and Default FAX. These settings define transfer destinations for received calls. DN transfer destinations are left empty, if they are not assigned. Enter up to 20 digits

4   Configure **Timeout Definitions**. **Maximum call length** defines the time period before the call receives the Timeout Action defined for **Call duration** in the **Voice Menus Options** tab. Range is 1-20 minutes.

         No input time-out defines the time period that the system waits for caller input before it takes the preset Timeout Action defined for **No action** in the **Voice Menus Options** tab. The range is one to ten seconds. Integrated Call Assistant also recognizes this setting as the length of time used as **interdigit timeout** for name and number dialing.

5   Configure **Dialed DN** length parameters to configure the number of digits allowed in a valid DN when the caller uses dial-by-number. This can provide an additional security check. DNs with fewer than the defined minimum or exceeding the defined maximum number of digits are disqualified. DN digit range is 1-32.

6   Allow or deny **Personal Verification for all subscribers**. Clicking on this dialog box displays a check mark and configures the Personal Recording option for all users. If this global option is not checked, the Personal Recording must be Allowed or Denied to each user in the Name Dialing Database displayed on the Name Dialing Edit window. If you have a database with more than 3,000 names, do not click this box. The Flash configuration maximum database size is 1,000 names.

Figure 21
Properties window General tab

--End--

Configure Administration Properties
Procedure 7
Configuring the Administration Properties

Step	Action
1	Click the **Administration** tab. See Figure 22 "Properties window Administration tab" (page 86).

Figure 22
Properties window Administration tab
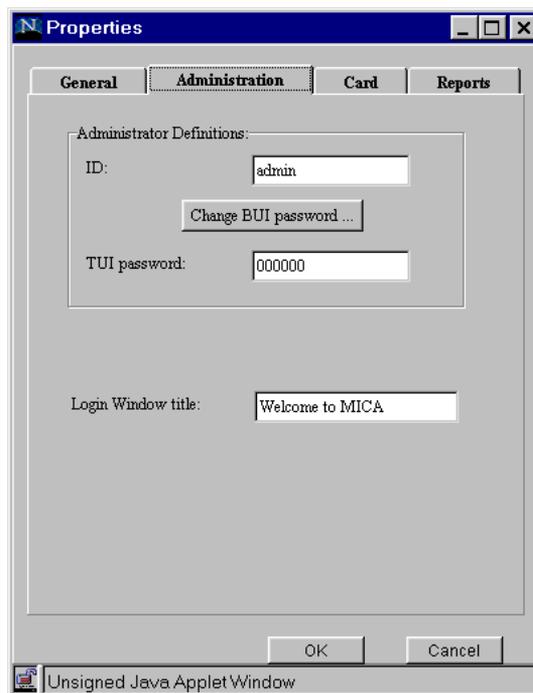
--End--

Configure Card Properties
Procedure 8
Configuring the Card Properties

Step	Action

1 Click on the **Card** tab. See Figure 23 "Properties window Card tab" (page 88).

2 Configure **Administrator Definitions**

- **ID** - Defines log in ID of the BUI user. Enter up to 20 characters and/or digits. The default is set to admin.

- **Change BUI password** Press this button to open the Password Change dialog box. Enter up to six characters and/or digits to replace the default password of six zeros (000000).

- Change the **TUI password**. Enter up to six digits to replace the default digit string 000000.

3   If required, change the default Integrated Call Assistant card name. Enter up to 20 characters and/or digits. The new card name is displayed in the main window's title the next time you login to Integrated Call Assistant.

4   Card version information is for viewing only and cannot be changed.

5   If you did not configure ACD parameters in the CLI, configure ACD parameters in this step. The ACD parameters are for ACD setup, and must match the configuration in the system.

> *Note:* If you make and save changes to ACD settings in the BUI, the CLI reflects the changes.

- **Agent ID** — Click in the box if your ACD is configured with the agent-ID option. The '**First port ID'** box turns white. Enter the *first* agent ID reserved for Integrated Call Assistant ports (length is four digits). This field corresponds to the **agent ID** prompt in the CLI.

- **ACD Multiple queue** — should be selected if the customer's ACD is configured with the multiple-queue option. This field corresponds to the **acd multiple queue:** prompt in the CLI.

- **MICA ports are ACD agents** — Integrated Call Assistant ports are ACD agents — indicates whether Integrated Call Assistant ports are defined as ACD agents or plain 2616 telephones. This field corresponds to the **card_acd**: prompt in the CLI.

Figure 23
Properties window Card tab
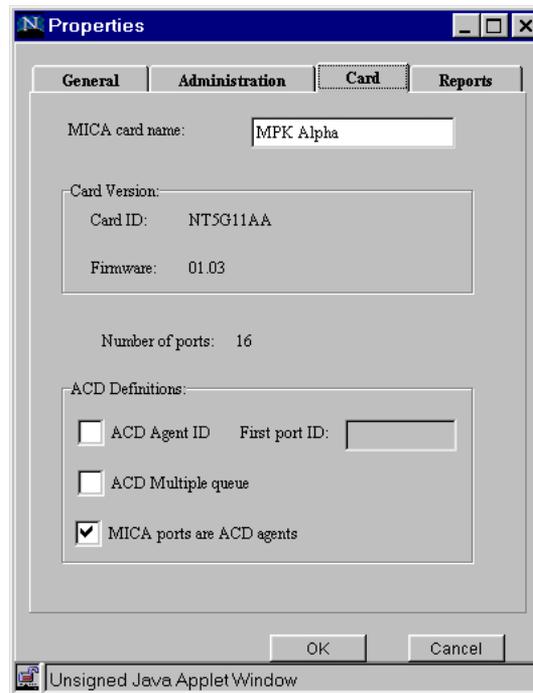
--End--

Configure Reports Properties

Integrated Call Assistant provides traffic peg reports and log reports.

Traffic Reports consist of special counters that are counted hourly, stored in special files on the PCMCIA disk on a daily basis and displayed in the BUI.

These events are pegged on the Integrated Call Assistant:

1. Total call number of incoming calls

2. Recording/Administrator calls

3. Incoming FAX calls

4. Name dialing attempts

5. Number dialing attempts

6. Average service time. This data is obtained indirectly: "Total service time" is counted as a peg, which is incremented not by one, but by

actual call length. BUI calculates "Average service time" as "Total service time" "Total calls" when displaying average service time.

7. Successful call transfers

8. Failed call transfers: busy number, wrong number, others

9. Name not found failures

10. Caller disconnected before system transferred his call

11. Screening violations

12. Service time exceeded

13. Switch language

The number of calls to each service is pegged, and displayed as separate pegs. Log reports are records of events, which are registered whenever they occur. The registration is done chronologically: the first event is first registered.

Log Reports are stored in special files on the PCMCIA disk on a per-day basis and displayed using the BUI. Logger events coming from calls to different services are registered together, in the same files.

The following events are reported whenever they occur (log reports):

1. CP Screening violation: screening violation: a caller attempted to have his/her call transferred to a number with a prefix which is prohibited by the administrator. The first three letters, CP, ATI, etc., is an event category mnemonic. CP means Call Process application, etc.

2. TUI Pswd failure: hacker alert: entrance to (TUI) administrator was denied, due to the maximum number of unsuccessful passwords being entered for a specific user, and as a result the call was disconnected.

Procedure 9
Configuring the reports properties

Step	Action
1	Click the Reports tab. See Figure 24 "Properties Reports tab" (page 90).
2	If required, deactivate the settings for **Traffic** and **Logger** reports.
3	If required, change Event Logger parameters.

- **Store history for** — indicates how long report/log file should be kept on Integrated Call Assistant.

- **Maximum size of daily report** — sets the size of each day's report. You view reports in the Reports window.

- **Event Categories Filter** — click in the dialog box of any event category to determine which events to include in the reports.

4   Press OK to save your changes and close the **Properties** window.

Figure 24
Properties Reports tab
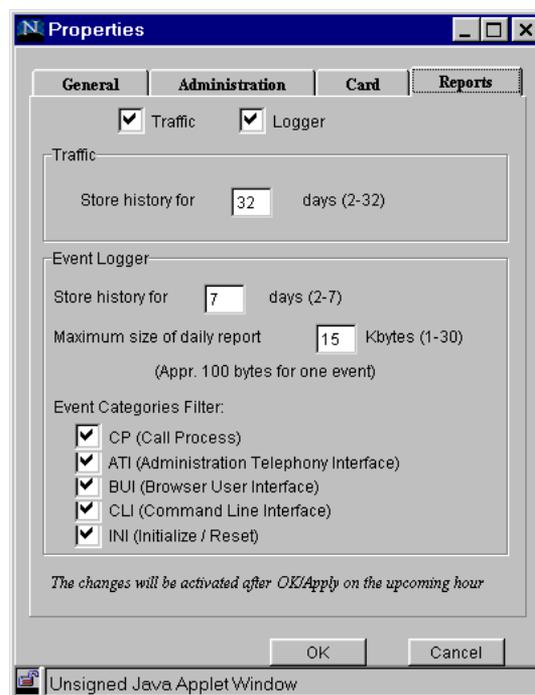
--End--

View Reports
Procedure 10
Viewing Reports

Step	Action

1   From the main window, click the **Reports** button. Integrated Call Assistant displays the daily traffic report. The column labeled **Today** is selected by default (see Figure 25 "Traffic Reports window" (page 91)).

2   If you want to view a report for another day, click on the column with that date. For example, click on 27/05 to see the May 27 report.

3   Click the **Show day** button. The default storage setting is 32 days for the hard disk configuration and seven days for the Flash configuration.

Figure 25
Traffic Reports window

--End--

View Event Logger report
Procedure 11
Viewing Event Logger reports

Step	Action
1	Click the **Event Logger** tab.
2	Use the scroll bar to highlight a particular date.
3	Press Cancel to exit the **Traffic** tab.

Figure 26
Event Logger window
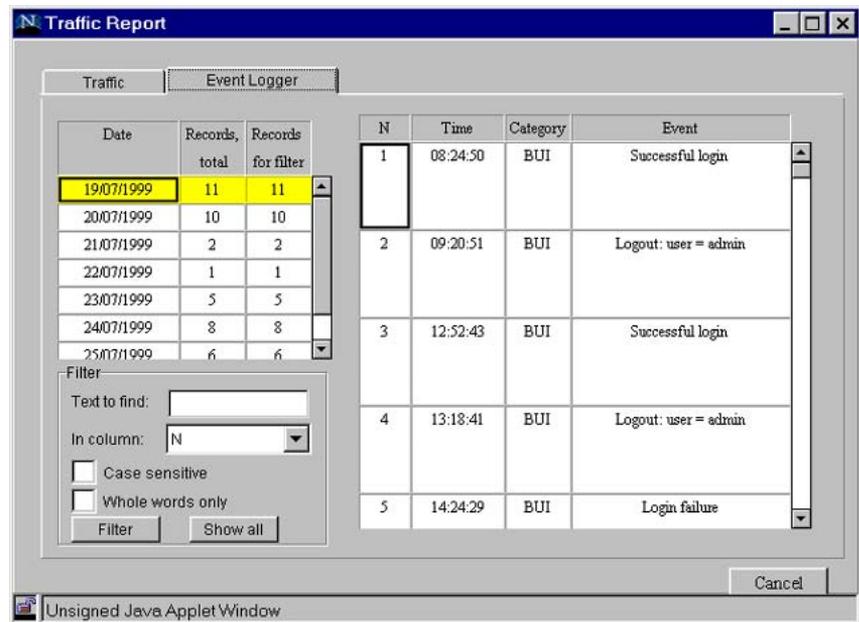
--End--

How to use the Event Logger Filter tool

Use the Filter tool to view only the records that contain specific information for a particular day. For example, you could view only records that contain the word login in the Event column for July 19, 1999.

Procedure 12
Using the Event Logger Filter tool

Step	Action
1	Select a date in the date column.
2	Enter the word or words you want to find in the **Text to find:** box.
3	Select a column name from the list box in the **In column:** field.
4	If required, click Case sensitive or Whole words only.
5	Press the **Filter** button.

6   Integrated Call Assistant displays only the records containing the word or words you specified. The **Records total** and **Records for filter** columns display the number of each kind of record.

--End--

How to view the Reports using FTP
You can get log and traffic files from Integrated Call Assistant using FTP. They will not look exactly like the BUI reports.

Procedure 13
Viewing the reports using FTP

Step	Action
1	ftp: <card IP address>
2	user: user
3	password: (CLI password - default is user)
4	cd oam
5	cd traffic
6	get files ending with. try
7	cd
8	cd log
9	get all files
10	software error files are in a:oam\err

--End--

Configure Special Days parameters
In this procedure, you define July 30 as a new Special day for City Power. You can add up to three Special Days. **Holidays** is a default entry and cannot be deleted. Default Holiday dates can be changed. Integrated Call Assistant lets you define Special Days parameters up to two years in advance.

You can have up to four types or groups of Special Days. You can include up to 150 days a year in the Special Days groups.

Procedure 14
Configuring Special Days parameters

Step	Action
1	From the Main Window, press the **Special Days** button (see Figure 27 "Special Days window" (page 94) for the default Special Days window).
2	Click **New**. Create a new Special Day called Board Meeting and press OK.
3	Define the Special Day as July 28, 1999.
4	Press Apply.
	Note: If you fill in the first five rows of the Definitions table press **Add Entry** to add a new row.
5	Click **Weekdays**. If required, modify the default Monday through Friday weekday definitions (see Figure 28 "Special Days andWeekdays Definitions window" (page 95)).

Figure 27
Special Days window
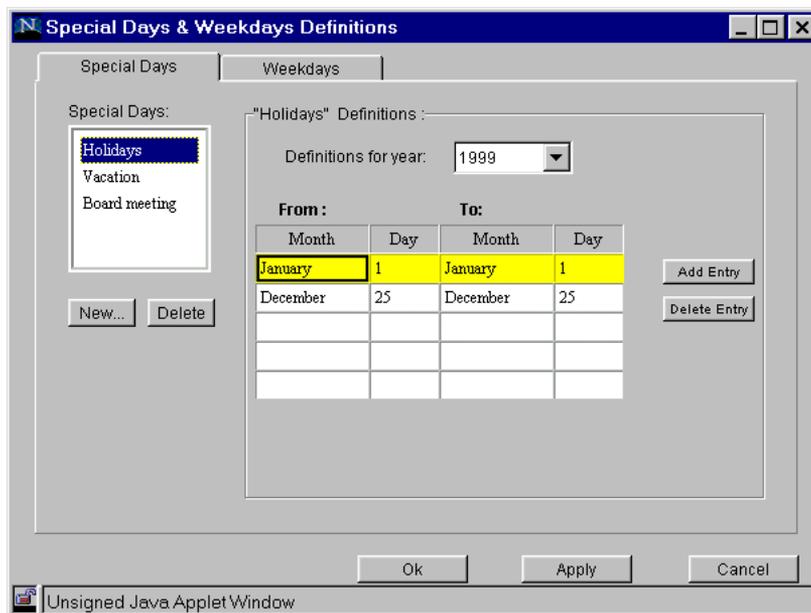
Figure 28
Special Days andWeekdays Definitions window
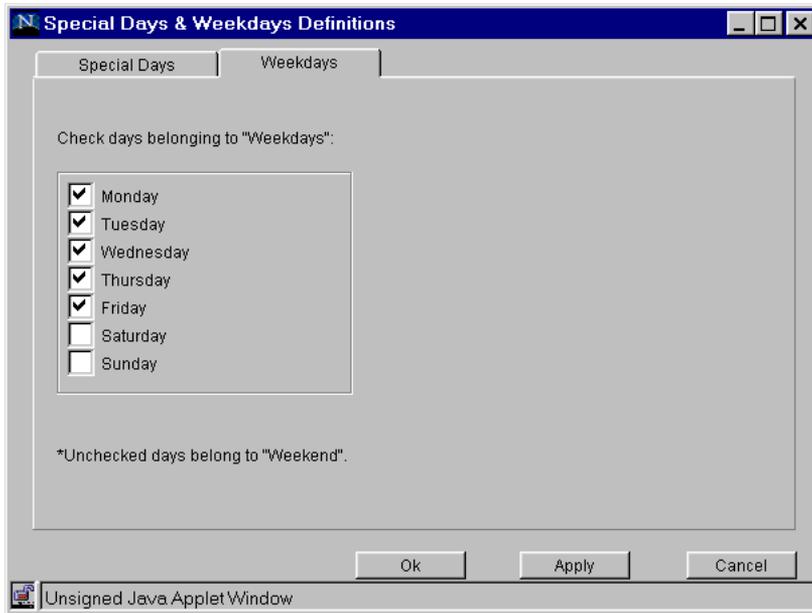
--End--

Configuring an Integrated Call Assistant service

Contents

This section contains information on the following topics:

Introduction

These procedures explain how to configure a service and assign a treatment to the service. You program different services for different requirements reached by a different dialed number. In each service, you define treatments that are activated depending on time and caller number. A treatment contains instructions that define how Integrated Call Assistant treats incoming calls.

> *Note:* The Integrated Call Assistant BUI contains a Default service which you cannot change.

Service Configuration procedure summary
Task Summary List

1. Configure a Voice Menu.

2. Define Call Screening tables.

3. Create a Service and assign treatments:

   a. Define caller groups.

   b. Define treatments.

   c. Define a schedule for the treatment.

4. Activate a service and assign a DN.

Service configuration parameters

Call transfer is subject to system limitations. For incoming calls on non-supervised trunks, the system allows transfer completion only after the called party has answered. In this case the Integrated Call Assistant will continue to retry the transfer for up to 15 seconds. During this time, the caller is on hold and will receive the hold treatment defined in the system.

In the hard drive configuration, you can define up to 32 different service profiles (assigned to service DNs), which lead to 32 different menus and 32 different call screening tables, based on 16 different time types and 16 different CLID types, to a maximum of 26 CLID digits.

In the Flash configuration, you may define up to eight different service profiles (assigned to service DNs), which lead to 16 different menus and eight different call screening tables, based on 16 different time types and 16 different CLID types, up to a maximum of 26 CLID digits.

About Integrated Call Assistant preconfigured services

In the hard drive configuration, Integrated Call Assistant includes five predefined services, four on the Flash card. The hard disk configuration supports up to 32 services. The Flash configuration supports up to eight services. The predefined services use predefined menus: 22 on the disk and 14 on the Flash card. The hard disk supports up to 32 menus and the Flash supports up to 16 menus.

You can keep the preconfigured services, modify them, ignore them or delete them. To delete a preconfigured service, highlight the service in the Main window **Services** list, and press the Delete button. Then delete related menus. For more information, see "Predefined service description" (page 130).

How to configure a service
Procedure 15
Configuring a service

Step	Action
1	Log in to Integrated Call Assistant. If you need help logging in, "Logging in to the Browser User Interface (BUI)" (page 79)
2	The Integrated Call Assistant Main Window appears. Figure 29 "Integrated Call Assistant main window components" (page 99) shows the Main window and identifies the Main window components. Table 10 "Main Window component description" (page 100) describes the components.
3	Click the **Voice Menus** button.

Figure 29
Integrated Call Assistant main window components

--End--

Table 10
Main Window component description

Number	Name	Description
1	Voice Menu button	Opens voice menu. Add or delete Voice menus; assign actions to digit keys; choose the greeting and the action following the greeting.
2	Working Services button	Opens the Working Services window. Activate available services so that they can be used by Integrated Call Assistant callers. A Service is activated by entering a Directory Number (DN) in the Service DN list. DNs can be up to seven digits long.
3	Call Screening button	Opens the Call Screening window. Select screening standards to 'block' or allow call processing to those call destinations whose prefixes (or DNs) are included in the set of screening standards.
4	Schedule tab	Shows the treatments the caller will receive at each time period (days/hours).
5	Name Dialing button	Opens the Name dialing window, where you can edit the Name Dialing database, or activate import of a customer database. This database holds the names, phone numbers, and personal recording authorization records for all callers serviced by the system.
6	Treatments tab	Sets the desired Voice Menu, Language, determine the Call Screening and define a FAX number for a particular Caller Group.
7	Properties button	The Properties window presents four sub menus accessed by clicking on the tab headings. The four tab headings are: General, Administration, Card and Reports.
8	Caller Groups tab	Presents a list of the Caller Groups on the left of the Tab window. New Caller Groups can be added through a New Item Dialog Box accessed by clicking the 'New...' button.
9	Special Days button	Define days on the yearly calendar as Special Days (holidays/vacation periods) and list those days regarded as weekdays and those treated as part of the weekend. "Configure Special Days parameters" (page 93)
10	Reports button	View the Traffic reports and Event logs, stored on the card in separate files for each day. Traffic reporting consists of the system counting the number of times an event occurred, and printing the counters to a file every hour. Event Logging means the system writes a report about specific events to a file, at the time they occur. "View Reports" (page 90)
11	Apply, Revert buttons	Press the Apply button to save configuration changes. Press the Revert button to revert to the last-saved changes. Revert does not undo any saved changes.

Table 10
Main Window component description (cont'd.)

Number	Name	Description
12	Exit, Help	Press the Exit button to end the Integrated Call Assistant configuration session. This does not log you out of your Web Browser. Press the Help button to open the on-line help file.
13	New button	Click to create a new Integrated Call Assistant service.
14	Delete button	Click to delete a Integrated Call Assistant service.
15	New button	Click to create a new treatment
16	Delete button	Click to delete a treatment.

Configure a Voice Menu

Follow the steps in this section to configure the Voice Menu parameters for City Power. The steps begin on "Create a new voice menu" (page 105). Figure 30 "Voice Menus window component description" (page 102) shows the Voice Menus window and identifies the components. Table 11 "Voice Menus window component description" (page 102) describes the components.

Figure 30
Voice Menus window component description
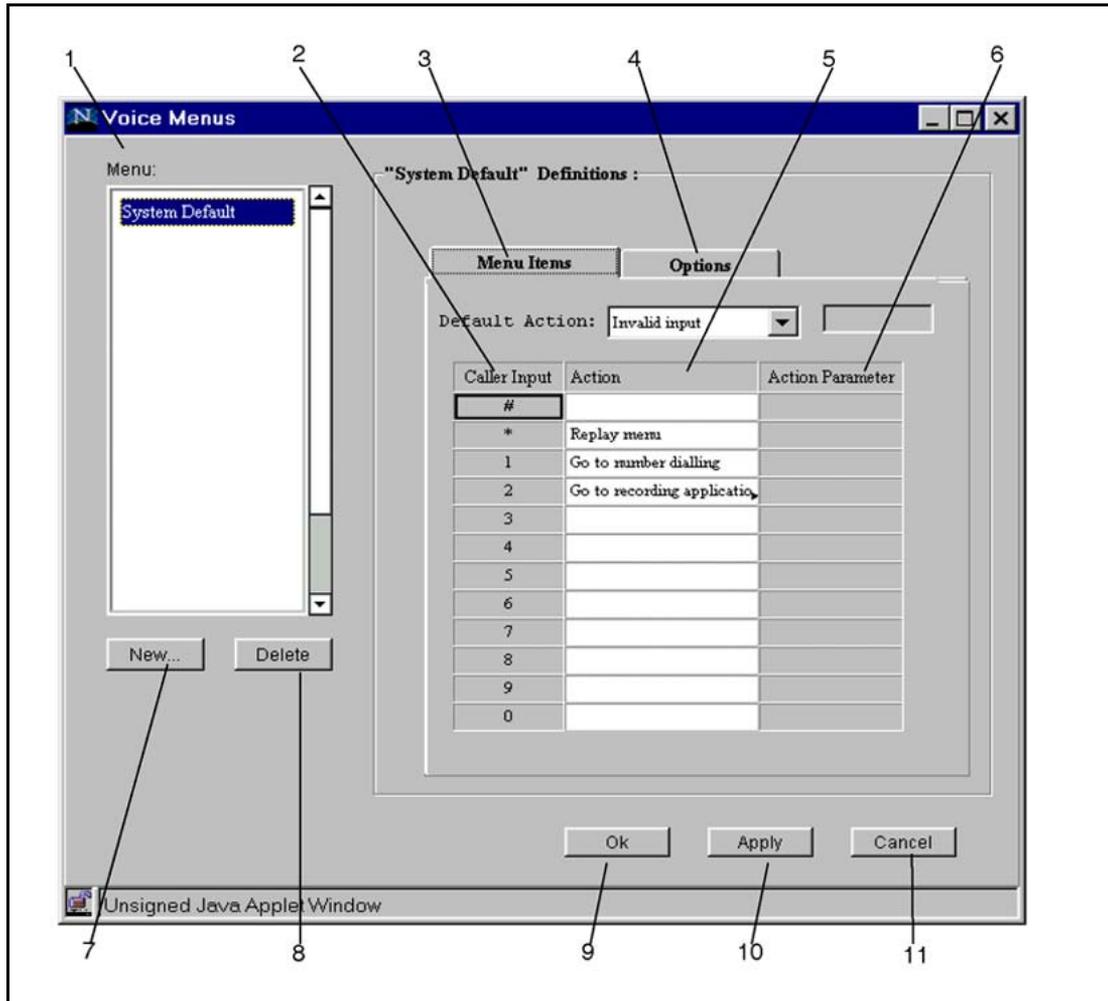
Table 11
Voice Menus window component description

Number	Name	Description
1	Menu	Displays all the voice menus configured on the Integrated Call Assistant card. Displays preconfigured menus.
2	Caller input	This column lists all 12 telephone keypad keys.
3	Menu items	Click this tab to configure the Integrated Call Assistant actions to customer keypad input.
4	Options	Click to display the Options tab, where you modify the default greeting and menu settings and change other Integrated Call Assistant parameters, if required.

Table 11
Voice Menus window component description (cont'd.)

Number	Name	Description
5	Action	This box turns into a drop-down menu when you click in it. It displays the actions Integrated Call Assistant can take in response to customer keypad input. ***Note:*** Table 12 "Integrated Call Assistant Voice Menu Action settings" (page 104) describes the actions.
6	Action Param eter	If you select an Action that requires a definition, this box turns white so you can enter digits, or turns into a drop-down box that displays a list of choices.
7	New	Press this button to define a new voice menu. You can have up to 16 menus on a Flash and up to 32 menus on the PCMCIA disk.
8	Delete	Press this button to delete a highlighted voice menu. You cannot delete a voice menu while they are used in services or other menus. If you delete a service, you do not automatically delete its associated voice menu.
9	OK	Press this button to save changes, update the Integrated Call Assistant database and close the Voice menus window.
10	Apply	Press this button to save changes and update the Integrated Call Assistant database.
11	Cancel	Press this button to return to the Main Window without saving any changes.

When you configure a new voice menu, part of your tasks involve
programming Integrated Call Assistant to perform specific actions. For
example, you can program Integrated Call Assistant to transfer a call
to voice mail if a caller presses 2 on a keypad. Table 12 "Integrated
Call Assistant Voice Menu Action settings" (page 104) describes the 13
available Integrated Call Assistant actions.

If you want to configure one menu that leads to another menu, use the
Go to Menu Action.

Table 12
Integrated Call Assistant Voice Menu Action settings

Action Name	Description
Go to number dialing	Customer is prompted to enter the extension number of the party they want to reach. Caller can begin the number dialing process while prompt is playing.
Go to name dialing	Customer is prompted to begin name dialing. Integrated Call Assistant plays a pre-recorded prompt.
Immediate number dialing	Allows customers to bypass the pre-recorded prompt and immediately enter the extension number. For example: If all extensions begin with a 3 or 2, it would be appropriate to define immediate number dialing on caller input of 2 and 3, then the caller hears the prompt "If you know the extension, dial it now." You must record this prompt or menu - it is not included in the system prompts or menus. If the caller dials 2345, the 2 activates the immediate dialing, and the DN dialed by Integrated Call Assistant to transfer the call is 2345. In such a setup, the action "Immediate number dialing" should not be assigned to caller input 4. Caller can begin the name dialing process while prompt plays. Integrated Call Assistant checks the number of digits entered against the length of the dialed number settings you defined in the General Properties window.
Immediate name dialing	Allows customers to bypass the pre-recorded prompt and immediately enter the name of the person being called. See the example in Immediate number dialing.
Transfer to operator	Integrated Call Assistant automatically dials the digits you define for operator in the **Properties** window.
Transfer to voice mail	Integrated Call Assistant automatically dials the digits you define for voice mail in the **Properties** window.
Disconnect	Integrated Call Assistant disconnects the call.
Replay menu	Integrated Call Assistant replays the menu from the beginning.
Go to recording application	Integrated Call Assistant sends callers to the Telephone User Interface (TUI). The TUI has an administrator level and a user level. Users can login to the TUI and record names, if allowable under the Integrated Call Assistant configuration. Administrators record greetings and menus and activate or deactivate emergency menu.

Table 12
Integrated Call Assistant Voice Menu Action settings (cont'd.)

Action Name	Description
Go to menu	The Action Parameter box changes to a drop-down menu that displays a list of available menus. When a menu is selected, Integrated Call Assistant switches to that menu and functions according to all the menu definitions. Use this action to create a menu tree, where a top menu leads to a submenu.
Transfer to number	The Action Parameter box turns white and you enter the number Integrated Call Assistant uses to transfer calls.
Select language	The Action Parameter box changes to a drop-down menu, where you can change the language Integrated Call Assistant plays for callers.
Invalid input	Caller hears a prompt telling them they have entered an invalid input.

Create a new voice menu

If your Integrated Call Assistant application includes DNIS and/or CLID, create two new voice menus and configure each one according to the steps in this section.

Procedure 16
Creating a new voice menu

Step	Action
1	From the **Main Window**, press the **Voice Menus** button. The **Voice Menus** window appears. Press the **New** button (see).
2	Create a new menu named City Power that is based on System Default settings, as shown in . Press **OK** to accept the new menu and return to the **Voice Menus** window **Menu Items** tab.

Figure 31
New Menu window
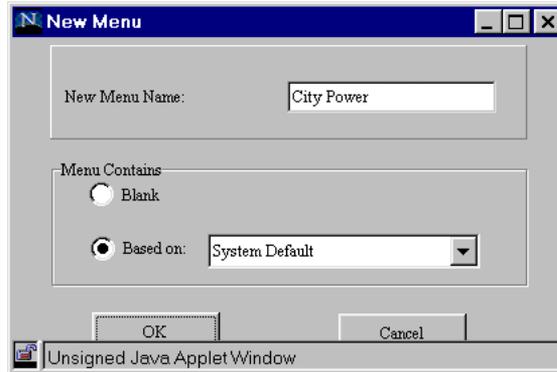
--End--

Configure the Voice Menu Options

In this section, you program new entries for the **Announcements to Caller Greeting** and **Menu Options**. Select the **First Action After Greeting** Integrated Call Assistant takes when answering calls for City Power. Configure the actions Integrated Call Assistant performs if the City Power caller exceeds the **timeout** settings for **no action** or **call duration**. Figure 32 "Voice Menus Options window" (page 107) shows the **Voice Menus Options** window.

Figure 32
Voice Menus Options window
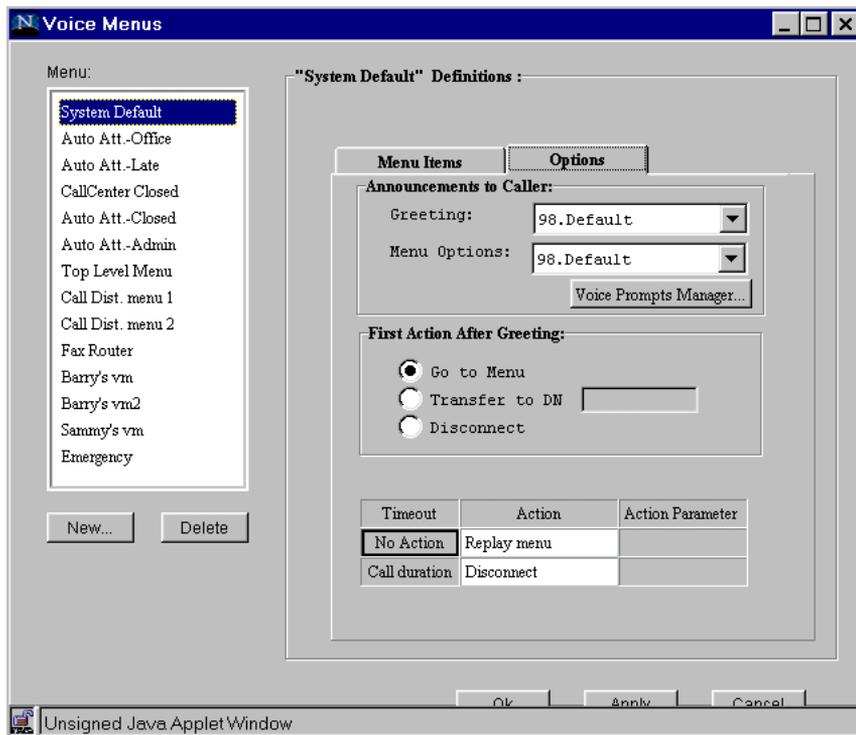
Procedure 17
Configuring the Voice Menu Options

Step	Action
1	From the **Voice Menus** window **Menu Items** tab, highlight City Power in the **Menu** list. Press the **Options** tab to display the **Options** window.
2	Press the **Voice Prompts Manager** button. This opens the **Voice Prompts Manager** window **Greeting prompts** tab.
3	In this step, you create a Greeting Prompt for City Power named **30 City Power**. Place your cursor in the ID number column and type in 30. Integrated Call Assistant accepts any number between 1 and 32 if you have a hard disk, or between 1 and 16 if you have a Flash card. Press the Tab key to move to the Name column and type in City Power as the name for the greeting prompt.

When you record the greeting that Integrated Call Assistant plays for City Power callers, you use the Greeting prompt ID number as a reference. You record the greeting through the Integrated Call Assistant Telephone User Interface (TUI).

4 In this step, you create a Greeting Prompt for City Power named **30 City Power menu**. Press the **Menu prompts** tab. Define an ID number for the Integrated Call Assistant menu prompt. Place your cursor in the ID number column and type in a number between 1 and 32 if you have a hard disk, or between 1 and 16 if you have a Flash card. Press the Tab key to move to the Name column and type in a name for the menu prompt. Create a Menu named 30.City Power menu.

When you record the menu prompts that Integrated Call Assistant plays for City Power callers, you use the Menu prompt ID number as a reference. You record the menu through the Integrated Call Assistant Telephone User Interface (TUI).

5 Press OK to return to the **Voice Menus Options** window.

--End--

Change Announcements to Caller default settings
In this procedure, you replace the default settings for **Greeting** and **Menu Options** in the **Announcements to Caller** box.

Procedure 18
Changing Announcements to Caller default settings

Step	Action

1	In the **Greeting** field, click the down arrow to display the drop-down menu. Click the Greeting prompt ID you created for City Power.
2	In the **Menu Options** field, click the down arrow to display the drop-down menu. Click on the Menu prompt ID you created for City Power.
3	Press the **Apply** button at the bottom of the **Voice Menu Options** window to save the **Announcements to Caller** changes.

--End--

Change First Action After Greeting default setting (optional)

This field defines what action Integrated Call Assistant takes after playing the greeting. **Go to Menu** is the default setting for Integrated Call Assistant's first action after greeting. For the City Power example, leave the default setting so Integrated Call Assistant plays the **30. City Power Menu1**. If your application requires a different parameter, perform steps 1 or 2 and 3.

Note: In an ACD front-end application, selecting T**ransfer to DN** forwards calls to the predefined destination after playing the prompt without waiting for caller input.

Procedure 19
Changing the First Action After Greeting default setting (optional)

Step	Action
1	If you choose any action other than **Go to Menu**, only the greeting plays. The menu options voice menu does not play.
2	If you click the Transfer to DN radio button, the gray box turns white and you enter the DN Integrated Call Assistant uses to transfer the calls.
3	If you click Disconnect, Integrated Call Assistant disconnects the call after playing the greeting.
4	Press the **Apply** button to save the changes.

--End--

Change No Action and Call Duration default settings (optional)

These settings define what Integrated Call Assistant does if a caller exceeds the timeout settings for no action or exceeds the call duration parameter. The default setting for **No Action** is Replay Menu. The default setting for **Call Duration** is Disconnect. For the City Power example, do not change the default settings. If your application requires a different parameter, perform steps 1 or 2 and 3.

Procedure 20
Changing No Action and Call Duration default settings (optional)

Step	Action
1	If you want to change the default action for Integrated Call Assistant after a caller exceeds the timeout for No Action, click in the **Action** box. The **Action** box changes to a drop-down menu. Select an action from the menu. Table 12 "Integrated Call Assistant Voice Menu Action settings" (page 104) describes each action.

2 If you want to change the default action for Integrated Call Assistant after a caller exceeds the timeout for **Call duration**, click in the **Action** box. The **Action** box changes to a drop-down menu. Select an action from the menu. Table 12 "Integrated Call Assistant Voice Menu Action settings" (page 104) describes each action.

3 Press the **Apply** button to save the changes.

--End--

Define Menu Items

In the previous step, you created a new **Menu Prompt** named 30.City Power Menu1 and selected it in the **Menu Options** field in the **Announcements to caller**.

In this step, you define the action Integrated Call Assistant takes when it plays 30. CityPower Menu 1 and a caller presses a keypad key. If required, set up one action for each keypad key. See Table 12 "Integrated Call Assistant Voice Menu Action settings" (page 104) for a description of the possible actions. Integrated Call Assistant uses the default action when callers press a key not defined in the table.

Procedure 21
Defining Menu items

Step	Action

1 From the **Options** tab, press the **Menu Items** tab. If required, select City Power from the **Menu** list.

> *Note:* Because you based the City Power voice menu on the default setting, the **Menu Items** tab displays the Integrated Call Assistant default settings.

2 Place the cursor in the **Action** box next to the **1** in the **Caller Input** column. The **Action** box changes to a drop-down menu. Select an action from the menu. Table 12 "Integrated Call Assistant Voice Menu Action settings" (page 104) describes each action.

--End--

Editing the emergency menu

Integrated Call Assistant ships with a default emergency menu that offers number dialing and a recording application. The emergency menu options are slightly different than the normal menu options:

- Announcement files have fixed name and number. You only specify whether to provide announcements or not. You must specify at least one announcement.

- You must specify a screening table, since the emergency menu stands alone and is not in context of a specific service.

- The language is preset to use the system default language, which is the first language in language set.

- One of the menu items should be the recording procedure, since you use the recording procedure used to deactivate the emergency menu through the TUI.

To edit the emergency menu, carry out the following steps:

Procedure 22
Editing the emergency menu

Step	Action
1	Select the emergency menu from the list of menus in the Voice Menus window (see Figure 33 "Emergency menu Menu Items tab" (page 112)).
2	Configure menu items as in a regular menu.
3	Define greetings and menus in the options tab (see Figure 34 "Emergency menu default Options tab" (page 113)).
4	Select a screening table to use when you activate the emergency menu.

Figure 33
Emergency menu Menu Items tab
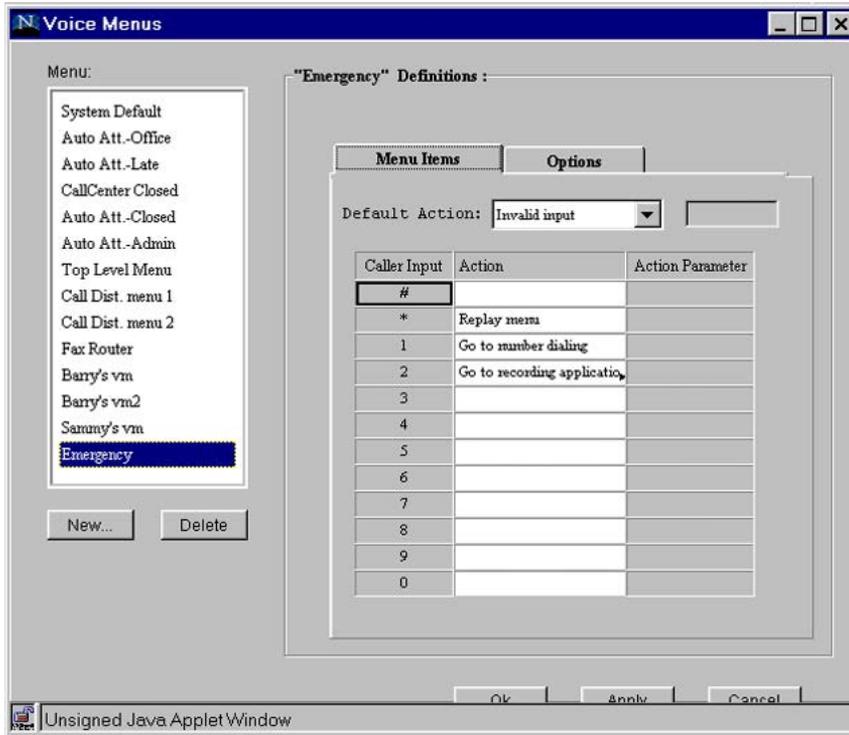
Figure 34
Emergency menu default Options tab
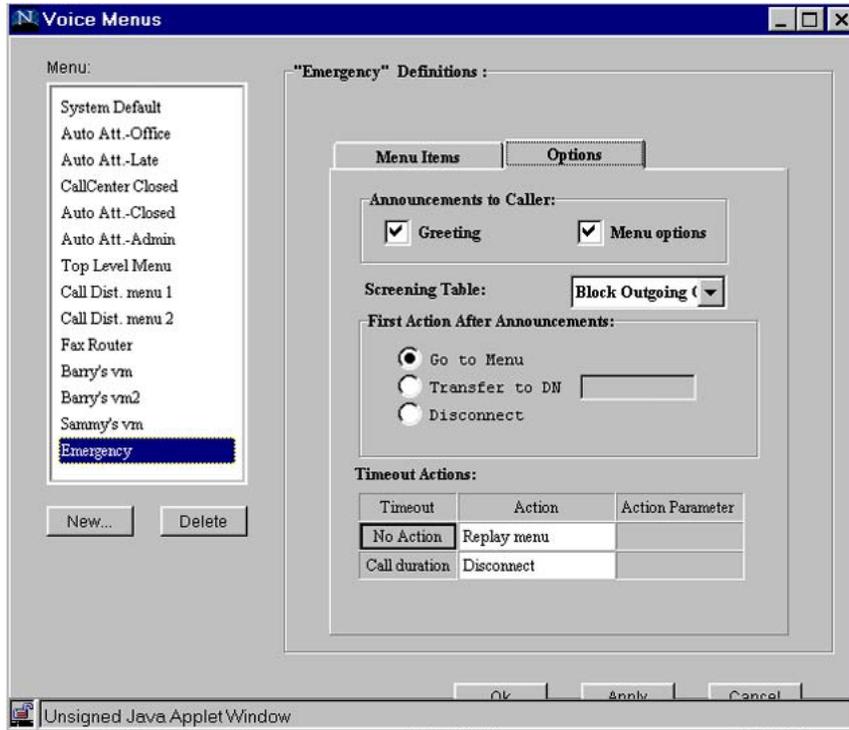
--End--

Define Call Screening

You define call screening parameters to block Integrated Call Assistant
from dialing certain destinations after customers enter the number they
want to be transferred to. For example:

Integrated Call Assistant answers a call. The caller presses 2 after hearing
the Integrated Call Assistant prompt "If you know the number you want to
reach, press 2".

Then Integrated Call Assistant prompts: "Please enter the number you
wish to be transferred to, followed by the pound sign". The customer
enters 6011526725551212#.

Integrated Call Assistant compares the dialing prefixes to the privileges
you define in the call screening table. If you allow Integrated Call Assistant
to transfer calls to numbers that begin with 6011 (which is an international
dialing code in some countries), Integrated Call Assistant dials the digits

and transfers the call. If you do not allow Integrated Call Assistant to transfer calls to destinations that begin with 6011, the caller is notified that the transfer is denied.

Integrated Call Assistant only screens calls after the caller enters the digits and presses the # key. An entry can be the prefix of another entry. When Integrated Call Assistant checks the dialed number, call processing software selects the longest match. For example, you can deny the dialing prefix 6, but allow the prefix 69, because Integrated Call Assistant looks for the longest match.

Note: The default setting is that all calls are Allowed.

Procedure 23
Defining Call Screening

Step	Action
1	From the Main Window, press the **Call Screening** button. Figure 35 "Call Screening window" (page 115) shows the **Call Screening** table default settings.
2	Click **New**. Create a new Screening Table named **City Power** based on the default settings. Press OK to return to the Call Screening Window. In the hard disk configuration, you may have up to 32 call screening tables. The Flash card can contain up to eight call screening tables.
3	In the Dialed Prefix list, enter outgoing call prefixes. The Dialed Prefix list can hold up to 100 entries. The maximum prefix digit length is 20 digits. See Figure 36 "Call screening table for City Power" (page 116) Figure 36 "Call screening table for City Power" (page 116).

Figure 35
Call Screening window
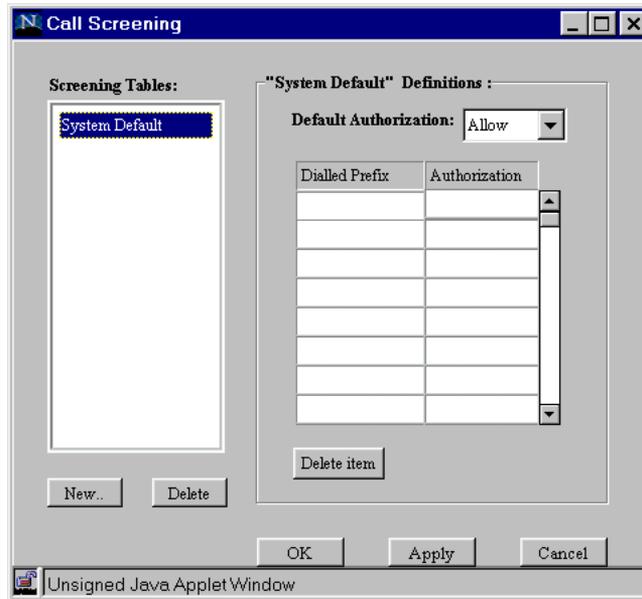
4   Click in the **Authorization** box for each dialed prefix entry. The
      Authorization box turns into a drop-down menu that displays
      Allow or Deny settings. Pick one setting for each prefix in the
      Dialed Prefix column.

5   Configure the default Authorization box to Allow or Deny dialed
      prefixes not listed in the Dialed prefix box.

6   Press **OK** to save the changes. Integrated Call Assistant returns
      you to the Main Window.

Figure 36
Call screening table for City Power
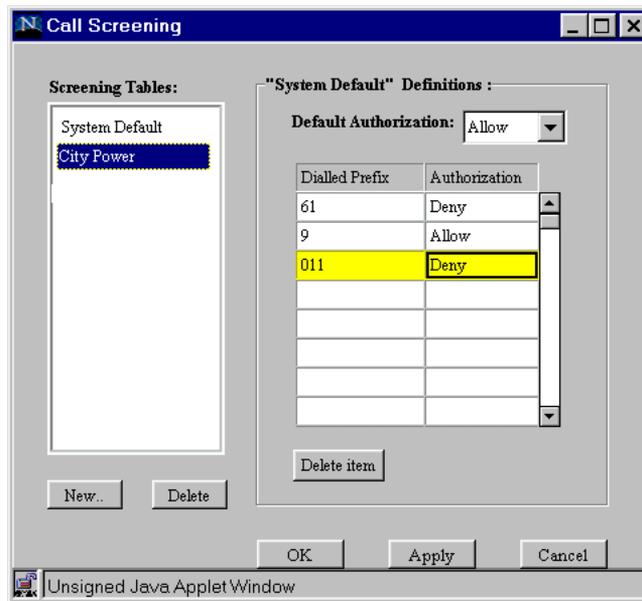
--End--

Create a Service and assign treatments

In this procedure, you create a new service, then define caller groups, call treatments, and set a schedule. Each Service is made up of three elements, defined per service. These are:

- Caller Groups
- Treatments
- Schedule

Each element is a tab on the **Main Window**.

Note: Caller groups, schedules and treatments are specific to each service. Menus and screening tables are system resources and you can use them for multiple services.

Create a new service
Procedure 24
Creating a new service

Step	Action
1	From the Main Window, press the **New** button under the **Services** list. You can have 32 services on the hard disk and eight on the Flash.
2	Create a new service based on the default settings. Press OK to return to the **Schedule** tab of the Main Window. If required, you can include the Service DN in the service name.

--End--

Create caller groups
Integrated Call Assistant routes calls according to their origin (caller identification). If all callers receive one treatment, skip to the **Treatments** tab. If you use CLID and want certain callers to receive special treatment, create caller groups. One prefix may be a prefix of another. Call processing software looks for the longest match. For example, you create a caller group with the prefix 612 that includes all people in Minnesota. You can create another caller group that uses the prefix 612434 in Minneapolis, Minnesota.

Caller Groups description
Caller groups define incoming calls as belonging to different groups according to CLID. Integrated Call Assistant handles calls differently for members of different caller groups.

For example, you create a group of prefixes named French. It includes prefixes 1416 and 1807. When Integrated Call Assistant answers a call that includes these dialed prefixes, it plays a menu in French and transfers the call to a French-speaking ACD agent.

A Prefix or number can only belong to one caller group. Define up to 15 Caller Groups. Up to 100 prefixes can be defined. Each prefix and/or number can be up to 26 digits long.

A list showing all the caller numbers in all the listed caller groups (sorted by number sequence) is displayed by clicking the Show all callers button. This list is for viewing only and may not be edited.

Caller Groups configuration procedure
In this step, you create two new caller groups for the Moore Company.

Procedure 25
Configuring Caller Groups

Step	Action
1	From the **Main Window Schedule** tab, click on a service in the **Services** list and click the **Caller Groups** tab.
2	Click the **New** button at the bottom of the Caller group list. Create a new Caller Group named French based on the default setting and press OK. The word French appears in the Caller group list.
3	Click on **French** in the Caller group list. In the **Prefixes** list, enter the prefixes that you want to include in the caller group French.
4	Create other caller groups and define prefixes as required.

--End--

Define Treatments

In this procedure, you select a service and define a treatment that tells Integrated Call Assistant how to answer and route incoming calls to that service. You can define up to 16 treatments, including default, for both Flash and hard disk configurations. You define different treatments if you plan to handle calls differently according to when Integrated Call Assistant receives the call. Otherwise, you may overwrite the system default treatment with the desired call-handling settings and Integrated Call Assistant will treat all calls the same, including weekends and vacations. You select the default and make your definitions in it. You just made a new service. You can change the default treatment inside a service you created.

shows an example of a treatment named City1, which is defined for City Power. City Power does not use Caller Groups because Integrated Call Assistant treats all calls to City Power the same way. Note that the **Caller Group** box is empty. Deleting a treatment will remove it from all schedules in which it appears. The maximum length of the FAX DN is 20 digits.

Option 1 Define a treatment for a non-caller-group service
Procedure 26
Defining a treatment for a non-caller-group service

Step	Action
1	Click on a Service in the **Services:** box.
2	Click the **Treatments** tab.

3 Click the **New** button.

4 Create a new Treatment and press **OK**.

5 Highlight the new Treatment in the Treatments box.

6 Look at the bottom of the screen. Under the words **Use for all unrecognized calls** you see three drop-down menu lists:

    a Click in the left drop-down menu list at the bottom of the **Menu** column. A list of all the Voice Menus available on Integrated Call Assistant appears. Select **City Power**. Integrated Call Assistant answers and routes calls according to the parameters you set up for the menu named **City Power** in the **Voice Menus** tab.

    b Click in the middle drop-down menu at the bottom of the Screening column. Select **City Power**. Integrated Call Assistant uses the call screening information you defined for City Power in the **Call Screening** tab.

    c Click in the right drop-down menu at the bottom of the **Language** column. Select the appropriate language. Integrated Call Assistant uses the language to answer calls. Integrated Call Assistant cards in the FLASH configuration support only English.

7 If you want Integrated Call Assistant to use the FAX extension entered in the Properties/General tab, leave the box at the bottom of the **FAX no**. column empty. If you want Integrated Call Assistant to use another FAX number for this treatment, type another FAX number in the box.

8 Press Apply to save your changes.

--End--

Option 2 Define treatment for a service that uses a caller group

In this procedure, you define one treatment providing different call-handling for callers from different caller groups.

Stage 1: Configure the call-handling parameters for callers in the caller group named French.

Stage 2: Configure the call-handling parameters for all other callers.

shows an example of a treatment named Moore, which uses a caller group for the Moore Vacuum Cleaner company.

Figure 37
Treatments window (no caller group defined)

Integrated Call Assistant uses the settings in these list boxes for
Menu, Screening and Language if you do not use caller groups.
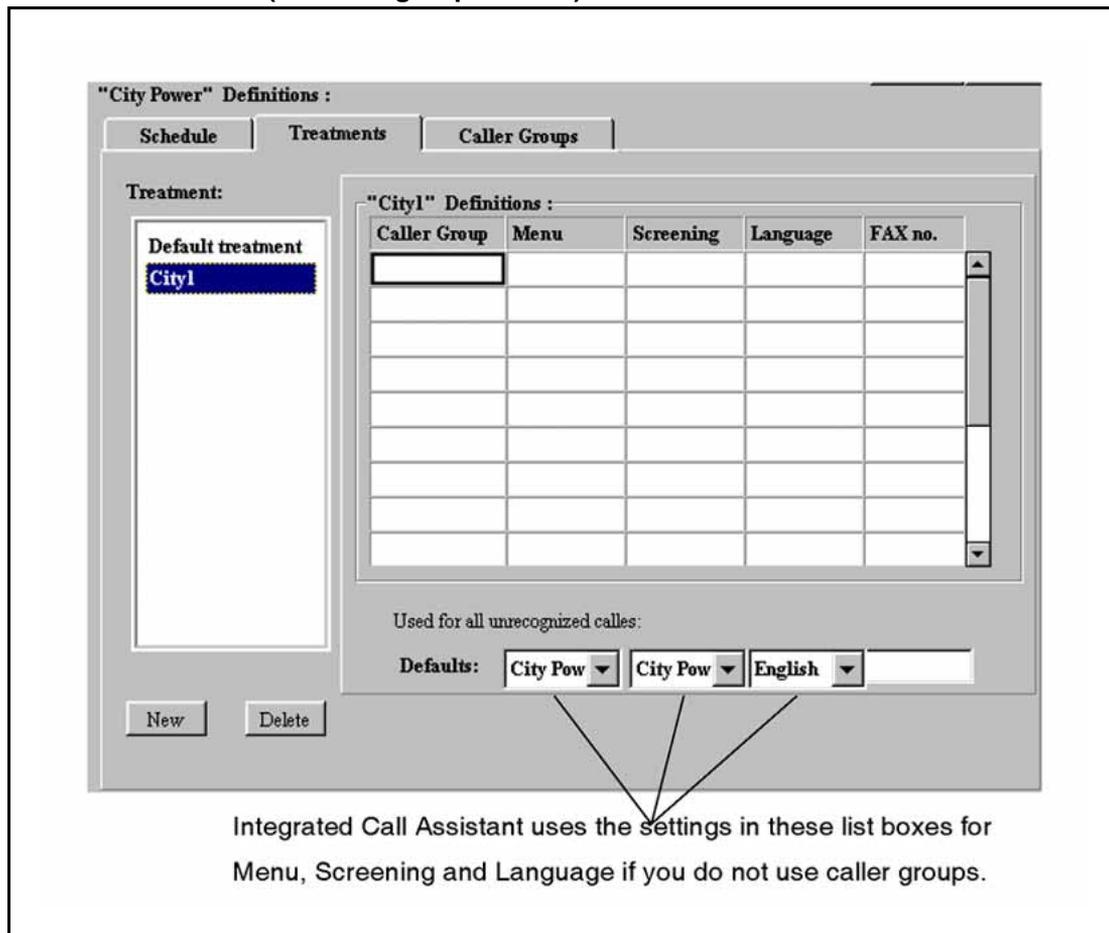
Figure 38
Treatments window
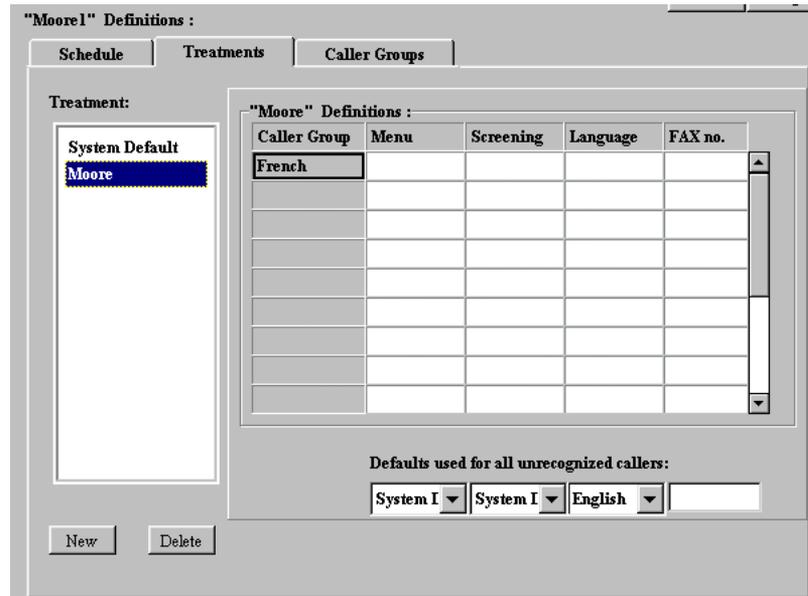
Procedure 27
Defining a treatment

Step	Action
1	Click on a Service in the **Services:** box.
2	Click the **Treatments** tab.
3	Click the **New** button.
4	Create a new Treatment called **Moore1** and press **OK**.
	At this point you define how Integrated Call Assistant treats and routes calls for all callers to the service whose dialing prefixes are defined in the **French** caller group.
5	Highlight **Moore1** in the Treatments box.
6	Each cell in the left column under **Caller Groups** displays one caller group that is assigned to that service. Select French, the caller group name you created in the Caller Group tab. Integrated Call Assistant uses the parameters you configure in the **French Caller Group** to route calls according to CLID.
7	Click in the box beneath **Menu**. A drop-down list appears. It shows all the voice menus available on Integrated Call Assistant. Select **Moore**. Integrated Call Assistant uses the voice menu parameters you created for **Moore** in the **Voice Menus** tab.
8	Click in the box beneath **Screening**. A drop-down list appears that shows all the call screening groups available on Integrated

Call Assistant. Select **Moore**. Integrated Call Assistant uses the call screening parameters you created for **Moore** in the **Call Screening** tab.

9   Click in the box beneath **Language**. A drop-down list appears that shows all the call screening groups available on Integrated Call Assistant. Select **French**. Integrated Call Assistant answers all calls in French when it sees an incoming call with a prefix that matches the prefixes defined for **French** in the Caller Group tab.

10 If you want Integrated Call Assistant to use the FAX extension entered in the Properties/General tab, leave the **FAX no**. column empty. If you want Integrated Call Assistant to use another FAX number for this treatment, type another FAX number in the box.

11 Press **Apply** to save your changes. It is not necessary to define menus, call screening language and FAX number on the bottom of the screen. Integrated Call Assistant uses the definitions contained in the list boxes beneath the **Menus, Screening and Language** columns.

At this point you define how Integrated Call Assistant treats and routes calls for all callers to the service whose dialing prefixes are not defined in the **French** caller group.

12 Look at the bottom of the screen. Under the words **Use for all unrecognized calls** you see three drop-down menu lists.

13 Click in the left drop-down menu list at the bottom of the **Menu** column. A list of all the Voice Menus available on Integrated Call Assistant appears. Select **Moore**. Integrated Call Assistant answers and routes calls according to the parameters you set up for the menu named **Moore** in the **Voice Menus** tab.

14 Click in the middle drop-down menu at the bottom of the **Screening** column. Select **System Default**. Integrated Call Assistant uses default call screening information.

15 Click in the right drop-down menu at the bottom of the **Language** column. Select English. Integrated Call Assistant uses English to answer calls whose prefixes are not part of the French caller group.

16 If you want Integrated Call Assistant to use the FAX extension entered in the Properties/General tab, leave the box at the bottom of the **FAX no**. column empty. If you want Integrated Call Assistant to use another FAX number for this treatment, type another FAX number in the box.

17 Press Apply to save your changes.

--End--

Configure a treatment schedule

In this section, you select a service and define which treatments Integrated Call Assistant uses for the service according to time of day and day of week.

Figure 39 "Schedule for City Power treatments" (page 124) shows the following:

- Integrated Call Assistant uses the default treatment for callers on Wednesdays between midnight (00:00 hours) and 8 am (08:00 hours).

- Integrated Call Assistant uses the City1 treatment for callers between 8 am and 5 pm (08:00 and 17:00 hours).

- Integrated Call Assistant uses the City2 treatment for callers between 5 pm and midnight (17:00 to 00:00 hours).

- Unspecified times and days receive the default treatment.

> *Note:* If you want Integrated Call Assistant to use a certain treatment for a whole day, choose this treatment from the **Default Treatment** drop-down menu.

Procedure 28
Configuring a treatment schedule

Step	Action
1	From the **Treatments** tab, press **Schedule**.
2	Click on a Service from the **Services** list.
3	Depending on your application, select a day from the schedule entry list, or select Weekdays or Weekends to assign treatments for those groups of days.
4	Click in the **From** box and type in the time you want Integrated Call Assistant to start using the treatment. **Important:** Calculate the time using the 24-hour clock format, where midnight is 00:00, and use hh:mm format to enter the hours in the **From** and **To** boxes in 15-minute intervals.
5	Click in the **To** box and type in the time you want Integrated Call Assistant to stop using the treatment.
6	Click in the **Treatment** box and select a treatment for Integrated Call Assistant to use during the time period you specified.
7	Schedule other treatments as required. Integrated Call Assistant uses the default treatment for unspecified times.

--End--

If you want Integrated Call Assistant to give a whole day the same treatment, select one treatment and do not specify any hours. If you do not specify weekend, holiday, or vacation treatments, Integrated Call Assistant uses the Default treatment.

Figure 39
Schedule for City Power treatments

Assign a DN to a Service

In this procedure, you click on the **Working Services** button to open the **Service Assignments** window and assign a service DN to a service. Figure 40 "Service Assignments window" (page 125) shows an example of the Service Assignments window. In the example, when callers dial 7001, they receive the treatment and hear the menus, greetings, and other Integrated Call Assistant components defined for the Auto Attendant service. Before you assign a service DN, read "Defining an Integrated Call Assistant service number" (page 33).

About activate emergency mode

When you check this box in the Service Assignments window, the "Emergency Menu" overrides normal operation of all services. This is intended for unexpected conditions in which the company cannot operate. For more information about Emergency mode, "About the emergency menu" (page 169)

Service DN parameters

- Service numbers can only be the numbers defined on the system to route to the Integrated Call Assistant card.

- You can only use numbers that will appear on the display of the Integrated Call Assistant units, so Integrated Call Assistant recognizes the number.

- You can only assign one DN to each service.

- Do not define DN 9999999. The system uses this number to mark services with no DN defined.

- You can enter up to seven digits in the **Service DN** list.

- Integrated Call Assistant sorts the Service DNs according to DN, not according to Service Name. To remove a service from the **Working Service** window. Deleting the DN deactivates the Service.

- To store services in the Service Assignments list for future use, list them and delete their DNs.

- To edit the Service names, click in the Service Names list.Default service explanation

Figure 40
Service Assignments window
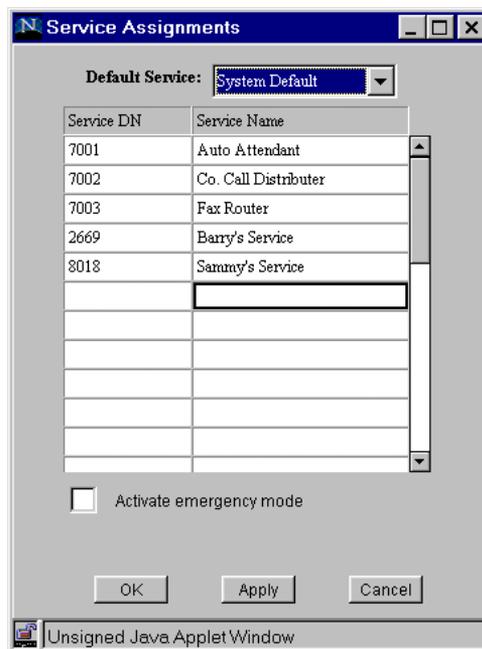
When you click the Default Service combo box, Integrated Call Assistant lists all services that have an assigned DN. You can select any service as the Default Service. You cannot delete a service used as a Default Service. When you select a service with an assigned DN as the default service (7001 Auto-Attendant, for example), the service loses its DN (see Figure 41 "Auto Attendant defined as the Default Service" (page 126)). Integrated Call Assistant uses the Default service to handle incoming calls where the dialed number is not a recognized service DNs. This can occur in two ways:

1. Calls are routed to Integrated Call Assistant using numbers that do not appear in the service assignment table. An example would be an application using DNIS. All calls to the DID route terminate on the Integrated Call Assistant. DNIS digits are used as the service number.

2. The dialed number appears in the service assignment table, but does not appear on the Integrated Call Assistant telephone display. An example of this is when a caller dials the Integrated Call Assistant ACD queue DN that does not reach the telephone display.

Figure 41
Auto Attendant defined as the Default
Service
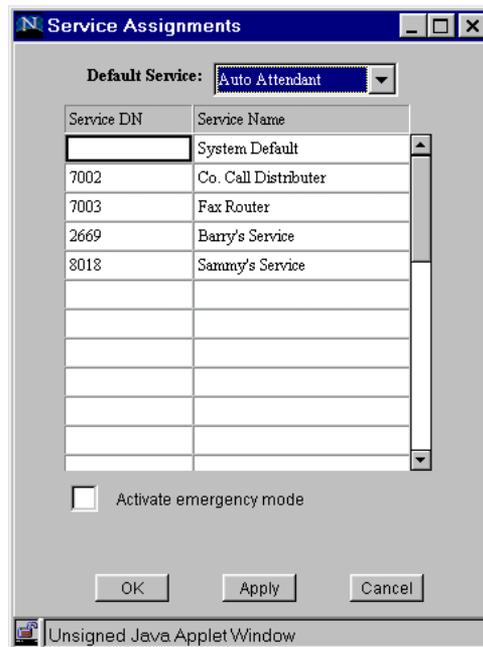
Working service assignment procedures
Procedure 29
Configuring the Work service assignment DN

Step	Action
1	From the Main Window schedule tab, click on a service in the **Services** list.
2	Press the **Working Services** button. This opens the **Service Assignments** window.
3	In the **Service DN** column, enter a DN up to seven digits.
4	Press the **Apply** button.

--End--

Integrated Call Assistant predefined service description

Contents

This section contains information on the following topics:

Introduction

This section describes the Integrated Call Assistant preconfigured services. You can modify the services to fit your application. The preconfigured services use the customer dialing plan listed in Table 13 "Predefined service customer dialing plan" (page 129). The Flash configuration contains four predefined services. The hard disk configuration contains five predefined services.

Table 13
Predefined service customer dialing plan

Characteristic	Description
Operator	0
Express messaging service	5000.
GateHouse	5500.
Local DNs	2, 3, 4, 5XXX
Network access	6XXX
DID access	7, 8XXX
Main company Fax	8000.
Dept. Fax machines	800X.

Table 13
Predefined service customer dialing plan (cont'd.)

Characteristic	Description
PSTN access	9
Administrator DNs (internal)	5001, 5002
Administrator DN (external)	222-2000
Company Voice Mail Box	5005.
Call Center salespeople	1XXX.

Predefined service description

The Integrated Call Assistant preinstalled services are named:

- Auto Attendant Service

- Company Call Distributer service (menu based service)

- Fax Routing service

- Two Call Center Front End services providing DNIS differentiation

    Note: On a flash card, there is only one Call Center Front End service, and it has fewer menus.

- Integrated Call Assistant uses one screening table for all callers to all services, including when Emergency menu is used. The call screening table is the "block outgoing calls" table. It is initially defined as blocking calls beginning with the digit '9', but allowing calls to number 9-408-222-3333.

In services other than the Fax Router service, Faxes are all transferred to the Main company Fax.

Auto Attendant Service description

Service Name: Auto Attendant

Reached by number: 7001

Caller groups (see Figure 43 "Auto-attendant service caller groups" (page 133)):

1. Administrators (CLID 5001, 5002, 222-2000): allowed to enter administrator interface and record greetings and menus in the TUI.

2. French speakers (CLID prefix: 514 (Montreal): These callers hear all recordings in French.

3. All callers who do not belong to the above groups are considered North American English speakers.

> *Note:* On Flash card, there is no multi-language support.

The Auto Attendant service treatments and schedule description

1. Office Hours: from 9 am to 5 pm Monday through Friday.

2. After Office Hours: all other hours Monday through Friday.

3. Weekend and Holiday schedule: Saturday, Sunday, January 1 and December 25.

4. On Tuesdays, Working hours are 9 am to 4 pm, so Tuesday is defined separately.

5. To return to the Weekdays definition, select Tuesday, then press "Restore to Weekdays" button.

The greeting and menu in "Office Hours" treatment: The menu used is called "Auto Att.-office" "Welcome to the Auto Attendant service. Press 1 for number dialing, 2 for name dialing, 3 for operator assistance, press 4 if you wish to be transferred to the express messaging service."

- This service uses greeting prompt 1 and menu prompt 1.

Figure 42
Auto-attendant treatments
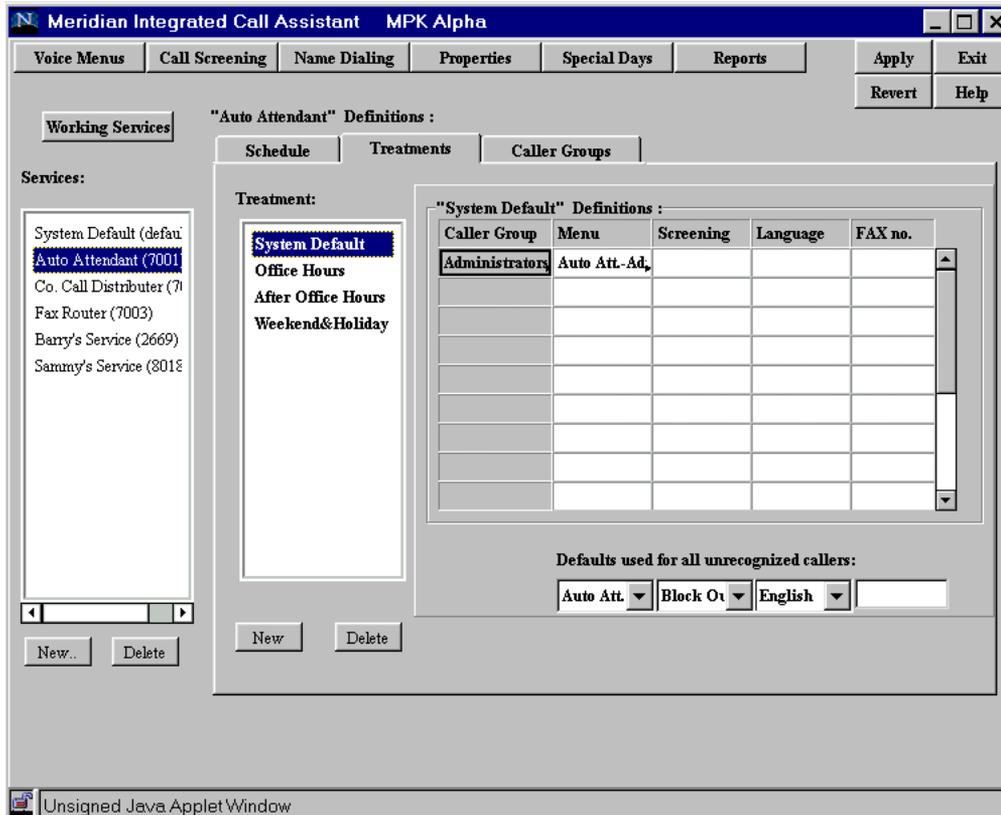
- The Integrated Call Assistant properties define the Operator number as 0, and the express messaging number as 5000.

- The "After Office Hours" treatment greeting uses the menu named "Auto Att.-late": "Welcome to the Auto Attendant service. Our office hours are from 9 am to 5 pm. For an emergency press 1. If you wish to be transferred to the express messaging service, press 2." Greeting prompt no. 2 and menu prompt no. 2 are used.

Figure 43
Auto-attendant service caller groups
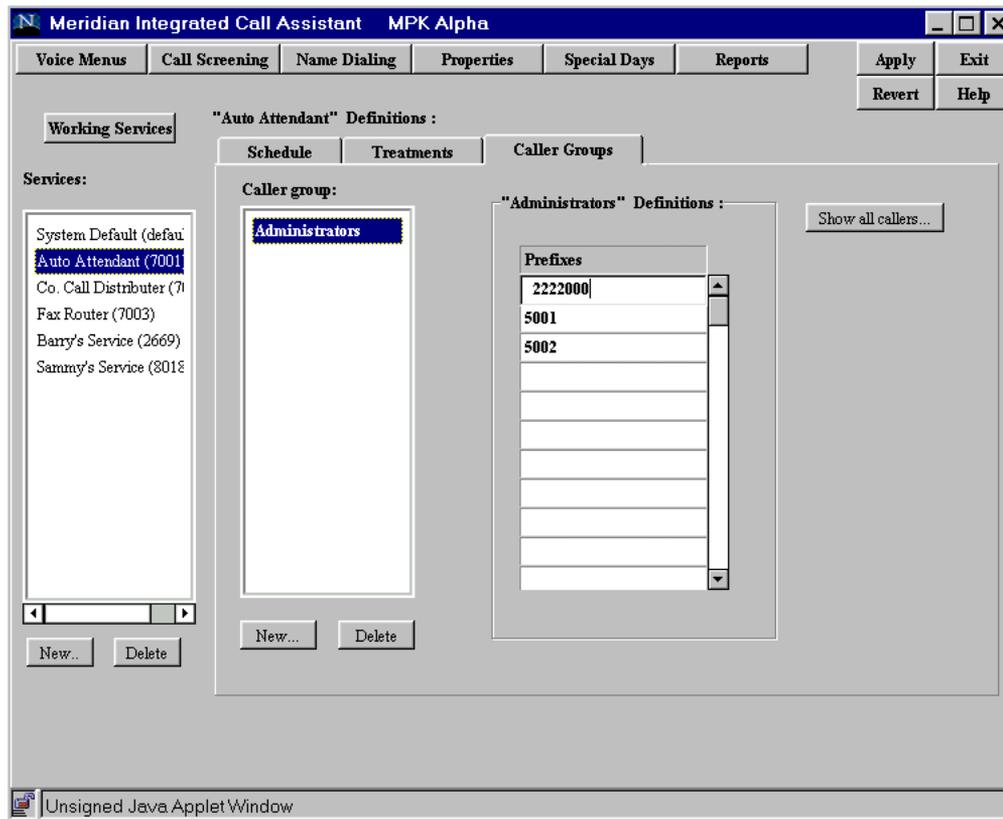
- If the caller presses 1, Integrated Call Assistant transfers the call to the Gate House (5500). If the caller presses 2, the call is transferred to express mail service, x5000.

- The greeting in "Weekend" treatment: The menu used is "Auto Att.-weekend". "Welcome to the Auto Attendant service, our offices are closed today, please call back on a weekday. In case of an emergency press 1". If the caller presses 1, the call will be transferred to the Gate House (5500).

- Greeting prompt no. 3 and menu prompt no. 3 are used.

- The greeting in "Holiday" treatment uses the menu "Auto Att.-closed" "Welcome to the Auto Attendant service, our offices are closed today, please call back on a weekday."

The menu is defined so that call is disconnected immediately after the greeting is played. Caller hears: "Thank you for calling, good-bye" before call is disconnected.

Integrated Call Assistant uses Greeting prompt no. 3. On Flash card there is one treatment for Weekend&Holiday: using "Auto Att.-closed".

The greeting for the administrator CLID at all times (in all treatments): The menu used is "Auto Att.-admin". "Welcome to the Administrator Auto Attendant service. Press 1 for number dialing, 2 for name dialing, 3 for operator assistance, press 4 if you wish to be transferred to the express messaging service. Press 5 for the administrator interface". Integrated Call Assistant uses Greeting prompt no. 4 and menu prompt no. 4.

Table 14
Default name dialing database

Last Name	First Name	Phone Number
Doe	Jane	2000
Doe	John	2001
Lee	David	2002
Smith	Kevin	2003
Jackson	Paul	2004

Company call distributer (menu-based service)

Service Name: Co. Call Distributer.

Reached by number: 7002

Three treatments in this service:

1. Office Hours (from 9 to 5 Monday through Friday)

2. After Office Hours (all other hours Monday through Friday)

3. Holiday and Weekend (Saturday, Sunday, Jan1st, Dec 25th)

This service uses no caller groups because Integrated Call Assistant handles all callers the same way.

Treatment description

Office Hours: uses the menu named Top Level Menu.

In the Top Level Menu if callers press:

> 0 - Integrated Call Assistant transfers call to DN 2000

> 1 - they reach menu 1

> 2 - they reach menu 2

3 - they reach menu 3

4 - they reach menu 4

5 - Integrated Call Assistant transfers call to DN 5005.

Note: On Flash card, menu 3 and 4 do not exist. If callers press 3 or 4, Integrated Call Assistant plays "You have pressed an incorrect digit".

In menu 1:

Caller chooses 1 to be transferred to number 2011

Caller chooses 2 to be transferred to number 2012

Caller chooses 3 to be transferred to number 2013

Caller chooses 4 to be transferred to number 2014

Caller chooses 5 to be transferred to number 2015

In menu 2

Caller chooses 1 to be transferred to number 2021

Caller chooses 2 to be transferred to number 2022

Caller chooses 3 to be transferred to number 2023

Caller chooses 4 to be transferred to number 2024

Caller chooses 5 to be transferred to number 2025

In menu 3

Caller chooses 1 to be transferred to number 2031

Caller chooses 2 to be transferred to number 2032

Caller chooses 3 to be transferred to number 2033

Caller chooses 4 to be transferred to number 2034

Caller chooses 5 to be transferred to number 2035

In menu 4

Caller chooses 1 to be transferred to number 2041

Caller chooses 2 to be transferred to number 2042

Caller chooses 3 to be transferred to number 2043

Caller chooses 4 to be transferred to number 2044

Caller chooses 5 to be transferred to number 2045

The menu names are generic, so this service can really be used for any number of applications. The recordings are more specific, to give a simple example. They may be re-recorded to fit your needs. Multilingual support may be easily provided by recording the same menu/greeting numbers in additional languages, and specifying different languages in the BUI in the treatment window for different caller groups. These menus use recordings: greetings and menus 5 through 9. The top-level menu, uses greeting and menu 5, and menu 1 uses greeting and menu 6 etc.

CoGreeting and menu description

Greeting 5: Welcome to the Company Call Director."

Greeting 6: "Welcome to the Sales Department."

Greeting 7: "Welcome to the Service Department."

Greeting 8: "Welcome to the Support department. We will be happy to assist."

Greeting 9: "You have reached the Information Center."

Menu 5: "For a Service Emergency press 0, for Sales press 1, for Service press 2, for Support press 3, for Information press 4. If you would like to leave a message press 5. Press * to replay the menu."

Menu 6: "For Local Sales press 1, for National Sales press 2, for International sales press 3, for General Product information press 4".

Menu 7: "For Local Service press 1, for National Service press 2, for International Service press 3, for Urgent Questions press 4".

Menu 8: "For new product support press 1, for other product support press 2. If you wish to register a complaint, press 4."

Menu 9: "for General company information press 1, for specific product information press 2, for departmental information press 3, for confidential information press 4."

For "after hours" and "holidays and weekends", treatment will be the same as the "after hours" and "weekends" in the auto attendant example.

Note: For the example, Integrated Call Assistant uses the same voice files for Flash Card and Hard Drive. The menu says "for Support press 3, for Information press 4," even on flash card, where these options are invalid.

Fax Router

Service Name: Fax Router.

Reached by number: 7003

The FAX service has five caller groups:

1. VIP (CLID prefix 555, 666, 222-2000).

2. From2or3prefix (CLID prefix 2, 3).

3. From4or5prefix (CLID prefix 4, 5).

4. From6or7prefix (CLID prefix 6, 7).

5. All other callers.

Integrated Call Assistant FAX service description

Integrated Call Assistant treats all Faxes the same way, differentiating according to CLID only. In the call treatment, The menu used is called "Fax Greeting", which transfers non-FAX callers to the Auto-Attendant service DN 7001 after playing the greeting. Caller first hears: "The call is being transferred to the requested number". Then Integrated Call Assistant plays Greeting 10: "Hello, you have reached the Fax Routing service. If you are not sending a fax, please wait while your call is transferred to the Auto Attendant service." Integrated Call Assistant routes FAXes as follows:

Faxes from group are transferred to fax number

1 8001

2 8002

3 8003

4 8004

5 Main Company Fax (8000)

First Call Center Front End (ACD Front service)

Service Name: Call Center Front A.

Reached by number: 7004

Five caller groups:

- 0. VIP (CLID prefix 555, 666, 222-2000).

- 1. From 2 or 3 prefix (CLID prefix 2, 3)

- 2. From 4 or 5 prefix (CLID prefix 4, 5)

- 3. From 6 or 7prefix (CLID prefix 6, 7)

- 4. All other callers

Two treatments in this service:

1. Weekdays (Monday through Friday)

2. Holiday and Weekend (Saturday, Sunday, January 1, December 25)

Weekdays treatment:

Greeting 11: "Welcome to the Call Center. Your order for product A will be handled by our salesperson in one moment."

Greeting 12: "Welcome to the Call Center. The system recognizes you as a special customer. Your order for product A will be handled by a special salesperson in one moment."

Menus are defined so that the call is transferred to the appropriate number immediately after the greeting is played. The caller hears: "The call is being transferred to the requested number".

Weekends and holidays treatment:
The menu used is called "Call Center closed".

Greeting 13: "Welcome to the Call Center. Our offices are closed today, please leave a message with your name, number and request, and we will comply."

All calls are transferred to company voice mail box: 5005. The menu names are generic, so this service can really be used for any number of applications. The recordings are more specific, to give a simple example. They may be re-recorded to fit customer needs.

Note: On Flash card, Caller Groups 2 and 3, and menus CallCenter A3 and CallCenter A4 do not exist.

Table 15
Treatment according to call groups

Callers from group no	hear greeting no	in	and are transferred to DN	menu name
0	12	English	1000	CallCenter A0
1	11	English	1001	CallCenter A1
2	11	English	1002	CallCenter A2
3	11	French	1003	CallCenter A3
4	11	English	1004	CallCenter A4

Second Call Center Front End (ACD Front service)

Service Name: Call Center Front B.

Reached by number: 7005

Five caller groups:

- 0. VIP (CLID prefix 555, 666, 222-2000).

- 1. From 2 or 3 prefix (CLID prefix 2, 3).

- 2. From 4 or 5 prefix (CLID prefix 4, 5).

- 3. From 6 or 7 prefix (CLID prefix 6, 7).

- 4. All other callers.

Treatments:

1. Weekdays (Monday through Friday)

2. Holiday and Weekend (Saturday, Sunday, Jan 1st, Dec 25th)

Weekdays treatment description

Greeting 14: "Welcome to the Call Center. Your order for product B will be handled by our salesperson in one moment."

Greeting 15: "Welcome to the Call Center. The system recognizes you as a special customer. Your order for product B will be handled by a special salesperson in one moment."

Menus are defined so that call is transferred to the appropriate number immediately after the greeting is played. (Caller hears: "The call is being transferred to the requested number").

"Weekends and Holidays" treatment: the menu used is called "CallCenter closed".

Greeting 13: "Welcome to the Call Center. Our offices are closed today, please leave a message with your name, number and request, and we will comply."

Calls are transferred to company voice mail box: 5005.

Note: On Flash card, this service does not exist.

Table 16
Treatment according to call groups

Callers from group no	hear greeting no	in	and are transferred to DN	menu name
0	15	English	1010	CallCenter B0
1	14	English	1011	CallCenter B1
2	14	French	1012	CallCenter B2
3	14	French	1013	CallCenter B3
4	14	English	1014	CallCenter B4

Weekends and holidays treatment:
Menu name: "CallCenter closed"

Greeting 13: "Welcome to the Call Center. Our offices are closed today. Please leave a message with your name, number and request, and we will return your call." Calls are transferred to company voice mail box: 5005.

Note: On Flash card, this service does not exist.

Creating a name dialing database in the BUI

Contents

This section contains information on the following topics:

Introduction

You can create a new database directly on the Integrated Call Assistant using the Edit feature in the Name Dialing window. Integrated Call Assistant ships with a default five-name database.

Create a name dialing database

Procedure 30
Creating a name dialing database

Step	Action
1	From the Main window, click the **Name Dialing** button.
2	Click the **Edit** button under the **General Tools** column. Integrated Call Assistant opens the default database (see Figure 44 "Name Dialing - Edit window" (page 142) on Figure 44 "Name Dialing - Edit window" (page 142)).
3	Click the Add Record button.
4	Add the new name and DN, last name first, to the database.
5	If you have the hard disk configuration, set personal recording privileges in the **P.Record** field. This field is "grayed-out" if you have the Flash configuration.

6 To remove the preconfigured names from the default name dialing database, highlight the names and press the **Delete** button.

--End--

Figure 44
Name Dialing - Edit window

Importing a name dialing database

Contents

This section contains information on the following topics:

Introduction

This chapter explains how to import a name dialing database from a file server to the Integrated Call Assistant PC card device. A name dialing database contains the first name, last name and phone number of a group of telephone users. Integrated Call Assistant matches the names in the database to the telephone keypad characters entered by callers who select "dial by name."

The name dialing database can contain up to 10,000 names (or 1000 on the FLASH card Integrated Call Assistant option). Names can be up to 20 characters long (alphanumeric characters), including the space between the last and first name. Phone numbers may be up to 20 digits long.

You can create a database file using a spread sheet or database software, or you can modify the five-name Integrated Call Assistant preconfigured default database to create one directly on the card.

Name dialing database import description

To import a name dialing database, you tell Integrated Call Assistant the database file name and the name and location of the computer where Integrated Call Assistant can find the database. Integrated Call Assistant uses File Transfer Protocol (FTP) to find the database and copy it to the PC card device. Integrated Call Assistant gives you the option of importing the database automatically using a "wizard", or importing it using a step-by-step method.

How a name dialing database works

For example, Chris Lee wants to reach Alice Wilson at the ABC department store. He calls the store's main number. Integrated Call Assistant answers the call and plays a set of prompts. Chris is prompted to select "3" to use the Dial by Name feature.

Integrated Call Assistant prompts Chris to enter the last name and then the first name of the person he wants to call. Chris enters 9 4 5. Integrated Call Assistant searches the name dialing database for a last name starting with W, X, or Y (corresponds to the 9 key) G, H, or I (corresponds to the 4 key), then J, K or L (corresponds to the 5 key).

Integrated Call Assistant finds "Wilson, Alice" in the name dialing database and checks if Alice Wilson has a personal verification recording. If yes, Integrated Call Assistant plays it and Chris hears Alice's voice. If Alice does not have a recording, Integrated Call Assistant plays "transferring call to A-L-I-C-E W-I-L-S-O-N (pronouncing each letter of the name).

For dial-by-name, the Caller can press 1 after name dialing to skip the announcement preceding the call transfer.

> *Note 1:* In name dialing, the Q is represented by 7 and Z by 9.
> *Note 2:* Callers can press the # sign twice to bypass the "call is being transferred to" announcement.

* returns callers to the main menu.

If you have the Flash option, Integrated Call Assistant plays the spelled name to the caller.

Before you import a name dialing database
Procedure 31
Before importing a name dialing database

Step	Action
1	Create a telephone database. Use a spreadsheet or software application in which you can save a file in an ASCII format.
2	Save the telephone database in a "Delimited" format. This can include spaces, commas, tabs or other characters. Your spreadsheet or database software may also require you to save the file "for import". Follow the instructions for the software package to prepare the database.
3	Check that your computer has File Transfer Protocol (FTP) client. An example often found on a Windows 95 computer is FTP95PRO. If your computer has file server protocol, place the database in a location from where it can be transferred using FTP.
4	Integrated Call Assistant prompts you for the following network-related information in Step 1 of the name dialing import Wizard. Contact your system administrator as required: **a** Host IP address (names and aliases are not supported). **b** FTP user name **c** FTP password **d** File name (full path)
5	Transfer mode (select ASCII)
6	Upload the telephone database to a file server according to the procedures required by your FTP software.
7	Note the directory path where the database is stored. Integrated Call Assistant requests the path in the import procedure. An example of a directory path is: DATABASE/January/database1.

--End--

Database format requirements

- The database must be an ASCII file up to 1 Mbyte for Flash and hard disk configuration

- Lines must contain at least name and number fields, one name and number per line. If there are more, only the first will be incorporated into the converted file. Additional information in the line is ignored

- Lines must end with the newline character

- Divide lines into fields/columns in one of two ways:

    Fixed - fields begin at predefined offsets that create columns

> **Delimited -** fields are separated by one appearance of a printable character defined as a delimiter.
>
> Divide lines into fields/columns using the same rule in all lines.

- Phone numbers cannot include alphabetical characters.

- Integrated Call Assistant ignores lines that do not meet the requirements. You can specify certain lines to be ignored by defining the following:

  — Note the number of the line in the database that conversion should begin on. For example, if the second line of the database holds the first name, you tell Integrated Call Assistant to begin conversion on Line 2.

  — Define a character or string of characters that, when appearing at the beginning of the line, indicate that it should be skipped

  — Do not to enter identical names, since a caller using name dial has no way to tell the two names apart. In addition, the database should not contain more than five names with identical keypad spelling. The system does not present lists of found names during name dialing if it is longer than five.

How to use the Name Dialing Import Wizard

The Wizard automates the database import process. You enter information about the database location and format. Integrated Call Assistant locates and copies the database, then converts it into a format Integrated Call Assistant can understand and use. If you have problems using the wizard, turn to "FTP server description and requirements" (page 162). Figure 45 "Name Dialing screen components" (page 147) on Figure 45 "Name Dialing screen components" (page 147) shows the Name Dialing window and identifies the components. Figure 45 "Name Dialing screen components" (page 147) describes the components. At different stages of the import process, some buttons are grayed-out to ensure you do not perform an action in the wrong order. For example, you cannot "Convert File" a database before you "Get File".

Procedure 32
Using the Name Dialing Import Wizard

Step	Action
1	Log in to the Integrated Call Assistant Browser User Interface.
2	From the Main window, click the **Name Dialing** tab.

Figure 45
Name Dialing screen components
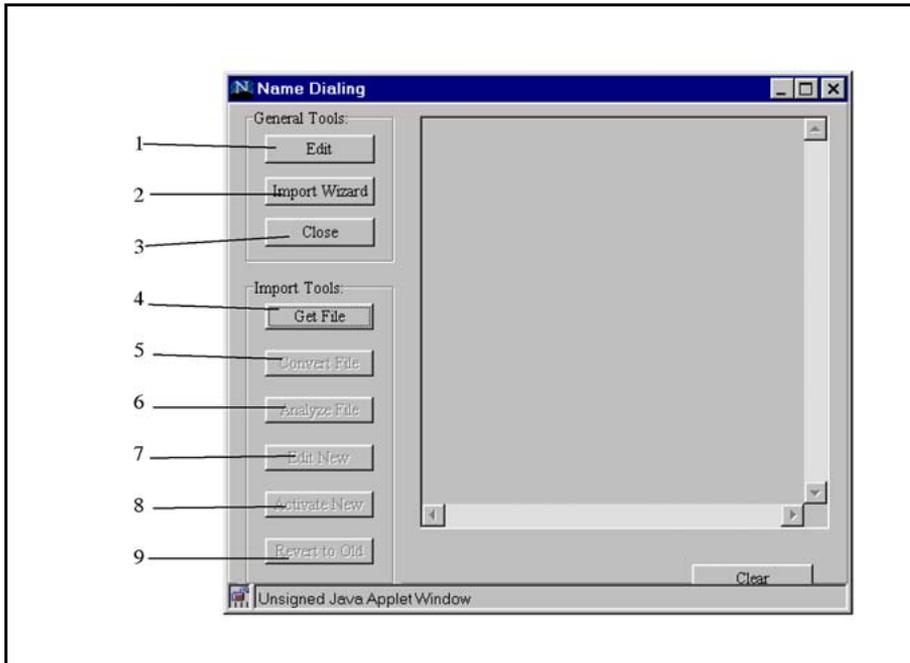
--End--

Table 17 "Name Dialing window component description" (page
147) provides descriptions of the Name Dialing window components.

Table 17
Name Dialing window component description

Number	Name	Description
1	Edit	Click to open the Edit window. Integrated Call Assistant displays the existing database. If you have not modified a database, the Edit window displays the Integrated Call Assistant five-name default database.
2	Import Wizard	Click to begin the name dialing database import wizard process. Integrated Call Assistant displays the screen called **Name Dialing Import Wizard Step 1**.
3	Close	Click to close the Name Dialing window.
4	Get File	Click to open the **Get File** window and import the database without converting it.
5	Convert File	Click to open the **Name Dialing Convert File** window. The windows prompt you to enter information about the database configuration, such as the delimited format used and other settings.

Table 17
Name Dialing window component description (cont'd.)

Number	Name	Description
6	Analyze File	When you click this button, you see the **Convert File** windows. You enter the data required in those windows and press OK. Then you see the **Name Dialing Analyze File** window. This tool debugs the imported file if there are problems in the conversion process. The tool generates an annotated file by adding a character to the start of each record. A + indicates the records processed successfully. A - indicates Integrated Call Assistant skipped the record.
7	Edit New	Click to open the **Name Dialing Edit New** window. You can view edit the new imported file before you activate it.
8	Activate New	Click to activate the new imported file after Integrated Call Assistant converts the file to the internal format.
8	Revert to Old	Click to activate the old database. The New database remains New.

Import Wizard Step 1, Define File Transfer Parameters

When you perform Step 1, you define the settings Integrated Call Assistant uses to import the datase.

Procedure 33
Defining File Transfer Parameters

Step	Action
1	From the **Name Dialing** window, click **Import Wizard**. Integrated Call Assistant displays the **Step 1** window (see).

Figure 46
Step 1 - define file transfer parameters

2   Define the File Transfer parameters:

    a **Host IP address** - type in the IP address of the file server where you store the name dialing database.

    b **FTP user Name** - type in the user name assigned to you by the server administrator. Integrated Call Assistant uses the name to access the server.

    c **FTP password:** type in the password assigned to you by the server administrator. Integrated Call Assistant uses this password to access the server.

    d **File name(full path):** This information defines the location of the database on the server. In this example, the database file name is NAMES22a.csw. In the example, Integrated Call Assistant looks on the server at IP address 47.82.42.55 for a file named NAMES22a.csw.

    e Leave the default transfer mode set to ASCII.

    Note: You must type in the Host IP address, not a name or an alias.

3   Press **Next**. Integrated Call Assistant displays the window for Step 2.

--End--

Step 2, Define the Data Type of the imported File

In this tab (see Figure 47 "Step 2 - select data type of the imported file" (page 151)), you select some of the parameters of the name dialing database. If required, you can change the row where Integrated Call Assistant begins to import the records, and if you want Integrated Call Assistant to ignore any rows.

Procedure 34
Defining the Data Type of the importing File

Step	Action
1	Click **Delimited** or **Fixed Width**, depending on the format you used to separate the fields in your database.
2	**Start import at row:** If you want Integrated Call Assistant to begin to import rows on a row different from 1, click in the box and type in the new row number.
3	**Ignore rows starting with:** If you want Integrated Call Assistant to ignore certain rows, enter the character that defines those rows in this box
4	Press **Next**.
	If you selected **Delimited**, Integrated Call Assistant displays the window you use to configure the options for a Delimited database. If you selected **Fixed width**, Integrated Call Assistant displays the window you use to configure the options for a Fixed Width database.
	Note: Each window is labeled **Name Dialing Import Wizard - Step 3**.

Figure 47
Step 2 - select data type of the imported file
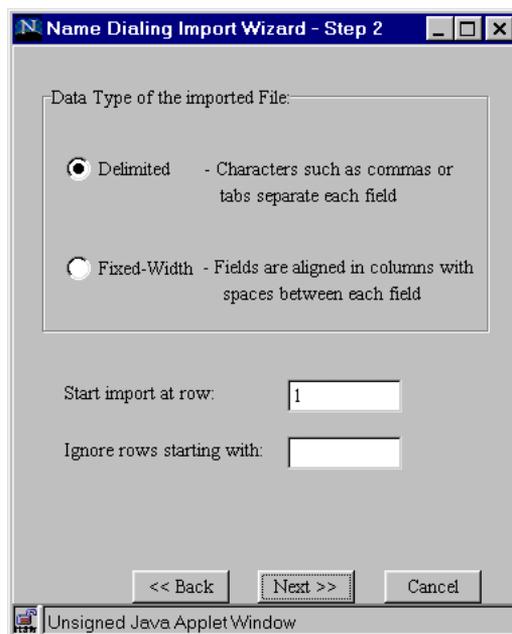
--End--

Step 3, Define File Format Parameters (Delimited File)

When you enter information in a "delimited" telephone database, you "delimit" or separate, the last name, first name and phone number information by a space, comma, tab, semicolon or other character.

In Step 3, you tell Integrated Call Assistant which character or characters you used to separate the information in your telephone database. The examples show different ways to separate information in a telephone database. The examples use spreadsheet software, but Integrated Call Assistant does not require you to use a spreadsheet.

Fields and delimiters description

Each appearance of any delimiter character indicates the end of a field. For example, if a comma is a delimiter, three consecutive commas are seen as three fields.

Example 1 tab-delimited database

In , there are three columns of information. The information in each column is separated by a tab. To Integrated Call Assistant, this database has three fields.

Figure 48
Tab-delimited database in a spreadsheet

	A	B	C
1	Last Name	First Name	Phone Ext.
2	Smith	John	1234
3	Jones	Mary	7888
4	Murphy	Mark	6522

Example 2 comma-delimited and space-delimited database

In Figure 49 "Comma-delimited and tab-delimited database" (page 152),
the last and first names are separated by a comma and a space. Four
spaces separate the last name and phone number. To Integrated Call
Assistant, this database has seven fields:

- Smith is field 1. The comma after Smith ends field 1

- The space after the comma ends field 2

- John is field 3

- The first space after John ends field 3

- The next three spaces end fields 4, 5 and 6.

- The phone number 1234 is field 7.

Figure 49
Comma-delimited and tab-delimited
database

	A
1	Phonebook
2	Smith, John 1234
3	Jones, Mary 7888
4	Murphy, Mark 4444

Define the delimiters for your database

The procedures in this section use Example 2 as a guide.

Procedure 35
Defining the delimiters for the database

Step	Action
1	In **File Format Parameters**, click on the delimiter(s) for your database. You can select more than one delimiter (see Figure 50 "Name Dialing Import Wizard - Step 3 (based on Example 2)" (page 153) **on** Figure 50 "Name Dialing Import Wizard - Step 3 (based on Example 2)" (page 153)).

2 In **Fields Relative Positions in the Data Record**, you specify the field numbers that contain the last name, first name and phone number in your database.

    a **Last Name:** Select 1 from the drop-down menu. Field 1 in the Example 2 database contains the Last name.

    b **First name:** Select 3 from the drop-down menu. Field 3 in the Example 2 database contains the First name.

    c **Phone number:** Select 7 from the drop-down menu. Field 7 in the Example 2 database contains the Phone Number.

3 Leave **Qualifier** in the default setting.

4 Press **Next**.

Figure 50
Name Dialing Import Wizard - Step 3 (based on Example 2)
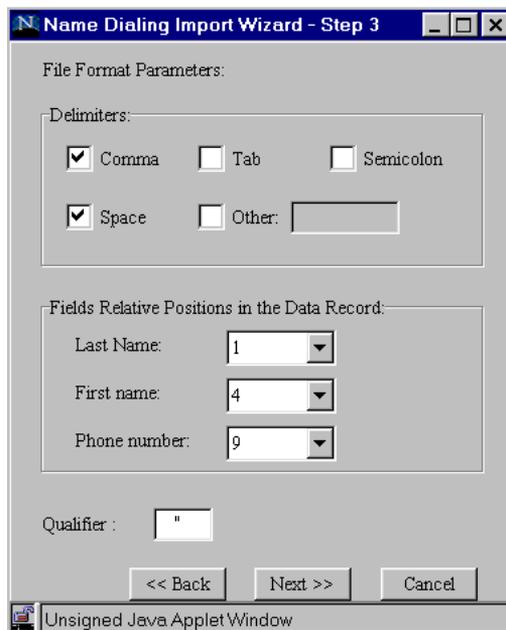
--End--

Define file format parameters for a fixed width file

If you chose fixed width file format, you define the position and length of the fields in a database (see Figure 51 "File format parameters for a fixed width file - Step 3" (page 155) on Figure 51 "File format parameters for a fixed width file - Step 3" (page 155)). Configure the parameters for last name, first name and phone number as described below.

Offset file explanation

An offset file is any file that is created in a table format. The characters are flush left and are of a fixed width. The word offset means the number of spaces between the margin of the table column and the first character. If the first column in the table is 11 characters wide and you press the space bar twice before you type in the last name, the offset for column 1 is 2 and the field length is 9.

Procedure 36
Defining file format parameters for a fixed width file

Step	Action
1	Click in the box for **Last Name: Start Offset**.
2	Enter the start offset position of the Last name. The field accepts digits between 0 and 256.
3	Click in the box for **Last Name: Field Length**.
4	Enter the field length of the Last name. The field accepts digits between 0 and 256.
5	Click in the box for **First Name: Start Offset**.
6	Enter the start offset position of the First name. The field accepts digits between 0 and 256.
7	Click in the box for **First Name: Field Length**.
8	Enter the field length of the First name. The field accepts digits between 0 and 256.
9	Click in the box for **Phone Number: Start Offset**.
10	Enter the start offset position of the Phone Number. The field accepts digits between 0 and 256.
11	Click in the box for **First Name: Field Length**.
12	Enter the field length of the Phone Number. The field accepts digits between 0 and 256.
13	Press **Next**.

--End--

Name Dialing Import Wizard Finish

After you define the FTP settings and database parameters for the file you want to import, Integrated Call Assistant prompts you to activate the Wizard (see Figure 25).

Procedure 37
Finish using the Name Dialing Import Wizard

Step	Action
1	Press **Finish** to activate the Import Wizard. Integrated Call Assistant imports the file, converts it, and activates it. Integrated Call Assistant displays messages describing the import progress status.

Figure 51
File format parameters for a fixed width file - Step 3
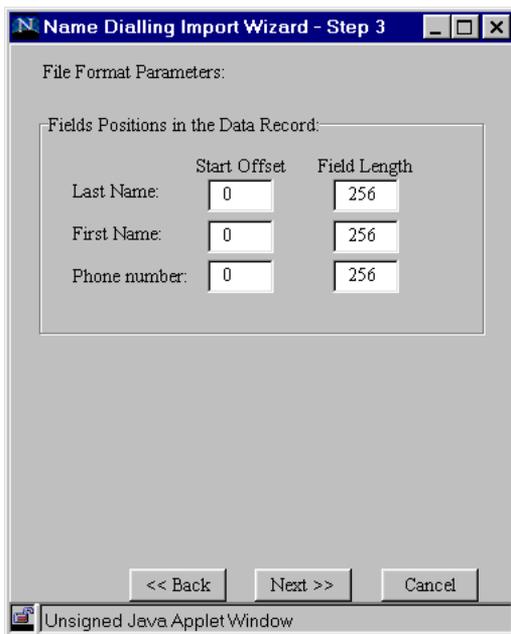
Figure 52
Name Dialing Import Wizard - Finish
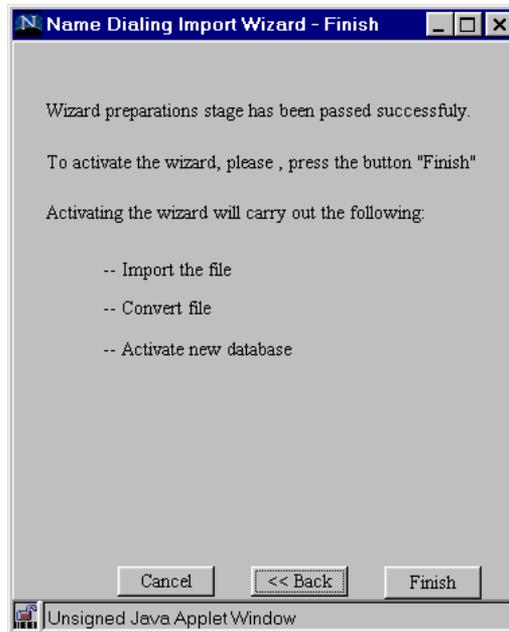
--End--

How to import a database using the Import Tools

When you use the Import Tools, you perform the steps that the Import Wizard carries out automatically.

Get File

Procedure 38
Getting a database file

Step	Action
1	From the **Name Dialing** window, press the **Get** button.
2	Integrated Call Assistant displays **Name Dialing Get File** screen (see Figure 53 "Name Dialing Get file screen" (page 157) on Figure 53 "Name Dialing Get file screen" (page 157)).
3	Define the File Transfer parameters:
	a **Host IP address** - type in the IP address of the file server where you store the name dialing database.

b   **FTP user Name** - type in the user name assigned to you by the server administrator. Integrated Call Assistant uses the name to access the server.

c   **FTP password:** type in the password assigned to you by the server administrator. Integrated Call Assistant uses this password to access the server.

d   **File name(full path):** This information defines the location of the database on the server. In this example, the database file name is NAMES22a.csw. In the example, Integrated Call Assistant looks on the server at IP address 47.82.42.55 for a file named NAMES22a.csw.

e   Leave the default transfer mode set to ASCII.

Note: You must type in the Host IP address, not a name or an alias.

4   Press **OK**. Integrated Call Assistant imports the name dialing database and stores it in its original format, without converting it.
Figure 53
Name Dialing Get file screen
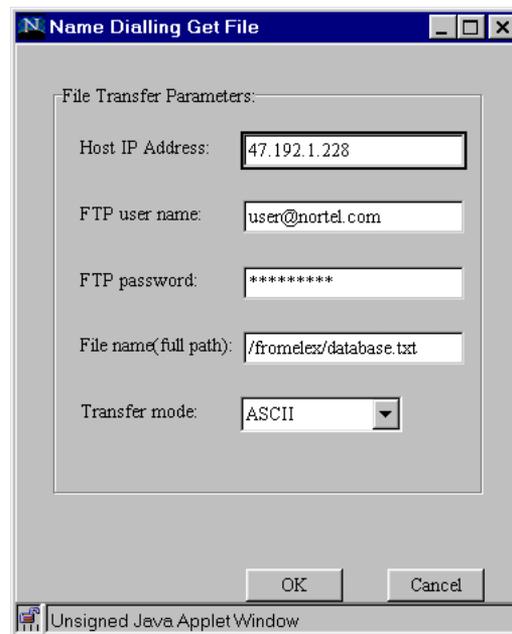
--End--

Convert File

This tool converts a new name dialing file from its original format to the internal format Integrated Call Assistant uses to respond to dial-by-name requests. It assumes that the file is already in the card.

Procedure 39
Converting a database file

Step	Action
1	From the **Name Dialing Database** window, press Convert.
2	Integrated Call Assistant displays a window labeled **Convert File - Step 2**. To convert the file, read the information and perform the steps described in "Step 2, Define the Data Type of the imported File" (page 150) and in "Step 3, Define File Format Parameters (Delimited File)" (page 151) or "Define file format parameters for a fixed width file" (page 153).
3	Press **OK** when you finish.

<div align="center">**--End--**</div>

Analyze File

This tool debugs the imported file if Integrated Call Assistant found problems in the file conversion process. The Analyze file tool generates an annotated file by adding a + or a - to the start of each record. If the record is marked with a +, it was accepted. If it was marked with a -, it was rejected. The Analyze button first displays the convert windows described above, so the user can enter the appropriate data. The file is then analyzed and Integrated Call Assistant displays the results.

Procedure 40
Analyzing the database file

Step	Action
1	Press the **Analyze File** button.
2	Integrated Call Assistant presents the windows described in the **Convert File** section.
3	Enter the database parameters for the converted file.
4	Press **OK**.

<div align="center">**--End--**</div>

Edit New

This tool is used for viewing and editing the new imported file after you convert it and before you activate it.

Activate New

This tool activates the new imported file after it has been converted to the internal format.

Revert to Old

This tool reverts the name dialing operation to the old database, that is, the database before the last import operation. In other words, it is, 'Undo' of the last 'Activate New' operation. It can be used when an 'Import' operation caused problems in name dialing functionality.

Edit

In the **Edit** window, you can perform the following tasks:

- Add a record

- Delete a record

- Modify a record

- Search for a record

- Clean up recordings

From the **Name Dialing Database** window, click the **Edit** button. Integrated Call Assistant displays the internal name dialing database. Integrated Call Assistant sorts the names alphabetically, not according to people's names, but according to the telephone digits entered by callers who use the Integrated Call Assistant dial-by-name feature to spell the name. In on , you see that Newman Paul is listed before Miller Marty. When callers select the Integrated Call Assistant dial-by-name option, callers press 6 3 9 on the telephone keypad to spell N E W. Callers press 6 4 5 to spell M I L. Integrated Call Assistant sorts according to the telephone keypad spelling, so 6 3 9 (NEW) comes before 6 4 5 (MIL).

If possible, avoid identical names in the name dialing database. If possible, the database should not contain more than five names with identical keypad spelling. Integrated Call Assistant presents only the first five names found that have identical keypad spelling.

About the P. Record column

The P. Record column lists the personal verification recording permissions (Yes or No) for a specific DN of up to seven digits. Integrated Call Assistant allows only 3000 personal verification recordings on the hard disk configuration. The Flash configuration does not allow any personal verification recordings. Permissions are granted only by DN, not by

subscriber name. If you import a new phonebook with the same subscriber names but different DNs, you manually update the definitions of allow/deny recordings.

Figure 54
Edit window
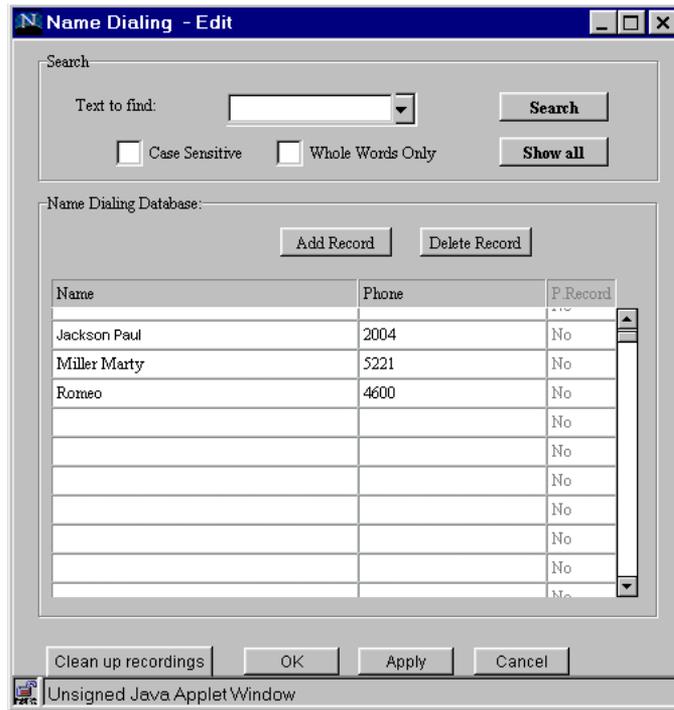
Add a record

Procedure 41
Adding a database record

Step	Action
1	Click the **Add Record** button. Integrated Call Assistant highlights a blank line in the database.
2	Enter the new name, last name first.
3	Press Apply.

--End--

Delete a record
Procedure 42
Deleting a database record

Step	Action
1	Click in the record you want to delete.
2	Click the **Delete Record** button.

--End--

Modify a record
Procedure 43
Modifying a database record

Step	Action
1	Click in the **Name** or **Phone** column of the record you want to modify.
2	Make the modification.
3	Press **Apply**.

--End--

Search for a record
Procedure 44
Searching for a database record

Step	Action
1	Enter the name in the **Text to find:** box
2	If required, click in the **Case Sensitive** and/or **Whole Word Only** checkboxes.
3	Press **Search**.
	Integrated Call Assistant displays the search results. To view the entire database, press **Show All**.

--End--

Clean up recordings
In the hard disk configuration, the Edit window includes a button
labeled "Clean up recordings." This button is not available in the Flash
configuration.

If you press this button, Integrated Call Assistant matches the personal recordings against the database and erases any recordings for people who are not in the database.

FTP server description and requirements

The list below describes the FTP servers Integrated Call Assistant supports from which you can import a database:

- Serv-U 2.5

- BisonFTP

- Express FS Server

- WFTPD

- Niteserver 1.0

- Hummingbird Communication

- TYPSoft FTP server 0.41b

- SunOs (UNIX)

Here is a list of possible server and user requirements for Integrated Call Assistant. Your particular server requirements can be different. Consult server documentation.

- Be sure you can configure the IP address and the port it "listens" on.

- Configure IP address to the same as host computer (PC) and configure the port to 21. If the FTP SERVER and the Integrated Call Assistant are in a different subnet on the network, configure the network to allow access. Configure the PC's network access (Gateways) to the needed configuration. You can run several servers, each on a different port. Some programs implement the multi-server feature. Integrated Call Assistant can only access the 21 port server.

- Make sure the server administrator has created a user name, password for you and has identified privileges (for example Telnet, and FTPD,) for you.

- The user must be allowed to access the phonebook file or its directory.

- The user should be allowed to place the file into the home directory or one of its subdirectories. When you import the file, you enter the path of the file relative to its home directory. This process is important because some servers may deny full/absolute path access or use the virtual file system, where the absolute path has no meaning.

- The user should type the full path only if the file located out of home-dir or on a different drive, and he or she still has access to it. Some servers implement only part of the client-server negotiation commands. You must use the server that supports the dialog shown in Figure 55

"Example of FTP commands executed by the Integrated Call Assistant Import Wizard" (page 164) after the client connects to its 21 port.

Import process FTP interface example

Figure 55 "Example of FTP commands executed by the Integrated Call Assistant Import Wizard" (page 164) on Figure 55 "Example of FTP commands executed by the Integrated Call Assistant Import Wizard" (page 164) provides an example of the FTP commands executed by the Import wizard as it locates and copies the name dialing database. You do not see these commands. In Figure 55 "Example of FTP commands executed by the Integrated Call Assistant Import Wizard" (page 164), "ftp>" indicates the commands the Integrated Call Assistant "Import" actually executes. The rest is server response. If you have problems using the wizard, make sure your FTP server can provide the information required by the Import wizard. It is important that the "status codes" (such as, 226 and150) are the same as in the example for "ftp", "ascii" and "get" commands. If they are not, the Import Wizard fails. Integrated Call Assistant protects itself from importing a file larger than a 1 Mbyte file. This protection is based on the server's answer to the dir command, which reports the file size. If the "dir" command is not correctly implemented, Integrated Call Assistant imports the file regardless of its size. A correctly formatted "dir" response is shown below:

-rw-r--r-- 1 user group 409 Jun 18 07:56 PHONBOOK.TXT

Figure 55
Example of FTP commands executed by the Integrated Call Assistant Import Wizard

```
>ftp 141.226.15.155

>ftp 141.226.15.155

220 Serv-U FTP-Server v2.4a build 3 for WinSock ready...

User (127.0.0.1:(none)): u

331 User name okay, need password.

Password:

230 User logged in, proceed.

ftp> ascii

200 Type set to A.

ftp> dir phonbook.bat

200 PORT Command successful.

150 Opening ASCII mode data connection for /bin/ls.

-rw-r--r--  1 user    group      409 Jun 18 07:56 PHONBOOK.TXT

226 Transfer complete.

ftp> get phonbook.bat phonbook.ext

200 PORT Command successful.

150 Opening ASCII mode data connection for phonbook.txt (409 bytes).

226 Transfer complete.

ftp> bye

221 Goodbye!
```

Configuring the Telephone User Interface

Contents

This section contains information on the following topics:

Introduction

This chapter explains how Integrated Call Assistant subscribers and administrators access and use the Telephone User Interface (TUI) to record personal verifications, customized greetings, and menus.

Note: The Flash version of the Integrated Call Assistant does not permit personal verification recordings because of space limits. Administrators record greetings and menus.

About the TUI

The TUI operates on a prompt-response basis. Subscribers and administrators press telephone keypad keys and/or record their voices in response to prompts. The basic TUI prompts are pre-recorded and stored on the Integrated Call Assistant PC card device in a file. Customers with

a Integrated Call Assistant configuration allowing multiple service number DNs can have a Service Number DN specifically designated for TUI recording.

If you define a separate number for recording, all calls to the service associated with the recording DN reach the same menu, which answers with "please press any digit to begin recording process" or a similar statement. All keys and timeout actions defined for the recording DN have the default action defined as "go to recording application" in the BUI. It is not necessary to define all keys — just define default action as "go to recording application" in the BUI Voice Menus tab.

If you want to return to the previous TUI menu, press the * key. When the TUI prompts you to enter more than one digit, always press the # key after you enter the last digit.

If you press Save to overwrite an existing file and Integrated Call Assistant is playing that file, for example, you record a new greeting while Integrated Call Assistant plays it for a caller. Integrated Call Assistant does not save the new recording. Integrated Call Assistant plays a prompt that says "Save failed". You must record the new greeting again.

Personal verification recordings

Personal Verification Recordings play back the subscriber's greeting in the subscriber's voice when the caller accesses the Dial By Name menu. The recording may be up to three seconds long and must be made from the DN associated with the person's name in the name dialing database.

Administrators can record personal verifications for many subscribers in one call. They can record the verifications from any phone.

> *Note:* In the hard-disk configuration, Integrated Call Assistant can support up to 3000 personal verifications up to three seconds long. If more than 3000 names are defined in the name dialing dialog box, the administrator defines which subscribers can have personal verifications.

How to access the TUI

Subscribers access the TUI by dialing a DN that includes a recording option defined in the main menu that leads to the recording procedure. For example, subscribers dial 4000 and hear the Integrated Call Assistant main menu, which includes "press 4 to begin recording." Any DN can include the menu for the recording option. If you use multiple DNs, you can set up a service for recordings, where all actions lead to the recording option. Subscribers must access the TUI from the phone associated with their name in the name-dialing database. The administrator provides subscribers with the DN. Subscribers can only

record personal verifications. Administrator access the TUI by dialing the same DN and entering the administrator's password (default 000000). The administrator's password can be changed in the BUI Properties sheet.

How to make a personal verification recording

This section describes two ways to record a personal verification.

Example 1 Personal verification recording permitted

Integrated Call Assistant has multiple DNs and has designated one for recording. The administrator has entered Chris Smith's name and primary DN (4002) in the Name Dialing Database and has allowed Chris to record a personal verification. Chris must use his primary DN, as entered in the Name Dialing Database to make the recording. System resources support CLID.

Step	Action
1	Chris Smith dials the Sales Department Recording Service DN (8000) and is prompted to press any number to begin recording.
2	Chris presses 3 and hears: "Please enter the administrator password followed by #, or press # to record your name"
3	Chris presses #.
4	He is prompted to enter his phone number. He enters 4002.
5	Chris hears: "Please say your name after the tone. To end recording, press #"
6	Chris waits for the tone, then says: "Chris Smith, Sales Manager, Extension 4002". He presses the # key and hears: "Press 2 to play the recording, 1 to retry, number-sign to save"
7	Chris presses # and hears "Recording saved".
8	Chris hangs up.

--End--

A caller to the Sales Department who used Dial-by-Name would press the characters "CHR" (247) on the keypad and then hear:

"The call is being transferred to: Chris Smith, Sales Manager, extension 4002"

Example 2 Administrator recording

In this example, Integrated Call Assistant is in the hard drive configuration. It uses a Hunt application and has one service DN (7000). The administrator has entered Chris Smith's name and primary DN (4002) in the Name Dialing database in the BUI. The system does not have Caller ID resources. On the Flash option, Integrated Call Assistant offers dial-by-name and plays the spelled name to the caller.

Step	Action
1	The administrator dials the Service DN (7000) and hears: "Press 1 for number dialing, 2 for name dialing, 3 for assistance (transfer to operator), 4 for recording procedure".
2	The administrator presses 4 and hears "please enter the administrator password followed by #". She enters the password and hears: "Welcome to the administrator interface. To record subscribers' personal verifications, press 1".
3	The administrator presses 1 and hears: "Please enter the subscriber's number".
4	The administrator enters 4002# and hears: "Please say the subscriber's name after the tone. End recording by pressing #".

--End--

The administrator continues to record each subscriber's personal verification and follows prompts to save and exit recordings.

Recording greetings and menus

Only the administrator can record greetings and menus that are played to callers when Integrated Call Assistant answers an incoming call. Each greeting and menu must be recorded in the language it will be used in. For example, you would record the greeting "Welcome to Moore Company" in English and again in French ("Bienvenue a Moore Company"). It is recommended that administrators record greetings and menus before composing the voice menu in the BUI. You can also create the list of prompts in the Voice Files Manager in the BUI and then proceed with the actual recording.

Before recording each greeting or voice menu, the administrator enters the serial number of the language in which the recording will be done and an identifying number for the greeting/menu (a number between 1 and 32 or 1-16 for the Flash option). This identifying number must then be used in the BUI when defining menus to indicate which voice files to play for each menu. Recording the same greeting/menu in different languages is done in different recording sessions. A different language number is entered each time, but the same identifying number for the greeting/menu is used.

Step	Action
1	The administrator dials the TUI DN and enters the administrator's password (000000).
2	The administrator is presented with a menu:
3	Press 1 to record the subscriber's personal verifications • Press 2 to record menus. • Press 3 to record greetings. • Press 4 for override activation or deactivation.
4	The administrator selects a task and follows prompts to complete the recording process.

--End--

About the emergency menu

When the administrator activates the Integrated Call Assistant emergency menu, all customers hear one greeting and set of options, regardless of the dialed number and time of day. The administrator accesses the emergency menu activation or deactivation settings by pressing "4" in the TUI administrator interface.

Integrated Call Assistant ships with a default emergency menu that offers number dialing and a recording application.

If you plan to deactivate the emergency menu by phone, include a recording option when defining the option in the BUI.

When the administrator activates the emergency menu:

• All callers who reach the Integrated Call Assistant will hear the emergency greeting/menu and will have the options defined.

• All FAX calls reaching the Integrated Call Assistant are transferred to the system default FAX number.

- The call screening chosen when the override menu is defined in the BUI is used for all calls.

- All system voice prompts are played in the first language in the language set.

How to record an emergency menu
Procedure 45
Recording an emergency menu

Step	Action
1	The administrator dials the TUI, and enters administrator's password (000000).
2	Integrated Call Assistant presents the Administrator menu: • Press 1 to record subscribers personal verifications. • Press 2 to record menus. • Press 3 to record greetings. • Press 4 for override activation or deactivation.
3	The administrator presses 2 or 3 as if to record a general greeting or menu.
4	The administrator hears: "Please enter the language number (or greeting/menu number), or press 0 to record the emergency prompt." *Note:* System requests the language number in the hard disk configuration and asks for the greeting/menu number in the FLASH configuration.
5	Administrator presses 0. The override greeting/menu is recorded only once. If multilingual support is needed, message may be repeated in different languages in the same recording.

--End--

How to activate the emergency menu
Procedure 46
Activating the emergency meny

Step	Action
1	The administrator presses * to return to the main menu and hears

- Press 1 to record subscribers personal verifications.
- Press 2 to record menus.
- Press 3 to record greetings.
- Press 4 for override activation or deactivation.

2   The administrator presses 4. Integrated Call Assistant announces the present state of the emergency menu and plays "Press 2 to activate the emergency menu" or "press 1 to deactivate the emergency menu."

--End--

About caller input

Integrated Call Assistant accepts digit input while playing a greeting, so an experienced caller can immediately input the appropriate digit and reach the desired option.

In the TUI, the * key can send users to the previous menu. In voice menus, the default definition for the * key is to replay the previous menu.

For system menus, such as dial-by-name or dial-by-number, press the * key to return to the main menu as long as the system prompt is playing.

If you have custom menus, you can define a customized function for the * key.

Callers who use dial-by-number can press the # key twice to bypass the "call is being transferred to" announcement.

Callers who use dial-by-name can press 1 after name dialing to skip the announcement preceding the call transfer.

The # has specific meaning in name dialing and cannot be used to skip the announcement.

Administration

Contents

This section contains information on the following topics:

Introduction

- Integrated Call Assistant administration is carried out through a Command Line Interface (CLI). The Integrated Call Assistant CLI administration menu offers five submenus:
- System Administration (SAdmin)
- System Maintenance (SMaint)
- Protected Administration (PAdmin)
- Port Maintenance (PMaint)
- Logout (LOgout)

You select a menu, then enter prompts to carry out tasks. This section lists the menus and describes each menu prompt.

How to access the Integrated Call Assistant administration CLI

- Connect a terminal directly to the Integrated Call Assistant adapter TTY port.

- Login to the Integrated Call Assistant adapter TTY port using a modem.

- Use Telnet or similar software to access Integrated Call Assistant through the Ethernet connection. If you need help using Telnet, contact your system administrator.

If you forget your CLI password

If you change your password from the default user, perform these steps.

Procedure 47
Resetting the default user password

Step	Action
1	At the CLI login window, enter **rst**
2	Integrated Call Assistant prompts you for the keycode. For help entering the key code, "Enter the key code and login" (page 50)
3	If Integrated Call Assistant validates the keycode, the password is reset to the default: **user**

--End--

Navigation guidelines

- Type in the first two letters of a menu item to open it. For example, to select SAdmin from the main menu, type in SA and hit return. The menus are not case-sensitive.

- Type in /, at any menu prompt to return to the main menu.

- Click the ? to access the Help menu.

- When you Save a change, it is saved immediately.

- Type a * at any menu prompt to return to the previous menu.

- Enter a . to end a command dialog session, such as a report.

Menu descriptions

and on describe each Integrated Call Assistant administration menu. Access all administration menus from the CLI Main Menu.

Integrated Call Assistant menu

Table 18
Integrated Call Assistant menu

Prompt	Description
SAdmin	System administration directory.
SMaint	System Maintenance directory.
PAdmin	Protected Administration directory.
PMaint	Port Maintenance directory.
LOgout	Logout.

System Administration (SAdmin) menu

Table 19
System Administration (SAdmin) menu description

Prompt	Description
SYstem	System attribute editor.
card	Enter up to eight characters to change card name. New name presented on next login.
subnet mask	Configure or change subnet mask address.
gateway address	Configure or change gateway address.
IP address	Configure or change IP address.

System Maintenance menu

Table 20
System Maintenance menu description

Prompt	Description
ARchivdb	Backup customer's database.
REstordb	Restore customer's database.
CRestart	Restarts the Integrated Call Assistant.
?	Help menu

Protected Administration menu

Table 21
Protected Administration (PAdmin) menu description

Prompt	Description
PSweditor	Password Editor — Allows modification of the CLI administrator password (which is also used as FTP password) with user "user"
FUpgrade	Functionality upgrade allows modification of the number of ports being used on the card. Saving modification must be accompanied by insertion of a new keycode. This command offers to reset the card since the card must be restarted in order for this change to take effect properly.
SWupgrade	Software Upgrade — SWupgrade allows upgrading the card's firmware by copying it from a PCMCIA or Flash card inserted in the upper slot of the card. New firmware takes effect after the card is restarted. If it is a new firmware release (indicating major feature changes), a new keycode will be requested upon reset.
ABreset	Administrator BUI Reset — Used to return the administrator BUI login and password to their default values: "admin" and "000000" respectively.
SCReen	SCReen — used to "lock" or "unlock" screening tables, preventing or allowing their modification from BUI. This command has one parameter: u - unlock, l - lock, or p - print (prints current situation). By factory default, screening tables are unlocked.

Port Maintenance menu

Table 22
Port Maintenance (PMaint) menu

Prompt	Description
PStatus	Display status of all Integrated Call Assistant ports.

Fault isolation and card replacement

Contents

This section contains information on the following topics:

Introduction

This section explains how to diagnose some Integrated Call Assistant faults and how to diagnose and replace a defective Integrated Call Assistant card. Also included are troubleshooting suggestions on how to achieve successful Integrated Call Assistant-to-modem communication.

Symptom: Calls ring but Integrated Call Assistant does not Answer or CLI output reads: Failed to acquire
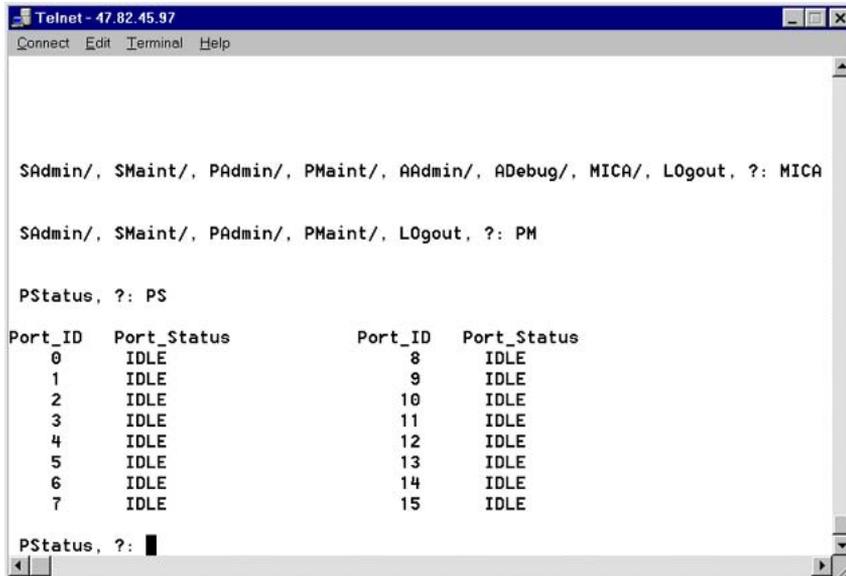
Procedure 48
Diagnosing the Failed to acquire fault.

Step	Action
1	Access the CLI.
2	At the main menu select MICA.
3	At the next menu, select PM.
4	At the next menu, select PS (see Figure 56 "PStatus screen" (page 178))

5 Check that the number of idle/busy ports equals the number
of idle/busy ports defined in the system for the Integrated Call
Assistant. Check that both equal the number of Integrated Call
Assistant ports purchased.

--End--

Figure 56
PStatus screen

Symptom: Calls answered, but there is no voice response
Procedure 49
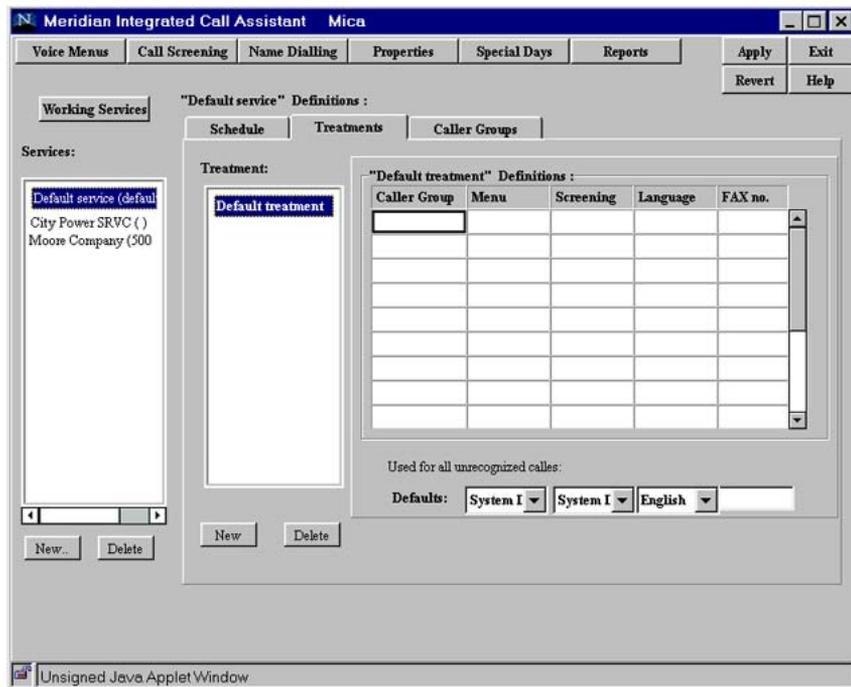**Diagnosing no voice response faults**

Step	Action
1	Login to the Integrated Call Assistant BUI.
2	Click on **Treatments** window (see Figure 57 "Treatments window" (page 179)).
3	Verify that a language is defined in the appropriate service.

--End--

Figure 57
Treatments window

Symptom: Callers hear System unavailable

Procedure 50
Diagnosing System unavailable faults

Step	Action
1	Login to Telephone User Interface.
2	Verify recording of voice files defined in BUI "Voice Menus".

--End--

Symptom: Disabled intelligent peripheral equipment card

One IPE card is disabled, the red LED on an IPE card is lit, or two or more units on a card are disabled. There is a system message indicating that the card or units on the card are disabled. Only one card on the shelf is affected. Look up all system messages and maintenance display codes in *Software Input Output Reference — System Messages (NN43001-712)* () and follow the instructions given. If the fault does not clear, use this procedure.

Manual continuity tests can be used to isolate IPE faults. See "LD45" in the *Software Input Output Administration (NN43001-611)* () for details on performing the tests.

> *Note:* Continually observe and look up system messages as you perform this procedure.

Replace equipment as described in *Communication Server 1000M and Meridian 1 Large System Maintenance (NN43021-700)* () . You may need to replace one of the following:

- Controller card: NT8D01BC, NT8D01AC, NT8D01AD
- Dual loop peripheral buffer (DLB) card: QPC659 or NT5K10
- Superloop network card and network card: NT8D04, QPC414
- IPE card
- IPE card cage: NT8D37

Possible cause	Action
Defective IPE card	Replace the affected card.
	Enable the card by entering:
	LD 32
	ENLC l s c"l s c" represents loop, shelf, and card numbers.
	Test the card by entering:
	LD 30
	SHLF l s
Defective controller card or DLB card	Replace the controller card or DLB card.
	Enable the card by entering:
	LD 32
	ENLC l s c
	Test the card by entering:
	LD 30
	SHLF l s

Possible cause	Action
Defective network card	Replace the network card. Test the loop by entering: **LOOP loop**"loop" represents the loop number.
Defective backplane	Replace the card cage assembly in the module.

Symptom: Unable to establish modem communication with Integrated Call Assistant

Procedure 51
Diagnosing modem communication setup faults

Step	Action
1	Make sure the Integrated Call Assistant adapter is correctly installed.
2	Make sure null modems are installed where required.
3	Make sure Integrated Call Assistant is plugged into the backplane.
4	Try to establish a Telnet session with the Integrated Call Assistant card or connect to Integrated Call Assistant directly through the adapter serial port.
5	Check the modem configuration. The settings below are only provided as an example and represent a US Robotics¨ 14.4 Sportster modem. Your settings may vary. Consult modem manufacturer's documentation. Configure modem to auto answer: • ats0=1 • at&wo to save settings Disable result codes • atq1 • at&w0
6	Check local modem switch settings as described in the next section.

--End--

Local modem switch settings
Procedure 52
Diagnosing modem setting faults

Step	Action
1	Turn modem off.
2	Configure dip switches:
	a 1 down — Modem ignores Data Terminal Ready DTR (Override).
	b 2 up — Verbal Result codes.
	c 3 down — Results Code Display enabled
	d 4 up — Keyboard commands displayed
	e 5 up — Modem answers on first ring, or higher if specified in NVRAM.
	f 6 up — Modem sends Carrier Detected CD signal when it connects with another modem, drops CD on disconnect.
	g 7 down — Load generic template from ROM.
	h 8 down — AT Command Set Recognition enabled (Smart Mode).
3	Turn modem on.
4	Define the terminal parameters:
	a 9600bps baud rate, 8-bit none, 1 stop bit:
5	Define modem parameters:
	a Press AT&F0 — Load the generic template read only factory configuration)
	b Press ATS0=1 — Configure register 0 to 1 (number of rings is 1).
	c Press AT&B1 — Fixed serial port rate.
	d Press ATY0 — Hardware Flow Control template settings in NVRAM.
	e Press ATQ1 — Quiet mode, no result codes.
	f Press AT&W0 — Modifies the NVRAM 0 template (Y0)
	g Press AT&W1 — Modifies the NVRAM 1 template (Y1).
6	Turn modem off.
7	Configure dip switches:
	a 1 down
	b 4 down — echo suppressed

    c 8 down

    d 2 up

    e 3 up — Results Code Display suppressed

    f 5 up

    g 6 up

    h 7 up — Load Y or Y1 configuration from user defined NVRAM

--End--

Integrated Call Assistant hardware replacement procedures

The *Software Input Output Administration (NN43001-611)* () describes all maintenance commands. Use the *Software Input Output Reference — System Messages (NN43001-712)* () to interpret system messages.

> **WARNING**
> Module covers are *not* hinged; do not let go of the cover. Lift the cover away from the module and set it out of your work area.

Backup the Integrated Call Assistant database

When you backup the database, you login to the Integrated Call Assistant CLI and select SMaint/ARchivdb. You back up only voice, data and report files, not application, firmware or BUI. If you use a backup disk that already contains a database, the backup process overwrites existing files with the same names on the target disk. The copied database includes the keycode of the original disk. If the copy is used on another card (for example, card B), a keycode inconsistency will be detected at reset. Entering the keycode belonging to card B is all that is necessary, provided that card B is a legitimate Integrated Call Assistant card.

Do not use the BUI during the backup or restore process.

Note: Database backup can take approximately one hour.

> **CAUTION**
> Disable Integrated Call Assistant before you backup the
> database.

Procedure 53
Backing up the Integrated Call Assistant Database

Step	Action
1	Software disable the Integrated Call Assistant: **LD 32** **DISC l s c** "l s c" are loop, shelf, and card numbers You will see "NPR011" on the system terminal when the card is disabled. Busy channels will not be disabled until the call is disconnected.
2	Insert a spare PC drive in Integrated Call Assistant slot B.
3	Log in to the Integrated Call Assistant Command Line Interface.
4	From the main menu, select MICA/SMaint/ARchivdb.
5	Follow prompts to backup the Integrated Call Assistant database. *Note:* Integrated Call Assistant displays "Acquire Failed" messages when you disable it in LD 32. If you want to disable the "Acquire Failed" commands, select AA from the CLI Main Menu, then select MA and type in SH0. If you take this step, you need to restart the Integrated Call Assistant after database upgrade is complete.

--End--

How to use the Restore command
Procedure 54
Using the database Restore command

Step	Action
1	Login to the Integrated Call Assistant Command Line Interface.
2	From the main menu, select MICA/SMaint/REstordb.
3	Follow prompts to perform the Restore process.

--End--

When you use the restore command, you copy ALL files from a PCMCIA hard disk or Flash device in Slot A to the device in Slot B. While the backup command copies ONLY the database from the device in Slot B to the device in Slot A. When you use the Restore command, make sure you use a PCMCIA device that was previously only used as a target disk for a backup.

Backup and restore Flash devices to Flash devices only.

Backup and restore hard disks to hard disks only.

Remove Integrated Call Assistant
Procedure 55
Removing Integrated Call Assistant

Step	Action
1	Eject the PC drive from slot A.
2	Unhook locking devices and slide Integrated Call Assistant out of the card cage.
3	Remove and retain the Integrated Call Assistant security device. The device is a round disk and resembles a watch battery. It clips onto the card.

--End--

Replace Integrated Call Assistant
Procedure 56
Replacing Integrated Call Assistant

Step	Action
1	Remove replacement Integrated Call Assistant from shipping box.
2	Install the original PC drive into Slot A of the replacement Integrated Call Assistant.
3	Install the original security device on the new Integrated Call Assistant.

4   Insert the replacement Integrated Call Assistant into the vacated slot and hook the locking devices.

Note : When IPE cards are installed, the red LED on the faceplate remains lit for 2 to 5 seconds as a self-test runs. If the self-test completes successfully, the LED flashes three times and remains lit until the card is configured and enabled in software, then the LED goes out. If the LED does not follow the pattern described or operates in any other manner (such as continually flashing or remaining weakly lit), replace the card.

5   Software enable the Integrated Call Assistant:

LD 32

ELNC l s c   "l s c" are loop, shelf, and card numbers

When the process is complete, you will receive a system response.

To Exit LD 32:

****

6   Test the Integrated Call Assistant:

LD 30

SHLF l s   "l s" are loop and shelf numbers

Note : This command tests every card on the designated shelf.If there is a problem, an NPR system message is generated and the red LED(s) on the faceplate of the card will remain lit.If there is no problem, exit LD 30:****

7   Tag defective equipment with a description of the problem and package it for return to a repair center.

--End--

Upgrading the Integrated Call Assistant firmware

Contents

This section contains information on the following topics:
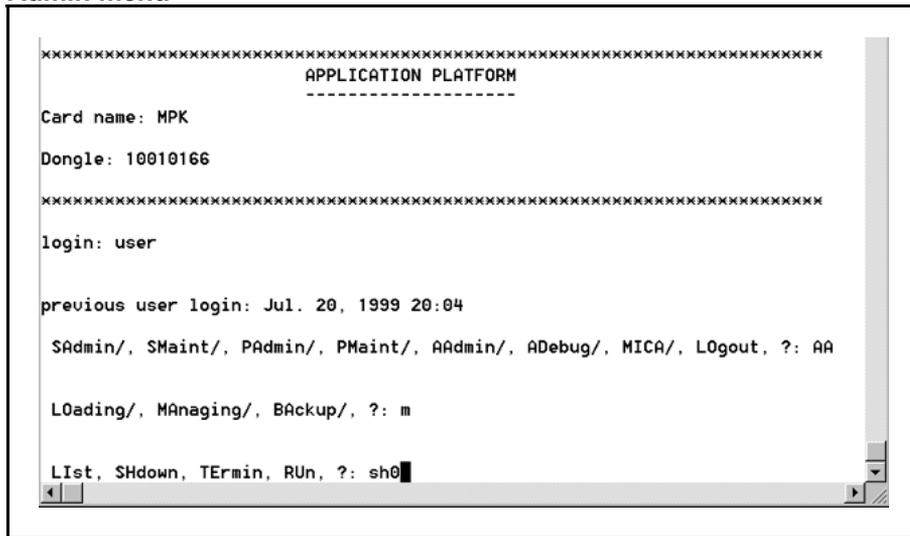
"Introduction" (page 187)

Introduction

These procedures explain how to upgrade the Integrated Call Assistant firmware.

Procedure 57
Upgrading the Integrated Call Assistant firmware

Step	Action
1	Log in to the Command Line Interface to disable Integrated Call Assistant call-handling functionality. Functionality returns after you reset Integrated Call Assistant after the upgrade.
2	At the CLI Main Menu prompts - SAdmin/, SMaint/, PAdmin/, AAdmin/, ADebut/, MICA/, LOgout, ?: enter AA (see Figure 58 "Admin menu" (page 188) on Figure 58 "Admin menu" (page 188)).
3	At the next menu - LOading/, MAnaging/, BAckup/, ?: enter m
4	At the next menu - LIst, SHdow, TErmin, RUn, ?: enter sh 0
5	Press /, to return to the CLI Main Menu.

Figure 58
Admin menu

```
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
                        APPLICATION PLATFORM
                        --------------------
Card name: MPK

Dongle: 10010166

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

login: user


previous user login: Jul. 20, 1999 20:04

 SAdmin/, SMaint/, PAdmin/, PMaint/, AAdmin/, ADebug/, MICA/, LOgout, ?: AA


 LOading/, MAnaging/, BAckup/, ?: m


 LIst, SHdown, TErmin, RUn, ?: sh0
```

6   Open LD 32 and software-enable the Integrated Call Assistant
card:

LD 32	to load the program
REQ	NEW CHG PRT
ENLC	l s c - l=loop, s=shelf, c=card
****	to exit the program

7   Log out of the BUI and do not use the BUI until you complete the
upgrade.

8   Place the new firmware disk in slot B.

9   At the CLI Main Menu prompts - SAdmin/, SMaint/, PAdmin/,
AAdmin/, ADebug/, MICA/, LOgout, ?: enter MICA.

10   At the next menu - SAdmin/, SMaint/, PAdmin/, PMaint/, LOgout,
?: enter PA

11   At the next menu - PSweditor, FUpgrade, SWupgrade, ABreset,
SCReen, ?: press SW

12   Integrated Call Assistant displays the current software release,
for example:

Software release: 01, Issue 03

13   At the prompt: Modify, Save, Cancel: **M**

14   Modify s/w? (Yes, (No)) **Y**

15   Modify, Save, Cancel: **S**

16   Integrated Call Assistant displays "UPGRADE process is in progress."

17   Integrated Call Assistant is disabled for several minutes. When the upgrade is complete, Integrated Call Assistant prompts:

new s/w will be used following AP restart

Restart AP ? (Yes, (No)) ⅄

18   Integrated Call Assistant restarts the card.

19   Re-enable the Integrated Call Assistant using LD 32.

--End--

Appendix
I/O panel slot charts

Cables are designated by the letter of the I/O panel cutout (A, B, C, and so on) where the 50-pin cable connector is attached. Each cable has three 20-pin connectors (16 positions are used), designated 1, 2, and 3, that attach to the backplane. Using the designations described, the backplane ends of the first cable are referred to as A-1, A-2, and A-3.

The locations of the cable connectors on the backplane are designated by the slot number (L0 through L9 for NT8D11, L0 through L15 for NT8D37) and the shroud row (1, 2, and 3). Using these designations, the slot positions in the first slot are referred to as L0-1, L0-2, and L0-3.

In NT8D11BC and NT8D11EC (and later vintage) CE/IPE Modules, all 10 IPE card slots support 24-pair cable connections. Table 23 "NT8D11 cable connections" (page 191) shows the cable connections from the backplane to the inside of the I/O panel. Figure 59 "NT8D11 backplane cable designations" (page 192) on Figure 59 "NT8D11 backplane cable designations" (page 192) shows the designations (such as A-1) for the backplane end of the cables, and the backplane slot designations (such as L0) for the cable connections.
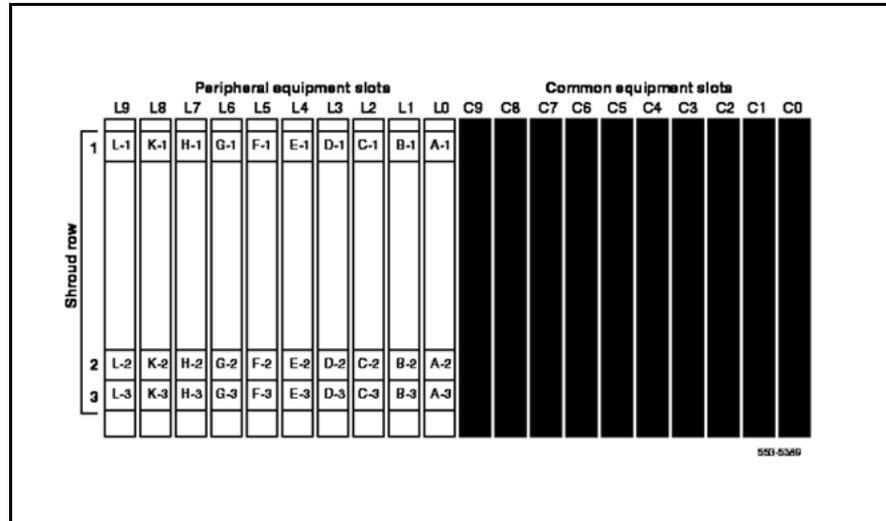
Table 23
NT8D11 cable connections

Backplane slots–shroud rows	I/O panel/cable designation
L0–1,2,3	A
L1–1,2,3	B
L2–1,2,3	C
L3–1,2,3	D
L9–1,2,3	**L**
L4–1,2,3	E
L5–1,2,3	F
L6–1,2,3	G

Table 23
NT8D11 cable connections (cont'd.)

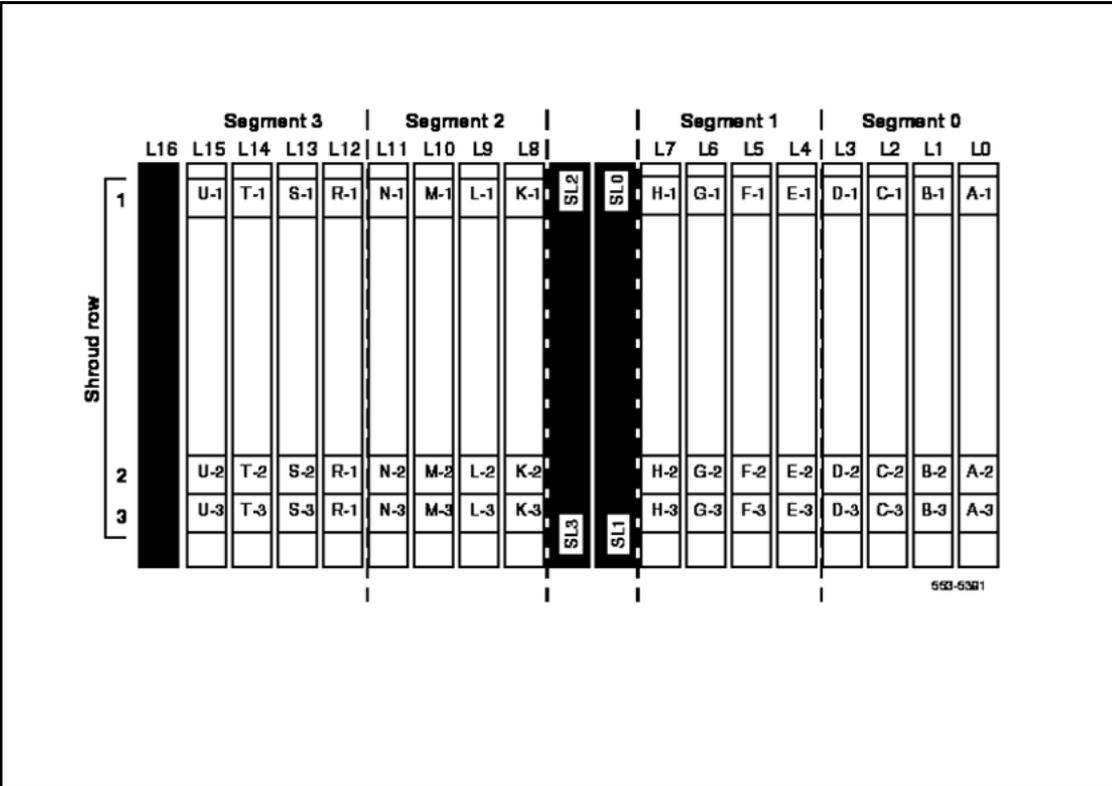| Backplane slots–shroud rows	I/O panel/cable designation
L7–1,2,3	H
L8–1,2,3	K
L9–1,2,3	**L**

Figure 59
NT8D11 backplane cable designations

In NT8D37BA and NT8D37EC (and later vintage) IPE Modules, all 16 IPE card slots support 24-pair cable connections. Table 24 "NT8D37 cable connections" (page 192) shows the cable connections from the backplane to the inside of the I/O panel. Figure 60 "NT8D37 backplane cable designations" (page 193) shows the designations for the backplane end of the cables, the backplane slot designations for the cable connections, and the associated network segments for the backplane slots.

Table 24
NT8D37 cable connections

Backplane slots–shroud rows	I/O panel/cable designation
L0–1, 2, 3	A
L1–1, 2, 3	B
L2–1, 2, 3	C
L3–1, 2, 3	D
L4–1, 2, 3	E
L5–1, 2, 3	F
L6–1, 2, 3	G
L7–1, 2, 3	H
L8–1, 2, 3	K
L9–1, 2, 3	L
L10–1, 2, 3	M

Backplane slots–shroud rows	I/O panel/cable designation
L11–1, 2, 3	N
L12–1, 2, 3	R
L13–1, 2, 3	S
L14–1, 2, 3	T
L15–1, 2, 3	U

Figure 60
NT8D37 backplane cable designations

Nortel Communication Server 1000

Integrated Call Assistant Fundamentals

NORTEL