



>THIS IS **THE WAY**

>THIS IS **NORTEL™**

IP Phone

External Server Applications User Guide



Revision history

August 2005

Standard 3.00. This document is up-issued to support Nortel Communication Server 1000 Release 4.5.

May 2005

Standard 2.00. This document is up-issued to support the IP Phone 2007.

February 2005

Standard 1.00. This is a new document, issued to support the 8.x Firmware Upgrade for IP Phones.

Contents

About the Nortel IP Phones	7
External Server Applications	8
External Server Applications feature support	10
Using text-based External Server Applications	12
Using graphical-based External Server Applications	19
Call interactions	20
Feature interactions with IP Phones	21
Terms you should know	23
Index	31

About the Nortel IP Phones

The Nortel IP Phones bring voice and data to the desktop by connecting directly to a Local Area Network (LAN) through an Ethernet connection.

Note: Not all features are available on all telephones or all call servers. Consult your system administrator to verify which features are available for your use.

For the basic operation of your IP Phone, consult one of the documents listed in Table 1.

Table 1: IP Phone User Guides

IP Phone	User Guide Name
Nortel IP Phone 2001	<i>IP Phone 2001 User Guide</i>
Nortel IP Phone 2002	<i>IP Phone 2002 User Guide</i>
Nortel IP Phone 2004	<i>IP Phone 2004 User Guide</i>
Nortel IP Phone 2007	<i>IP Phone 2007 User Guide</i>

This document focuses on External Server Applications (XSA) and their interactions with IP Phones.

External Server Applications

Use External Server Applications (XSA) to access a variety of HTML, XML, and multimedia-rich applications directly from your IP Phone. These applications reside on an Application Gateway (also known as an External Application Server or XAS).

The following are examples of some applications that can be available on your IP Phone:

- News — Browse and read a variety of news sources and topics.
- Finance — Obtain market indices and stock quotations.
- White Pages — Search for people (by first name and last name), for a business (by name and ZIP code or postal code), or for either by phone number.
- Yellow Pages — Search for businesses by name and ZIP code or postal code.
- Sports — Read the latest sports news.
- Travel — Access flight information through FlightArrivals.com.
- Weather — Check the weather based on ZIP code or postal code.
- Visual Voice Mail — See a visual list of your voice messages; review and respond to them.

Because your system applications can be customized, not all applications, as listed above, are available on all IP Phones. Contact your system administrator with any questions you have regarding the default applications available on your IP Phone. See the appropriate application gateway documentation for further information about the applications available to you.

The application information displays on the LCD screen of your IP Phone. Only one application can be active at a time. While browsing applications, you can make or receive telephone calls. You can use the **Expand to PC** feature key to toggle between the IP Phone and external text-based applications.

In addition to text-based external applications, the IP Phone 2007 provides access to graphical-based external applications. An example of an application display is shown in Figure 1.

Figure 1: IP Phone 2007 graphical external application



To access the graphical external applications using an IP Phone 2007, use the following soft keys:



Tap this soft key to access a list of all registered **Graphical Applications**.



Tap this soft key to access the **Primary Application**. This soft key, to the left of the **Graphical Applications** soft key, displays the icon associated with the primary graphical application.

Note: Users cannot access both text and graphical external applications on a phone. Consult your system administrator to determine which is configured for your use.

External Server Applications feature support

Not all IP Phones support the External Server Applications (XSA) features. Table 2 lists the IP Phones and whether they support XSA features.

Table 2: IP Phone support for XSA features

Telephone model	Support
IP Phone 2001	Limited
IP Phone 2002	Yes
IP Phone 2004	Yes
IP Phone 2007	Yes
IP Audio Conference Phone 2033	No
IP Softphone 2050	No
Mobile Voice Client 2050	No
WLAN Handsets 2210 and 2211	No

The user interface for the IP Phone 2007 is slightly different from the other supported IP telephones. The soft keys (soft-labeled fixed keys) of the IP Phone 2002 and IP Phone 2004 correspond to soft keys on the IP Phone 2007 touch-sensitive screen, as shown in Table 3.

Table 3: IP Phone user interface differences (Part 1 of 2)








IP Phone 2002 IP Phone 2004	IP Phone 2007
<p>Expand to PC key</p> 	<p>Expand soft key</p> 

Table 3: IP Phone user interface differences (Part 2 of 2)

IP Phone 2002 IP Phone 2004	IP Phone 2007
Navigation keys 	Navigation keys 
Select 	Tap a soft key or a menu item (depends on context)
Next  Prev 	Tap the arrows of the scroll bar

This document describes procedures using the IP Phone 2004 interface. The IP Phone 2004 soft keys correspond to the IP Phone 2007 soft keys, and IP Phone 2007 users can use Table 3 as a guide.

Using text-based External Server Applications

This section provides information on the following topics:

- “To establish a text XSA session:”
- “To access the News application:” on page 13
- “To access the Finance application:” on page 14
- “To access the White Pages “Find a Person” application:” on page 16
- “To exit an XSA session:” on page 18

To establish a text XSA session:



1. Press the **Expand to PC** key.

Note: If the server is not available when you press the **Expand to PC** key, you are immediately returned to the Call Processing display. Contact your system administrator for assistance.



2. Press the **Up/Down** navigation keys to scroll through the list of available applications.

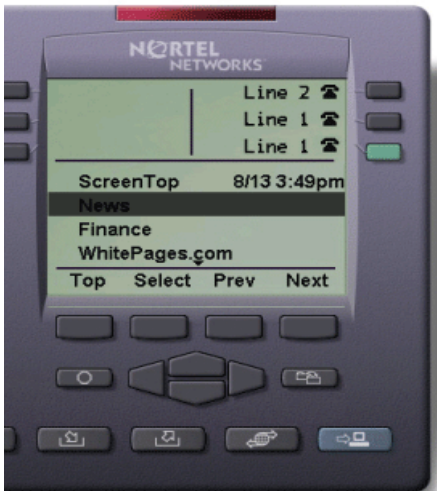
Select



3. Choose one of the following:
 - Press the **Select** soft key (IP Phone 2002 or IP Phone 2004).
 - Tap the application name (IP Phone 2007).

Figure 2 on page 13 shows an example of the display screen during an XSA session. The menu displays a list of available applications.

Figure 2: IP Phone 2004 display during an XSA session



The following procedures show how to navigate through a series of applications using an IP Phone 2004. These are examples and can vary according to the XSA used. See the appropriate application gateway documentation for further information.

To access the News application:

Select



1. Press the **Select** soft key or tap the application name to choose the **News** application.

The Loading ... message displays.



2. Press the **Up/Down** navigation keys to scroll and highlight an available headline.

Select



3. Press the **Select** soft key, or tap the news item, to choose the news story.
The **Loading ...** message displays.

Next



Prev



4. Press the **Next** and **Prev** soft keys, or tap the scroll bar, to scroll through the text of the news story.

Select



5. Press the **Select** soft key to return to the list of news headlines when you reach the end of the news story.

To access the Finance application:

Select



1. Press the **Select** soft key to choose the **Finance** application.
The **Loading ...** message displays.

Next



2. Press the **Next** soft key or tap the scroll bar.

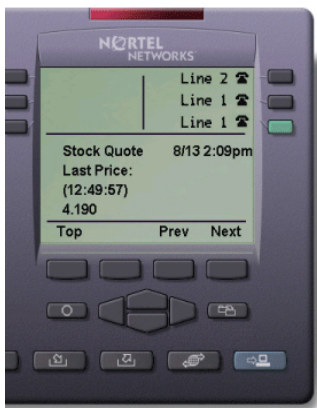
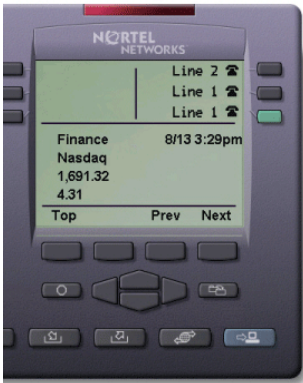
3. Choose one of the following:

- a. Market Indices

- The **Loading...** message displays. A list of major stock markets is shown.
- Press the **Next** and **Prev** soft keys, or tap the scroll bar, to scroll through the list of markets. When you reach the end of the market listings, press the **Top** soft key to return to the XSA display.

- b. Stock Quotes

- The **Loading...** message displays.
- Use the telephone dialpad to enter the symbol for the stock for which you want a quotation.
- Press the **Get** soft key to retrieve the results. The **Loading...** message displays.
- Press the **Next** and **Prev** soft keys to scroll through the information. When you reach the end of the information, the **Home** message displays.
- Press the **Select** soft key.
- Press the **Top** soft key to return to the XSA menu.



To access the White Pages “Find a Person” application:

Select



1. Press the **Select** soft key to choose the **White Pages** application.

The Loading ... message displays.



2. Press the **Up/Down** navigation keys to scroll and highlight **Find a Person**.

Select



3. Press the **Select** soft key.



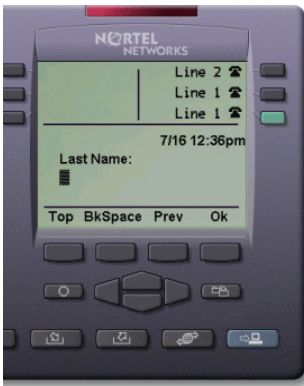
4. At the prompt, use the telephone dialpad to enter the first name (for example, John).

Note: If you make a mistake, press the **BkSpace** soft key to correct your entry.

OK



5. Press the **OK** soft key.



- At the prompt, use the telephone dialpad to enter the last name (for example, Smith).

Note: If you make a mistake, press the **BkSpace** soft key to correct your entry.

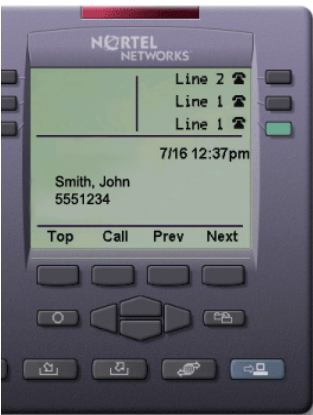
OK



- Press the **OK** soft key.



- At the prompt, use the telephone dialpad to enter the zip code or postal code (for example, 90210).



- Press the **Search** soft key.

If your search is successful, the person's name and telephone number display on the telephone.

Note: In certain environments, you must enter a digit before the telephone number to access an external line. Your system administrator can configure this to occur automatically.

Call



Next



TOP



10. Choose one of the following:

- Press the **Call** soft key to automatically place a call.
- Press the **Next** soft key to search for another person.
- Press the **Top** soft key to return to the XSA menu.

Note: If the search is unsuccessful, the response `Your search has returned no results displays.`

To exit an XSA session:



To exit an XSA session, choose one of the following:

- Press the **Expand to PC** feature key.
- Lift the handset.
- Press the **Quit** soft key.

You receive the message `“Lost connection. Returning to main server.”`

Using graphical-based External Server Applications

This section provides information on the following topics:

- establish a graphical XSA session.
- exit a graphical XSA session.

These procedures are for the IP Phone 2007 only.

To establish a graphical XSA session:

Choose one of the following:



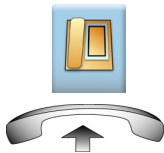
- Press the **Graphical Applications** soft key. You are shown a list of registered applications.
- Press the **Primary Application** soft key. You are taken to the screen of the primary application.

Note: If the server is not available when you press the soft key, you are immediately returned to the Call Processing display. Contact your system administrator for assistance.

Use the USB keyboard and mouse to navigate in the screen.

Consult your system administrator for documentation on the graphical applications available on your telephone.

To exit an XSA session:



To exit an XSA session, choose one of the following:

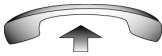
- Press the **Telephone Services** soft key.
- Lift the handset.

Call interactions

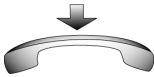
This section provides information on the following topics:

- answer a telephone call while in an XSA session.
- place a telephone call while in an XSA session.

To answer a phone call while in an XSA session:



1. When you hear the ringing of the incoming call, lift the handset.

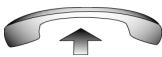


2. Replace the handset to end the call.



3. Press the **Expand to PC** feature key to return to your XSA session. You are returned to the same place from which you left your XSA session.

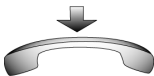
To place a phone call while in an XSA session:



1. Lift the handset. The XSA display is replaced with the call processing display.



2. Dial the number.



3. Replace the handset to end the call.



4. Press the **Expand to PC** feature key to return to your XSA session. You are returned to the same place from which you left your XSA session.

Feature interactions with IP Phones

Table 4 shows how XSA interacts with IP Phone call features.

Table 4: IP Phone interactions (Part 1 of 2)

IP Phone feature	XSA result
Auto Answerback, Dial Intercom, any other voice call	Any call processing or voice-based activity takes precedence over XSA application access.
Boss Secretarial Filtering	A boss cannot screen incoming calls while engaged in an application session. This feature can be accessed during an incoming call, while in an XSA session, by pressing the Expand to PC feature key to return to the call processing display.
Call Party Name Display	The Call Party Name Display information for incoming calls is not displayed while in an XSA session. This feature can be accessed during an incoming call, while in an XSA session, by pressing the Expand to PC feature key to return to the call processing display.

Table 4: IP Phone interactions (Part 2 of 2)

IP Phone feature	XSA result
Call Pickup	If Call Pickup is configured on one of the soft keys, then it is not available while in an XSA session. This feature can be accessed during an incoming call, while in an XSA session, by pressing the Expand to PC feature key to return to the call processing display.
Handsfree	When XSA attempts to originate a call using the Handsfree key on a telephone that has HFD Class of Service, the microphone does not work. If the telephone has HFA Class of Service, the microphone does work.
MG 1000B	The XSA session is lost when switching between the main office and branch office.
Virtual office	Only one XSA server is supported. Even if you are logged in to a remote switch using Virtual Office, you are connected to the local XSA server configured in the phone when you press the Expand to PC feature key.
Emergency Services Access	When you are in an XSA session, you can press the Handsfree key, the Headset key, or lift the handset to immediately access call processing services. You receive dial tone immediately, and your screen is refreshed to show the call processing display.

Terms you should know

Attendant

A telephone operator in your organization.

AutoDial

A telephone number programmed on the **AutoDial** key for one-touch dialing.

Callers List

A list of all incoming calls (maximum 100 entries).

Calling Party Name Display (CPND)

Information appearing on the LCD screen, such as the caller's name and telephone number. The system must have CPND enabled.

Category 5 (Cat 5)

Balanced 100 Ohm cable and associated connecting hardware whose transmission characteristics are specified up to 100 MHz. It is used by 10Base-T, 100Base-T4, and 100Base-TX installations. The cable normally has four pairs of copper wire. Category 5 is the most popular cable used in new installations today.

Communication Server 1000

An office communications system.

Copy key

A fixed key used to copy entries to your Personal Directory from other lists, such as the Caller List, Redial List, Corporate Directory, etc.

Date/Time display

The current date and time when the telephone is in an idle state.

Directory key

Enables access to Corporate Directory, Personal Directory, Redial List, and Callers List.

Directory Number (DN)

A number consisting of one to seven digits for a telephone. Also known as an *extension number*.

Expand to PC

A fixed key on your telephone used to access external server applications such as XSA.

Fastbusy

A signal given when all outgoing lines are busy.

Feature display

An area that shows status information about the feature in use. It also displays the name and status of the active session.

Fixed key

Any of the hard-labeled keys on your telephone.

Handsfree

A method of conversing with the party on the other end of the line without lifting your handset.

Flexible Feature Code (FFC)

Specialized codes entered using the dialpad that enable features (for example, Automatic Wake-Up Call).

Goodbye key

A fixed key used to end an active call.

Handsfree

A method of conversing with the party on the other end of the line, without lifting your handset.

Headset key

A fixed key used to answer a call using the headset.

Hold key

A fixed key used to place an active call on hold.

Information display

Any display of call activity, lists, prompts, and status of calls.

Information line

A 1-line by 24-character area that displays date and time or application information.

Interrupted dial tone

A broken or pulsed dial tone you hear when you access some features on your telephone.

IP Phone Key Expansion Module (KEM)

An optional hardware module that provides additional line appearances and feature keys to your IP Phone. Up to two KEMs can be attached to a IP Phone 2004, providing a total of 48 keys.

Message (Inbox)

A soft key that connects to your voice messaging system when the key is pressed.

Message Waiting indicator/Incoming Call indicator

An LCD or an LED that indicates the status of a feature by the flash, wink, steady on, or off.

Meridian 1

An office communications system.

More..

An option allowing access to the multiple layers of soft keys. Soft keys are the four keys located directly below the display area.

Mute key

A fixed key used to listen to a caller without transmitting.

Navigation keys

Up/Down and Left/Right keys used to scroll through menus and lists appearing on the LCD screen.

Off-hook

Any line selected to make a call or receive an incoming call. The term *off-hook* is applied whether (a) the end user lifts up the handset, (b) the end user presses a line key, (c) the call is automatically answered at the set, or (d) a line is automatically selected for an outgoing call.

Outbox/Shift

A fixed key used to switch between two feature key pages to provide access to an additional six lines/features and an additional 24 lines on the IP Phone KEM.

Paging tone

A special tone heard when you use the Radio Paging feature. You hear two beeps followed by dial tone.

Password Admin

A menu used by you and the system administrator to change your Station Control Password (SCPW).

Personal Directory

A list of user-defined names and numbers (maximum of 100 entries).

Primary directory number

The main extension number on your telephone.

Private line

A feature that can be assigned to your telephone. With this line, you can reach an outside number without dialing a code to access an outside line. Internal extensions cannot be dialed from a private line.

Programmable line (DN)/feature keys (self-labeled)

The six keys located at the sides of the upper area of the display.

Quit key

A fixed key on your telephone that is used to exit applications.

Redial list

A list of previously dialed telephone numbers (maximum 20 entries).

Ringback/ring tone

A sound indicating that a call you have made is ringing at its destination.

Secondary Directory Number

A second incoming/outgoing line for your telephone.

Services key

A fixed key used to access options, such as Telephone Options, Password Admin, Display Network Diagnostics Utilities, Virtual Office Login, Virtual Office Logout, Test Local Mode, and Resume Normal Mode.

Shared Directory Number

A DN (extension) that is shared by two or more persons.

Soft keys (self-labeled)

A set of keys programmed by your system administrator. These four keys located directly below the display area have four programmable layers that layers are accessed through the **More..** key. These keys are also used to configure parameters in the **Telephone Option** menu.

Speaker key

A fixed key used to activate Handsfree.

Special dial tone

The three consecutive tones followed by dial tone that you hear when accessing telephone features.

Station Control Password (SCPW)

Enables security features on your phone to prevent others from making calls from your telephone and to access your Personal Directory, Redial List, and Callers List.

Status messages

A message displayed to inform the user of important information. A right arrow appears if more than one Status Message is present. Examples of Status Messages include: Message Waiting, All Lines Forwarded to: 6453, Do Not Disturb On, Ring Again Active, Ringer is OFF, and Line x Unavailable.

System or Switch

Your office communications system.

Switchhook

A button that the handset depresses, disconnecting your call when you replace the handset. When lifted, the handset releases the switchhook, and you either answer an incoming call or you receive a dial tone to make a call.

User Interface

Screen displays that interact with the end user as a result of an action or event.

Volume control bar

A rocker bar you press to increase or decrease the volume of the ringer, handset, headset, speaker, and the Handsfree feature.

Index

A

Attendant 23
AutoDial 23

C

Call interactions 20
Callers List 23
Calling Party Name Display (CP-ND) 23
Cat 5 23
Communication Server 1000 23
Copy key 23

D

Date/Time display 24
Directory key 24
Directory Number (DN) 24

E

Expand to PC key 24
External Server Applications
 features 10
External server applications 8
 establish a session 12, 19
 feature interactions 21
 finance 14
 news 13

F

Fastbusy signal 24
Feature display 24
Finance 14

Fixed key 24
Flexible Feature Codes (FFCs) 24

G

Goodbye key 25

H

Handsfree 25
Handsfree key 24
Headset key 25
Hold key 25

I

Indicator status 26
Information display 25
Information line 25
Interrupted dial tone 25
IP Phone Key Expansion Module (KEM) 25

L

Local Area Network (LAN) 7

M

Meridian 1 26, 29
Message (Inbox) key 25
Message waiting indicator 26
More key 26
Mute key 26

N

Navigation keys 26

News 13

O

Off-hook 26

Outbox/Shift key 26

P

Paging tone 26

Password Admin 27

Personal Directory 27

Primary directory number 27

Private Line 27

Programmable line (DN)/feature keys (self-labeled) 27

Q

Quit key 27

R

Redial List 27

Ringback/ring tone 27

S

Secondary Directory Number 27

Services key 28

Shared Directory Numbers 28

Soft keys (self-labeled) 28

Speaker key 28

Special dial tone 28

Station Control Password (SCPW) 28

Status messages 28

Switchhook 29

System or Switch 29

U

User Interface 29

V

Volume control bar 29

X

XSA 8

call interactions 20

establish a session 12, 19

feature interactions 21

features 10

finance 14

news 13

IP Phone

External Server Applications User Guide

Copyright © Nortel Networks Limited 2005

All Rights Reserved

Information is subject to change without notice. Nortel Networks reserves the right to make changes in design or components as progress in engineering and manufacturing may warrant.

Nortel, Nortel (Logo), the Globemark, This is the Way, This is Nortel (Design mark), SL-1, Meridian 1, and Succession are trademarks of Nortel Networks.

Publication Number: NN-10300-023

Document Release: Standard 3.00

Date: August 2005

Produced in Canada



>THIS IS **THE WAY**

>THIS IS **NORTEL™**

Internet address

<http://www.nortel.com>