

# NP Boomerang Reference Manual

NuPoint Messenger  
Optional Feature for Release 6.1

## DOCUMENT HISTORY

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**8777 E. Via De Ventura Suite #340  
Scottsdale, Arizona 85258**

**Main: (480) 998-9500  
Fax: (480) 718-7355**

**<http://www.legacyvoicemail.com>**

**Support: [support@legacyvoicemail.com](mailto:support@legacyvoicemail.com)  
Sales: [sales@legacyvoicemail.com](mailto:sales@legacyvoicemail.com)  
General: [info@legacyvoicemail.com](mailto:info@legacyvoicemail.com)**

## About This Manual

The NP Boomerang Optional Feature for Mitel Networks NuPoint Messenger Communications Servers allows subscribers to listen to a message and immediately place an outdial call without disconnecting from the server.

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## Who Uses This Manual

This manual is intended for use by system administrators, field engineers, and Mitel Networks employees who are responsible for installing and configuring NP Boomerang on NuPoint Messenger systems.

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## What's In This Manual

Chapters contained in this manual are:

Chapter 1 - Introduction: A brief orientation to NP Boomerang.

Chapter 2 - Installing NP Boomerang: Instructions for installing NP Boomerang on a NuPoint Messenger Server.

Chapter 3 - Configuring NP Boomerang: Instructions for configuring NP Boomerang online using the Resource Configuration Manager.

Chapter 4 - Operating NP Boomerang: Instructions for operating NP Boomerang.

For detailed reference on NuPoint Messenger server configuring and operating characteristics, refer to the following:

- *Installation and Service Manual*
- *Reference and Configuration Manual*

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## 1 Introduction

This chapter describes NP Boomerang and how NP Boomerang works on the NuPoint Messenger Server.

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### What is NP Boomerang?

NP Boomerang is a Mitel Networks NuPoint Messenger Server optional feature. NP Boomerang allows mailbox users to listen to a message, then immediately place an outdial call without disconnecting from the mailbox user interface.

The following are the processes used by NP Boomerang:

- Obtaining call back numbers
- Reviewing messages
- Initiating an NP Boomerang call
- Returning mailbox user to mailbox

### Obtaining Call Back Numbers

NP Boomerang obtains phone numbers in one of the following ways:

- Calling Line Identification (NP CLI) optional feature or from a manually entered number from the CLI caller user interface
- Mailbox Extension field in each mailbox.
- NP Boomerang option **N**

### Calling Line Identification

Calling Line Identification (CLI) is an optional feature that enables NuPoint Voice to capture the phone numbers of outside callers and store them along with their messages. CLI, depending upon the Feature Class of Services (FCOS) bit settings, stores the calling phone number as either a mailbox number in the extension field of the Message Record, or as a telephone number in the Sender Field of the Message Record. CLI optional feature software, while useful, is not required for NP Boomerang.

When an outside caller leaves a message, CLI captures the caller's phone number and stores it with the message. If a message is left by a caller with a mailbox on the system, the caller's mailbox number is captured as the calling number. This allows calls to be returned to other NuPoint Voice mailboxes as well as to outside callers.

CLI also allows callers to input phone numbers or extensions when they are not calling from their primary phone numbers.

### Mailbox Extension Field

Because NuPoint Voice has a database of all mailbox users on the system, it can capture extension numbers when calls are made from other mailboxes. Captured mailbox numbers are stored in the Extension Field of the Message Record. This allows mailbox users to return calls to other mailbox users with NP Boomerang.

### NP Boomerang option **N**

When enabled, the NP Boomerang option **N** allows the caller to press the "6" key on the keypad, then input a callback number followed by the pound key (#) to terminate input. This number is stored with the message and is used as the NP Boomerang number when the message is retrieved by the mailbox user.

### Reviewing Messages

If a message has an associated callback number or mailbox number, the user hears one of the

following message prompts:

- [*TimeStamp*] from telephone [*CLI number*] (if outside caller leaves a message and CLI captures and stores the number)
- [*TimeStamp*] from [*recorded name*] (if existing mailbox user with a recorded name leaves a message)
- [*TimeStamp*] from mailbox [*Number*] (if existing mailbox user with no recorded name available leaves a message)
- [*TimeStamp*] (if message is left by an outside caller and CLI is not active)

After playing a message, the user can invoke NP Boomerang from the Main Menu. Once NP Boomerang is selected, NuPoint Voice suspends message processing and dials one of the following phone numbers:

- the callback number in the Sender Field of the Message Record
- the mailbox number stored in the Extension Field of the Message Record
- a number input by the caller through NP Boomerang option **N**

### Initiating an NP Boomerang Call

NP Boomerang requires you to configure two NuPoint Voice applications, one for incoming calls (called NuPoint Voice) and one for outgoing calls (called Pager-Dialer). NuPoint Voice uses the outdial line group assigned to the NuPoint Voice Pager application, referred to as NuPoint Voice Pager, to initiate NP Boomerang calls. If the line has CLI capability and CLI is enabled on the NuPoint Voice system, NuPoint Voice Pager uses the number stored in the Sender Field as the dial string. When CLI is not installed or not enabled, the NP Boomerang **N** option (FCOS bit 281) can be enabled to allow callers to input a callback phone number along with their message. See Chapter 3, FCOS Configuration.

As soon as dialing begins, the NuPoint Voice and Pager-Dialer lines are “hair-pinned” together. This means that the incoming and outgoing lines are switch-connected through the Resource Manager and Multi-Vendor Interface Protocol (MVIP) bus.

- **Outgoing ring-no-answer or busy** - If the outgoing call indicates ring-no-answer or busy, the line remains in use until the user terminates the call in by pressing the star (\*) key.
- **Outgoing answer** - If the outgoing call is answered, the lines remain hair-pinned until the mailbox user or called party terminates the call.
- **Outgoing hang-up** - If the outgoing line indicates that the called party hangs up, the incoming and outgoing lines are disconnected, the outgoing line is released, and the mailbox user is returned to the Play menu (for example, the user hears the “Press **P** to play the current message again”).
- **Incoming hang-up** - If the incoming line indicates that the user hangs up, NuPoint Voice eventually detects that the call was terminated, and then disconnects and releases the incoming and outgoing lines.
- **User Termination** - If the mailbox user presses the star key (\*) at any time, the incoming and outgoing lines are disconnected, the outgoing line is released, and the user is returned to the Play menu.

## Returning Mailbox User to Mailbox

When all outdial call processing concludes, NuPoint Voice returns the mailbox user to the top of the Play menu and mailbox call processing resumes.

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## 2 Installation

This chapter describes the procedure for installing NP Boomerang, an optional feature, on a NuPoint Messenger server.

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### System Requirements

To function, NP Boomerang requires the following hardware and software.

#### Hardware Requirements

- NuPoint Messenger Server: Model 640, or 120, or 70
- At least one line card

#### Software Requirements

NP Boomerang is supported on NuPoint Voice Release 6.1 and later. If your system is not currently running this software, contact your support representative.

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### Installing NP Boomerang

The NP Boomerang software comes on two floppy diskettes labeled as NP Boomerang Optional Feature Setup Disk and NP Boomerang Optional Feature Disk 1

To install NP Boomerang, insert the NP Boomerang Optional Feature Patch Setup Diskette into the floppy disk slot on the NuPoint Messenger system. Then follow CP 5402, Install an Optional Feature.

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## 3 Configuration

This chapter describes how to configure NP Boomerang after it is installed on the NuPoint Messenger Server.

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### Configuration Steps

After the NP Boomerang Optional Feature is installed, the following configuration modifications are required:

- Configure Line Groups

- Define Pager
- Configure Feature Class of Service (FCOS)
- Configure Mailboxes

## Configure Line Groups

NP Boomerang requires outdial lines for placing calls. The outdial lines on the NuPoint Messenger system might already be configured for other features (for example, fax, paging, or Message Delivery). Configure NP Boomerang to avoid the following potential problems:

- outdial functions using all outdial lines leaving none available for NP Boomerang
- NP Boomerang using all outdial lines, leaving none available for other outdial functions, such as NP WakeUp, Message Delivery, and so forth

You can dedicate outdial lines to NP Boomerang, or you can “share” outdial lines among NP Boomerang and other outdial functions. NP Boomerang cannot use lines that are “dedicated” to other outdial functions.

For further information on linegroup configuration, refer to CP 5010, Define a Line Group.

**Note:** You might want to give the NP Boomerang line group a unique name so that it is easily identified when viewing the configuration.

After creating an NP Boomerang line group, the line group must be allocated to the Pager application. From the Offline menu select **A** to display the Linegroup Only Applications menu (Figure 3-1)

### Figure 3-1 Linegroup Only Applications menu

Verify that the correct group number is shown. If it is not, change the group by using the **G** option and entering the correct group number. Then, select the **P** option to specify that this is a pager application, and then exit from this menu.

## Define Pager

Now that the linegroup is defined, you must define a pager system for the NP Boomerang linegroup in the Online menu as you would for other outdial functions. To do this, exit the Offline menu and return to the NuPoint Voice Configuration menu. Follow CP 5012, Define a Pager System, located in the *Reference and Configuration Manual, Volume 2*.

After the pager system is defined, you must also modify the application. From the Online Menu, select **M** (Figure 3-2) and the NuPoint Voice Application menu appears (Figure 3-3).

### Figure 3-2 Online menu

### Figure 3-3 Voicemail Configuration menu

Select **J** and the Do not play prefix menu (Figure 3-4) appears.

### Figure 3-4 Do Not Play Prefix menu

To suppress the prefix for local calls, select **A**, then type the area code and any local phone number prefixes you want to suppress.

The **B** option enables you to set a limit on the number of digits played back. For example, if you input seven to this field, only seven digits of the phone number are played, even though the phone number might contain more than seven digits.

The **C** option specifies the long distance dial prefix. In the United States, you enter “1” as the prefix digit.

Exit from this menu to return to the NuPoint Voice Configuration menu, then select **G** to specify your Pager Dialer group number. If you have specified the correct outdial group for your pager application, the Pagers menu appears (Figure 3-5).

**Figure 3-5 Pagers menu**

Select **P** to specify the Pager Index (NP Boomerang Index) for your NP Boomerang linegroup.

Table 3-1 displays sample NP Boomerang configurations. In this example, line groups are defined as “dedicated” to NP Boomerang, “shared” with NP Boomerang, or as normal pager functions that are excluded from use with NP Boomerang.

Also this example specifies pager system index 1 is used for paging (fax, NP WakeUp, and so forth) and that index 2 is for NP Boomerang:

<b>Line Group</b>	<b>Pager System Index Supported</b>	<b>Line Group Supports</b>
1	1	normal paging functions
2	2	Dedicated NP Boomerang
3	1,2	Shared NP Boomerang and NuPoint Voice Pager functions

Now that the configuration is complete, you must activate the configuration you have modified. Refer to CP 7002, Activate the Inactive Configuration, located in the *Reference and Configuration Manual, Volume 2*.

### **FCOS Configuration**

Create a Features Class of Service (FCOS) that contains feature bit 270, “Enable NP Boomerang Optional Feature.” You can also include any of the following feature bits in your NP Boomerang FCOS:

- 264, “Enable CLI outside caller Interface.” Include this bit if you want to capture the phone numbers of incoming callers and allow the mailbox user to outdial those numbers.
- 262, “Store CLI as a phone number.” This bit stores all phone and mailbox numbers as telephone numbers.
- 263, “Analyze CLI and if the number is a mailbox number, store it as a mailbox, otherwise store it as a phone number.” This bit stores mailbox numbers as mailbox numbers. All other

phone numbers are stored as telephone numbers.

**Note:** Feature bit 262 and 263 cannot be assigned to the same FCOS.

- 280, “Re-enable CLI outside caller Interface.” NP Boomerang disables CLI by default. If CLI capability is required, FCOS 280 is required to re-enable the CLI Outside Caller Interface.
- 281, “Enable Option for NP Boomerang.” If enabled, the N Option allows callers to input a callback number after leaving a message.

For more information on FCOS configuration, refer to Chapter 7, Features Class of Service, in the *Reference and Configuration Manual, Volume 1* or to the following CPs in *Volume 2*:

- FCOS usage, CP 3342
- Create a new FCOS, CP 5004
- Modify or Renumber a Default FCOS, CP 5008

### Mailbox Configuration

The final configuration step is to specify the pager and FCOS for each mailbox that uses NP Boomerang. From the NuPoint Voice Main Menu, select **M** (Mailbox Configuration), then modify the NP Boomerang mailboxes to use the appropriate NP Boomerang Index and FCOS.

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## 4 Operation

This chapter describes how NP Boomerang outdials from the NuPoint Voice system without disconnecting the current NuPoint Voice session.

Figure 4-1 on the following page shows the call processing events when an NP Boomerang call is initiated.

### Figure 4-1 How NP Boomerang outdials

#### Feature Limitations and Considerations

- The outgoing NuPoint Voice Pager port must be on the same host as the incoming NuPoint Voice port.
- Linegroups that NP Boomerang “shares” with other paging applications can have resource conflicts because NP Boomerang can keep phone lines busy for extended periods of time. This could result in NP Boomerang using all the outgoing lines, leaving none available for other outdial functions.
- NP Boomerang conforms to the Limits Class of Service (LCOS) and Restrictions Class of Service (RCOS) settings assigned to existing outdial applications. For more information, see Chapter 8, Other Classes of Service, in the *Reference and Configuration Manual, Volume 1*.