

# **UC for Enterprise (UCE) Room Direct for Health Care (UNIVERGE UA5200 )**

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*A UA5200 Solution*

## **Operations Guide**

**NEC** Corporation

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## 1

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# Introduction

Welcome to the *UC for Enterprise (UCE) UNIVERGE UA5200 Room Direct for Health Care Operations Guide*. This guide provides the step by step instructions for installing and managing the Room Direct Administrator.

*Chapter Topics*

- [UA5200 Room Direct Overview](#)
- [How This Guide is Organized](#)
- [Terms and Acronyms](#)

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## UA5200 Room Direct Overview



NOTE

*UA5200 Room Direct is not a stand-alone application. The application requires a database that is created and maintained from the OW5000 Database administration interfaces.*

Room Direct is a member of the UA5200 family of products that makes it possible for hospital admitting personnel to assign Direct Inward Dialing (DID) telephone numbers to Hospital Patients. With Room Direct, obtaining a DID number for a new patient involves pressing a function key on the Dterm. In response, Room Direct accesses a database of DID numbers, retrieves the next available number on the list, and displays it on the Dterm or PC screen. Admitting personnel have only to accept the number and enter it into the patient's record through the Hospital Management System or to reject the number.

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## How This Guide is Organized

<i>Chapter 1</i> <i>Introduction</i>	This chapter outlines how to use the guide, including the organization and chapter layout for the Room Direct application.
<i>Chapter 2</i> <i>Installing Room Direct</i>	This chapter describes the initial requirements for installing Room Direct, along with the step-by-step procedures needed to install the application.
<i>Chapter 3</i> <i>Using Room Direct Administrator</i>	This chapter provides the steps and information needed to start and configure the Room Direct application.
<i>Chapter 4</i> <i>Using Room Direct Dterm</i>	This chapter explains the Dterm and Room Direct interface and their communication inputs.

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## Terms and Acronyms

<b><i>DID</i></b>	<i>Direct Inward Dialing.</i> A service of a local phone company (or local exchange carrier) that provides a block of telephone numbers for calling into a company's private branch exchange (PBX) system. DID is used in conjunction with FLF to permit direct dialing to a physical location.
<b><i>FLF</i></b>	<i>Free Location Facility.</i> An OAI facility.
<b><i>HL7</i></b>	<i>Health Level Seven.</i> A health care messaging protocol for the exchange, integration, sharing and retrieval of electronic health information.
<b><i>ADT</i></b>	<i>Admit, Discharge, and Transfer.</i> Standard used to refer to the complete range of HL7 message types.

# 2

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## Installing Room Direct

This chapter provides the step-by-step procedures to install the Room Direct application. Descriptions and procedures are found in the following sections of this chapter:

*Chapter Topics*

- [\*Before Starting the Installation Procedure\*](#)
- [\*Installing UA5200 Room Direct\*](#)
- [\*Uninstalling Room Direct Software\*](#)

---

### Before Starting the Installation Procedure

Room Direct requires two installations:

- **UA5200 Patient Link**

If Patient Link is installed and Room Direct is not, Patient Link will need to refuse any requests that would normally make a DID allocation request.

- **UA5200 Room Direct**

If Room Direct is installed and Patient Link is not, the Dterm application should not allow interaction with the Data Mode on the Dterm.

This section describes the required components that must be in place before installing the Room Direct software.

- OW5000 Runtime Platform must be installed prior to installing Room Direct.
- UA5200 Patient Link must be installed and operational prior to running the Dterm interface and FLF service.
- The OAI keys must be programmed on the Dterms through the PBX prior to starting the Dterm interface service.
- Through the Dterm interface, the patient account number cannot contain alphabetic characters.
- OAIServer must be enabled to use FLF in OW5000 Admin.
- FLF is only supported on a NEAX 2400. NEAX 2000 does not support FLF.

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## Hardware and Software Requirements

Room Direct is installed as part of the UA5200 Patient Link and is expected to reside on the same server as the other server components.



REFERENCE

*Refer to the OW500 Configuration Guide for server hardware and software requirements.*

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## Installing UA5200 Room Direct

Room Direct will be installed as part of the UA5200 installation. The installation will register the Room Direct with the OW5000 Database, validate security keys, and install the appropriate services.

**Step 1** Place the UCE DVD into the computer's DVD-ROM drive. On most computers, setup will automatically start when the DVD is loaded. If Autorun is not enabled on the computer, then do the following:

- After placing the UCE DVD into the computer's DVD-ROM drive, open Windows Explorer and double-click the **DVD-ROM drive** icon.
- In the DVD-ROM file list, double-click the **Setup.exe** file in the **Room Direct** folder. A Master Installation Menu displays.

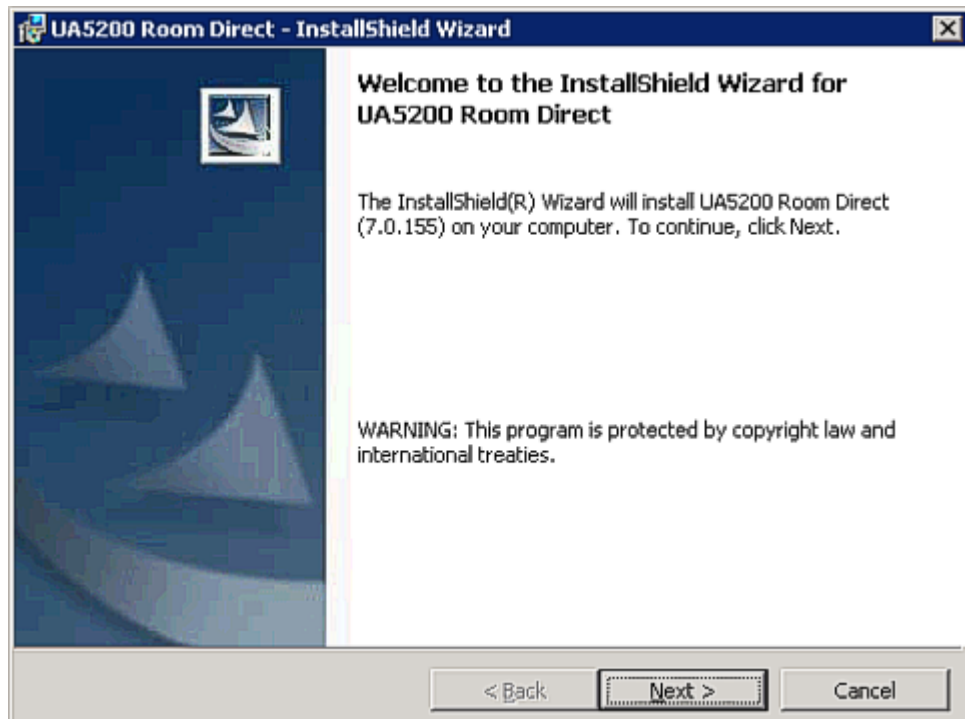
**Step 2** From the Master Installation Menu, choose the **UA5200 Room Direct** option to start the installation process [Figure 2-1](#) displays.



NOTE

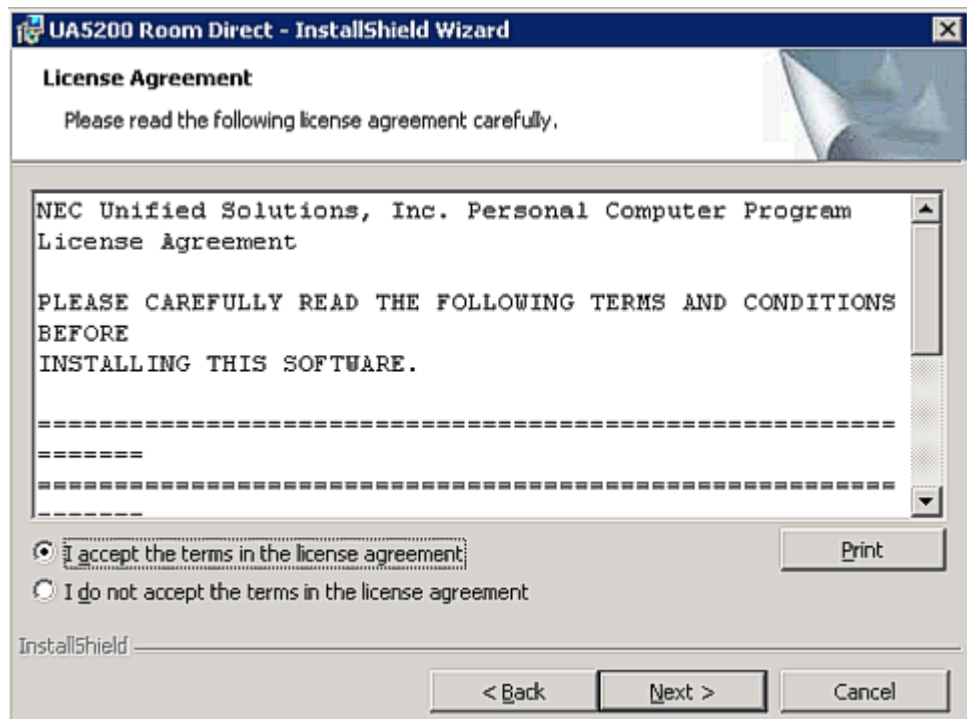
*When installing from a web browser, the browser must allow execution of Java applications and allow pop-ups.*

**Figure 2-1** Room Direct - InstallShield Wizard - Welcome



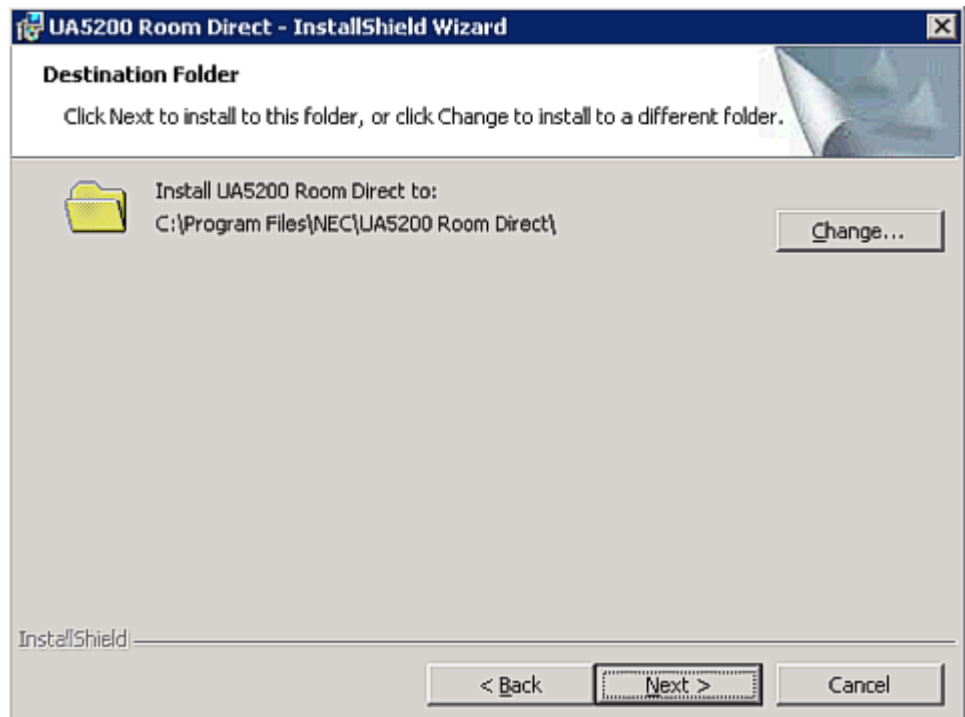
**Step 3** Click **Next**. [Figure 2-2](#) displays.

**Figure 2-2** Room Direct - InstallShield Wizard - License Agreement



- Step 4** Read or print the license agreement information listed. Select either the **I accept the terms in the license agreement** or the **I do not accept the terms in the license agreement** option button.
- Click **Back** or **Cancel** to exit the installation procedure.
  - Click **Next** to continue. [Figure 2-3](#) displays.

**Figure 2-3** *Room Direct - InstallShield Wizard - Destination Folder*



- Step 5** Select either the default install location or click **Change** and navigate to the desired folder. Click **Next** to install to the default folder. [Figure 2-4](#) displays.

**Figure 2-4** Select Database Server

The screenshot shows the 'Database Server' step of the 'UA5200 Room Direct - InstallShield Wizard'. The window title is 'UA5200 Room Direct - InstallShield Wizard'. The main heading is 'Database Server' with the instruction 'Select database server and authentication method'. Below this, a text box explains: 'Select the database server to install to from the list below or click Browse to see a list of all database servers. You can also specify the way to authenticate your login using your current credentials or a SQL Login ID and Password.' There is a 'Database Server:' label followed by a dropdown menu showing 'Vanquish' and a 'Browse...' button. Under 'Connect using:', there are two radio buttons: 'Windows authentication credentials of current user' (unselected) and 'Server authentication using the Login ID and password below' (selected). Below these are fields for 'Login ID:' containing 'openworxdb' and 'Password:' with masked characters. At the bottom are '< Back', 'Next >', and 'Cancel' buttons.

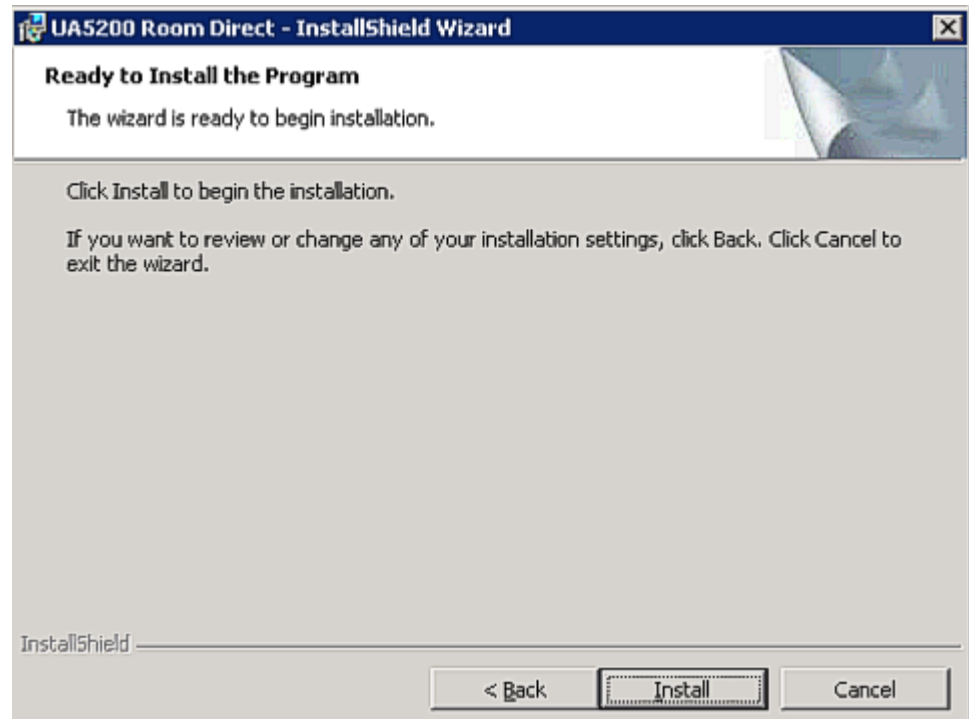
**Step 6** Select the **Database Server** and enter the **Login ID** and **Password** to use when connecting. Then click **Next**. [Figure 2-5](#) displays.

**Figure 2-5** Room Direct Logon Information

The screenshot shows the 'Logon Information' step of the 'Room Direct - Logon Information' window. The window title is 'Room Direct - Logon Information'. The main heading is 'Logon Information' with the instruction 'Specify a user name and password'. Below this, a text box explains: 'Specify the user name and password of the user account that will logon to use this application. The user account must be in the form DOMAIN\Username.' There is a 'User name:' label followed by a text box containing 'OUTBACK32\Administrator'. Below this is a 'Password:' label followed by an empty password field. At the bottom are '< Back', 'Next >', and 'Cancel' buttons.

- Step 7** Enter the user name and password of the account that will logon to this application. The user account must be in the form DOMAIN\Username.
- Click **Next**. [Figure 2-6](#) displays.

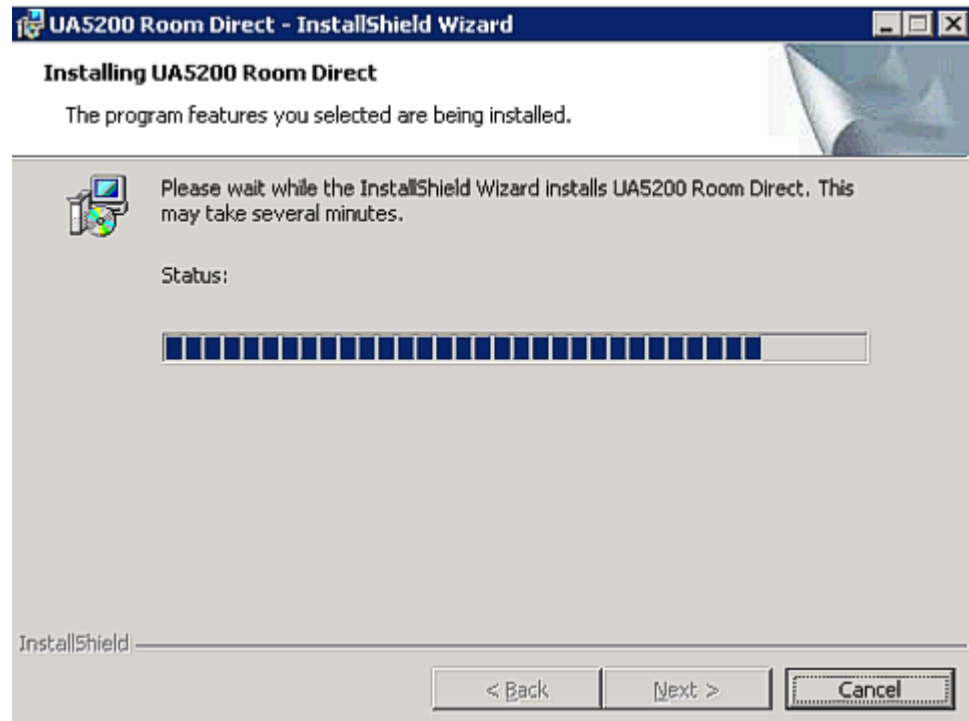
**Figure 2-6** *Room Direct - InstallShield Wizard - Ready to Install the Program*



- Step 8** Click **Install** to begin the installation. [Figure 2-7](#) displays.

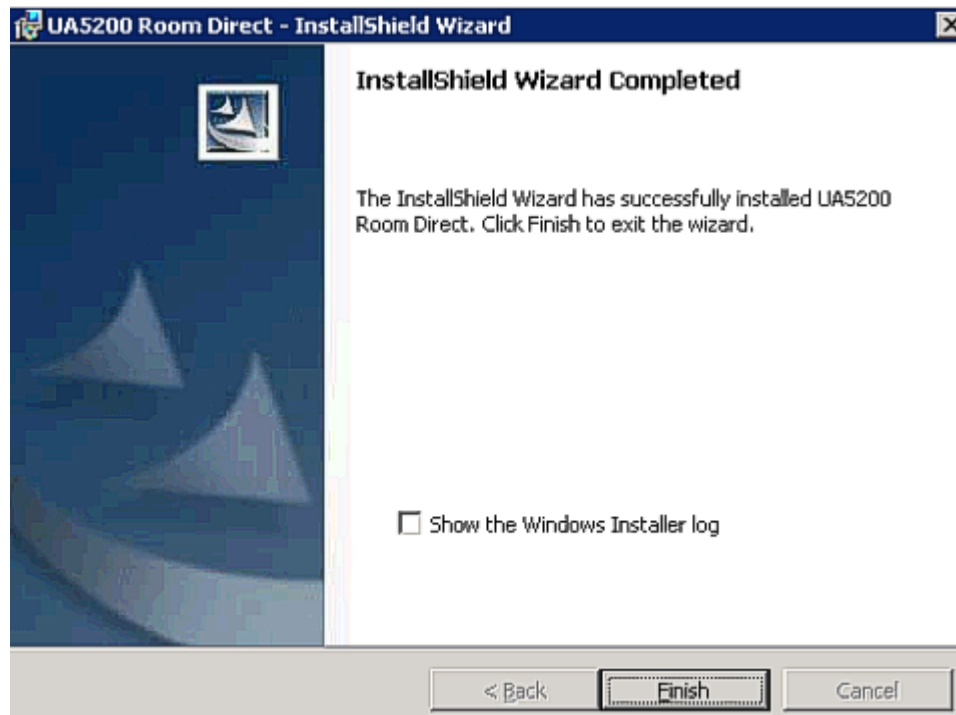


**Figure 2-7** Room Direct - InstallShield Wizard - Installing UA5200 Room Direct



**Step 9** UA5200 Room Direct installs. [Figure 2-8](#) displays.

**Figure 2-8** Install Shield Wizard - Complete



**Step 10** Click **Finish**. The UA5200 Room Direct installation is now complete.

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## Uninstalling Room Direct Software

The UA5200 Room Direct software can be uninstalled using the Windows operating system Add/Remove Programs function in the Windows Control Panel.

**Step** In the Add/Remove Programs dialog, select **UA5200 Room Direct** and click **Remove**. Follow the displayed instructions, and remove all components when prompted.



REFERENCE

*Refer to Microsoft Windows documentation for the specific version of Windows installed for more information about adding and removing software applications.*

# 3

## Using Room Direct Administrator

The functions and associated screen displays for Room Direct Administrator in the OW5000 Administrator are described in this chapter:

### Chapter Topics

- [Logging into UA5200 Room Direct Administrator](#)
- [Configuring Room Direct Dterm PBX](#)
- [Configuring Room Direct](#)
- [Configuring Room Direct DID Number](#)
- [Room Direct Manager](#)

All Room Direct Reserved numbers must be configured in the OW5000 Database prior to **Room Direct** operations.

During installation, the Room Direct application name is registered with the OW5000 Database as an installed application. In addition, two security roles are assigned for the application. They are:

- **Room Direct Administrator**

Allows a user to log in to OW5000 Admin.

- **Room Direct User**

Room Direct User, as well as Room Direct Administrator, allows access to use the Dterm for DID number allocation.

Room Direct users must be given access prior to using the administration portion of the application.

The installation automatically ties the default Admin user account name to the Room Direct application and provides the Admin user the *Room Direct Administrator* privilege.

## Logging into UA5200 Room Direct Administrator

When OW500 Administrator is executed and a user with *Room Direct Administrator OW5000* privileges logs in, the **Room Direct** application will be visible under the UA5200 menu item.

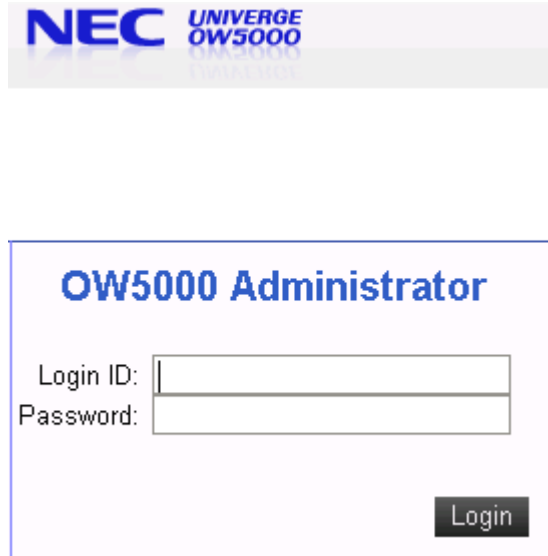
To create another user as a *Room Direct Administrator*, a user with existing OW5000 Admin *Administrator* privileges can go to the **User Manager** tab and select the **Create Users** or **Manage Users** icon to add or modify Room Direct privileges.

Log in to the OW5000 Administrator to configure the Room Direct Administrator application.

### Logging into Room Direct Administrator

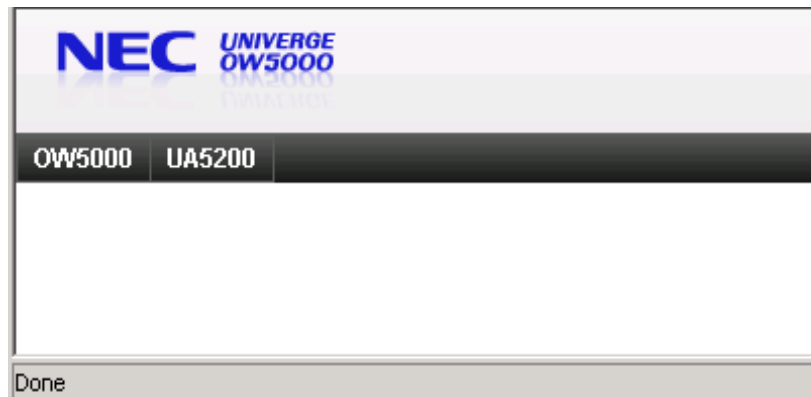
- Step 1** Open the web browser to the OW5000 Administrator login window ([http://ow5000\\_server\\_name/ow5000](http://ow5000_server_name/ow5000)) (Figure 3-1).

**Figure 3-1** OW5000 Administrator Login

The image shows the OW5000 Administrator login interface. At the top, there is a header with the NEC logo and the text "UNIVERGE OW5000". Below this, the title "OW5000 Administrator" is displayed in a large, bold, blue font. Underneath the title, there are two input fields: "Login ID:" and "Password:". To the right of the "Password:" field is a "Login" button. The entire login form is enclosed in a light blue border.

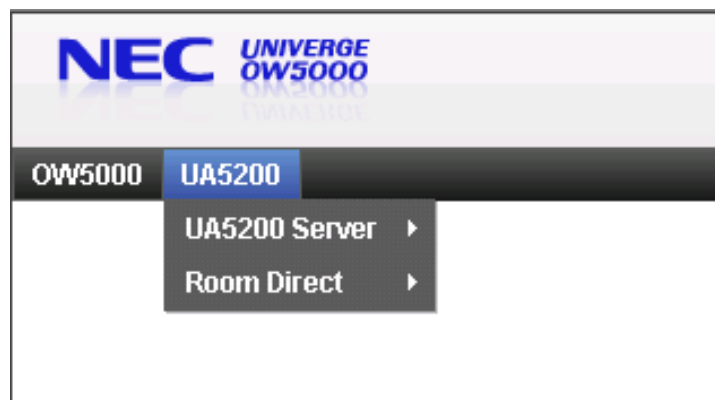
- Step 2** Enter the desired administrator's user name and password into the appropriate fields and click **Login**. Figure 3-2 displays if logging in as the OW5000 Administrator.

**Figure 3-2** OW5000 Administrator Control Panel

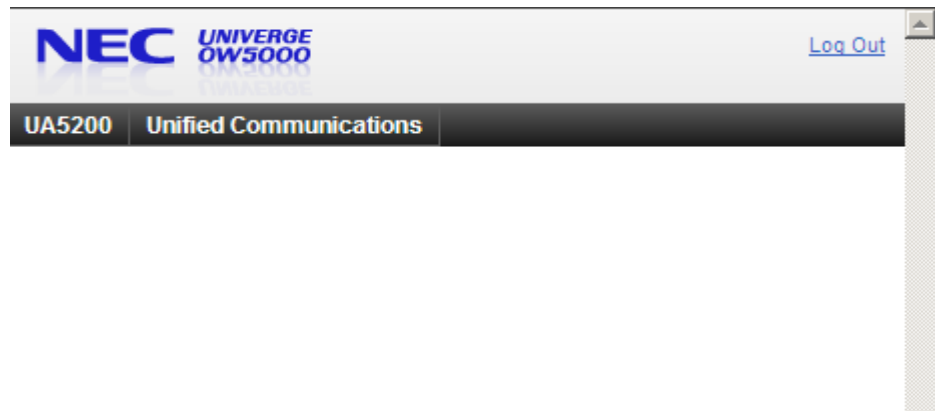


—[Figure 3-3](#) displays when the **UA5200** menu option is selected.

**Figure 3-3** OW5000 Administrator UA5200 Options



—If logging in with Room Direct Administrative privileges, [Figure 3-4](#) displays.

**Figure 3-4** Room Direct Administrator Control Panel

—Selecting the **UA5200** menu option will display a drop-down similar to that shown in [Figure 3-3](#).



The other application tabs shown in [Figure 3-4](#), when logged in as the Room Direct administrator, are dependent on the application privileges granted by the OW5000 administrator.

## Configuring Room Direct Dterm PBX

The Room Direct Administrator page in OW5000 Administrator is used to configure the PBX settings for the Dterm Interface. See [Figure 3-5](#).



To configure PBXs with Room Direct Dterms, the PBX must be enabled for Room Direct services.



PBX's that contain patient extensions for DID mapping should be configured using OAI Server and have FLF enabled.

**Figure 3-5** Room Direct PBX Configuration

## Room Direct PBX Settings

PBX: \*SV7000-40-Hotel ▾  
 IP Address: 172.24.133.40  
 PBX ID: 40  
 RMI Bind Name: OaiServer.SV7000-40-Hotel  
 Client Server Port: 44000  
 PBX Type: UNIVERGE SV7000  
 Split Call Forward: No  
 Port: 60030  
 Force Port: ☒ yes ☐ no  
 Heartbeat: ☒ yes ☐ no  
 Selected: ☒  
 Incremental Retry Delay: 30 seconds ▾  
 OAI Timeout: 15 seconds ▾  
 Max Retry Delay: 10 minutes ▾  
 Use OAI Server: No  
 Data Mode: 129 | RoomDirectDterm ▾  
 LED Number: 11 | RoomDirectDterm ▾

Values displayed without an associated drop-down list box are read-only values assigned at the time the PBX was configured for use with the OW5000 Platform. Changes to these values can only be made by modifying the global PBX configuration under OW5000 Platform in the navigation pane. Such changes will affect every application using that PBX. See [Table 3-1](#).

**Table 3-1** Room Direct PBX Configuration Field Descriptions

Field	Description
PBX	List of available PBXs configured in OW5000 Admin. An asterisk preceding the PBX name indicates the PBX is enabled for the Room Direct services.
Port	<p><b>Note:</b> Depending on the PBX type, the port may be selectable.</p> <p>List of preconfigured values representing the port in which the application will first attempt to get an OAI Association.</p>

Field	Description
<b>Force Port</b>	<p>If <b>Port</b> is enabled, this option will force the application to use only the port listed in the <b>Port</b> field.</p> <ul style="list-style-type: none"> <li>• <b>Yes</b> indicates the application will not attempt to try another port if the first attempt fails.</li> </ul> <p><b>Note:</b> <i>It is recommended to have force port enabled if multiple OAI applications are running.</i></p>
<b>Heartbeat</b>	Instructs the application to connect to the PBX with heartbeats enabled.
<b>Selected</b>	Allows a user to set the PBX displayed in the PBX drop-down list as a PBX that Room Direct service with which OAI will gain an association.
<b>Increment Retry Delay</b>	Interval between attempts. Preconfigured time values that are used when attempting to reconnect to the PBX if the OAI Association was lost.
<b>OAI Timeout</b>	Length of time (seconds, minutes, or hour) before the OAI server time-out occurs.
<b>Max Retry Delay</b>	Maximum time to attempt reconnecting. Preconfigured time values that are used when trying to reconnect to the PBX if the OAI Association was lost.
<b>Data Mode</b>	<p>Preconfigured values specifying a Data Mode code that the application will use when connecting to the PBX.</p> <p><b>Note:</b> <i>If this data mode is assigned but is physically in use by another application, then Room Direct services will not start. When a data mode is assigned to an application then it is reserved for that application and no other application can reserve it. The name of the application that has it reserved will display in the drop-down list with the number.</i></p>
<b>LED Number</b>	Preconfigured values specifying the LED the application will use. This corresponds to the button on the Dterm that will be lit when the application is being executed from the Dterm.



## Configuring Room Direct

The Room Direct Applications Settings page in OW5000 Administrator is required to establish a connection between Room Direct and Patient Link. Perform the following steps to establish a connection between Room Direct and Patient Link.

- Step 1** Open the OW5000 Administrator Control Panel in your browser, then click **Room Direct > Settings**. Figure 3-6 displays.

**Figure 3-6** Room Direct Application Settings

- Step 2** Enter the Room Direct server and port Patient Link will be listening on for a socket connection.

—Both the **Patient Link Server** and **Patient Link Listening Port** fields are editable to allow changes in the event of network conflicts.



NOTE

Selecting the **Password Required** check box instructs the Room Direct Dterm application to prompt for a user password before permitting a Dterm user to request a DID.



NOTE

A user's Dterm password is configured using the OW5000 Admin Persons contacts page.

### OAI Server Enabled FLF PBX

When Patient Link starts, the application searches the OW5000 Database for a list of PBX's that the OAI Server is able to have an OAI

Association with, plus have the FLF flag checked. These are the PBX's that Patient Link requests to connect to during start-up.



*You should ensure the same PBX's are enabled for both the OAIServer and the Room Direct Dterm. There is no automatic validation.*

NOTE

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## HL7 Integration

All location data must be manually inserted in the database prior to running Patient Link. This is accomplished by using the OW5000 DB Tool location import options to populate the hospital, nurse station, room and bed hierarchy, and assign extensions. The extensions must be assigned to the correct PBX in which the OAI Server FLF is enabled.

The HL7 message has a header and facility identification. The header is the master and is used as the default if the facility identification is not available. If the facility identification is provided, it should match the header. The header is the *source* identification. The header informs you where the message originated. The *source* identification will match the parent location (hospital type) in the database containing the imported room, bed, and extension data.

This matched room, bed, and extension data located in the database, based on the *source* identification, is where you will get the PBX that that extension is configured to be used. The FLF requests are directed to the OAI Server using the OAIServer's Port for the appropriate PBX.

---

## Configuring Room Direct DID Number

The PBX has two phone number entities — external (published/logical) or internal (unpublished/physical). The *published* number is assigned to a person, department, or group that terminates somewhere within a physical location of the PBX. Typically, the published number and the physical number in the PBX are the same.

The Room Direct application takes advantage of a NEC PBX feature called **Free Location Facility (FLF)**. The FLF allows the assignment of logical numbers, also known as DID numbers, to be assigned to different physical numbers.

DID numbers, or the published external number, are typically allocated by the phone company that controls the numbering plan in an area, in large blocks or exchanges.

---

**Example:** *A company might get all or part of the numbering plan in **214-518-xxxx** and could have the number from **0000** to **9999** in the **214-518** exchange.*

The Room Direct interface provides the ability of assigning and modifying large block of numbers from a start and end range. It also handles gaps or errors in the data during assignment. Room Direct checks for overlapping or previously assigned numbers.

If it becomes necessary to override a properly assigned Room Direct DID number (for example, a patient discharge), Room Direct will generate messages to clear the PBX FLF assignments. This process will occur once a day programmed internally by the UA5200 Patient Link.

---

## Room Direct Manager

The Room Direct dialog box helps administrators manage the following:

- DID Groups
- Dterms
- Reservations

---

### Viewing the Room Direct Dialog Box

**Step** From the OW5000 Administrator, navigate to **UA5200 > Room Direct > Room Direct Manager**. [Figure 3-7](#) displays.



NOTE

Field descriptions for Room Direct Manager are listed in [Table 3-2](#).

**Figure 3-7** Room Direct Manager

The screenshot shows the 'Room Direct Manager' application. At the top, there's a header 'Room Direct Manager'. Below it, a section titled 'ROOM DIRECT RESERVATIONS' contains three buttons: 'DID Groups', 'Add New Reservation', and 'DTerm Management'. A filter section includes 'Filter:' with dropdowns for 'Current State' and 'Starts with', followed by a text input field and 'Filter' and 'Clear' buttons. Below the filter, it shows '1 - 10 of 19 records' and '10 Results per page'. The main table has columns: 'DID Number', 'Group Name', 'Current State', 'Extension', and 'PBX Name'. It lists 10 records, all with 'Medical-40' as the group name and 'Unassigned' as the current state. At the bottom, there are 'Delete Range' and 'FLF Download' buttons, and a note: 'Note: Will cause all DID redirections to be re-set to match the OW5000 database.'

DID Number	Group Name	Current State	Extension	PBX Name
123	Medical-40	Pending Reserved	4050	SV7000-40-Hotel
1234	Medical-40	Unassigned	4050	SV7000-40-Hotel
242	Medical-40	Unassigned	4050	SV7000-40-Hotel
3445	Medical-40	Unassigned	4050	SV7000-40-Hotel
8000	Medical-40	Unassigned	4072	SV7000-40-Hotel
8001	Medical-40	Unassigned	4072	SV7000-40-Hotel
8002	Medical-40	Unassigned	4072	SV7000-40-Hotel
8003	Medical-40	Unassigned	4072	SV7000-40-Hotel
8004	Medical-40	Unassigned	4072	SV7000-40-Hotel
8005	Medical-40	Unassigned	4072	SV7000-40-Hotel

**Table 3-2** Room Direct Manager - Reservations Description

Field / Button	Description
<b>Add New Reservation</b>	Click the <b>Add New Reservation</b> button to create a new DID Number.
<b>Filter</b>	Allows field entries to be filtered by current state, DID number, or extension by entering the information in the <b>Starts with</b> or <b>Is exactly</b> text box and then clicking the <b>Filter</b> button.
<b>Select</b> ( > icon)	Click to select a DID number and open the <b>Room Direct Reservations Details</b> dialog.
<b>Delete</b> (Trash icon)	Allows the administrator to delete the record and all of the associated data from the database. A confirmation dialog box displays when deleting a record.
<b>DID Number</b>	Room Direct Reservation (DID number).
<b>Group Name</b>	Group the DID Number belongs to.
<b>Current State</b>	Displays the DID number's current state.
<b>Extension</b>	Lists the extension the DID number is assigned to.
<b>Delete Range</b>	Click the <b>Delete Range</b> to remove a selected range of Room Direct reservation records.
<b>FLF Download</b>	Syncs the PBX with the DID Number states in the OW5000 Database. It is used when PBX mappings have been lost, for example, after a PBX reset.

## DID Groups

All Room Direct Reservations (DID numbers) must belong to a DID Group. Each DID Group is associated with a single PBX. Access DID Groups by clicking the **DID Groups** button on the main **Room Direct Manager** page. The Room Direct DID Groups grid contains the Group Name, PBX Name, as well as a Pencil icon (editing a group) and a Trash Can icon (deleting a group).

Sorting and Filtering is by Group Name and PBX Name. See [Figure 3-8](#).

## Adding DID Groups

Adding a DID Group allows you to name a new Group and associate it with a PBX. The group name should be easily identifiable and related to the location for patient beds. For example, Hospital A and Hospital B can be two groups. More than one group can be associated with the same PBX allowing the Reservations within a PBX to be subdivided allowing multiple hospitals to be supported by a single Room Direct Dterm. This is useful in a Centralized OAI with Fusion environment. Perform the steps below to add a DID Group.

- Step 1** Click the **DID Groups** button on the main **Room Direct Manager** page. [Figure 3-8](#) displays.

**Figure 3-8** Room Direct DID Group Manager





Room Direct DID Group Manager

ROOM DIRECT DID GROUPS

Add DID Group Room Direct Manager

Filter: Group Name Starts with Filter Clear

1 - 2 of 2 records 10 Results per page Page: 1 of 1

	Group Name	PBX Name
 	Group44	SV7000-44
 	Medical-40	SV7000-40-Hotel





1 - 2 of 2 records 10 Results per page Page: 1 of 1

- Step 2** Click the **Add DID Group** button. [Figure 3-9](#) displays.

**Figure 3-9** Add DID Group**ROOM DIRECT DID GROUPS**

Filter:

1 - 2 of 2 records  Results per page Page:  of 1

	<a href="#">Group Name</a>	<a href="#">PBX Name</a>
 	Group44	SV7000-44
 	Medical-40	SV7000-40-Hotel

1 - 2 of 2 records  Results per page Page:  of 1

**ADD DID GROUP**

DID Group Name:

PBX:

- Step 3** Input the **DID Group Name** and select the PBX from the drop down menu. [Figure 3-10](#) displays.

**Figure 3-10** Add DID Group Confirmation

The screenshot shows the 'Room Direct DID Group Manager' interface. At the top, a green message box states 'DID Group inserted successfully.' Below this, the title 'ROOM DIRECT DID GROUPS' is displayed. The interface includes two buttons: 'Add DID Group' and 'Room Direct Manager'. A filter section contains dropdown menus for 'Group Name' and 'Starts with', followed by 'Filter' and 'Clear' buttons. Below the filter, a pagination bar shows '1 - 3 of 3 records', a '10' results per page selector, and 'Page: 1 of 1'. A table lists the existing groups:

	Group Name	PBX Name
	Group44	SV7000-44
	Group49	SV7000-44
	Medical-40	SV7000-40-Hotel

At the bottom, another pagination bar shows '1 - 3 of 3 records', a '10' results per page selector, and 'Page: 1 of 1'.

**Step 4** Click the **Room Direct Manager** button to return to the main **Room Direct Manager** page.

## Dterm Management

Before a Dterm can be used to get the next available DID for a patient, the Dterm must be assigned to a DID Group. A Dterm can be assigned to more than one group. If a Dterm is assigned to more than one group, the DID Group receiving the reservation must be selected.

Access Dterm Management by clicking the Dterm Management button on the main Room Direct Manager main page.

### Associating a Dterm with a Group

To associate a Dterm with a Group perform the following steps.

**Step 1** Access Dterm Management by clicking the **Dterm Management** button on the main **Room Direct Manager** main page. This page shows all configured Dterms and their associated Groups. An extension may appear several times, once for each of its associated groups (Figure 3-11).

**Figure 3-11** Dterm Management Main Window

**DTerm Management**

**Associate DID Groups & Extensions**

Filter: Group Name:  Extension:

1 - 8 of 8 records  Results per page Page:  of 1

	Group Name ▲	Extension	PBX
	Group44	2101	SV7000-44
	Group44	4006	SV7000-40-Hotel
	Medical-40	4006	SV7000-40-Hotel
	Medical-40	4000	SV7000-40-Hotel
	Medical-40	2101	SV7000-44
	Medical-40	2516	SV7000-44
	Medical-40	2504	SV7000-44
	Medical-40	2498	SV7000-44

1 - 8 of 8 records  Results per page Page:  of 1

- Step 2** Click the **Associate DID Groups & Extensions** button. [Figure 3-12](#) displays.

**Figure 3-12** DID Group Management

**DID Group and Extension Association Management**

Group Name:

- Step 3** Select a Group from the **Group Name** drop down menu. A grid displays the currently configured extensions for this group ([Figure 3-13](#)).







**Figure 3-13** DID Group Extensions

**DID Group and Extension Association Management**

Group Name: Medical-40

Add New

1 - 4 of 4 records 10 Results per page Page: 1 of 1

	Extension
	4000
	4006
	2498
	2504

1 - 4 of 4 records 10 Results per page Page: 1 of 1

Apply Done Cancel

- Step 4** Click the **Add New** button to associate another extension to this group. [Figure 3-14](#) displays.

**Figure 3-14** Add New Extension to DID Group

Group Name: Medical-40

**Add New**

---

1 - 4 of 4 records 10 Results per page Page: 1 of 1

---

	Extension
	4000
	4006
	2498
	2504

---

1 - 4 of 4 records 10 Results per page Page: 1 of 1

**Select a number to add**

PBX: <All> Extension: Starts With

**Search** **Cancel**

---

1 - 20 of 709 records 20 Results per page Page: 1 of 36 > >>

---


	PBX	Extension ▲	Tenant
>	SV7000-44	2101	1
>	SV7000-44	2498	1
>	SV7000-44	2499	1
>	SV7000-44	2500	1
>	SV7000-44	2501	1
>	SV7000-44	2502	1
>	SV7000-44	2503	1

**Step 5** Click on the > icon to select the Dterm extension to be added to the group. [Figure 3-15](#) displays.





You can either search for a number using the drop down menus under **Select a number to add** or select a number from the populated grid. You can also sort on all of the columns in the grid.






**Figure 3-15** Apply New Dterm Addition

Group Name:  



---

1 - 5 of 5 records   Results per page Page:   of 1

---

	Extension
	4000
	4006
	2498
	2504
	2101

---

1 - 5 of 5 records   Results per page Page:   of 1

---

**Step 6** Click **Apply**. [Figure 3-16](#) displays.

**Figure 3-16** Dterm Assignment Saved

**DID Group and Extension Association Management**

Assignments saved successfully.

Group Name:

**Add New**

1 - 5 of 5 records  Results per page Page:  of 1

	Extension
	4000
	4006
	2498
	2504
	2101

1 - 5 of 5 records  Results per page Page:  of 1

**Apply Done Cancel**

**Step 7** Click **Add New** to add more extensions to the group or click **Done** to return back to the main Dterm Management window.

## Managing Reservations

The Room Direct Manager allows administrators to manage reservations created for use on the UA5200 application by displaying a list of all reservations. This list can also be searched for specific reservations.

**Step 1** Navigate to **UA5200 > Room Direct > Room Direct Manager**. Reservations are noted under **Current State**. See [Figure 3-17](#).

**Figure 3-17** Room Direct Reservations

**ROOM DIRECT RESERVATIONS**

DID Groups Add New Reservation DTerm Management

Filter: Current State Starts with Filter Clear

1 - 10 of 21 records 10 Results per page Page 1 of 3

	DID Number	Group Name	Current State	Extension	PBX Name
>	123	Medical-40	Unassigned	4050	SV7000-40-Hotel
>	1234	Medical-40	Unassigned	4050	SV7000-40-Hotel
>	242	Medical-40	Unassigned	4050	SV7000-40-Hotel
>	3445	Medical-40	Unassigned	4050	SV7000-40-Hotel
>	600	Medical-40	Pending Reserved	4050	SV7000-40-Hotel
>	601	Medical-40	Pending Reserved	4050	SV7000-40-Hotel
>	8000	Medical-40	Unassigned	4072	SV7000-40-Hotel
>	8001	Medical-40	Unassigned	4072	SV7000-40-Hotel
>	8002	Medical-40	Unassigned	4072	SV7000-40-Hotel
>	8003	Medical-40	Unassigned	4072	SV7000-40-Hotel

1 - 10 of 21 records 10 Results per page Page 1 of 3

**Step 2** Click **Add New Reservation** to create a new DID number. [Figure 3-18](#) displays.

**Figure 3-18** Room Direct Manager - New Room Direct Reservation

**Room Direct Manager**

**ROOM DIRECT RESERVATIONS**

**NEW ROOM DIRECT RESERVATION**

DID Group: Medical-40

PBX: SV7000-40-Hotel

DID Number: To:

**DEFAULT REDIRECTION NUMBER**

Extension: 4050

Apply Cancel

**Step 3** Select a DID Group from the **DID Group** drop down menu.



NOTE

*The PBX is now read-only and is associated with the DID Group.*

**Step 4** Enter the DID number in the **DID Number** field.

—A new DID number can be added one at a time, or by a range. The **To** field (range entry) is optional. Logical Numbers have a maximum length of 16 (10 on the 2400 due to PBX limitation).

**Step 5** Select the **Default Redirection Number** from the drop down list. This is the number that will be dialed when the number is in the unassigned state.

—The extension represents the default redirection to be used when a DID number enters this state. However, the assigned state redirection number will be determined by the physical phone in the room.



NOTE

*When adding new DID Numbers, and a range method is used where some of the number in the range already exist, only non-existent numbers are created. Existing numbers are not modified. The following displays.*



### Error Message

DID Numbers: 601 , 601 already exists.

## Modifying a DID Number

**Step 1** Click the > icon to select a DID number. [Figure 3-19](#) displays.

**Figure 3-19** Room Direct Reservations Details

[DID Groups](#)
[Add New Reservation](#)
[DTerm Management](#)

Filter: [Current State](#) [Starts with](#)  [Filter](#) [Clear](#)

1 - 6 of 6 records  Results per page Page 1 of 1

	DID Number	Group Name	Current State	Extension	PBX Name
>	4015	Group1	Unassigned	4050	SV7000-40
>	4016	Group1	Unassigned	4050	SV7000-40
>	4017	Group1	Unassigned	4050	SV7000-40
>	4018	Group1	Unassigned	4050	SV7000-40
>	4019	Group1	Unassigned	4050	SV7000-40
>	4020	Group1	Unassigned	4050	SV7000-40

1 - 6 of 6 records  Results per page Page 1 of 1

[Delete Range](#)
[FLF Download](#)
 Note: Will cause all DID redirections to be re-set to match the QW5000 database.

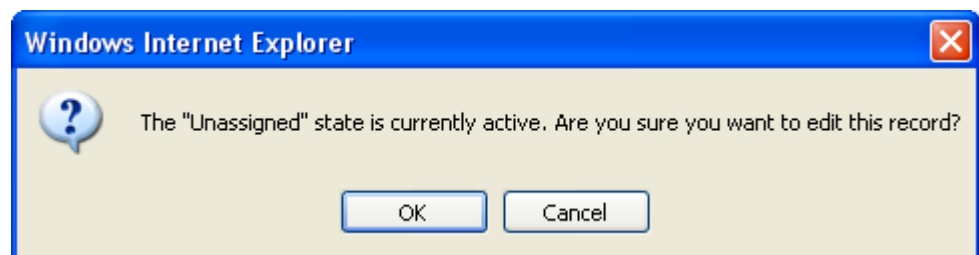
**ROOM DIRECT RESERVATIONS DETAILS**

1 - 7 of 7 records  Results per page Page 1 of 1

State	PBX	Extension
Assigned	SV7000-40	4302
Delete Pending	SV7000-40	4050
Pending	SV7000-40	4050
Pending Assigned	SV7000-40	4050
Pending Reserved	SV7000-40	4050
Reserved	SV7000-40	4050
Unassigned	SV7000-40	4050

1 - 7 of 7 records  Results per page Page 1 of 1

**Step 2** Click the **Pencil** icon. If the **Current State** for the DID is **Unassigned**, [Figure 3-20](#) displays. Otherwise, [Figure 3-21](#) displays.

**Figure 3-20** Modify Current State Confirmation

**Step 3** Click **OK**. [Figure 3-21](#) displays.

**Figure 3-21** Edit Room Direct Redirection

Note: Will cause all DID redirections to be re-set to match the OW5000 database.

EDIT ROOMDIRECT REDIRECTION

DID Number: 8000  
 State: Unassigned  
 Group: Medical-40  
 PBX: SV7000-40-Hotel  
 Extension: 4072

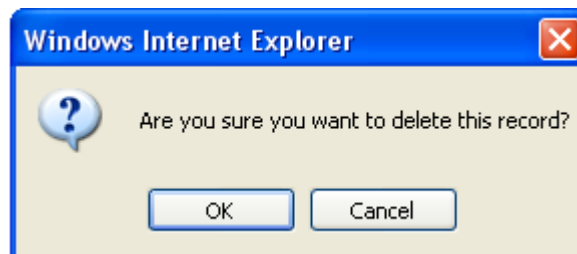
**Step 4** Select an existing **Extension** number from the drop down menu and click **Apply**. [Table 3-3](#) describes the **State** field.

**Table 3-3** Room Direct Reservations Details Description

Icon / State	Description
<b>Edit</b> (Pencil icon)	Opens the Edit Room Direct Redirection dialog. See <a href="#">Figure 3-21</a> .
<b>State</b>	Lists the possible states and their current settings. The states are: <ul style="list-style-type: none"> <li>• Unassigned</li> <li>• Assigned</li> <li>• Pending</li> <li>• Pending Reserved</li> <li>• Pending Assigned</li> <li>• Delete Pending</li> <li>• Reserved</li> </ul>

## Deleting a DID Number

**Step 1** Select **Delete** (trash can) icon for the DID number to be eliminated. [Figure 3-22](#) displays.

**Figure 3-22** Delete Configurations

**Step 2** Click **OK**.



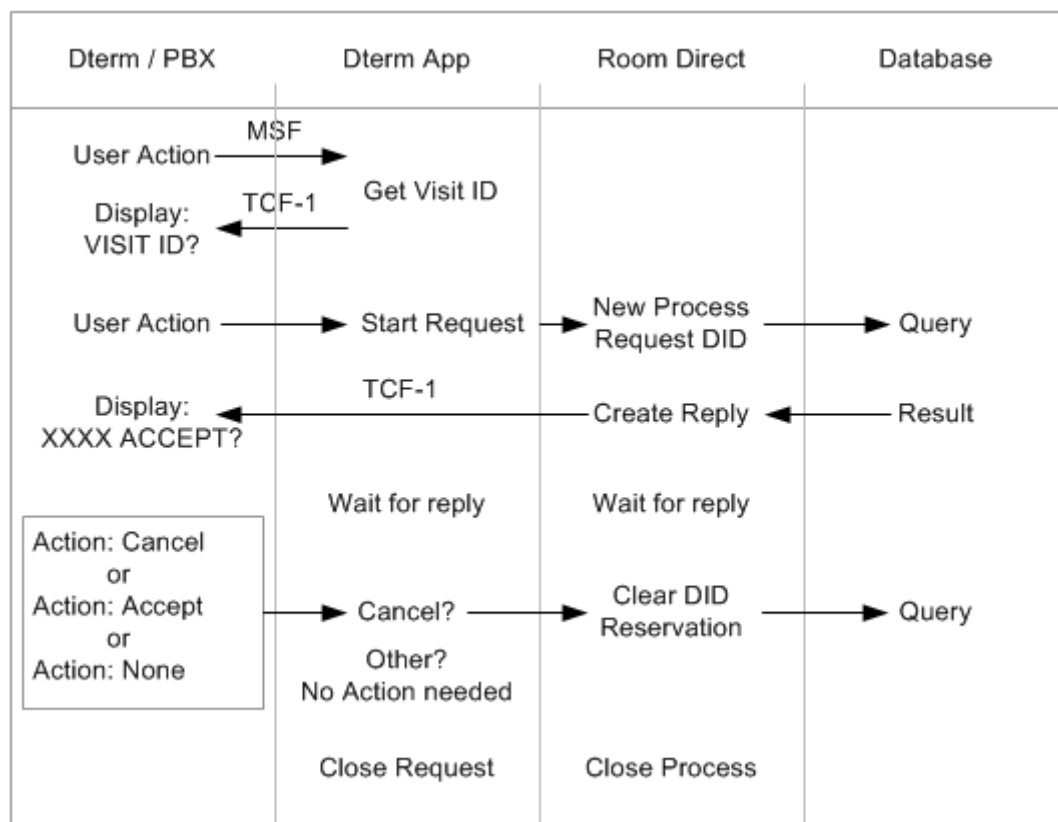
# 4

## Using Room Direct Dterm

This chapter describes how the user uses the Dterm, programmed for Room Direct, to send instructions between the Dterm and a Room Direct communication socket using TCP/IP. [Figure 4-1](#) provides a basic overview of this process.

- Chapter Topics
- [Dterm Interface Inputs](#)
  - [Application Message Formats](#)

**Figure 4-1** Dterm Interface Basic Flow Diagram



Dterm acts as an interface for Room Direct allowing the user to obtain the next available DID connection. Communication messages between the Dterm application and the Room Direct interface will follow the format listed in [Application Message Formats](#).

## Dterm Interface Inputs



NOTE

During installation, a default value of *False* is assigned for the *Password required* field. If the flag is switched to *True* using the OW5000 Admin application, then the user requires a Dterm password set up in the Person database.

The Dterm application is activated when the user presses the assigned MSF key. The Dterm number keys (0-9, \*, #, and MSF key) are utilized by the user as inputs during an active session. The acceptable key pad inputs are:

- **Accept DID**      **1 #** or **#** or **MSF-Close** key
- **Cancel DID**      **0 #**

Before the **Visit ID?** prompt displays, depending on the user and dterm configuration, the following can occur:

- If Password is enabled and multiple users have this Dterm as their primary extension, a prompt displays to pick which user to use to login.
- If the Dterm is associated with multiple DID Groups, a prompt displays to pick which DID Group they would like a DID number for. If the Dterm is only associated with a single DID Group, the first prompt that displays is the **Visit Id?** prompt.

**Step 1** When the initial **VISIT ID?** prompt displays requesting a patient visit account number, you can do one of the following:

—If the patient visit identification is known, enter the visit identification directly.



NOTE

Use the \* key to clear the values entered.

—If patient visit identification is not known, then enter # without data and the next Dterm prompt is **<DID Number> ACCEPT?**. No further action is required to accept the presented DID. However, if you want to cancel a displayed DID, press **0 #** to reject the DID assignment.



NOTE

Any Dterm input is ended using the # key. If an MSF time-out occurs, then the application exits and nothing is sent to Patient Link.

**Step 2** Press the MSF key **1 #** or **#** to close the session and accept the DID.



NOTE

The DID is accepted if you let the session time-out without any input. The process can be repeated to request more than one DID.

Dterm Service will now communicate a START message to Patient Link. [Table 4-1](#) lists possible return results.

**Table 4-1** START Message Return Results

Prompts	Description	Solution
Invalid ID	Invalid Visit ID.	Any key press returns the prompt to the <b>Visit ID?</b> prompt.
None Available	No DID number available.	Any key press returns the prompt to the <b>Visit ID?</b> prompt.
!XXXX Accepted?	Visit ID is already assigned to a DID number.	The number is returned but the value is preceded with a !.
!Assigned XXXX	DID Number returned.	
Failed	Unspecified error.	Any key press returns the prompt to the <b>Visit ID?</b> prompt.

Table 4-2 lists possible event scenarios from the **Accept?** prompt.

**Table 4-2** Accept? Prompt Events

Event	Result
MSF Timeout	The application issues a CLOSE message to Patient Link to end the session and the DID remains reserved. The display changes to <b>XXXX Reserved</b> .  <i>Note: The reserved prompt displays once for 4 seconds.</i>
User enters invalid values and hits #	The display returns to the <b>Accept?</b> prompt.
User enters 1 then #	ACK and CLOSE messages are sent to Patient Link. Display changes to <b>XXXX Reserved</b> .  <i>Note: The reserved prompt displays for 2 seconds, then changes to the <b>Visit ID?</b> prompt.</i>
User enters 0 then #	NAK and CLOSE messages are sent to Patient Link. The prompt changes to <b>XXXX Cancelled</b> .  <i>Note: The cancelled prompt displays for 2 seconds, then changes to the <b>Visit ID?</b> prompt.</i>

## Room Direct Interface

The UA5200 Patient Link Room Direct interface always *listens* for any new communication requests from the Room Direct Dterm application. All sessions begin with the **Start** command and either can terminate a session with the **Close** command.

1. A **Start** command causes the UA5200 Patient Link Room Direct interface to query a DID number from the database. During the query transaction, the DID is marked as **Reserved**.
2. A newly acquired DID number is returned to the active Dterm session with a **Data** command.
  - If the **Data** command is sent without error, then no action is required other than waiting for a reply or a time-out.

- If a communication error occurs, then the DID status is *released* or set to **Available**.
- 3. The Room Direct interface waits for a Dterm session reply.
  - A *time-out*, **Close** command, or **Ack** command requires not action.
  - A **Nak** command requires the Room Direct interface to clear the *Reserved* status of the previously acquired DID number.
- 4. After receiving the **Start** command, Room Direct does not *listen* for new Dterm transactions until it sends a **Data** command for the active **Start**.



This creates a **lock** condition preventing corruption of the DID number status.

## Application Message Formats

Application messages are required to inform and control the configuration and allocation of Room Direct DID numbers. The messages contain the components needed to allow the FLF process to create an OAI FLF message. A basic reply message is used to inform the Room Direct process of the status of the request.

There are four fields in every message containing the information needed in the assignment of a room direct DID number to a patient. The fields are:

- **Header** Always the three character string — DID.
- **Command** A string of one of the following:
  - START** Begins a session
  - DATA** Reply from Room Direct with DID#
  - ACK** Dterm user accepted
  - NAK** Dterm user
  - CLOSE** Either application wishes to close session
- **Station** The Dterm extension number.
- **DID Data** The DID number returned from Room Direct, a zero if a DID is not available, or if a database error occurs.

**Example:** Message exchange from Dterm station 71234 and Room Direct returning DID number 8228. The user has input patient visit ID 990076543.

```
DID|START|71234|990076543|<cr>
DID|DATA|71234|8228|<cr>
DID|CLOSE|71234||<cr>
```

***For additional information or support on this NEC Corporation product, contact your NEC Corporation representative.***



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**UA5200 Room Direct for Health Care Operations Guide**

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