

Title: Integration Notes for Mitel SX50 DNIC

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Overview

DuVoice DV2000–U provides complete integration with Mitel SX50 phone systems. This is accomplished by using digital extensions emulating DNIC M420 sets. This file gives needed information on integrating the DuVoice VM with the Mitel SX50 systems.

Features Supported

Message Lights	Yes
Fwd to a personal greeting RNA	Yes
Fwd to a personal greeting Busy	Yes
Fwd to a personal greeting DND	Yes
Different Busy Greeting	Yes
Auto Login to a mailbox	Yes
Trunk ID Multiple Tenant	NA
Voice Mail Transfer Button to a mailbox	Yes
Record a call	NA
DID fax	Yes
Caller ID with message	Yes
Trunk to trunk transfer (unsupervised)	Yes
LS Disconnect	NA
Tone Disconnect	Yes
Supervised Transfers	NA
Call Screening	Yes
Caller Queuing	NA

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1. Theory of Operation

In the digital integration, digital extensions—configured as station type 2616—are connected to the VMS voice ports. The VMS then interprets the display information to determine the call type (direct to voice mail, forward on busy/RNA/all calls, trunk call, etc.). For more on the physical connection to the Dialogic Dx2JCT-U cards, refer to section 4-VMS/Dialogic on this document.

Critical Considerations

References:

- DuVoice Technical document
[TB000006 - Using the Dialogic D/x2JCT-U PBX Integration Boards](#)

2. Requirements:

- DuVoice DV2000-U with release 3.05.37 or 4.0.44 and higher with Dialogic Dx2jct-u card
- Mitel SX50 telephone system with MS55 software.
- One DNIC 420 extension per voicemail port
- IP address for remote administration and support.
- If using Fax, one analog extension per fax port

3. PBX programming - Mitel SX50 DNIC configuration for DuVoice digital ports

Below lists the menu structure used when configuring a Mitel SX50 DNIC.

For details about programming a Mitel SX50, refer to the appropriate Mitel SX50 manual.

Programming your SX-50

Set up the Voicemail ports

3a) Create a Class of Service for the Voicemail ports

The four digital extensions need to be assigned a class of service, **COS 2** in this [example](#), that will be used for the voicemail ports. This needs to be changed to allow **Auxiliary Attendant** functionality. This is done by using commands 121 through 129, depending on which class of service has been selected for the voicemail ports. Register 7, position C, is set to 1. In our example it would be command **122 for COS 2**.

To accomplish this: At the attendant console, dial **#122**, and press the **enter** soft key.

Scroll through the registers using the **next** softkey until register 7 is reached.

Scroll through the register using the **_** key and change the **3rd** digit (c) to **1**.

The register should now read 071102. Press **EXIT** key if complete

3b) Build the vm extensions

This is done using commands 301 to 310, where the two digits after the 3 are the slot number of the PBX's linecard. In our example, the voicemail ports will be on line card 5, ports 1 through 4. In this case we dial **#305 enter**. Register 1 will appear. This is the register for port 1. In our example, R1= 010200**201**. Pressing **next** gives register 2, which is port 2. R2=020200**202**. Repeat this procedure for all four ports, i.e., registers R3 and R4.

3c) Build a Hunt Group

The SX-50 can have up to six hunt groups, configured using commands 361 through 366 respectively. Select a hunt group, say hunt group 3, and then program it with the extensions of the four voicemail ports. In this case, to program the hunt group:

Dial **#363** and push the **enter** soft key. Set the first register to R1=110

Then press the **next** key and add the extensions R2=2201, R3=3202, R4=4203 and R5=5204 the remaining ports should be set to zero e.g. R6=60, R7=70, etc.

3d) Configure Users' Phones

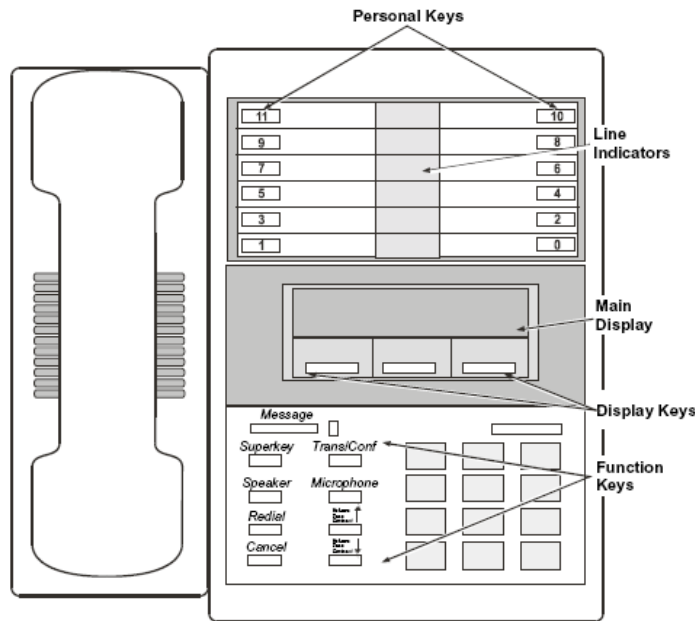
If subscribers have names programmed, these must include the extension number at beginning of the name. For example, a user with the name **FRED** on extension **201** would become **201 FRED**. Users' extensions do not require any special programming beyond that required for any other extension. If Forward-On-Busy or Forward-On-No-Answer to voicemail is desired, then the appropriate COS options to enable forwarding must be enabled Call forwarding on the SX-50 is initiated from each user's phone, by

Using the Super key on Supersets or an access code on other phone type\

3e) Add message waiting indicator key to port (s)

This is accomplished by using commands 401 to 480, depending on the slot occupied by the DNIC card and the circuit number on that card. By default, the Message Waiting Indicators are set and cleared on the last port of the duvoice system. The 420 sets used for setting and clearing message waiting lamps must have an Auxiliary Attendant key (type 8) programmed on **key 12 (upper left button)** of the set, with the Message Waiting Function (value 10) assigned to it. This is explained below. To program the message waiting line: Dial **#436** and press the **enter** soft key. Press the **next** key until register 12 is reached. This controls key 12. Key 12 should be programmed as follows: R12=12810.

Note: the message waiting indicators are a toggle without separate on and off codes, you will need to change the Duvoice MWI ON template in mailbox admin to stop the on-code from being sent for every new message. See the below section "DuVoice Dv2000 Programming setup" on this document for instructions.



Mitel Superset 420 Telephone

Dialogic JCT connection and configuration

This section describes the necessary pin outs to connect the Mitel SX50 DNIC and configuring the Dialogic program DCM for a Mitel M420 type set. The DV2000-U comes in a 4 port or 8 ports per card configuration.

4a. The Dialogic JCT card requires the dialogic D82 cable that connects to the back of the JCT card and terminates to a amphenol connector. Use the below chart to connect the amphenol cable to your cross connect field.

Color pair		Pairs #	2 Wire Set
White	Blue	1 & 26	NA
White	Orange	2 & 27	VM Port 1
White	Green	3 & 28	NA
White	Brown	4 & 29	VM Port 2
White	Slate	5 & 30	NA
Red	Blue	6 & 31	VM Port 3
Red	Orange	7 & 32	NA
Red	Green	8 & 33	VM Port 4
Red	Brown	9 & 34	NA
Red	Slate	10 & 35	VM Port 5
Black	Blue	11 & 36	NA
Black	Orange	12 & 37	VM Port 6
Black	Green	13 & 38	NA
Black	Brown	14 & 39	VM Port 7
Black	Slate	15 & 40	NA
Yellow	Blue	16 & 41	VM Port 8

4b. Configuring the Dialogic JCT board.

STOP! Duvoice Server control program must be stopped before proceeding

This section details the steps to configure the Dialogic program DCM to be used on the Mitel SX50 DNIC.

Step 1. The DCM program is located by choosing **Start/Programs/Intel Dialogic System Software/Configuration manager-DCM**. When the program opens you will receive a popup stating that the dialogic system service is running, simply select the OK button.

Step 2. The JCT card will be shown with a green dot on it, indicating that the dialog service is running. Again you will need to confirm that the Duvoice Server Control program (stoplight) is not running before continuing. To begin, press the stop button. It may take a few moments for this action to be completed. Once the card is stopped a red light will now be on the Cards Icon.

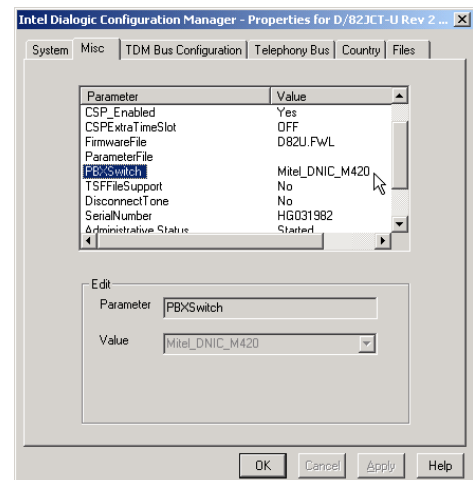
Step 3. Once the card has been stopped double click on the card with the red dot on it and select the misc tab. Confirm the following options are set, leave all other setting default.

TSFFilesupport = no

Disconnect Tone = no

PBX Switch = Mitel M420

See picture to the right>



DuVoice Dv2000 Programming setup.

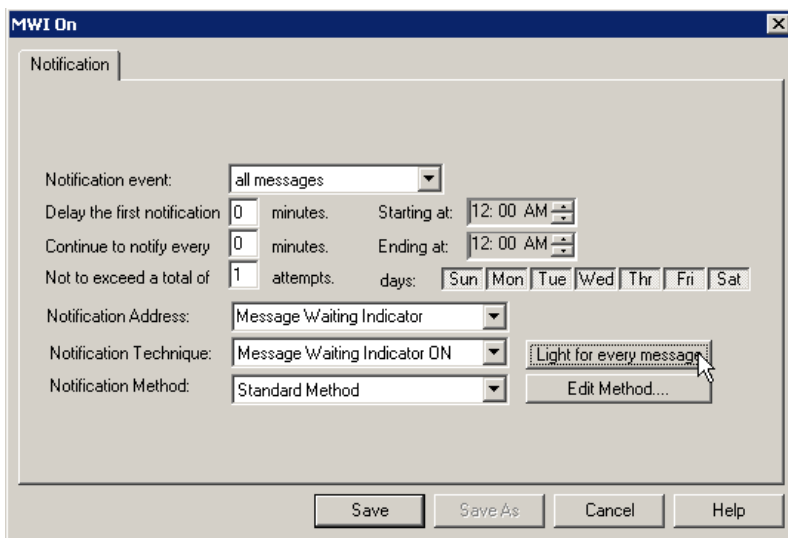
The DV2000 system should be configured for Mitel SX50 DNIC as follows, Please refer to the Duvoice DV4/DV2000 manual for further information. Also confirm that the duvoice server control is stopped before proceeding.

- 1) Setup the Systems integration for Mitel SX50 DNIC integration by opening the System Configuration program. If the ports are set as another integration type you will need to delete the ports and re-add them.
 - a. To delete ports simply highlight the voice ports to be deleted (do not delete the fax port) and press [delete] on the keyboard.
 - b. Once all ports are gone you can select **Define Ports** and choose to **define a range** of ports. This will start the Port Creation Wizard that will lead you through: setting the number of ports to add, selecting the PBX template to assign (Mitel SX50 DNIC), and selecting the location to assign (leave default unless setting up multi tenant). Make sure you assign the Mitel SX50 DNIC through the setup process.
- 2) Next double click a port to open the ports properties and enter the extension number that is connected to that specific port, this must be exact as miss matched ports will not integrate. Repeat for each voice port.

IMPORTANT!

If this is not done the message lights will not operate correctly and the lights will be turned off every time the voicemail has more than one message, this is because the light codes are a toggle using the same code for on and off.

- 3) Edit the MWI on Template to disable the light for every message option.
 - a. Open mailbox administration (default password = duvoice)
 - b. Select **templates** from the top of the mailbox admin window
 - c. Choose **open** and **templates** and select the **notifications** template.
 - d. Next highlight the template named **MWI ON** and hit open or double click
 - e. Once open click on the button labeled “light for every message” so that it appears not pressed, see below pic.
 - f. Select save and then choose cancel when you see the notification templates. This change is immediate and auto change all mailboxes.



Testing and Troubleshooting

Use the below testing format and check the box once you have completed and the test was successful. RNA=ring no answer, BNA= busy no answer.

- Test the RNA from admin station to guest room
- Test BNA from admin to guest room
- Test RNA to guest phone from outside call
- Test BNA to guest phone from outside call
- Test the RNA from Guest phone to admin phone
- Test BNA from Guest phone to admin phone
- Test RNA to Admin phone from outside call
- Test BNA to admin phone from outside call
- Test User-Login from guest phone
- Test User-Login from admin
- Test the disconnect by calling from any phone in the system and watch the port view once you hang up. The disconnect should be no longer than 5 seconds. You will see the port show disconnect then it will show idle.
- Test message waiting light to a guest phone, test this by leaving two messages on the phone, then log in and listen to the messages to confirm the light go out.
- Test message waiting light to a admin phone test this by leaving two messages on the phone, then log in and listen to the messages to confirm the light go out

Troubleshooting

Below are a few common mistakes found while troubleshooting and testing

1. **Port do not answer or ring busy when you call them directly**
 - a. **Fix:** confirm you connectivity to the Dialog card and refer back to the connection chart in this document. Also note that on the back of the dialogic card there is a display that indicates the current status of each of the ports, E1 E2 E3 E4 etc will be displayed if there are any errors of configuration or connectivity between the either the dialogic card or the Mitel SX50 Ports that are connected. If there are no ports errored you will not see the E1,E2 etc as the E indicated a link problem to the PBX. Also confirm that you have set the dialogic card to the Mitel_M420 set type as described in this document.
2. **Calls to ports answer but do not integrate to correct mailbox when calling ports directly or the hunt/prime number from an extension that has a mailbox**
 - a. **Fix:** this is usually a cause of the duvoice port not being labeled with the correct extension it is connected to. Please double check that the duvoice system configuration program has the ports labeled with the exact extension that is connected to it.

Conclusion

If you need further assistance please contact DuVoice Technical Support Monday - Friday 8am - 5pm Pacific Time, (425)250-2393.