



Octel 50

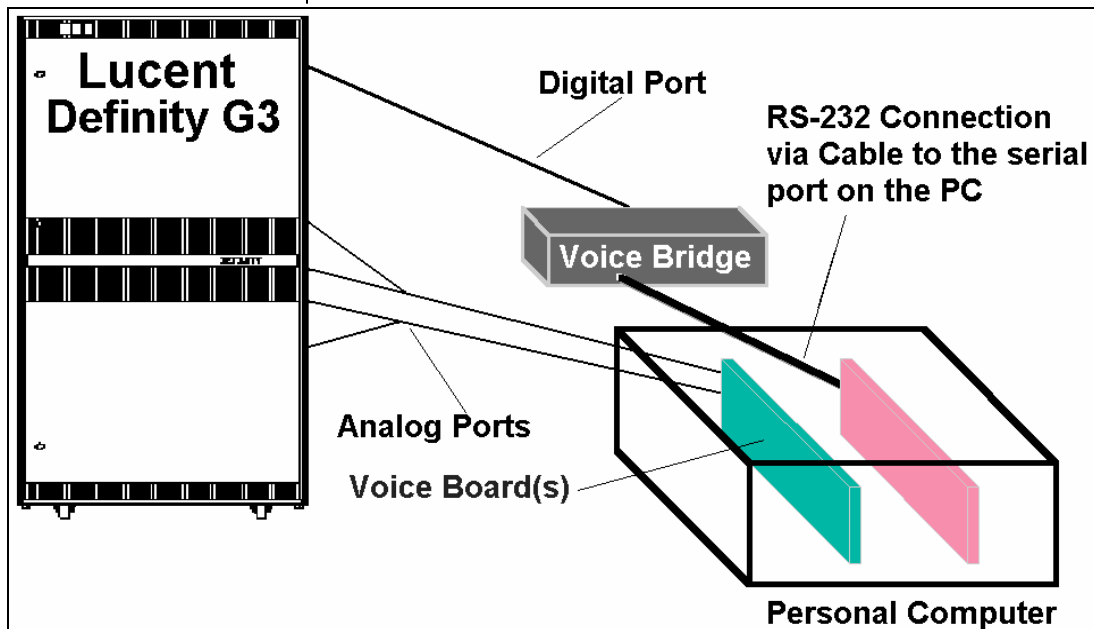
Voice Processing

Module

Configuration Note 77036

Lucent Definity G3* with Vectoring VoiceBridge® (Bridged Mode)

Revised 6/3/99



Communication between the Definity G3 and the Octel 50 is through the VoiceBridge using the Bridged Method.

1.0 METHOD OF INTEGRATION

Integration is RS-232/SMDI using the VoiceBridge Series II with bridged mode. The VoiceBridge communicates with the Lucent Definity by emulating the 7434D Digital Display set. When a call is received by the VoiceBridge, it simultaneously rings at a bridged analog appearance corresponding to an Octel 50 voice port. The digital display provides call information. The VoiceBridge collects this data and transmits the call information to the Octel 50 through a serial port using industry standard Centrex SMDI protocol. The Octel 50 then immediately answers the call with the appropriate greeting. Message waiting indicators are set and canceled via the VoiceBridge using Lucent Leave Word Calling feature. A hookflash followed by the extension transfers the caller to the operator.

Disclaimer: Configuration Notes are designed to be a general guide reflecting Lucent Technologies - Enterprise Communications Application Group (ECAG) experience configuring its systems. These notes cannot anticipate every configuration possibility given the inherent variations in all hardware and software products. Please understand that you may experience a problem not detailed in a Configuration Note. If so, please notify Sales Engineering at (408)324-3066, and if appropriate we will include it in our next revision. ECAG accepts no responsibility for

**Supported Voice Processing
Modules**

1.1 SUPPORTED VOICE PROCESSING MODULES

The Octel 50 is a Year 2000 (Y2K) compliant, PC based, enhanced voice messaging product release intended to replace the Smooth Operator, Smooth Operator Ultra Lite, Smooth Operator Lite and Cooperator product lines.

Supported PBX Configurations

1.2 SUPPORTED PBX CONFIGURATIONS

The Lucent Technologies Definity G3 Enterprise Communication Server is a state of the art digital communication Platform with a modular design that grows with the customers needs. The ProLogix is based on the Definity/CMC (Compact Modular Cabinet) hardware.

BCS is an offer that has the competencies of G3 such as reliability, performance, and security; however, it is designed to meet the basic to midsize telephony market needs. BCS does not support many of the advanced features of the ProLogix or the Definity G3. For example, DCS is not available in the BCS Offering.

Definity BCS Issue 4 is based on the R6 software platform. The main difference between the ProLogix / G3 and BCS is the feature set and the station circuit packs.

Note: All reference to ProLogix /G3 will include the Definity BCS unless otherwise noted

Octel 50 Ordering Information

2.0 OCTEL 50 ORDERING INFORMATION

This integration supports up to 16 Octel 50 ports.

Dialogic and Brooktrout kit versions of this product are available depending on the application.

The Lucent VoiceBridge, H-VTG-2320 (version 3.2) must be included.

For existing systems with greater than 16 ports, please consult with your sales representative.

G3 Hardware Requirements

3.0 DEFINITY GENERIC 3 HARDWARE REQUIREMENTS

- One digital port (TN754 or TN754B) configured for a 7434 digital display set.
- One analog port (TN742-8 circuits, TN746B-16 circuits, TN769-8 circuits, TN793-24 circuits, and TN2183-16 circuits) configured as a VMI set for each Octel 50 port.
- For Definity BCS analog ports (TN791-16circuits, TN2215-16cicuits, and TN2793-24 circuits) configured as a VMI set for each Octel 50 Port.
- All line circuits supports LED message waiting indicators (message waiting indicators are not supported off-premises).
- Neon message waiting indicators are support by TN769, TN793, and TN2793 along with a TN755B Power Unit per carrier or per Single - Carrier Cabinet.

Note: See Section 7.7, and Section 7.9 for hardware considerations.

G3 Software Requirements

3.1 DEFINITY GENERIC 3 SOFTWARE REQUIREMENTS

- Version 2 to Version 6
(for version 4 see section 7.12, version 5 See section 7.13)
- ProLogix Communications Solutions.
- Basic Vectoring Software Package
- G3s/vs: Voicemail Application Software (see Section 7.11)

Additional Material Requirements

3.2 ADDITIONAL MATERIAL REQUIREMENTS

- A Personal Computer with a millennium-compliant version of DOS is required to support the messaging system hardware and software. Chapter 2 of the Installation Guide provides minimum hardware requirements for identifying this item.
- When using the DIALOG/4™ you will need:
 - One RJ-14 jack with 4-conductor line cord for every two Octel 50 ports
- If FaxMail is installed.
 - One analog line per Tr112™ port.
 - Two RJ-11 Jacks for every Brooktrout 2 port Tr112™ board.
- For optional remote service pack :
 - Remote maintenance modem (28.8 kbps minimum) - External.
 - Request up to, two analog lines for remote service access. In addition order one RJ-11 Jacks and 2-conductor modular telephone cords for each line.
 - One for access Octel 50
 - One for access to VoiceBridge
- For optional battery power backup:
 - Uninterruptable power supply (UPS) and cable (requires a single serial port).
- If both optionally, remote service pack and battery power, backup:
 - 16-bit serial expansion board.

Supported integration features

4.0 SUPPORTED FEATURES

[✓] Items are supported

System Forward to Personal Greeting

All Calls

Ring/no answer

[✓]

[✓]

Message Waiting

LCD Display

LED

[]

[✓]

Busy	[✓]	Lamp	[✓]
Busy/No Answer	[]	Audible / Stutter Dial Tone ¹	[✓]
Do Not Disturb	[✓]	Multiple Return to Operator	[✓]
Station Forward to Personal Greeting		Direct Call	[✓]
All Calls	[✓]	Auto Attendant	[✓]
Ring/no answer	[]	Outcalling	[✓]
Busy	[]	Personal Greeting of Original-Called Party	
Busy/No Answer	[]	Multiple Call Forward	[]
Do Not Disturb	[]	Double Call Forward	[]
Flexible Forwarding		Call Coverage	[✓]
Forward to No Answer Greeting	[✓]	Intercom Paging	[✓]
Forward to Busy Greeting	[✓]	Supervised Transfers	
Intercom/CO Forwarding	[✓]	Call Screening	[✓]
		Call Queuing	[✓]
		Intercom Paging	[✓]
<i>Note: ¹ G3i V2 and G3r must have audible MWI activated</i>		Record Telephone Conversation	[]

4.1 DISCONNECT TYPE

Disconnect Type

Disconnect is achieved with either Drop in Loop Current with “Adjunct Supervision? Y”, or by the use of BELCOR standard dialtone. This is done when configuring the single line Octel 50 ports in the PBX programming section. For proper external disconnect supervision, Ground start, or Supervised Loop start CO lines are recommended.

5.0 CONFIGURING THE LUCENT DEFINITY G3

Programming PBX system parameters

VoiceBridge II In Bridged Mode
Requires The G3 To Have
Vectoring Available.

Contact the System Administrator and determine whether vectoring is to be used. Vectoring is required for VoiceBridge to use the bridged method. Basic Vectoring Software Package is required if vectoring is used.

Note: If vectoring is unavailable then the transfer mode is required, reference Configuration Note CN7035 Lucent Definity G3 with VoiceBridge.

Before you begin programming, it is recommended that a hard copy of the customer database be obtained to verify existing programming.

Refer to the Programming section in the Lucent manual for information on entering, saving, and exiting database programming. Up to nine tasks must be completed when programming the PBX to integrate. They are as follows:

- Configure the Single lines assigned to Octel 50.
- Program a digital port as a 7434D Digital Display station for the VoiceBridge.
- Using the ADD HUNT-GROUP command, create a hunt group to provide a queue.

- Program the Lucent Definity G3 for VoiceMail Application using vectoring.
 - Enable basic vectoring.
 - Create a Call Vector that routes calls to the VoiceBridge.
 - Create a VDN to be used as the main System Access Number.
- Create call coverage path(s) that include the VoiceBridge access number or Vector Directory Number.
- Change subscribers' station programming to include the proper name field information and call coverage path (e.g. 2345 Smith, B.)

NOTE: Lucent recommends that the extension be prior the subscriber's name due to the limitation of VTG to read only the first 15 characters of the LCD display on the digital telephone.

In the following example, a four port Voice Mail system is used. Specific extension numbers are used for the VoiceBridge, Octel 50 analog lines, and subscriber stations. In addition, a sample coverage path is shown. The example assumes:

- VoiceBridge is extension 5000
- The Octel 50 analog ports are extensions 5001, 5002, 5003, and 5004
- The hunt group number for Octel 50 is 35 with extension number 5040
- The vector directory number is 5030
- Extensions 2345, 3001, and 3002 are Voice Mail Subscribers.
- Coverage Path number one is the example shown.

Note: Entries in bold italic type indicate where information must be entered.

5.1 CONFIGURING THE SINGLE LINE OCTEL 50 PORTS

Define analog voice ports that will connect to the Octel 50 using the ADD STATION command. Sequential numbering is recommended. Repeat for each analog port.

Add Station 5001

				Page 1 of 2
STATION				
Extension: 5001	BCC: 0		TN: 1	
Type: <i>2500</i>		Lock Messages? <i>n</i>	COR	2
Port: 01A0304		Security Code:	COS	1
Name: VOICEMAIL		Coverage Path:	Tests? <i>n</i>	

Entries in bold italic type indicate where information must be entered.

FEATURE OPTIONS

LWC Reception:	<i>none</i>	Coverage Msg Retrieval?	<i>n</i>
LWC Activation?	<i>n</i>	Auto Answer?	<i>none</i>
CDR Privacy?	<i>n</i>	Data Restriction?	<i>y</i>
Redirect Notification?	<i>n</i>	Call Waiting Indication?	<i>n</i>
Bridge Call Alerting?	<i>n</i>	Att. Call Waiting Indication?	<i>n</i>
Off Premise Station?	<i>n</i>	Distinctive Audible Alert?	<i>n</i>
Switchhook Flash?	<i>y</i>	Message Waiting Indicator:	
Ignore Rotary Digits?	<i>n</i>	Adjunct Supervision?	<i>y</i>

Next

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STATION

NON-SWITCH DATA

Room:	Headset?	<i>n</i>
Jack:	Speaker?	<i>n</i>
Cable:	Mounting:	<i>d</i>
Floor:	Cord length:	<i>0</i>
Building:	Set Color:	

ABBREVIATED DIALING

List1:	List2:	List3:
--------	--------	--------

HOT LINE DESTINATION

Abbreviated Dialing List Number (From above 1, 2 or 3):
Dial Code:

Line Appearance: *call-appr*

Enter

5.2 CONFIGURING THE DIGITAL PORT

The following steps are required to program the digital 7434D port to a VoiceBridge.

Note: *There are two sections below describing configuring the digital ports. The first section, labeled G3V2 and G3V3, is used for G3 V2, and V3. The second section, labeled G3V4 and G3V5 is used for G3 V4 and V5. Use the appropriate section for configuring the digital port.*

- Set up the 7434 set as shown in Figure 1, with bridged appearances beginning on button 11, one for each integrated voice port, up to a maximum of 24.
- Configure the Display Buttons as shown in Table 5.

Define the digital port as 7434D terminal using the ADD STATION command as follows:

For G3V2 and G3V 3 use this section.

Add Station 5000

Entries in bold italic type indicate where information must be entered.

Use this section to configure the G3V2 and G3V3 digital ports.

Page 1 of 4

STATION

Extension: 5000 BCC: 0 TN: 1

Type: **7434D** Lock Messages? **n** COR: 1

Port: 01C0202 Security Code: COS: 1

Name: **VOICEMAIL** Coverage Path:

FEATURE OPTIONS

LWC Reception: **none** Auto Select Any Idle Appearance? **n**

LWC Activation? **y** Coverage Msg Retrieval? **n**

CDR Privacy? **n** Auto Answer? **n**

Redirect Notification? **n** Data Restriction? **y**

Per Button Ring Control? **n** Idle Appearance Preference? **n**

Bridged Call Alerting? **n**

Active Station Ringing: **single** Restrict Last Appearance? **y**

Data Module? **n** Feature Module?: **n**

Display Module? **y** Coverage Module? **n**

Display Language: **english** Disp Client Redir? **n**

Message Lamp Ext: **5000** Select Last Used Appearance? **n**

Next

Page 2 of 4

STATION

NON-SWITCH DATA

Room: SWITCH ROOM Headset? **n**

Jack: Speaker? **n**

Cable: mounting: **d**

Floor: Cord Length: **0**

Building: Set Color:

ABBREVIATED DIALING

List1: List2: List3:

BUTTON ASSIGNMENTS

1: **call-appr** 6: **call-appr**

2: **call-appr** 7: **call-appr**

3: **call-appr** 8: **call-appr**

4: **call-appr** 9: **call-appr**

5: **call-appr** 10: **call-appr**

Next

Entries in bold italic type indicate where information must be entered.

Page 3 of 4

STATION

FEATURE BUTTON ASSIGNMENTS

11: **abrdg-appr** Ext: **5001** 12: **abrdg-appr** Ext: **5002**

13: **abrdg-appr** Ext: **5003** 24:

14: abrdg-appr	Ext: 5004	25:
15:		26:
16:		27:
17:		28:
18:		29:
19:		30:
20:		31:
21:		32:
22:		33:
23:		34:

Next

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STATION

DISPLAY BUTTON ASSIGNMENTS

1: **normal**
2:
3:
4:
5:
6:
7:

Enter

**Use this section to configure the G3V4 and G3V5 digital ports.
G3V4 and G3V5**

Add Station 5001

Page 1 of 5

STATION

Extension: 5001	Lock Messages? n	
Type: 7434D	Security Code:	TN: 1
Port: 01A0304	Coverage Path 1:	COR: 1
Name: VOICEMAIL	Coverage Path 2:	COS: 1

STATION OPTIONS

Data Module? n	Personalized Ringing Pattern: 4
Display Module? y	Message Lamp Ext: 2470
Display Language: english	
	Coverage Module? n

Next

Page 2 of 5

STATION

FEATURE OPTIONS

LWC Reception: none	Auto Select Any Idle Appearance? n
LWC Activation? y	Coverage Msg Retrieval? n
CDR Privacy? n	Auto Answer: none
Redirect Notification? n	Data Restriction? y
Per Button Ring Control? n	Idle Appearance Preference? n
Bridged Call Alerting? n	

**Use this section to configure
the G3V4 and G3V5 digital
ports.**

Active Station Ringing: *single*

Restrict Last Appearance? *y*

Display Client Redirection? *n*

Select Last Used Appearance? *n*

Next

SITE DATA		STATION	Page 3 of 5
Room: TELCO ALLEY		Headset? <i>n</i>	
Jack: BRIDGE		Speaker? <i>n</i>	
Cable:		Mounting: <i>d</i>	
Floor: FIRST		Cord length: <i>0</i> (zero)	
Building: MAIN		Set Color:	
ABBREVIATED DIALING			
List1:	List2:	List3:	
BUTTON ASSIGNMENTS			
1: <i>call-appr</i>	6: <i>call-appr</i>		
2: <i>call-appr</i>	7: <i>call-appr</i>		
3: <i>call-appr</i>	8: <i>call-appr</i>		
4: <i>call-appr</i>	9: <i>call-appr</i>		
5: <i>call-appr</i>	10: <i>call-appr</i>		

Next

BUTTON ASSIGNMENTS		STATION	Page 4 of 5
11: <i>abrdg-appr</i>	Ext: 5001	12: <i>abrdg-appr</i>	Ext: 5002
13: <i>abrdg-appr</i>	Ext: 5003	24:	
14: <i>abrdg-appr</i>	Ext: 5004	25:	
15:		26:	
16:		27:	
17:		28:	
18:		29:	
19:		30:	
20:		31:	
21:		32:	
22:		33:	
23:		34:	

Next

DISPLAY BUTTON ASSIGNMENTS	STATION	Page 5 of 5
1: <i>normal</i>		
2:		

3:
4:
5:
6:
7:

Enter

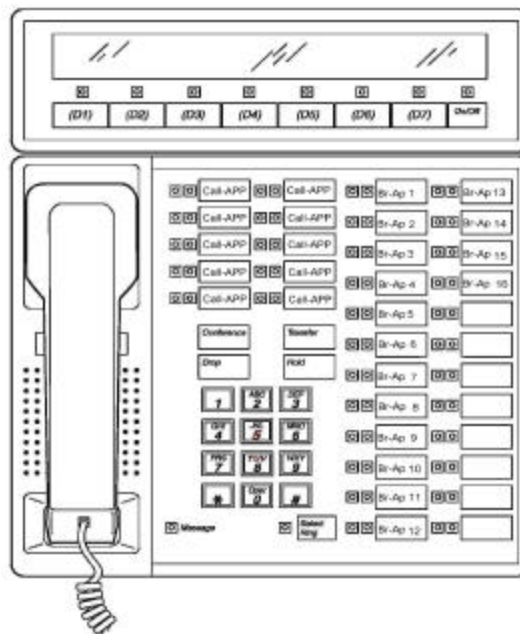


Fig 1 7434D layout

Figure 1 shows an overview of how the 7434D telephone buttons should appear.

5.3 CREATE A GROUP TO ESTABLISH A QUEUE

Using the ADD HUNT-GROUP command, create a hunt group to provide a queue.

Using the `ADD HUNT-GROUP` command, create a hunt group whose member is a Octel 50 port.

ADD HUNT-GROUP 35

Page 1 of 2

HUNT-GROUP

Group Number: 35 Group Extension: ***5040*** Group type: ***ucd***
Member Range Allow: 1-***40*** Administered Members (min/max): 1 /***10***
Total Administered Members: ***10***

GROUP MEMBER ASSIGNMENTS

Ext	Name	Ext	Name	Ext	Name
-----	------	-----	------	-----	------

1: 5004 VoiceMail 4	14:	27:
2:	15:	28:
3:	16:	29:
4:	17:	30:
5:	18:	31:
6:	19:	32:
7:	20:	33:
8:	21:	34:
9:	22:	35:
10:	23:	36:
11:	24:	37:
12:	25:	38:
13:	26:	39:
		40:

Next

Page 2 of 2

HUNT-GROUP

Group Number : 35 Group Extension: **5040** Group type: **ucd**
 Group Name : Octel 50 ACD? **y**
 Queue? **y** AAS? **y** Vector? **y**
 Security Code: Night Service Destination: COR: **1**
 ISDN Caller Disp: Coverage Path:

Measured : **external** Supervisor Extension:
 Priority On Intraflow? **n** Inflow Threshold (sec): **999**
 Control Adjunct: **n**

Queue Length: **15**
 Call Warning Threshold: **5** Call Warning Port:
 Time Warning Threshold: **30** Time Warning Port:

Redirect on No Answer (rings): **5**
 Forced Entry of Stroke Counts or Call work codes? **n**

Enter

5.4 CONFIGURE THE LUCENT DEFINITY G3 FOR VOICEMAIL APPLICATION USING VECTORING

**Configure the Lucent Definity G3
for Voicemail Application using
vectoring.**

A Vector Directory Number (VDN) is a 'soft' extension number, i.e., an extension number without assigned hardware. VDNs are associated with vectors that are series of programmable call routing steps. Calls to the VDN are routed according to the programmed vector steps. Typical PBX applications for vectoring are ACD and DNIS. External Calls to VDNs that route to an Octel 50 can be programmed to return the personal greeting of the mailbox corresponding to the VDN. All access to Octel 50 must be

through vectoring, as “direct access” and vectoring are mutually exclusive. The following instructions apply only when vectoring is required.

SYSTEM PARAMETER CUSTOMER OPTIONS FORM

Basic vectoring must be enabled on the System Parameter Customer Options Form by an authorized technician.

Contact the System Administrator and determine whether vectoring is to be used prior to performing any database programming. Basic Vectoring Software Package is required if vectoring is used.

A Vector Directory Number (VDN) is a 'soft' extension number, i.e., an extension number without assigned hardware. VDNs are associated with vectors which are series of programmable call routing steps. Calls to the VDN are routed according to the programmed vector steps. Typical switch applications for vectoring are ACD and DNIS. External Calls to VDNs that route to the Octel 50 can be programmed to return the personal greeting of the mailbox corresponding to the VDN. All access to the Octel 50 must be through vectoring as direct access and vectoring are mutually exclusive.

CREATE THE MAIN SYSTEM ACCESS NUMBER (VDN)

Using the ADD VDN command, create a Vector Directory Number (e.g. v5030) configured as follows:

Assign all integrated Octel 50 ports as part of the call vector.

If you desired, you may assign to the **Octel 50** VDN the name VOICEMAIL. Enter the entire name in capital letters with no spaces. An extension number may follow the name using a space to separate the extension number from the name. For example, 'VOICEMAIL' and 'VOICEMAIL 5030' is acceptable. '5030 VOICEMAIL' and 'VOICE MAIL' is not acceptable. If the extension number is not included then the caller will receive the general Auto-Attendant greeting.

In addition, it is recommended that each Octel 50 port be assigned the name 'VOICEMAIL' as outlined above. If not, when dialing individual Octel 50 ports directly (i.e., not through the vector number) the Octel 50 will answer as a forwarded call and not as a direct call.

Note: This only applies to performing port to port checks; day-to-day operation of the Octel 50 is not affected.

Use this section to configure the G3V2, and G3V3.

G3V2, and G3V3

Add vector 1

Page 1 of 1

CALL VECTOR FORM

Vector number: 1

1 queue to main split 35	priority m
2 Goto step 5 if calls queued in split 35 => 10 pri m	
3 wait 0 seconds	hearing FDBK ringback
4 goto step 1	if unconditionally
5 route to number xxxx	if unconditionally

A maximum of 32 steps is allowed per call vector. The number xxxx is a secondary answer point (e.g., attendant console or answering point).

Page 1 of 1

VECTOR DIRECTORY NUMBER FORM

Extension: 5030	NAME: VOICEMAIL 5030
Allow VDN override? n	COR: 1
Vector Number: 1	Measured: none

The VDN is now the Octel 50 Access Number. Subscribers dial it to retrieve their messages and use it as the call coverage target.

Place the VDN created above in the coverage path of each subscriber. The specific number of the VDN is entered (e.g., v5030).

NOTES: Do not change vectors while calls are being processed; problems may be experienced with calls already being processed.

For more information on commands and how VDNs should be administered, refer to Definity Communications System Generic 3i Implementation Manual 555-204-655 (for the Generic 3r the number is 555-230-651).

Use this section to configure the G3V4 and G3V5.

G3V4 and G3V5

Page 1 of 1

VECTOR DIRECTORY NUMBER

Extension: 5030
Name: VOICEMAIL
Allow VDN Override? N
COR: 1
TN: 1
Vector Number: 1

Assign the VDN as the coverage path for each subscriber

**Assign the VDN as the coverage
path for each subscriber**

Measured: none
Acceptable Service Level (sec):
VDN of Origin Annc. Extension:
1st Skill:
2nd Skill:
3rd Skill:

Return Destination:

The VDN is now the Octel 50 Access Number. Subscribers dial it to retrieve their messages and use it as the call coverage target.

Place the VDN created above in the coverage path of each subscriber. The specific number of the VDN is entered (e.g., v5030).

NOTES: Do not change vectors while calls are being processed; problems may be experienced with calls already being processed.

For more information on commands and how VDNs should be administered, refer to Definity Communications System Generic 3i Implementation Manual 555-204-655 (for the Generic 3r the number is 555-230-651).

CREATE THE MAIN SYSTEM ACCESS NUMBER (VDN)

Using the ADD VDN command, create a Vector Directory Number (e.g. v5030) configured as follows:

Assign All integrated Octel 50 ports as part of the call vector.

If you desired, you may assign to the **Octel 50** VDN the name VOICEMAIL. Enter the entire name in capital letters with no spaces. An extension number may follow the name using a space to separate the extension number from the name. For example, 'VOICEMAIL' and 'VOICEMAIL 5030' is acceptable. '5030 VOICEMAIL' and 'VOICE MAIL' is not acceptable. If the extension number is not included then the caller will receive the general Auto-Attendant greeting.

In addition, it is recommended that each Octel 50 port be assigned the name 'VOICEMAIL' as outlined above.

Add vector 1 Use this section for G3V2 and G3V3

CALL VECTOR				Page 1 of 2
Number: 1	NAME: VOICEMAIL 5030	Ext: 5030		
	ASAI Routing? n	Basic ? n	Prompting? n	EAS? n
01	<i>route to</i>	<i>number 5001</i>		<i>if unconditionally</i>
02	<i>route to</i>	<i>number 5002</i>		<i>if unconditionally</i>
03	<i>route to</i>	<i>number 5003</i>		<i>if unconditionally</i>
04	<i>route to</i>	<i>number 5004</i>		<i>if unconditionally</i>

05	<i>queue</i>	<i>to main split 35</i>	<i>priority m</i>	
06	<i>goto</i>	<i>step 15</i>	<i>if staffed-agents</i>	<i>in split 35 is < 1</i>
07	<i>goto</i>	<i>step 11</i>	<i>if calls-queued</i>	<i>in split 35 is > 10 pri m</i>
08	<i>goto</i>	<i>step 12</i>	<i>if oldest call waiting</i>	<i>in split 35 is > 45</i>
09	<i>wait</i>	<i>time 0 seconds</i>	<i>hearing ringback</i>	
10	<i>goto</i>	<i>step 1</i>	<i>if unconditionally</i>	
11	<i>route to</i>	<i>number 6000</i>	<i>if unconditionally</i>	
12	<i>route to</i>	<i>number 6999</i>	<i>if unconditionally</i>	
13				
14				
15	<i>busy</i>			

A maximum of 32 steps is allowed per call vector.

Enter

Add vector 1 Use this section for G3V4, and G3V5

CALL VECTOR		Page 1 of 3
Number: 1	NAME: VOICEMAIL 5030	
Basic? y EAS? y G3V4 Enhanced? y ANI/II-Digits? y ASAI Routing? n		
Prompting? y LAI? n G3V4 Adv Route? y CINFO? n		
01	<i>route to</i>	<i>number 5001 with cov n if unconditionally</i>
02	<i>route to</i>	<i>number 5002 with cov n if unconditionally</i>
03	<i>route to</i>	<i>number 5003 with cov n if unconditionally</i>
04	<i>route to</i>	<i>number 5004 with cov n if unconditionally</i>
05	<i>queue</i>	<i>to main split 35 priority m</i>
06	<i>goto</i>	<i>step 15 if staffed-agents in split 35 is < 1</i>
07	<i>goto</i>	<i>step 11 if calls-queued in split 35 is > 10 pri m</i>
08	<i>goto</i>	<i>step 12 if oldest call waiting in split 35 is > 45</i>
09	<i>wait</i>	<i>time 0 seconds hearing ringback</i>
10	<i>goto</i>	<i>step 1 if unconditionally</i>
11	<i>route to</i>	<i>number 6000 with cov n if unconditionally</i>

Next

		Page 2 of 3
12	<i>route to</i>	<i>number 6999 with cov n if unconditionally</i>
13		
14		
15	<i>busy</i>	

A maximum of 32 steps is allowed per call vector. (Page 3 of 3 not shown)

Note: Step 6 is required for ACD type hunt groups. Ignore step 6 if hunt group is UCD as shown.

This vector is designed to:

- Step 1- 4 will route to an available Octel 50 port.
- Step 5 will queue to hunt group 35 the last port for Octel 50.
- Step 6 will send the caller to step 12 if the Octel 50 port is taken out of service by the switch technician. Hunt group would have to be ACD not UCD.

**Assign the VDN as the coverage
path for each subscriber**

**Entries in bold italic type
indicate where information
must be entered.**

- Step 7 will send the caller to step 11 if the queue of hunt group 35 grows larger than 10 calls. This threshold can be easily changed to a higher or lower value based on site requirements.
- Step 8 will send the caller to step 12 if a caller has been in queue for 45 seconds.
- Step 9 will cause the caller to hear ringback tone.
- Step 10 will send caller to the top of the vector and rescan for a free line.
- Step 11 will route caller to extension 6000 a secondary answer point such as the attendant.
- Step 12 will route caller to extension 6999 a second vector or answer point.
- Step 13 will return busy tone to the caller.

The VDN is now the Octel 50 Access Number. Subscribers dial it to retrieve their messages and use it as the call coverage target.

Place the VDN created above in the coverage path of each subscriber. The specific number of the VDN is entered (e.g., v5030).

NOTES: Do not change vectors while calls are being processed; problems may be experienced with calls already being processed.

For more information on commands and how VDNs should be administered, refer to Definity Communications System Generic 3i Implementation Manual 555-204-655 (for the Generic 3r the number is 555-230-651).

5.5 Configuring the subscriber coverage path

Add coverage path 1

COVERAGE PATH				Page 1 of 1
Coverage Path Number: 1				
Next Path Number: Linkage				
COVERAGE CRITERIA				
Station/Group Status	Inside Call	Outside Call		
Active?	n	n		
Busy?	y	y		
Don't Answer?	y	y	Number of Rings: 3	
All?	n	n		
DND/SAC/Goto Cover?	y	y		
COVERAGE POINTS				

**Configuring Single Line
Subscriber Stations**

All subscriber extensions can be
programmed with the name
associated with the telephone

Terminate to Coverage Pts. with Bridged Appearances? **n**

Point1: **5030**

Point2:

Point3:

Point4: **5030**

Point5:

Point6:

(Points 4, 5, and 6 for G3V4 and G3V5 only)

Enter

5.6 CONFIGURING THE SUBSCRIBER STATIONS

All subscriber extensions can be programmed with the name associated with the telephone. This programming is done using the administrator terminal.

(Use of the VoiceBridge requires that the name entry have the extension number as part of the field.) The extension can be placed anywhere in the name field. The field can contain only 15 characters; therefore, abbreviations may be necessary. For example:

- 3001 J. Smith
- 3002.HL.Stevnsn

When Lucent integrated directory feature is implemented then the name must go before the extension number.

Change station 3001

Page 1 of 2

STATION

Extension: 3001

BCC: 0

TN: 1

Type: **2500**

Lock Messages? **n**

COR 2

Port: 01A0601

Security Code:

COS 1

Name: **3001, John Smith**

Coverage Path: **1**

Tests? y

FEATURE OPTIONS

LWC Reception: **msa-spe**

Coverage Msg Retrieval? n

LWC Activation? n

Auto Answer? none

CDR Privacy? n

Data Restriction? y

Redirect Notification? n

Call Waiting Indication? n

Bridge Call Alerting? n

Att. Call Waiting Indication? n

Off Premise Station? n

Distinctive Audible Alert? n

Switchhook Flash? y

Message Waiting Indicator: led

Ignore Rotary Digits? n

Adjunct Supervision? y

(Page 2 is not shown as no specific programming is required.)

Note: Numbers other than the extension number may be included if they have fewer digits than the extension number and are placed to the left of the extension. For example, "Conf Rm 3, 2301" is acceptable but "2301, Conf Rm 3" is not.

Change Station 3002

**Configuring Digital
Subscriber Stations**

Page 1 of 4

STATION

Extension: 3002

BCC: 0

TN: 1

Type: 8410D

Lock Messages? n

COR: 10

Port:	01C0202	Security Code:	COS: 0
Name:	3002.HL.Stevnsn	Coverage Path:	I
FEATURE OPTIONS			
LWC Reception:	<i>msa-spe</i>	Auto Select Any Idle Appearance?	y
LWC Activation?	n	Coverage Msg Retrieval?	n
CDR Privacy?	n	Auto Answer?	n
Redirect Notification?	y	Data Restriction?	y
Per Button Ring Control?	n	Idle Appearance Preference?	n
Bridged Call Alerting?	n	Personal Ringing Pattern:	1
Active Station Ringing:	<i>single</i>	Restrict Last Appearance?	y
Data Module?	n	Mode Button Enabled?	y
Speaker Phone ?	2-way	Coverage Module?	n
Display Language:	english	Disp Client Redir?	n
Message Lamp Ext:	3002	Select Last Used Appearance?	n

(Pages 2-4 are not shown as no specific programming is required.)

5.7 CONFIGURING THE VOICEBRIDGE

Note: *The maximum loop distance between the Lucent switch and the VoiceBridge is 2500 feet. Local power cannot be used to extend this distance.*

The VoiceBridge Series II equipment provides a control path between the Definity G3 and the Octel 50. It emulates a 7434 digital set on the Definity G3 and transmits the call information to a serial port on the Octel 50 using industry standard Centrex SMDI protocol.

The VoiceBridge Series II equipment includes a built-in 19-key keypad and a two-line 40 character LCD display that are used for programming the device. Chapter 3 of the VoiceBridge documentation, which you will receive with the unit, provides systematically configuration instructions, as well as a User Interface Tutorial and unit testing instructions. The instructions are easy to follow and a technician should be able to install the device in a few minutes using the VoiceBridge documentation.

Important Note: *The VoiceBridge II for the Lucent switches can operate in either bridged mode or transfer mode. Changing the mode requires a proprietary password. The VoiceBridge II is shipped in the transfer mode unless we know it is for installation with a G3 with vectoring software, in which case it will be preset in bridged mode and marked as such with a label. Contact Technical Support for help in changing the mode on the VoiceBridge II, if required.*

Before configuring the VoiceBridge, you must determine the following:

- Number of Voice Mail Ports:

This field defaults to 24, the maximum number of ports supported by the unit. Specify the number of Octel 50 ports on your system.

- Message Desk Number:

This number must match the number assigned in Octel 50. The default value of 001 is usually the number of choice. The range is 001-063.

- Directory Numbers: Set to length of 4 or too match the G3 numbering plan.

- Unidentified Reason: Disable

- CPID Extension Length:

- CPID Pad String:

VoiceBridge gets the actual extension from the switch and converts it to the SMDI protocol that uses seven digits. Therefore, you must pick a seven-digit string that will pad the string with 0s. For example, if your extension length is set to 3 and the pad string is set to 0000XXX, the VoiceBridge will convert an extension of 270, to SMDI caller ID information 0000270.

- MWI Extension Length

- MWI Pad String

SMDI protocol uses seven digits. Therefore, we are padding the string with 0s. As in the previous example so that the VoiceBridge will know what digits are not required by the Lucent switch and ignore them.

- MWI Feature

If message waiting indicators are being used, set this field to Enable; if message waiting indicators are not used, Disable.

- MWI Interleave Factor

Under normal conditions the VoiceBridge will process calls before it will process MWI. On busy systems, this can cause MWI packets to back up causing a delay in sending message waiting indication. If you insert an interleave factor you can tell the VoiceBridge to process a MWI after X number of calls. The default setting is 5. If 0 appears in this field it is disabled.

- Message Waiting On

This field accepts up to eight characters for the Leave Word Call enable feature code. The code is the sequence of keys pressed to set the message-waiting indicator. Default is *4.

- Message Waiting Off

As with Message Waiting On, this field will accept up to eight characters used to deactivate message waiting indicator. Default is #4.

- Call Sequence

Indicates order in which calls are sent to Octel 50. Set to Data/Call.

From the Setup menu press 4 for advanced options. Arrow down to Answer delays field.

- Answer Delay: 2500 ms

Press the FUNC key. This will return you to the Setup Menu. Press the 2 key to edit the port configuration, as follows:

- Extension/ LTN Plan

Enter analog extension / LTNs (Logical Terminal Numbers) assigned to the Octel 50 system.

NOTE: For a large number of Octel ports to enter, refer to the AUTOFILL command in the VoiceBridge documentation to make the process quicker.

Press the FUNC key. This will return you to the Setup Menu. Press the 3 key to edit the serial ports, select port A and get serial port data as follows:

- SMDI Baud Rate

Default baud rate is 1200. Range is 1200 through 9600.

Press the FUNC key twice. this should bring you to the Main Menu. The system will ask the following questions. Answer as indicated.

- SAVE EDITS? **I** - Yes
- START SYSTEM? **I** - Yes

Within a few seconds, integration is active, utilizing the new configuration. You will be placed in the View Mode on VoiceBridge.

The VoiceBridge Manual (Document Number - VB201-0202) contains much more information on the functionality of the VoiceBridge. Refer to it to set the date and time on the unit, to set security levels, and to learn more about the functionality of VoiceBridge.

5.8 SMDI INFORMATION FROM VOICEBRIDGE

SMDI Packet:

Two party call, identification for both parties.

MD0010001A0001234 0005678

MD0010001B0001234 0005678

MD0010001F0001234 0005678

Two party call, calling party information unavailable.

MD0010001A0001234

Direct call to the VoiceBridge.

MD0010001D 0001234

Invalid MWI packet response from VoiceBridge:

MD0010001D INV

Key:

001- Message desk number

0001- Octel 100 Port number

0001234- Called party (forwarded from)

0005678- Calling party

D-Direct, A-Forward, send all, B-Busy, N-No Answer

MWI Packet: (to VoiceBridge)

OP: MWI 0001234!

**SMDI information from
VoiceBridge**

Octel 50 programming

RMV: MWI 0001234!

6.0 CONFIGURING THE OCTEL 50

During the install process, run the Integrator program and choose the Lucent Definity G3 w/VoiceBridge switch. The Integrator will place appropriate feature codes into the Octel 50 Setup. The following codes should be inserted by the integrator. Four digit extensions are assumed.

Outside Line Access Code	9,
Off Hook Delay (OFFHDLY)	50
Hook Flash Interval (FLINTVL)	50
DTMF Tone Length (TONELEN)	8

Transfer, Paging and Screening Parameters

Custom Transfer Code	&,XDR
Transfer Release Code when Busy	&,&
Transfer Release Code when No Answer	&,&
Call Screening Release Code when Busy	&,&
Call Screening Release Code when No Answer	&,&
Call Screening Release Code when Reject	&,&
Call Screening Release Code When Transfer	&,&

Message Waiting Parameters

Permit Message Waiting Lights	Enabled
Use MW Data from Serial Port [COMMMWL]	Enabled

Inband Parameters

Total Number of DID Digits	10
Seconds to Wait for First Digit	1
Location of Inband Signaling Code	1
Millisecs to Wait for Next Digit	100
Code for Go to Voice Mail	F
Start at End of String for Go to Voice Mail	Enabled
Location of Mailbox Number for Go to Voice Mail	4
Code for Immediate Subscriber Login to Mailbox	C
Start at End of String for Immediate Login	Enabled
Location of Mailbox Number for Immediate Login	4
Code for Busy Extension	B
Start at End of String for Busy Extension	Enabled
Location of Mailbox Number for Busy Extension	4
Code for No Answer Extension	N
Start at End of String for No Answer Extension	Enabled
Location of Mailbox for No Answer Extension	4
Start at End of String for Default Code	Enabled
Location of Mailbox Number for Default Code	4

In addition to running the Integrator, ensure the following parameters are set to their corresponding values in System Setup:

Hangup Detection Parameters

Dial Tone Detection Time (DTONDET)

600

Note: Verify these dialing sequences for your PBX.

6.1 INTEGRATION CONFIGURATION PROGRAM

When either the SWITCH or ICONFIG program is run, ensure that the Serial Communication Protocol matches the VoiceBridge. The default settings on the VoiceBridge are 1200 baud, even parity, seven data bits, and one stop bit (1200, 7,E, 1).

Set Timeout to 2. Port ID's should be set to the port number, i.e. port number 1, port ID = 0001, etc.

The following is an example of the SMDI.CFG file to confirm the correct values were added during the SWITCH or ICONFIG program.

COMPORT	1
BAUD	1200
PARITY	EVEN
DATABITS	7
STOPBITS	1
EVERY	5
TIMEOUT	2
DESKID	001
PORTID0	0001
PORTID1	0002
PORTID2	0003
PORTID3	0004

7.0 CONSIDERATIONS / ALTERNATIVES

The following items should be considered:

- ☐ Single VoiceBridge Only
- ☐ Lucent Definity G3
- ☐ Unsupervised Transfers
- ☐ Supervised Transfers
- ☐ Privacy feature "Keep Held in SBA"
- ☐ Leave Word Calling
- ☐ Hardware Compatibility
- ☐ Octel 50 compatibility with the DCS Option.
- ☐ Octel 50 ports should be distributed.
- ☐ VoiceMail Applications software for G3s & G3vs
- ☐ Class of Service Attribute Client Room Causes Incorrect Call Records.
- ☐ Configuring subscriber stations for G3V4
- ☐ Upgrading G3 to Version 5

Important notes concerning this
integration

7.1 SINGLE VOICEBRIDGE ONLY

Octel 50 does not support multiple VoiceBridge installation.

7.2 LUCENT DEFINITY G3

Lucent Definity G3 is associated with the following, upgradable models:

- Definity G3vs which supports up to 200 lines
- Definity G3s which supports up to 200 lines
- Definity G3i which supports up to 1,600 lines
- Definity G3r which supports up to 25,000 lines

They all integrate in the same way.

Extensions on the Lucent G3 can be a maximum of five digits.

The Lucent G3r V2 increases Leave Word Calling maximum message storage, from 2000 to 6000 messages.

7.3 UNSUPERVISED TRANSFERS

The Definity G3 does not support unsupervised transfers to busy stations without busy-call coverage programming. Calls will be lost. Ensure that all applicable extensions have busy-call coverage programmed, including all extensions configured as personal operators.

7.4 SUPERVISED TRANSFERS

When the Octel 50 is programmed to perform a supervised transfer, subscriber telephones should Ring-No-Answer forward to Voicemail only. Set the PBX ring timer to allow for more rings than, in the Mailbox Class of Service Max rings. Internal calls will encounter a busy when the line is busy and will forward into the personal greeting on a Ring-No-Answer.

7.5 PRIVACY FEATURE “KEEP HELD IN SBA”

Integration with the G3V2 PBX has a feature called “Keep Held in SBA” that ensures privacy for a call going to a covering point, in this case, the VoiceMail. Without the feature someone can pick up the extension at the same time the VoiceBridge answers and listen to the message that is being recorded into VoiceMail.

You may need to modify the configuration of the G3 to correctly forward calls to the Octel 50. Specifically, the G3 feature parameter for simulated bridged appearance, Keep Held SBA at Coverage Point, defaults to YES and allows the transfer of a call from one digital set to another without going to coverage. This may cause calls to the message server to be bridged. If this occurs set this parameter to NO. It has been reported that this feature is not available in the G3V3, G3V4, and G3V5 software releases.

Vectoring ensures privacy since the vector step removes the bridge from the called parties extension. Vectoring is a value-added feature. Consult the System Administrator about the purchase of this feature from the PBX vendor.

**Important notes concerning this
integration**

7.6 LEAVE WORD CALLING

Leave Word Calling (LWC) provides message notification. If the LWC feature is being used by the Octel 50 and other sources (that is, message centers and station users), then users without display terminals must contact their designated message retriever to determine the source of their message-waiting light.

The message return feature cannot be used to retrieve messages when vectoring is in use. For ease of use, create a speed call number to be used to retrieve messages. Assign this speed call number to a button on the feature telephone.

We recommend that only VoiceBridge be allowed LWC activation. This will prevent single line telephones from having their message waiting lamps lit when there are no new messages.

Note: *CAUTION: Users with display terminals must not delete any Octel 50 messages on their display. This allows the Octel 50 to turn off the message-waiting light when voice messages are reviewed.*

7.7 HARDWARE COMPATIBILITY

Check the availability of TN746B or TN742 analog ports in the Lucent Generic 3. These are both -48v circuit cards, required by the Octel 50 port. The TN746 analog card is a -24v circuit card. This card is NOT supported by Octel.

If existing TN742 analog circuits are to be used, check the revision level. Voltage levels might vary on lower revisions of the eight-port analog circuit pack, causing garbled messages, and prompts in limited number of cases. Installing TN742 Revision 17 or higher port cards corrects the voltage fluctuation. If Octel 50s are integrated on lower revision analog cards, customers must be aware of this potential problem; if it is experienced at their site, they are responsible for upgrading the circuit packs.

The TN754B is preferred, and TN754 card Version 11 or higher provides the digital port used by the VoiceBridge. Lower versions should be replaced due to inconsistencies in operation that caused display corruption.

The new 16 port line card TN2181 does not support this integration. It will support 8400-type digital station equipment, not the 7434D-type telephone that is emulated by the VoiceBridge.

Lucent G3 PBXs at Version 3 using the new TN2182 Tone/Clock circuit packs integrated with VBIIs could experience problems with message waiting delays. Lucent has acknowledged that the TN2182 pack does not always send confirmation tone back to the VBII when it performs message waiting or Leave Word Calling commands. Without confirmation tone being detected by the VBII it retries MWI and slows down the process for all message waiting ON and OFF activity. The G3 *does* change the lamp states on the telephones correctly on the first attempt by the VBII.

Important notes concerning this
integration

SOLUTION:

Lucent has implemented a work around. It forces the G3 PBX to **ALWAYS** send the proper frequency and cadence for confirmation tone back to the VBII when it performs MWI commands.

The following shows what the Lucent service engineers must enter into the SYSTEM-PARAMETERS COUNTRY-OPTIONS table on page 2 of 7 in the G3, in order for the work around to function properly:

SYSTEM PARAMETERS COUNTRY-OPTIONS

Tone Name	Cadence Step	Tone (Frequency/Level)	
rep-confirmation	1:	350+440/-13.75	Duration(msec): 100
	2:	silence	Duration(msec): 100
	3:	350+440/-13.75	Duration(msec): 100
	4:	silence	Duration(msec): 100
	5:	350+440/-13.75	Duration(msec): 100
	6:		
	7:		
	8:		
	9:		
	10:		
	11:		
	12:		
	13:		
	14:		
	15:		

This work around is meant to clear up slow MWI complaints. Lucent has not committed to a long-term fix for this issue. This is the only solution that they can provide.

7.8 OCTEL 50 COMPATIBILITY WITH THE DCS OPTION:

DCS is Lucent's PBX networking package. In a DCS environment, subscribers on the remote nodes may not have the same integration feature functionality as those on the hub node. In general, all integration features are supported. Call Coverage support on the remote nodes is dependent on the type of switch and software as follows:

- If they are on a G3 V2 or higher system, the Remote Call Coverage feature is standard and allows coverage to personal greeting for Busy and RNA conditions.
- If they are on a System 85 or G2, they must call cover to a VDN that routes the call to the hub system. This allows coverage to personal greeting on Busy and RNA conditions. VDN software is an optional package on the G2. Without VDN s/w, they will be limited to station call forwarding All Calls only.

**Important notes concerning this
integration**

- If they are on a System 75 or G1 system, they are limited to station call forwarding All Calls only.
- In all cases, MWI is supported to the remote hubs over a DCS network.

Note: G3i V1 7.0 with DCS is NOT SUPPORTED! The display field is shifted 2 characters on the G3i side. V1 also does not support call coverage to a VDN.

7.9 OCTEL 50 PORTS SHOULD BE DISTRIBUTED

We recommend that Octel 50 ports are distributed among different port cards and shelves in the PBX. This reduces the possibility that a single card or shelf failure will affect a large number of Octel 50 ports. Depending on PBX architecture, performance could also be an issue on some PBX's during high traffic if a large number of calls are being processed on the same card or shelf. The TN746B is an interface between analog, voice terminal lines, and the TDM/packet bus. The TN746B consists of a ringing application circuit and port input/output circuits. A TN746B supports 16 ports. The TN746B allows ringing on four ports of each half of the circuit pack for a maximum of eight simultaneous ports ringing. A user attempting to ring one half of the circuit pack when all four ports are busy receives a busy tone from the PBX.

The TN742 and TN769 allow ringing on four simultaneous ports. TN2183, TN791, and TN2215 allow ringing on four ports of each half of the circuit pack for a maximum of eight simultaneous ports ringing. TN793 and TN2793 allow ringing on four ports of one-third of the circuit pack for a maximum of twelve simultaneous ports ringing.

Therefore, when assigning analog ports to be used as appearances for integration, always distribute the VoiceMail ports across multiple TN742, TN746B, TN769, TN791, TN793, TN2183, TN2215, and TN2793 cards.

7.10 VOICEMAIL APPLICATIONS SOFTWARE FOR G3S & G3VS

Lucent G3s and G3vs PBX's require that the Voicemail Applications software feature be enabled in order to support message waiting indication. Normally, these two "low-end" switches can be ordered with two different software packages: Premiere Business Package, and Advanced Business Package. The Premiere Business Package includes Voicemail Applications software; the Advanced Business package Voicemail Applications software as a value added feature. The feature is needed to support Leave Word Calling, which is necessary for message waiting activation/deactivation.

**Important notes concerning this
integration**

7.11 CLASS OF SERVICE ATTRIBUTE CLIENT ROOM CAUSES INCORRECT CALL RECORDS.

The Definity G3 has a Station Class of Service attribute called Client Room. It is to provide hospitality services such as Check-in, Checkout, Room change/swap, and Maid status. If this class of service attribute is on for a station that also has an Octel 50 mailbox, and a caller is forwarded on an RNA/busy, the Octel 50 receives an incorrect call record. The caller hears the main Greeting instead of the called party's personal greeting. To correct this make sure that the attribute "Client Room" is not in the subscriber PBX station class of service.

7.12 CONFIGURING SUBSCRIBER STATIONS FOR G3V4

G3 Version 4 software introduced a new terminal type used for special applications, the 7405ND. If this terminal type is supported on your PBX, (it is part of Special Applications package SA7608), configure the digital channels supporting the VoiceBridge port as 7405ND, including extension numbers, as part of the name field is not required.

7.13 UPGRADING G3 TO VERSION 5

After upgrading the G3 to Version 5 software the site may experience intermittent loss of integration of forwarded calls to extensions that are ALL-CALL forwarded to the Octel system, or that simply forward on a busy without ringing the station.

This problem is due to a slow display "refresh" to digital stations. This problem affects all integration's on G3V5 with VoiceBridge.

This problem is rectified by having Lucent load patch 1627 on their V5 software PBX.

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