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MD110 Connection to Mobility Server

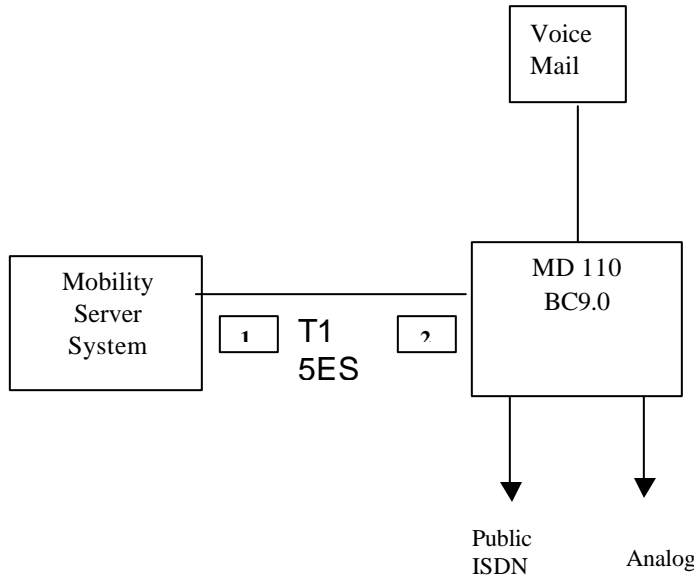
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Graph of Mobility Server connection to MD110 PBX



1 T1 5ESS PWT Mobility Server to MD	
Link ID	PBX_1_T1
Board & Port numb	1, 2
Capacity	T1
Protocol layer 3	ISDN 5ESS netw side
Protocol Version	No Version
Network Termination	Master
Send restart layer 2	No
Frame structure	Extended Super Frame
Alarm Indication	Option 0
Line Coding	B8ZS

2 T1 5ESS MD to PWT Mobility Server	
ROU	xx
SEL	712000000000
SERV	3110000010
SIG	211100100030
BCAP	001100
TYPE	SL63
VARI	00000003
VARO	00000020
VARC	00000012

Special Notes:

1) Patch level is BC9 with patch 74792 loaded. This allows MD to send progress message for voice cut-through when connected to PSTN network nodes that do not send CONNECT message (i.e. 800 number with voice prompt menus).

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General information

Before attempting to connect the PWT Mobility Server System (PMSS) to the premise PBX an overall understanding of the interworking between the two systems is required. One way to look at the PMSS is as another node in the PBX network. Numbers will be routed to and received from this node. Here are some Frequently Asked Questions when connecting the PMMS to a PBX.

1) How do I route numbers to the PMMS?

The PMMS should be integrated to match your existing numbering plan. For example, if your numbering plan consists of 5 digit extensions, then you should send down the 5 digits to the PMMS for those numbers that terminate in the PMMS.

An easy and efficient way to accommodate this is through the use of Abbreviated Dialing in the PBX. In the setup for the MD110 described in the following pages in the Number Analysis Configuration section, the PBX administrator has designated the destination code of **06828** for the trunk(s) that will go to the PMMS. Then through the use of the Abbreviated Dialing Facility in the PBX, each PMMS subscriber is defined as an Abbreviated number. When that 5 digit number is encountered in number analysis, the PBX then appends the destination code of the trunk to the beginning of the number so that it looks like 06828xxxxx, where xxxxx is the 5 digit number going to the PMMS. The numbers are then routed to the destination of 06828 which is the trunk to PMMS. There the destination code of 06828 is stripped off of the number string and only the xxxxx portion of the digit string is sent down through the trunk to the PMMS.

2) What do I need to do with calls routed from the PMMS?

Calls coming from the PMMS to the PBX should be routed according to the local dialing plan. If a number comes in from the PMMS starting with "9" and "9" is the External line designator digit then that call should be routed externally in the same manner as an internal PBX call would be.

The numbering plan in the PMMS should be set up to match the numbering plan of the existing facility. If you are currently using 4-digit dialing for extensions, then the PBX should expect that it will receive 4 digit numbers from the PMMS and should then route them according to the local dialing plan.

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Mobility Server PBX Link Setup

Create PRI link to PBX (Physical Link)

➤ Hardware Resources - Board - Create Advanced:

Input Field Name	Data fill	Default value (Y)es or (N)o
Link Id	1_to_PBX_Link	N
Board and port number	1, 2	N
Capacity	T1	N
Send restart at layer 2 establishment:	NO	Y
Protocol Layer 3	ISDN 5ESS Network Side or ISDN-Q*	N
Protocol Version	no version	Y
Network Termination	Master	Y
T309	90000	Y
T316	120000	Y
N316	2	Y
Protocol Layer 2	LAPD	Y
Ack Pending Time	0	Y
Window Size	7	Y
T200	1000	Y
T203	10000	Y
N200	3	Y
Frame Structure	ESF (Extended SuperFrame)	N
Threshold CRC4	915	Y
Cont CRC Time	50	Y
Mfa Time	150	Y
Alarm Indication	Option 0	N
Line Coding	B8ZS	N

[APPLY]

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Create Routes for Link just created

➤ Route Handling - Route - Create:

Type of Route Connection	T1_TRUNK
Route ID	20
Name	PBX_ROUTE1
Customer	No specific Customer
Trunk Call Discrimination	15
Traffic Matrix Coordination	15
Call Collision Priority	A-side (high)
Channel Selection Order	Bottom
Channel Negotiation	Yes

[APPLY]

Create Primary Routing Analysis

➤ Route Handling - Primary Routing - Create:

Net type	PNP
Logical route	1
Transfer capability	Don't Care
Customer	Common
Selected route(s)	20
Alternative Logical Route	none

[APPLY]

Action: Create Trunks for Links just created

➤ Hardware Resources - Trunk, Create:

Trunk Id	T1_TRUNK
Route	20
Physical Link	T1_to_PBX_Link
First B-channel	1
Last B-channel	23

[APPLY]

Result: Primary Analysis set.

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Mobility Server connection to MD110 (5ESS T1)

Physical Link Configuration

<RODAP:ROU=13;

ROUTE DATA

ROU	TYPE	VARC	VARI	VARO	FILTER
13	SL63	H'00000012	H'00000003	H'00000020	NO

END

VARC = H'12 which means: No voice compression

Send ring tone to cooperating exchange = NO

Overlap receiving = NO

External line without signaling = NO

Reanswer service allowed = NO

Full ISDN functionality = YES

Limitation of Octets in UUI Element = NO

Send Busy/Congestion tone to cooperating exchange = NO

Plus a patch specific parameter value???? Not in document

VARI = H'3 which means AT&T 5ESS

VARO = H'20 which means: Restart Whole interface one channel at a time = NO

Fixed connection between channel and trunk line = NO

Priority at call collision = YES (outgoing call has priority)

Layer 2 (NT2) acting as user side

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Permitted to send user info message in active state = NO

Permitted to send user info before active state = NO

Permitted to send User to User information Element = NO

Route Configuration

<ROCAP:ROU=13;

ROUTE CATEGORY DATA

ROU SEL	TRM SERV	NODG	DIST	DISL	TRAF	SIG	BCAP
13	712000000000	7	3110000000	0	30 128	00141414	211100100030 001100

Route number 13

Route selection category 7 = Direct in Dialing, 1 = open to incoming traffic, 2 = sequential selection in LIM

Transmission category – Value in a transmission matrix

Route service category: 3 = Call waiting permitted, 1 = automatic callback permitted, 1 = Type of route (Tie Line)

DIST = disturbance level of 128 (faulty seizures)

TRAF – Abbreviated dialing and TCD values

SIG - 2 = A party hears dial tone from cooperating exchange

- 1 = clearing signal from the line is received for incoming calls
- 1 = clearing signal from the line is received for outgoing calls
- 1 = answer signal is received for outgoing traffic (B-answer)
- 1 = ring tone generated in own exchange
- 3 = ISDN

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Number Analysis configuration (Abbreviated dial, etc.)

<RODDP:DEST=06828;

EXTERNAL DESTINATION ROUTE DATA

DEST	DRN	ROU	CHO	CUST	ADC	TRC	SRT	NUMACK	PRE
06828	13		06060000000000	250	0	6	0		

ADC:

0 = Immediate Seizure

6 = Local Private (A-number)

0 = Calling number (unknown public)

0 = Local Private (B-number)

0 = UUI not allowed

0 = Fiber route or TNS

0 = release when one party goes on-hook

0 = MFC signaling – send from first digit

0 = send terminating seizure signal to next exchange

0 = no threshold level for offhook queueing

0 = ERWT not sent (expensive route warning tone)

0 = Least cost routing available to all calls

0 = TCM not sent (Traveling Mark Class)

2 = Max number of transit exchanges calls can be routed

5 = “ “

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0 = No individual number translation information available

END

<ADCDP:ABB=21554;

COMMON ABBREVIATED DIALING FACILITY DATA

ABB	TRA	CLASS
21554	0682821554	0123

This command indicates that then the PBX sees the number 21554 dialed, it will translate that to 0682821554. 06828 is the destination for the trunk (span) going to the Mobility Server system. 06828 is stripped off and 21554 is sent down to Mobility Server as the incoming (called party) number.

Voicemail options

Option 1: Short message, limited to Name greeting

```
COS 1      (MAILBOX COS)
        6      Call EXTENSION first BEFORE playing GREETING.
        7      This user may send a PRIVATE message.
        9      LAMP or DISPLAY PHONE message waiting.
       11      NO system PROMPT after GREETING, go straight to recording.
       12      This user may REPLY to ADDITIONAL addresses.
       15      Transfer to a RINGING EXTENSION.
       24      NEVER play NOVICE prompts.
```

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- 28 May use OFFSITE or PAGER message waiting notification.
- 48 May use AUTOMATIC MESSAGE COPY.
- 54 May specify a PERSONAL ASSISTANCE mailbox.
- 61 This mailbox may send FUTURE DELIVERY messages.
- 64 This user may ERASE a message during ADDRESSING OPTIONS.
- 76 Use NEW and SAVED MESSAGE queues.
- 77 ALLOW user to record PERSONAL NAME.
- 78 FORCE recording of PERSONAL NAME.
- 93 Allow USER to send an URGENT MESSAGE.
- 94 Allow CALLER to leave an URGENT MESSAGE.

1	PDL INDEX VALUE	2
2	CODE RATE	NONE
3	PURGE SAVED msgs older than (days)	15
4	PURGE NEW msgs older than (days)	21
5	SECURITY CODE change interval (days)	NONE
6	CALL FORWARD PROMPT LANGUAGES:	NONE

PERIOD DAYS START STOP INFO TABLE#

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1 SMTWTFS HOL 00:00 23:59 1
DEFAULT 1

INFORMATION TABLE 1

1	INTERCEPT MAILBOX	27000
3	CALL BLOCKING NUMBER	NONE
4	MAX DIGIT FOR MENU	NONE
5	PREFIX DIGS FOR MENU	NONE
6	PRE EXTENSION DIGITS	NONE
7	RINGS BEFORE NO ANS	3
8	MSG WAITING RINGS	3
9	TIMES TO RETRY ON BUSY	NONE
10	USE ALT TRANSFER CODES	NO
11	DIVERT MSGS TO MAILBOX	NONE
12	MSG WAITING NOTIF	YES
13	AUTO GREETING ACTIV	NO
14	OFFSITE ATTEMPT TIMES	15
15	OFFSITE SPEAK TIMES	3
16	OFFSITE SPEAK DELAY	5
17	OFFSITE PREFIX DIGITS	NONE
18	NEXT MAILBOX	NONE

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19 OFFSITE DIAL SYSP DIGS NO
20 OFFSITE END WITH POUND NO
21 FIFO QUEUE MSG MAILBOX NONE
22 MAXIMUM MSG LENGTH 5
23 MAX NUMBER OF MSGS 32
24 PERSONAL ASSISTANCE YES
25 QUICK GREETING ACTIV NO
26 AUTOTRANSFER TO ASSIST YES
27 MSG WITH AUTO TRANSFER YES
28 ANNOUNCE CALLS TO INT NO
29 LANGUAGE ENGL US--V
30 GROUP FAX NUMBER NONE
31 OFFSITE ONLY IF URGENT NO
32 MAX FAX DELIV ATTEMPTS SYSP 209

Option 2: Change to COS 30, DUN = VM box #

Note: this option has the limitation that calls cannot be transferred from an 800 number or any other incoming call that gets voice prompts and asks the caller for the extension they wish to dial. These calls are allowed to leave voice mail messages only.

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COS 30 (MAILBOX COS)

7 This user may send a PRIVATE message.

9 LAMP or DISPLAY PHONE message waiting.

11 NO system PROMPT after GREETING, go straight to recording.

12 This user may REPLY to ADDITIONAL addresses.

14 When GREETING is ON, MESSAGE WAITING will still CALL.

15 Transfer to a RINGING EXTENSION.

24 NEVER play NOVICE prompts.

28 May use OFFSITE or PAGER message waiting notification.

54 May specify a PERSONAL ASSISTANCE mailbox.

61 This mailbox may send FUTURE DELIVERY messages.

64 This user may ERASE a message during ADDRESSING OPTIONS.

76 Use NEW and SAVED MESSAGE queues.

77 ALLOW user to record PERSONAL NAME.

78 FORCE recording of PERSONAL NAME.

93 Allow USER to send an URGENT MESSAGE.

94 Allow CALLER to leave an URGENT MESSAGE.

1	PDL INDEX VALUE	NONE
2	CODE RATE	NONE
3	PURGE SAVED msgs older than (days)	0
4	PURGE NEW msgs older than (days)	0

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5 SECURITY CODE change interval (days) NONE
6 CALL FORWARD PROMPT LANGUAGES: NONE

DEFAULT 1

INFORMATION TABLE 1

1 INTERCEPT MAILBOX 27000
3 CALL BLOCKING NUMBER NONE
4 MAX DIGIT FOR MENU NONE
5 PREFIX DIGS FOR MENU NONE
6 PRE EXTENSION DIGITS NONE
7 RINGS BEFORE NO ANS 3
8 MSG WAITING RINGS 3
9 TIMES TO RETRY ON BUSY NONE
10 USE ALT TRANSFER CODES NO
11 DIVERT MSGS TO MAILBOX NONE
12 MSG WAITING NOTIF YES
13 AUTO GREETING ACTIV NO
14 OFFSITE ATTEMPT TIMES 15
15 OFFSITE SPEAK TIMES 3
16 OFFSITE SPEAK DELAY 5

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17	OFFSITE PREFIX DIGITS	NONE
18	NEXT MAILBOX	NONE
19	OFFSITE DIAL SYSP DIGS	NO
20	OFFSITE END WITH POUND	NO
21	FIFO QUEUE MSG MAILBOX	NONE
22	MAXIMUM MSG LENGTH	5
23	MAX NUMBER OF MSGS	32
24	PERSONAL ASSISTANCE	YES
25	QUICK GREETING ACTIV	NO
26	AUTOTRANSFER TO ASSIST	YES
27	MSG WITH AUTO TRANSFER	YES
28	ANNOUNCE CALLS TO INT	NO
29	LANGUAGE	ENGL US--V
30	GROUP FAX NUMBER	NONE
31	OFFSITE ONLY IF URGENT	NO
32	MAX FAX DELIV ATTEMPTS SYSP	209