

Cisco 2611XM Gateway-PBX Interoperability: Ericsson MD110 PBX using NM-HDV2-E1 PRI NET5 with H.323

Introduction

- This document contains the test results of PBX interoperability testing from a PBX via digital trunk (E1 PRI Net5) interfaces under test to a Cisco voice router via NM-HDV2-T1/E1 modules installed in Cisco voice gateways.
- This test plan is directed toward testing interoperability of the NM-HDV2-T1/E1 Voice Interface Module with a Siemens Hicom 330E and an Ericsson MD110 and as the Primary and Secondary PBXs.
- The test plan is for Connectivity/Interoperability testing of the selected PBXs connected via the NM-HDV2-T1/E1 interfaces to a C3745, and C2611XM. The PBXs / Routers under test are connected to an Ethernet switch so that VoIP session targets could be established.

Note: This application note allows you to configure Router B (Cisco 2611) and PBX B (Ericsson MD110). To configure Router A (Cisco 3745) and PBX A (Siemens Hicom 330E), see the following application note: Cisco 3745 Gateway-PBX Interoperability: Siemens 300E PBX using NM-HDV2-E1 PRI NET5 with H.323 (document number 408136a.pdf).

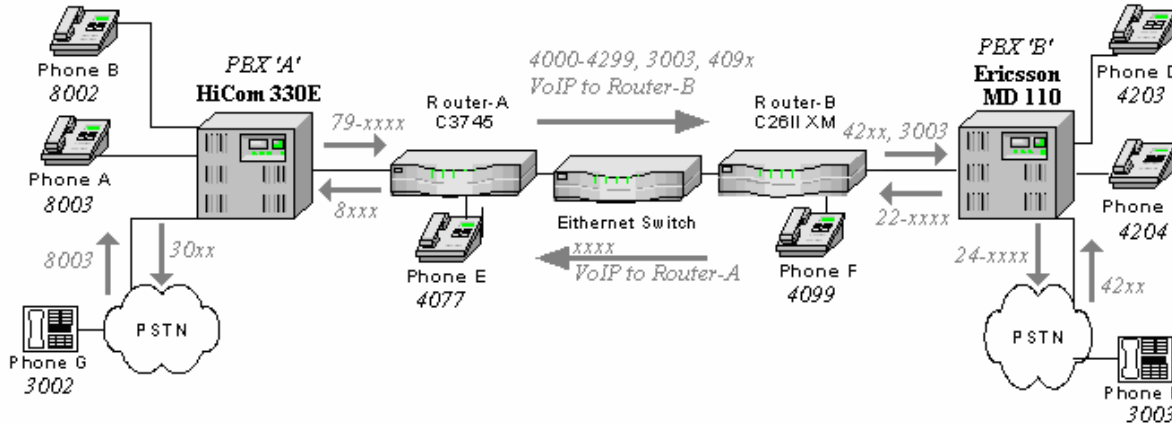
Network Topology

The diagram in Figure 1 is representative of the configuration used for testing. The diagram shows the test set-up for 2 Cisco voice gateways connected through an Ethernet switch and controlled via H.323.

Figure 1. Network Topology



H323 Test Configuration with Route Patterns



Limitations

- ☐ It is important to note that the correct position of J7 on th NM-HDV2-T1/E1 is critical to establish Layer 1 connectivity. Looking into the NM-HDV2-T1/E1 in the direction of insertion into the router, the jumper should be placed to connect the left and middle pins.
- ☐ The Hicom PBX does not support sending CALLING, CALLED, or CONNECTED name for this configuration (E1 PRI Net5).
- ☐ The Ericsson PBX does not support sending CALLED number in the ALERTING message for this configuration (E1 PRI Net5).
- ☐ The Ericsson PBX does not support sending CALLING, CALLED, or CONNECTED name for this configuration (E1 PRI Net5).
- ☐ The Hicom PBX does not support sending CALLED number in the ALERTING message for this configuration (E1 PRI Net5).
- ☐ The IOS gateway does not support sending CALLED number in the CALL PROCEEDING or PROGRESS messages on E1 PRI Net5.
- ☐ The IOS gateway does not support sending CALLING, CALLED, or CONNECTED name on E1 PRI Net5 Net5 (on PBXs and Routers set up in a symmetrical test scenario).
- ☐ The IOS gateway does not support sending CONNECTED number in the CONNECT messages on E1 PRI Net5 Net5 (on PBXs and Routers set up in a symmetrical test scenario).
- ☐ In the test scenario in which Phone 'E' called Phone 'C', the Ericsson PBX did send CONNECTED number in the CONNECT message, but the number displayed on the analog phone 'E' is just the dialed number, not the CONNECTED number. This was verified by placing a call from phone 'E' to phone 'D', where it was auto-forwarded to phone 'C'. The number for 'D' (the dialed number) was the number displayed on the analog phone 'E'.
- ☐ The CALLING number was displayed only if the caller-id feature was enabled for the destination PSTN analog port.
- ☐ The PSTN trunks did not support sending CALLING, CALLED, or CONNECTED name.



- ☐ The destination PSTN trunks did not support sending CALLED number in the CALL PROCEEDING or PROGRESS messages.
- ☐ The destination PSTN trunks did not support sending CONNECTED number in the CONNECT messages.

System Components

Hardware Requirements

- ☐ Cisco 2611XM
- ☐ Siemens Hicom 330E
- ☐ Ericsson MD110
- ☐ NM-HDV2-2T1/E1 card

Software Requirements

- ☐ PBX software release
- ☐ Siemens Hicom R5.1-e2.404-0-k-uk-c6s2
- ☐ Ericsson MD110: software version CXP1010101/2/BC12SP5/R2A
- ☐ Cisco IOS Software Release 12.3(7)T (release software fc1) with Cisco C2600-ADVENTERPRISEK9-M

Features

The following features are supported:

- ☐ Calling number
- ☐ Connected number

Configuration

Configuration Sequence and Tasks

- ☐ Configuring Router B
- ☐ Configuring PBX B

Configuration Menus and Commands

Configuring the Cisco 2611XM (Router B)

show version

2611XM-B# **show version**

Cisco IOS Software, C2600 Software (C2600-ADVENTERPRISEK9-M), Version 12.3(7)T,



RELEASE SOFTWARE (fc1)

Technical Support: <http://www.cisco.com/techsupport>

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Compiled Sat 21-Feb-04 14:41 by eaarmas

ROM: System Bootstrap, Version 12.2(7r) [cmong 7r], RELEASE SOFTWARE (fc1)

2611XM-B uptime is 4 days, 32 minutes

System returned to ROM by power-on

System image file is "flash:c2600-adventerprisek9-mz.123-7.T.bin"

This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at:

<http://www.cisco.com/wwl/export/crypto/tool/stqrg.html>

If you require further assistance please contact us by sending email to export@cisco.com.

Cisco 2611XM (MPC860P) processor (revision 0x100) with 122880K/8192K bytes of memory.

Processor board ID JAD061509Q5 (642679138)

M860 processor: part number 5, mask 2

2 FastEthernet interfaces



31 Serial interfaces

1 Channelized E1/PRI port

4 Voice FXS interfaces

32K bytes of NVRAM.

49152K bytes of processor board System flash (Read/Write)

Configuration register is 0x2002



show running configuration

2611XM-B# **show running config**

Building configuration...

Current configuration : 1859 bytes

```
!  
version 12.3  
service timestamps debug datetime msec  
service timestamps log datetime msec  
no service password-encryption  
!  
hostname 2611XM-B  
!  
boot-start-marker  
boot-end-marker  
!  
card type e1 1 1  
!  
no network-clock-participate slot 1  
no network-clock-participate wic 0  
ip subnet-zero  
!  
!  
!  
!  
ip cef  
ip audit po max-events 100  
no aaa new-model  
no ftp-server write-enable  
isdn switch-type primary-net5  
voice-card 1
```



```
!  
!  
!  
voice rtp send-recv  
!  
!  
!  
!  
voice class h323 1  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
!  
controller E1 1/0  
  pri-group timeslots 1-31  
  description connection from 2611XM to ERICSSON  
!  
no crypto isakmp enable  
!  
!  
!  
!  
interface FastEthernet0/0  
  ip address 172.20.43.155 255.255.255.0  
  duplex auto
```



```
speed auto
!
interface FastEthernet0/1
no ip address
shutdown
duplex auto
speed auto
!
interface Serial1/0:15
no ip address
no logging event link-status
isdn switch-type primary-net5
isdn overlap-receiving (for overlap cases only)
isdn incoming-voice voice
isdn send-alerting
isdn sending-complete
no cdp enable
!
ip classless
ip route 0.0.0.0 255.255.255.0 FastEthernet0/0
!
no ip http server
no ip http secure-server
!
!
!
!
!
control-plane
!
!
!
```



```
voice-port 1/0/0
  station-id name phone F
  station-id number 4099
  caller-id enable
!
voice-port 1/0/1
  station-id name phone FF
station-id number 4098
  caller-id enable
!
voice-port 1/0/2
!
voice-port 1/0/3
!
voice-port 1/0:15
!
!
!
!
!
dial-peer voice 1 voip
  destination-pattern ....
  session target ipv4:172.20.43.151
  ip qos dscp cs1 media
!
dial-peer voice 100 pots
  destination-pattern 4099
  port 1/0/0
!
dial-peer voice 101 pots
  destination-pattern 4098
  port 1/0/1
```



```
!  
dial-peer voice 1015 pots  
  destination-pattern 42..  
  direct-inward-dial  
  port 1/0:15  
  forward-digits all  
!  
dial-peer voice 1016 pots  
  destination-pattern 3003  
  direct-inward-dial  
  port 1/0:15  
  forward-digits all  
!  
!  
!  
line con 0  
line aux 0  
line vty 0 4  
  login  
!  
!  
!  
end
```



show isdn status

2611XM-B# show isdn status

Global ISDN Switchtype = primary-net5

ISDN Serial1/0:15 interface

dsl 0, interface ISDN Switchtype = primary-net5

Layer 1 Status:

ACTIVE

Layer 2 Status:

TEI = 0, Ces = 1, SAPI = 0, State = MULTIPLE_FRAME_ESTABLISHED

Layer 3 Status:

0 Active Layer 3 Call(s)

Active dsl 0 CCBs = 0

The Free Channel Mask: 0xFFFF7FFF

Number of L2 Discards = 0, L2 Session ID = 3

Total Allocated ISDN CCBs = 0

2611XM-B#

2611XM-B#

show voice port summary

2611XM-B# show voice port summary

PORT	CH	SIG-TYPE	ADMIN	OPER	IN STATUS	OUT STATUS	EC
1/0/0	--	fxs-ls	up	dorm	on-hook	idle	y
1/0/1	--	fxs-ls	up	dorm	on-hook	idle	y
1/0/2	--	fxs-ls	up	dorm	on-hook	idle	y
1/0/3	--	fxs-ls	up	dorm	on-hook	idle	y
1/0:15	01	isdn-voice	up	dorm	none	none	y
1/0:15	02	isdn-voice	up	dorm	none	none	y
1/0:15	03	isdn-voice	up	dorm	none	none	y



1/0:15	04	isdn-voice	up	dorm	none	none	y
1/0:15	05	isdn-voice	up	dorm	none	none	y
1/0:15	06	isdn-voice	up	dorm	none	none	y
1/0:15	07	isdn-voice	up	dorm	none	none	y
1/0:15	08	isdn-voice	up	dorm	none	none	y
1/0:15	09	isdn-voice	up	dorm	none	none	y
1/0:15	10	isdn-voice	up	dorm	none	none	y
1/0:15	11	isdn-voice	up	dorm	none	none	y
1/0:15	12	isdn-voice	up	dorm	none	none	y
1/0:15	13	isdn-voice	up	dorm	none	none	y
1/0:15	14	isdn-voice	up	dorm	none	none	y
1/0:15	15	isdn-voice	up	dorm	none	none	y
1/0:15	17	isdn-voice	up	dorm	none	none	y
1/0:15	18	isdn-voice	up	dorm	none	none	y
1/0:15	19	isdn-voice	up	dorm	none	none	y
1/0:15	20	isdn-voice	up	dorm	none	none	y
1/0:15	21	isdn-voice	up	dorm	none	none	y
1/0:15	22	isdn-voice	up	dorm	none	none	y
1/0:15	23	isdn-voice	up	dorm	none	none	y
1/0:15	24	isdn-voice	up	dorm	none	none	y
1/0:15	25	isdn-voice	up	dorm	none	none	y
1/0:15	26	isdn-voice	up	dorm	none	none	y
1/0:15	27	isdn-voice	up	dorm	none	none	y
1/0:15	28	isdn-voice	up	dorm	none	none	y
1/0:15	29	isdn-voice	up	dorm	none	none	y
1/0:15	30	isdn-voice	up	dorm	none	none	y
1/0:15	31	isdn-voice	up	dorm	none	none	y

2611XM-B#



show controller e1

2611XM-B# **show controllers e1**

E1 1/0 is up.

Applique type is Channelized E1 - balanced

Description: connection from 2611XM to ERICSSON

No alarms detected.

alarm-trigger is not set

Version info Firmware: 20030723, FPGA: 255

Framing is CRC4, Line Code is HDB3, Clock Source is Line.

Current port master clock:recovered from controller 1/0

Data in current interval (120 seconds elapsed):

0 Line Code Violations, 0 Path Code Violations

0 Slip Secs, 0 Fr Loss Secs, 0 Line Err Secs, 0 Degraded Mins

0 Errored Secs, 0 Bursty Err Secs, 0 Severely Err Secs, 0 Unavail Secs

Total Data (last 24 hours)

0 Line Code Violations, 0 Path Code Violations,

0 Slip Secs, 0 Fr Loss Secs, 0 Line Err Secs, 0 Degraded Mins,

0 Errored Secs, 0 Bursty Err Secs, 0 Severely Err Secs, 0 Unavail Secs

2611XM-B#

Configuring PBX B

Configuring the Ericsson MD110 (PBX 'B')

<NADAP;

NUMBER ANALYSIS DATA

TYPE OF SERIES	NUMBER SERIES
EXTENSION NUMBER SERIES	4200 - 4230
	4250 - 4299
EXTERNAL DESTINATION CODE	11
	21 - 40
	50



550 - 560
60
777
950

OPERATOR INDIV. NUMBER SERIES 100

OWN EXCHANGE NUMBER SERIES 666

TYPE OF SERVICE CODE SERVICE CODE

EXTERNAL NUMBER LENGTH DATA

EXTERNAL NUMBER NUMBER LENGTH

11 4 - 4

21 6 - 6

22 6 - 6

23 6 - 6

24 6 - 6

31 6 - 6

40 4 - 4

550 3 - 7

551 3

777 3 - 7

950 7

PROCEED TO SEND SIGNAL DATA

EXTERNAL NUMBER POS. TYPE

CALL DISCRIMINATION DATA

EXTERNAL/INTERNAL NUMBER CAT

END

<ROCAP:ROU=ALL;

ROUTE CATEGORY DATA

ROU	SEL	TRM	SERV	NODG	DIST	DISL	TRAF	SIG	BCAP
1	71100000000000010	5	3110000000	0	30	128	03151515	111110000031	111111
2	71100000000000010	5	3110000000	0	30	128	03151515	111110000031	111111
3	71100000000000010	5	3110000000	0	30	128	03151515	111110000031	111111



```
4  7110000000000010 5  3110000000 0  30  128  03151515 111110000031 111111
5  7130000000700040 5  3110000000 0  20  10  03151515 311110000030 001100
6  7130000000700040 5  3110000000 0  20  10  03151515 311110000030 001100
7  7110000000000010 5  3110000000 0  20  10  03151515 111110000031 001100
8  7130000000700040 5  3110000000 0  20  10  03151515 311110000030 001100
9  7130000000700040 5  3110000000 0  20  10  03151515 311110000030 001100
10 7130000000700040 5  3110000000 0  20  10  03151515 311110000030 001100
11 7130000000700040 5  3110000000 0  20  10  03151515 111110000011 111111
12 7110000000700010 5  3110000000 0  20  128 03151515 111110000011 111111
100 7110000000000010 4  3110000011 0  30  128 03151515 111100000031 101111
```

END

<RODAP:ROU=ALL;

ROUTE DATA

ROU	TYPE	VARC	VARI	VARO	FILTER
1	SL60	H'00000310	H'15400000	H'06400000	NO
2	SL60	H'00000310	H'05400000	H'06300000	NO
3	SL60	H'00000310	H'15400000	H'06300000	NO
4	SL60	H'00000310	H'05400000	H'06300000	NO
5					
6					
7	SL60	H'00001314	H'15400000	H'46200010	NO
8	SL60	H'00000310	H'00000000	H'46400000	NO
9					
10					
11	TL50	H'00000001	H'00000000	H'00000000	NO
12	TL50	H'00000001	H'00000000	H'00000000	NO
100	SL60	H'00000310	H'45440000	H'06300000	NO

END



<CADAP;

CALENDAR DATA

IDENTITY=STANDARD-ACM2

VERSION=CXP1010101/2/BC12SP5/R2A

13:28:58

TUE 19 OCT 2004

END

<ROEDP:ROU=2,TRU=ALL;

ROUTE EQUIPMENT DATA

ROU	TRU	EQU	IP ADDRESS	SQU	INDDAT	CNTRL
2	001-1	001-1-40-01			H'000000000000	
2	001-2	001-1-40-02			H'000000000000	
2	001-3	001-1-40-03			H'000000000000	
2	001-4	001-1-40-04			H'000000000000	
2	001-5	001-1-40-05			H'000000000000	
2	001-6	001-1-40-06			H'000000000000	
2	001-7	001-1-40-07			H'000000000000	
2	001-8	001-1-40-08			H'000000000000	
2	001-9	001-1-40-09			H'000000000000	
2	001-10	001-1-40-10			H'000000000000	
2	001-11	001-1-40-11			H'000000000000	
2	001-12	001-1-40-12			H'000000000000	
2	001-13	001-1-40-13			H'000000000000	
2	001-14	001-1-40-14			H'000000000000	
2	001-15	001-1-40-15			H'000000000000	
2	001-17	001-1-40-17			H'000000000000	
2	001-18	001-1-40-18			H'000000000000	
2	001-19	001-1-40-19			H'000000000000	



2	001-20	001-1-40-20	H'000000000000
2	001-21	001-1-40-21	H'000000000000
2	001-22	001-1-40-22	H'000000000000
2	001-23	001-1-40-23	H'000000000000
2	001-24	001-1-40-24	H'000000000000
2	001-25	001-1-40-25	H'000000000000
2	001-26	001-1-40-26	H'000000000000
2	001-27	001-1-40-27	H'000000000000
2	001-28	001-1-40-28	H'000000000000
2	001-29	001-1-40-29	H'000000000000
2	001-30	001-1-40-30	H'000000000000
2	001-31	001-1-40-31	H'000000000000

END

<ROEDP:ROU=4,TRU=ALL;

ROUTE EQUIPMENT DATA

ROU	TRU	EQU	IP ADDRESS	SQU	INDDAT	CNTRL
4	001-1	001-1-50-01			H'000000000000	
4	001-2	001-1-50-02			H'000000000000	
4	001-3	001-1-50-03			H'000000000000	
4	001-4	001-1-50-04			H'000000000000	
4	001-5	001-1-50-05			H'000000000000	
4	001-6	001-1-50-06			H'000000000000	
4	001-7	001-1-50-07			H'000000000000	
4	001-8	001-1-50-08			H'000000000000	
4	001-9	001-1-50-09			H'000000000000	
4	001-10	001-1-50-10			H'000000000000	
4	001-11	001-1-50-11			H'000000000000	
4	001-12	001-1-50-12			H'000000000000	
4	001-13	001-1-50-13			H'000000000000	
4	001-14	001-1-50-14			H'000000000000	



4	001-15	001-1-50-15	H'000000000000
4	001-17	001-1-50-17	H'000000000000
4	001-18	001-1-50-18	H'000000000000
4	001-19	001-1-50-19	H'000000000000
4	001-20	001-1-50-20	H'000000000000
4	001-21	001-1-50-21	H'000000000000
4	001-22	001-1-50-22	H'000000000000
4	001-23	001-1-50-23	H'000000000000
4	001-24	001-1-50-24	H'000000000000
4	001-25	001-1-50-25	H'000000000000
4	001-26	001-1-50-26	H'000000000000
4	001-27	001-1-50-27	H'000000000000
4	001-28	001-1-50-28	H'000000000000
4	001-29	001-1-50-29	H'000000000000
4	001-30	001-1-50-30	H'000000000000
4	001-31	001-1-50-31	H'000000000000

END

<KSCAP:DIR=ALL;

KEY SYSTEM CATEGORY PRINT

DIR	TRAF	SERV	CDIV	ROC	ITYPE	TRM	ADC	LANG	BSEC
4200	03151515	0211120700	011151111	720004	20	0	00100013011000	F	0
4201	03151515	0211120700	011151111	720004	20	0	00100013011000	F	0
4202	03151515	0211120700	011151111	720004	20	0	00100013011000	F	0
4203	03151515	0211120700	011151111	720004	20	0	00100013011000	F	0
4204	03151515	0211120700	011151111	720004	20	0	00100013011000	F	0
4205	03151515	0211120700	011151111	720004	20	0	00100013011000	F	0
4206	03151515	0211120700	011151111	720004	20	0	00100013011000	F	0
4207	03151515	0211120700	011151111	720004	20	0	00100013011000	F	0
4208	03151515	0211120700	011151111	720004	20	0	00100013011000	F	0
4209	03151515	0211120700	011151111	720004	20	0	00100013011000	F	0



4210	03151515	0211120700	011151111	720004	20	0	00100013011000	F	0
4211	03151515	0211120700	011151111	720004	20	0	00100013011000	F	0
4212	03151515	0211120700	011151111	720004	20	0	00100013011000	F	0
4213	03151515	0211120700	011151111	720004	20	0	00100013011000	F	0
4214	03151515	0211120700	011151111	720004	20	0	00100013011000	F	0
4215	03151515	0211120700	011151111	720004	20	0	00100013011000	F	0

END

<NADAP;

NUMBER ANALYSIS DATA

TYPE OF SERIES	NUMBER SERIES
----------------	---------------

EXTENSION NUMBER SERIES	4200 - 4230
-------------------------	-------------

4250 - 4299

EXTERNAL DESTINATION CODE	11
---------------------------	----

21 - 40

50

550 - 560

60

777

950

OPERATOR INDIV. NUMBER SERIES	100
-------------------------------	-----

OWN EXCHANGE NUMBER SERIES	666
----------------------------	-----

TYPE OF SERVICE CODE	SERVICE CODE
----------------------	--------------

EXTERNAL NUMBER LENGTH DATA

EXTERNAL NUMBER	NUMBER LENGTH
-----------------	---------------

11	4 - 4
----	-------

21	6 - 6
----	-------

22	6 - 6
----	-------

23	6 - 6
----	-------

24	6 - 6
----	-------

31	6 - 6
----	-------



40 4 - 4
550 3 - 7
551 3
777 3 - 7
950 7

PROCEED TO SEND SIGNAL DATA

EXTERNAL NUMBER POS. TYPE

CALL DISCRIMINATION DATA

EXTERNAL/INTERNAL NUMBER CAT

END

<SUSIP:ROU=2,TRU=ALL;

STATUS INFORMATION AT 13:30:46 19OCT04

ROU	TRU	TYPE	TRAFFIC	STATE/PTR	LINE	STATE/PTR	ADD INFO
2	001-1	TL60	IDLE	#00EF	FREE	#00E2	
2	001-2	TL60	IDLE	#00EE	FREE	#00E3	
2	001-3	TL60	IDLE	#00ED	FREE	#00E4	
2	001-4	TL60	IDLE	#00EC	FREE	#00E5	
2	001-5	TL60	IDLE	#00EB	FREE	#00E6	
2	001-6	TL60	IDLE	#00EA	FREE	#00E7	
2	001-7	TL60	IDLE	#00E9	FREE	#00E8	
2	001-8	TL60	IDLE	#00E8	FREE	#00E9	
2	001-9	TL60	IDLE	#00E7	FREE	#00EA	
2	001-10	TL60	IDLE	#00E6	FREE	#00EB	
2	001-11	TL60	IDLE	#00E5	FREE	#00EC	
2	001-12	TL60	IDLE	#00E4	FREE	#00ED	
2	001-13	TL60	IDLE	#00E3	FREE	#00EE	
2	001-14	TL60	IDLE	#00E2	FREE	#00EF	
2	001-15	TL60	IDLE	#00E1	FREE	#00F0	
2	001-17	TL60	IDLE	#00E0	FREE	#00F1	
2	001-18	TL60	IDLE	#00DF	FREE	#00F2	



2	001-19	TL60	IDLE	#00DE	FREE	#00F3
2	001-20	TL60	IDLE	#00DD	FREE	#00F4
2	001-21	TL60	IDLE	#00DC	FREE	#00F5
2	001-22	TL60	IDLE	#00DB	FREE	#00F6
2	001-23	TL60	IDLE	#00DA	FREE	#00F7
2	001-24	TL60	IDLE	#00D9	FREE	#00F8
2	001-25	TL60	IDLE	#00D8	FREE	#00F9
2	001-26	TL60	IDLE	#00D7	FREE	#00FA
2	001-27	TL60	IDLE	#00D6	FREE	#00FB
2	001-28	TL60	IDLE	#00D5	FREE	#00FC
2	001-29	TL60	IDLE	#00D4	FREE	#00FD
2	001-30	TL60	IDLE	#00D3	FREE	#00FE
2	001-31	TL60	IDLE	#00D2	FREE	#00FF

END

<SUSIP:ROU=4,TRU=ALL;

STATUS INFORMATION AT 13:30:57 19OCT04

ROU	TRU	TYPE	TRAFFIC	STATE/PTR	LINE	STATE/PTR	ADD INFO
4	001-1	TL60	IDLE	#00D1	FREE	#00D2	
4	001-2	TL60	IDLE	#00D0	FREE	#00D1	
4	001-3	TL60	IDLE	#00CF	FREE	#00D0	
4	001-4	TL60	IDLE	#00CE	FREE	#00CF	
4	001-5	TL60	IDLE	#00CD	FREE	#00CE	
4	001-6	TL60	IDLE	#00CC	FREE	#00CD	
4	001-7	TL60	IDLE	#00CB	FREE	#00CC	
4	001-8	TL60	IDLE	#00CA	FREE	#00CB	
4	001-9	TL60	IDLE	#00C9	FREE	#00CA	
4	001-10	TL60	IDLE	#00C8	FREE	#00C9	
4	001-11	TL60	IDLE	#00C7	FREE	#00C8	
4	001-12	TL60	IDLE	#00C6	FREE	#00C7	
4	001-13	TL60	IDLE	#00C5	FREE	#00C6	
4	001-14	TL60	IDLE	#00C4	FREE	#00C5	



4	001-15	TL60	IDLE	#00C3	FREE	#00C4
4	001-17	TL60	IDLE	#00C2	FREE	#00D3
4	001-18	TL60	IDLE	#00C1	FREE	#00D4
4	001-19	TL60	IDLE	#00C0	FREE	#00D5
4	001-20	TL60	IDLE	#00BF	FREE	#00D6
4	001-21	TL60	IDLE	#00BE	FREE	#00D7
4	001-22	TL60	IDLE	#00BD	FREE	#00D8
4	001-23	TL60	IDLE	#00BC	FREE	#00D9
4	001-24	TL60	IDLE	#00BB	FREE	#00DA
4	001-25	TL60	IDLE	#00BA	FREE	#00DB
4	001-26	TL60	IDLE	#00B9	FREE	#00DC
4	001-27	TL60	IDLE	#00B8	FREE	#00DD
4	001-28	TL60	IDLE	#00B7	FREE	#00DE
4	001-29	TL60	IDLE	#00B6	FREE	#00DF
4	001-30	TL60	IDLE	#00B5	FREE	#00E0
4	001-31	TL60	IDLE	#00B4	FREE	#00E1

END

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