IP Enabling Siemens Hicom 300 With Avaya Solutions Running MultiVantage™ Software

Configuring a PRI Trunk Connection between an Avaya™ S8300 Media Server and an Avaya™ G700 Media Gateway running Avaya MultiVantage™ Software and a Siemens Hicom 300.
Issue 1.0

ABSTRACT

Many multi-location enterprises have telecommunications equipment from vendors that do not provide a gentle migration path to IP converged platforms. Avaya's Enterprise Class IP Solutions (ECLIPS) enable a gradual adoption of IP technology for Third-party PBXs and enables the adoption of the value-added capabilities of Avaya's MultiVantage™ Software while providing a platform to host future applications that will further enhance the enterprise's operations.

Following the instructions in these Application Notes facilitates the Gentle-Migration of a Siemens Hicom 300 PBX to the Avaya ECLIPS platform running the Avaya MultiVantage Software for call processing. A minimal amount of new hardware is needed to complete the migration including the Avaya™ S8300 Media Server, the Avaya™ G700 Media Gateway, Avaya™ IP telephones and the new Avaya™ GUI administration tools.

This solution's return on investment (ROI) is very high because it does not require a fork-lift removal of existing hardware, capitalizes on existing phone assets and the users' knowledge of the existing user interface, and allows the enterprise to migrate only those users who can best utilize the productivity enhancing features of the Avaya MultiVantage Software. The platform can expand to accommodate the entire enterprise's organization over time at a pace the customer dictates.

1. Introduction:

The configuration shown in figure 1 illustrates a PRI Trunk Connection between an Avaya S8300 Media Server and an Avaya G700 Media Gateway (S8300/G700) running Avaya MultiVantage Software placed as an adjunct to a Siemens Hicom 300.

The main Central Office connection for the solution is made through the Siemens Hicom 300. Additional Central Office lines can be connected to the S8300/G700 in order to facilitate the use of Avaya™ Extension to Cellular (EC500) and other Avaya MultiVantage Software features.

This document assumes the reader has a basic knowledge of programming Multivantage and Hicom platforms. Basic interoperability between S8300/G700 and Hicom 300 and how it was accomplished is described within these application notes. It should be noted that the interoperability of the S8300/G700 and Hicom 300 is established on basic network fundamentals, and more advanced areas of networking and call routing such as QSIG, AAR and ARS, while functional in this configuration, are not within the scope of this document. E-1 connectivity is possible but requires additional hardware and software upgrades. The Siemens Hipath series is not covered in this document. The Hipath has very different user interfaces and hardware architecture.

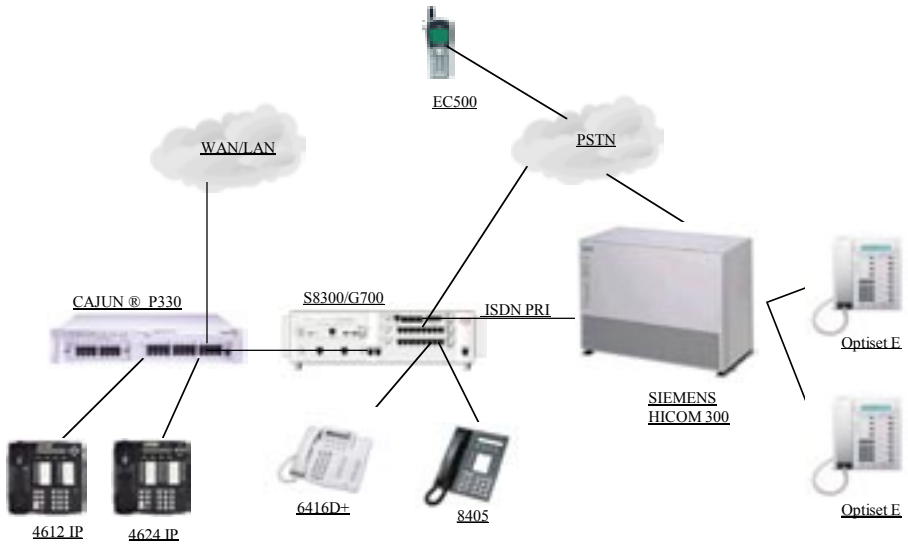


Figure 1. Avaya S8300/G700 and Siemens Hicom 300

2. Equipment and Software Validated:

The configuration used to test performance of this solution was established in an Avaya Lab setting within the guidelines and use parameters allowed in the user licenses acquired with the equipment and software listed below.

Platform	Version
Avaya MultiVantage Software	1.2
Avaya S8300 Media Server	213.0
Avaya G700 Media Gateway	3.12
Avaya™ 4612 IP Phones	46XXCommon.V36
Avaya™ 4624 IP Phones	46XXCommon.V36
Avaya MM710 T-1 Interface	Firmware version 5
Siemens Hicom 300 30 EP	Release 9006.5
DSC80 Processor	Firmware version D961-D
TMDN64P T-1 Interface (Q2484-X)	Firmware version D467-C
Optiset E Digital Advanced Plus Phones	Model 69671

3. Requirements:

Avaya S8300 Media Server and an Avaya G700 Media Gateway:

Software:

1. Avaya MultiVantage Software Release 1.2 or newer
2. G700 Media Gateway Firmware Release 3.12 or newer
3. S8300 Media Server Software Release 213.0 or newer

Hardware:

1. MM710 DS1 Circuit pack. Installer needs to determine the number of trunks cards that will be needed for traffic requirements. Consideration must be made for the available slots and resources of the Hicom.
2. T-1 Interface cable. Connects the MM710 T-1 RJ45 interface port or the TN464 DS1 circuit pack to the Hicom. The actual cable needs to be custom built.

Siemens Hicom 300:

For this application to be successful, the intended switch **must** have:

1. Available slots for the T-1 boards.
2. Available purchased software ports for the T-1 spans.
3. T-1 boards must be compatible to software version.
4. If software or port capacities need to be upgraded, there are two options.
   a. Siemens can be contacted and they will upgrade the system.
   b. The software on DAT tape is purchased from Siemens or a vendor. The customer loads the software.

Software:

1. Recommended Siemens Hicom 300. Release 9006.5 or newer.
2. Firmware for the boards and phones are included in the core software.

Hardware:

1. TNBN64P and TNDN64 can be programmed to run PRI and NI2.
2. TMDN TMD24 can only be used with PRI.

Board type used is dependant on software and hardware release of the switch.

4. Cable schematic:

Note: A length of 4-wire cable is needed to make the connection to each PRI circuit card. The Pin assignments for each are as follows.

Siemens TMDN64P (25 pair amphenol)

XTIP	pin 16	RTIP	pin 13
XRING	pin 41	RRING	pin 38

MM710 (RJ45)

XTIP	pin 4	RTIP	pin 1
XRING	pin 5	RRING	pin 2

TN464 DS1 (wall field)

XTIP	pin 22	RTIP	pin 23
XRING	pin 47	RRING	pin 48

5. S8300/G700 Configurations:

The following pages are excerpts of an actual system administration session using the Avaya VisAbility™ Software Suite.

DS1 Interface: ISDN maximizes the number of connections between the switches due to the fast processing of calls across that medium. ISDN also allows for Caller ID, Call Tracing, Call Return and many other features. Configure the DS1 form as described below. Select "isdn-pri" for the Signaling Mode, this allows for Facility and Non-facility Associated Signaling. Select "b8zs" for the line coding which is required when running ISDN. Framing Mode should be "ESF" to allow for best signaling quality. Setting the Connect and Interface prompts to "PBX" and "Network" allows the MM710 to have control over glare conditions. This allows the MM710 to have priority over circuit assignment and force the switch on the other end to continue searching for an open B-Channel. All other prompts are default. **If using NI-2 (National ISDN–2) change Protocol Version to "b".**

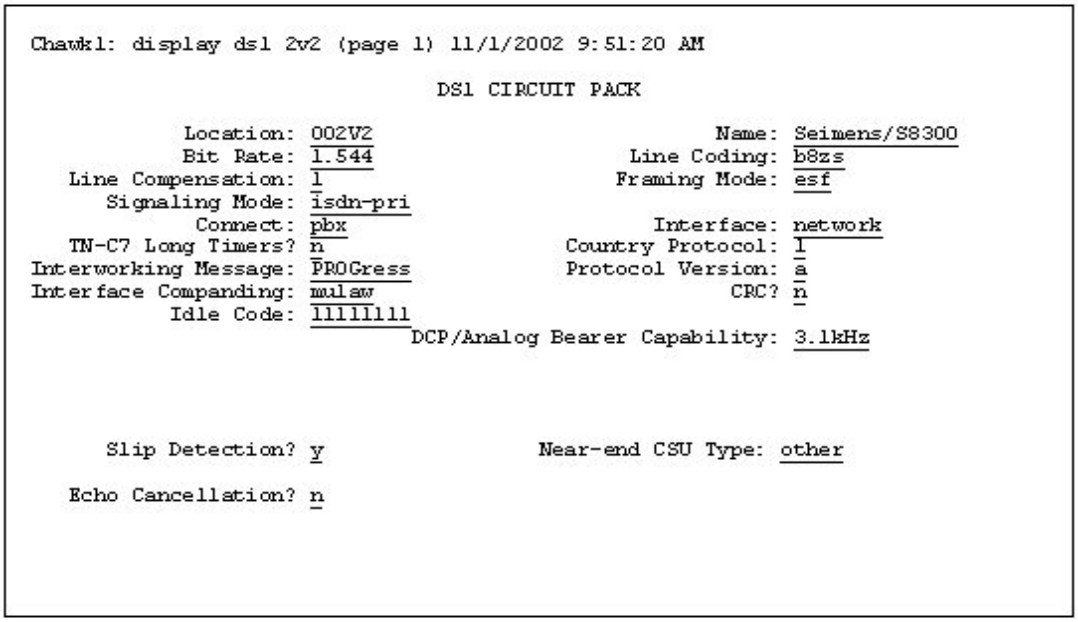


Figure 2a. **MM710** DS1 Circuit Pack Administration

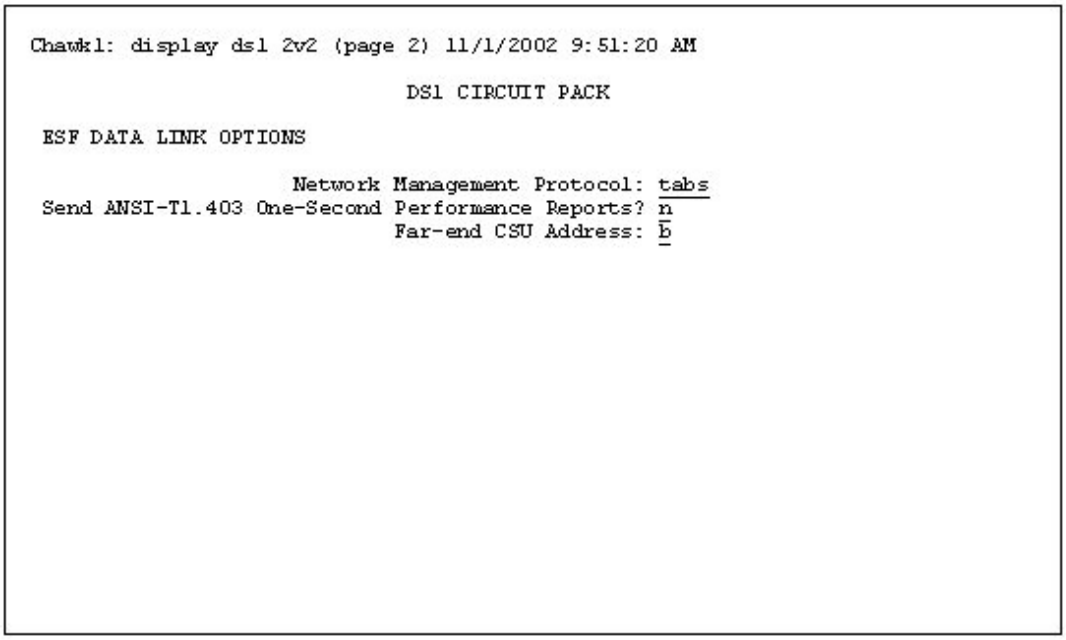


Figure 2b. **MM710** DS1 Circuit Pack Administration

Trunk Group: Create a Trunk Group and select "isdn" as the Group Type and a TAC number based on your switches dial-plan. Ensure "PRI/BRI" is the Carrier Medium, this is used for ISDN trunks. Set Dial Access to "Y" and Service type is "tie", this gives the most universal type of connection. All other prompts are default.

```
Chawkl: display trunk-group 22 (page 1) 11/1/2002 9:56:11 AM

                                TRUNK GROUP

Group Number: 22                    Group Type: isdn          CDR Reports: y
  Group Name: Seimens/S8300              COR: 1        TN: 1        TAC: #22
   Direction: two-way         Outgoing Display? y        Carrier Medium: PRI/BRI
 Dial Access? y                 Busy Threshold: 255      Night Service:
Queue Length: 0
Service Type: tie                    Auth Code? n           TestCall ITC: rest
                         Far End Test Line No:
TestCall BCC: 4
TRUNK PARAMETERS
        Codeset to Send Display: 6     Codeset to Send National IEs: 6
       Max Message Size to Send: 260   Charge Advice: none
  Supplementary Service Protocol: a    Digit Handling (in/out): enbloc/enbloc

            Trunk Hunt: descend                      QSIG Value-Added? n
                                                   Digital Loss Group: 13
Calling Number - Delete:     Insert:                 Numbering Format:
              Bit Rate: 1200          Synchronization: async    Duplex: full
 Disconnect Supervision - In? y  Out? n
 Answer Supervision Timeout: 0
```

Figure 4. Trunk–Group Administration

Signaling Group: Create a Signaling Group for the PRI D-channel. The Group Type default is "isdn-pri"; this creates a channel to control the Bearer channels on the T-1 card. Select the T-1 port that will be used as the Primary D-channel and assign the Trunk Group for Channel Selection. All other prompts are default.

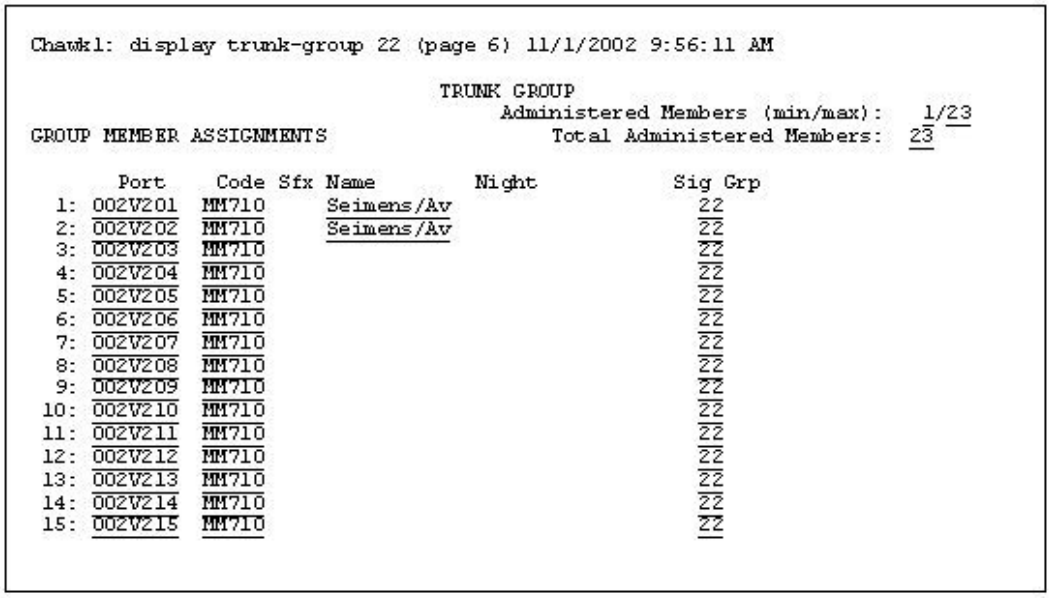
```
Chawkl: display signaling-group 22 (page 1) 11/1/2002 9:54:37 AM

                              SIGNALING GROUP

 Group Number: 22              Group Type: isdn-pri
                 Associated Signaling? y        Max number of NCA TSC: 0
                    Primary D-Channel: 002V224     Max number of CA TSC: 23
                                                 Trunk Group for NCA TSC:
       Trunk Group for Channel Selection: 22      X-Mobility/Wireless Type: NONE
          Supplementary Service Protocol: a         Network Call Transfer? n
```

Figure 3. Signaling-Group D-Channel Configuration

Trunk Group Members: Assign trunk ports to the Trunk Group. Up to 255 ports can be assigned to each ISDN Trunk Group. The Sig Grp prompt will display the signaling group after the Trunk Group is created and assigned to the Signaling Group.



```
Chawkl: display trunk-group 22 (page 6) 11/1/2002 9:56:11 AM

                                TRUNK GROUP
                                     Administered Members (min/max):   1/23
GROUP MEMBER ASSIGNMENTS                  Total Administered Members:  23

      Port    Code Sfx Name         Night           Sig Grp
 1: 002V201  MM710     Seimens/Av                    22
 2: 002V202  MM710     Seimens/Av                    22
 3: 002V203  MM710                                   22
 4: 002V204  MM710                                   22
 5: 002V205  MM710                                   22
 6: 002V206  MM710                                   22
 7: 002V207  MM710                                   22
 8: 002V208  MM710                                   22
 9: 002V209  MM710                                   22
10: 002V210  MM710                                   22
11: 002V211  MM710                                   22
12: 002V212  MM710                                   22
13: 002V213  MM710                                   22
14: 002V214  MM710                                   22
15: 002V215  MM710                                   22
```

Figure 5. Assign trunk Group Members

6. Hicom Configurations:

The following listing of Command Line Interface (CLI) text is intended to be an accurate representation of the actual administrative visuals for implementing the translations required for the Hicom 300.

Typical Cabinet Configuration:

<dis-bcsu:tbl; (Displays Board Configuration Switching Unit)

H500: AMO BCSU STARTED

ADDRESS	NOM. BOARD	TYPE	V/R	ACTUAL BOARD	LWV	FID	FIRMWARE	BD STATUS	CCN
1. 1. 37	Q2161-X	DSC80		Q2161-X	1	2	D961-D	READY	1
1. 1. 49	Q2146-X	SLMA2		Q2146-X	1	0	-11 -	READY	24
1. 1. 55	Q2485-X	TMC16P		Q2485-X	1	0	D429-B	READY	16
1. 1. 61	Q2158-X	SLMO24	R	Q2158-X	1	0	-05 -	READY	24
1. 1. 67	Q2158-X	SLMO24	R	Q2158-X	1	0	-05 -	READY	24
1. 1. 73	FREE			FREE					
1. 1. 79	FREE			FREE					0
1. 1. 85	Q2452-X	TMDID		Q2452-X	1	0	B008-D	READY	8
1. 1. 91	FREE			FREE					0
1. 1. 97	Q2233-X	SIUX		Q2233-X	1	2	D802-B	READY	8
1. 1.103	FREE			FREE					0

Determine If System Has Capacities:

<dis-dimen; (Displays System Dimensions)

```
TYPE = cc;
DIS-DIMEN:CC;
H500:  AMO DIMEN STARTED
+-------------------------------------+-------------------------------------+
|                      NON-CONFIGURABLE PARAMETERS                          |
+-------------------------------------+-------------------------------------+
| TOTAL LINES   : ALLOC =  2750   LARGEST BLOCK =  2496   USED =   238    |
| PHYSICAL LINES: ALLOC =  1368   MAX USED      =   203   USED =   203    |
+-------------------------------------+-------------------------------------+
|                        CONFIGURABLE PARAMETERS                            |
+-------------------------------------+-------------------------------------+
|            ALLOC /MAXUSED/ USED     |            ALLOC /MAXUSED/ USED     |
+-------------------------------------+-------------------------------------+
|                                     |  PRITRUNK:      2 /     1 /     1   |
|                                     |  TRUNK   :     49 /    49 /    27   |
|                                     |  T1SPAN  :      2 /     2 /     2   |
+-------------------------------------+-------------------------------------+
 * = ALLOC-VALUE EXCEEDS ALLOC-RECMAX
     ( RECOMMENDED ALLOC-MAXIMUM )  FOR THIS SYSTEM TYPE
```

<dis-dimen:ltg;

```
DIS-DIMEN:LTG;
H500:  AMO DIMEN STARTED
+-------------------------------------+-------------------------------------+
|                      NON-CONFIGURABLE PARAMETERS                          |
+-------------------------------------+-------------------------------------+
| TOTAL LINES   : ALLOC =  2750   LARGEST BLOCK =  2496   USED =   238    |
| PHYSICAL LINES: ALLOC =  1368   MAX USED      =   203   USED =   203    |
+-------------------------------------+-------------------------------------+
|                        CONFIGURABLE PARAMETERS                            |
+-------------------------------------+-------------------------------------+
|  LTG: 1     ALLOC /MAXUSED/ USED    |  LTG: 1     ALLOC /MAXUSED/ USED    |
+-------------------------------------+-------------------------------------+
|                                     |                                     |
|  APILTG  :     32 /     0 /     0   |  LTGIDX  :    400 /    90 /    90   |
|  AUTOLTG :      0 /     0 /     0   |  NWCRLTG :      1 /     0 /     0   |
|  DHBUFLTG:      0 /     0 /     0   | *OPTILTG :     72 /     4 /     3   |
|  DIG2LTG :    160 /     0 /     0   | *OPTSTLTG:     72 /     4 /     3   |
| *DIGILTG :     80 /     4 /     3   |  PRTRKLTG:      1 /     1 /     1   |
|  DILTG   :     96 /     4 /     3   |  RDTILTG :     18 /     0 /     0   |
|  DLPWLTG :      0 /     0 /     0   |  RP120LTG:      0 /     0 /     0   |
|  DSLTG   :    255 /   115 /   115   |  RP240LTG:      0 /     0 /     0   |
|  DTILTG  :    281 /    30 /    30   |  RP400LTG:      0 /     0 /     0   |
|  DTIS0   :      0 /     0 /     0   | *S0LTG   :     16 /     0 /     0   |
|  KSETLTG :    144 /     4 /     3   |                                     |
|                                     |                                     |
+-------------------------------------+-------------------------------------+

 * = ALLOC-VALUE EXCEEDS ALLOC-RECMAX
     ( RECOMMENDED ALLOC-MAXIMUM )  FOR THIS SYSTEM TYPE
```

Adding a TNDN64 T-1 Board:

<add-bcsu

```
BOARD = ?
BOARD           : SPECIFY BOARD TYPE
CHARACTERISTIC  : REQUIRED              CONDITIONAL
POSSIBLE VALUES : STMA          STMA
                  SLMN          SLMN USED FOR NX64
                  IPDN          IPDN BOARD USED FOR ISDN APPLICATIONS
                  RPER          ROLM PERIPHERAL BOARDS
                  RT1           ROLM T1 BOARD
                  TMD           DIGITAL TRUNK MODULE WITH 24 CHANNELS
                  RG            RING GENERATOR
                  SIUP          SIGNALLING UNIT PERIPHERY
                  PER           PERIPHERY MODULE
BOARD = tmd
LTG = 1
LTU = 1
SLOT = 79
PARTNO = q2484-x (part number for a TNDN64P number will vary with hardware)
FCTID = 2 ???

LWVAR = ?
LWVAR           : LOADWARE VARIANT
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : MAX. OF 8 POSITIONS
LWVAR =0
CABTYP = 1

TIMTYP = ?
TIMTYP          : SPECIFY SYSTEM OR LOOP TIMING FOR TMD24
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : SYST          TMD FRAME TIMING DRIVEN BY SYSTEM
                  LOOP          LOOPBACK STATE
TIMTYP =syst
OESDISTH =30
OESREQTH =4
SESDISTH =10
SESREQTH =10

SIGTYP = ?
SIGTYP          : TYPE OF SIGNALING ON TMD24 SPAN
CHARACTERISTIC  : REQUIRED              CONDITIONAL
POSSIBLE VALUES : CVN           CORNET-VN LINK WITH 24 CHANNELS
                  CCO           DMI LINK WITH 24 CHANNELS
                  MOS           DMI LINK WITH MESSAGE ORIENTED SIGNALING
                  BOS           DMI LINK WITH BIT ORIENTED SIGNALING
                  CAS           TMD LINK WITH CHANNEL ASSOCIATED SIGNALING
SIGTYP = mos

NETUSR = ?
NETUSR          : USER TO EMULATE NETWK OR USER ON DMI LINK
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : USER          USER WILL EMULATE USER END OF DMI LINK
                  NETWK         USER WILL EMULATE NETWK END OF DMI LINK
NETUSR = user
```

```
ACKTIM = ?
ACKTIM          : ACKNOWLEDGEMENT TIMER
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : 1000-5000
ACKTIM =1000

DLVTIM = ?
DLVTIM          : DATA LINK VERIFICATION TIMER
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : 5000-60000
DLVTIM =30000

OCTMAX = ?
OCTMAX          : MAXIMUM NUMBER OF OCTETS IN AN INFORMATION FIELD
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : 3-260
OCTMAX =260

RETMAX = ?
RETMAX          : MAXIMUM NUMBER OF RETRANSMISSIONS
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : 1-10
RETMAX =3

WINDOW = ?
WINDOW          : MAXIMUM NUMBER OF OUTSTANDING INFORMATION FRAMES
CHARACTERISTIC  : OPTIONAL
VALUE TYPE      : DECIMAL NUMBER
CONVERSION TYPE : BINARY NUMBER WITH 8 BITS
POSSIBLE VALUES : 1-7
WINDOW =7

IGN = ?
IGN             : INTERFACE GROUP NUMBER
CHARACTERISTIC  : REQUIRED
POSSIBLE VALUES : 0-127
IGN = 1
POSSIBLE VALUES : NO          NO
                  YES         YES
TABS =no

BI8SUB = ?
BI8SUB          : BI-POLAR 8 ZERO SUBSTITUTION
CHARACTERISTIC  : OPTIONAL             CONDITIONAL
POSSIBLE VALUES : YES         YES
                  NO          NO
BI8SUB = yes

BIVDET = ?
BIVDET          : BI-POLAR VIOLATION DETECTION
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : NO          NO
                  YES         YES
BIVDET =yes
ADD-BCSU:TMD,1,1,91,Q2484-X,2,,3,,,,,,MOS,USER,,,,,,1,1,ESF,,YES,;
H500:  AMO BCSU  STARTED
H1: BOARD   1. 1. 91
```

```
       SET UP - OUT OF SERVICE       (NPR)
H6 : THE CIRCUIT WAS ADDED TO THE REFERENCE CLOCK TABLE.
H19 : WHEN FCTID IS NOT ENTERED, OR FCTID=0 IS ENTERED FOR A TMDN,
      IT WILL CONFIGURE A TMDN WITH THE DEFAULT FCTID=1.
AMO-BCSU -111       BOARD CONFIGURATION, SWITCHING UNIT
ADD COMPLETED;
```

Display Board:

<dis-bcsu:tmd;

```
H500:  AMO BCSU  STARTED
------------------------------------------------------------
| DETAILS OF TMD BOARD AT ADDRESS (LTG.LTU.SLOT) = 1. 1. 73   |
|                                                             |
|    CABTYP =    1      TIMTYP = SYST       SIGTYP = MOS      |
|     FRAME =  ESF        TABS =   NO       FCTID  =   2      |
|    BI8SUB =  YES      BIVDET =  YES                         |
|-----------------------------------------------------------|
|   RDRATIO =     6       RDTH =  2500      RDQUAL = 15000    |
|    YLSEND =  5000       YLTH =   400      YLQUAL =   100    |
|       LOS =   150        AOS =  4000                        |
|  SESDISTH =    10   SESREQTH =    10                        |
|  OESDISTH =    30   OESDISIN = 24-00-00                     |
|  OESREQTH =     4   OESREQIN = 04-00-00                     |
|-----------------------------------------------------------|
|    NETUSR =  USER     ACKTIM = 1000       DLVTIM = 30000    |
|    OCTMAX =  260      RETMAX =    3       WINDOW =     7    |
|    CRIDC  =           TTSC   =            NSFIV  =          |
|    NSFTSC =           PFDGT  =                              |
|-----------------------------------------------------------|
|       IGN = 0          IID = 0                            |
------------------------------------------------------------
```

Display Cabinet:

< dis-bcsu:tbl;

```
DIS-BCSU:TBL,,,;
H500:  AMO BCSU  STARTED
 ADDRESS |NOM. BOARD  TYPE  V/R| |ACTUAL BOARD |LWV|FID|FIRMWARE|BD
STATUS|CCN|
---------+-------------------+-+-------------+---+---+--------+---------+-
--+
1. 1. 37 | Q2161-X   DSC80    | | Q2161-X     | 1 | 2 | D961-D |READY |1   |
1. 1. 49 | Q2146-X   SLMA2    | | Q2146-X     | 1 | 0 | -11 -  |READY |24  |
1. 1. 55 | Q2485-X   TMC16P   | | Q2485-X     | 1 | 0 | D429-B |READY |16  |
1. 1. 61 | Q2158-X   SLMO24  R| | Q2158-X     | 1 | 0 | -05 -  |READY |24  |
1. 1. 67 | Q2158-X   SLMO24  R| | Q2158-X     | 1 | 0 | -05 -  |READY |24  |
1. 1. 73 | Q2484-X   TMDN64P  | | Q2484-X     | 1 | 2 | D467-C |READY |25  |
1. 1. 79 | FREE               | | FREE        |   |   |        |      |0   |
1. 1. 85 | Q2452-X   TMDID    | | Q2452-X     | 1 | 0 | B008-D |READY |8   |
1. 1. 91 | FREE               | | FREE        |   |   |        |      |0   |
1. 1. 97 | Q2233-X   SIUX     | | Q2233-X     | 1 | 2 | D802-B |READY |8   |
1. 1.103 | FREE               | | FREE        |   |   |        |      |0   |
H2: LTU 1. 2 IS NOT SET UP
AMO-BCSU -111       BOARD CONFIGURATION, SWITCHING UNIT
```

Add Trunk Group Access Codes:

```
<add-tgacc
TGRP = 100

SATOPS = ?
SATOPS          : SATOPS TYPE USAGE FOR THE TRUNK-GROUP
CHARACTERISTIC  : REQUIRED
POSSIBLE VALUES : SAT           SAT PROTOCOL
                  VLSAT         VLSAT PROTOCOL
                  NONE          NON-SATOPS PROTOCOL
SATOPS = none
NAME = c-hawk

NO = ?
NO              : MAXIMUM NUMBER OF LINES TO BE ASSIGNED
CHARACTERISTIC  : REQUIRED
POSSIBLE VALUES : 1-999
NO = 23

DIRTYP = ?
DIRTYP          : TRUNK GROUP DIRECTION TYPE
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : INC           INCOMING TRUNK GROUP
                  OUTG          OUTGOING TRUNK GROUP
                  BOTH          BOTHWAY TRUNK GROUP
DIRTYP = both

TGUSAGE = ?
TGUSAGE         : TRUNK GROUP FACILITY USAGE
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : SATL          SATELLITE
                  TERR          TERRESTRIAL
TGUSAGE = terr

ACDTHRH = ?
ACDTHRH         : MAXIMUM NUMBER OF TRUNKS FOR ACD THRESHOLD
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : MAX. OF 3 POSITIONS
ACDTHRH =

TRACENO = ?
TRACENO         : MAXIMUM NUMBER OF TRUNKS IN A GROUP THAT CAN BE CALL
TRACED
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : 0-999
TRACENO =0

GDTRRULE = 0

SELECT = ?
SELECT          : TRUNK SELECTION ALGORITHIM
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : HIGH          HIGH
                  LOW           LOW
                  ROUND         ROUND
SELECT = round
```

```
CFBLOCK = ?
CFBLOCK         : CALL FORWARD BLOCKING
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : ENABLED      CALL FORWARD BLOCKING ENABLED
                  DISABLED     CALL FORWARD BLOCKING DISABLED
CFBLOCK = DISABLED

ADD-TGACC:100,NONE,C-HAWK,23,BOTH,TERR,,,0,ROUND,;
H500:  AMO TGACC STARTED
H1: TRUNK GROUP 100 HAS BEEN CREATED
AMO-TGACC-111       TRUNK GROUP ACCESS CODE
ADD COMPLETED;
```

Display Trunk Group Access Codes:

<dis-tgacc

```
TGRP =100;
DIS-TGACC:100;
H500:  AMO TGACC STARTED
+-------------------------------------------------------------------------+
| TGRP NUMBER    :   100   TGRP NAME  : CHAWK     /N    MAXIMUM NO:   23 |
| SUBGROUP NUMBER:     3   DEVICE TYPE: PRI B           DIR TYPE  : BOTH |
| ACD THRESHOLD  :     *   TRACENO    :          0      USAGE TYPE: TERR |
| ALLOCATED TO AT LEAST ONE ROUTE                      GDTR RULE :    0 |
| SELECTION      :  ROUND  CFBLOCK    : DISABLED
|
| THE FOLLOWING PORTS (LTG-LTU-SLOT-CIRCUIT) ARE ALLOCATED:
|
+-------------------------------------------------------------------------+
|1-1-73-1 | 1-1-73-2 | 1-1-73-3 | 1-1-73-4 | 1-1-73-5 | 1-1-73-6 |
+-------------------------------------------------------------------------+
|1-1-73-7 | 1-1-73-8 | 1-1-73-9 | 1-1-73-10| 1-1-73-11| 1-1-73-12|
+-------------------------------------------------------------------------+
|1-1-73-13| 1-1-73-14| 1-1-73-15| 1-1-73-16| 1-1-73-17| 1-1-73-18|
+-------------------------------------------------------------------------+
|1-1-73-19| 1-1-73-20| 1-1-73-21| 1-1-73-22| 1-1-73-23|
+-------------------------------------------------------------------------+
AMO-TGACC-111       TRUNK GROUP ACCESS CODE
DISPLAY COMPLETED;
```

Add COP (Class of Parameters):

<add-cop

```
COPNO = 100
PAR = ;
ADD-COP:100,;
H500:  AMO COP   STARTED
H1: COP 100 IS NOW SET UP
AMO-COP  -111       CLASS OF PARAMETER
ADD COMPLETED;
```

Display COP (Class of Parameters):

<dis-cop;

```
DIS-COP:,,;
H500:  AMO COP   STARTED
|   |                    |  |  |    |
|   | S           E A    |  |  |    |
|   | T         E S N    |  |  |    |
|   | A   S   V S P I D |DD| S|    |
|   | D   Z   L P D D T |TT| U|  P |
|   | I A A S S A N N O |MM| P|  D |
|COP| A N C A A N I I N |FF| V|  P |
|IDX| L S K T T I S S E | L|12|1234|
+---+-------------------+--+--+----+
|  2|                   |X |  | X  |
| 50| X X               |  |X |    |
|100|                   |  |  |    |
+---+-------------------+--+--+----+
AMO-COP  -111       CLASS OF PARAMETER
DISPLAY COMPLETED;
```

Add COT (Class of Trunk):

<add-cot

```
COTNO = 100
PAR =
ADD-COT:100,;
H500:  AMO COT   STARTED
H1: THE COT  100 HAS BEEN SET UP.
AMO-COT  -111       CLASS OF TRUNK FOR CALL PROCESSING
ADD COMPLETED;
```

Display COT (Class of Trunk):

<dis-cot;

```
DIS-COT:,,;
H500:  AMO COT   STARTED
       |D|A|D|D|D|M|S|V|E|E|A|R|
       |I|N|S|S|I|D|A|L|S|S|N|F|
       |T|S|A|A|S|R|T|S|P|P|I|L|
       | |R| |S| | | |A|A|D|D|A|
       | | | | | | | |T|N|N|N|S|
       | | | | | | | | |I|I|I|H|
   COT | | | | | | | | | |S|S| |
   ----+-+-+-+-+-+-+-+-+-+-+-+-+
     2 |X| | | | |X| | | | | | |
    50 | |X| | | |X| | | | | | |
   100 | | | | | | | | | | | | |
   ----+-+-+-+-+-+-+-+-+-+-+-+-+
AMO-COT  -111       CLASS OF TRUNK FOR CALL PROCESSING
DISPLAY COMPLETED;
```

Add COS (Class of Service):

<add-cos
COPYCOS =
NEWCOS = **100**

```
AVCE = ?
AVCE             : ADD VOICE AUTHORIZATION
CHARACTERISTIC   : OPTIONAL
POSSIBLE VALUES  : AGENT        ACD AGENT
                   AUTOLOG      ACD AUTOLOGON
                   BROADCST     SPEAKER CALL DIAL ONE WAY BROADCAST
                   BSYALERT     AUDIBLE BUSY ALERT ON ATTENDANT CONSOLES
                   CAF          CONTROL AGENT FACILITY
                   CASILMON     ACD CAN ACTIVATE SILENT MONITOR
                   CBSILMON     ACD CAN BE SILENT MONITORED
                   CFWCO        CALL FORWARDING TO CO
                   COSXCD       COS CHANGEOVER BY CODE
                   DIDBLK       DIRECT-INWARD-DIALING BLOCKING
                   DNDOVR       DO NOT DISTURB OVERRIDE
                   HOT          HOTLINE
                   HUNTB        STATION HUNT ON BUSY
                   HUNTNA       STATION HUNT ON NO ANSWER
                   INDTMF       INBAND DTMF DIALING
                   INTRCOM      INTERCOMM CALL
                   KN           KNOCKING/CAMP-ON AUTHORIZATION
                   KNOVR        OVERRIDE AUTHORIZATION (CALL INTRUSION
                   MB           MAIL BOX - AUTHORIZATION TO RECEIVE MAIL
                   MDR          MESSAGE/CALL DETAIL RECORDING
                   MSGWCAP      MESSAGE WAITING CAPABILITY - CAN SEND MAIL
                   NCMPBRST     NO CAMP-ON BURST TONE ALERT
                   NOCONF       NO CONFERENCE CALL AUTHORIZATION
                   NOHOLD       NO HOLD FEATURE FOR CONFERENCE CALL
                   NVDATA       NON-VOICE DATA AUTHORIZATION
                   OFHKRCL      OFHKRCL
                   ORIGONLY     ORIGINATE ONLY
                   PRISTN       STATION WITH PRIORITY
                   RKNOVR       REJECT KNOCKING/CAMP-ON AND OVERRIDE
                   SPKRCALL     SPEAKER CALL DIAL ONE WAY
                   SUPER        ACD SUPERVISOR
                   TPSET        THIRD PARTY SET
                   TRACEAUT     AUTOMATIC MALICIOUS CALL TRACING
                   TTT          TRUNK TO TRUNK CONNECTION/TRANSFER
                   VC           VOICE CALL
                   VCE          SERVICE MODULE ACCESS (VCE)
AVCE = mdr

ADTE = ?
ADTE             : ADD DATA TERMINAL EQUIPMENT AUTHORIZATION
CHARACTERISTIC   : OPTIONAL
POSSIBLE VALUES  : BASIC        DATA ORIGINATE ENABLE (DTE)/GUEST ACCESS
                   CHANLPBK     DATA REMOTE CHANNEL LOOPBACK
                   DLINEQG      DATA LINE QUEUING (GROUP)
                   DORIGQ       DATA ORIGINATING QUEUING
                   DSPEEDG      DATA SPEED CALLING (GROUP)
                   DSPEEDI      DATA SPEED CALLING (INDIVIDUAL)
                   HOT          HOTLINE
```

```
                    MDR          MESSAGE/CALL DETAIL RECORDING
                    ORIGONLY     ORIGINATE ONLY
                    TERMLPBK     DATA REMOTE TERMINAL LOOPBACK
                    URTA         UNRESTRICTED TRUNK ACCESS TO AND FROM CO
ADTE =
AFAX =

DVCE = ?
DVCE             : DELETE VOICE AUTHORIZATION
CHARACTERISTIC   : OPTIONAL
POSSIBLE VALUES  : AGENT        ACD AGENT
                   AUTOLOG      ACD AUTOLOGON
                   BROADCST     SPEAKER CALL DIAL ONE WAY BROADCAST
                   BSYALERT     AUDIBLE BUSY ALERT ON ATTENDANT CONSOLES
                   CAF          CONTROL AGENT FACILITY
                   CASILMON     ACD CAN ACTIVATE SILENT MONITOR
                   CBSILMON     ACD CAN BE SILENT MONITORED
                   CFWCO        CALL FORWARDING TO CO
                   COSXCD       COS CHANGEOVER BY CODE
                   DIDBLK       DIRECT-INWARD-DIALING BLOCKING
                   DNDOVR       DO NOT DISTURB OVERRIDE
                   HOT          HOTLINE
                   HUNTB        STATION HUNT ON BUSY
                   HUNTNA       STATION HUNT ON NO ANSWER
                   INDTMF       INBAND DTMF DIALING
                   INTRCOM      INTERCOMM CALL
                   KN           KNOCKING/CAMP-ON AUTHORIZATION
                   KNOVR        OVERRIDE AUTHORIZATION (CALL INTRUSION
                   MB           MAIL BOX - AUTHORIZATION TO RECEIVE MAIL
                   MDR          MESSAGE/CALL DETAIL RECORDING
                   MSGWCAP      MESSAGE WAITING CAPABILITY - CAN SEND MAIL
                   NCMPBRST     NO CAMP-ON BURST TONE ALERT
                   NOCONF       NO CONFERENCE CALL AUTHORIZATION
                   NOHOLD       NO HOLD FEATURE FOR CONFERENCE CALL
                   NVDATA       NON-VOICE DATA AUTHORIZATION
                   OFHKRCL      OFHKRCL
                   ORIGONLY     ORIGINATE ONLY
                   PRISTN       STATION WITH PRIORITY
                   RKNOVR       REJECT KNOCKING/CAMP-ON AND OVERRIDE
                   SPKRCALL     SPEAKER CALL DIAL ONE WAY
                   SUPER        ACD SUPERVISOR
                   TPSET        THIRD PARTY SET
                   TRACEAUT     AUTOMATIC MALICIOUS CALL TRACING
                   TTT          TRUNK TO TRUNK CONNECTION/TRANSFER
                   VC           VOICE CALL
                   VCE          SERVICE MODULE ACCESS (VCE)
DVCE =ttt
DDTE =
DFAX =
ADD-COS:,100,MDR,,,TTT,,;
H500:  AMO COS   STARTED
H4 :      THE NUMBER OF THE CLASS OF SERVICE ADDED IS 20.
AMO-COS  -111       CLASSES OF SERVICE, SWITCHING UNIT
ADD COMPLETED;
```

Display COS (Class of Service):

<dis-cos:all;

```
H500:  AMO COS   STARTED
+------+------------+------------+------------+
|  COS |   VOICE    |    DTE     |    FAX     |
+------+------------+------------+------------+
| 100  |            |            |            |
|      |  MDR       |            |            |
|      |  TTT       |            |            |
|      |            |            |            |
+------+------------+------------+------------+
AMO-COS  -111       CLASSES OF SERVICE, SWITCHING UNIT
```

Add Trunk Members:

<add-tcsu (Trunk Configuration Switching Unit)

```
PEN = 1-1-73-24

NO = ?
NO               : NUMBER OF TRUNKS TO BE CREATED
CHARACTERISTIC   : OPTIONAL
POSSIBLE VALUES : 1-30
NO = 23

COTNO = 100
COPNO = 100
DPLN = 0
ITR = 0
TGRP = 100

ACDATA = ?
ACDATA           : DATA ACCESS CLASS
CHARACTERISTIC   : OPTIONAL
POSSIBLE VALUES : 0-255
ACDATA =

CCT = ?
CCT              : CIRCUIT/TRUNK NUMBER
CHARACTERISTIC   : OPTIONAL
POSSIBLE VALUES : MAX. OF 8 POSITIONS
CCT =

ACT = n

DITIDX = ?
DITIDX           : INDEX TO HOTLINE TABLE FOR DIT TRUNK DESTINATION NUMBER
CHARACTERISTIC   : OPTIONAL
POSSIBLE VALUES : 0-255
DITIDX =

TRKID = ?
TRKID            : TRUNK IDENTIFICATION NUMBER
CHARACTERISTIC   : OPTIONAL
POSSIBLE VALUES : 0-9999
TRKID =
```

```
TCCID = ?
TCCID           : TELEPHONE COMPANY CIRCUIT IDENTIFICATION
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : MAX. OF 30 POSITIONS
TCCID = 123456

DEV = ?
DEV             : DEVICE TYPE (DEVICE HANDLER)/MODULE TYPE
CHARACTERISTIC  : REQUIRED              CONDITIONAL
POSSIBLE VALUES : ATMPBB       ATM INTERWORKING B-CHANNEL
                  ATMIWB       ATM INTERWORKING B-CHANNEL
                  T1GRDSTR     T1 TRUNK EMULATING GROUND-START TRUNK
                  GRDSTR       GROUND-START TRUNK
                  T1LPSTR      T1 TRUNK EMULATING LOOP-START TRUNK
                  LPSTR        LOOP-START TRUNK
                  T1EMW        T1EM TRUNK WITH WINK SIGNALLING
                  T1EMP        T1EMP TRUNK WITH PLAR SUPPORT
                  T1EMI        T1EM TRUNK WITH IMMEDIATE SIGNALLING
                  T1EMD        T1EM TRUNK WITH DELAY SIGNALLING
                  TSEMW        TSEM TRUNK WITH WINK SIGNALLING
                  TSEMH        TSEM TRUNK WITH NO SIGNALLING
                  TSEMI        TSEM TRUNK WITH IMMEDIATE SIGNALLING
                  TSEMD        TSEM TRUNK WITH DELAY SIGNALLING
                  S1B          CORNET BEARER CHANNEL
                  PRIB         PRI BEARER CHANNEL
                  T1NS         T1 NO SIGNALLING TRUNK
                  T1DID        T1 TRUNK EMULATING DID TRUNK
                  DID          DIRECT INWARD DIALING TRUNK
DEV = prib

SRTIDX = ?
SRTIDX          : SERVICE RULE TABLE INDEX FOR DID TRANSLATION -PRIB TRUNKS
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : 0-15
SRTIDX =

LOCANA = ?
LOCANA          : LOCAL ASSIGNED NIGHT ANSWER
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : MAX. OF 6 POSITIONS
LOCANA =

REMANA = ?
REMANA          : REMOTE ASSIGNED NIGHT ANSWER
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : MAX. OF 6 POSITIONS
REMANA =

ATNTYP =
LCRCOSV = 1
LCRCOSD = 1

COSNO = ?
COSNO           : CLASS OF SERVICE NUMBER FOR
CHARACTERISTIC  : REQUIRED
POSSIBLE VALUES : 0-127
```

```
COSNO = 1

DEDSVC = ?
DEDSVC          : DEDICATED SERVICE FOR PRIB TRUNKS
CHARACTERISTIC  : OPTIONAL              CONDITIONAL
POSSIBLE VALUES : NONE          NOT A SPECIAL DEVICE
                  TTA           TIE TRUNK ACCESS
                  FX            FOREIGN EXCHANGE ACCESS SERVICE
                  PRIV          PRIVATE NETWORK SERVICE
                  MCI8          MCI 800
                  MCIP          MCI PRISM-1
                  MCIV          MCI VNET
                  WB9           WATS BAND 9
                  WB8           WATS BAND 8
                  WB7           WATS BAND 7
                  WB6           WATS BAND 6
                  WB5           WATS BAND 5
                  WB4           WATS BAND 4
                  WB3           WATS BAND 3
                  WB2           WATS BAND 2
                  WB1           WATS BAND 1
                  WB0           WATS BAND 0
                  MSB           MAXIMAL SUBSCRIBED WATS BAND
                  INW           INCOMING WATS
                  A64R          ACCUNET 64 R
                  A64C          ACCUNET 64 C
                  A56           ACCUNET 56
                  ILD           INTERNATIONAL LONG DISTANCE
                  SDN           SOFTWARE DEFINED NETWORK
                  MEG8          MECACOM 800
                  MEG           MEGACOM
DEDSVC = none

SIDANI = ?
SIDANI          : SID ANI REQUESTS ARE POSSIBLE ON PRIB TRUNK
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : Y             YES
                  N             NO
SIDANI =

TRTBL = ?
TRTBL           : TRANSLATION TABLE USED
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : GDTR          GENERAL DIGIT TRANSLATION TABLE
                  DIDCR         DID CONVERSION TABLE
TRTBL = didcr
ADD-TCSU:1-1-73-
1,23,100,100,0,0,100,,,N,,,123456,PRIB,,,,,1,1,1,NONE,,DIDCR;
H500:  AMO TCSU  STARTED
F125:  TRUNK GROUP 100 IS INCOMING OR BOTHWAY - MUST ENTER SRTIDX.
SRTIDX = 1
AMO-TCSU -111       TRUNK CONFIGURATION, SWITCHING UNIT
ADD COMPLETED;
```

Modify D-Channel from Default:

```
<cha-tcsu
PEN = 1-1-73-24
COTNO =
COPNO =
DPLN =
ITR =
TGRP =
ACDATA =
CCT =
DITIDX =
TRKID =
TCCID =

DEV = ?
DEV              : DEVICE TYPE (DEVICE HANDLER)/MODULE TYPE
CHARACTERISTIC   : OPTIONAL              CONDITIONAL
POSSIBLE VALUES : ATMPBD       ATM BACKBONE D-CHANNEL
                  ATMIWD       ATM INTERWORKING D-CHANNEL
                  ATMPBB       ATM INTERWORKING B-CHANNEL
                  ATMIWB       ATM INTERWORKING B-CHANNEL
                  T1GRDSTR     T1 TRUNK EMULATING GROUND-START TRUNK
                  GRDSTR       GROUND-START TRUNK
                  T1LPSTR      T1 TRUNK EMULATING LOOP-START TRUNK
                  LPSTR        LOOP-START TRUNK
                  T1EMW        T1EM TRUNK WITH WINK SIGNALLING
                  T1EMP        T1EMP TRUNK WITH PLAR SUPPORT
                  T1EMI        T1EM TRUNK WITH IMMEDIATE SIGNALLING
                  T1EMD        T1EM TRUNK WITH DELAY SIGNALLING
                  TSEMW        TSEM TRUNK WITH WINK SIGNALLING
                  TSEMH        TSEM TRUNK WITH NO SIGNALLING
                  TSEMI        TSEM TRUNK WITH IMMEDIATE SIGNALLING
                  TSEMD        TSEM TRUNK WITH DELAY SIGNALLING
                  PRID         PRI SIGNALING CHANNEL
                  PRIB         PRI BEARER CHANNEL
                  T1NS         T1 NO SIGNALLING TRUNK
                  T1DID        T1 TRUNK EMULATING DID TRUNK
                   DID          DIRECT INWARD DIALING TRUNK
                  S1D          CORNET SIGNALING CHANNEL
                  S1B          CORNET BEARER CHANNEL
DEV = prid

PROTOCOL = ?
PROTOCOL         : PROTOCOL IDENTIFICATION FOR D CHANNEL
CHARACTERISTIC   : OPTIONAL
POSSIBLE VALUES : ATT4E3       AT&T 4ESS (TEST VERSION 3)
                  ATT4E4       AT&T 4ESS (TEST VERSION 4 - FUTURE )
                  ATT5E8       AT&T 5ESS(SOFTWARE GENERIC 5E7/8)
                  ATT5E9       AT&T 5ESS(SOFTWARE GENERIC 5E9)
                  ATT5E10      AT&T 5ESS(SOFTWARE GENERIC 5E10- FUTURE )
                  ATT5E11      AT&T 5ESS(SOFTWARE GENERIC 5E11- FUTURE )
                  ATT5E12      AT&T 5ESS(SOFTWARE GENERIC 5E12- FUTURE )
                  BC36         BELL CANADA DMS-100(RELEASE BCS-36)
                  BC37         BELLCANADA DMS-100(RELEASE BCS-37/LEC-03-
                  BC38         BELLCANADADMS-100(RELEASE BCS-38/LEC-04-)
                  BC39         BELLCANADA DMS-100(RELEASE BCS-39/LEC-05-
```

```
                    D10036       NTI DMS-100(RELEASE BCS-36)
                    D10037       NTI DMS-100(RELEASE BCS-37/LEC-03- FUTURE)
                    D10038       NTI DMS-100(RELEASE BCS-38/LEC-04- FUTURE)
                    D10039       NTI DMS-100(RELEASE BCS-39/LEC-05- FUTURE)
                    EWSD11       SIEMENS EWSD(RELEASE APS-11)
                    EWSD12       SIEMENS EWSD(RELEASE APS-12- FUTURE)
                    EWSD13       SIEMENS EWSD(RELEASE APS-13- FUTURE)
                    EWSD14       SIEMENS EWSD(RELEASE APS-14- FUTURE)
                    FTS5E        GSA FTS-2000(AT&T 5ESS - FUTURE)
                    FTS250       GSA FTS-2000(SPRINT DMS-250)
                    IEC1         INTER-EXCHANGE CARRIER 1(FUTURE)
                    LEC1         LOCAL EXCHANGE CARRIER 1(FUTURE)
                    MCI136       MCI DEX600(RELEASE 36)
                    MCI137       MCI DEX600(RELEASE 37- FUTURE )
                    MCI138       MCI DEX600(RELEASE 38- FUTURE )
                    MCI139       MCI DEX600(RELEASE 39- FUTURE )
                    MCI236       MCI DMS-250(RELEASE BCS-36/IEC-01)
                    MCI237       MCI DMS-250(RELEASE BCS-37/IEC-02- FUTURE )
                    MCI238       MCI DMS-250(RELEASE BCS-38/IEC-03- FUTURE )
                    MCI239       MCI DMS-250(RELEASE BCS-39/IEC-04- FUTURE )
                    NI2          NATIONAL ISDN 2
                    NI3          NATIONAL ISDN 3 - FUTURE
                    SA1          SPECIAL APPLICATION 1(UNDESIGNATED SPARE-
                    SPRINT36     SPRINT DMS-250(BCS-36/IEC-01)
                    SPRINT37     SPRINT DMS-250(BCS-37/IEC-02- FUTURE )
                    SPRINT38     SPRINT DMS-250(BCS-38/IEC-03- FUTURE )
                    SPRINT39     SPRINT DMS-250(BCS-39/IEC-04- FUTURE )
                    WCIN36       WESTINGHOUSE DMS-250(BCS-36/IEC-01)
                    WCIN37       WESTINGHOUSE DMS-250(BCS-37/IEC-02-FUTURE )
                    WCIN38       WESTINGHOUSE DMS-250(BCS-38/IEC-03-FUTURE )
                    WCIN39       WESTINGHOUSE DMS-250(BCS-39/IEC-04)-FUTURE
PROTOCOL = att5e8
```

*****Protocol would be "NI2" if using National ISDN 2*****

```
DEDSCC = ?
DEDSCC          : DEDICATED SPECIAL COMMON CARRIER FOR PRID
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : MAX. OF 4 POSITIONS
DEDSCC =

INTERFID = ?
INTERFID        : INTERFACE IDENTIFICATION NUMBER FOR PRI D CHANNEL
CHARACTERISTIC  : OPTIONAL
POSSIBLE VALUES : 0-31
INTERFID =

TMR301 = ;
CHA-TCSU:1-1-73-24,,,,,,,,,,PRID,ATT5E8,,,;
H500:  AMO TCSU  STARTED
H11 :  PROTOCOL CHANGED - CHECK THE DEDSVC ON THE SPAN FOR THE
       COMPATIBILITY TO THE NEW PROTOCOL.
H10 : TIMERS HAVE BEEN CHANGED TO THE DEFAULT VALUES BASED ON THE
      PROTOCOL SELECTED.
H14 :  PRID TRUNK AT PORT 1-1-73-24 WAS CHANGED.
AMO-TCSU -111       TRUNK CONFIGURATION, SWITCHING UNIT
```

Display Trunk Members:

```
<dis-tscu
PEN1 = 1-1-73-24;
H500:  AMO TCSU  STARTED
 +-------------------------------------------------------------------------+
 | PEN:  1- 1- 73- 1  INS: Y   BOARD: TMDN64P    DEV: PRIB      TGRP: 100 |
 +-------------------------------------------------------------------------+
 | TRKID  : 0001          TCCID    :                                       |
 | CCT    : 23      /0001                                                  |
 |                                                                         |
 | ACDATA : 0             DITIDX   : 0           LOCANA   :                |
 | ATNTYP : CO            DPLN     : 0           REMANA   :                |
 | COPNO  : 100           ITR      : 0           SIDANI   : N              |
 | COSNO  : 100           LCRCOSD  : 1           SRTIDX   : 1              |
 | COTNO  : 100           LCRCOSV  : 1           TRTBL    : DIDCR          |
 | DEDSVC : NONE          FACILITY : *                                     |
 +-------------------------------------------------------------------------+
```

7. Verification:

Making basic test calls, (direct dialing an extension) from each system verifies the connection. This application uses ESS5 and NI-2 standards. It is assumed that all features that are supported by these standards will work.

8. Conclusion:

This solution provides a means by which customers with traditional TDM based PBX communications networks, like the Siemens Hicom 300, can become IP Enabled without completely replacing their whole infrastructure. Enabling a gradual migration to a converged solution facilitates opportunities for enterprises using non-Avaya solutions to get familiar with applications and administration of the new Avaya platforms gradually. Enhancements to the enterprise network and the addition of services for new employees can be added to the new Avaya platform as the business needs continue to spawn opportunities for incremental change.