Establishment GURGAON	**Alcatel-Lucent India Ltd.**
2011	**CREATION OF PRA**

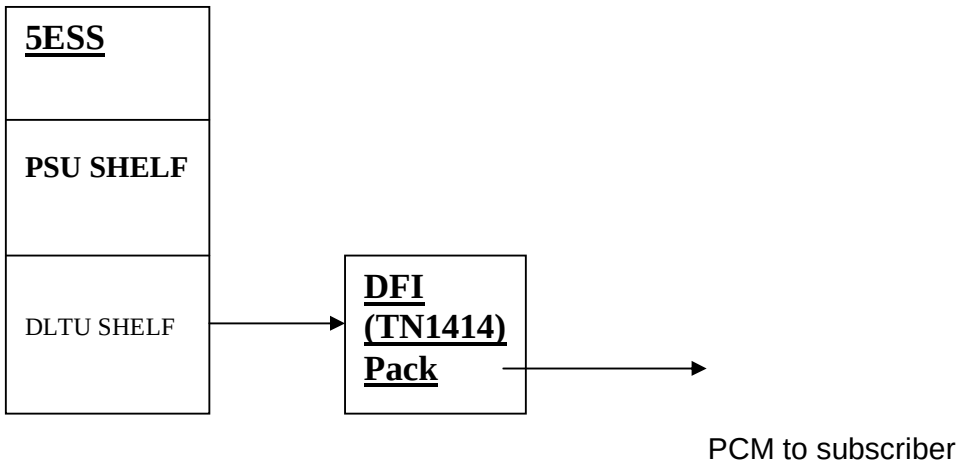
Area	:	**ALCATEL-LUCENT 5ESS SWITCH**
Type	:	TECHNICAL NOTE

IMPLEMENTATION BY	SITE

DOCUMENT PREPARED BY	PRANAY DESAI, 5ESS TAC
DOCUMENT REVIEWED BY	VINOD MONTEIRO, 5ESS TAC HEAD

1. INTRODUCTION

This technical note describes the procedure for setting up primary rate access directly connected to the exchange at trunk unit (DFI of DLTU). This procedure is based on an example which you can adapt to fit your exchange's configuration.



2. PREREQUISITE

1) The Switching Module (SM) from which PRI needs to be given must be equipped with a PSU shelf with at least one of the PH's defined with EISDN functionality and having at least 4 consecutive spare channels available for definition of the PRI.

2) The Switching Module (SM) from which PRI needs to be given must be equipped with a DLTU shelf with at least one DFI pack (TN1414 pack) available with E1's from the same available for definition of the PRI.

3. LIMITATIONS

1. Review RC/V 95.11 (FETVL) for feature PRADFI and ensure maximum allocated quantity of PRA's that are allowed to be created is not exhausted(Refer field MAX for the maximum value allowed and ensure it is less than the USED count). A sample RC/V 95.11 form is as below. Kindly note the same is site specific and MAX and USED values will vary based on site's initial requirement and quantity used. **If the used quantity is equal to max quantity then the subscription has to be enhanced by procuring the password for additional quantities which are required to be grown.**

```
SCREEN 1 OF 1                RECENT CHANGE  95.11

                             FEATURE VALIDATION

*1. FEATURE   PRADFI

#2. CODE      m8K03t5v268tnY8PpLr03tssxpsno (sample)

&3. MAX       50

&4. USED      45

&5. ENABLED   _
```

&6. EXPDATE _____

2. One PH3 pack (TN1371C) defined with EISDN functionality has 128 channels available for definition of BRA and PRA's. 1 PRA requires 4 consecutive channels of the PH while 1 BRA subscriber requires only 1 channel of this PH. Ensure atleast 4 consecutive free channels are available in the PH from which PRI is being defined before proceeding with PRA creation.

3. The Number of PRA's that can be defined from an SM also depends on the type of DF pack equipped in the PSU shelf. Kindly note that a UN192 DF pack supports only 1 PIDB and upto 6DPIDB's thus limiting the number of PRI's that can be given from this pack to 31 (1 PIDB has 31 definable timeslots available and 1 PRA requires 1 Full Timeslot) whereas a UN348/UN399 DF-MP pack supports upto 4 PIDB's and 0 DPIDB's meaning a maximum of 124 PRA's can be defined from this pack although no BRA's can be defined from the DF-MP pack.

Note: Normally RSMs are equipped with UN192 DF pack PSU shelf to be able to cater to both BRA's and PRA's.

4. PRA CREATION PROCEDURE

1. Add a subscriber class in view 1.5(SBCLS) with ORIG CLASS EISDN and TERM CLASS IPBX to use regular DA tables. Sample RC/V form attached as below.
2.

```
SCREEN 1 OF 1            RECENT CHANGE  1.5 SBCLS
                  CLASS CHARACTERISTICS -- SUBSCRIBER GROUP

*1. LOCAL AREA      01
*2. SB CLASS        IPX
#3. ORIG CLASS      EISDN
#4. TERM CLASS      IPBX
#5. SCR INDEX       21
6. DIGIT ANL        5
&7. NBR OF LINES    71

TRAFFIC DISPERSION MEASUREMENTS
#8. SRC MEASMNT     0
#9. DEST MEASMNT    0
10. REMARKS         ISDN LINES
Enter Review, Change-insert, Validate, or Print:
```

2. Check for free PICBs and PIDBs on the available CIs and DXs in view 8.3(EMCIA) and 8.5 (EMDIA).

3. Grow in the new DLTU pack in view 9.2 (EPDLT). FAC0 MODE and FAC1 MODE should be CCS. Sample RC/V form attached as below.

```
SCREEN 1 OF 9                    RECENT CHANGE  9.2 EPDLT
              0            DIGITAL LINE TRUNK UNIT PACK

 *1. SM          003
 *2. DLTU         00
 *3. DFI         05
 *4. FAC IND      2
 #5. TYPE        TRUNK
 #6. CLI         1000e
 #7. CHNLIND     32
 #8. INTF UNIT   0
 #9. CI          0
#10. PICB        6
 11. C5 GDSF     __

Enter Review, Change-insert, Validate, screen#, or Print:

                                WRLD3
 SCREEN 2 OF 9                    RECENT CHANGE  9.2 EPDLT
              0            DIGITAL LINE TRUNK UNIT PACK

FACILITY 0 INFORMATION
 12. FAC0 APPL TYPE    ______
 13. FAC0 DI           0
 14. FAC0 PIDB         16
 15. FAC0 EQSTAT       O
&16. FAC0 PATTERN      _
 17. FAC0 MODE         CCS
 18. FAC0 FACILITY     BANK OF BARODA
 19. FAC0 FRM SET      01
 20. FAC0 CGADLYID     00
&21. FAC0 DCME         ___
 22. FAC0 EECU         N
Enter Review, Change-insert, Validate, screen#, or Print:
```

```
SCREEN 3 OF 9                    RECENT CHANGE  9.2 EPDLT
              0          DIGITAL LINE TRUNK UNIT PACK

HOST FAC
23. FAC0 COMM LINK          N

REMOTE FAC
24. FAC0 SUBGRP RLI MUX     _
25. FAC0 PORT RLI MUX       _

26. FAC0 AFAC ID            0

Enter Review, Change-insert, Validate, screen#, or Print:

                                WRLD3
 SCREEN 4 OF 9                   RECENT CHANGE  9.2 EPDLT
              0          DIGITAL LINE TRUNK UNIT PACK

FACILITY 0 SIGNALING BIT INFORMATION    38. FAC0 N0                 N
27. FAC0 SA5 FR0TS16     1              39. FAC0 N1 THRU N4         N
28. FAC0 SA7 FR0TS16     1              40. FAC0 SPARING            N
29. FAC0 SA8 FR0TS16     1
30. FAC0 ODD INTL        1
31. FAC0 EVEN INTL       1
32. FAC0 SA4 NATL0       1
33. FAC0 SA5 NATL1       1
34. FAC0 SA6 NATL2       1
35. FAC0 SA7 NATL3       1
36. FAC0 SA8 NATL4       1
37. FAC0 IE AND IO       N
Enter Review, Change-insert, Validate, screen#, or Print:

                                WRLD3
 SCREEN 5 OF 9                   RECENT CHANGE  9.2 EPDLT
              0          DIGITAL LINE TRUNK UNIT PACK

FACILITY 0 ECHO CANCELLER PACK          52. FAC0 RSD ECTL     _
41. FAC0 EC5          N                 53. FAC0 TRANS EN     _
42. FAC0 ECSU         __                54. FAC0 EC BYP       _
43. FAC0 POS EC5      __                55. FAC0 EC5 MODE     ___
44. FAC0 CI EC5       _
45. FAC0 PICB EC5     __
46. FAC0 CLI EC5      ________
```

47. FAC0 END PATH ____
48. FAC0 TONE DIS _____
49. FAC0 ALPHA VAL ___
50. FAC0 TN MATCH _
51. FAC0 NB ENGDT _
Enter Review, Change-insert, Validate, screen#, or Print:

WRLD3
SCREEN 6 OF 9 RECENT CHANGE 9.2 EPDLT
0 DIGITAL LINE TRUNK UNIT PACK

FACILITY 1 INFORMATION
56. FAC1 APPL TYPE _____
57. FAC1 DI 0
58. FAC1 PIDB 17
59. FAC1 EQSTAT O
&60. FAC1 PATTERN _
61. FAC1 MODE CCS
62. FAC1 FACILITY NP-PUNE-6
63. FAC1 FRM SET 01
64. FAC1 CGADLYID 00
&65. FAC1 DCME ___
66. FAC1 EECU N
Enter Review, Change-insert, Validate, screen#, or Print:

SCREEN 7 OF 9 RECENT CHANGE 9.2 EPDLT
0 DIGITAL LINE TRUNK UNIT PACK

HOST FAC
67. FAC1 COMM LINK N

REMOTE FAC
68. FAC1 SUBGRP RLI MUX _
69. FAC1 PORT RLI MUX _
70. FAC1 AFAC ID 0
Enter Review, Change-insert, Validate, screen#, or Print:

SCREEN 8 OF 9 RECENT CHANGE 9.2 EPDLT
0 DIGITAL LINE TRUNK UNIT PACK

FACILITY 1 SIGNALING BIT INFORMATION
71. FAC1 SA5 FR0TS16 1
72. FAC1 SA7 FR0TS16 1
73. FAC1 SA8 FR0TS16 1
74. FAC1 ODD INTL 1
75. FAC1 EVEN INTL 1
82. FAC1 N0 N
83. FAC1 N1 THRU N4 Y
84. FAC1 SPARING N

76. FAC1 SA4 NATL0 1
77. FAC1 SA5 NATL1 1
78. FAC1 SA6 NATL2 1
79. FAC1 SA7 NATL3 1
80. FAC1 SA8 NATL4 1
81. FAC1 IE AND IO N

SCREEN 9 OF 9
RECENT CHANGE 9.2 EPDLT
DIGITAL LINE TRUNK UNIT PACK

FACILITY 1 ECHO CANCELLER PACK
85. FAC1 EC5 N
86. FAC1 ECSU __
87. FAC1 POS EC5 __
88. FAC1 CI EC5 _
89. FAC1 PICB EC5 __
90. FAC1 CLI EC5 _____
91. FAC1 END PATH ____
92. FAC1 TONE DIS _____
93. FAC1 ALPHA VAL ___
94. FAC1 TN MATCH _
95. FAC1 NB ENGDT _
96. FAC1 RSD ECTL _
97. FAC1 TRANS EN _
98. FAC1 EC BYP _
99. FAC1 EC5 MODE ___

4. Insert ISDN PBX in 67.1 (IGCHR). Choose a number in the office dialing plan,but not used elsewhere for the lister dirnr. Use subscriber class defined in step 1 for SB CLASS; do not define any Nx64 capability. Sample RC/V form attached as below.

SCREEN 1 OF 4 RECENT CHANGE 67.1 IGCHR
ISDN PBX CHARACTERISTICS

*1. PBX ID 1257
#2. INDIAL Y
#3. LISTED DIRNR 222357700
4. LOCAL AREA 1
#5. SB CLASS IPX
6. OVFL PBX ID ____
7. RMN CLD DIGS ALL
8. ADD CLD DIGS _____
9. COMPLAINT N
#10. LANGUAGE 2
&11. ORIG1 GRP ____
&12. ORIG1 TYPE ____
&13. ORIG2 GRP ____
&14. ORIG2 TYPE ____
&15. HUNT1 GRP 1257
&16. HUNT1 TYPE PRA
&17. HUNT2 GRP ____
&18. HUNT2 TYPE ____
&19. HUNT3 GRP ____
&20. HUNT3 TYPE ____
&21. HUNT4 GRP ____
&22. HUNT4 TYPE ____
23. REMARKS dimex diamond

Enter Review, Change-insert, Validate, screen#, or Print:

```
SCREEN 2 OF 4                  RECENT CHANGE  67.1 IGCHR
                          ISDN PBX CHARACTERISTICS

24. AMATRC                  N
25. SERV PROV               N
26. BILL TYPE               BILLAMA
27. BILL DIR NR             222357700
28. CRD LIM STATUS          I
29. CRD LIM                 0
&30. CREDIT LIMIT EXCEEDED      N
#31. TYPE OF USER           NETWORK
32. PART BARRING            N
33. ORIG DENIED             N
34. TERM DENIED             N
35. NO PAYMENT              N
Enter Review, Change-insert, Validate, screen#, or Print:
```

```
SCREEN 3 OF 4                  RECENT CHANGE  67.1 IGCHR
                          ISDN PBX CHARACTERISTICS

&36. CHANGE TIME      ________________   48. IBERCOM PLUS        N
37. RMN PART DIGS     ALL                49. VER CHARGE          N
38. ADD PART DIGS     __________        &50. NBR DDI RANGES      1
39. CGPN TREAT        OPT               &51. NBR EXT RANGES      0
40. CDPN TREAT        OPT               &52. NBR BRA ACCESSES    0
41. PART ALLOW        N                 &53. NBR PRA ACCESSES    1
42. LINE STUDY        Y                  54. LOG EPS NUM         __
#43. EPLS PRIORITY    0                  55. FORCE NAT FORMAT    Y
44. NX64 RATE         __________
45. NX64 TSA TYPE     _____
46. LINE BILL         N
47. IBERCOM           N
Enter Review, Change-insert, Validate, screen#, or Print:
```

SCREEN 4 OF 4 RECENT CHANGE 67.1 IGCHR
ISDN PBX CHARACTERISTICS
BEARER SERVICE GROUPS 61. OUT PORTED N
&56. GROUP 1 SP3P1
&57. GROUP 2 CSDATA
&58. GROUP 3 _____
&59. GROUP 4 _____
&60. GROUP 5 _____

5. Insert 67.3 (IGGRP) for the number of the PRA trunk group,PRA for GROUP TYPE, UCD for HUNT TYPE, PBX ID from step 4, FUNCTIONHUNT, PKT TYPE BB or NONE,Nx64 CAPABLE is N. Sample RC/V form attached as below.

SCREEN 1 OF 1 RECENT CHANGE 67.3 IGGRP
ISDN GROUP

*1. GROUP NR 1257 9. NX64 CAPABLE N
*2. GROUP TYPE PRA &10. NX64 RATE _____
3. GROUP HTYPE UCD &11. NX64 TSA TYPE _____
4. PBX ID 1257 12. DATA RATE 64K
5. FUNCTION HUNT &13. GRP SIZE 31
6. POSITION 1 &14. ACT SIZE 30
7. SEMIPERM N 15. REMARKS DIMEX DIAMOND
8. PKT TYPE NONE 16. APPLICATION _____

Enter Review, Change-insert, Validate, or Print:

6. Insert view 67.3(IGGRP) for the D-channel of the PRA trunk group (use group number 301 if PRA trunk group is 300, for example). GROUP TYPE is PRAD , GROUP HTYPE is NONE , DATA RATE is 64K, rest of the fields N or NONE.

7. Insert view 67.2 for bearer services i.e SP3P1 and CSDATA . Sample RC/V form attached as below.

```
SCREEN 1 OF 2                  RECENT CHANGE  67.2 IGBSC
                ISDN PBX BEARER SERVICE GROUP CHARACTERISTICS

*1. PBX ID            1257                  13. AOC S              N
*2. BEARER SERV GRP   CSDATA                14. AOC S FLAV         ALL
 3. TONES ANNC        N                     15. AOC D              N
 4. OVERFLOW          N                     16. AOC D FLAV         ALL
 5. AUDIBLE           N                     17. AOC E              N
 6. DISPLAY           Y                     18. AOC E FLAV         ALL
 7. SUBADDR           N                     19. AOC DC EC NTF      _____
 8. LOW LVL COMP      Y                     20. AOC INFO IN UNITS  N
 9. HIGH LVL COMP     Y
10. MC TRACE          NOTRC
11. MC TRACE NO ANS   N
&12. SERVICES         N
Enter Review, Change-insert, Validate, screen#, or Print:


SCREEN 2 OF 2                  RECENT CHANGE  67.2 IGBSC
                ISDN PBX BEARER SERVICE GROUP CHARACTERISTICS

USER TO USER SIGNALING
21. UUS1              N
#22. UUS2             N
23. UUS3              N
24. UUS2 IMPLIED      N
25. UUS3 IMPLIED      N
26. UUS3 PROTOCOL     __________

27. NON SRVD USR NTF  __________
&28. NX64 RATE        __________
&29. NX64 TSA TYPE    _____
```

8. Use view 9.9 (EUPHW) to assign a new PH3 group from the new PH3s or note which groups have GROUP TYPE EISDN.

9. Use view 65.2 (ISPRA) to insert the PRA.The key is the D-channel time slot. (For example, if DLTU0 DFI7 were grown in on SM6, then the EQ NR would be D 00600007016 for facility 0.) PBX ID from step 4, CHNL GROUP NR from step 6, D ISCN based on information gathered in step 7. Make Nx64 CAPABLE N. Sample RC/V form attached as below.

```
SCREEN 1 OF 5                    RECENT CHANGE  65.2 ISPRA
                        ISDN PRIMARY RATE ACCESS DEFINITION

*1. EQ NR              D 00300005016    13. TYPE OF USER      NETWORK
#4. PBX ID             1257             14. MSN               N
#5. D CHNL GROUP NR    1258             15. MAX CALLS         1
#6. D CHNL MEMBER NR   1                16. TEI MGMT          Y
#7. D ISCN             001092           17. OUT MSG SEG       N
8. TRANS PRIORITY      TPRIORD          &18. DEFAULT DIR NR
9. EPLS PRIORITY       0                19. NX64 CAPABLE      N
10. CGPN TREAT         OPT              20. DATA RATE         64K
11. CDPN TREAT         OPT              21. REMARKS           DIMEX
DIAMOND
12. AUDIBLE            N

Enter Review, Change-insert, Validate, screen#, or Print:

SCREEN 2 OF 5                    RECENT CHANGE  65.2 ISPRA
                        ISDN PRIMARY RATE ACCESS DEFINITION

22. D CHANNEL PS LIST
   TEI DLCI    TRK GRP NR TRK NR EPS CG  LOG EPS NUM TYPE
1)  __ ________  _____  _____ ________  __  ______
2)  __ ________  _____  _____ ________  __  ______
3)  __ ________  _____  _____ ________  __  ______
4)  __ ________  _____  _____ ________  __  ______
5)  __ ________  _____  _____ ________  __  ______
6)  __ ________  _____  _____ ________  __  ______
7)  __ ________  _____  _____ ________  __  ______
8)  __ ________  _____  _____ ________  __  ______
Enter Review, Change-insert, Validate, screen#, or Print:
```

SCREEN 3 OF 5 RECENT CHANGE 65.2 ISPRA
ISDN PRIMARY RATE ACCESS DEFINITION
22. D CHANNEL PS LIST

	TEI	DLCI	TRK GRP NR	TRK NR	EPS CG	LOG EPS NUM	TYPE
9)	__	_____	____	____	_____	__	_____
10)	__	_____	____	____	_____	__	_____
11)	__	_____	____	____	_____	__	_____
12)	__	_____	____	____	_____	__	_____
13)	__	_____	____	____	_____	__	_____
14)	__	_____	____	____	_____	__	_____
15)	__	_____	____	____	_____	__	_____
16)	__	_____	____	____	_____	__	_____

Enter Review, Change-insert, Validate, screen#, or Print:

SCREEN 4 OF 5 RECENT CHANGE 65.2 ISPRA
ISDN PRIMARY RATE ACCESS DEFINITION

&41. B CHANNELS PROVISIONED

	SERV	GROUP NR	MEMBER NR		SERV	GROUP NR	MEMBER NR
1)	CSDV	1257	0001	9)	CSDV	1257	0009
2)	CSDV	1257	0002	10)	CSDV	1257	0010
3)	CSDV	1257	0003	11)	CSDV	1257	0011
4)	CSDV	1257	0004	12)	CSDV	1257	0012
5)	CSDV	1257	0005	13)	CSDV	1257	0013
6)	CSDV	1257	0006	14)	CSDV	1257	0014
7)	CSDV	1257	0007	15)	CSDV	1257	0015
8)	CSDV	1257	0008	16)	CSDV	1257	0016

SCREEN 5 OF 5 RECENT CHANGE 65.2 ISPRA
ISDN PRIMARY RATE ACCESS DEFINITION
&41. B CHANNELS PROVISIONED

	SERV	GROUP NR	MEMBER NR		SERV	GROUP NR	MEMBER NR
17)	CSDV	1257	0017	25)	CSDV	1257	0025
18)	CSDV	1257	0018	26)	CSDV	1257	0026
19)	CSDV	1257	0019	27)	CSDV	1257	0027
20)	CSDV	1257	0020	28)	CSDV	1257	0028
21)	CSDV	1257	0021	29)	CSDV	1257	0029
22)	CSDV	1257	0022	30)	CSDV	1257	0030
23)	CSDV	1257	0023				
24)	CSDV	1257	0024				

Enter Review, Change-insert, Validate, screen#, or Print:

10. Use RC/V 65.5 to insert members for this PBX.

```
SCREEN 1 OF 1                    RECENT CHANGE  65.5 ISMEM
                          ISDN GROUP MEMBER ASSIGNMENT
*1. GROUP NR        1257
*2. GROUP TYPE       PRA
*3. MEMBER NR        0001
#4. EQ NR           D 00300005001
7. MEMBER QTY        15__  ( <<<<< Number of Members to be inserted)
&8. PBX ID          1257
V5 FIELDS
9. V51 TIMESLOT     __
```

11. Once all of the errors are cleared up and 65.2 inserts successfully, the 112X page for the DFI will show that the facility is a PRA.

5. RESTORING THE PRA D-TRUNK

1. Restore D-channel of the PRA E1 first as below:

   RST-DTRK:DEN=SM-DLTU-DFI-(16/48),ucl,OOS,DSBLD;

   Verify that trunk is restored using
   OPST-DTRK:SM-DLTU-DFI-TS;

2. Restore the other members of the PRA E1 as below:

   RST-DTRK:DEN=SM-DLTU-DFI-(1-31),ucl,OOS,DSBLD;

   Verify that trunk is restored using
   OPST-DTRK:SM-DLTU-DFI-TS;