4.8 BWM NUMBER. INF98-0008 Local Number Portability on LDP - IMR 599162

SYSTEM IDENTIFICATION.
  5E13.1

BWM TYPE.
  INF

PROFILE MATCH.
  5E13,(1)02.00

SUBJECT.
  Local Number Portability on LDP - IMR 599152

PERSON TO CONTACT.
  DATE: 11/05/98
   Normal regional support should be attempted before escalation.

KEYWORDS.
  CSCANS 500013198I0008

SPECIAL INSTRUCTIONS.
  NONE

GENERAL INFORMATION.
   This announces the upcoming availability of the Local Number Portability
   on Long Distance Platform (LNP on LDP) Special Feature. This feature is being
   deployed on the 5ESS Switch in a software update for the 5E13(1) 5ESS Switch
   Software Release.

   This feature's use is RESTRICTED until the purchaser has made the necessary
   financial arrangements with Lucent Technologies. Information on feature
   enabling will be provided upon ordering. Please contact your Lucent
   Technologies Network Systems Account Representative for ordering and pricing
   information. This feature is a Call Processing secured Special Feature, which
   is controlled by secured number 303 and is tracked by IMR 599162. The
   Lucent feature number for LNP on LDP is 99-5E-3837.

   LNP on LDP provides the ability to support Number Portability on the
   Long Distance Platform. The existing Number Portability feature,
   99-CP-3169, does not provide for portability support on the 5ESS-2000
   Long Distance Switch.

   LNP

   The existing capability, Local Number Portability (LNP), gives the end-user
   the ability to move from one switch to another and keep their original
   Directory Number (DN). There are three types of Local Number Portability.
   1) Service portability allows a user to retain their DN after changing
   services (e.g., POTS to ISDN). 2) Service provider portability allows a
   user to retain their DN after changing service providers. 3) Geographic
   portability allows a user to retain their DN after changing physical
   locations. The initial 5E11 offering, Number Portability-Basic Location
   Routing Number (LRN), (99-CP-3169), supports all three types of Local Number
   Portability, with limited geographical portability (portability within the
   LATA). The LNP trigger operation will be consistent across the toll and local
   switch. This new feature provides the ability to use the existing LNP
   capability on the LDP. It is assumed that the user is already familiar

with LDP. It is essential that the service provider understand how to
provision LNP in general. See the NP User's Guide 235-190-127, or the NP
Roadmap 781-610-300 for more LNP information.

SFID

To unlock LNP on LDP (SFID 303) the LNP feature (SFID 174) must first
be enabled.

FEATURE DESCRIPTION

This feature allows for support of LNP triggers in the LDP. There is a
need for LNP triggers to be encountered and honored in the originating
toll switch, intermediate toll switch, and the terminating toll switch.
This feature allows the end-to-end network provider to select at which
point in the network the LNP queries should be performed.

If a toll network is providing LNP queries for proper call delivery to
multiple end offices serving overlapping rate centers, then the toll
provider may want to provision LNP triggers in the terminating toll
switches. If a toll network would like to perform LNP queries as soon as
the call is received into the toll network, then LNP triggers can be
provisioned on all the toll switches in that toll network using LRN values
for call routing within the toll network, and passing off calls to other
toll carriers without an LNP query.

If a called DN is ported and the LNP processing is to be done by the
LDP network, then this capability is needed by the LDP switch to perform
the LNP query, (usually the originating LDP switch connecting to the
serving end office).

Without this feature, an LNP query to the LNP database will not be performed
by the LDP switch. In this case, calls being routed within the toll network
would always be routed to the incumbent exchange; that is, to the exchange
that serves as the home exchange for that NPA-NXX.

As with LNP, the dialed number will be sent up in the LNP query, and either
the dialed number will be returned (for the non-ported case), or the LRN
(for the ported case). If an LRN is returned, the appropriate DAS will be
used to analyze the LRN and route to the next switch. The call will be
routed following the LNP query using the Location Routing Number (LRN) and
the dialed DN will be passed in the ISUP Generic Address Parameter (GAP)
and ISUP Forward Call Indicator (FCI) for LNP.

ENHANCEMENTS

The enhancements to LNP on the LDP included in this feature will include
the following:

(1) Allowing LNP triggers to be encountered and honored in the toll network,
    with all existing TYP CI CALLs supported by LNP, and also "INTER", on
    the LDP, when the feature is purchased. Line originations with a TYP CI
    CALL of "INTER" will continue to bypass LNP triggers until geographic
    porting is fully supported.

(2) Allowing call originations from LDP LATA trunks to encounter LNP triggers.

(3) Providing additional AMA capabilities to allow the LNP AMA to complement
    the LDP AMA capabilities in support of LNP as well as incorporate the LNP
    AMA data into the Real Time Call Detail (RTCD) records.

(4) Supporting LNP trigger interworking with the LDP features including
    the ANI Table triggers and LDP carrier table features and triggers,
    and MINT signaling and routing features.

This feature allows LNP triggers and LNP provisioning to interwork with the
LDP's ANI Table and LDP Carrier Table triggers.

Once the feature has been purchased, it may be used to:

(1) Set up an LNP TRIG NBR and/or PORTED IN on RC/V 9.3 LDIT (or RC/V 9.9
    RDIT or RC/V 9.15 MLDIT), in the trunk DAS of an incoming trunk to an
    originating, intermediate, or terminating LDP switch. LNP Triggers will
    now be allowed even when the TYP CI CALL is "INTER" on these Views.

(2) With this feature, LDP calls can encounter LNP triggers when originating
    on an incoming LATA trunk; and, at an intermediate or terminating toll
    switch, calls can encounter LNP triggers on incoming TTOLL trunks.

(3) When the LRN is analyzed on RC/V 9.3 LDIT (or RC/V 9.9 RDIT or RC/V
    9.15 MLDIT), the TYP CI CALL is now allowed to be "INTER", on the LDP.

(4) Assign a (new field) TNSC LRN DAS using RC/V 8.53 LDP Terminating NSC.
Prior to this feature, this View already has a DAS field to analyze the
dialed digits. The TNSC LRN DAS, if provisioned, will be used rather
than the DAS on the View whenever it is an LRN that is being analyzed.

DATA VIEWS MODIFICATIONS
----
1) The new field, LRN DAS, has been added to RC/V 8.53.

```
|                               5ESS SWITCH                               |
|                           RECENT CHANGE   8.53                          |
|(5568)                     LDP TERMINATING NSC                           |
|                                                                         |
|*1. TERM NSC  ___                                                        |
|#2. DAS       ___                                                        |
|#3. SCR       ___                                                        |
| 4. LRN DAS   ___          >***<new field>                               |
|                                                                         |
|_____|
```

2) RC/V 9.3 (and RC/V 9.9) will now allow an LNP Trigger to be assigned when
   the TYP CI CALL is "INTER".

```
|                               5ESS SWITCH                               |
|SCREEN 1 OF 10               RECENT CHANGE   9.3                          |
|(53003,53005)             LOCAL DIGIT (OFFICE DIALING)                    |
|                                                                         |
|*1. LDIT            ___        15. DESEP        ___                       |
|*2. INCOMING DIGITS ___        16. PREFIX       ___                       |
| 3. CALL TYPE       ___        17. WZ1 REGION   ___                       |
| 5. TYP CI CALL     ___        18. SAC OWNER    ___                       |
| 7. RTI             ___        19. NATURE OF NBR ___                      |
| 8. POLYGRD         ___        20. TRIG NBR     ___                       |
| 9. NPA             ___        21. ESC CODE     ___                       |
|10. OFFCOD          ___        22. DFLT RT      ___                       |
|11. TERM LATA       ___        23. INH OBL      ___                       |
|12. NBR OF DIGITS   ___        24. INH ONA      ___                       |
|13. RDIT            ___        25. ANI BYPASS   ___                       |
|14. CODE INDEX      ___        26. RMK          ___                       |
|                                                                         |
|_____|
```

```
|                               5ESS SWITCH                               |
|SCREEN 2 OF 10               RECENT CHANGE   9.3                          |
|(53003,53005)             LOCAL DIGIT (OFFICE DIALING)                    |
```

```
|27. IMPLIED NPAS (IMPLDNPAS.I)LOCAL NUMBER PORTABILITY     36. NODAL IDX
|ROW PREFIX NPA                  30. LNP TRIG NBR  ___       37. DN PREFD
| 1    ___  ___                  31. GEO PORT         _      38. GETS HPC
| 2    ___  ___                  32. PORTED IN        _      39. DENY XFER
| 3    ___  ___                  33. HOME LRN         _
|                                34. LRN SCREENING  _
|                                35. INH DNT
|
|
```

COS/TYPES OF CALLS SUPPORTED

In the context of a LDP environment (trunk originations), the "INTER" call
type on a 5ESS LDP switch will receive different AMA and carrier selection
treatment than the local (line originations) "INTER" call treatment. In
particular, allowing the LNP trigger assignment on the "INTER" call on a
5ESS LDP switch does not inherently mean the called party has ported
Inter-LATA. LNP triggers will be supported and provisioned on a call of
Type CI Call of "INTER".

The call processing capabilities provided by this feature will only be
available if the incoming trunk has specific attributes assigned. In
particular, for the specified trunk group Class of Service (COS) on the
RC/V 5.1 Trunk Group View, the following assignments are required to allow
the LNP capabilities and LNP functionality for Inter-LATA calls from the
trunk origination:

```
Incoming Trunk COS          LDP LNP Allowed Only If:
-------------------         -------------------------
LATA                        LDP=Y
TTOLLCONN                   LDP=Y, Or Mint Signaling Enabled
IC                          LDP=Y
PF                          DAL ACCESS = Y
EDSL, EDSLHM                VPN ACCESS = Y, Or DAL ACCESS=Y
```

DIGIT ANALYSIS SELECTOR (DAS)

The LNP triggers will need to be provisioned in the various DASs that are
in use for the particular call that should encounter LNP triggers. The
initial LNP feature allows the service provider to provision a unique
LNP-specific DAS for use when analyzing and routing on LRN values.
Allowing for a separate DAS for LRN processing can facilitate the
administration of LNP by allowing the LRN routing information to be
uniquely provisioned. The LNP specific DAS can be encountered and used:

1) In post query processing following an LNP trigger
2) In an incoming trunk origination being routed on an LRN value
3) In either of the above cases when MINT processing is deriving the DAS

The LNP triggers can be provisioned in the originating LDP switches in
the originating DASs used by the LATA trunks. In particular, the LNP
triggers can be provisioned in any of the DASs used by the ANI Tables or
LDP Carrier Tables or MINT TNSC specified DASs. The ANI Table OHD
triggers, if provisioned will take precedence over any LNP triggers
encountered during ANI Table or LDP Carrier Table call processing.

In addition to provisioning a DAS for LRN use, some of the LNP specific
fields the service provider will provision include the following:

1) LNP triggers in the LDIT, RDIT, and MLDIT Views
2) Home LRN indication in the LDIT, RDIT, and MLDIT Views,
3) The Jurisdiction Information Parameter (JIP) on RC/V 8.1
4) The default LRN Trunk DAS, and LRN signaling option on RC/V 5.1
5) The LNP post query DAS on RC/V 9.35

6) The Connecting Network Access (CNA) billing option on RC/V 5.1

PROVISIONING

Provisioning of LNP triggers follows the provisioning of 3/6/10 digit
triggers. Provisioning of the LNP TRIG NBR for LNP on LDP may require:

1) Provisioning the LNP triggers in the appropriate origination DASs.
2) Provisioning of the Post Query DASs, for use in routing on LRN values.
3) Provisioning of the Post Query TNSC LRN DASs, for use in routing on
   LRN values.
4) Provisioning of LRN values in the DASs for properly handling and routing
   on LRN values.
5) AMA records provisioning - Connecting Network Access Record, is
   provisioned on a per trunk group basis to record calls from a particular
   trunk or network. AMA Access recording also provisionable for EDSL
   origination.
6) Trunk group provisioning - to send or not send the LRN/GAP values on
   the outgoing trunks, and also to define which DAS the incoming LRN routed
   calls should use.
7) Provisioning a per-office Jurisdiction Information Parameter (JIP), to be
   used for calls originating or being redirected from that office. The LNP
   AMA Access Billing feature, allows for support and provisioning of a
   per-SM JIP. The JIP is used as an indication of where a call is
   originating from (or being redirected from).
8) Provisioning of INH DNT on incoming trunk DASs. When the LRN is
   analyzed, if INH DHT is set to N, the incoming LNP GAP dialed digits are
   analyzed check for dialed DN triggers.
9) If MINT routing is used, then the appropriate MINT parameters and
   signaling indicators will need to be provisioned.

ANI TABLE PRECEDENCE

In general LNP trigger processing and LNP queries will follow ANI Table
or LDP Carrier Table processing; that is, if an incoming call encounters
an LNP trigger in the originating DAS, the entries in the LDP derived ANI
Table or LDP Carrier Table or II Digits Table are honored first in priority
before honoring the LNP triggers. The LNP triggers can be encountered
following the ANI Table triggers only if the LNP triggers are provisioned
in the post-query DAS used for ANI Table trigger response processing.
For ANI Table triggers or LDP Carrier Table triggers, or II Digits Table
triggers, the Table triggers are always honored in precedence to the LNP
triggers. The other attributes in the ANI or LDP Carrier Tables, or II
Digits Tables, will be honored but the Account Code processing for example
may actually be performed following the LNP query.

CARRIERS

If the incoming LDP LATA trunk call is destined for a carrier (IC) not being
served by or belonging to the LDP, any LNP triggers encountered will be
bypassed, since the other carrier will do its own LNP processing. Incoming
LATA trunk call originations to carriers defined in the LDP Carrier Table
(or the LDP Office Carrier) will be considered as belonging to the serving
toll switch, and these calls will be able to successfully encounter LNP
triggers. In addition, for the LDP "Fixed Carrier" assignments that are
provisioned and determined to be used for the call, LNP triggers and LNP
assignments will be ignored and the call routed to the Fixed Carrier.

TTOLL MINT Inter-LATA call originations will be able to encounter and honor
LNP triggers and assignments regardless of the call's associated carrier
value. STINT originations will not support LNP triggers on calls that are
Inter-LATA. The STINT originations to Inter-LATA calls will be routed to
the carrier and bypass LNP triggers.

A carrier is considered to "belong" to the LDP if the LDP is provisioned to

provide call processing for these carriers; in particular, these carriers
are provisioned in the LDP Carrier Table or provisioned as the LDP Office
Carrier thus indicating that the LDP is the host for that particular carrier
entry. If a carrier is not administered as being hosted by the LDP, then
the call will receive carrier routing by Carrier ID (CID).

BILLING

The AMA capabilities have been upgraded to handle the new AMA modules and
records created for LNP. The LNP AMA Module can be appended to existing
LDP AMA records. The LNP Connecting Network Access (CNA) assignments can
be used to create AMA records (to append LNP modules) for incoming trunk
calls not normally resulting in AMA records (i.e., on incoming TTOLL trunks).

REAL TIME CALL DETAIL (RTCD)

The new Real Time Call Detail (RTCD) feature, **99-5E-3784** and 99-5E-4387,
must be activated and provisioned to provide necessary interworking between
LNP on LDP and RTCD. The SFID is 245. RTCD has been expanded to
accommodate the LNP call data through the deployment of a new RTCD record
type, including LNP required AMA parameters. This feature will introduce
additional data to the RTCD feature and the RTCD data server and data
manager will need to be able to accommodate the additional LNP call data.
For more information, please see the Info SU for RTCD.

ASSERTS

When an LNP trigger is encountered and the LNP trigger is also defined
(via RC/V 9.35) as an VPN trigger (VPN = Y), an assert will be generated
indicating incompatibility.

The LNP on LDP feature allows a TYP CI CALL of "INTER" for LNP calls. An
existing modified assert will fire and the call will fail if this feature
is purchased and the TYP CI CALL is neither "INTER", or a flavor of
Intra-LATA. The assert has been modified to indicate that "INTER" is
allowed whenever LNP on LDP in purchased, in addition to the existing
Intra-LATA YPe CI CALLs which are already allowed with LNP.

MEASUREMENTS

The measurements provided in support of LNP on the local 5ESS Switch will be
available on the LDP.

NETWORK MANAGEMENT

Existing Network Management (NM) controls are supported for LNP on LDP.

SCENARIOS

For the call flows that follow, the interactions with the LDP ANI Table
triggers are highlighted. In the context of these scenarios, the
"LDP ANI Table trigger" can be encountered when provisioned on an incoming
LATA trunk, and when there is a trigger provisioned in the LDP Carrier
Tables or the ANI Tables used for the call. The table used for the call is
determined from a match of the incoming call's ANI and/or CIC entries
provisioned on the LDP. There is a match when one of the following occurs:

(1) incoming ANI matches a provisioned ANI Table entry, or
(2) the incoming call's CIC matches a value in the LDP Carrier Table, or
(3) the incoming call's CIC matches the LDP Office Carrier value.

The following call scenarios represent the most typical call scenarios.
In all the scenarios, there are no non-LNP DNTs provisioned. If DNTs are
present, then in every case, the DNT is honored and the LNP trigger is

ignored.

Scenario 1: Incoming LDP call encounters an LNP trigger at the Originating
LDP Switch. No ANI Table triggers or LDP Carrier Table triggers
are encountered.

For this scenario it is assumed that a call comes into the 5ESS LDP
switch and LNP triggers are provisioned at the Originating LDP switch
and the Serving exchange is not in the toll network.

Calling Party (ANI) =   708-224-1111
Dialed DN = 708-713-2222
Destination LRN = 312-979-0000

1) An incoming call originating on a LATA trunk is received with
    ANI = 708-224-1111 and dialed DN = 708-713-2222 and LDP=Y on the incoming
    trunk. Call processing finds a carrier match in the LDP Carrier Tables.

2) The Originating LDP switch performs digit analysis on the dialed digits
    to determine how to route the call. The switch determines that the
    dialed DN is in a portable NPA-NXX (708-713) because an LNP trigger is
    encountered. There are no DNTs encountered (or ANI Table, or LDP
    Carrier Table triggers encountered), and the called party does not
    reside on the switch. And that carrier matches a carrier value
    provisioned in the LDP Carrier Table (RC/V 8.52).

3) The switch sends an LNP query to the LNP data base based on the dialed
    digits to the LNP SCP.

4) The LNP SCP sends a response containing the LRN of the Serving Exchange
    (312-979-0000). The LRN is used to route the call to the correct
    serving exchange. LRN routing is the basis of the LNP architecture.

5) The Originating LDP switch receives the LNP SCP response and analyzes
    the data. The LRN is translated in a Post Query DAS associated with the
    trigger number and an ISUP route out of the switch is determined.

    (Use of the post-Query DAS associated with the trigger number is based
    on the Multiple Rate Center Enhancements feature, (99-5E-3192 and
    99-5E-3426), SFID 190, and also assumes that the MINT associated TNSC
    parameters are not returned from the LNP query. There are a number of
    different post-query DAS possibilities. This scenario uses the Post
    Query DAS associated with the trigger number.)

    The LRN is stored in the CdPN parameter and the dialed digits are stored
    in the GAP parameter of the ISUP IAM message. The ISUP FCI Translated
    Called Number Indicator is set to indicate that an LNP query has been
    done (set to "translated number"). If no ISUP trunks are available,
    then the call is routed on the Dialed DN (708-713-2222), and the LRN and
    ISUP FCI are not passed to the outgoing trunk.

6) The call is routed to a Terminating LDP switch based on the LRN
    (LRN=312-979-0000).

7) The Terminating 5ESS LDP switch receives and processes the contents of
    the IAM message. Since the ISUP FCI is set, the CdPN is checked for an
    LRN on this switch. The LRN is analyzed in the trunk's LRN DAS (unless
    a DAS was determined via the MINT TNSC parameter). The LRN does not
    belong to this switch so the call is routed using existing ISUP
    procedures.

    (If in the analysis of the LRN, the INH DNT indicator is set to No, then
    the switch will also analyze the incoming Dialed DN in the received
    GAP for any dialing plan triggers.

8) The Terminating 5ESS LDP switch routes the call to the Serving Exchange.

9) The Serving Exchange receives and processes the contents of the IAM message. The LRN is analyzed in the trunk LRN DAS (if provisioned) and the switch replaces the CdPN parameter's contents with the dialed digits stored in the GAP parameter. The switch does digit analysis on the dialed digits from the GAP, using the trunk DAS, or TNSC DAS (MINT), to look for dialed number triggers (assuming the INH DNT indicator is set to No, which indicates call processing should look for dialed number triggers) and then routes the call to the subscriber on the switch (if no other triggers).

10) The Serving Exchange completes the call to the subscriber.

11) An Originating LDP AMA record is generated for the call by the originating exchange (e.g. CC710) with an appended LNP Module (Bellcore AMA Format Module - 720). The LNP module contains the LRN returned from the LNP SCP database and an indication that the module applies to the "terminating party", as well as a LNP query status indication of "no query failure" and LRN source indicator of "LNP Data Base".

12) Both the Originating 5ESS LDP switch and Terminating 5ESS LDP switch will have the ability to generate an AMA module if the incoming call contains an LNP Jurisdiction Information Parameter (JIP). The JIP information reflects the location of the originator.

13) At the Terminating 5ESS LDP switch, an AMA module will be generated to record the incoming LRN value. Within the LNP AMA module, the LRN Source Indicator would be "Incoming signaling", and Query Status indicator of "No query performed". This LNP module would be appended to any terminating AMA records (Structure code 625, call code 711) that are created.

14) At the Originating LDP switch, an RTCD record will be made, if provisioned, and it will include the AMA information contained in the LNP module generated for the LNP query (and the incoming JIP information if present). In addition, if RTCD is provisioned at the terminating toll switch, the LRN module information reflecting the incoming LRN and the an incoming JIP are also included in the RTCD record.

Scenario 2: Terminating LDP call encounters an LNP trigger at the Terminating LDP Switch.

For this scenario it is assumed that a call comes into the toll network and LNP triggers are provisioned at the Terminating LDP switch and the Serving exchange is not in the toll network.

Calling Party (ANI) = 708-224-1111
Dialed DN = 708-713-2222
Destination LRN = 312-979-0000

1) An incoming call originating on a LATA trunk is received with ANI = 708-224-1111 and dialed DN = 708-713-2222. LDP=Y and ANI PROCESS = Y on the LATA trunk, a match is found and a table entry for the call is obtained.

2) The Originating LDP switch performs digit analysis on the dialed digits to determine how to route the call. The Originating LDP switch routes the call to the Terminating LDP switch.

3) With MINT signaling, or if LDP=Y on the incoming TTOLL trunk (STINT), the Terminating LDP switch performs digit analysis on the dialed digits to determine how to route the call. The switch determines that the dialed number is in a portable NPA-NXX (708-713) because an LNP trigger

is encountered. There are no DNTs encountered, and the called party does not reside on the switch.

4) The switch sends an LNP query to the LNP SCP based on the dialed digits to the LNP SCP.

5) The LNP SCP sends a response containing the LRN of the Serving Exchange (312-979-0000).

6) The Terminating LDP switch receives the LNP SCP response and analyzes the data. The LRN is translated in a Post Query DAS associated with the trigger number and an ISUP route out of the switch is determined.

   (Use of the post-Query DAS associated with the trigger number is based on the Multiple Rate Center Enhancements feature, (SFID 190) and also assumes that the MINT associated TNSC parameters are not returned from the LNP query. There are a number of different post-query DAS possibilities. This scenario uses the Post Query DAS associated with the trigger number.)

   The LRN is stored in the CdPN parameter and the dialed digits are stored in the GAP parameter of the ISUP IAM message. The ISUP FCI Translated Called Number Indicator is set to indicate that an LNP query has been done (set to "translated number"). If no ISUP trunks are available, then the call is routed on the Dialed DN (708-713-2222), and the LRN and ISUP FCI are not passed to the outgoing trunk.

7) The Terminating toll switch routes the call to the Serving Exchange based on the LRN (LRN = 312-979-0000).

8) The Serving Exchange receives and processes the contents of the IAM message. The LRN is analyzed in the trunk LRN DAS (if provisioned) and the switch replaces the CdPN parameter's contents with the dialed digits stored in the GAP parameter. The switch does digit analysis on the dialed digits from the GAP, using the trunk DAS, or TNSC DAS (MINT), to look for dialed number triggers (assuming the INH DNT indicator is set to No, which indicates call processing should look for dialed number triggers) and then routes the call to the subscriber on the switch (if no other triggers).

9) The Serving Exchange completes the call to the subscriber.

10) A Terminating LDP switch LDP AMA record is generated for the call by the terminating exchange (e.g. CC711) with an appended LNP Module (Bellcore AMA Format Module - 720). The LNP module contains the LRN returned from the LNP SCP database and an indication that the module applies to the "terminating party", as well as an LNP query status indication of "no query failure".

11) Both the Originating 5ESS LDP switch and Terminating 5ESS LDP switch will have the ability to generate an AMA module if the incoming call contains an LNP Jurisdiction Information Parameter (JIP). The JIP information reflects the location of the originator.

12) At the Originating LDP switch, an RTCD record will be made if provisioned and it will include the incoming JIP information if a JIP is received.

13) At the Terminating LDP switch, an RTCD record will be made if provisioned and it will include the incoming JIP information if a JIP is received. And the RTCD record will include the LNP module information for the LNP query.

Scenario 3:   Originating Exchange performs an ANI Table trigger, followed by an LNP trigger.

For this scenario, there is an ANI Table OHD trigger applicable for the call as well as an LNP trigger assigned in the LDP derived DAS.

```
Calling Party (ANI) =      708-224-1111
Dialed DN = 708-713-2222
Destination LRN = 312-979-0000
```

1) An incoming call originating on a LATA trunk is received with ANI = 708-224-1111 and dialed DN = 708-713-2222.

2) The Originating LDP switch performs digit analysis on the dialed digits to determine how to route the call.

   An incoming call analyzes the dialed digits using the DAS derived by LDP processing. If an ANI Table trigger is encountered, then the ANI table trigger will be honored. If an LNP trigger is also encountered, it will be ignored.

3) The switch sends an ANI Table trigger query to the "Toll Applications" SCP.

4) The "Toll Applications" SCP sends an Analyze Route back.

5) The Originating LDP switch receives the SCP response and analyzes the received CalledPartyID. An LNP trigger is encountered in the post-Query DAS or MINT TNSC derived DAS.

6) The switch sends an LNP query based on the received CalledPartyID to the LNP SCP.

7) The LNP SCP sends a response containing the LRN of the Serving Exchange (LRN = 312-979-0000).

8) The Originating LDP switch receives the LNP SCP response and analyzes the data. The LRN is translated in a Post Query DAS associated with the trigger number and an ISUP route out of the switch is determined.

   (Use of the post-Query DAS associated with the trigger number is based on the Multiple Rate Center Enhancements feature, and also assumes that the MINT associated TNSC parameters are not returned from the LNP query. There are a number of different post-query DAS possibilities. This scenario uses the Post Query DAS associated with the trigger number.)

   The LRN is stored in the CdPN parameter and the dialed digits are stored in the GAP parameter of the ISUP IAM message. The ISUP FCI Translated Called Number Indicator is set to indicate that an LNP query has been done (set to "translated number"). If no ISUP trunks are available, then the call is routed on the Dialed DN (708-713-2222), and the LRN and ISUP FCI are not passed to the outgoing trunk.

9) The call is routed to a Terminating LDP switch based on the LRN (LRN = 312-979-0000).

10) The Terminating 5ESS LDP switch receives and processes the contents of the IAM message. The ISUP FCI is set, the CdPN is checked for an LRN on this switch. The LRN is analyzed in the trunk's LRN DAS (unless a DAS was determined via the MINT TNSC parameter). The LRN does not belong to this switch so the call is routed using existing ISUP procedures.

11) The Terminating 5ESS LDP switch routes the call to the Serving Exchange.

12) The Serving Exchange receives and processes the contents of the IAM message. The LRN is analyzed in the trunk LRN DAS (if provisioned) and the switch replaces the CdPN parameter's contents with the dialed

digits stored in the GAP parameter. The switch does digit analysis on the dialed digits from the GAP, using the trunk DAS, or TNSC DAS (MINT), to look for dialed number triggers (assuming the INH DNT indicator is set to No, which indicates call processing should look for dialed number triggers) and then routes the call to the subscriber on the switch (if no other triggers).

13) The Serving Exchange completes the call to the subscriber.

14) An Originating LDP AMA record is generated for the call by the originating exchange (e.g. CC710) with an appended LNP Module (Bellcore AMA Format Module - 720). The LNP module contains the LRN returned from the LNP SCP database and an indication that the module applies to the "terminating party", as well as a LNP query status indication of "no query failure" and LRN source indicator of "LNP Data Base".

15) Both the Originating 5ESS LDP switch and Terminating 5ESS LDP switch will have the ability to generate an AMA module if the incoming call contains an LNP Jurisdiction Information Parameter (JIP). The JIP information reflects the location of the originator.

16) At the Terminating 5ESS LDP switch, an AMA module may be generated to record the incoming LRN value. If so, the LRN Source Indicator would be "Incoming signaling", and Query Status indicator of "No query performed".

17) At the Originating LDP switch, an RTCD record will be made, if provisioned, and it will include the AMA information contained in the LNP module generated for the LNP query. In addition, if RTCD is provisioned at the terminating toll switch, the LRN module information reflecting the incoming LRN and possibly an incoming JIP are also included in the RTCD record.

Scenario 4: Incoming LDP call encounters an LNP trigger at the Originating LDP Switch. No ANI Table triggers or LDP Carrier Table triggers are encountered. The LNP SCP does NOT return an LRN value.

For this scenario it is assumed that a call comes into the 5ESS LDP switch and LNP triggers are provisioned at the Originating LDP switch and the Serving exchange is not in the toll network.

Calling Party (ANI) =   708-224-1111
Dialed DN = 312-979-2222
Destination LRN = 312-979-0000

1) An incoming call originating on a LATA trunk (LDP=Y) is received with ANI = 708-224-1111 and dialed DN = 312-979-2222. A match is found in the LDP Carrier Tables and a Tuple is obtained for the call.

2) The Originating LDP switch performs digit analysis on the dialed digits to determine how to route the call. The switch determines that the dialed DN is in a portable NPA-NXX (708-713) because an LNP trigger is encountered. There are no DNTs encountered and the called party does not reside on the switch.

3) The switch sends an LNP query to the LNP data base depending on the dialed digits.

4) The LNP SCP sends a Continue; or equivalent - an Analyze Route message with the same dialed digits.

5) The Originating toll switch receives the LNP SCP response and analyzes the response. Since a Continue is received, the analysis of the incoming dialed DN which was done pre-query is utilized and the call is routed as

            if no LNP trigger were encountered.

6)   The call routes and completes.

7)   An Originating LDP AMA record is generated for the call by the originating exchange (e.g. CC710) with an appended LNP Module (Bellcore AMA Format Module - 720). The LNP module contains the LRN returned from the LNP SCP database and an indication that the module applies to the "terminating party", as well as a LNP query status indication of "no query failure" and LRN source indicator of "LNP Data Base".

8)   Both the Originating 5ESS LDP switch and Terminating 5ESS LDP switch will have the ability to generate an AMA module if the incoming call contains an LNP Jurisdiction Information Parameter (JIP). The JIP information reflects the location of the originator.

9)   At the Originating LDP switch, an RTCD record will be made, if provisioned, and it will include the AMA information contained in the LNP module generated for the LNP query. In addition, if RTCD is provisioned at the terminating toll switch, the LRN module information reflecting the incoming LRN and possibly an incoming JIP are also included in the RTCD record.

SUMMARY

This feature is available with the 5E13(1) 5ESS Switch Software Release with a Software Update that will be available shortly. This is a Call Processing Special feature.

MNEMONIC CODE.
  NONE

HASH SUMS.
  NONE

SOFTWARE CHANGE SIZE.
  TOTALSIZE 0 0

OVERWRITE DATA.
  NONE

END OVERWRITE.

END BWM.