Origination Date: 01/10/2001

Originator: LNPA WG

Change Order Number: NANC 323

Description: Partial Migration of a SPID via Mass Update

Cumulative SP Priority, Weighted Average:

Functional Backwards Compatible: NO

IMPACT/CHANGE ASSESSMENT

FRS	IIS	GDMO	ASN.1	NPAC	SOA	LSMS
Y	Y			Medium	Med/High	Med/High

January 2001: After much discussion on the NANC 217 change order the LNPA WG decided that it would be best to have two change orders for updating of SPIDs. NANC 217 would be retained and used to cover the simple case where a SPID is being completely retired (merger or acquisition) and a new change order (NANC 323) created to cover the partial update of a SPID (parts of a company's assets are transferred to another company). The majority of the information in the NANC 217 change order has been moved into this new change order. The 'Business Need' and 'Description of Change' that follows was copied directly from NANC 217 so that the history of the requested change would not be lost, however, this change order **will not** address the complete migration of one SPID to another. The complete migration of one SPID to another is covered in NANC 217.

Business Need:

Currently the NPAC does not have the ability to broadcast a mass update on SPID. SPs are experiencing the need to change the SPID on ported telephone numbers. Examples that cause this situation for SPs are mergers, service area trading, data system consolidations, etc. In order to make a SPID change for given ported telephone numbers, the current NPAC operation requires each involved active-like ported telephone numbers to be deleted, and each involved pending subscription to be cancelled resulting in a large coordination effort among service providers. Coordination with all service providers utilizing the NPA/NXX is required to facilitate the SPID change. During the transition period, call routing will be affected and customer service is impacted. Once these actions have been taken and the new network data updated at NPAC, the active-like and pending ported telephone numbers information must be re-created. This procedure causes the customer to be out of service during the process and also increase the porting traffic over the interface.
This Change Order would allow the NPAC to perform this functionality without affecting the customer while reducing porting traffic over the interface.

Description of Change:

It has been requested that Mass Update functionality be enhanced to allow SPID to be changed for all network data and subordinate subscription data. The current NPAC functionality allows mass updates to LRN, GTT data, and optional data (e.g., billing ID) for all active subscriptions currently serviced by that specific Service Provider, by NPA-NXX.

Having this functionality would facilitate a situation where one Service Provider (SP1) purchases/merges with another Service Provider (SP2), and all LNP data needs to be consolidated into a single SPID (on the NPAC) or separated into multiple SPIDs.

Today, the NPAC requires all active subscriptions to be disconnected, and all pending subscriptions to be cancelled, by NPA-NXX for all NPA-NXXs owned by or ported away from SP2. Next, SP2 would delete all LRNs, and then delete all NPA-NXXs. SP1 would then have to add the NPA-NXXs and LRNs that were just deleted by SP2. Finally, the pending and activated SVs would need to be "re-created" under the presumption that SP1 is now the code holder for the NPA-NXXs.

The proposed solution with this change order is the NPAC would perform all of this processing "under the sheets", and not require SP1 and SP2 to perform all of these steps. The issue of notifications (whether to send or suppress) is NOT addressed at this point in time.

After further analysis it was determined that the current NPAC implementation includes 23 tables that contain a customer SPID. Each will have to be addressed (at a business level) to determine correct NPAC processing should the SPID be modified.
The other issues to determine include:

1. length of time to complete this update.
2. which notifications need to be sent out over the SOA interface, since we are modifying numerous objects.
3. what do we do with current Network and Subscription records (update them with new SPID; or create new ones for the new SPID, and move the previous ones to OLD).

After much discussion on the 7/8/98 telecon, it was decided that the scope of this change order is huge, and it's frequency of use is undetermined at this point in time (speculation is relatively small).

Additionally, AT&T requested that all SPs look at the possibility of performing some type of database migration/conversion instead of having the NPAC perform all of the updates, then have to broadcast to all SPs. The database migration/conversion could potentially be accomplished by using a new NPAC "bulk download file" to update the local database.

The current position for this change order is to have a brief discussion at the Wed, 7/15 meeting in Chicago. The group will seek volunteers for a sub-committee to further analyze this change order in the context of how to accomplish a "merger" using today's functionality, and investigate potential solutions using a "bulk download file" approach, and a full NPAC solution with notifications across the interface. Participants include, AT&T (Beth), Bellcore (John), ESI (Jim), GTE (Gene), MCI (Gustavo), PacBell (Jackie), and Sprint (Dave).

The subcommittee will also talk about the potential of a "partial cut" from one SPID to another (possibly do on a market by market basis, or NPA by NPA basis). During the

11/23/98 telecon, it was determined that Beth's proposed short term solution would not be easy to accomplish. Details on the telecon will be available at the Dec LNPAWG meeting.
Dec LNPAWG (Atlanta), Mass update is the long term solution, but wanted to have short term solution. In the case of MCI and Brooks, they deleted the SVs, deleted the network data, then put it back out there under the new SPID.
What we looked at for an NPAC manual update, then produce BDD, would require code changes. Plus, BDD would be all records instead of just changed ones. Also, SVs would be modified instead of activated, so the current BDD by time range would NOT pick these up.
Current solution is customer impacting. Two long term options are the actual mass update of this change order, or having the NPAC internally update the SPID, then create appropriate BDD files that capture the changes within the time range.
Jan 00 LNPAWG meeting, the current processing approach is to have the NPAC perform this processing on the NPAC database, then when complete, create separate Bulk Data Download files for the different areas of data (i.e., NPA-NXX, LRN, NPA-NXX-X, Block, SV) that could then be used by each SOA/LSMS to update their local database. However, since this would require Service Providers to wait until the NPAC completed this processing, before they could update their own database, the new approach is for the NPAC to create Selection Input Criteria SPID Mass Update Request Files (SIC-SMURF) that could be used by the NPAC and all Service Providers as the input for everyone to update their own database. It was agreed that we no longer needed the results files.

December 00: Additional information was added to both the Business Need and Description of Change by Sprint to cover the situation of a single SPID being split into multiple SPIDs.

Requirements:

Req 1 SPID Mass Update – OpGUI Entry

NPAC SMS shall allow NPAC Personnel, via the NPAC SMS Administrative Interface, to enter selection input criteria (SPID, NPA-NXX, LRN, and/or NPA-NXX-X) for a partial SPID Mass Update Request Process.

Req 2 SPID Mass Update – Generation of SIC-SMURF Files

NPAC SMS shall provide a mechanism that generates Selection Input Criteria SPID Mass Update Request Files (SIC-SMURF) for SPID, NPA-NXX, LRN, and/or NPA-NXX-X upon completion of the entry of the selection input criteria in the NPAC SMS Administrative Interface, for a partial SPID Mass Update Request Process in the NPAC SMS.

Req 3 SPID Mass Update – NPAC SMS Processing of Requested Data

NPAC SMS shall provide a mechanism to mass update SPID information according to the requested selection input criteria, when changing from one SPID to another SPID in selected NPA-NXX, LRN, and NPA-NXX-X data, and subordinate Number Pool Block and Subscription Version data in the NPAC SMS.

Req 4 SPID Mass Update – Suppression of Notifications

NPAC SMS shall suppress notifications to all Service Providers via the SOA to NPAC SMS Interface and NPAC SMS to LSMS Interface, when performing the partial SPID Mass Update Request Process.

Req 5 SPID Mass Update – NPAC SMS Processing of Requested Data Based on Status

NPAC SMS shall only migrate existing NPA-NXX, LRN, and NPA-NXX-X data, as well as Number Pool Block and Subscription Version data that have 'active-like' or 'pending-like' statuses when performing the partial SPID Mass Update Request Process.

Notes:

- 'Active-like' Blocks or Subscription Versions are defined to be Blocks or Subscription Versions that contain a status of active, sending, partial failure, old with a Failed SP List, or disconnect pending.
- 'Pending-like' Blocks or Subscription Versions are defined to be Blocks or Subscription Versions that contain a status of pending, conflict, cancel-pending, or failed.
- "~~old~~Old" history data containing a status of cancelled or old with an empty FailedSP-List will not be migrated.

Req 6 SPID Mass Update – SIC-SMURF File Names

NPAC SMS shall follow the SIC-SMURF file naming convention as described in Appendix E.

Req 7 SPID Mass Update – SIC-SMURF File Formats

NPAC SMS shall follow the SIC-SMURF file format as described in Appendix E.

Req 8 SPID Mass Update – SIC-SMURF NPA-NXX File Processing

NPAC SMS shall use the SIC-SMURF NPA-NXX file to update the SPID associated with NPA-NXXs in the NPAC SMS during the partial SPID Mass Update Request Process.

Req 9 SPID Mass Update – SIC-SMURF NPA-NXX File Processing

NPAC SMS shall update the old service provider SPID on 'active-like' subscription versions when the NPA-NXX codeholder SPID is the same as the old service provider SPID on the subscription version during the partial SPID Mass Update Request Process.

Note: Service Providers need to be aware that if they query the NPAC SMS and the old service provider SPID has been migrated they may get old service provider information that is incorrect.

Req 10 SPID Mass Update – SIC-SMURF LRN File Processing

NPAC SMS shall use the SIC-SMURF LRN file to update the SPID associated with LRNs in the NPAC SMS during the partial SPID Mass Update Request Process.

Req 11 SPID Mass Update – SIC-SMURF LRN File Processing

NPAC SMS shall update the blockholder SPID on Number Pool Blocks with the same SPID as its LRN that was updated during the partial SPID Mass Update Request Process.

Req 12 SPID Mass Update – SIC-SMURF-LRN File Processing

NPAC SMS shall update the new service provider SPID on subscription versions with the same SPID as its LRN that was updated during the partial SPID Mass Update Request Process.

Req 13 SPID Mass Update – SIC-SMURF NPA-NXX-X File Processing

NPAC SMS shall use the SIC-SMURF NPA-NXX-X file to update the SPID associated with NPA-NXX-Xs in the NPAC SMS during the partial SPID Mass Update Request Process.

Req 14 SPID Mass Update – Maximum Level of Granularity

NPAC SMS shall perform the partial SPID Mass Update Request Process at a maximum level of granularity of a single SPID.

Req 15 SPID Mass Update – Minimum Level of Granularity

NPAC SMS shall perform the partial SPID Mass Update Request Process at a minimum level of granularity of an NPA-NXX-X.

Req 16 SPID Mass Update – Creation of Number Pool Block for Old Service Provider

NPAC SMS shall create an old Number Pool Block with a new version id for the old Service Provider for a Number Pool Block that contains a status of active, partial failure, disconnect pending, or old with a FailedSP-List, prior to the partial SPID Mass Update Request Process.

Req 17 SPID Mass Update – Creation of Number Pool Block for Old Service Provider – No Broadcast

NPAC SMS shall broadcast no data to the SOAs and LSMSs due to the creation of an old Number Pool Block with a new version id for the old Service Provider for a Number Pool Block that contains a status of active, partial failure, disconnect pending, or old with a FailedSP-List, prior to the partial SPID Mass Update Request Process.

Req 18 SPID Mass Update – Creation of Subscription Version for Old Service Provider

NPAC SMS shall create an old subscription version with a new version id for the old Service Provider for a subscription version that contains a status of active, partial failure, disconnect pending, or old with a FailedSP-List, prior to the partial SPID Mass Update Request Process.

Req 19 SPID Mass Update – Creation of Subscription Version for Old Service Provider – No Broadcast

NPAC SMS shall broadcast no data to the SOAs and Local SMSs due to the creation of an old subscription version with a new version id for the old Service Provider for a subscription version that contains a status of active, partial failure, disconnect pending, or old with a FailedSP-List, prior to the partial SPID Mass Update Request Process.

Req 20 SPID Mass Update – Exclusion of Data During Recovery

NPAC SMS shall exclude data in a recovery request for activity related to partial SPID Mass Update Request Process activity.

Req 21 Update of SPID on 'pending-like' Subscription Versions

NPAC SMS shall allow NPAC Personnel, via the NPAC SMS Administrative Interface, to update the Old Service Provider SPID on 'pending-like' subscription versions that have an active subscription version for the same TN.

Req 22 Update SPID on 'pending-like' Subscription Versions – Creation of Subscription Version for Old Service Provider

NPAC SMS shall create an old subscription version with a new version id for the old Service Provider for a subscription version that contains a 'pending-like' status prior to the update of the subscription version with the new SPID.

Req 23 Update SPID on 'pending-like' Subscription Versions – Creation of Subscription Version for Old Service Provider – No Broadcast

NPAC SMS shall broadcast no data to the SOAs due to the creation of an old subscription version with a new version id for the old Service Provider for a subscription version that contains a 'pending-like' status prior to the update of the subscription version with the new SPID.

Req 24 Update SPID on Messages Queued for Recovery

NPAC SMS shall apply the SPID update to any messages that are in the queue for recovery.

Points to address during reviewing:

- Should the minimum level of granularity be NPA-NXX-X or TN (Req. 15)
- OLD SPID value will not be migrated on the active SVs but will be on pending SVs -- ~~Still~~ have the problem of updating the OLD SPID on the active SVs in the case of a port of a port.
- Process for SP notifying NPAC of SPID migration
- Process for NPAC notifying all SP in the effected regions of the SPID migration.

Appendix E

SIC-SMURF NPA-NXX Download File

The SIC-SMURF NPA-NXX download file is used as input to the SPID mass update process in the NPAC SMS and all SOAs/LSMSs, to convert NPA-NXX data from the Old SPID to the New SPID. This file contains individual fields that are pipe delimited, with a carriage return (CR) after each SIC-SMURF NPA-NXX record.

The file name for the SIC-SMURF NPA-NXX download file will be in the format:

SIC-SMURF-NPANXX.OldSPID.NewSPID.DD-MM-YYYYHH24MISS

(The SIC-SMURF-NPANXX portion is the literal string "SIC-SMURF-NPANXX". The OldSPID is the four digit ID of the Old Service Provider. The NewSPID is the four digit ID of the New Service Provider.)

The SIC-SMURF NPA-NXX file given in the example would be named:

SIC-SMURF-NPANXX.0001.0002.10-13-1996081122

EXPLANATION OF THE FIELDS IN THE SIC-SMURF NPA-NXX DOWNLOAD FILE

Field Number	Field Name	Value in Example
1	Old Service Provider Id	0001
2	New Service Provider Id	0002
3	NPA-NXX Value	312382

SIC-SMURF LRN Download File

The SIC-SMURF LRN download file is used as input to the SPID mass update process in the NPAC SMS and all SOAs/LSMSs, to convert LRN, Block (SOA/LSMS optional), Subscription Version, and scheduled event for Block (NPAC only) data from the Old SPID to the New SPID. This file contains individual fields that are pipe delimited, with a carriage return (CR) after each SIC-SMURF LRN record.

The file name for the SIC-SMURF LRN download file will be in the format:

SIC-SMURF-LRN.OldSPID.NewSPID.DD-MM-YYYYHH24MISS (The SIC-SMURF-LRN portion is the literal string "SIC-SMURF-LRN". The OldSPID is the four digit ID of the Old Service Provider. The NewSPID is the four digit ID of the New Service Provider.)

The SIC-SMURF-LRN file given in the example would be named:

SIC-SMURF-LRN.0001.0002.10-13-1996081122

EXPLANATION OF THE FIELDS IN THE SIC-SMURF LRN DOWNLOAD FILE

Field Number	Field Name	Value in Example
1	Old Service Provider Id	0001
2	New Service Provider Id	0002
3	LRN Value	3123820000

SIC-SMURF NPA-NXX-X Download File

The SIC-SMURF NPA-NXX-X download file is used as input to the SPID mass update process in the NPAC SMS and all SOAs/LSMSs, to convert NPA-NXX-X data (SOA/LSMS optional) from the Old SPID to the New SPID. This file contains individual fields that are pipe delimited, with a carriage return (CR) after each SIC-SMURF NPA-NXX-X record.

The file name for the SIC-SMURF NPA-NXX-X download file will be in the format:

SIC-SMURF-NPANXXX.OldSPID.NewSPID.DD-MM-YYYYHH24MISS

(The SIC-SMURF-NPANXXX portion is the literal string "SIC-SMURF-NPANXXX". The OldSPID is the four digit ID of the Old Service Provider. The NewSPID is the four digit ID of the New Service Provider.)

The SIC-SMURF-NPA-NXX-X file given in the example would be named:

SIC-SMURF-NPANXXX.0001.0002.10-13-1996081122

EXPLANATION OF THE FIELDS IN THE SIC-SMURF NPA-NXX-X DOWNLOAD FILE

Field Number	Field Name	Value in Example
1	Old Service Provider Id	0001
2	New Service Provider Id	0002
3	NPA-NXX-X Value	3123820

IIS:

No change required

GDMO:

No change required.

ASN.1:

No change required.

M&P:

Since the SPID Mass Update Request Process is very different from the existing M&P write-up for mass update, a new section will be created in chapter 8.
The SPID Mass Update Request Process must be flash cut on NPAC and all LSMSs during an agreed upon quiet period.
Need to define M&P steps. Use current mass update process as baseline, and add changes to reflect SPID Mass Update Request Process. Call NPAC personnel to give update info (both old and new SPs). This could be at as high a level of the Old SPID to the New SPID, Old SPID for these NPAs to the New SPID, or as low a level of the Old SPID for this NPA-NXX-X to the New SPID. NPAC personnel will enter this into the GUI and use this to generate the "abbreviated format" files (with summary records, like on board, SELECTION INPUT CRITERIA SPID MASS UPDATE REQUEST FILE – SIC-SMURF). These are moved to the FTP site, and are available to the SPs. The requesting SP verifies file, and authorizes the migration. The amount of time for the migration down time is agreed upon by NPAC and all SPs on a case-by-case basis.
NPAC and all SPs start their own migration process.
Assumption is NPAC is down during this migration period.
The migration process for NPAC will create an old SV for the active ones in the old SP at the time of moving to the new.

Notes:
SPs need to look internally, if there might be a billing issue on the local side.
The NPAC billing information will not be changed for days prior to mass update of SPID.