Methods and Procedures for NPAC Release 4.0

Prepared for NeuStar, Inc.
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Version 0.~~1~~2

1. General Notes

This M&P is developed for the NPAC SMS, Release 4.0. This M&P is only for the Change Orders included in this release. This document will be folded into the existing NPAC Methods and Procedures for Service Providers document, once this release has been accepted.

1.1 Definitions

None.

1.2 Approach

This release contains a variety of changes to the NPAC SMS. The common approach for this release is to make it as backwards compatible as practical.

Note to reviewers: All change orders selected for NPAC Release 4.0 have been addressed in this document. Some of them do not require ~~an~~ M&P additions/changes. Once all have agreed on the change orders that do not require M&Ps or M&P changes, they and any associated notes will be moved to an appendix.

2. M&Ps For NPAC Release 4.0

2.1 NANC 227 – Failed TN Problems

~~TBD~~ No change required. Current M&P does not address Failed SP List.

2.2 NANC 219 – NPAC Monitoring of Associations

(This would be a new section in the M&P.)

For NPAC monitoring of associations, there are two parts that need to be covered in the M&P – Alarm Handling and Reports. These are described in the following sections.

2.2.1 Alarm Handling for Association Aborts

The NPAC SMS will automatically generate a unique alarm in the form of a page to NPAC Personnel when a Service Provider association (SOA and/or LSMS) is aborted. The abort can be sent by the NPAC SMS or received from the Service Provider.

When NPAC Personnel receive the page, they ~~should~~ will verify that the Service Provider SOA and/or LSMS is not longer associated and contact the discrepant Service Provider. The NPAC Personnel and Service Provider ~~should~~ will then work together to resolve the cause of the abort and establish a new association.

2.2.2 Association Aborts/Binds Reports

~~Chapter 10~~Section 10.2 – Service Provider Reports in the current M&P needs to be updated to include the following:

~~10.2~~ Service Provider Reports

The following table lists the reports available for creation by an NPAC Service Provider, and those reports available only upon request.

Report Types	Report Name	Party who can access	Function
Service and Network Data	System Tunables	Service Provider	Allows the inspection of the tunable parameters in the NPAC SMS. The administrator can view the current values of all tunable parameters. Tunables are broken into five categories: subscriptions, communication, audits, logs and security.
	NPAC Service Provider LRN Report	Service Provider	Displays a list of all the LRNs currently defined for a given Service Provider.
	Open NPA-NXX	Service Provider	Shows all the NPA-NXXS defined for a Service Provider.
	NPA Split	Service	Lists data concerning a single NPA split.

Report Types	Report Name	Party who can access	Function
		Provider	
Service Provider	NPAC Service Provider Profile	Service Provider	Shows all data defined for an NPAC Service Provider (Service Provider's own data only).
	Summary Subscription	Service Provider	Shows TN, Status, Activation Time stamp and LRN by selected Service Provider (Service Provider's own data only).
Subscription Data	Detail for each Subscription Version	Service Provider	Queries for all data concerning subscription version(s).
	Summary for each Subscription Version	Service Provider	Presents a subset of subscription information for a single TN or a range of TN's.
	Active Status	Service Provider	Shows: TN, Current Service Provider, Activation Time stamp, LRN and Version ID.
	Cancel Status	Service Provider	Shows: TN, Version ID, New Service Provider, Old Service Provider and Cancellation Date.
	Conflict Status	Service Provider	Shows: TN, Version ID, New SP, Old Service Provider and Conflict Date.
	Disconnect Pending Status	Service Provider	Shows TN, Version ID, Current Service Provider, Service Provider Disconnect Date and Effective Release Date.
	Failed Status	Service Provider	Shows: TN, Version ID, New Service Provider, Old Service Provider and Broadcast Time stamp.
	Partial Failure Status	Service Provider	Shows: TN, Version ID, New Service Provider, Old Service Provider, Broadcast Time stamp and Failed LSMSs.
	Pending Status	Service Provider	Shows: TN, New Service Provider, New Due Date, Old Service Provider, Old Due Date, Version ID and LRN.
Audit	Audit Summary	Service Provider	Generates summary reports on audits performed.
	Single Audit	Service Provider	Performs network data comparisons and displays discrepancies between NPAC attribute data and LSMS attribute data for a given date range.
System Statistics	NPAC SMS Performance (Transmissions/second)	NPAC only	Gives an idea of the efficiency and load of the network interfaces.
	NPAC SMS Performance (TN's Downloaded per second)	NPAC only	Reflects the number of TN's broadcast to a LSMS in a given time period.
	NPAC SMS Performance (Subscription Activation Time)	NPAC only	Portrays the amount of time the NPAC SMS takes to propagate subscription version activation messages to the LSMSs and receive responses.
System Statistics (cont'd)	Storage Utilization	NPAC only	Outputs the database storage statistics.
	Overall CPU System Utilization	NPAC only	Presents the machine processing usage for the entire NPAC system.
	NPAC SMS Database Sample	NPAC only	Provides results of the periodic statistical sampling of the NPAC database.
Security	User	NPAC only	Creates a list of all users, along with related user information. The report is generated on a selected User Group or all User Groups.
	Security Log	NPAC only	Shows user actions that result in illegal access attempts or

Report Types	Report Name	Party who can access	Function
			operations that should only be performed by authorized personnel.
	Encryption Key	NPAC only	Inspects the key list status of mechanized interfaces with each Service Provider. From this report the administrator can determine if more keys should be exchanged with any given Service Provider.
Log File	History	NPAC only	Events logged by the NPAC SMS for any of the Service Providers.
	Error Log	NPAC only	Generates report on the contents of the NPAC SMS error logs. Any error that affects the NPAC Sims's ability to process requests and commands, after it receives the requests and commands, is identified and placed in an error log. This does not include front end, field-level validations that are trapped and displayed by the OpGUI.
	Notification Log	NPAC only	Will report extracts from NPAC SMS notification log based on notification type and Service Provider.
	Service Provider Administration	NPAC only	Details the events related to NPAC Service Provider functions which have occurred during a given time period.
	Subscription Administration	NPAC only	Shows Service Provider, Event Type (create, modify, activate, etc.), Version ID, TN and Time stamp.
	Subscription Transaction Report	NPAC only	
Association	Association Log Report – Single Service Provider, Summary or Detail	NPAC or LTI user	Shows association log data for bind, recovery complete, and abort
	Association Log Report – All Service Providers, Summary or Detail, SPID values displayed	NPAC only	Shows association log data for bind, recovery complete, and abort
	Association Log Report – All Service Providers, Summary or Detail, SPID values encoded	NPAC only	Shows association log data for bind, recovery complete, and abort

- Section 10.2 – Service Provider Reports
  - Add the following Association/Bind Reports to the list of reports with report name, NPAC Personnel as the party who can access, and function of the report:
    - Detailed Report for a Single Service Provider
    - Summary Report for a Single Service Provider
    - Detailed Report for all Service Providers without encoding
    - Summary Report for all Service Providers without encoding
    - Summary Report for all Service Providers with SPID masked

  - Add the following Association/Bind Reports to the list of reports with report name, SOA LTI User as the party who can access, and function of the report:
    - Report for a Single Service Provider

Section 10.4, a new sub-section, 10.4.9 Association Log Report, will need to be added with a screen capture of the report request screen and a sample report. Each field in the report request screen will need to be defined/explained.

Section 10.5 – NPAC SMS Reports Accessible by Request from NPAC Personnel in the current M&P will need to be ~~modified~~updated to include ~~as~~the following~~s~~:

~~10.5~~ NPAC SMS Reports Accessible by Request from NPAC Personnel

Provided in this section, are the type of reports available to Service Providers upon request made to NPAC Personnel. In addition to a listing of the reports available, a brief description of each report will be given, as well as detail regarding the information necessary to be submitted to the NPAC for the processing of the requested report. Sample reports are also provided. The reports available upon request by type are:

- *System Statistics Reports*
  NPAC SMS Performance (Transmissions/Second)
  NPAC SMS Performance (TN's Downloaded/Second)
  NPAC SMS Performance (Subscription Activation Time)
  Storage Utilization
  CPU Utilization
  NPAC SMS Database Sample Report

- *Security Reports*
  User Report
  Security Log Report
  Encryption Key Report

- *Log File Reports*
  History Report
  Error Log Report
  Notification Report

- *Service Provider Administration*

- *Subscription Administration Report*

- *Association Log Report*
  Single Service Provider, Detailed Report
  Single Service Provider, Summary Report
  All Service Providers, Detailed Report
  All Service Providers, Summary Report

2.3 NANC 240 – No SV Cancel on T2 Expiration

Note: The current M&P does not address timer expirations/notifications, therefore information on the T2 Expiration will not be added.

Section 4.13.3 – Canceling a Subscription Version in the current M&P needs to be updated. The part about canceling if the New Service Provider does not submit it's create within the allotted time is deleted. The re-write would read as shown below:

4.13.3 Canceling a Subscription Version

The SMS cancels a subscription version when the status of the subscription version is pending and one of the following occurs:

- The old Service Provider requests to release the TN to the new Service Provider, but the new Service Provider fails to concur within the allowed time frame.
- The new Service Provider requests cancellation of its request to port.
- The old Service Provider requests cancel after its concurrence.

If the cancellation request came from the SP Service Provider who originated the request (and the other Service ProviderSP has not concurred) to port or release the TN, the SMS cancels the subscription version and notifies both Service ProvidersSPs. If the cancellation request came after both Service ProvidersSPs have concurred, the status of the subscription version is set to cancel pending.

In this case the NPAC SMS waits for the other Service ProviderSP who did not initiate the cancel to acknowledge the Cancel Pending status with concurrence. If the new customer fails to acknowledge the new status, the NPAC SMS places the subscription version in conflict. If the new customer acknowledges the impending cancellation but the old customer does not, the NPAC SMS cancels the subscription version. Any time the status of a subscription version changes; the NPAC SMS will notify the customers via broadcasts.

2.3.1 Canceling a Subscription Version

The SMS cancels a subscription version when the status of the subscription version is pending and one of the following occurs:

- The new Service Provider requests cancellation of its request to port.
- The old Service Provider requests cancel after its concurrence.

If the cancellation request came after both SPs have concurred, the status of the subscription version is set to cancel pending.

In this case the SMS waits for the other SP who did not initiate the cancel to acknowledge the Cancel Pending status with concurrence. If the new customer fails to acknowledge the new status, SMS places the subscription version in conflict. If the new customer

~~acknowledges the impending cancellation but the old customer does not, the SMS cancels the subscription version. Any time the status of subscription version changes; the SMS will notify the customers via broadcasts.~~

~~Step 22 of the~~Section 19.6.3 -- Provisioning Flow and Section 19.6.4 --Provisioning Flow Text, Step 22 of the current M&P will need to be ~~changed~~updated to show that if the New Service Provider has not submitted its create when the T2 timer expires the subscription version will remain in 'pending' status for a tunable amount of time.

~~19.6.3~~ Provisioning Flow

INTER-SERVICE PROVIDER LNP OPERATIONS FLOWS
- PROVISIONING -

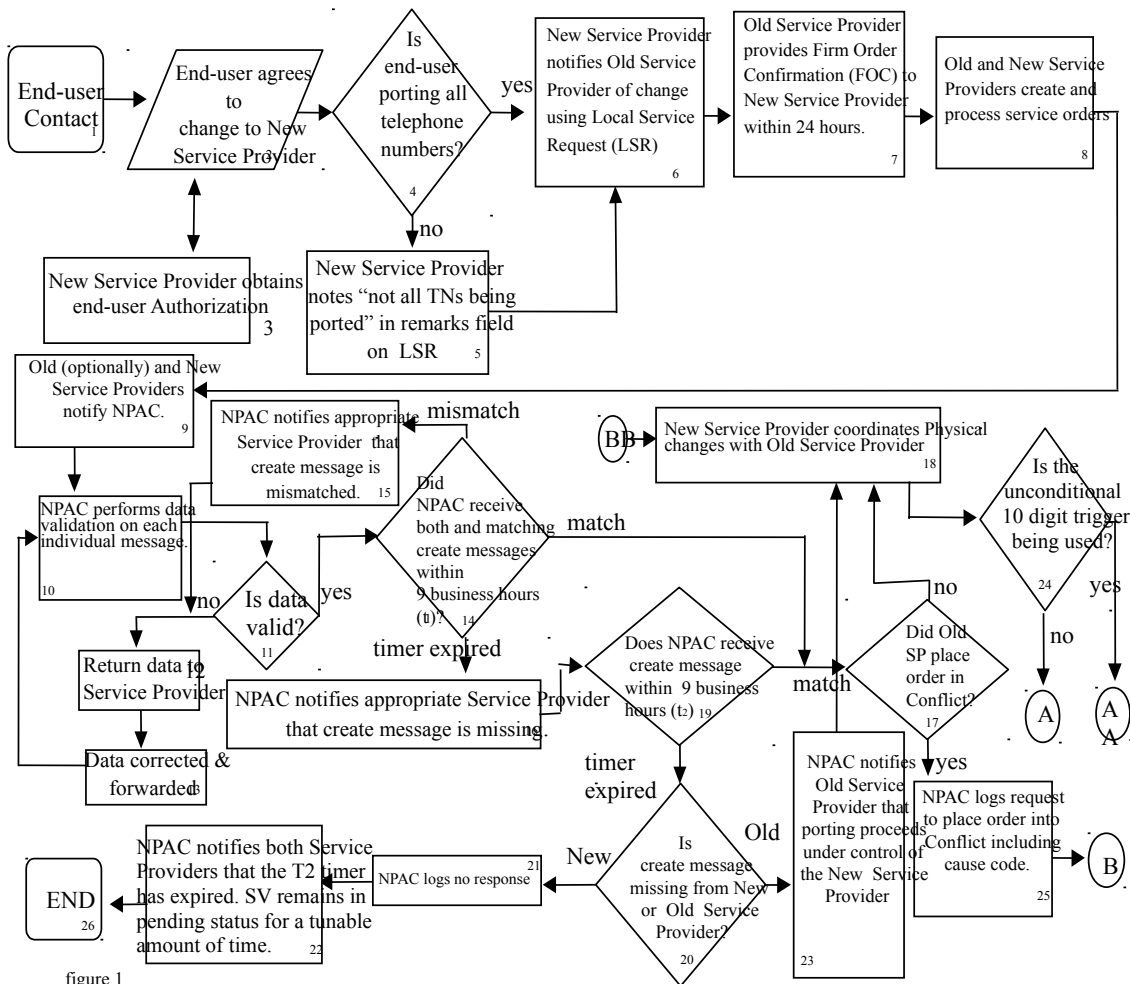**4/8/97 NANC ISSUE 1.0;**
4/10/97 Midwest Issue 1.0

figure 1

~~19.6.4~~ **Provisioning Flow Text**

Step	Description
1. End-user Contact	• The process begins with an end-user requesting service from the New Service Provider. • It is assumed that prior to entering the provisioning process the involved NPA/NXX was opened for porting.
2. End-user agrees to change to New Service Provider	• End-user agrees to change to New Service Provider and requests retention of current telephone number (TN)
3. New Service Provider obtains end-user Authorization	• New Service Provider obtains authority from end-user to act as the official agent on behalf of the end-user. The New Service Provider is responsible for demonstrating necessary authority.
4. Is end-user porting all telephone numbers?	• The New Service Provider determines if Service Provider is porting all TNs. • If yes, go to Step (6). • If no, go to Step (5).
5. New Service Provider notes "not all TNs being ported" in remarks field on LSR.	• The New Service Provider makes a note in the remarks section of the LSR to identify whether the end-user is not porting all telephone numbers (TNs).
6. New Service Provider notifies Old Service Provider of change using Local Service Request (LSR).	• The New Service Provider notifies the Old Service Provider of the porting using the LSR and sends the information via an electronic gateway, FAX, or other manual means. The LSR process is defined by the Ordering and Billing Forum (OBF) and the electronic interface by the Telecommunications Industry Forum (TCIF).
7. Old Service Provider provides Firm Order Confirmation (FOC) to New Service Provider within 24 hours.	• The minimum expectation is that the FOC is returned within 24 hours excluding weekends unless otherwise defined by inter-company agreements. It is the responsibility of the Old Service Provider to contact the New Service Provider if the Old Service Provider is unable to meet the 24 hour expectation for transmitting the FOC. If the FOC is not received by the New Service Provider within 24 hours, then the New Service Provider contacts the Old Service Provider. • The FOC due date is no earlier than three (3) business days after the FOC receipt date. The first TN ported in an NPA-NXX is no earlier than five (5) business days after FOC receipt date. It is assumed that the porting interval is not in addition to intervals for other requested services related to the porting (e.g., unbundled loops). The interval becomes the longest single interval required for the services requested.

Step	Description
	• The FOC process is defined by the OBF and the electronic interface by the TCIF.
8. Old and New Service Providers create and process service orders.	• The Service Providers create and process their service orders through their internal service order systems, from the information provided on the FOC and LSR.
9. Old (optionally) and New Service Providers notify NPAC.	• Due date on create message is the due date on the FOC. Any change of due date to NPAC is the result of a change in the FOC due date. • Service Providers enter subscription data into NPAC SMS via SOA interface for porting of end-user in accordance with the NANC Functional Requirements Specification (FRS) and the NANC Interoperability Interface Specifications (IIS).
10. NPAC performs data validation on each individual message.	• NPAC SMS validates data to ensure value formats and consistency as defined in the FRS. This is not a comparison between Old and New Service Provider messages.
11. Is data valid?	• If yes, go to Step (14). If this is the first valid create message, the T_1 timer is started. • If no, go to Step (12).
12. Return data to Service Provider.	• If the data is not valid, the NPAC returns notification to the Service Provider for correction.
13. Data corrected and forwarded.	• The Service Provider, upon notification from the NPAC SMS, corrects the data and forwards back to NPAC SMS.
14. Did NPAC receive both and matching create messages within nine (9) business hours (t_1).	• If matching, go to Step (17). • If mismatched, go to Step (15). • If T1 timer expires, go to Step (16). • NPAC SMS processing timers include business hours only, except where otherwise specified. Local business hours are defined as 12 daytime hours per day on Monday through Friday, except holidays. Holidays and business hours are regionally defined.
15. NPAC notifies appropriate Service Provider that information is mismatched.	• The NPAC informs the Service Provider that sent the second create that the messages are mismatched and returns to Step (12). If necessary, the Service Provider notified coordinates the correction.
16. NPAC notifies appropriate Service Provider that create message is missing.	• If Service Providers do not notify the NPAC SMS and/or provide matching data, the NPAC SMS sends a notification to the Service Provider who did not

Step	Description
	respond to the port.
	• The NPAC SMS provides an Initial Concurrence Window tunable parameter (t_1) defined as the number of hours after the subscription version was initially created by which both Service Providers can authorize transfer of subscription service. The current default is nine (9) business hours. • The t_2 timer starts.
17. Did Old Service Provider place order in Conflict.	• If yes, go to Step (25). • If no, go to Step (18). • Check Concurrence Flag Yes or No. If no, a conflict cause code as defined in the FRS, is designated. Old Service Provider makes a concerted effort to contact New Service Provider prior to placing subscription in conflict. Old Service Provider may initiate conflict with proper conflict cause code at anytime prior to noon of the business day before the due date.
18. New Service Provider coordinates physical changes with Old Service Provider.	• The New Service Provider has the option of requesting a coordinated order. This is the re-entry point from the Inter-Service Provider LNP Operations Flows - Conflict Flow for the Service Creation Provisioning Process tie point BB. • If coordination is requested on the LSR, an indication of yes or no for the application of a 10-digit trigger is required. If no coordination indication is given, then by default, the 10-digit trigger is applied as defined in inter-company agreements. If the New Service Provider requests a coordinated order and specifies 'no' on the application of the 10-digit trigger, the Old Service Provider uses the 10-digit trigger at its discretion.
19. Does NPAC receive information within nine (9) business hours (t_2)?	• The NPAC SMS provides a Final Concurrence Window tunable parameter (t_2), defined as the number of hours after the concurrence request is sent by the NPAC SMS. The current default is nine (9) business hours. • NPAC SMS processing timers include business hours only, except where otherwise specified. Local business hours are defined as 12 daytime hours per day on Monday through Friday, except holidays. Holidays and business hours are regionally defined. • If create messages match, go to Step (17). • If T2 timer expires, go to Step (20). • If create messages are mismatched they will be processed in the same manner as Step (15).

Step	Description
20. Is create message missing from New or Old Service Provider?	• If New Service Provider, go to Step (21). • If Old Service Provider, go to Step (23).
21. NPAC logs no response.	• The NPAC records that no matching create message was received from the New Service Provider.
22. NPAC notifies both Service Providers that ~~transaction is canceled and change is rejected~~the T2 timer has expired.	• The subscription version ~~is immediately canceled by NPAC SMS. Both Service Providers take appropriate action related to internal work orders~~remains in 'pending' status for a tunable amount of time.
23. NPAC notifies Old Service Provider that porting proceeds under control of New Service Provider.	• A notification message is sent to the Old Service Provider noting that the porting is proceeding in the absence of any message from the Old Service Provider.
24. Unconditional 10-Digit Trigger?	• If yes, go to Inter-Service Provider LNP Operations Flows - Provisioning with Unconditional 10-Digit Trigger - tie point AA. • If no, go to Inter-Service Provider LNP Operations Flows - Provisioning without Unconditional 10-digit Trigger - tie point A.
	• The unconditional 10-digit trigger is an option assigned to a line on a donor switch during the transition period when the line is physically moved from donor switch to recipient switch. During this period it is possible for the TN to reside in both donor and recipient switches at the same time. • The unconditional 10-digit trigger may be applied by the New Service Provider.
25. NPAC logs request to place order into Conflict including conflict cause code.	• Go to Inter-Service Provider LNP Operations Flows - Conflict Flow for the Service Creation Provisioning Process - tie point B.
26. END	

The following needs to be added to the current M&P:

2.3.2 Modify the "No New SP Concurrence Notification" Indicator in a Service Provider Profile

To modify the "No New SP Concurrence Notification" Indicator in a Service Provider Profile the following steps must be followed:

1. Service Provider Personnel will contact NPAC Personnel with a request to modify their "No New SP Concurrence Notification" Indicator. Valid values for this Indicator are "TRUE" or "FALSE". The value is automatically defaulted to "FALSE" indicating that the Service Provider **does not** ~~want to see~~support the "New Service Provider Final Create Window Expiration Notification" in ~~the Notification data that is sent to~~ their SOA.

2. NPAC Personnel shall validate the caller's name and authorization code against a list of authorized Service Provider Personnel. If the caller cannot be validated the request is denied. If the caller is validated, the request is processed.

3. NPAC Personnel, using the NPAC Administrative Interface, shall navigate to the appropriate Service Provider Profile and set the "No New SP Concurrence Notification" Indicator to the value requested by the Service Provider. The NPAC SMS will generate a confirmation message to the screen indicating the change has been made successfully.

2.4 NANC 191 & 291 – DPC/SSN Value Edit

The following needs to be added to the current M&P:

2.4.1 ~~To m~~Modify the "Class SSN Edit" Indicator in a Service Provider Profile ~~the following steps must be followed:~~

To modify the "Class SSN Edit" Indicator in a Service Provider Profile the following steps must be followed:

1. Service Provider Personnel will contact NPAC Personnel with a request to modify their "Class SSN Edit" Indicator. Valid values for this Indicator are "TRUE" or "FALSE". The value is automatically defaulted to "FALSE" indicating that the Service Provider **does not** support the "Class SSN Edit" Indicator.

2. NPAC Personnel shall validate the caller's name and authorization code against a list of authorized Service Provider Personnel. If the caller cannot be validated the request is denied. If the caller is validated, the request is processed.

3. NPAC Personnel, using the NPAC Administrative Interface, shall navigate to the appropriate Service Provider Profile and set the "Class SSN Edit" Indicator to the value requested by the Service Provider. The NPAC SMS will generate a confirmation message to the screen indicating the change has been made successfully.

2.4.2 ~~To m~~Modify the "LIDB SSN Edit" Indicator in a Service Provider Profile ~~the following steps must be followed:~~

To modify the "LIDB SSN Edit" Indicator in a Service Provider Profile the following steps must be followed:

1. Service Provider Personnel will contact NPAC Personnel with a request to modify their "LIDB SSN Edit" Indicator. Valid values for this Indicator are "TRUE" or "FALSE". The value is automatically defaulted to "FALSE" indicating that the Service Provider **does not** support the "LIDB SSN Edit" Indicator.

2. NPAC Personnel shall validate the caller's name and authorization code against a list of authorized Service Provider Personnel. If the caller cannot be validated the request is denied. If the caller is validated, the request is processed.

3. NPAC Personnel, using the NPAC Administrative Interface, shall navigate to the appropriate Service Provider Profile and set the "LIDB SSN Edit" Indicator to the value requested by the Service Provider. The NPAC SMS will generate a

confirmation message to the screen indicating the change has been made successfully.

2.4.3 ~~To m~~Modify the "CNAM SSN Edit" Indicator in a Service Provider Profile ~~the following steps must be followed:~~

To modify the "CNAM SSN Edit" Indicator in a Service Provider Profile the following steps must be followed:

1. Service Provider Personnel will contact NPAC Personnel with a request to modify their "CNAM SSN Edit" Indicator. Valid values for this Indicator are "TRUE" or "FALSE". The value is automatically defaulted to "FALSE" indicating that the Service Provider **does not** support the "CNAM SSN Edit" Indicator.

2. NPAC Personnel shall validate the caller's name and authorization code against a list of authorized Service Provider Personnel. If the caller cannot be validated the request is denied. If the caller is validated, the request is processed.

3. NPAC Personnel, using the NPAC Administrative Interface, shall navigate to the appropriate Service Provider Profile and set the "CNAM SSN Edit" Indicator to the value requested by the Service Provider. The NPAC SMS will generate a confirmation message to the screen indicating the change has been made successfully.

2.4.4 ~~To m~~Modify the "ISVM SSN Edit" Indicator in a Service Provider Profile ~~the following steps must be followed:~~

To modify the "ISVM SSN Edit" Indicator in a Service Provider Profile the following steps must be followed:

1. Service Provider Personnel will contact NPAC Personnel with a request to modify their "ISVM SSN Edit" Indicator. Valid values for this Indicator are "TRUE" or "FALSE". The value is automatically defaulted to "FALSE" indicating that the Service Provider **does not** support the "ISVM SSN Edit" Indicator.

2. NPAC Personnel shall validate the caller's name and authorization code against a list of authorized Service Provider Personnel. If the caller cannot be validated the request is denied. If the caller is validated, the request is processed.

3. NPAC Personnel, using the NPAC Administrative Interface, shall navigate to the appropriate Service Provider Profile and set the "ISVM SSN Edit" Indicator to the value requested by the Service Provider. The NPAC SMS will generate a confirmation message to the screen indicating the change has been made successfully.

2.4.5 ~~To m~~Modify the "WSMSC SSN Edit" Indicator in a Service Provider Profile ~~the following steps must be followed:~~

To modify the "WSMSC SSN Edit" Indicator in a Service Provider Profile the following steps must be followed:

1. Service Provider Personnel will contact NPAC Personnel with a request to modify their "WSMSC SSN Edit" Indicator. Valid values for this Indicator are "TRUE" or "FALSE". The value is automatically defaulted to "FALSE" indicating that the Service Provider **does not** support the "WSMSC SSN Edit" Indicator.

2. NPAC Personnel shall validate the caller's name and authorization code against a list of authorized Service Provider Personnel. If the caller cannot be validated the request is denied. If the caller is validated, the request is processed.

3. NPAC Personnel, using the NPAC Administrative Interface, shall navigate to the appropriate Service Provider Profile and set the "WSMSC SSN Edit" Indicator to the value requested by the Service Provider. The NPAC SMS will generate a confirmation message to the screen indicating the change has been made successfully.

Section 8.1 – Types of Mass Updates/Changes in the current M&P needs to be updated to read:

Types of Mass Updates/Changes

Examples of mass changes may include, but are not limited to:

- Location Routing Number (LRN)
- Destination Point Code (DPC) and *Sub-System Number (SSN)* information
- Location values and type
- Billing ID

Section 8.2 – Procedures in the current M&P needs to be updated to read:

1.c   The following Subscription Version data can be mass updated:

- LRN
- DPC Values *(required if SSN Value is to be updated)*
- SSN Values *(required if DPC Value is to be updated)*
- Billing ID
- End User Location Type
- End User Location Value

2.5 NANC 297 – Sending SVs in Recovery

No change required. The current M&P does not address what is sent in recovery.

2.6 NANC 192 – NPA Split Load File

Both section 7.2 and 7.3 would be updated as follows:

7.2 Notice of Split to NPAC
The NPAC will be made aware of all NPA/~~NXXS~~ NXXs that will be split by the Service Provider*, via the NPA Split Load File from the LERG (both monthly updates and emergency updates), during the nightly housekeeping process*. ~~NPAC requires 30 Days notice from the Service Provider for an up and coming split. The NPAC requires 30 days notice of the NPA that is Splitting, the actual NXX's of that split can be sent to the NPAC two weeks prior to the start of the permissive dialing period~~**.   PLEASE NOTE – if the official permissive dialing period is to start on a date that has already passed – i.e. NPAC can not input a split that is to begin PDP on 7/1 on 7/14. The NPAC would need to use 7/15 as the start of PDP.   In this case NPAC and the Service Providers involved in that split would need to all agree on the date the NPAC will use for the Permissive dialing period and all involved in the split will need to enter in the same dates.   These situations will be discussed on the Cross Regional calls and agreed upon as an industry.** *When processing the NPA Split Load File,* the NPAC SMS will modify all of the subscription versions associated with the split to associate the new TN with the Subscription Version to support the permissive dialing period. It is up to the Service Provider to enter the data on their side as well as, clean up their network data and delete the old NPAs.

This function of the NPAC SMS interface is only available to NPAC Operations ~~personnel~~Personnel. (A Service Provider can not perform a Split without the help of NPAC ~~personnel~~Personnel.). No updates or information will be sent over the SOA interface or LSMS interface to indicate that a split is occurring. Split information will be accessible to Service Providers via the NPAC web site. ~~ The NPAC SMS requires the following data for entry of NPA split information into the NPAC:~~

- ~~The old and new NPA~~
- ~~The affected NXX(s)~~
- ~~The start date of the permissive dialing period~~
- ~~The end date of the permissive dialing period~~
- ~~The agreed upon date to install the split into the systems~~
- ~~The Service Provider ID~~

Split information *processing from the NPA Split Load File* ~~input~~ will not be allowed if there are any partially failed or sending subscription versions associated with the old NPA-NXXs. ~~All SVs must be in an active state or the split will not occur.~~

The NPAC SMS modifies all of the subscription versions associated with the split to associate the new TN with the subscription version to support the permissive dialing period.

7.3 NPA Split Process

The NPAC SMS will obtain NPA Split information from the NPA Split Load File from the LERG. ~~Service Provider(s) responsible for the NPA split will call, email or fax the NPA split information into NPAC.   NPAC personnel will enter the split information into the GUI.~~ The NPA split will reflect Midnight Central Daylight savings time (Chicago Time) and will be loaded into the GUI as Greenwich Mean time (UTC Time). ~~Therefore, the Service Provider must convert the time from their time zone to Central Daylight savings time (Chicago Time), when speaking to NPAC.~~

~~*NOTE – Appendix O contains a time zone converter*.~~

NPAC SMS will verify that the new and the old NPA-NXX(s) involved in an NPA Split exist and are not currently involved in another NPA Split. New NPA-NXX(s) will be opened via normal processing prior to the NPA Split. NPAC SMS will verify that the NPA Split has an effective date equal to the start date of permissive dialing. NPAC will post this information out on the web site. The Service Providers are responsible for adding, changing and removing old NPA NXX's from their networks. If needed, a mass update will be completed to update LRN information for a LSMS only not SOA. NPAC SMS can leave filters for NPA-NXX(s) involved in an NPA split unchanged if the Service Provider wants - this is up to the ~~SP~~Service Provider. Service Providers are responsible for setting filters appropriately.

Please note- NPAC SMS shall complete any needed NPA Split processing or activities by 00:01 CST on the start date of permissive dialing.

NPAC SMS will reject a NPA Split if:

✓ Determining that the old NPA-NXX involved in an NPA Split does not exist when the split information is entered.
✓ Determining that a new NPA-NXX involved in an NPA split has an effective date not equal to the start date of permissive dialing.
✓ Determining that a new NPA-NXX involved in an NPA split is currently involved in another NPA Split.
✓ Determining that there are Subscription Versions with a status other than pending, old, conflict, canceled, or cancel pending in the new NPA-NXX split.

2.7 NANC 299 – NPAC Interface Heartbeat

~~TBD. Implementation needs to be determined before M&P can be written.~~This change order was removed from Release 4.0 consideration.

2.8 NANC 301 – NPAC Monitoring of SOA and LSMS Associations via NPAC TCP Level Heartbeat (transport layer)

~~TBD.~~No M&P required. If the TCP Keepalive feature detects an inactive association it will issue an abort and the abort will be logged. Change Order 219 covers logging of association aborts and binds and there is an M&P for this.

2.9 NANC 230 – Donor SOA PTO

No change required. The current M&P does not address PTO. It is assumed that NPAC user documentation (i.e. NPAC SMS User's Guide) provided to NeuStar by it's vendor covers PTO.

2.10 NANC 249 – Modification Disconnect Pending Date

No change required. The current M&P does not address Disconnect Pending Dates. It is assumed that NPAC user documentation (i.e. NPAC SMS User's Guide) provided to NeuStar by it's vendor covers Disconnect Pending Dates.

2.11 NANC 294 – Due Date Edit (7PM)

No change required. The current M&P does not address Due Dates. It is assumed that NPAC user documentation (i.e. NPAC SMS User's Guide) provided to NeuStar by it's vendor covers Due Dates.

2.12 NANC 200 – NPA Split Notification

Section 7.2.1 – NPAC Notice of Splits to Service Providers/Split Information should have the following description added at the end of the section:

> For those Service Providers that support the NPA Split Information Notifications based on their customer profiles, a notification will be sent for each NPA Split activity that is processed by the NPAC ("PDP Start", "PDP End", "Remove NXX from Split"). The notifications will be sent to the SOA when the "SOA NPA Split Notification" Indicator is set to TRUE, and sent to the LSMS when the "LSMS NPA Split Notification" Indicator is set to TRUE.

The following needs to be added to the current M&P:

2.12.1   Modify the "SOA NPA Split Notification" Indicator in a Service Provider Profile

To modify the "SOA NPA Split Notification" Indicator in a Service Provider Profile the following steps must be followed:

1. Service Provider Personnel will contact NPAC Personnel with a request to modify their "SOA NPA Split Notification" Indicator. Valid values for this Indicator are "TRUE" or "FALSE". The value is automatically defaulted to "FALSE" indicating that the Service Provider **does not** want to seesupport the "NPA Split Information Notification" in the Notification data that is sent to their SOA.

2. NPAC Personnel shall validate the caller's name and authorization code against a list of authorized Service Provider Personnel. If the caller cannot be validated the request is denied. If the caller is validated, the request is processed.

3. NPAC Personnel, using the NPAC Administrative Interface, shall navigate to the appropriate Service Provider Profile and set the "SOA NPA Split Notification" Indicator to the value requested by the Service Provider. The NPAC SMS will generate a confirmation message to the screen indicating the change has been made successfully.

2.12.2   Modify the "LSMS NPA Split Notification" Indicator in a Service Provider Profile

To modify the "LSMS NPA Split Notification" Indicator in a Service Provider Profile the following steps must be followed:

1. Service Provider Personnel will contact NPAC Personnel with a request to modify their "LSMS NPA Split Notification" Indicator. Valid values for this Indicator are "TRUE" or "FALSE". The value is automatically defaulted to "FALSE" indicating that the Service Provider **does not** ~~want to see~~support the "NPA Split Information Notification" in the Notification data that is sent to their LSMS.

2. NPAC Personnel shall validate the caller's name and authorization code against a list of authorized Service Provider Personnel. If the caller cannot be validated the request is denied. If the caller is validated, the request is processed.

3. NPAC Personnel, using the NPAC Administrative Interface, shall navigate to the appropriate Service Provider Profile and set the "LSMS NPA Split Notification" Indicator to the value requested by the Service Provider. The NPAC SMS will generate a confirmation message to the screen indicating the change has been made successfully.

2.13 ILL 130 – Application Level Errors

When resolving errors with an SP, USAs will need a list of all potential errors. When the application level errors have been defined in a table in the IIS, the table will be copied to the M&P document and explanations added as needed. ~~Add table with errors and explanation after the errors have been defined.~~

2.14 NANC 217 – Mass Update of SPID

Chapter 8 – Mass Updates and Changes, should have the following description added at the end of the intro section (immediately before section 8.1):

In the case of Mass Update of SPID, refer to section 8.4. This functionality allows ~~SPs~~ Service Providers to change the SPID on ~~ported telephone numbers~~network data (NPA-NXX, LRN and NPA-NXX-X) and subscription versions. Examples that cause this situation for Service Provider~~SP~~s are mergers, service area trading, data system consolidations, etc. The Mass Update of SPID changes all network data and subordinate block/subscription data from one Service Provider (SP1) to another Service Provider (SP2). This activity occurs during an NPAC/SP agreed upon quiet time, when all associations are ~~dropped~~down. Upon completion of a full transfer, SP1 would not own any network data (NPA-NXXs, LRNs, or NPA-NXX-Xs), nor have any active blocks/subscription versions. SP1 would them be eligible to be changed to "inactive" in the NPAC SMS.

The following section needs to be added to Chapter 8 in the current M&P:

8.4   Mass Update of SPID

1. Service Provider Personnel will contact NPAC Personnel with a request for a Mass Update of SPID. Service Provider Personnel must provide the appropriate selection criteria and update information for the Mass Update of SPID to NPAC Personnel at the time of the request.
    1.a   The following selection criteria is required:
    - Old Service Provider ID –**must be the same as the Service Provider requesting the Mass Update**

    1.b   Additional selection criteria are available. Single or multiple items may be selected. Selecting multiple items will narrow the search. The additional selection criteria are:
    - New Service Provider ID
    - Choice of: all data, list of NPA-NXXs/NPA-NXX-Xs

2. NPAC Personnel shall validate the callers' names and authorization codes against a list of authorized Service Provider Personnel. If the caller cannot be validated the request is denied. If the caller is validated, NPAC Personnel also contact to New Service Provider Personnel to validate the receipt of the network data and block/subscription data that is requested to be updated. If the New Service Provider ~~is validated~~concurs, the request is processed.

3. NPAC Personnel, using the NPAC Administrative Interface, will navigate to the **<Mass Update of SPID>** window, select the Service Provider ID of the requesting Service Provider and enter the other selection criteria as specified by the Service Provider. The NPAC SMS will generate all of the appropriate Selection Input Criteria SPID Mass Update Request Files (SIC-SMURF).

4. The generated SIC-SMURF files are placed in the requesting Service Provider's FTP site for verification by the requesting Service Provider.

5. The requesting Service Provider reviews the SIC-SMURF and authorizes the migration.

6. NPAC Personnel monitor/check that the TNs involved are active with an empty failed-SP list.

7. Since the migration takes place during the agreed upon downtime, the amount of migration downtime to perform the Mass Update of SPID is agreed upon by the NPAC and all Service Providers involved.

8. All During the selected Service Provider Maintenance Window, all Service Providers use the same SIC-SMURF files to migrate their own data in their local database.

9. During the selected Service Provider Maintenance Window and uUpon approval by the requesting Service Provider, NPAC Personnel initiate the update process in the NPAC SMS. This begins the change of all matching NPA-NXX, LRN, NPA-NXX-X, Block, and Subscription Version records, except for those with a status of old, partial failure, sending or cancelled. The NPAC SMS will initiate a confirmation message to the NPAC Personnel indicating that the Mass Update of SPID was performed successfully.

10. If there are matching Subscription Version records for the Mass Update that are currently in a state of sending, partially failed, disconnect-pending or cancelled the NPAC SMS create a log entry. In this event, proceed to the M&P titled, 'M&P for Mass Update Exception Processing' (section 8.2, Processing).

11. If "all data" was migrated, NPAC Personnel will update the Service Provider Active Indicator. Using the NPAC Administrative Interface, navigate to the appropriate Service Provider profile using the NPAC OP GUI. Set the Service Provider Active Indicator to FALSE. The NPAC SMS will generate a confirmation message to the screen indicating the change has been made successfully.

2.15 NANC 187 – Recovery Linked Replies

Section 4.13.1 – Notification Recovery in the current M&P needs to be updated to read:

Notification Recovery

SOA and LSMS systems are able to request recovery of all notifications *and network data* sent to them during a time range limited by the maximum download duration tunable. *LSMS systems are able to request recovery of all notifications, network data, and subscription data sent to them during a time range limited by the maximum download duration tunable.* The request for notification recovery is sent across the CMIP interface in a Network Notification Recovery Action. The response to the notification recovery request is sent across the CMIP interface in a Network Notification Recovery Reply *as a linked response if the "SOA/LSMS Linked Replies Notification" Indicator is set to TRUE and as* a non-linked response *if the "SOA/LSMS Linked Replies Notification" Indicator is set to FALSE.*

Refer to the NANC IIS for a list of all notifications that are subject to notification recovery.

Note to John N.: Beth had a comment that we needed to add a section like "Notification Recovery" above to cover Network

Data and Subscription Data recovery. I tried to roll it all into the paragraph above. What do you think?

The following needs to be added to the current M&P:

2.15.1 Modify the "SOA Linked Replies Notification" Indicator in a Service Provider Profile

Note to John N: Is the name of the indicator correct? Beth asked this. Since the indicator applies to network data and subscription data maybe it should be called a "SOA/LSMS Linked Replies" Indicator and leave out the word "Notification". Having the word "notification" as part of the Indicator name could be misleading.

To modify the "SOA Linked Replies Notification" Indicator in a Service Provider Profile the following steps must be followed:

1. Service Provider Personnel will contact NPAC Personnel with a request to modify their "SOA Linked Replies Notification" Indicator. Valid values for this Indicator are "TRUE" or "FALSE". The value is automatically defaulted to "FALSE" indicating that the Service Provider's SOA **does not** ~~want to receive~~support recovering notification data and network data as linked replies. ~~in the Notification data that is sent to t~~Their SOA ~~(~~would receive individual replies~~)~~.

2. NPAC Personnel shall validate the caller's name and authorization code against a list of authorized Service Provider Personnel. If the caller cannot be validated the request is denied. If the caller is validated, the request is processed.

3. NPAC Personnel, using the NPAC Administrative Interface, shall navigate to the appropriate Service Provider Profile and set the "SOA Linked Replies Notification" Indicator to the value requested by the Service Provider. The NPAC SMS will generate a confirmation message to the screen indicating the change has been made successfully.

2.15.2 Modify the "LSMS Linked Replies Notification" Indicator in a Service Provider Profile

To modify the "LSMS Linked Replies Notification" Indicator in a Service Provider Profile the following steps must be followed:

1. Service Provider Personnel will contact NPAC Personnel with a request to modify their "LSMS Linked Replies Notification" Indicator. Valid values for this Indicator are "TRUE" or "FALSE". The value is automatically defaulted to "FALSE" indicating that the Service Provider's LSMS **does not** ~~want to~~

receivesupport recovering notification data, network data, and subscription data as linked replies. in the Notification data that is sent to tTheir LSMS (would receive individual replies).

2. NPAC Personnel shall validate the caller's name and authorization code against a list of authorized Service Provider Personnel. If the caller cannot be validated the request is denied. If the caller is validated, the request is processed.

3. NPAC Personnel, using the NPAC Administrative Interface, shall navigate to the appropriate Service Provider Profile and set the "LSMS Linked Replies Notification" Indicator to the value requested by the Service Provider. The NPAC SMS will generate a confirmation message to the screen indicating the change has been made successfully.

2.16 NANC 285 – SOA/LSMS Query Size

No change required. In section 10.4.1 the Systems Tunable Report Screen will need to be updated so that the Subscriptions Tunable section shows the new value for the maximum subscription query.

Systems Tunable Report Overview
The System Tunables report allows a User to inspect the tunable parameters in the NPAC SMS. From this report the User will be able to view the current values of all tunable parameters. The System Tunables Report Window shown allows the User to generate the tunables report.

Sample Report

```
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17:25
                        NPAC system tunable parameters

TUNABLE TYPE
------------
   TUNABLE TAG                                  TUNABLE     METRIC    VALID
                                                VALUE                 RANGE

   ------------------------------------------   -------   -------   -------
Subscriptions Tunables
   Initial Concurrence Window                   18          hours     1-72
   Final Concurrence Window                     18          hours     1-72
   Conflict Expiration Window                   30          days      1-180
   Maximum Subscriber Query                     50          records   10-150
   Pending Subscription Retention               90          days      1-180
   Cancellation-Initial Concurrence Window      4           hours     1-72
   Cancellation-Final Concurrence Window        4           hours     1-72
   Old Subscription Retention                   18          months    1-36
   Cancel-Pending Subscription Retention        90          days      1-360
   Cancel-Conflict Subscription Retention       30          days      1-360
   Cancel-Disconnect Pending Retention          90          days      1-360
   Subscription Activation Retry Attempts       3           attempts  1-10
   Subscription Activation Retry Interval       2           minutes   1-60
   Subscription Modification Retry Attempts     3           attempts  1-10
   Subscription Modification Retry Interval     2           minutes   1-60
   Subscription Disconnect Retry Attempts       3           attempts  1-10
   Subscription Disconnect Retry Interval       2           minutes   1-60
Communications Tunables
   Local SMS Retry Attempts                     3           attempts  1-10
   Local SMS Retry Interval                     2           minutes   1-60
   SOA Retry Attempts                           3           attempts  1-10
   SOA Retry Interval                           2           minutes   1-60
   Maximum Number of Download Records           10000       records   1-200000
   Maximum Download Duration                    60          minutes   1-1440
Audits Tunables
   Canceled Audit Retention Period              30          days      1-360
   Data Integrity Sample Size                   1000        SVs       1-5000
   Data Integrity Sample Interval               30          days      7-360
   Logs Tunables
   Audit Log Retention Period                   90          days      1-360
Error Log Retention Period               90    days        1-360
History File Data Storage                365   days        1-365
Local SMS Activation Log Retention Period 90   days        1-360
Usage Log Retention                      90    days        1-360
Security Tunables
   Key Change Interval                          7           days      1-365
   Failed Login Attempts                        3           attempts  0-10
   Failed Login Shutdown Period                 60          seconds   0-300
   Unused User ID Disable Period                60          days      1-360
```

2.17 NANC 169 – Delta Bulk Data Download for Subscription Versions

No change required. This change order was removed from Release 4.0 consideration.

2.18 NANC 179 – TN Range Notifications

No change required. The current M&P does not address notifications to this detail.

2.19 NANC 232 – First Port Notification on Web BB

No ~~change~~ M&P required. Posting First Port Notifications on the Web BB will be an automated process.

2.20 NANC 287 – ASN.1 Notification Recovery

No ~~change~~ M&P required. ASN.1 recompile only.

2.21 NANC 218 – Conflict Timestamp Broadcast SOA

No change required. The current M&P~~s~~ do~~es~~ not ~~currently~~ address things at the timestamp level.

2.22 NANC 138 – Definition of Cause Code

No change required. The current M&P~~s~~ only address~~es~~ cause codes that a Service Provider can utilize.