

Release 5.0 Change Orders

Updated On: [8/9/10/4/00](#)

Change Order Prioritization List with July 2000 LNPA-WG meeting Weighted Averages

Table of Change Orders for NPAC SMS Release 5.0 (winter of 2001/2002) sorted in order of cumulative SP priority (i.e., weighted average). The weighted average is based on the summary of a priority vote by each SP at the July 00 LNPAWG meeting, then divided by the number of voting SPs. 1.00 is the highest possible priority and 11.00 is the lowest possible priority.

Note: During the July 00 LNPA WG meeting NANC 87 was removed from consideration for R5.0. This changed the number of change orders to 10, making 10.00 the lowest possible priority.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 169 & NANC 246	Delta Download File Creation by Time Range for SVs	Med	N/A / Med-Low	2.77
NANC 300	Resend Exclusion for Number Pooling	Med	Med/Low / Med/Low	4.23
NANC 311	Query Message of SP Association Status	Med	Med / N/A	4.23
NANC 151	TN Addition to Attribute Value Change Notification	Low	Low / N/A	4.77
NANC 310	Time Reference in the NPAC SMS	High	High / High	5.77
LL 23	Detailed Integrity Sample Results Report	Low (assuming audit)	N/A / N/A	6.08
NANC 193	TN Processing during NPAC SMS NPA Split Processing	High +	Low-Med / Low-Med	6.08
LL 5	Round-Robin Broadcasts across LSMS Associations	Low	Low-High / Low-High	6.31
NANC 307	Change BDD Format for NPA-NXX and NPA-NXX-X Files	Med	Med / Med	7.31
NANC 312	Different User Levels on the LTI	Med	N/A / N/A	7.46

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Clarifications

Note: Change Orders that have been clarifications to previously documented Release 5 change orders have been merged in this document as indicated in the table below and will not be referenced separately as Release 5 change orders.

Change Order Retained	Change Order Merged and Removed
NANC 169	NANC 246

Rejections

Change Orders rejected for Release 5.0.

Change Order Number	Change Order Description
NANC 103	Increase of OSI Selector Size
NANC 122	Enhanced Key Expiration Strategy
NANC 147	Version ID Rollover Strategy
NANC 299	NPAC Monitoring of SOA and LSMS Associations via Heartbeat
NANC 87	RR5-39 Requirement Modification for Viewing of Cancelled SV

Origination Date: 5/23/97

Change Order Number: NANC 169

Description: Delta Download File Creation by Time Range for SVs

Cumulative SP Priority, Weighted Average: [2.77](#)

Pure Backwards Compatible: YES (may have operational impacts, since this is optional functionality, and not over the NPAC to LSMS interface. Also, may have an LSMS impact if the LSMS is currently designed to only accept a download reason of “new1”.)

IMPACT/CHANGE ASSESSMENT

FRS	IIS	GDMO	ASN.1	NPAC	SOA	LSMS
Y				Med	N/A	Med-Low

Business Need:

Currently the NPAC does not have the ability to create a delta bulk data download file by date and time range. This change order is expected to help with an SP’s capability to ‘catch-up’ faster after an extended outage, as porting volume increases. The ability to create a delta bulk data download file by date and time range (downloading only the actual data required) reduces the work effort of the SP while getting the SP back in-sync with the NPAC in a more timely manner which in turn facilitates proper call routing.

Description of Change:

It has been requested that requirements be added to the FRS to allow for creation of a delta download file by date and time range, for SVs.

Need to change functionality when requesting SV BDD with a time range. Currently, the NPAC provides all “active” SVs based on Activation Broadcast ~~Complete~~ Timestamp. This creates an issue for modification, or mass updates that are within the specified time range window, but the Activation was prior to the specified time range. There is also an issue for Activation Failures.

Additional proposed changes to handle two issues, include:

1. Incorporate the start and end time ranges into the file name.
2. Need to capture all SV activity (activation, modification, disconnect) into the file, when doing time range.

The start and end timestamps are NOT embedded in the filename. Update documentation to state Activation Broadcast ~~Complete~~ Timestamp is used for comparison. The proposal is to use the Broadcast Timestamp attribute in the SV, to determine whether or not an SV fits in the specified time range.

~~NOTE TO CMA: If NANC 310 does not get implemented at the same time as this change order need to discuss having this file delivered in UTC to keep things consistent with the current BDD files.~~

Requirements:

Req 1 Subscription Version Information Bulk Download File Creation – Subscription Versions

NPAC SMS shall allow NPAC personnel to request a bulk data download file for Subscription Version data via the NPAC Administrative Interface. (existing NPAC SMS functionality)

Req 2 Subscription Version Information Bulk Download File Creation – Selection Criteria

NPAC SMS shall include the Requesting Service Provider, Active/Disconnect Pending/Partial Failure Subscription Versions Only or Latest View of Subscription Version Activity Choice, Time Range in ~~Central Time (GMT standard/daylight)~~, and TN Range as Selection Criteria fields for the Subscription Version bulk data download file via the NPAC Administrative Interface.

Req 3 Subscription Version Information Bulk Download File Creation – Active/Disconnect Pending/Partial Failure Subscription Versions Only or Latest View of Subscription Version Activity Choice

NPAC SMS shall allow NPAC Personnel to select either *Active/Disconnect Pending/Partial Failure Subscription Versions Only* or *Latest View of Subscription Version Activity*, and shall use the selected choice, for Subscription Version data.

Req 4 Subscription Version Information Bulk Download File Creation – Data in Active/Disconnect Pending/Partial Failure Subscription Versions Only Choice

NPAC SMS shall use the *Active/Disconnect Pending/Partial Failure Subscription Versions Only* selection to only include Subscription Versions with a status of either Active, Disconnect Pending or Partial Failure in the Subscription Version Bulk Data Download file. – check with Jim if the download reason would always be NEW1

Req 5 Subscription Version Information Bulk Download File Creation – Data in Latest View of Subscription Version Activity Choice

NPAC SMS shall use the *Latest View of Subscription Version Activity* selection to include all Subscription Versions, regardless of status, in order to capture activation, modification, and deletion transactions for Subscription Version data, but only include the latest instance of the TN in the Subscription Version Bulk Data Download file, for a given NPA-NXX, when a Subscription Version has more than one activity (e.g., addition, then modification) within the specified time range. – check with Jim if download reason is CHANGE (modification) are the SPs getting all attributes. How was this implemented in R3.0

Req 6 Subscription Version Information Bulk Download File Creation – Time Range Fields

NPAC SMS shall use the Start Time Range entry field as an inclusive start range in [Central Time \(standard/daylight\)GMT](#), and the End Time Range entry field as an inclusive ending range in [Central Time \(standard/daylight\)GMT](#), for Subscription Version data that were broadcast during the specified Time Range.

Req 137 Subscription Version Information Bulk Download File Creation – Time Range Fields and SV Data Model

NPAC SMS shall use the Start and End Time Range entry fields to include Subscription Version data, based on the Activation Broadcast Time Stamp, Modify Broadcast Time Stamp, and Disconnect Broadcast Time Stamp, in the NPAC’s Subscription Version Data Model, when generating the file for the *Latest View of Subscription Version Activity* selection.

Req 78 Subscription Version Information Bulk Download File Creation – TN Range Fields

NPAC SMS shall use the first TN Range entry field as an inclusive start range, and the second TN Range entry field as an inclusive ending range, for Subscription Version data.

Req 89 Subscription Version Information Bulk Download File Creation – Selection Criteria Combinations

NPAC SMS shall edit the selection criteria combination as shown in the table below:

	Time Range	TN Range
Active/Disconnect Pending/Partial Failure SVs Only	Rejected	Optional
Latest View of SV Activity	Required	Optional

Such that a combination of:

- Active with a Time Range shall be rejected.
- Latest View shall require a Time Range.
- TN Range shall be optional for both Active and Latest View.

Req 910 Subscription Version Information Bulk Data Download – Subscription Version Results

NPAC SMS shall provide a bulk data download file, based on the selection criteria, that contains all Subscription Versions in the NPAC SMS.

Req ~~10~~11 **Subscription Version Information Bulk Data Download – Subscription Version Results Sort Order**

NPAC SMS shall sort the Subscription Version Bulk Data Download file, in ascending order based on the value in the TN attribute.

Req ~~11~~12 **Subscription Version Information Bulk Data Download – Filters for Subscription Versions**

NPAC SMS shall apply NPA-NXX Filters to Subscription Versions in the creation of bulk data download files.

Req 13 **Subscription Version Information Bulk Data Download – EDR LSMSs**

NPAC SMS shall use the Service Provider's profile (EDR Flag True or False) to determine if it should include Pooled SVs in the bulk data download file.

Req ~~12~~14 **Subscription Version Information Bulk Data Download – FTP Sub-Directory**

NPAC SMS shall automatically put the bulk data download file into the FTP sub-directory of the Service Provider, based on SPID, that requested the creation of the bulk data download file.

Origination Date: 12/6/99

Change Order Number: NANC 300

Description: Resend Exclusion for Number Pooling

Cumulative SP Priority, Weighted Average: [4.23](#)

Functional Backwards Compatible: NO

IMPACT/CHANGE ASSESSMENT

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

Business Need:

When information about ported (or pooled) numbers is broadcast, no changes in this information can be subsequently broadcast until all service providers' LSMSs have acknowledged successful receipt of the original broadcast. That is, no changes can be made to SVs in a "partial failure" condition. This limitation is being corrected for ported telephone numbers in NPAC Release 4.0. However, a ported pooled thousands block remains subject to this restriction. Change Order NANC 300, proposed for NPAC release 5.0, effectively removes the restriction and allows changes to be made to ported pooled thousands blocks in a partial failure condition.

The business need for this change is the need to promptly correct erroneous NPAC broadcast information about ported pooled blocks. For example, there may be an error in the LRN associated with the pooled thousands block; this would render the block's thousand numbers unusable until the correct LRN information could be modified and broadcast by NPAC. This is less serious a problem than the inability to change an existing ported customer's SV, at least if the error is discovered before numbers from the pooled block are assigned to end-users. However, even if no numbers are yet assigned to end-users, it is important to be able to correct errors promptly rather than being held hostage to a particular service provider's inability to receive or acknowledge broadcasts when the original pooled block broadcast was made. An LSMS can be off line for days during which time no numbers from the block could be used. [INC guidelines state that the pooled numbers can be used the following day which would make it imperative that the block be able to be modified.](#)

An additional need for this change order is contaminated working numbers missed by the code holder at the time of block donation, that need to be intra-service provider ported for a Number Pool Block that contains a Partial Failure status (which currently cannot be performed until the Number Pool Block is Active).

A process is available that could be implemented by NPAC personnel for such situations -- using NPA-NXX filters -- but the process is risky and very likely to cause greater problems. A higher definition filter therefore is necessary to avoid the problems introduced by use of existing NPA-NXX filter. The 10-digit filter provided in release 4.0 is not feasible for addressing the problem

of pooled thousands blocks. Hence this change order which proposes a 7-digit (NPA-NXX-X) filter.

Description of Change:

This is an extension of NANC 227. During the Dec 99 LNPA-WG meeting, it was proposed to remove Number Pooling functionality from NANC 227, and create a new change order for this functionality. [This functionality was removed from NANC 227 because it was too much for Release 4.0.](#)

The NPAC SMS currently rejects a request to "modify active" or "disconnect" a Number Pool Block or SVs of [LNP](#) type POOL that has a partial failure status. Nothing can be done to the Block/SV until the discrepant LSMS(s) come back on line, and either recover the broadcast, or accept a re-send from the NPAC SMS.

Similar to NANC 227 for non-pooled SVs, the NPAC should provide a mechanism that allows activity (modify, disconnect, subsequent port) on the Block/SV, regardless of the Failed SP List. This will be done via the resend exclusion functionality (defined in NANC 227), which is a mechanism that allows a Service Provider to be removed from a Failed SP List.

Jun 99, during the Pooling Assumptions walk-thru, four SV requirements were modified, and the functionality was moved into this change order. Basically, the “partial failure/failed” text is moved to this change order. The affected requirements are listed below:

SV-230 Modification of Number Pooling Subscription Version Information – Subscription Data

SV-240 Modification of Number Pooling Subscription Version Information – Status Update to Sending

SV-270 Modification of Number Pooling Subscription Version Information – Status Update

SV-280 Modification of Number Pooling Subscription Version Information – Failed SP List

May 00, using the resend exclusion functionality eliminates the need to update the above four requirements. Other requirements will need to be written to define the functionality.

~~**Question: Should the granularity go down to the specific TN/SV-ID for the pool-type SVs for the exclusion list and reports (effectively adding pool-type SVs to NANC 227 from R4)? Or is the NPA-NXX-X and Number Pool Block ID sufficient?**~~

Requirements:

Req 1 Number Pool Block Failed SP List – Exclusion of a Service Provider from Resend

NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to request that a Service Provider be excluded from the Number Pool Block Failed SP List when resending a number pool block and the associated ~~pool-type~~ subscription version(s) [of LNP type POOL](#), and not broadcast to the Service Provider that is excluded.

Req 2 Number Pool Block Failed SP List – Logging of an Excluded Service Provider

NPAC SMS shall log the following information when a Service Provider is excluded from the Failed SP List based on a request by NPAC Personnel via the NPAC Administrative Interface: date, time, excluded SPID, ~~current SPID~~[Blockholder SPID](#), NPA-NXX-X, Number Pool Block ID.

Req 3 Number Pool Block Failed SP List – Recovery of Excluded Service Provider Subscription Versions

NPAC SMS shall, for a recovery of number pool block data, in instances where the NPAC SMS excluded the Service Provider from the Failed SP List based on a request by NPAC Personnel via the NPAC Administrative Interface, allow the Local SMS to recover a Number Pool Block or its associated pool-type subscription versions with all current attributes, even though the Service Provider is no longer on the Failed SP List.

Req 4 – Number Pool Block Failed SP List – Excluded Service Provider Log Data Availability for the Excluded Service Provider Report

NPAC SMS shall allow the Excluded Service Provider log data to be available for the Excluded Service Provider Report.

Req 5 – Number Pool Block Failed SP List – [Resend](#) Excluded Service Provider Report [by Current SPID/Blockholder SPID](#) via OpGUI

NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to generate the [Resend](#) Excluded Service Provider Report [by Current SPID/Blockholder SPID](#) on Excluded Service Provider log data.

Req 6 – Number Pool Block Failed SP List – [Resend](#) Excluded Service Provider Report Request [by Current SPID/Blockholder SPID](#)

NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to specify time range and ~~current~~[Current](#) [SPID/Blockholder SPID](#) option (of either an individual SPID or all SPIDs) when generating the [Resend](#) Excluded Service Provider Report [by Current SPID/Blockholder SPID](#) on Excluded Service Provider log data.

Req 7 – Number Pool Block Failed SP List – [Resend](#) Excluded Service Provider Report [by Current SPID/Blockholder SPID](#) Request Sort Criteria

NPAC SMS shall use the following sort order when generating the [Resend](#) Excluded Service Provider Report [by Current SPID/Blockholder SPID](#) on Excluded Service Provider log data:

1. ~~current~~[SPID/Blockholder](#) SPID (ascending)
2. [TN/NPA-NXX-X](#) (ascending)
3. date/time (earliest date/time to latest date/time)
4. excluded SPID (ascending)

5. [SVID/Number Pool Block -ID \(ascending\)](#)

Req 8 – Number Pool Block Failed SP List –Resend Excluded Service Provider Report by Excluded SPID via OpGUI

NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to generate the Resend Excluded Service Provider Report by Excluded SPID on Excluded Service Provider log data.

Req 9 – Number Pool Block Failed SP List – Resend Excluded Service Provider Report by Excluded SPID Request

NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to specify time range and excluded SPID option (of either an individual SPID or all SPIDs) when generating the Resend Excluded Service Provider Report by Excluded SPID on Excluded Service Provider log data.

Req 10 – Number Pool Block Failed SP List –Resend Excluded Service Provider Report by Excluded SPID Request Sort Criteria

NPAC SMS shall use the following sort order when generating the Excluded Service Provider Report on Excluded Service Provider log data:

1. excluded SPID (ascending)
2. TN/NPA-NXX-X (ascending)
3. date/time (earliest date/time to latest date/time)
4. currentSPID/Blockholder SPID (ascending)
5. SVID/Number Pool Block -ID (ascending)

NOTE: Issue to discuss next time is whether or not to take LSMS profile into consideration for display of the data. SPs were also asked to think about reporting requirements for their companies needs and be prepared to discuss in Banff.

IIS

TBD

GDMO

TBD

ASN.1

TBD

| [M&P](#)

| [Yes](#)

Origination Date: 6/5/00

Change Order Number: NANC 311

Description: Query Message of SP Association Status

Cumulative SP Priority, Weighted Average: [4.23](#)

Pure Backwards Compatible: YES

IMPACT/CHANGE ASSESSMENT

FRS	IIS	GDMO	ASN.1	NPAC	SOA	LSMS
Y				Med	Med	N/A

Business Need:

Currently the NPAC does not provide any mechanism that allows a Service Provider to check all of the other Service Providers LSMS Associations prior to activating a Subscription Version(s). By providing the New Service Provider (NSP) with the status of all LSMS associations, the NSP would have an additional decision point when performing large ports and allow the two SPs involved in a port to be proactive instead of reactive. If it was known in advance that an SP association(s) was unavailable, the porting activity could be placed on-hold until the association(s) is restored. This would improve the reliability of the porting activities, and help prevent lengthy recovery processes and procedures to complete a port that encountered problems. This would also reduce the instances where provisioning errors occur, and the NSP is unable to quickly correct them because the ported SV(s) is in a Partial Failure status.

Description of Change:

Provide information of the current service status (TBD) for all LSMS associations in each NPAC region. This query would be initiated by SOAs only. This would be an enhancement to NANC 219 and 301 (Association Monitoring) which both will be fully deployed in NPAC SMS Release 4.0.

Jun 00 LNPAWG, at the suggestion of the CMA, the group discussion migrated away from a dynamically updated web site, to a query message that could be used by the soon-to-be-activating Service Provider, to determine if all associations are available. This new query would be a CMIP message (M-ACTION) that would allow a query on an NPA-NXX, where the NPAC SMS would take into account all filters for that given NPA-NXX, and return a list of all SPIDs that are currently not available that should be available (i.e., the New SP is expecting an empty unavailable SP List).

Requirements:

Req 1 SOA Query Associated LSMS Message

NPAC SMS shall ~~provide a mechanism for~~allow a Service Provider, via the SOA to NPAC SMS Interface, to query for a list of Service Provider LSMSs that are not currently associated for porting activity.

Req 2 SOA Query Associated LSMS Message - NPA-NXX Required

NPAC SMS shall require a valid NPA-NXX to be provided by the SOA when sending a Query Associated LSMS message.

Req 3 SOA Query Associated LSMS Message - Invalid NPA-NXX Error

NPAC SMS shall respond to the Service Provider SOA with an “Invalid NPA-NXX” error, if the NPA-NXX value is not in the NPAC SMS database.

Req 4 SOA Query Associated LSMS Message -NPAC SMS Queries LSMSs

NPAC SMS shall, upon receipt of a valid SOA Query Associated LSMS message, query the LSMSs for the specified NPA-NXX object.

Req 5 SOA Query Associated LSMS Message - LSMS Filtered NPA-NXX Supported

NPAC SMS shall apply the LSMS Filtered NPA-NXX information when determining which LSMSs to query for the NPA-NXX object.

Question: What happens if an LSMS has the network data download indicator turned off either in the Service Provider Profile (meaning they don't get NPA-NXX data) or via functional units, but they are receiving SV updates?

Req 6 SOA Query Associated LSMS Message - NPAC SMS Responds to SOA

NPAC SMS shall, upon receipt of a response from all LSMSs and/or the expiration of the retry/timeout interval, assemble a list of those LSMSs who did not respond to the query and return that list to the requesting SOA, via the SOA to NPAC SMS interface.

Question: What happens if an LSMS responds with an error?

IIS

TBD

GDMO

TBD

| [ASN.1](#)

| [TBD](#)

| [M&P](#)

| [TBD](#)

Origination Date: 9/4/97

Change Order Number: NANC 151

Description: TN and Number Pool Block Addition to Notifications

Cumulative SP Priority, Weighted Average: [4.77](#)

Functional Backwards Compatible: NO

IMPACT/CHANGE ASSESSMENT

FRS	IIS	GDMO	ASN.1	NPAC	SOA	LSMS
Y	Y	Y	Y	Low	Low	N/A

Business Need:

This change order saves research time for SOA operational staff when they receive a notification for a subscription version that has inadvertently been removed from their local database or was never received. Currently, only the NPAC subscription version id ([SVID](#)) is included in the notification message. If the SOA missed the subscription version create message (“object creation”, which includes both TN and ~~SV-ID~~[SVID](#)), any subsequent notification that the NPAC sends cannot be associated with the TN, since those subsequent notifications currently do not include the TN.

Description of Change:

It has been requested that the TN for the subscription version be added to all notifications that currently contain ~~SV-ID~~[SVID](#) but not TN from the NPAC SMS. It is possible for a SOA in a disconnect or modify-active situation, to not have the SV record in their database. Therefore, when the attribute/status change notification comes from the NPAC SMS, there is no way to correlate its version id with the TN on the disconnect or modify request in SOA.

This would be a deviation from the standard since the TN would not have been an attribute that was changed.

Additionally, the same type of change should be done for Number Pool Block (i.e., add the NPA-NXX-X to all notifications that currently contain Block-ID but not NPA-NXX-X).

Requirements:

Req 1 Subscription Version Status Attribute Value Change – Send TN

NPAC SMS shall send the Subscription Version TN when sending a Subscription Version Status Attribute Value Change notification.

Req 2 Subscription Version Attribute Value Change – Send TN

NPAC SMS shall send the Subscription Version TN when sending a Subscription Version Attribute Value Change notification.

Req 3 Number Pool Block Status Attribute Value Change – Send NPA-NXX-X

NPAC SMS shall send the Number Pool Block NPA-NXX-X when sending a Number Pool Block Status Attribute Value Change notification.

Req 4 Number Pool Block Attribute Value Change – Send NPA-NXX-X

NPAC SMS shall send the Number Pool Block NPA-NXX-X when sending a Number Pool Block Attribute Value Change notification.

IIS

TBD

GDMO

TBD

ASN.1

TBD

| [M&P](#)

| [TBD](#)

Origination Date: 2/18/00

Change Order Number: NANC 310

Description: Time Reference in the NPAC SMS

Cumulative SP Priority, Weighted Average: [5.77](#)

Functional Backwards Compatible: NO

IMPACT/CHANGE ASSESSMENT

FRS	IIS	GDMO	ASN.1	NPAC	SOA	LSMS
Y	Y	Y		High	High	High

Business Need:

Currently, the NPAC SMS system time uses Greenwich Mean Time (GMT). Many of the SOA/LSMS applications operate on network time (Central Standard Time year-around). This change order would update the NPAC SMS hardware to run on CST. It would also require the NPAC SMS software to make all decisions based on CST. This change order would eliminate the confusion centered around time/time zone/time conversion issues experienced by system engineers, developers, operations support people and users of the NPAC SMS/SOA/LSMS applications. This change order could reduce a service provider’s operational costs by decreasing re-work of porting orders.

Description of Change:

Change the NPAC SMS system time to Network Time (Central Standard Time year round). Therefore, all application level decisions involving date/time would be done in [Central Standard Time \(CST\)](#). Also, date/time fields in the PDUs, except CMIP Departure Time, over the interface would be CST. The NPAC SMS would store all date/times in CST. However, we may still want the CMIP departure time in the access control of the interface to still be GMT/UTC.

[NOTE TO CMA: - Depending on how this change order gets implemented NANC 169 “Delta Download File Creation by Time Range for SVs” may need to be revisited.](#)

[Note from CMA: - The FRS was reviewed for all items that referenced time. The items that follow were taken directly from the FRS and modified to reflect Central Standard time, with the exception of the assumption, A-1. Assumption A-1 would be an addition to the assumptions currently contained in the FRS.](#)

[Assumptions:](#)

A-1 Central Standard Time

NPAC will make time related decisions based on Central Standard Time.

AR3-3 System Tunable Time

Specific time of day references in the Functional Requirements Specification for the following system tunables, are assumed to be in Central **Standard** Time (standard/daylight) for that specific user:

- Conflict Restriction Window
- Short Business Day Start Time
- Long Business Day Start Time

3.1.3 Subscription Version Data

Update the Subscription Version Data Model and the Number Pooling Block Holder Information Data Model tables so that all references to time indicate Central Standard Time (CST).

<u>SUBSCRIPTION VERSION DATA MODEL</u>			
<u>Attribute Name</u>	<u>Type (Size)</u>	<u>Required</u>	<u>Description</u>
•			
•			
•			
<u>New Service Provider Create Time Stamp</u>	<u>T</u>		<u>The date and time (CST) that the New Service Provider authorized Transfer of Service of the Subscription Version.</u>
<u>Old Service Provider Authorization Time Stamp</u>	<u>T</u>		<u>The date and time (CST) that the old Service Provider authorized Transfer of Service for the Subscription Version.</u>
<u>Activation Request Time Stamp</u>	<u>T</u>		<u>The date and time (CST) that the Subscription Version activation request was made by the new Service Provider.</u>
<u>Activation Broadcast Date</u>	<u>T</u>		<u>The date and time (CST) that broadcasting began to all local SMS systems for the activation of the Subscription Version.</u>
<u>Activation Broadcast</u>	<u>T</u>		<u>The date and time (CST) that at least one Local</u>

SUBSCRIPTION VERSION DATA MODEL			
<u>Attribute Name</u>	<u>Type (Size)</u>	<u>Required</u>	<u>Description</u>
<u>Complete Time Stamp</u>			<u>SMS system successfully acknowledged the broadcast for the activate of the Subscription Version.</u>
<u>Disconnect Request Time Stamp</u>	<u>T</u>		<u>The date and time (CST) that the Subscription Version disconnect request was made by the local Service Provider.</u>
<u>Disconnect Broadcast Time Stamp</u>	<u>T</u>		<u>The date and time (CST) that broadcasting began to all local SMS systems for the disconnect of the Subscription Version.</u>
<u>Disconnect Complete Time Stamp</u>	<u>T</u>		<u>The date and time (CST) that at least one Local SMS system successfully acknowledged the broadcast for the disconnect of the Subscription Version.</u>
•			
•			
•			
<u>Old Service Provider Cancellation Time Stamp</u>	<u>T</u>		<u>The date and time (CST) that the Old Service Provider acknowledged that the Subscription Version be canceled.</u>
<u>New Service Provider Cancellation Time Stamp</u>	<u>T</u>		<u>The date and time (CST) that the New Service Provider acknowledged that the Subscription Version be canceled.</u>
<u>Cancellation Time Stamp</u>	<u>T</u>		<u>The date and time (CST) that the Subscription Version became canceled.</u>
<u>Old Time Stamp</u>	<u>T</u>		<u>The date and time (CST) that the Subscription Version became old.</u>
<u>Conflict Time Stamp</u>	<u>T</u>		<u>The date and time (CST) that the Subscription Version was last placed in conflict.</u>
<u>Conflict Resolution Time Stamp</u>	<u>T</u>		<u>The date and time (CST) that the resolution of a Subscription Version in conflict is acknowledged.</u>

SUBSCRIPTION VERSION DATA MODEL			
<u>Attribute Name</u>	<u>Type (Size)</u>	<u>Required</u>	<u>Description</u>
<u>Create Time Stamp</u>	T	√	<u>The date and time (CST) that this Subscription Version record was created.</u>
<u>Modified Time Stamp</u>	T	√	<u>The date and time (CST) that this Subscription Version record was last modified.</u> <u>The default value is the Create Time Stamp (CST).</u>
•			
•			
•			
<u>Modify Request Timestamp</u>	T		<u>The date and time (CST) that the Subscription Version Modify request was made.</u>
<u>Modify Broadcast Timestamp</u>	T		<u>The date and time (CST) that broadcasting began to all local SMS systems for the modification of the Subscription Version.</u>
<u>Modify Broadcast Complete Timestamp</u>	T		<u>The date and time (CST) that at least one local SMS system successfully acknowledged the broadcast for the modification of the Subscription Version.</u>
•			
•			
•			

Table 3-6 Subscription Version Data Model

NUMBER POOLING BLOCK HOLDER INFORMATION DATA MODEL			
<u>Attribute Name</u>	<u>Type (Size)</u>	<u>Required</u>	<u>Description</u>
•			

NUMBER POOLING BLOCK HOLDER INFORMATION DATA MODEL			
<u>Attribute Name</u>	<u>Type (Size)</u>	<u>Required</u>	<u>Description</u>
•			
•			
<u>Creation Date</u>	<u>T</u>		<u>The date and time (CSTGMT) that this Block Holder record was created.</u>
<u>Activation Start Timestamp</u>	<u>T</u>		<u>Date and time (CSTGMT) of the Start of the Activation. This field defines the date and time of the start of the activation request (i.e., the date and time the NPAC begins the broadcasts to the LSMSs).</u>
<u>Activation Broadcast Complete Timestamp</u>	<u>T</u>		<u>Date and time (CSTGMT) of the Completion of the Activation. This field defines the date and time of the completion of the activation request (i.e., the date and time the NPAC receives at least one Local SMS acknowledgment of the broadcast, for the activation of the Block).</u>
<u>Last Modified Timestamp</u>	<u>T</u>		<u>Date and time (CSTGMT) of the Last Modification to the Block.</u> <u>The initial value is the Creation Timestamp.</u>
<u>Disconnect Request Time Stamp</u>	<u>T</u>		<u>The date and time (CST) that the Block disconnect request was made by the NPAC personnel.</u>
<u>Disconnect Broadcast Time Stamp</u>	<u>T</u>		<u>The date and time (CST) that broadcasting began to all local SMS systems for the disconnect of the Block.</u>
<u>Disconnect Complete Time Stamp</u>	<u>T</u>		<u>The date and time (CST) that at least one Local SMS system successfully acknowledged the broadcast, for the disconnect of the Block.</u>
<u>Old Time Stamp</u>	<u>T</u>		<u>The date and time (CST) that the Block became old.</u>

NUMBER POOLING BLOCK HOLDER INFORMATION DATA MODEL			
<u>Attribute Name</u>	<u>Type (Size)</u>	<u>Required</u>	<u>Description</u>
<u>Modify Request Timestamp</u>	T		<u>The date and time (CST) that the Block Modify request was made.</u>
<u>Modify Broadcast Timestamp</u>	T		<u>The date and time (CST) that broadcasting began to all local SMS systems for the modification of the Block.</u>
<u>Modify Broadcast Complete Timestamp</u>	T		<u>The date and time (CST) that at least one local SMS system successfully acknowledged the broadcast, for the modification of the Block.</u>
•			
•			
•			

Table 3-8 Number Pooling Block Holder Information Data Model

3.1.4 Network Data

Update the Network Data Model, LSMS Filtered NPA-NXX Data Model, and Number Pooling NPA-NXX-A Holder Information Data Model tables so that all references to time indicate Central Standard Time (CST).

PORTABLE NPA-NXX DATA MODEL			
<u>Attribute Name</u>	<u>Type (Size)</u>	<u>Required</u>	<u>Description</u>
•			
•			
•			
<u>NPA-NXX Effective Date</u>	T	√	<u>The date <i>and time (CST)</i> that the NPA-NXX is available for LNP in the NPAC Customer</u>

PORTABLE NPA-NXX DATA MODEL			
<u>Attribute Name</u>	<u>Type (Size)</u>	<u>Required</u>	<u>Description</u>
			<u>networks.</u>
•			
•			
•			
<u>Split Activation Date</u>	<u>T</u>		<u>The date <i>and time (CST)</i> that the new NPA-NXX becomes available for use in an NPA split. This date represents the beginning of the permissive dialing period.</u>
<u>Split Disconnect Date</u>	<u>T</u>		<u>The data <i>date and time (CST)</i> that the old NPA-NXX becomes unavailable for use in an NPA split. This date represents the end of the permissive dialing period.</u>
<u>NPA-NXX has been Ported</u>	<u>T</u>		<u>A timestamp that indicates when the first TN within this NPA-NXX has been ported.</u>

Table 1-10 Portable NPA-NXX Data Model

LSMS FILTERED NPA-NXX DATA MODEL			
<u>Attribute Name</u>	<u>Type (Size)</u>	<u>Required</u>	<u>Description</u>
•			
•			
•			
<u>Creation Timestamp</u>	<u>T</u>	<u>√</u>	<u>Date <i>and time (CST)</i> the filtered NPA-NXX was created.</u>

Table 3-12 LSMS Filtered NPA-NXX Data Model

NUMBER POOLING NPA-NXX-X HOLDER INFORMATION DATA MODEL			
<u>Attribute Name</u>	<u>Type (Size)</u>	<u>Required</u>	<u>Description</u>
•			
•			
•			
<u>NPA-NXX-X Effective Date</u>	<u>T</u>	<u>√</u>	<u>The effective date of the 1K Block. The time for this field will be stored in CSTGMT, but and will be equivalent to 00:00:00 network data time CST.</u>
<u>Creation Time Stamp</u>	<u>T</u>		<u>The date and time (CSTGMT) that this NPA-NXX-X Holder record was created.</u>
<u>Last Modified Time Stamp</u>	<u>T</u>		<u>The date and time (CSTGMT) of the Last Modification to this NPA-NXX-X Holder record. <u>The default value is the Creation Timestamp in CST.</u></u>
•			

Table 3-13 Number Pooling NPA-NXX-X Holder Information Data Model

Requirements:

RN3-4.15 NPA Split – Entering of Split Data

The NPAC SMS shall require the following data for entry of NPA Split information into the NPAC:

- the Service Provider Id
- the old and new NPA
- the affected NXX(s)
- the start date (**CST**)of the permissive dialing period
- the end date (**CST**)of the permissive dialing period

RR3-33 NPA Splits and the Number Pool NPA-NXX-X Holder Information – New NPA Split Field Values for Automatic Add of New NPA-NXX-X

NPAC SMS shall populate the fields for the automatically generated new NPA-NXX-X in the Number Pooling NPA-NXX-X Information, when a request is made to add an NPA Split or an old NPA-NXX-X is created during a split, as follows: (Previously N-302)

- NPA-NXX-X ID – value automatically generated by NPAC.
- NPA-NXX-X Holder SPID – value set to old NPA-NXX-X.
- NPA-NXX-X – value set to the new NPA-NXX, plus the seventh digit of the old NPA-NXX-X.
- Effective Date – value set to the latest of, the same field in old NPA-NXX-X, or the start of PDP.
- Creation Date – value set to current date/time(**CST**).
- Last Modified Date – value set to current date/time(**CST**).
- Download Reason – value set to “new1”.

RR3-13.1 Business Day Start Time - Tunable Parameter

NPAC SMS shall provide long and short Business Day Start Time tunable parameters, which are defined as the start of the business day in Central **Standard** Time (standard/daylight).

RR3-13.3 Short Business Day Start Time - Tunable Parameter Default

NPAC SMS shall default the short Business Day Start Time tunable parameter to 7:00 AM, Central **Standard** Time (standard/daylight).

RR3-13.4 Long Business Day Start Time - Tunable Parameter Default

NPAC SMS shall default the long Business Day Start Time tunable parameter to 8:00 AM, Central **Standard** Time (standard/daylight).

RR3-226 Bulk Data Download – Optional Selection Criteria for Subscription Data File Generation

NPAC SMS shall accept, as optional selection criteria for subscription bulk data download file generation, an end NPA-NXX-station (10 digits), a start activation date and time, **in CST**, and an end activation date and time, **in CST**.

RR3-201.1 Number Pool Block Holder Information Bulk Download File Creation – Time Range Fields

NPAC SMS shall use the Start Time Range entry field as an inclusive start range in *CST* Central Time (daylight/standard), and the End Time Range entry field as an inclusive ending range in *CST* Central Time (daylight/standard), for Block data that were broadcast during the specified Time Range. (Previously B-654.1)

RR5-2.2 Create Subscription Version - Set Conflict Timestamp

NPAC SMS shall set the conflict timestamp to the current time (*CST*) when a Subscription Version is set to conflict at the time of subscription version creation for an Inter-Service Provider port.

RR5-10.1 Modify Subscription Version - Set Conflict Timestamp

NPAC SMS shall set the conflict timestamp to the current time (*CST*) when a Subscription Version is set to conflict upon Subscription Version modification.

R5-40.1 Modify Active Subscription Version - Broadcast Date/Time Stamp

NPAC SMS shall record the current date and time (*CST*) as the broadcast date and time stamp upon initiation of broadcasting of the modified active Subscription Version.

RR5-42.4 Conflict Subscription Version - Conflict Restriction Window Tunable Default

NPAC SMS shall default the Conflict Restriction Window Tunable parameter to 12 noon (*CST*).

R5-44.2 Conflict Subscription Version - Set Conflict Date and Time

NPAC SMS shall, upon placing a Subscription Version into conflict, record the current date and time (*CST*) as the conflict date and time stamp.

R5-45.5 Conflict Subscription Version - Set Cancellation Date Timestamp

NPAC SMS shall set a Subscription Version cancellation date timestamp to the current time (*CST*) upon setting a conflict Subscription Version to cancel.

RR5-14 Conflict Resolution Acknowledgment - Update Conflict Resolution Date and Time Stamp

NPAC SMS shall update the conflict resolution date and time stamp with the current date and time (*CST*) and set the old Service Provider Authorization flag to true when conflict is resolved.

R5-51.2 Activate Subscription Version - Broadcast Complete Date and Time Stamp

NPAC SMS shall record the current date and time (CST) as the Activation Broadcast Complete Date and Time Stamp, as soon as one Local SMS has successfully acknowledged activating the new Subscription Version.

RR5-22 Activate Subscription Version - Set Activation Received Timestamp

NPAC SMS shall set the Activation Received timestamp to the current date and time (CST) upon receiving a Subscription Version activation request.

R5-53.3 Activate Subscription Version - Validate Due Date

NPAC SMS shall verify that a pending Subscription Version is eligible for activation by ensuring that the new Service Provider due date is less than or equal to the current date (CST).

R5-57.3 Activate Subscription Version - Date and Time Stamp

NPAC SMS shall record the current date and time (CST) as the broadcast date and time stamp upon initiating sending the activated subscription to the Local SMSs.

R5-65.5 Disconnect Subscription Version - Disconnect Broadcast Date and Time Stamp

NPAC SMS shall record the current date and time as the disconnect broadcast date and time (CST) stamp upon sending of disconnect messages to the Local SMSs.

RR5-30 Cancel Subscription Version Acknowledgment - Update Old Service Provider Date and Time Stamp

NPAC SMS shall update the old Service Provider cancellation date and time stamp with the current date and time (CST) when the cancellation acknowledgment is received from the old Service Provider.

RR5-31 Cancel Subscription Version Acknowledgment - Update New Service Provider Date and Time Stamp

NPAC SMS shall update the new Service Provider cancellation date and time stamp with the current date and time (CST) when the cancellation acknowledgment is received from the new Service Provider.

RR5-91 Addition of Number Pooling Subscription Version Information – Create “Pooled Number” Subscription Version

NPAC SMS shall automatically populate the following data upon Subscription Version creation for a Pooled Number port: (Previously SV-20)

Version ID - Automatically generated by NPAC SMS.

-
-
-

New Service Provider Due Date - Value set to current date (CST).

Old Service Provider Due Date - Value set to current date (CST).

Old Service Provider Authorization - Value set to "TRUE".

New Service Provider Create Time Stamp - Value set to current date/time (CST).

Old Service Provider Authorization Time Stamp - Value set to current date/time (CST).

Activation Request Time Stamp - Value set to current date/time (CST).

Activation Broadcast Date - Value set to current date (CST).

Activation Broadcast Complete Time Stamp - Value set to current date/time (CST), once the broadcast is complete (Local SMS has responded).

-
-
-

RR6-65 Number Pool Block Holder Information Resynchronization – Block Criteria

NPAC SMS shall accept criteria for Block data, of either Time Range in **CSTGMF** or Block Range entry fields, where the Time Range in **CSTGMF** includes the starting time in **CSTGMF** and ending time in **CSTGMF** based on the Activation Start Timestamp/Disconnect Broadcast Timestamp/Modify Broadcast Timestamp, and the Block Range includes the starting Block and ending Block. (Previously B-691)

NOTE: If the Block Range was 303-242-2 through 303-355-6, the range would contain all Blocks within the TN Range of 303-242-2000 through 303-355-6999.

R8-9 NPAC Personnel Specify Audit Scope

NPAC SMS shall allow NPAC SMS Personnel to specify the scope of an audit by specifying one or more of the following parameters:

- Specific Service Provider network **or** ALL Service Providers networks.
- Full audit for all LNP attributes **or** a partial audit where the Service Provider can specify one or more of the following LNP attributes:
 - LIDB data
 - CLASS data
 - LRN data
 - CNAM data

- ISVM data
- WSMSC data (only Service Provider Local SMSs that support this attribute will be audited on this attribute)

Default: Full audit

Specify an activation Date/Time stamp range (**CST**), i.e., only audit records activated between a specific time window.

RR8-6 Audit Processing for All Subscription Versions in a Number Pooling Environment

NPAC SMS shall process an audit request of an Active-Like **Subscription Version(s)**, by performing the following steps: (Previously A-2)

- Validate that the audit request is valid (existing FRS functionality).
- Validate that the Block associated with the TN contained in the Subscription Version(s), exists in the NPAC SMS.
- Send queries of TN Range, or TN Range with Activation Timestamp(**CST**), to non-EDR Local SMSs that are accepting downloads for the given NPA-NXX.
- Send queries of Block(s) **AND** TN Range or TN Range with Activation Timestamp (**CST**), to EDR Local SMSs that are accepting downloads for the given NPA-NXX.
-
-
-

IIS

TBD

GDMO

TBD

ASN.1

TBD

M&P

TBD

Origination Date: 10/15/96

Change Order Number: ILL 23

Description: Detailed Integrity Sample Results Report

Cumulative SP Priority, Weighted Average: [6.08](#)

Pure Backwards Compatible: YES

IMPACT/CHANGE ASSESSMENT

FRS	IIS	GDMO	ASN.1	NPAC	SOA	LSMS
Y				Low (assuming this is converted to an audit)	N/A	N/A

Business Need:

Each week, the NPAC conducts a non-corrective audit of 1,000 randomly selected ported telephone numbers at each service provider's LSMS. (It is not possible for the NPAC to directly audit the SPs' network routing data.). The raw data is provided in the NPAC monthly reports provided to the LLC, showing the number of inquiries made and the number of errors found. The results are not summarized by service provider, however, and only a regional-wide error level is known.

The business need [is](#) for a more detailed network integrity report, showing the errors found at each tested LSMS, as ~~that~~ carriers' relative performance in the area of accurate ported number databases may vary significantly. The region-wide report demonstrates a general statement of the LNP database condition overall. But a service provider-specific report over time could demonstrate whether a substantial difference did in fact exist from one carrier to the next (or from one LSMS vendor to the next). The provider-specific report could be used by a carrier to work with its LSMS vendor on the problem as well as by the LLC and NPAC to see where improvement is needed. Each carrier could receive only its own results plus the overall regional results; the LLC would receive both the overall regional results and each individual service provider's results. This report supports the long term "Slow Horse" effort.

Description of Change:

A request was made for an additional NPAC SMS report for detailed integrity sample results. This report would list all of the discrepancies found for a given Data Integrity Sampling by service provider.

The data integrity report is used to determine the percentage of synchronization between the NPAC SMS and Local SMS. The report is run at a tunable frequency (default 1 week) for a random sample of a tunable number of TNs (default of 1000).

There is also an issue being discussed on whether the discrepancies found should be fixed.

There was a request that the M&P support be discussed.

June 00 LNPAWG meeting, after discussing with the group, the expectation for this report is that it would still be generated during housekeeping activities, and would continue to use the existing tunables (frequency = default is weekly, number of TNs = default is 1000). The processing for this report would utilize the existing audit feature and would send corrections to any discrepant LSMSs for the randomly selected SVs.

Once all queries/corrections have been processed, the NPAC SMS would generate a report (for LLC distribution only) that lists the results of each SP in that region, with the specific TNs that were discrepant. An example is shown below:

SP1	TNs = 1000	Discrepancies = 2
	303-671-2222	
	303-671-4141	
SP2	TNs = 1000	Discrepancies = 0
SP3	TNs = 1000	Discrepancies = 1
	303-671-5001	

Requirements:

TBD

IIS

TBD

GDMO

TBD

ASN.1

TBD

M&P

TBD

|

Origination Date: 1/23/98

Change Order Number: NANC 193

Description: TN Processing during NPAC SMS NPA Split Processing

Cumulative SP Priority, Weighted Average: [6.08](#)

Pure Backwards Compatible: YES

IMPACT/CHANGE ASSESSMENT

FRS	IIS	GDMO	ASN.1	NPAC	SOA	LSMS
Y				High +	Low-Med	Low-Med

Business Need:

Currently the NPAC SMS performs NPA Split processing at the start of the Permissive Dial Period (PDP), based on data input on the NPAC OpGUI. This processing only affects data at the NPAC since nothing is broadcast to Service Providers as a result of Split processing. The general understanding of all parties is that NPAC behavior would not change until the start of PDP (i.e., sending out the new NPA-NXX for requests using the old NPA-NXX).

However, since NPA Split processing could take a lengthy period of time to accomplish (in almost all instances thousands of SVs need to be updated), what is the expected NPAC behavior for Service Provider requests that are sent during this Split processing window of time (i.e., before the start of PDP)? Some of the NPAC responses may be processed and returned prior to the start of PDP, while others may be processed and returned shortly after the start of PDP (e.g., several seconds or a minute or more later). Additionally, on the Service Provider side, what is the expected behavior and response for audits that are sent to the LSMS during this NPA Split processing window of time? The same issue applies at the end of PDP.

With this change order, the behavior of the NPAC would be clearly defined for requests that are sent/received/processed/returned during the Split processing window immediately before/during/after the start of PDP and the end of PDP.

Description of Change:

There was group consensus that NPAC behavior would not change until the start of permissive dialing. An example would be an audit that occurred during split processing one-minute before the start of permissive dialing. The NPAC should act as if permissive dialing has not yet started for the audit initiated during split processing. The Split processing should have no effect on operations of the system.

A clarification requirement should be added as follows:

NPAC SMS shall processes requests during split processing prior to the start of permissive dialing as if the split processing has not yet occurred.

Additional clarification requirement:

NPAC SMS shall in a download request made after permissive dialing start for subscription version data sent prior to permissive dialing start, return the new NPA-NXX for subscription versions involved in an NPA Split.

The following questions need to be answered by vendors:

- What will the SOA do if it sends an old NPA-NXX prior to PDP and the NPAC returns the new SV with the new NPA-NXX? What would happen for a create/audit/query?
- What will LSMS systems do if an audit is sent for new NPA prior to PDP?
- Are there LSMS that will not be able to handle audits on new NPA-NXX right at the start of PDP?
- How long does it take for NPAC/SOA/LSMS to split an NPA-NXX?
- What is the NPAC behavior for recovery spanning time before & after PDP?
- If NPAC splits starting at midnight and SOA sends new NPA-NXX for an NPA-NXX not in split what would happen?

After reviewing the above questions. It was determined that the NPAC should act as if the split had not occurred during split processing prior to permissive dialing.

A matrix of answers received above has been created.

It was discussed that this requirement would have to be implemented by SOA, LSMS, and NPAC vendors. This requirement would shorten the window when errors could occur for the change of an NPA. It was requested that we review and document on behavior in the following situations: When the NPAC receives a request sent before the split after the split start, how should it respond? Also when an SOA or LSMS receives a request sent before the split after the split start, how should it respond?

IIS flows for error scenarios will be created. If an activate using the new NPA-NXX is received by the NPAC SMS before PDP it will be rejected. If an SV using the old NPA-NXX is received after the end of PDP it will be treated as the old NPA-NXX if that NPA- NXX is still a valid portable NPA-NXX in the NPAC SMS, otherwise it will be rejected. Download requests after the start of PDP for information occurring before PDP should reflect the new NPA- NXX for subscription versions involved in a Port.

Requirements:

TBD

IIS

TBD

GDMO

TBD

| [ASN.1](#)

| [TBD](#)

| [M&P](#)

| [TBD](#)

|

Origination Date: 10/15/96

Change Order Number: ILL 5

Description: Round-Robin Broadcasts across SOA/LSMS associations

Cumulative SP Priority, Weighted Average: [6.31](#)

Pure Backwards Compatible: YES (this is optional functionality for the LSMS)

IMPACT/CHANGE ASSESSMENT

FRS	IIS	GDMO	ASN.1	NPAC	SOA	LSMS
Y	Y			Low	Low-High	Low-High

Business Need:

Currently, most SOAs/LSMSs have one association to the NPAC SMS over which all interface traffic is sent and received. As performance increases over the interface, a SOA/LSMS may need to distribute their interface processing across multiple machines to gain additional memory, processor speed and stack resources. This change order would enable an SOA/LSMS to distribute their interface processing across multiple machines. This change order would also enable the NPAC SMS to accept multiple associations of the same function type from different NSAPs and distribute outbound traffic in a round robin algorithm across the multiple associations.

A benefit of allowing an SP to establish additional associations during heavy activity periods is that if one of the associations go down, the other association still remains connected, thereby alleviating (in whole or in part) partial failures as a result of the downed association.

Description of Change:

The NPAC SMS would support additional LSMS associations and manage the distribution of transactions in a round robin algorithm across the associations. For example, due to performance conditions a Service Provider may want to start another LSMS association for network/subscription downloads. The NPAC SMS would accept the association, manage security, and distribute network/subscription PDUs across the 2 or more associations using the round robin algorithm (One unique PDU will be sent over one association only.)

[Requirements:](#)

[TBD](#)

[IIS](#)

[TBD](#)

| GDMO

| TBD

| ASN.1

| TBD

| M&P

| TBD

|

Origination Date: 2/4/00

Change Order Number: NANC 307

Description: Change BDD Format for NPA-NXX and NPA-NXX-X Files

Cumulative SP Priority, Weighted Average: [7.31](#)

Functional Backwards Compatible: NO

IMPACT/CHANGE ASSESSMENT

FRS	IIS	GDMO	ASN.1	NPAC	SOA	LSMS
Y				Low -	Low	Low

Business Need:

The intended use of Bulk Data Download (BDD) files is to allow a flat file to be generated by the NPAC SMS, and loaded/utilized by a Service Provider’s local systems. Given the typical flat file format, unformatted data is the normal format. In most of the BDD files generated by the NPAC SMS today, this is the case. However, two files currently do not conform to this normal format. Therefore, the reason for removing the dash from the NPA-NXX values in the bulk data download file format is to sync up the BDD data with the data sent over the interface and with other fields in the BDD files such as TN and LRN. Prior to Release 3.0, the NPA-NXX field was the only field in the BDD files to contain a dash. In Release 3.0, the NPA-NXX-X field was designed to contain a dash due to consistency reasons with the NPA-NXX field.

Description of Change:

In the NPA-NXX Bulk Data Download file, the NPA-NXX Value has a format that includes a dash between the NPA and the NXX. The proposal is to remove the dash in the NPA-NXX Value field.

In the NPA-NXX-X Bulk Data Download File, the NPA-NXX-X has the same issue with the format of the NPA-NXX-X Value, and the same proposal for removal.

Since this change order is not backwards compatible, the NPAC SMS needs to have the ability to generate the BDD files both with and without the dash (“-“).

[Requirements:](#)

[TBD](#)

[IIS](#)

[TBD](#)

| **GDMO**

| TBD

| **ASN.1**

| TBD

| **M&P**

| TBD

|

Origination Date: 6/14/00

Change Order Number: NANC 312

Description: Different User Levels on the LTI

Cumulative SP Priority, Weighted Average: [7.46](#)

Pure Backwards Compatible: YES

IMPACT/CHANGE ASSESSMENT

FRS	IIS	GDMO	ASN.1	NPAC	SOA	LSMS
Y				Med	N/A	N/A

Business Need:

Currently the NPAC Low-Tech Interface (LTI) does not provide any mechanism that allows a Service Provider to have different user levels for access to the LTI features. The problem is for access to the reports option on the LTI. By limiting the access based on user level, a Service Provider can control the number of users that have access to this chargeable event.

Description of Change:

Provide two user security levels for the LTI. One would have access to the reports option, and the second would not have this access. All other access would be identical for the two user levels.

Requirements:

TBD

IIS

TBD

GDMO

TBD

ASN.1

TBD

| [M&P](#)

| [TBD](#)

|