National Number Pooling Requirements

Document Change History:

5/20/98

- 1. Updated definitions, added "blank directory" and "TN re-assignment" table.
- 2. Updated section 3, added initial requirements for NPA-NXX and LRN validation. Updated NPAC Customer Data Model (for EDR flag). Also, Number Pooling Block NPA-NXX-X Holder Information Model, and requirements RR3-27.1 through RR3-34.1, RR3-25, and RR3-26. Also added initial requirements for Sub-Block Block discussion.
- 3. Updated section 8, issue with audit and notification suppression to SOA, depending on value of ERD flag to LSMS.
- 4. Updated section 9, consolidated requirements for reports.

6/1/98

- 1. Updated definition for "vacant number treatment".
- 2. Updated BlockNPA-NXX-X and Sub-Block Sections based on discussion.
- 3. Added comments to SV section related to discussion in Chicago.

6/29/98

?1 Re-worked most areas of document, to accommodate new direction (i.e., sub-blocks over the SOA).

8/17/98

- ?2 Updated Block NPA-NXX-X Holder section for issues discussed in Denver.
- ?3 Incorporated new requirements for "pending-like, no active" edits.

8/31/98

- ?4 Updated all sections.
- ?5 Put in sub-section headers and re-numbered all sections based on functionality.

10/9/98

1. <u>Updates based on 9/16/98 (Seattle), 9/21-25/98 (Kansas City), and 10/5-10/7 (New Orleans)</u> Number Pooling meetings.

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- 2. Changed references for Block and Sub-Block to match those found in the GMDO, ASN, and IIS flows. The Block is now referred to as "NPA-NXX-X" and the Sub-Block is now referred to as the "Block".
- 3. Added requirements for NPA-NXX-X notification.
- 4. Added requirements to capture the necessary synchronization that must be performed by the NPAC SMS for Block and associated Subscription Versions, within a 1K Range.

Number Pooling Requirement Overview

The National Number Pooling Requirements document provides a set of requirements developed by NANC T&O, as a "target architecture" approach for a national solution to Number Pooling.

The following definitions apply in the requirements that follow:

- Code Holder The code holder is the LERG assignee owner of the NPA-NXX.
- Block Holder The recipient Service Provider of a <a href="https://linear.ncbi.nlm.ncbi.nl
- Block NPA-NXX-X A range of 1000 pooled TNs within the NPA-NXX, beginning with a station of n000, and ending with n999, where n is a value between 0 and 9. From an NPAC perspective, this is considered Network Data.
- Sub-Block Block A range of 1000 pooled TNs within the NPA-NXX, beginning with a station of n000, and ending with n999, where n is a value between 0 and 9. A range of pooled TNs, between size x and 1000 TNs. Currently, x equals 1000.
- Port on Demand Porting of a single TN or range of TN's from the code holder to the block holder at a time desired by the block holder that is on, or after, the effective date of the pool. This is NOT supported for the National Number Pooling architectureNote: this is not used for the current architecture.
- Number Pooling Block NPA-NXX-X Holder Information –Data in the NPAC SMS that contains the <u>first 7-digits of a range</u> of TN's, the block holder (service provider), and the effective date of the block. Also referred to as "dash X" data.
- Number Pooling Sub Block Block Information Data in the NPAC SMS that contains the first 7-digits of a 1K range of TN's-(could be the entire set or a sub-set of the block, however, for the initial implementation, it will include the 1K range of TNs), default routing for a sub-block of TNs, and the activation timestamp of the TN's within the 1K range. Also referred to as "Block" data.
- De-Pool Return of a 1K pooled block to the Number Administrator. Also referred to as "un-allocation of the block".
- Vacant Number A non-working number.
- Vacant Number Treatment A recorded announcement played to the calling party, when the NPA-NXX of the TN they have dialed is valid, but the 10-digit TN is not a working number.
- Default Routing Restoration reinstatement of the default routing for the TN as defined in the applicable block/sub-block information, in order to provide vacant number treatment
- Snapback Notification for TN reassignment.

- Contaminated Numberion An unavailable working number (e.g., working), within a 1K Block 1K Block, at the time prior to the 1K Block 1K Block is being donated to the Pooling Administrator.
- Pending-like SVs SVs that contain a status of pending, conflict, cancel-pending, or failed.
- Active-like SVs SVs that contain a status of active, sending, partial failure, <u>old with a Failed SP List</u>, or disconnect pending.
- Effective Date The date that is considered to be the "ownership switchover" date for
 the 1K Block | Block | From the Code Holder (NPA-NXX owning SP) to the Block
 Holder (NPA-NXX-X owning SP). This is the date published by the LERG, and is
 also used by the Pooling Administrator and the NPAC.
- EDR (Efficient Data Representation) The ability to represent 1000 TNs as a range.
- EDR within the NPAC A storage mechanism where a 1K range of TNs is represented, stored, and communicated, as a single Block entity (i.e., a Block that equates to the 1000 TNs within the 1K range).

The following table portrays "vacant number treatment" responsibility and "snapback for TN re-assignment" notifications throughout each phase of number pooling, once the Block has been donated to the Pooling Administrator:

Vacant Number Treatment	Pre effective date	post effective date	post Sub-BlockBlock activation
Contaminated disconnect	Code holder	Code holder	Block holder
Non-contaminated	Code holder	Code holder	Block holder
Snapback for TN			
re-assignment			
Contaminated disconnect	Code holder*	Block holder	Block holder
Non-contaminated	N/A	N/A	Block holder

^{* =} Code Holder receives a notification but CANNOT reassign this TN.

- At the present time, the <u>National Number Pooling</u> approach includes the following:
- 0Pre-Port 1K Blocks to a single switch (i.e., all 1000 TNs contain same LRN).
- 1EDR (Efficient Data Representation) captured through the use of "sub-blocks" in the NPAC, and over the SOA-to-NPAC and NPAC-to-LSMS interfaces.
- 2The Block NPA-NXX-X Holder Information in the NPAC is the same as the 1K Block managed by the Pooling Administrator, and represented in the LERG.
- 3The <u>Block NPA-NXX-X</u> Holder Information is broadcast over the NPAC-to-LSMS interface to all Service Providers in that NPAC region (exclusive of those that have filters for the NPA-NXX), for the opening of NPA-NXX-X data to the NPA-NXX-X Holder, just like NPA-NXX openings today.
- 4The <u>Block NPA-NXX-X</u> Holder Information's "Effective Date" is the date the LERG, the Pooling Administrator, and the NPAC, consider to be the "ownership switchover" date for the <a href="https://linear.nc.nih.google.com/
- 5At the time of Block NPA-NXX-X creation, the NPAC will check for "pending-like, no-active" SVs or pending-like Port-To-Original SVs. If any are found, the NPAC will reject the creation of this Block NPA-NXX-X. An error message (new error message and error number for Block NPA-NXX-X) will be generated for the NPAC personnel. An "error dialog with a transition mechanism" will be developed that allows the NPAC personnel to easily generate this the Pending-Like No-Active Subscription Version report and Pending-Like Port-to-Original Subscription Version report (e.g., user gets prompted for reports, "Print the reports now, O.K. / Cancel").
- 6The new-Pending-Like No-Active Subscription Version report and Pending-Like Port-to-Original Subscription Version report will be created that is visible to NPAC personnel. The report will contain TN, SV ID, Old SP, New SP, Due Date, and Status.
- 7The recipients of <a href="this-Pending-Like No-Active Subscription Version report and Pending-Like Port-to-Original Subscription Version report (e.g., Pooling Administrator, Code Holder) will have their own M&P (outside of NPAC) to clean up these SVs (either cancel or activate). Once they are cleaned up, NPAC personnel will await notification from the Pooling Administrator prior to attempting the Block NPA-NXX-X creation again (need-input from-INC before proceeding with this one).
- 8<u>The NPA-NXX-X Holder Information is broadcast over the NPAC-to-LSMS interface, when the SP's NPA-NXX-X flag in the SP Profile record in the NPAC, is set to TRUE (non- NPA-NXX-X compatible LSMSs do not receive a broadcast, since the SP's NPA-NXX-X flag is set to FALSE).</u>
- 9Once the Block NPA-NXX-X has been created on the NPAC, the Code Holder is prohibited from performing intra-service provider ports. If TNs were missed during the Code Holder's pre-donation intra-port activities, then NPAC personnel only are allowed to perform these intra-service provider port creates of SVs with no previously active SV, on behalf of the Code Holder. The and subsequent activates of these LISP ports can be performed by either the Code Holder or NPAC personnel. The NPAC will allow NPAC personnel, via the Ops GUI, to create these LISP ports up to the effective date (11:59p of the day prior to the effective date), and to activate these LISP ports up to the activation date/time.
- 10The TN Range in the NPA-NXX-X and Sub-Block Block are the same Holder Information in the NPAC is a sub-set of the Block Holder Information. At the present time, they are equal-(i.e., both contain all 1000 TNs).

- 11Once the Block NPA-NXX-X's Effective Date has been reached, the Sub-Block Block will be created (either from a scheduled event on the NPAC, or from a SOA sending up the Sub-Block).
- 12The <u>Sub-Block Block</u> Holder Information is broadcast over the NPAC-to-LSMS interface, when the SP's LSMS EDR flag in the SP Profile record in the NPAC, is set to TRUE (non-EDR LSMSs get individual SVs, since the SP's LSMS EDR flag is set to FALSE).
- 13The Sub-Block Block Holder Information's "Activation Timestamp" is the date/time the NPAC broadcasts sub-block or SV data to the applicable LSMSs. Only at this point in time are all SPs notified of the "ownership switchover" date for the HK Block from the Code Holder (NPA-NXX owning SP) to the Block Holder (NPA-NXX-X owning SP).
- 14The <u>Sub-Block Block</u> Holder Information's SOA notification is <u>eonditionally</u> broadcast over the SOA to NPAC Interface, <u>when the SOA Origination on the Block record is set to TRUE</u>.—

 <u>The decision is based on the SOA Origination on each Sub-Block record.</u>
- 15At the time of Sub-Block Block creation by the NPAC (attempted on or after the Block NPA-NXX-X's Effective Date), the NPAC will check for "pending-like, no- active" SVs-or-pending Port-To-Original SVs. If any are found, the NPAC will reject the creation of this Sub-BlockBlock. An error message (new error message and error number for Sub-BlockBlock) will be generated for the NPAC personnel. An "error dialog with a transition mechanism" will be developed that allows the NPAC personnel to easily generate this-the-Pending-Like No-Active Subscription Version report (e.g., user gets prompted for report, "Print the report now, O.K. / Cancel").
- 16At the time of Sub-BlockBlock creation by the SP's SOA (attempted on or after the BlockNPA-NXX-X's Effective Date), the NPAC will check for "pending-like, no- active" SVs-or pending Port-To-Original SVs. If any are found, the NPAC will reject the creation of this Sub-BlockBlock. An error message (new error message and error number for Sub-BlockBlock) will be generated and sent back to the SP's SOA. A new M&P will require the SP to contact NPAC personnel (USA) and request the generation of the Pending-Like No-Active Subscription Version report.
- 17The new Pending-Like No-Active Subscription Version report will be created that is visible to NPAC personnel. The report and will contain TN, SV ID, Old SP, New SP, Due Date, and Status.
- 18Block Create messages over the SOA-to-NPAC SMS Interface will set the SOA Origination to TRUE.
- 19The recipients of this report (e.g., Pooling Administrator, Code Holder) will have their own M&P (outside of NPAC) to clean up these SVs (either cancel or activate) by the Code Holder and the NPAC Personnel. Once they are cleaned up, NPAC personnel will await notification from the Pooling Administrator ______ prior to attempting the Sub-Block Creation again (if it is NPAC initiated), or contacting the Block Holder SP and informing them that they could re-submit the Sub-BlockBlock request.
- 20Once the Sub-Block Block has been created on the NPAC, most of the NPAC functionality remains the same. The differences include, Port-To-Original (PTO) must now be the Block NPA-NXX-X Holder SP, PTO activates and all disconnects broadcast different SV data to non-EDR LSMSs (M-CREATE) and EDR LSMSs (M-DELETE).
- 21See attachment for Block and SV behavior.

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- 22<u>A new boolean in the NPAC Customer Data Model will be added to indicate whether or not the Service Provider accepts NPA-NXX-X downloads from the NPAC (TRUE = yes, FALSE = no).</u>
- 23A new boolean in the NPAC Customer Data Model will be added to indicate whether or not the Service Provider uses Efficient Data Representation on the Local SMS (TRUE = yes, FALSE = no).
- 24The two new objects that will be broadcast over the interface include the NPA-NXX-X (1K Block) openings (similar to today's code opening of NPA-NXX), and Block for EDR compatible Local SMSs that replace the 1000 TNs of POOL'ed numbers within the 1K Block.
- 25 The baseline for any requirements that begin with "RR..." is IIS/FRS 1.10.
- 26The baseline for the National Number Pooling requirements is the Illinois Number Pooling NPAC Release 1.4.

Requirements

Section 3 Modifications

FRS Section 3.1.2

NPAC CUSTOMER DATA MODEL				
Attribute Name	Type (Size)	Required	Description	
NPAC Customer ID	C (4)	V	An alphanumeric code which uniquely identifies an NPAC Customer.	
NPAC Customer Name	C (40)	V	A unique NPAC Customer Name.	
NPAC Customer Allowable Functions	M	V	Each bit in the mask represents a boolean indicator for the following functional options: SOA Management SOA Network Data Management LSMS Network Data Management LSMS Data Download	
			LSMS Queries/Audits	
NPAC Customer NPA-NXX-X Indicator	<u>B</u>	⊻	A boolean that indicates whether the NPAC Customer accepts NPA-NXX-X downloads from the NPAC SMS. The default value is False.	
NPAC Customer LSMS EDR Indicator	В	V	A boolean that indicates whether the NPAC Customer utilizes Efficient Data Representation (EDR) on the LSMS. The default value is False.	

EDR-10 Service Provider NPA-NXX-X Indicator

NPAC SMS shall provide a mechanism for the Service Provider to indicate whether or not they manage the 1K Block using NPA-NXX-X, and want Number Pooling Block Information downloaded to their Local SMS via the NPAC SMS to Local SMS Interface, using the Number Pooling NPA-NXX-X Object.

EDR-20 Service Provider NPA-NXX-X Indicator – Default

NPAC SMS shall default the NPA-NXX-X Indicator to FALSE.

EDR-30 Service Provider NPA-NXX-X Indicator – Modification

NPAC SMS shall allow the NPAC SMS Administrator to modify the NPA-NXX-X Indicator on the NPAC Customer record.

EDR-40 Service Provider NPA-NXX-X Indicator – Downloads

NPAC SMS shall download NPA-NXX-X data, via the NPAC SMS to Local SMS Interface if the indicator is TRUE.

EDR-150 Service Provider EDR Indicator

NPAC SMS shall provide a mechanism for the Service Provider to indicate whether or not they manage the <a href="https://linear.com/l

EDR-260 Service Provider EDR Indicator – Default

NPAC SMS shall default the EDR Indicator to FALSE.

EDR-370 Service Provider EDR Indicator – Modification

NPAC SMS shall allow the NPAC SMS Administrator to modify the EDR Indicator on the NPAC Customer record.

FRS Section 3.1.3

SUBSCRIPTION VERSION DATA MODEL			
Attribute Name	Type (Size)	Required	Description
Version ID	N	√	A unique sequential number assigned upon creation of the Subscription Version.
LRN	TN	√	The LRN is an identifier for the switch on which portable NPA-NXX-XXX-X's reside.
Old Service Provider ID	C (4)	√	Old Service Provider ID.
New Service Provider ID	C (4)	√	New Service Provider ID.
TN	TN	V	Subscription Version telephone number.
Local Number Portability Type	Е	√	Number Portability Type. Valid enumerated values are: LSPP - Local Inter-Service Provider Portability (0) LISP - Local Intra-Service Provider Portability (1) POOL - Pooled Block Number Port (2)
Status	Е	√	Status of the Subscription Version. The default value is P for Pending. Valid enumerated values are: X - Conflict (0) A - Active (1) P - Pending (2) S - Sending (3) F - Failed (4) PF - Partial Failure (5) DP - Disconnect Pending (6) O - Old (7) C - Canceled (8) CP - Cancel Pending (9)
CLASS DPC	N (9)	√	DPC for 10-digit GTT for CLASS features.
CLASS SSN	N (3)	√	CLASS SSN for the Subscription Version.

SUBSCRIPTION VERSION DATA MODEL			
Attribute Name	Type (Size)	Required	Description
LIDB DPC	N (9)	√	DPC for 10-digit GTT for LIDB features.
LIDB SSN	N (3)	√	LIDB SSN for the Subscription Version.
CNAM DPC	N (9)	√	DPC for 10-digit GTT for CNAM features.
CNAM SSN	N (3)	√	CNAM SSN for the Subscription Version.
ISVM DPC	N (9)	√	DPC for 10-digit GTT for ISVM features.
ISVM SSN	N (3)	√	ISVM SSN for the Subscription Version.
New Service Provider Due Date	Т	√	The due date planned by the new Service Provider for Subscription Version Transfer.
Old Service Provider Due Date	Т		The due date planned by the old Service Provider for Subscription Version Transfer.
Old Service Provider Authorization	В		A boolean indicator set by the old Service Provider to indicate authorization or denial of Transfer of Service for the Subscription Version to the new Service Provider.
New Service Provider Create Time Stamp	Т		The date and time that the New Service Provider authorized Transfer of Service of the Subscription Version.
Old Service Provider Authorization Time Stamp	Т		The date and time that the old Service Provider authorized Transfer of Service for the Subscription Version.
Activation Request Time Stamp	Т		The date and time that the Subscription Version activation request was made by the new Service Provider.
Activation Broadcast Date	Т		The date and time that broadcasting began to all local SMS systems for the activation of the Subscription Version.
Activation Broadcast Complete Time Stamp	Т		The date and time that at least one Local SMS system successfully acknowledged the broadcast or the retries were exhausted for the activate.
Disconnect Request Time Stamp	Т		The date and time that the Subscription Version disconnect request was made by the local Service

SUBSCRIPTION VERSION DATA MODEL			
Attribute Name	Type (Size)	Required	Description
			Provider.
Disconnect Broadcast Time Stamp	Т		The date and time that broadcasting began to all local SMS systems for the disconnect of the Subscription Version.
Disconnect Broadcast Complete Time Stamp	Т		The date and time that at least one Local SMS system successfully acknowledged the broadcast or the retries were exhausted for the disconnect.
Effective Release Date	Т		The date that the Subscription Version is to be deleted from all Local SMS systems.
Customer Disconnect Date	Т		The date that the Customer's service was disconnected.
Pre-Cancellation Status	Е		Status of the Subscription Version prior to cancellation. Valid enumerated values are: X - Conflict (0) P - Pending (2) DP - Disconnect Pending (6)
Old Service Provider Cancellation Time Stamp	Т		The date and time that the Old Service Provider acknowledged that the Subscription Version be canceled.
New Service Provider Cancellation Time Stamp	Т		The date and time that the New Service Provider acknowledged that the Subscription Version be canceled.
Cancellation Time Stamp	Т		The date and time that the Subscription Version became canceled.
Old Time Stamp	Т		The date and time that the Subscription Version became old.
Conflict Time Stamp	Т		The date and time that the Subscription Version was last placed in conflict.
Conflict Resolution Time Stamp	Т		The date and time that the resolution of a Subscription Version in conflict is acknowledged.
Create Time Stamp	Т	V	The date and time that this Subscription Version record was created.

SUBSCRIPTION VERSION DATA MODEL				
Attribute Name	Type (Size)	Required	Description	
Modified Time Stamp	Т	√	The date and time that this Subscription Version record was last modified.	
			The default value is the Create Time Stamp.	
Porting to Original	В	V	A boolean that indicates whether the Subscription Version created is to be ported back to the original Service Provider.	
			The default value is False.	
End User Location Value	C (12)		For future use.	
End User Location Value Type	C (2)		For future use.	
Modify Request Timestamp	Т		The date and time that the Subscription Version Modify request was made.	
Modify Broadcast Timestamp	Т		The date and time that broadcasting began to all local SMS systems for the modification of the Subscription Version.	
Modify Broadcast Complete Timestamp	T		The date and time that all local SMS systems successfully acknowledged or the retries were exhausted for the modification of the Subscription Version	
Billing ID	C (4)		For future use.	
			The default value is the Facilities Based Service Provider ID.	
Status Change Cause Code	N (2)		Used to specify reason for conflict when old Service Provider Authorization is set to False, or to indicate NPAC SMS initiated cancellation. Valid values are: 0 - No value 54 - General Conflict 50 - LSR Not Received 51 - FOC Not Issued 52 - Due Date Mismatch 53 - Vacant Number Port 55 - NPAC SMS Automatic Conflict from Cancellation 1 - NPAC SMS Automatic Cancellation	

Table 0-1 Subscription Version Data Model

RX3-3.1 Service Provider NPA-NXX Data Deletion

NPAC SMS shall allow Service Providers to delete their NPA- NXX data via the NPAC SMS to Local SMS interface or the SOA to NPAC SMS interface provided the changes do not cause any updates to the Subscription Versions, **Number Pooling** Block NPA-NXX-X or Sub-Block Information.

RR4-3 Removal of NPA-NXX

NPAC SMS shall allow the removal of an NPA-NXX by NPAC personnel only if no Subscription Versions, except for Old or Canceled Subscription Versions, **Number Pooling** Block NPA-NXX-X or Sub-Block Information, exists for the NPA-NXX.

RX3-3.2 Service Provider LRN Data Deletion

NPAC SMS shall allow Service Providers to delete their LRN data via the NPAC SMS to Local SMS interface or the SOA to NPAC SMS interface provided the changes do not cause any updates to the Subscription Versions or Number Pooling Sub-Block Block Information.

RR4-4.2 Removal of LRN

NPAC SMS shall allow the removal of an LRN by NPAC personnel only if no Subscription Versions, except for Old or Canceled Subscription Versions or Number Pooling Sub-Block Block Information, exists for the LRN.

Section 3 New Requirements

NUMBER POOLING BLOCKNPA-NXX-X HOLDER INFORMATION DATA MODEL				
Attribute Name	Type (Size)	Required	Description	
Block NPA-NXX-X ID	N	√	A unique sequential number assigned upon creation of the BlockNPA-NXX-X.	
BlockNPA-NXX-X Holder SPID	C(4)	V	The Service Provider Id of the block NPA-NXX-X holder.	
TN Range Start NPA- NXX-X	TN N(7)	V	NPA-NXX-X Telephone number at the start of the 1K Block 1K Block.	
TN Range End	N(4)	¥	Last four (4) digits of telephone number that indicate the end of the TN range for the 1K Block.	
Effective Date	Т	V	The effective date of the HK Block . The time for this field will be stored in GMT, but equivalent to 00:00:00 network data time CST.	
Creation Date	Т		The date and time (GMT) that this BlockNPA-NXX-X Holder record was created.	
Last Modified Date	Т		The date and time (GMT) of the Last Modification to this Block NPA-NXX-X Holder record.	
			The default value is the Creation Timestamp.	

Block NPA-NXX-X Holder, General

B-N-10 Number Pool Block NPA-NXX-X Holder Information – NPAC Personnel GUI

NPAC SMS shall allow NPAC Personnel to add, modify, and delete, and query Block NPA-NXX-X Holder information via the NPAC Administrative Interface.

N-15 Number Pool NPA-NXX-X Holder Information –GUI Entry Field

NPAC SMS shall include the "Scheduled Time" as an entry field in the format of HH:MM, for the NPA-NXX-X Holder information via the NPAC Administrative Interface.

N-16 Number Pool NPA-NXX-X Holder Information – Default for Entry Field

NPAC SMS shall default the value in the "Scheduled Time" field in the NPAC Administrative Interface, to 00:01 (HH:MM).

N-17 Number Pool NPA-NXX-X Holder Information –Use of Entry Field

NPAC SMS shall use the value in the "Scheduled Time" field as the time that the Block Creation scheduled event will occur for NPAC initiated Block Holder data.

B-N-20 Number Pool Block NPA-NXX-X Holder Information – Service Provider Request

NPAC SMS shall reject a request from a Service Provider SOA via the SOA to NPAC SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, to add, modify, <u>or</u> delete, <u>or query Block NPA-NXX-X</u> Holder information as stored in the NPAC SMS.

B-N-30 Number Pool Block NPA-NXX-X Holder Information – NPA-NXX Validation

NPAC SMS shall validate that the NPA-NXX specified in the addition of Number Pooling BlockNPA-NXX-X Holder information is a valid NPA-NXX defined in the NPAC SMS.

B-N-40 Number Pool Block NPA-NXX-X Holder Information – NPA-NXX Effective Date

NPAC SMS shall validate that the effective date of the block is equal to, or greater than, the effective date of the NPA-NXX as defined in the NPAC SMS.

B-N-50 Number Pool Block NPA-NXX-X Holder Information – Duplicate No-Overlapping Block NPA-NXX-X Validation

NPAC SMS shall validate that the <u>NPA-NXX-X</u> <u>TN range</u> specified in the addition of Number Pooling <u>BlockNPA-NXX-X</u> Holder <u>Iinformation is not a duplicate does not overlap with a TN in a range</u> for another entry in the Number Pooling <u>BlockNPA-NXX-X</u> Holder Information <u>Table</u>.

B-N-60 Number Pool Block Holder Information - Block in one NPA-NXX

NPAC SMS shall validate that the range specified for a block of numbers to be pooled is contained in one NPA-NXX-X, where the range begins with n000 and end with n999, where n is a value between 0 and 9.

N-61 Number Pool NPA-NXX-X Holder Information – NPAC SMS download of network data to the Local SMS

NPAC SMS shall be able to communicate creation, modification, or deletion of NPA-NXX-X data for a Service Provider to Local SMSs.

The contents of the network download are:

?6 Network data:

27NPAC Customer ID

28NPAC Customer Name

?7 NPA-NXX-X Download Data:

29NPA-NXX-X ID

30NPA-NXX-X Value

31Effective TimeStamp

32Download Reason

N-62 Number Pool NPA-NXX-X Holder Information – NPAC SMS notification of NPA-NXX-X availability to the Service Providers

NPAC SMS shall inform all Service Providers about the availability of the NPA-NXX-Xs for porting via the NPAC SMS to Local SMS interface or the Web bulletin board. The NPA-NXX-X data fields sent via the NPAC SMS to Local SMS interface are:

?8 NPAC Customer ID

?9 NPAC Customer Name

?10 NPA-NXX-X ID

?11 NPA-NXX-X Value

?12 Effective Date

?13 Download Reason

The NPA-NXX-X data fields sent to the WEB bulletin board are:

?14 NPAC Customer ID

?15 NPAC Customer Name

?16 NPA-NXX-X Value

?17 Effective Date

N-63 Number Pool NPA-NXX-X Holder Information – Service Provider NPA-NXX-X Indicator Download of NPA-NXX-X Object

NPAC SMS shall download Number Pooling NPA-NXX-X Information, for additions, modifications, and deletions, using the Number Pooling NPA-NXX-X Object, via the NPAC SMS to Local SMS Interface if the Service Provider's NPA-NXX-X indicator is **TRUE**.

N-64 Number Pool NPA-NXX-X Holder Information – Service Provider NPA-NXX-X Indicator Download of SVs

NPAC SMS shall suppress the download of Number Pooling NPA-NXX-X Information, for additions, modifications, and deletions, via the NPAC SMS to Local SMS Interface if the Service Provider's NPA-NXX-X indicator is **FALSE**.

N-65 Number Pool NPA-NXX-X Holder Information – Filters for NPA-NXX-Xs

NPAC SMS shall apply NPA-NXX Filters to NPA-NXX-X downloads to the Local SMS(s).

B-N-70 Number Pool Block NPA-NXX-X Holder Information – Validation Error

NPAC SMS shall report an error to the <u>user NPAC Personnel</u> and reject the addition or modification of Number Pooling <u>Block NPA-NXX-X</u> Holder information if validation errors occur as defined in Requirements ______, and ___.

CMA to update numbers once requirements are finalized.

NOTE: need to add procedures within M&Ps to define steps that should be taken by the NPAC personnel when validation errors are encountered.

BlockNPA-NXX-X Holder, Addition

B-N-80 Addition of Number Pooling Block NPA-NXX-X Holder Information Required Fields

NPAC SMS shall require NPAC personnel to specify the <u>Service Provider Id NPA-NXX-X Holder SPID</u>, the <u>NPA-NXX-XTN Range</u>, and the Effective Date, as defined in the Number Pooling <u>Block NPA-NXX-X</u> Holder Information data model.

B-N-90 Addition of Number Pooling Block NPA-NXX-X Holder Information – SPID Validation

NPAC SMS shall validate that the Block NPA-NXX-X Holder SPID is a valid Service Provider in the NPAC SMS.

B-N-100 Addition of Number Pooling Block NPA-NXX-X Holder Information – Check for Ppending-Like No-Active SVs

NPAC SMS shall reject the request and issue an unique alarmable error message to the NPAC personnel at the time of BlockNPA-NXX-X Creation, if there are any TNs within the 1K Block, that contain an SV, for a given TN in the 1K Block, with a status of pending/conflict/cancel-pending/failed, and where a currently active SV does NOT exist, for the that same given TN.

B-N-110 Addition of Number Pooling Block NPA-NXX-X Holder Information – Check for Pending-Like Port-To-Original SVs

NPAC SMS shall <u>reject the request and issue an unique alarmable</u> error message to the NPAC personnel at the time of <u>Block NPA-NXX-X</u> Creation, if there are any TNs within the <u>HK-Block IK Block</u>, that contain an SV, <u>for a given TN in the 1K Block</u>, with a status of pending/conflict/cancel-pending/failed, and where the SV is a Port-To-Original port, for <u>the that same</u> given TN.

B-120 Addition of Number Pooling Block Holder Information – Unique Error Message for Pending-Like No-Active or Port-To-Original SVs

NPAC SMS shall generate a unique error message with a unique error number, when an error is encountered during Block creation, for either pending-like no-active SVs or Port-To-Original SVs.

B-N-130 Addition of Number Pooling Block NPA-NXX-X Holder Information – Report for Ppending-Like No-Active SVs and Pending-Like Port-To-Original SVs

NPAC SMS shall provide an "error dialog with a transition mechanism" that displays the unique error message described in B-N-90; and B-N-100, and B-110, and allows the user NPAC Personnel to perform an easy one-button mouse click generation of the Pending-Like No-Active Subscription Version report and Pending-Like Port-to-Original Subscription Version report to the NPAC personnel of all of the error messages TNs that are generated at the time of Block NPA-NXX-X Creation, for pending-like no-active SVs and pending-like Port-To-Original SVs, for TNs within the 1K Block 1K Block.

B-N-140 Addition of Number Pooling NPA-NXX-X Holder Information Effective Date - Tunable Parameter

NPAC SMS shall provide a BlockNPA-NXX-X Holder Effective Date Window tunable parameter which is defined as the minimum length of time between the current date and the effective date, when Creating a BlockNPA-NXX-X in the NPAC SMS.

NOTE: Need to add an entry in Appendix C, System Tunables, that this new tunable has a default value of 5, units is business days, and valid range is between 5 and 360.

B-N-150 Addition of <u>Number Pooling NPA-NXX-X Holder Information</u> Effective Date – Tunable Parameter Default

NPAC SMS shall default the Block NPA-NXX-X Holder Effective Date Window tunable parameter to five (5) business days.

NOTE: The value of five (5) business days is selected because of the first port notifier, and this ewould affect SPs operationally if this value is set to less than five business days.

B-N-160 Addition of Number Pooling NPA-NXX-X Holder Information Effective Date – Validation

NPAC SMS shall verify that the Effective Date for the <u>Block NPA-NXX-X</u> Holder data is equal to, or greater than, the current date plus the value of the <u>Block NPA-NXX-X</u> Holder Effective Date Window tunable parameter.

B-N-170 Addition of <u>Number Pooling NPA-NXX-X Holder Information</u> Effective Date – Ops GUI Default

NPAC SMS shall default the time portion of the Effective Date Timestamp to 00:00 <u>Central Time</u>, and not allow the NPAC Personnel to modify the Time portion of the Effective Date, on the NPAC Administrative Interface GUI screen.

B-N-180 Addition of Number Pooling NPA-NXX-X Holder Information Block NPA-NXX-X Holder SPID – Validation

NPAC SMS shall allow the value of the Block NPA-NXX-X Holder SPID to be equal to the value of the SPID that owns the NPA-NXX.

Block NPA-NXX-X Holder, Modification

NPAC SMS shall allow NPAC personnel to modify the block holder effective date for a 1K Block as stored in the NPAC SMS via the NPAC Administrative Interface.

B-N-200 Modification of Number Pool Block NPA-NXX-X Holder Information - Effective Date

NPAC SMS shall allow the NPAC personnel to modify the effective date for a HK Block1K Block if the current date is less than the effective date for the HK Block1K Block.

B-210 Modification of Effective Date – Tunable Parameter

NPAC SMS shall provide a Block Holder Effective Date Window tunable parameter which is defined as the minimum length of time between the Block Creation date and the effective date, when Modifying a Block's Effective Date in the NPAC SMS.

B-N-220 Modification of Number Pool NPA-NXX-X Holder Information Effective Date – Tunable Parameter Modification

NPAC SMS shall allow the NPAC SMS Administrator to modify the BlockNPA-NXX-X Holder Effective Date Window tunable parameter.

B-N-230 Modification of <u>Number Pool NPA-NXX-X Holder Information</u> Effective Date – Validation

NPAC SMS shall verify that the modification of the Effective Date for the Block NPA-NXX-X Holder data is equal to, or greater than, in business days, the block creation date plus the value of the Block NPA-NXX-X Holder Effective Date Window tunable parameter.

Block NPA-NXX-X Holder, Deletion

B-N-240 Deletion of Number Pool Block NPA-NXX-X Holder Information – Block NPA-NXX-X Data

NPAC SMS shall allow NPAC personnel to delete the block holder information for a 1K-Block as stored in the NPAC SMS.

B-N-250 Deletion of Number Pooling Block NPA-NXX-X Holder Information – Check for Ppending-Like Active POOL SVs

NPAC SMS shall reject the request and issue an unique alarmable error message to the NPAC personnel at the time of Block NPA-NXX-X Deletion, if there are any TNs within the 1K Block, that contain an SV; for a given TN in the 1K Block, with a status of pending/conflict/cancel-pending/failed; where the Old SP is equal to the Block NPA-NXX-X Holder SPID, and the current active SV is LNP Type of POOL.

B-N-260 Deletion of Number Pooling Block NPA-NXX-X Holder Information – Check for Port-to-Original SVs

NPAC SMS shall <u>reject the request and</u> issue an <u>unique alarmable</u> error message to the NPAC personnel at the time of <u>Block NPA-NXX-X</u> Deletion, if there are any TNs within the <u>1K Block</u>, that contain an SV, <u>for a given TN in the 1K Block</u>, where the SV is a Port-To-Original port.

B-270 Deletion of Number Pooling Block Holder Information – Unique Error Message for Pending-Like or Port-To-Original SVs

NPAC SMS shall generate a unique error message with a unique error number, when an error is encountered during Block deletion, for either pending-like SVs where the Old SP is equal to the Block Holder SPID, or where the SV is a Port-To-Original port.

B-N-280 Deletion of Number Pooling Block NPA-NXX-X Holder Information – Report for Ppending-Like Active POOL SVs

NPAC SMS shall provide an "error dialog with a transition mechanism" that displays the unique error message described in B-N-240, B-250 and B-260, and allows the user NPAC Personnel to perform an easy one-button mouse click generation of the Pending-Like Active POOL Subscription Version report and Port-To-Original Pending Subscription Version report, to the NPAC personnel of all of the error messages that are generated considered in error at the time of BlockNPA-NXX-X Deletion, for pending-like SVs, where the Old SP is equal to the BlockNPA-NXX-X Holder SPID and the current active SV contains LNP Type of POOL, or Port-To-Original SVs, for TNs within the 1K Block1K Block.

B-N-290 Deletion of Number Pool BlockNPA-NXX-X Holder Information – Sub-Block Block and Subscription Version Data Dependency

NPAC SMS shall delete the NPA-NXX-X Holder Information for a 1K Block, through a multistep process that includes:

- Broadcasting the delete of SVs to non-EDR Local SMSs.
- Broadcasting the delete of Blocks to the EDR Local SMSs.
- Receiving a successful response from all EDR and non-EDR Local SMSs.
- Updating all SVs and Blocks on the NPAC SMS.
- Broadcasting the delete of NPA-NXX-X to the NPA-NXX-X enabled Local SMSs.
- Receiving a successful response from all NPA-NXX-X enabled Local SMSs.
- Deleting the NPA-NXX-X Holder information from the NPAC SMS.

N-295 Deletion of Number Pool NPA-NXX-X Holder Information – NPA-NXX-X Dependency

NPAC SMS shall only delete the NPA-NXX-X Holder Information after successfully completing all previous steps defined in N-290.

NPAC SMS shall delete the Block Holder Information for a 1K Block, by first broadcasting the request of the deletion, and after the successfully deleting all subordinate subscription versions with LNP Type of POOL, and subordinate Sub-Block to all Local SMSs.

Block NPA-NXX-X Holder, NPA Splits

B-N-300 NPA Splits and the Number Pool Block NPA-NXX-X Holder Information – New NPA Split Modification

NPAC SMS shall reject a request to add upon the start of permissive dialing for an NPA Split, if the old NPA-NXX-X and new NPA-NXX-X do NOT exist convert the old NPA-NXX to the new NPA-NXX in the Number Pooling Block NPA-NXX-X Information.

B-N-310 NPA Splits and the Number Pool Block NPA-NXX-X Holder Information Table - NXX Removal from NPA Split prior to the end of PDP

NPAC SMS shall upon the removal of an NPA-NXX from an NPA Split <u>prior to the end</u> after the start of permissive dialing, shall remove the new NPA-NXX-X from reinstate the original NPA for the NXX in the <u>Block NPA-NXX-X</u> Holder Information.

B-N-320 NPA Splits and the Number Pool BlockNPA-NXX-X Holder Information Table - Addition of an NPA-NXX involved in an NPA Split

NPAC SMS shall <u>add an entry for convert the old NPA-NXX to</u> the new NPA-NXX<u>-X</u> for an NPA-NXX involved in an NPA Split upon entry of the Number Pooling <u>Block NPA-NXX-X</u> Holder Information, if the old NPA-NXX is <u>scheduled for permissive dialing or currently in permissive dialing</u>.

N-325 NPA Splits and the Number Pool NPA-NXX-X Holder Information – Broadcast of Addition of NPA-NXX-X Split Data

NPAC SMS shall broadcast NPA-NXX-X data that is added for an NPA Split, as defined in requirements N-61, N-62, N-63, N-64, and N-65, upon entry of the Number Pooling NPA-NXX-X Holder Information.

BlockNPA-NXX-X Holder, First Port Notification

B-N-330 Number Pool BlockNPA-NXX-X Holder information notification of First Port

NPAC SMS shall upon creation of the Number Pooling <u>Block NPA-NXX-X</u> Holder Information, send a <u>first port</u> notification <u>of the planned first port</u> for the NPA-NXX if there have not been any previous ports for the NPA-NXX.

Block NPA-NXX-X Holder, Query

B-N-340 Query of Number Pool Block NPA-NXX-X Holder Information - NPAC Personnel

NPAC SMS shall allow NPAC personnel to query the block holder information for all data as listed in the <u>Block NPA-NXX-X</u> Holder Information Data Model, for a <u>1K Block 1K Block</u> as stored in the NPAC SMS.

N-350 Query of Number Pool Filtered NPA-NXX-X Holder Information – Service Provider Personnel

NPAC SMS shall allow a Service Provider SOA via the SOA to NPAC SMS Interface, Service Provider Local SMS via the NPAC to Local SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, to query filtered NPA-NXX-Xs, for all data as listed in the NPA-NXX-X Holder Information Data Model, for a 1K Block as stored in the NPAC SMS.

N-360 Query of Number Pool Filtered NPA-NXX-X Holder Information – NPA-NXX Not Provided

NPAC SMS shall return to the requesting Service Provider all filtered NPA-NXX-Xs for a given Service Provider, as listed in the NPA-NXX-X Holder Information Data Model, for a 1K Block as stored in the NPAC SMS, when the NPA-NXX is NOT input upon a Filter NPA-NXX-X Query, by the Service Provider SOA via the SOA to NPAC SMS Interface, Service Provider Local SMS via the NPAC to Local SMS Interface, or Service Provider via the NPAC SOA Lowtech Interface.

N-370 Query of Number Pool Filtered NPA-NXX-X Holder Information – NPA-NXX Provided

NPAC SMS shall return to the requesting Service Provider up to ten filtered NPA-NXX-Xs for a given Service Provider, as listed in the NPA-NXX-X Holder Information Data Model, for a 1K Block as stored in the NPAC SMS, when the NPA-NXX is input upon a Filter NPA-NXX-X Query, by the Service Provider SOA via the SOA to NPAC SMS Interface, Service Provider Local SMS via the NPAC to Local SMS Interface, or Service Provider via the NPAC SOA Lowtech Interface.

NPA-NXX-X Holder, Resync

N-380 Resynchronization of Number Pool NPA-NXX-X Holder Information – NPA-NXX-X Indicator set to TRUE

NPAC SMS shall process a Service Provider request to download Network data over the NPAC SMS to Local SMS Interface, when a Service Provider establishes an association with the resynchronization flag set to TRUE, and shall *send* the NPA-NXX-X portion of the Network data when the Service Provider's NPA-NXX-X Indicator is set to TRUE.

N-390 Resynchronization of Number Pool NPA-NXX-X Holder Information – NPA-NXX-X Indicator set to FALSE

NPAC SMS shall process a Service Provider request to download Network data over the NPAC SMS to Local SMS Interface, when a Service Provider establishes an association with the resynchronization flag set to TRUE, and shall *suppress* the NPA-NXX-X portion of the Network data when the Service Provider's NPA-NXX-X Indicator is set to FALSE.

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N-400 Resynchronization of Number Pool NPA-NXX-X Holder Information – Filters on NPA-NXX-X resync

NPAC SMS shall apply NPA-NXX Filters to NPA-NXX-X resynchronization to the Local SMS(s) via the NPAC SMS to Local SMS Interface.

NUMBER POOLING SUB-BLOCK HOLDER INFORMATION DATA MODEL			
Attribute Name	Type (Size)	Required	Description
Sub Block Block ID	N	√	A unique sequential number assigned upon creation of the Sub-BlockBlock.
Block Holder SPID	C(4)	V	The Service Provider Id of the block holder.
NPA-NXX-XTN Range Start	TNN(7)	V	NPA-NXX-X Telephone number at the start of the 1K Block 1K Block.
TN Range End	N(4)	¥	Last four (4) digits of the telephone number at the end of the 1K Block.
LRN	TN	√	The LRN is an identifier for the switch on which the pooled NPA-NXX-X resides for the HK Block 1K Block.
CLASS DPC	N (9)	V	DPC for 10-digit GTT for CLASS features for the 1K Block 1K Block.
CLASS SSN	N (3)	V	CLASS SSN for the 1K Block 1K Block.
LIDB DPC	N (9)	V	DPC for 10-digit GTT for LIDB features for the 1K Block 1K Block.
LIDB SSN	N (3)	V	LIDB SSN for the 1K Block 1K Block.
CNAM DPC	N (9)	V	DPC for 10-digit GTT for CNAM features for the HK Block 1K Block.
CNAM SSN	N (3)	V	CNAM SSN for the 1K Block 1K Block.
ISVM DPC	N (9)	V	DPC for 10-digit GTT for ISVM features for the HKBlock 1K Block.
ISVM SSN	N (3)	V	ISVM SSN for the 1K Block 1K Block.
Creation Date	Т		The date and time (GMT) that this Sub-Block Block Holder record was created.
Activation Start Timestamp	T		Date and time (GMT) 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).
Activation Complete	Т		Date and time (GMT) of the Completion of the

NUMBER POOLING SUB-BLOCK BLOCK HOLDER INFORMATION DATA MODEL			
Attribute Name	Type (Size)	Required	Description
Timestamp			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, or the retries were exhausted for the activate).
Last Modified Timestamp	Т		Date and time (GMT) of the Last Modification to the Sub-BlockBlock . The initial value is the Creation Timestamp.
Disconnect Request Time Stamp	T		The date and time that the Block disconnect request was made by the NPAC personnel.
Disconnect Broadcast Time Stamp	<u>T</u>		The date and time that broadcasting began to all local SMS systems for the disconnect of the Block.
Disconnect Broadcast Complete Time Stamp	T		The date and time that at least one Local SMS system successfully acknowledged the broadcast or the retries were exhausted for the disconnect.
Old Time Stamp	T		The date and time that the Block became old.
Modify Request Timestamp	T		The date and time that the Block Modify request was made.
Modify Broadcast Timestamp	T		The date and time that broadcasting began to all local SMS systems for the modification of the Block.
Modify Broadcast Complete Timestamp	T		The date and time that all local SMS systems successfully acknowledged or the retries were exhausted for the modification of the Block.
SOA Origination	В	V	A boolean that indicates whether or not the Block NPA-NXX-X Holder's SOA initiated the Sub-Block Over the SOA to NPAC SMS Interface. This attribute will be set by the NPAC SMS at the time of Sub-Block Creation. If originated by SOA, value is TRUE. If originated by NPAC, value is FALSE.
Status	Е	V	Status of the Sub-Block Block.

NUMBER POOLIN	$NUMBER\ POOLING\ {\color{red}{\bf SUB-BLOCK}} {\color{blue}{\bf BLOCK}} \ HOLDER\ INFORMATION\ DATA\ MODEL$				
Attribute Name	Type (Size)	Required	Description		
			The initial value is S for Sending.		
			Valid enumerated values are:		
			A - Active (0)		
			S - Sending (1)		
			F - Failed (2)		
			PF - Partial Failure (3)		
			O - Old (4)		

Sub-Block Block Holder, General

SB-B-10 Number Pool Sub-Block Holder Information – NPAC Personnel GUI

NPAC SMS shall allow NPAC Personnel to add, or modify, or query Sub-Block Holder information via the NPAC Administrative Interface.

SB-B-20 Number Pool Block Holder Information — Service Provider EDR Indicator Download of Sub-Block Object

NPAC SMS shall download Number Pooling <u>Sub-Block Block</u> Information, for additions, modifications, <u>and deletions</u>, <u>re-sends</u>, <u>and resync</u> using the Number Pooling <u>Sub-Block Block</u> Object, via the NPAC SMS to Local SMS Interface if the EDR indicator is **TRUE**, at the time a request is processed by the NPAC SMS.

NOTE: The EDR Indicator will be used by the NPAC SMS when processing a request, but not during the retry functionality.

SB-B-30 Number Pool Block Holder Information – Service Provider EDR Indicator Download of SVs

NPAC SMS shall download Number Pooling <u>Sub-Block Block Information</u>, for additions, modifications, and deletions, using individual subscription versions with LNP Type of POOL, <u>for the TNs within the range of the 1K Block</u>, via the NPAC SMS to Local SMS Interface if the EDR indicator is **FALSE**, at the time a request is processed by the NPAC SMS.

SB-B-40 Number Pool Sub-Block Holder Information – Service Provider Validation

NPAC SMS shall <u>verify</u> <u>validate that</u> the <u>Block NPA-NXX-X</u> Holder SPID attribute of the <u>Sub-Block object matches request for additions, is equal to</u> the SPID <u>in the accessControl making the request in the SOA to NPAC SMS Interface</u>.

NOTE: SB-40 relates to the AccessControl portion of the CMIP Association.

SB-B-50 Number Pool Sub-Block Block Holder Information – SPID Validation

NPAC SMS shall <u>verify validate that</u> the <u>Block Holder SPID of the accessControl matches the owner of the association attribute of the Sub-Block request for additions, is equal to the SPID of the requestor making the request.</u>

SB-B-60 Number Pool Sub-Block Block Holder Information – Block NPA-NXX-X Data Validation

NPAC SMS shall validate the following three two attributes are contained in a single NPA-NXX-X entry in the Number Pooling NPA-NXX-X Holder Information in the NPAC SMS such that the:

- Block NPA-NXX-X Holder SPID in the Sub-Block is equal to the Block NPA-NXX-X Holder SPID,
- <u>NPA-NXX-X</u> TN Range Start in the <u>Sub-Block Block</u> is equal to the <u>NPA-NXX-X</u> TN Range Start,
- TN Range End in the Sub-Block is equal to the TN Range End, in one of the valid Number Pooling Blocks defined in the NPAC SMS, as referred to in the Block Holder Information Data Model.

SB-B-70 Number Pool Sub-Block Block Holder Information – Block NPA-NXX-X Effective Date

NPAC SMS shall reject a request to create or modify a Sub-Block lift the current date is prior to the effective date of the Number Pooling Block NPA-NXX-X as defined in the NPAC SMS.

SB-B-80 Number Pool Sub-Block Holder Information – LRN Validation

NPAC SMS shall validate that the LRN specified in the addition or modification of Number Pooling <u>Sub-Block Block</u> Holder information is a valid LRN defined in the NPAC SMS for the <u>bBlock hHolder</u>.

SB-B-90 Number Pool Sub-Block Block Holder Information – Duplicate No-Overlapping Sub-Block Block Validation

NPAC SMS shall validate that the <u>NPA-NXX-X TN range</u> specified in the addition of Number Pooling <u>Sub-Block Block</u> Holder Information does not <u>already exist</u> <u>overlap with a TN in a range for another entry</u> in the Number Pooling <u>Sub-Block Block Holder Information</u>.

SB-B-100 Number Pool Sub-Block Holder Information – SOA Origination + Values

NPAC SMS shall set the SOA Origination to TRUE for <u>Sub-BlockBlock</u>s sent over the SOA to NPAC SMS Interface, and to FALSE for <u>Sub-BlockBlock</u>s that were created by NPAC personnel.

SB-B-110 Number Pool Sub-Block Holder Information – Validation Error

NPAC SMS shall report an error to the user and reject the addition or modification of Number Pooling Block Holder information if validation errors occur as defined in, ___, __, and ___.

CMA to update numbers once requirements are finalized.

SB-B-120 Number Pooling Sub-Block Block Holder Information – Status Update Notification

NPAC SMS shall *send* all SOA notifications to the current SP (the block holder) for status updates on <u>Sub-Block Block</u>s, when the <u>Sub-Block Block SOA</u> Origination is TRUE.

SB-B-130 Number Pooling Sub-Block Holder Information – Status Update Notification Suppression

NPAC SMS shall *suppress* all SOA notifications to the current SP (the block holder) for status updates on <u>Sub-BlockBlock</u>s, when the <u>Sub-BlockBlock</u> SOA Origination is FALSE.

SB-B-140 Number Pooling Sub-Block Block Holder Information – Failed SP List Update for Sub-Block

NPAC SMS shall <u>consider an EDR Local SMS to be discrepant and shall update</u> the Sub-Block Block's with a Failed SP List, based on an EDR Local SMS failing to process the Sub-Block Block Object, for an addition, modification, deletion, re-send, resync, or mass update.

SB-B-150 Number Pooling Sub-Block Block Holder Information – Failed SP List Update for Subscription Versions

NPAC SMS shall consider a non-EDR Local SMS to be discrepant and shall update the Sub-Block's with a Failed SP List, based on a non-EDR Local SMS failing to process one or more Subscription Versions within the Sub-Block Block, for an addition, modification, deletion, re-send, resync, or mass update.

SB-B-160 Number Pooling Sub-Block Block Holder Information – Failed SP List Broadcast Sent to Block Holder

NPAC SMS shall broadcast a send the Block's Failed SP List, to the current SP (the block holder) via the SOA to NPAC SMS Interface, along with the SOA notification for status update of the Sub-Block, when the Block SOA Origination is TRUE, and the broadcast to one or more Local SMSs fail.

B-165 Number Pooling Block Holder Information – Synchronization of Block Status and Subscription Version Status

NPAC SMS shall ensure that the *status* for Block broadcasts to EDR Local SMSs and Subscription Versions broadcasts to non-EDR Local SMSs, are synchronized, by performing the following:

33The *status* for the Block and Subscription Versions shall cross-reference one another and contain the results of the broadcast of the Block to the EDR Local SMSs, and the broadcast of the Subscription Version to the non-EDR Local SMSs. Therefore, if an *EDR* Local SMS fails the broadcast of the Block, the *status* of the Block and all Subscription Versions within the 1K Block, shall contain the same *status* ("Failed" if all Local SMSs were unsuccessful, "Partial Failure" if only some of the Local SMSs were unsuccessful, or "Active" if all of the Local SMSs were successful).

34The *status* for the Block and Subscription Versions shall cross-reference one another and contain the results of the broadcast of the Block to the EDR Local SMSs, and the broadcast of the Subscription Version to the non-EDR Local SMSs. Therefore, if a *non-EDR* Local SMS fails the broadcast of one or more Subscription Versions, the *status* of the Block and the individually failed Subscription Versions within the 1K Block, shall contain the same *status* ("Failed" if all Local SMSs were unsuccessful, "Partial Failure" if only some of the Local SMSs were unsuccessful, or "Active" if all of the Local SMSs were successful).

B-166 Number Pooling Block Holder Information – Synchronization of Block Failed SP List and Subscription Version Failed SP List

NPAC SMS shall ensure that the *Failed SP List* for Block broadcasts to EDR Local SMSs and Subscription Versions broadcasts to non-EDR Local SMSs, are synchronized, by performing the following:

35 The *Failed SP List* for the Block and Subscription Versions shall cross-reference one another and contain the results of the broadcast of the Block to the EDR Local SMSs, and the broadcast of the Subscription Version to the non-EDR Local SMSs. Therefore, if an *EDR* Local SMS fails the broadcast of the Block, the *Failed SP List* of the Block and all Subscription Versions within the 1K Block, shall contain the same *Failed SP List* (all SPIDs if all Local SMSs were unsuccessful, some SPIDs if only some of the Local SMSs were unsuccessful, or no SPIDs if all of the Local SMSs were successful).

36The *Failed SP List* for the Block and Subscription Versions shall cross-reference one another and contain the results of the broadcast of the Block to the EDR Local SMSs, and the broadcast of the Subscription Version to the non-EDR Local SMSs. Therefore, if a *non-EDR* Local SMS fails the broadcast of one or more Subscription Versions, the *Failed SP List* of the Block and the individually failed Subscription Versions within the 1K Block, shall contain the same *Failed SP List* (all SPIDs if all Local SMSs were unsuccessful, some SPIDs if only some of the Local SMSs were unsuccessful, or no SPIDs if all of the Local SMSs were successful).

B-167 Number Pooling Block Holder Information – Synchronization of Block Failed SP List and Subscription Version Failed SP List for the last failed Subscription Version in the 1K Block

NPAC SMS shall remove a non-EDR Service Provider from the Block's *Failed SP List* when the Service Provider is no longer on the *Failed SP List* for ALL subscription versions in the 1K Block.

Sub-Block Block Holder, Addition

SB-B-170 Addition of Number Pooling **Sub-Block** Holder Information

NPAC SMS shall allow NPAC personnel or Service Provider via the SOA to NPAC SMS Interface to request the creation of a Number Pooling Sub-Block Block.

SB-B-180 Addition of Number Pooling Sub-Block Holder Information – Required Data

NPAC SMS shall require NPAC personnel or Service Provider via the SOA to NPAC SMS Interface to specify the <u>Block Holder SPIDService Provider Id</u>, the <u>NPA-NXX-XTN range</u>, and the initial routing information, as defined in the Number Pooling <u>Sub-Block Block</u> Holder Information <u>data model</u>.

SB-B-190 Addition of Number Pooling Sub-Block Holder Information – Check for pending-like SVs for NPAC Personnel

NPAC SMS shall reject the request and issue an unique alarmable error message to the NPAC personnel at the time of Sub-Block Block Creation from the NPAC Administrative Interface or the Service Provider SOA via the SOA to NPAC SMS Interface, if there are any TNs within the 1K Block, that contain an SV, for a given TN in the 1K Block, with a status of pending/conflict/cancel-pending/failed, and where a currently active SV does NOT exist, for the that same given TN.

SB-200 Addition of Number Pooling Sub-Block Holder Information – Check for Port-To-Original SVs for NPAC Personnel

NPAC SMS shall issue an error message to the NPAC personnel at the time of Sub-Block-Creation from the NPAC Administrative Interface, if there are any TNs within the 1K Block, that contain an SV, for a given TN in the 1K Block, with a status of pending/conflict/cancel-pending/failed, and where the SV is a Port-To-Original port, for that same given TN.

SB-B-210 Addition of Number Pooling Sub-Block Holder Information – Error Message to SOA Check for pending-like SVs for SOA

NPAC SMS shall reject the request and issue an error message to the **SOA** at the time of Sub-Block Creation from the SOA via the SOA to NPAC SMS Interface, if there are any TNs within the 1K Block IK Block, that contain an SV, for a given TN in the 1K Block IK Block, with a status of pending/conflict/cancel-pending/failed, and where a currently active SV does NOT exist, for the that same given TN.

SB-220 Addition of Number Pooling Sub-Block Holder Information - Check for Port-To-Original SVs for SOA

NPAC SMS shall issue an error message to the SOA at the time of Sub-Block Creation from the SOA via the SOA to NPAC SMS Interface, if there are any TNs within the 1K Block, that contain an SV, for a given TN in the 1K Block, with a status of pending/conflict/cancel-pending/failed, and where the SV is a Port-To-Original port, for that same given TN.

SB-230 Addition of Number Pooling Sub-Block Holder Information – Unique Error Message for Pending-Like No-Active or Port-To-Original SVs

NPAC SMS shall generate a unique error message with a unique error number, when an error is encountered during Sub-Block creation, for either pending-like no-active SVs or Port-To-Original SVs.

SB-B-240 Addition of Number Pooling **Sub-Block Block** Holder Information – Report for pending-like SVs and Port-To-Original SVs

NPAC SMS shall provide an "error dialigdialog with transition mechanism" that displays the unique error message described in SB-B-190, SB-200, SB-210, SB-220, and SB-230, and allows the user to perform an easy one-button mouse click generation of the report to the NPAC personnel of all of the TNs error messages that are considered in error generated at the time of Sub-Block Block Creation, for pending-like SVs and Port-To-Original SVs, for TNs within the TK Block Block.

SB-B-250 Addition of Number Pooling Sub-Block Holder Information – Field-level Data Validation

NPAC SMS shall perform field-level data validations to ensure that the value formats for the following input data, is valid according to the formats specified in Table 3-x upon Sub-Block creation for a Number Pool:

Block NPA-NXX-X Holder SPID

NPA-NXX-XTN Range Start

TN Range End

LRN

Class DPC

Class SSN

LIDB DPC

LIDB SSN

CNAM DPC

CNAM SSN

ISVM DPC

ISVM SSN

SB-B-260Addition of Number Pooling Sub-Block Holder Information – Broadcast of Sub-Block Data

NPAC SMS shall broadcast Pooled data an additions of a Sub-Block Block data, to EDR Local SMSs, via the NPAC SMS to Local SMS Interface, upon successful creation of the Pooled Sub-Block in the NPAC SMS with a status of sending.

SB-B-270Addition of Number Pooling Sub-Block Holder Information – Active Status Update

NPAC SMS shall update the status of the <u>Sub-Block Block</u> upon successful completion of the broadcast to ALL <u>EDR and non-EDR</u> Local SMSs, from a sending status to an active status.

SB-B-280Addition of Number Pooling Sub-Block Holder Information – Partially Failed Partial failure Status Update

NPAC SMS shall update the status of the <u>Sub-Block Block</u> upon completion of the broadcast to all <u>EDR and non-EDR Local SMSs</u>, and a successful response from at least one, but not all Local SMSs, from a sending status to a <u>partially failed partial failure</u> status.

SB-B-290Addition of Number Pooling Sub-Block Holder Information – Failed Status Update

NPAC SMS shall update the status of the <u>Sub-Block Block</u> upon completion of the broadcast to all <u>EDR and non-EDR Local SMSs</u>, and a successful response from NONE of the Local SMSs, from a sending status to a failed status.

SB-300 Addition of Number Pooling Sub-Block Holder Information – Subscription Version Broadcast Failure to Local SMS

NPAC SMS shall consider a non-EDR Local SMS to be discrepant, and on the failed SP List, for the Sub-Block and the individual unsuccessful subscription versions, if one or more subscription version activation broadcasts were unsuccessful.

SB-310 Addition of Number Pooling Sub-Block Holder Information — Sub-Block Broadcast Failure to Local SMS

NPAC SMS shall consider an EDR Local SMS to be discrepant, and on the failed SP List, for the Sub-Block, if the Sub-Block activation broadcast was unsuccessful.

Sub-Block Block Holder, Modification

B-315 Block's SOA Origination Indicator – NPAC Personnel GUI

NPAC SMS shall allow NPAC Personnel to modify the SOA Origination information on the NPAC Block record, via the NPAC Administrative Interface.

SB-B-320Modification of Number Pooling Sub-Block Holder Information

NPAC SMS shall allow NPAC personnel, or Service Provider via the SOA to NPAC SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, to modify the sub-block holder default routing information (LRN, DPC(s), and SSN(s)), for a https://linear.py.ncbi.nlm.new.npac-block stored in the NPAC SMS for default routing restoration.

SB-B-330Modification of Number Pooling Sub-Block Holder Information – SPID Validation

NPAC SMS shall allow a Service Provider via the SOA to NPAC SMS Interface or Service Provider via the NPAC SOA Low-tech Interface, to modify Sub-BlockBlock data for Sub-BlockBlocks where the BlockNPA-NXX-X Holder SPID matches the Service Provider making the request.

SB-B-340Modification of Number Pooling Sub-Block Holder Information –Status Update

NPAC SMS shall update the status of the <u>Sub-Block Block</u>, upon the start of the broadcast of a <u>Sub-Block Block</u> modification to the Local SMSs, from an active status to a sending status.

SB-B-350Modification of Number Pooling Sub-Block Block Holder Information – Broadcast of Sub-Block Data

NPAC SMS shall broadcast <u>Pooled data a modifications</u> of a <u>Sub-Block Block</u> to EDR Local SMSs, via the NPAC SMS to Local SMS Interface, upon <u>successful modification</u> of the Pooled <u>Sub-Block Block</u> in the NPAC SMS.

SB-B-360Modification of Number Pooling Sub-Block Holder Information – Active Status Update

NPAC SMS shall update the status of the <u>Sub-Block Block</u> upon completion of the broadcast to ALL <u>EDR and non-EDR Local SMSs</u>, whether or not the broadcasts were successful, from a sending status to an active status.

SB-370 Modification of Number Pooling Sub-Block Holder Information — Sub-Block Holder Notification

NPAC SMS shall send a notification to the Block Holder to update the status of the Sub-Block on the SOA, from a sending active status to an active status, for a Sub-Block with a SOA Origination set to TRUE.

SB-380 Modification of Number Pooling Sub-Block Holder Information — Subscription Version Broadcast Failure to Local SMS

NPAC SMS shall consider a non-EDR Local SMS to be discrepant, and on the Failed SP List, for the Sub-Block and the individual unsuccessful subscription versions, if one or more subscription version modify active broadcasts were unsuccessful.

SB-390 Modification of Number Pooling Sub-Block Holder Information — Sub-Block Broadcast Failure to Local SMS

NPAC SMS shall consider an EDR Local SMS to be discrepant, and on the Failed SP List, for the Sub-Block, if the Sub-Block modify active broadcast was unsuccessful.

Sub-Block Block Holder, Deletion

SB-B-400Deletion of Number Pool Sub-Block Holder Information – NPAC

NPAC SMS shall reject a request to delete a Sub-Block by NPAC personnel.

SB-B-410Deletion of Number Pool Sub-Block Holder Information – SOA

NPAC SMS shall reject a request to delete a <u>Sub-Block Block</u> by a Service Provider via the SOA to NPAC SMS interface, and will return an error message, SOA not authorized.

B-415 Deletion of Number Pool Block Holder Information – LTI

NPAC SMS shall reject a request to delete a Block by a Service Provider via the NPAC SOA Low-tech Interface, and will return an error message to the LTI user.

SB-420 Deletion of Number Pool Sub-Block Holder Information - Sub-Block Data

NPAC SMS shall process a delete Block Holder request, by deleting the subordinate Sub-Block by setting status to old.

SB-B-430Deletion of Number Pooling BlockNPA-NXX-X Holder Information – Sending Status Update to Sub-BlockBlock

NPAC SMS shall update the status of the <u>Sub-Block Block</u> at the start of the broadcast to the Local SMSs, from an active status to a sending status.

SB-B-440Deletion of Number Pool Block NPA-NXX-X Holder Information — Broadcast of Sub-Block Data

NPAC SMS shall broadcast Pooled data deletes of a Sub-Block Block data, to EDR LSMSs, via the NPAC SMS to Local SMS Interface, upon updating the Pooled Block in the NPAC SMS to a sending status.

SB-B-450Deletion of Number Pooling BlockNPA-NXX-X Holder Information – Old Status Update to Sub-BlockBlock

NPAC SMS shall update the status of the <u>Sub-Block Block</u> upon completion of the broadcast to <u>all-ALL EDR and non-EDR Local SMSs</u>, and a successful response from at least one Local SMS, from a sending status to an old status.

SB-B-460Deletion of Number Pooling Block NPA-NXX-X Holder Information – Failed Status Update to Sub-Block Block and Subscription Versions

NPAC SMS shall update the status of the <u>Sub-Block Block</u> upon completion of the broadcast to the <u>ALL EDR and non-EDR Local SMSs</u>, and a successful response from NONE of the Local SMSs, from a sending status to an active status.

SB-470 Deletion of Number Pooling Block Holder Information – Sub-Block Broadcast Failure to Local SMS

NPAC SMS shall consider an EDR Local SMS to be discrepant, and on the failed SP List, for the Sub-Block, if the Sub-Block disconnect broadcast was unsuccessful.

SB-480 Deletion of Number Pooling Block Holder Information - Block Holder Notification

NPAC SMS shall send a notification to the Block Holder to update the status of the Sub-Block on the SOA, from an active status to an old status, for a Sub-Block with a SOA Origination set to TRUE.

Sub-Block Block Holder, NPA Splits

SB-B-490NPA Splits and the Number Pooling Sub-Block Holder Information – Modification

NPAC SMS shall upon the start of permissive dialing for an NPA Split, convert the old NPA-NXX to the new NPA-NXX in the Number Pooling Sub-Block Information.

SB-B-500NPA Splits and the Number Pooling Sub-Block Holder Information – NXX Removal from Split

NPAC SMS shall upon the removal of an NPA-NXX from an NPA Split, after the start of permissive dialing, shall reinstate the original NPA for the NXX in the Sub-Block Holder Information.

SB-B-510NPA Splits and the Number Pool Sub-Block Holder Information – Addition of an NPA-NXX involved in an NPA Split

NPAC SMS shall convert the old NPA-NXX to the new NPA-NXX for an NPA-NXX involved in an NPA Split upon entry into the Number Pooling <u>Sub-Block Block</u> Holder Information, if the old NPA-NXX is currently in permissive dialing.

SB-B-520NPA Splits and the Number Pool Sub-Block Holder Information – Addition of a Sub-Block for an NPA-NXX involved in an NPA Split

NPAC SMS shall accept a <u>Sub-Block Block</u> create from NPAC personnel or a Service Provider via the SOA to NPAC SMS Interface, with either the old NPA-NXX or the new NPA-NXX for an NPA-NXX that is currently in permissive dialing.

SB-B-530NPA Splits and the Number Pool Sub-Block Block Holder Information – Broadcast of a Sub-Block Block Create for an NPA-NXX involved in an NPA Split

NPAC SMS shall broadcast a <u>Sub-Block Block</u> create to an EDR Local SMS, via the NPAC SMS to Local SMS Interface, by sending a <u>Sub-Block Block</u> using the new NPA-NXX for an NPA-NXX that is currently in permissive dialing.

SB-B-540NPA Splits and the Number Pool Sub-Block Block Holder Information – Modification of a Sub-Block Block for an NPA-NXX involved in an NPA Split

NPAC SMS shall accept a <u>Sub-Block Block</u> modify active from NPAC personnel or a Service Provider via the SOA to NPAC SMS Interface, with either the old NPA-NXX or the new NPA-NXX for an NPA-NXX that is currently in permissive dialing.

SB-B-550NPA Splits and the Number Pool Sub-Block Block Holder Information – Broadcast of a Sub-Block Modify Active for an NPA-NXX involved in an NPA Split

NPAC SMS shall broadcast a <u>Sub-Block modify active</u> to an EDR Local SMS, via the NPAC SMS to Local SMS Interface, by sending a <u>Sub-Block Block</u> using the new NPA-NXX for an NPA-NXX that is currently in permissive dialing.

B-551 NPA Splits and the Number Pool Block Holder Information – Depooling of the Block during PDP

NPAC SMS shall broadcast a Block *delete* to an EDR Local SMS, via the NPAC SMS to Local SMS Interface, by sending a Block using the new NPA-NXX for an NPA-NXX that is currently in permissive dialing.

Block Holder, Query

B-555 Ouery of Number Pool Block Holder Information – NPAC Personnel

NPAC SMS shall allow NPAC Personnel to query the block holder information for all data as listed in the Block Holder Information Data Model, for a 1K Block as stored in the NPAC SMS.

B-556 Query of Number Pool Filtered Block Holder Information – Service Provider Personnel

NPAC SMS shall allow a Service Provider SOA via the SOA to NPAC SMS Interface, Service Provider Local SMS via the NPAC SMS to Local SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, to query filtered NPA-NXX-Xs, for all data as listed in the Block Holder Information Data Model, for a 1K Block as stored in the NPAC SMS.

B-557 Query of Number Pool Filtered Block Holder Information – Query Block

NPAC SMS shall return Block data that match the query selection criteria, on query requests by NPAC personnel, SOA via the SOA to NPAC SMS Interface, Local SMS via the NPAC SMS to Local SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface.

Sub-Block Block Holder, Filters

SB-B-560Number Pool Block Holder Information – Filters for Sub-Blocks

NPAC SMS shall apply NPA-NXX Filters to Sub-Block downloads to the Local SMS(s).

Sub-Block Holder, Default Routing Restoration

SB-B-570Number Pool Block Holder Information Use of Number Pool Default Routing Information – Existing Sub-Block Block

The NPAC SMS shall use the default routing restoration information in the Number Pooling Sub-Block Holder Information as the block holder default routing, when a ported pooled number is disconnected or port to original port is activated, and returns the TN(s) to the block, on or after the activation date start timestamp of the sub-block.

Sub-Block Block Holder, Re-Send

B-575 Re-Send of Number Pooling Block Holder Information – NPAC Personnel GUI

NPAC SMS shall allow NPAC Personnel to re-send Block Information via the NPAC Administrative Interface.

<u>B-576</u> Re-Send of Number Pooling Block Holder Information – Use of EDR Indicator for Re-Send data

NPAC SMS shall use the value in the Service Provider's EDR Indicator to determine the type of data to re-send to the Service Provider, when a re-send request is initiated.

B-577 Re-Send of Number Pooling Block Holder Information – Re-Send to EDR Local SMS

NPAC SMS shall re-send Block Information to an EDR Local SMS, by re-sending the previously failed Block Object, via the NPAC SMS to Local SMS Interface.

B-578 Re-Send of Number Pooling Block Holder Information – Re-Send to non-EDR Local SMS

NPAC SMS shall re-send Block Information to a non-EDR Local SMS, by re-sending the previously failed Subscription Version(s), via the NPAC SMS to Local SMS Interface.

SB-B-580Re-Send of Number Pooling Sub-Block Holder Information – Sending Status Update to Failed Sub-Block Block

NPAC SMS shall update the status of the failed <u>Sub-Block Block</u>, specified in the re-send request, at the start of the re-send to <u>theall</u> Local SMSs, from an an active <u>failed</u> status to a sending status.

SB-B-590Re-Send of Number Pooling Sub-Block Holder Information – Sending Status Update to Partially Failed Partial failure Sub-Block Block

NPAC SMS shall update the status of the partially failed partial failure Sub-Block, specified in the re-send request, at the start of the re-send to the Local SMSs, specified in the re-send request, from a partially failed partial failure status to a sending status.

SB-B-600Re-Send of Number Pooling Sub-Block Holder Information – Sending Status Update to Active Sub-Block Block

NPAC SMS shall update the status of the active <u>Sub-Block Block</u>, with a Failed SP List, <u>specified in the re-send request</u>, at the start of the re-send to the Local SMSs, specified in the re-send request, from an active status to a sending status.

SB-B-610Re-Send of Number Pooling Sub-Block Holder Information – Sending Status Update to Old Sub-Block Block

NPAC SMS shall update the status of the old <u>Sub-Block Block</u>, with a Failed SP List, <u>specified in the re-send request</u>, at the start of the re-send to the Local SMSs, specified in the re-send request, from an old status to a sending status.

SB-B-620Re-Send of Number Pool Block NPA-NXX-X Holder Information – Broadcast of Sub-Block Data

NPAC SMS shall broadcast a <u>Pooled data</u> re-sends of a <u>Sub-Block Block data</u>, to EDR LSMSs, via the NPAC SMS to Local SMS Interface, upon updating the <u>Pooled Block in the NPAC SMS</u> to a sending status.

SB-B-630Re-Send of Number Pooling Sub-Block Holder Information – Update to Failed SP List

NPAC SMS shall update the Failed SP List of the <u>Sub-Block Block Block</u> by removing the previously failed Local SMS, upon a successful re-send to a previously failed Local SMS.

B-635 Re-Send of Number Pooling Block Holder Information – Status Update to Block after Successful Re-Send

NPAC SMS shall update the status of the Block, specified in the re-send request, at the completion of the re-send to the Local SMS, and a **successful** response from the Local SMS, from a sending status, based on the following:

37<u>If the status prior to the re-send was *failed*, and the Failed SP list contains at least one SPID, then the status is set to *partial failure*.</u>

38<u>If the status prior to the re-send was *partial failure*, and the Failed SP list contains at least one SPID, then the status is set to *partial failure*.</u>

39<u>If the status prior to the re-send was *failed*, and the Failed SP list is now empty, then the status is set to *active*.</u>

40If the status prior to the re-send was *partial failure*, and the Failed SP list is now empty, then the status is set to *active*.

41<u>If the status prior to the re-send was *active*, and the Failed SP list contains at least one SPID, then the status is set to *active*.</u>

42<u>If the status prior to the re-send was *active*, and the Failed SP list is now empty, then the status is set to *active*.</u>

B-636 Re-Send of Number Pooling Block Holder Information – Status Update to Block after Un-Successful Re-Send

NPAC SMS shall update the status of the Block, specified in the re-send request, at the completion of the re-send to the Local SMS, and an **un-successful or missing** response from the Local SMS, from a sending status, based on the following:

- 43If the status prior to the re-send was *failed*, then the status is set to *failed*.
- 44If the status prior to the re-send was *partial failure*, then the status is set to *partial failure*.
- 45If the status prior to the re-send was *active*, then the status is set to *active*.

Sub-Block Block Holder, Bulk Data Downloads

SB-B-640Number Pool Block Holder Information Bulk Download File Creation – Sub-Block

NPAC SMS shall allow NPAC personnel to request a bulk data download file for active Sub-Block data via the NPAC Administrative Interface.

SB-B-650Number Pool Block Holder Information Bulk Download File Creation – Sub-Block

NPAC SMS shall include the Requesting Service Provider, <u>TimeRange</u>, and <u>NPA-NXX-X Range</u> as <u>an</u>-entry fields for the <u>Sub-Block Block</u> bulk data download file via the NPAC Administrative Interface.

B-655 Number Pool Block Holder Information Bulk Download File Creation – Block

NPAC SMS shall use the first NPA-NXX-X Range entry field as an inclusive start range, and the second NPA-NXX-X Range entry field as an inclusive ending range, for Block data.

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

SB-B-660Number Pool Block Holder Information Bulk Data Download - Sub-Block

NPAC SMS shall provide a bulk data download file that contains all active <u>Sub-Block Blocks</u> in the NPAC SMS.

SB-B-670Number Pool Block Holder Information Bulk Data Download – Filters for Sub-Block Blocks

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

SB-B-680Number Pool Block Holder 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.

Sub-Block Block Holder, Resync

SB-B-690Number Pool Block Holder Information Resynchronization - Sub-Block

NPAC SMS shall process a Service Provider request to download Sub-BlockBlock data over the NPAC SMS to Local SMS Interface, when a Service Provider establishes an association with the resynchronization flag set to TRUE, and requests Sub-BlockBlock data based on criteria sent to the NPAC SMS upon association.

B-691 Number Pool Block Holder Information Resynchronization - Block Criteria

NPAC SMS shall accept criteria for Block data, of either TimeRange or Block Range entry fields, where the TimeRange includes the starting time and ending time, and the Block Range includes the starting Block and ending Block.

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.

B-695 Number Pool Block Holder Information Resynchronization – Block Range Tunable Parameter

NPAC SMS shall provide a Block Range Maximum Resynchronization tunable parameter which is defined as the maximum number of Blocks that can be resynchronized by a Local SMS.

B-696 Number Pool Block Holder Information Resynchronization - Block Range Tunable Parameter Default

NPAC SMS shall default the Block Range Maximum Resynchronization tunable parameter to 100 records.

B-697 Number Pool Block Holder Information Resynchronization – Block Range Tunable Parameter Modification

NPAC SMS shall allow the NPAC Administrator to modify the Block Range Maximum Resynchronization tunable parameter.

B-698 Number Pool Block Holder Information Resynchronization – Rejection of Block Criteria

NPAC SMS shall reject a resynchronization request, if the criteria of either TimeRange or Block Range, exceeds the current values of the TimeRange or Block Range tunables.

SB-B-700Number Pool Block Holder Information Resynchronization - Sub-Block Resynchronization - Sub-Block Resync and queuing of messages

NPAC SMS shall queue up all messages to the Local SMS, via the NPAC SMS to Local SMS Interface, when a Service Provider has requested Sub-Block data download upon establishesing an association with the NPAC SMS and where the resynchronization flag is set to TRUE.

SB-B-710Number Pool Block Holder Information Resynchronization – Sub-Block Plock resync and sending of queued messages

NPAC SMS shall send, in order, queued up messages to the Local SMS, via the NPAC SMS to Local SMS Interface, when a Service Provider has sent a message to the NPAC SMS that resynchronization has been completed.

SB-B-720Number Pool Block Holder Information Resynchronization – Filters on Sub-Block Resync

NPAC SMS shall apply NPA-NXX Filters to <u>Sub-Block Block</u> resynchronization to the Local SMS(s), via the NPAC SMS to Local SMS Interface.

SB-B-730Number Pool Block Holder Information Resynchronization – Update to Failed SP List

NPAC SMS shall update the Failed SP List of the <u>Sub-Block Block</u> by removing the resyncing Local SMS, upon a successful resynchronization to a previously failed Local SMS.

B-740 Number Pool Block Holder Information Resynchronization – Status Update to Block after Successful Resynchronization

NPAC SMS shall update the status of the Block, specified in the resynchronization request, at the completion of the resynchronization to the Local SMS, based on the following:

- 46If the status prior to the resynchronization was *failed*, and the Failed SP list contains at least one SPID, then the status is set to *partial failure*.
- 47<u>If the status prior to the resynchronization was *partial failure*, and the Failed SP list contains at least one SPID, then the status is set to *partial failure*.</u>
- 48<u>If the status prior to the resynchronization was *failed*, and the Failed SP list is now empty, then the status is set to *active*.</u>
- 49<u>If the status prior to the resynchronization was *partial failure*, and the Failed SP list is now empty, then the status is set to *active*.</u>
- 50If the status prior to the resynchronization was *active*, and the Failed SP list contains at least one SPID, then the status is set to *active*.
- 51<u>If the status prior to the resynchronization was *active*, and the Failed SP list is now empty, then the status is set to *active*.</u>

Block Holder, Mass Update

B-750 Block Holder Information Mass Update – NPAC Personnel

NPAC SMS shall allow NPAC Personnel to initiate a mass update of Block data via the NPAC Administrative Interface.

B-760 Block Holder Information Mass Update – GUI Criteria

NPAC SMS shall provide Block Range Criteria on the NPAC Administrative Interface, by allowing the NPAC Personnel to input two 7-digit fields, which will be used to update all Blocks and Subscription Versions within the two 7-digit ranges.

B-770 Block Holder Information Mass Update – Block Range Values for Subscription Versions

NPAC SMS shall append 000 to the end of the first 7-digit field that is used for Block Range, and shall append 999 to the end of the second 7-digit field that is used for Block Range, in order to define the TN range that should be used for mass update.

B-780 Block Holder Information Mass Update – Download to EDR Local SMS

NPAC SMS shall download Number Pooling Block Information, for mass updates, using the Number Pooling Block Object, via the NPAC SMS to Local SMS Interface, when the Service Provider's EDR Indicator is **TRUE**, at the time of the mass update request.

B-790 Block Holder Information Mass Update – Download to non-EDR Local SMS

NPAC SMS shall download Number Pooling Block Information, for mass updates, using Subscription Version(s), via the NPAC SMS to Local SMS Interface, when the Service Provider's EDR Indicator is **FALSE**, at the time of the mass update request.

Section 5 New Requirements

Subscription Version, General

SV-1 Number Pooling Subscription Version Information – Reject Messages

NPAC SMS shall reject a message from NPAC personnel, a Service Provider SOA via the SOA to NPAC SMS Interface, a Service Provider LSMS via the NPAC SMS to Local SMS Interface, or a Service Provider via the NPAC SOA Low-tech Interface, to Create, Modify, Cancel, Set to Conflict, Activate, or Disconnect, a Subscription Version with an LNP Type of POOL.

SV-2 Number Pooling Subscription Version Information – Suppression of Notifications

NPAC SMS shall suppress all notifications to the old and new service provider SOA systems for Subscription Versions with LNP Type of POOL.

SV-3 Number Pooling Subscription Version Information – Filters for "Pooled Number" Subscription Versions

NPAC SMS shall apply NPA-NXX Filters to subscription version downloads to the Local SMSs, for Subscription Versions with LNP Type of POOL.

SV-4 Number Pooling Subscription Version Information – Broadcast of Subscription Data

NPAC SMS shall broadcast an addition, modification, or deletion of Subscription Versions, to non-EDR LSMSs, via the NPAC SMS to Local SMS Interface, upon successful update of the 1K Block in the NPAC SMS, for Subscription Versions with LNP Type of POOL.

SV-5 Number Pooling Subscription Version Information – Failed SP List Update for Block

NPAC SMS shall consider an EDR Local SMS to be discrepant and shall update the Failed SP List for all Subscription Versions with LNP Type of POOL in the 1K Block, based on an EDR Local SMS failing to process the Block Object, for an addition, modification, deletion, re-send, resync, or mass update.

Subscription Version, Addition for Number Pooling

SV-10 Addition of Number Pooling Subscription Version Information – Subscription Data

NPAC SMS shall create individual subscription versions, with LNP Type of POOL, for each TN within the https://linear.nc.in/html

SV-20 <u>Addition of Number Pooling Subscription Version Information</u> — Create "Pooled Number" Subscription Version

NPAC SMS shall automatically populate the following data upon Subscription Version creation for a Pooled Number port:

Version ID - Automatically generated by NPAC SMS.

LRN - Value set to same field in Sub-BlockBlock.

Old Service Provider ID - Value set to owner of NPA-NXX.

New Service Provider ID - Value set to Block NPA-NXX-X Holder SPID field in Sub-Block.

TN - Telephone Number associated with this Subscription Version.

LNP Type - Value set to "POOL".

Status - Value initially set to "Sending".

CLASS DPC - Value set to same field in Sub-BlockBlock.

CLASS SSN - Value set to same field in **Sub-Block** Block.

LIDB DPC - Value set to same field in **Sub-Block**Block.

LIDB SSN - Value set to same field in Sub-BlockBlock.

CNAM DPC - Value set to same field in **Sub-Block** Block.

CNAM SSN - Value set to same field in Sub-Block Block.

ISVM DPC - Value set to same field in **Sub-Block**Block.

ISVM SSN - Value set to same field in Sub-BlockBlock.

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

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

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

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

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

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

Activation Broadcast Date - Value set to current date.

Activation Broadcast Complete Time Stamp - Value set to current date/time, once the

broadcast is complete (either Local SMS has responded or retries have been exhausted).

Disconnect Request Time Stamp - Value set to all zeros.

Disconnect Broadcast Time Stamp - Value set to all zeros.

Disconnect Broadcast Time Stamp - Value set to all zeros.

Disconnect Broadcast Complete Time Stamp - Value set to all zeros.

Effective Release Date - Value set to all zeros.

Customer Disconnect Date - Value set to all zeros.

Pre-Cancellation Status - Value set to NULLall zeros.

Old Service Provider Cancellation Time Stamp - Value set to all zeros.

New Service Provider Cancellation Time Stamp - Value set to all zeros.

Cancellation Time Stamp - Value set to all zeros.

Old Time Stamp - Value set to all zeros.

Conflict Time Stamp - Value set to all zeros.

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Conflict Resolution Time Stamp - Value set to all zeros.

Create Time Stamp - Value set to current date/time.

Modified Time Stamp - Value set to current date/time.

Porting to Original - Value set to "FALSE".

End User Location Value - Value set to "no value".

End User Location Value Type - Value set to "no value".

Modify Request Time Stamp - Value set to all zeros.

Modify Broadcast Time Stamp - Value set to all zeros.

Modify Broadcast Complete Time Stamp - Value set to all zeros.

Billing ID - Value set to "no value".

Status Change Cause Code - Value set to "no value".

SV-30 <u>-Addition of Number Pooling Subscription Version Information</u> Create "Pooled Number" Subscription Version – Bypass of Existing Subscription Versions

NPAC SMS shall upon finding an existing subscription version with an active, partial failure, disconnect pending, old with a failed SP list, or sending status for any TNs within the HK
<a href="https://Block.nih.go.ni

SV-40 <u>Addition of Number Pooling Subscription Version Information</u> Create "Pooled Number" Subscription Version - Validation Failure Notification

NPAC SMS shall send an appropriate error message to the originating NPAC personnel user if any of the validations listed in Requirements _____, and ____3.3, 4, 5.1, RR5-6.4.2, RR5-6.4.3, 6, 7, 8, 9, 10 fail upon Subscription Version creation for a Pooled Number port.

CMA Comment → need to update requirements list above, once numbers are finalized.

SV-50 <u>Addition of Number Pooling Subscription Version Information</u> Create "Pooled Number" Subscription Version - Validation Failure - No Create

NPAC SMS shall not create a new Subscription Version, if any of the validations fail listed in Requirements ____, and ___3.3, 4, 5.1, 5.2, RR5-6.4.2, RR5-6.4.3, 6, 7, 8, 9, 10 upon Subscription Version creation for a Pooled Number port.

CMA Comment → need to update requirements list above, once numbers are finalized.

SV-60 <u>Addition of Number Pooling Subscription Version Information</u> Create "Pooled Number" Subscription Version - Validation Success - Create New

NPAC SMS shall create a new Subscription Version if all validations pass at the time of Subscription Version ereation for a Subscription Version with LNP Type of POOL, for each non-contaminated TN in the 1K Block, after successfully creating the corresponding Block.

SV-70 <u>Addition of Number Pooling Subscription Version Information</u>-Create "Pooled Number" Subscription Version - Set to Sending

NPAC SMS shall set a Subscription Version of LNP Type POOL in the 1K Block, to sending upon successful subscription creation.

SV-80 Addition of Number Pooling Subscription Version Information – Broadcast of Subscription Data

NPAC SMS shall broadcast Pooled data additions of Subscription data, to non-EDR LSMSs, via the NPAC SMS to Local SMS Interface, upon successful creation of the 1K Block in the NPAC SMS.

SV-90 Addition of Number Pooling Subscription Version Information – Active Status Update

NPAC SMS shall update the status of each Subscription Version with LNP Type of POOL for each TN in the <a href="https://linear.com/l

SV-100 Addition of Number Pooling Subscription Version Information – Partially Failed Partial failure Status Update

NPAC SMS shall update the status of each Subscription Version with LNP Type of POOL for each TN in the <a href="https://linear.com/l

SV-110 Addition of Number Pooling Subscription Version Information – Failed Status Update

NPAC SMS shall update the status of each Subscription Version with LNP Type of POOL for each TN in the https://lk.block.org/ an EDR failure, or specific Subscription Version(s) of a non-EDR failure, upon completion of the broadcast to all-ALL EDR and non-EDR Local SMSs, and a successful response from NONE of the Local SMSs, from a sending status to a failed status.

SV-121 Addition of Number Pooling Subscription Version Information – Failed SP List

NPAC SMS shall update the Failed SP List with the discrepant Local SMS of the individual subscription version(s) with LNP Type of POOL, upon completion of the activation broadcast to All EDR and non-EDR Local SMSs, and an unsuccessful response from at least one Local SMS.

SV-120 Addition of Number Pooling Subscription Version Information — Sub-Block Broadcast Failure to Local SMS

NPAC SMS shall consider an EDR Local SMS to be discrepant, and on the failed SP List, for ALL subscription versions with LNP Type of POOL in the 1K Block, if the Sub-Block activation broadcast was unsuccessful.

SV-130 Create "Pooled Number" Subscription Versions - No Notifications

NPAC SMS shall suppress all notifications to the old and new service provider SOA systems for Subscription Versions with LNP Type POOL.

SV-140 Filters for "Pooled Number" Subscription Versions

NPAC SMS shall apply NPA-NXX Filters to subscription version downloads to the Local SMS(s).

SV-150 "Pooled Number" Subscription Version – Reject Messages

NPAC SMS shall only allow a message from NPAC personnel, a Service Provider SOA via the SOA to NPAC SMS Interface, or a Service Provider LSMS via the NPAC SMS to Local SMS Interface, to Query a Subscription Version with an LNP Type of POOL.

Subscription Version, Create in a Number Pooling Environment

SV-160 Create Intra-Service Provider Port – NPAC Personnel After Block NPA-NXX-X Creation

NPAC SMS shall allow NPAC personnel to create intra-service provider ports for a TN within the <a href="https://linear.ncbi.nlm.n

SV-170 Create Intra-Service Provider Port – SOA After Block NPA-NXX-X Creation

NPAC SMS shall reject an intra-service provider Subscription Version Create message for a TN within the <a href="https://linear.com/

SV-180 Create Inter-Service Provider Port-to-Original Port – NPAC and SOA After Block NPA-NXX-X Creation

NPAC SMS shall reject an inter-service provider Port-to-Original Subscription Version Create message for a TN within the <a href="https://linear.ncbi.org/line

SV-190 Create Inter-Service Provider Port-to-Original Subscription Version – After Sub-Block Activation

NPAC SMS shall validate that the New Service Provider is the <u>Block NPA-NXX-X</u> Holder, in an inter-service provider port-to-original port for a TN within the <u>1K Block 1K Block</u>, after the activation of the <u>Sub-Block Block</u>.

Subscription Version, Activate in a Number Pooling Environment

SV-200 Activate Intra-Service Provider Port – After BlockNPA-NXX-X Creation

NPAC SMS shall allow NPAC personnel, a Service Provider SOA via the SOA to NPAC SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, to activate intra-service provider ports for a TN within the HK Block, up to the Activation of the Sub-Block.

SV-210 Activate Port-to-Original Subscription Version – Broadcast of Subscription Data Creation

The NPAC SMS shall broadcast a new Subscription Version Create to a non-EDR Local SMS, upon activating a port-to-original Subscription Version, where the TN is within the range of a HKBlock after the activation of the Block.

SV-220 Activate Port-to-Original Subscription Version – Broadcast of Subscription Data Deletion

The NPAC SMS shall broadcast a Subscription Version Delete to an EDR Local SMS, upon activating a port-to-original Subscription Version, where the TN is within the range of a HKBlock after the activation of the Block.

Subscription Version, Modification for Number Pooling

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

NPAC SMS shall automatically apply the updates to the attributes of the individual subscription versions with LNP Type of POOL, for each TN within the Sub-BlockBlock immediately after successfully modifying a Number Pooling Sub-BlockBlock in the NPAC SMS.

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

NPAC SMS shall update the status of the individual subscription versions with LNP Type of POOL, for each TN within the Sub-BlockBlock, upon the start of the broadcast of a Sub-BlockBlock Modification to the Local SMSs, from an active status to a sending status, after successfully modifying a Number Pooling Block in the NPAC SMS.

SV-250 Modification of Number Pooling Subscription Version Information – Broadcast of Subscription Data

NPAC SMS shall broadcast Pooled data modifications of Subscription Versions with LNP Type of POOL in the 1K Block, to non-EDR LSMSs, via the NPAC SMS to Local SMS Interface, upon successful modification of the Pooled Subscription Versions in the NPAC SMS.

SV-260 Modification of Number Pooling Subscription Version Information – Sub-Block Broadcast Failure to Local SMS

NPAC SMS shall consider an EDR Local SMS to be discrepant, and on the failed SP List, for ALL subscription versions in the 1K Block, if the Sub-Block modify active broadcast was unsuccessful.

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

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

NPAC SMS shall update the Failed SP List with the discrepant Local SMS of the individual subscription version(s) with LNP Type of POOL, upon completion of the <u>modification</u> broadcast to <u>the All EDR and non-EDR</u> Local SMSs, and an unsuccessful response from at least one Local SMS.

SV-290 Modification of Number Pooling Subscription Version Information – Sub-Block Broadcast Failure to Local SMS

NPAC SMS shall consider an EDR Local SMS to be discrepant, and on the failed SP List, for ALL subscription versions with LNP Type of POOL in the 1K Block, if the Sub-Block modification broadcast was unsuccessful.

Subscription Version, Deletion for Number Pooling

SV-300 Deletion of Number Pool Subscription Version Information - NPAC

NPAC SMS shall reject a request to delete a Subscription Version with LNP Type of POOL by NPAC personnel, or Service Provider via the NPAC SOA Low-teeh Interface.

SV-310 Deletion of Number Pool Subscription Version Information – SOA

NPAC SMS shall reject a request to delete a Subscription Version with LNP Type of POOL by a Service Provider via the SOA to NPAC SMS interface, and will return an error message, SOA not authorized.

SV-320 Deletion of Number Pool Subscription Version Information – Subscription Version Data

NPAC SMS shall process a delete Block Holder request, by deleting all subordinate subscription versions with LNP Type of POOL in the 1K Block, by setting status to old.

SV-330 Deletion of Number Pooling Subscription Version Information – Sending Status Update to Sub-Block and Subscription Versions

NPAC SMS shall update the status of the Subscription Versions with LNP Type of POOL in the https://linear.nlm.new.org/https://linear.nlm.new.org/https://l

SV-340 Deletion of Number Pool Subscription Version Information – Broadcast of Subscription Data

NPAC SMS shall broadcast Pooled data deletes of Subscription data, to non-EDR LSMSs, via the NPAC SMS to Local SMS Interface.

SV-350 Deletion of Number Pooling Subscription Version Information – Old Status Update to Sub-Block and Subscription Versions

NPAC SMS shall update the status of the Subscription Versions with LNP Type of POOL in the <a href="https://linear.com/li

SV-360 Deletion of Number Pooling Subscription Version Information – Failed Status Update

NPAC SMS shall update the status of the Subscription Versions with LNP Type of POOL in the <a href="https://linear.com/li

SV-365 Deletion of Number Pooling Subscription Version Information – Failed SP List

NPAC SMS shall update the Failed SP List with the discrepant Local SMS of the individual subscription version(s) with LNP Type of POOL, upon completion of the deletion broadcast to All EDR and non-EDR Local SMSs, and an unsuccessful response from at least one Local SMS.

SV-370 Deletion of Number Pooling Subscription Version Information — Subscription Version Broadcast Failure to Local SMS

NPAC SMS shall consider a non-EDR Local SMS to be discrepant, and on the failed SP List, for the Sub-Block, if one or more subscription version disconnect broadcasts were unsuccessful.

SV-380 Deletion of Number Pooling Block Holder Information - Sub-Block Broadcast Failure to Local SMS

NPAC SMS shall consider an EDR Local SMS to be discrepant, and on the failed SP List, for ALL subscription versions with LNP Type of POOL in the 1K Block, if the Sub-Block disconnect broadcast was unsuccessful.

Subscription Version, Disconnect <u>and Port-To-Original</u> in a Number Pooling Environment

SV-390 – Disconnect Subscription Version <u>or Port-To-Original</u> – Pooled Number <u>Sub-Block Block</u> <u>Holder</u> Default Routing Restoration

The NPAC SMS shall reinstate the <u>Sub-Block Block holder</u> default routing, block holder Service Provider Id and the LNP Type to POOL for a subscription version upon a disconnect for a ported TN, or an activate for a Port-To-Original TN, belonging to the <u>1K Block 1K Block</u>.

SV-400 - Disconnect Subscription Version - Customer Disconnect Date Notification for Pooled Number

NPAC SMS shall notify the new Service Provider (the block owner) of the Subscription Version Customer Disconnect Date and Effective Release Date prior to reinstating the default routing.

SV-410 – Disconnect Subscription Version – Broadcast of Subscription Data Creation

The NPAC SMS shall broadcast a new Subscription Version Create to a non-EDR Local SMS, upon a <u>disconnect of a non-pooled deleting an inter-ported or intra-ported</u> Subscription Version, where the TN is within the <u>1K Block</u>1K Block.

SV-420 – Disconnect Subscription Version – Broadcast of Subscription Data Deletion

The NPAC SMS shall broadcast a Subscription Version Delete to an EDR Local SMS, upon <u>a disconnect of a non-pooled deleting an inter-ported or intra-ported</u> Subscription Version, where the TN is within the <u>range of a Pooled-1K Block</u>.

SV-425 – Disconnect Subscription Version – Updates to the Failed SP List

NPAC SMS shall update the Failed SP List with the discrepant Local SMS of the individual subscription version(s) with LNP Type of POOL, that were *active prior to the disconnect* broadcast and used to indicate the status of the previously active Subscription Version(s) that is being disconnected, upon completion of the disconnect broadcast to All EDR and non-EDR Local SMSs, and an unsuccessful response from at least one Local SMS.

<u>SV-426 – Disconnect Subscription Version – Updates to the Failed SP List</u>

NPAC SMS shall update the Failed SP List with the discrepant Local SMS of the individual subscription version(s) with LNP Type of POOL, that were *pending prior to the disconnect broadcast and used to indicate the status of the Port-To-Original Subscription Version(s)*, upon completion of the disconnect broadcast to All EDR and non-EDR Local SMSs, and an unsuccessful response from at least one Local SMS.

Subscription Version, NPA Splits

SV-430 NPA Splits and the Number Pool <u>Sub-Block Block Holder</u> Information – Broadcast of Subscription Versions for an NPA-NXX involved in an NPA Split

NPAC SMS shall convert the old NPA-NXX to the new NPA-NXX when broadcasting Subscription Versions with LNP Type of POOL, broadcast a Sub-Block create to a non-EDR Local SMS, via the NPAC SMS to Local SMS Interface, by sending Subscription Versions in a TN Range using the new NPA-NXX for an NPA-NXX that is currently in permissive dialing.

Subscription Version, Query

SV-440 Query Subscription Version – LNP Type of POOL

NPAC SMS shall return Subscription Versions with LNP Type of POOL that match the query selection criteria, on query requests by NPAC personnel, SOA via the SOA to NPAC SMS Interface, Local SMS via the NPAC SMS to Local SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface.

SV-450 Query Sub-Block

NPAC SMS shall return Sub-Block data that match the query selection criteria, on query requests by NPAC personnel, SOA via the SOA to NPAC SMS Interface, or Local SMS via the NPAC SMS to Local SMS Interface.

Subscription Version, Re-Send for Number Pooling

SV-451 Re-Send of Number Pooling Subscription Version Information – NPAC Personnel GUI

NPAC SMS shall prevent NPAC Personnel from re-sending a Subscription Version with LNP Type of POOL, via the NPAC Administrative Interface.

SV-452 Re-Send of Number Pooling Subscription Version Information – Subscription Versions sent to non-EDR Local SMS

NPAC SMS shall re-send Subscription Versions to a non-EDR Local SMS via the NPAC SMS to Local SMS Interface, when a re-send request to a non-EDR Local SMS is initiated by the NPAC SMS.

SV-460 Re-Send of Number Pooling Subscription Version Information – Sending Status Update to Failed Subscription Versions for Block Activation

NPAC SMS shall update the status of the failed Subscription Versions with LNP Type of POOL in the <a href="https://linear.com/linear

SV-470 Re-Send of Number Pooling Subscription Version Information – Sending Status Update to Partially Failed Partial failure Subscription Versions for Block Activation

NPAC SMS shall update the status of the partially failed partial failure Subscription Versions with LNP Type of POOL in the 1K Block 1K Block, at the start of the re-send to the Local SMSs, from a partially failed partial failure status to a sending status.

SV-480 Re-Send of Number Pooling Subscription Version Information – Sending Status Update to Active Subscription Version <u>for Block Modification</u> or Deletion

SV-490 Re-Send of Number Pooling Subscription Version Information – Sending Status Update to Old Subscription Version <u>for Block Deletion</u>

NPAC SMS shall update the status of the old Subscription Version with LNP Type of POOL in the https://linear.nih.google.com the status of the re-send to the Local SMSs, from an old status to a sending status.

SV-500 Re-Send of Number Pool Subscription Version Information — Broadcast of Subscription Data

NPAC SMS shall broadcast Pooled data re-sends of Subscription data, to non-EDR LSMSs, via the NPAC SMS to Local SMS Interface.

SV-510 Re-Send of Number Pooling Subscription Version Information – Update to Failed SP List for Block Activation

NPAC SMS shall update the Failed SP List of the Subscription Version(s) with LNP Type of POOL in the <a href="https://linear.nih.google.com/linear.nih.goo

<u>SV-515 Re-Send of Number Pooling Subscription Version Information – Status Update to Subscription Version after Successful Re-Send</u>

NPAC SMS shall update the status of the Subscription Version(s), specified in the re-send request, at the completion of the re-send to the Local SMS, and a **successful** response from the Local SMS, from a sending status, based on the following:

- 52<u>If the status prior to the re-send was *failed*, and the Failed SP list contains at least one SPID, then the status is set to *partial failure*.</u>
- 53<u>If the status prior to the re-send was *partial failure*, and the Failed SP list contains at least one SPID, then the status is set to *partial failure*.</u>
- 54<u>If the status prior to the re-send was *failed*, and the Failed SP list is now empty, then the status is set to *active*.</u>
- 55If the status prior to the re-send was *partial failure*, and the Failed SP list is now empty, then the status is set to *active*.
- 56If the status prior to the re-send was *active*, and the Failed SP list contains at least one SPID, then the status is set to *active*.
- 57<u>If the status prior to the re-send was *active*, and the Failed SP list is now empty, then the status is set to *active*.</u>

SV-516 Re-Send of Number Pooling Subscription Version Information – Status Update to Subscription Version after Un-Successful Re-Send

NPAC SMS shall update the status of the Subscription Version(s), specified in the re-send request, at the completion of the re-send to the Local SMS, and an **un-successful or missing** response from the Local SMS, from a sending status, based on the following:

58If the status prior to the re-send was *failed*, then the status is set to *failed*.

59If the status prior to the re-send was *partial failure*, then the status is set to *partial failure*.

60If the status prior to the re-send was active, then the status is set to active.

SV-517 Re-Send of Number Pooling Subscription Version Information — Status Update to Block after all Subscription Versions are Successfully re-sent

NPAC SMS shall update the status of the corresponding Block after all Subscription Versions with LNP Type of POOL in the 1K Block, have been re-sent to the Local SMSs, as follows:

61<u>If the status of all Subscription Versions with LNP Type of POOL in the 1K Block is *failed*, then the status of the Block is set to *failed*.</u>

62If the status of all Subscription Versions with LNP Type of POOL in the 1K Block is *partial failure*, then the status of the Block is set to *partial failure*.

63If the status of all Subscription Versions with LNP Type of POOL in the 1K Block is *active*, then the status of the Block is set to *active*.

64<u>If the status of all Subscription Versions with LNP Type of POOL in the 1K Block is *old*, then the status of the Block is set to *old*.</u>

<u>Subscription Version, Re-Send in a Number Pooling</u> Environment

SV-518 Re-Send of Subscription Version Information – Disconnect or Port-To-Original of a TN within a Pooled 1K Block

NPAC SMS shall examine a Service Provider's EDR Indicator, at the time of re-send, to determine the message to re-send, for a disconnect or a Port-To-Original Subscription Version of a non-pooled TN, where the TN is contained within a Pooled 1K Block.

<u>Subscription Version, Bulk Data Downloads</u>

SV-521 Bulk Download File Creation – Pooled Subscription Versions Filtered for EDR Local SMS

NPAC SMS shall filter out Subscription Versions with LNP Type of POOL for Bulk Data

Download files of Subscription Version data, when the requesting Service Provider has an EDR Indicator set to TRUE.

<u>Subscription Version, Resynchronization</u>

SV-522 Addition of Number Pooling Subscription Version Information Resynchronization – Filters on Subscription Versions Resync

NPAC SMS shall filter out Subscription Versions with LNP Type of POOL for Resynchronization of Subscription Version data, when the resyncing Service Provider has an EDR Indicator set to TRUE.

Subscription Version, Mass Updates

SV-520 Mass Update of "Pooled Number" Subscription Versions - Notification Suppression

NPAC SMS shall suppress SOA notifications to the current SP (the block holder) for mass-updates on Subscription Versions with an LNP Type of POOL.

SV-530 Addition of Number Pooling Subscription Version Information Mass Update of "Pooled Number" Subscription Versions - Rejection

NPAC SMS shall reject a request to perform a mass update on Subscription Versions with an LNP Type of POOL.

Section 6 New Requirements

RR6-15 - Sub-Block Resynchronization Filter Usage

NPAC SMS shall, for a Sub-Block Resynchronization request, over the NPAC SMS to Local SMS Interface, only send Sub-Blocks that are not filtered on the Local SMS. possibly a dupe of resync in sub-block section.

Section 8 New Requirements

A-1 Audit Processing for Blocks and Pooled Number Subscription Versions

NPAC SMS shall process an audit request of a **Block** by performing the following steps:

65 Validate that the Block exists in the NPAC SMS.

66Perform an internal integrity check within the NPAC SMS to ensure that the Block and all Subscription Versions with LNP Type of POOL within the 1K Block, contain the same data.

67<u>If any of the Subscription Versions are out of sync in the NPAC SMS</u>, update those <u>Subscription Versions in the NPAC SMS</u>, issue a unique alarmable error message, then continue processing.

68Once the integrity check is complete, broadcast the Block and TN Range to the EDR Local SMS, per requirement A-40, and the TN Range to the non-EDR Local SMS.

A-2 Audit Processing for Pooled Number Subscription Versions

NPAC SMS shall process an audit request of a **Subscription Version(s)** by performing the following steps:

69 Validate that the Block associated with the TN contained in the Subscription Version(s), exists in the NPAC SMS.

70Perform an internal integrity check within the NPAC SMS to ensure that the Block and all Subscription Versions with LNP Type of POOL within the TN Range, contain the same data.

71<u>If any of the Subscription Versions are out of sync in the NPAC SMS, update those Subscription Versions in the NPAC SMS, issue a unique alarmable error message, then continue processing.</u>

72Once the integrity check is complete, broadcast the Block and TN Range to the EDR Local SMS, per requirement A-40, and the TN Range to the non-EDR Local SMS.

A-10 Audit Discrepancy and Results Notifications for Pooled Number Subscription Versions

NPAC SMS shall for audits of Subscription Versions with LNP Type of POOL, send notifications of discrepancies found and audit results to the requesting SOA.

A-20 Audit Status Attribute Value Change Notification Suppress for Pooled Number Subscription Versions

NPAC SMS shall for audits of Subscription Versions with LNP Type of POOL, suppress status change <u>notifications</u> for discrepancy corrections to the block holder SOA (current SP).

A-30 Audit Attribute Value Change Notification Suppress for Pooled Number Subscription Versions

NPAC SMS shall for audits of Subscription Versions with LNP Type of Pool suppress, attribute change <u>notifications</u> for discrepancy corrections to the block holder SOA (current SP).

A-40 Flow of Audit Execution – Pooled Numbers to EDR Local SMS

NPAC SMS shall send a query for a <u>Sub-Block Block</u> and a query for Subscription Version(s), resulting from the TN or TN Range audit request, to an EDR Local SMS that is accepting <u>Sub-Block Block</u> and Subscription Version data download for the given NPA-NXX-X via the NPAC SMS to Local SMS Interface.

A-50 Ignore missing SVs for Pooled Ports at EDR Local SMS

NPAC SMS shall <u>not consider ignore</u> a query response of <u>No Data, as a discrepancy a missing-Subscription Version</u> from an EDR Local SMS, for a Subscription Version with LNP Type of POOL.

A-60 Delete erroneous SVs for Pooled Ports at EDR Local SMS

NPAC SMS shall <u>consider process</u> a query response <u>which contains of an erroneous</u> Subscription Version, <u>as a discrepancy</u> from an EDR Local SMS, for a Subscription Version with LNP Type of POOL, by sending a Subscription Version Delete message for the <u>erroneous</u> Subscription Version.

A-70 Suppress Notifications for Discrepancy Corrections for Pooled Ports at EDR Local SMS

NPAC SMS shall suppress status notifications to the Block Holder SOA for audit discrepancy corrections of Subscription Versions with LNP Type of POOL.

A-80 Compare NPAC SMS Sub-Block to Service Provider Sub-Block at EDR Local SMS

NPAC SMS shall conduct a comparison of the <u>Sub-Block Block</u> belonging to the Service Provider to its owns <u>Sub-Block Block</u>.

A-90 Add Sub-Block to Service Provider at EDR Local SMS

NPAC SMS shall, following the comparison of its own <u>Sub-Block Block</u> to the Service Provider's <u>Sub-Block Block</u>, add a <u>Sub-Block Block</u> found to be absent in the Service Provider's <u>Local SMSSub-Block database</u>, by sending a <u>Sub-Block Block Block</u> Activate message.

A-100 Modify Sub-Block Block to Service Provider at EDR Local SMS

NPAC SMS shall, following the comparison of its own <u>Sub-Block Block</u> to the Service Provider's <u>Sub-Block Block</u>, modify a <u>Sub-Block Block</u> found to be in error in the Service Provider's <u>Local SMSSub-Block database</u>, by sending a <u>Sub-Block Block Modify message</u>.

A-110 Delete Discrepant Sub-Block to Service Provider at EDR Local SMS

NPAC SMS shall, following the comparison of its own <u>Sub-Block Block</u> to the Service Provider's <u>Sub-Block Block</u>, delete a <u>Sub-Block Block</u> found to be erroneously present in the Service Provider's <u>Local SMSSub-Block database</u>, by sending a <u>Sub-Block Block</u> Delete message.

Section 9 New Requirements

R-10 Pooled Number Report – Query functions

NPAC SMS shall support pooled number reports that allow queries on any combination of SPID, Block NPA-NXX-X ID, and TN Range, where the NPAC SMS returns all TNs that meet the selection criteria.

R-20 Pooled Number Report – Filters

NPAC SMS shall support pooled number reports that allow filters on any combination of LNP Type (POOL, LSPP, LISP), where the NPAC SMS returns all TNs that meet the selection criteria.

R-30 Pooled Number Report – Numbers in a Block NPA-NXX-X

NPAC SMS shall support a report that list all numbers in a 1K block (NPA-NXX-X) for a block holder, for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low-tech Interface.

R-40 Pooled Number Report – Numbers in a Block NPA-NXX-X Data Elements

NPAC SMS shall support a report that lists all numbers in a HK Block for a block holder, that contains the following data elements:

TN (primary sort) SV id LNP Type activation date LRN

R-50 Pooled Number Report – Block NPA-NXX-X Holder History

NPAC SMS shall support a report that contains <u>Block NPA-NXX-X</u> Holder History for a <u>1K-Block 1K Block</u>, for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low-tech Interface.

R-60 Pooled Number Report – Block NPA-NXX-X Holder History Data Elements

NPAC SMS shall support a report that contains Block NPA-NXX-X Holder History for a 1K-Block, that contains the following data elements:

Code Holder

Block NPA-NXX-X

Holder

TN Range

Effective Date

R-70 Pooled Number Report – Pending-Like No-Active Subscription Versions

NPAC SMS shall support a report, used for Block Block Block Creation, that contains a list of all numbers in a HK Block, that currently have a Subscription Version with a status of pending/conflict/cancel-pending/failure, and where no active Subscription Version exists, for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low-tech Interface.

R-80 Pooled Number Report – Pending-Like No-Active Subscription Versions Data Elements

NPAC SMS shall support a report, used for Block Block Block Creation, that contains a list of all numbers in a HK Block, that currently have a Subscription Version with a status of pending/conflict/cancel-pending/failure, and where no active Subscription Version exists, that contains the following data elements:

TN Old Service Provider New Service Provider Due Date Status

R-90 Pooled Number Report – Port-to-Original Pending Subscription Versions

NPAC SMS shall support a report, used for Block NPA-NXX-X and Sub-Block Block Creation, that contains a list of all numbers in a HK Block, that currently have a Port-to-Original Subscription Version with a status of pending/conflict/cancel-pending/failure, for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low-tech Interface.

R-100 Pooled Number Report – Port-to-Original Pending Subscription Versions Data Elements

NPAC SMS shall support a report, used for <u>BlockNPA-NXX-X</u> and <u>Sub-BlockBlock</u> Creation, that contains a list of all numbers in a <u>1K Block1K Block</u>, that currently have a Port-to-Original Subscription Version with a status of pending/conflict/cancel-pending/failure, that contains the following data elements:

TN Old Service Provider New Service Provider Due Date Status

R-110 Pooled Number Report – <u>Contaminated</u> Active-Like Subscription Versions

NPAC SMS shall support a report, used for de-pooling, that contains a list of all numbers in a HK-Block, that currently have a Subscription Version with a status of active/partial failure/disconnect pending/sending/old with a Failed SP List, for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low-tech Interface.

R-120 Pooled Number Report – <u>Contaminated Active-Like Subscription Versions</u> Data Elements

NPAC SMS shall support a report, used for de-pooling, that contains a list of all numbers in a HK Block, that currently have a Subscription Version with a status of active/partial failure/disconnect pending/sending/old with a Failed SP List, that contains the following data elements:

TN Old Service Provider New Service Provider Due Date Status

R-130 Pooled Number Report – Pending-Like Active POOL Subscription Versions

NPAC SMS shall support a report, used for de-pooling, that contains a list of all numbers in a 1K Block, that currently have a Subscription Version with a status of pending/conflict/cancel-pending/failure, and where the currently active Subscription Version is LNP Type of POOL, for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low-tech Interface.

R-140 Pooled Number Report – Pending-Like Active POOL Subscription Versions Data Elements

NPAC SMS shall support a report, used for de-pooling, that contains a list of all numbers in a 1K Block, that currently have a Subscription Version with a status of pending/conflict/cancel-pending/failure, and where the currently active Subscription Version is LNP Type of POOL, that contains the following data elements:

TN
Old Service Provider
New Service Provider
Due Date
Status