

Number Pooling – 05/185/1998

Number Pooling Requirement Overview

The requirements below have been developed as number pooling options for the Midwest Region.

The following definitions apply in the requirements that follow:

[De-Pool – The return of a pooled block to the pool administrator.](#)

Code Holder – The code holder is the LERG owner of the NPA-NXX.

Block Holder – The recipient of a pool of numbers from the code holder defined as the NPA-NXX-X holder in the LERG.

[Pre-Port – Porting of an entire block of TN's from the code holder to the block holder on or after the effective date of the pool.](#)

The following summarizes the approach taken:

Pre-Porting with snap back to block holder. The NPAC personnel do the Pre-Porting with no notifications across the mechanized interface and no concurrence of port request by old or new service provider. The activate of the subscription version takes place at a scheduled time upon creation of the porting request by NPAC personnel. [Block holder information](#) [Number pooling block holder information](#) is entered into the NPAC prior to the port of the pool. If no ports have previously been done for the NPA-NXX then a notification will be sent upon entry of the information to allow for time to make any necessary facilities changes.

Pre-Port, Snap Back to Block Holder and POOL Indicator Requirement Identification

The following are the requirements that are present to support snap back processing:

Requirement / Table	Description
Number Pooling-Information Pooling block holder information Data Model routing information	LRN and DPC information would be present for restoration of block holder default routing on snap back.
RR3-27, RR3-28, and RR3-29	Requirements to allow addition, modification and deletion in the Number Pooling-Information Pooling block holder information Table of LRN and DPC data used for block holder default routing restoration on snap back.
Requirement 15, 16, 17, and 18	Disconnect requirements for snap back processing.
RR9-7 and RR9-8	Reporting requirements.

The following are the requirements that are present to support the pool indicator :

Requirement / Table	Description
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Subscription Version Data Model LNP type modification	LNP type modification to add porting type of POOL.
Requirement 1	Setting of LNP type to POOL on pre-porting of the block.

Pre Porting Requirements with Snap Back

Section 3 Modifications

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-XXXX's reside.
Old Service Provider ID	C (4)	√	Old Service Provider ID.
New Service Provider ID	C (4)	√	New Service Provider ID.
TN	TN	√	Subscription Version telephone number.
Local Number Portability Type	E	√	Number Portability Type. Valid enumerated values are: LSSP - Local Service Provider Portability (0) LISP - Local Intra-Service Provider Portability (1) POOL - Pooled Block Number Port (2)
Status	E	√	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)

SUBSCRIPTION VERSION DATA MODEL

Attribute Name	Type (Size)	Required	Description
			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.
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	T	√	The due date planned by the new Service Provider for Subscription Version Transfer.
Old Service Provider Due Date	T		The due date planned by the old Service Provider for Subscription Version Transfer.
Old Service Provider Authorization	B		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	T		The date and time that the New Service Provider authorized Transfer of Service of the Subscription Version.
Old Service Provider Authorization Time Stamp	T		The date and time that the old Service Provider authorized Transfer of Service for the Subscription Version.
Activation Request Time Stamp	T		The date and time that the Subscription Version activation request was made by the new Service Provider.
Activation Broadcast Date	T		The date and time that broadcasting began to all local SMS systems for the activation of the Subscription Version.
Activation 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 activate.
Disconnect Request Time Stamp	T		The date and time that the Subscription Version disconnect request was made by the local Service Provider.
Disconnect Broadcast	T		The date and time that broadcasting began to all local SMS

SUBSCRIPTION VERSION DATA MODEL

Attribute Name	Type (Size)	Required	Description
Time Stamp			systems for the disconnect of the Subscription Version.
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.
Effective Release Date	T		The date that the Subscription Version is to be deleted from all Local SMS systems.
Customer Disconnect Date	T		The date that the Customer's service was disconnected.
Pre-Cancellation Status	E		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	T		The date and time that the Old Service Provider acknowledged that the Subscription Version be canceled.
New Service Provider Cancellation Time Stamp	T		The date and time that the New Service Provider acknowledged that the Subscription Version be canceled.
Cancellation Time Stamp	T		The date and time that the Subscription Version became canceled.
Old Time Stamp	T		The date and time that the Subscription Version became old.
Conflict Time Stamp	T		The date and time that the Subscription Version was last placed in conflict.
Conflict Resolution Time Stamp	T		The date and time that the resolution of a Subscription Version in conflict is acknowledged.
Create Time Stamp	T	√	The date and time that this Subscription Version record was created.
Modified Time Stamp	T	√	The date and time that this Subscription Version record was last modified. The default value is the Create Time Stamp.
Porting to Original	B	√	A boolean that indicates whether the Subscription Version created is to be ported back to the original Service Provider.

SUBSCRIPTION VERSION DATA MODEL			
Attribute Name	Type (Size)	Required	Description
			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	T		The date and time that the Subscription Version 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 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: No value General Conflict LSR Not Received FOC Not Issued Due Date Mismatch Vacant Number Port NPAC SMS Automatic Conflict from Cancellation NPAC SMS Automatic Cancellation

Table 0-1 Subscription Version Data Model

Section 3 New Requirements

NUMBER POOLING BLOCK HOLDER INFORMATION DATA MODEL			
Attribute Name	Type (Size)	Required	Description
Block Holder SPID	C(4)	√	The Service Provider Id of the block holder.
TN Range Start	TN	√	Telephone number at the start of the pool.

NUMBER POOLING BLOCK HOLDER INFORMATION DATA MODEL

Attribute Name	Type (Size)	Required	Description
TN Range End	TN	√	Telephone number at the end of the pool.
LRN	TN	√	The LRN is an identifier for the switch on which portable NPA-NXX-XXXX resides.
CLASS DPC	N (9)	√	DPC for 10-digit GTT for CLASS features.
CLASS SSN	N (3)	√	CLASS SSN for the Subscription Versions.
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
Effective Date	T	√	The effective date of the pool. The time for this field will be normalized 00:00:00.

RR3-27.1 Number ~~Pool-Block~~ Pooling Block Holder Information – NPA-NXX Validation

NPAC SMS shall validate that the NPA-NXX specified in the addition or modification of Number Pooling Block Holder information are valid NPA-NXX defined in the NPAC SMS.

RR3-27.2 Number ~~Pool-Block~~ Pooling Block Holder Information – LRN Validation

NPAC SMS shall validate that the LRN specified in the addition or modification of Number Pooling Block Holder information is a valid LRN defined in the NPAC SMS for the block holder.

RR3-28.1 Number ~~Pool-Block~~ Pooling Block Holder Information – No Overlapping Block Validation

NPAC SMS shall validate that the TN range specified in the addition or modification of Number Pooling Block Holder information does not overlap with a TN in a range for another entry in the Number ~~Pooling-Information~~ Pooling block holder information table.

RR3-28.2 Number ~~Pool-Block~~ Pooling 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.

RR3-29 Number ~~Pool-Block~~ Pooling 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 RR3-27.1, RR3-27.2, RR3-28.1, and RR3-28.2.

RR3-30.1 Addition of Number Pooling Block Holder Information

NPAC SMS shall require NPAC personnel to store the Service Provider Id, the TN range, the effective date and the initial routing information, as defined in the number ~~pooling-information~~ [pooling block holder information](#) data model.

RR3-30.2 Use of Number Pool Default Routing Information

The NPAC SMS shall use the routing information in the number ~~pooling-information~~ [pooling block holder information](#) data model as the block holder default routing when a pooled number is disconnected or port to original port and returns the TN(s) to the block.

RR3-30.3 Use of Number Pool Default Routing Information with Effective Date

NPAC SMS shall reinstate the default routing for a disconnected TN in a pool from the ~~block-holder-information~~ [number pooling block holder information](#) table on or after the effective date in the ~~block-holder-information~~ [number pooling block holder information](#) table

RR3-31.1 Modification of Number ~~Pool-Block~~ Pooling Block Holder Information

NPAC SMS shall allow NPAC personnel to modify the block holder default routing information (LRN, DPC(s), and SSN(s)), and the effective date for a pool of numbers as stored in the NPAC SMS for block holder snap back processing.

RR3-31.2 Modification of Number ~~Pool-Block~~ Pooling Block Holder Information

NPAC SMS shall allow the NPAC personnel to modify the effective date for a pool of numbers if the current date is less than the effective date for the pool.

RR3-32 Deletion of Number ~~Pool-Block~~ Pooling Block Holder Information

NPAC SMS shall allow NPAC personnel to delete the block holder default routing information for a pool of numbers as stored in the NPAC SMS for return to the code holder if there are no pooled Subscription Versions in the block.

RR3-33.1 NPA Splits and the Number ~~Pool-Block~~ Pooling Block Holder Information Table Modification

NPAC SMS shall upon the start of permissive dialing for an NPA Split modify the NPA-NXX information in the Number Pooling Block [Holder](#) Information table if appropriate.

RR3-33.2 NPA Splits and the Number Pool-Block Pooling Block Holder Information Table – 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 [block-holder-information](#)[number pooling block holder information](#) table.

RR3-33.3 NPA Splits and Number Pool Block-Information Block holder information Table – Addition of an NPA-NXX involved in an NPA Split

NPAC SMS shall during permissive dialing ~~will~~ convert the old NPA-NXX to the new NPA-NXX for an NPA-NXX involved in an NPA Split upon entry into the number pool [block-information](#)[block holder information](#) table.

RR3-34 Number Pool-Block Pooling Block Holder information notification of First Port

NPAC SMS shall send a notification of the planned first port for the NPA-NXX if there have not been any previous ports for the NPA-NXX when the number pool is entered into the NPAC SMS Number Pooling Block Holder information table.

RR3-25 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.

Section 5 New Requirements

Subscription Version Creation - Number Pooling Ports

This section provides the Subscription Version Creation requirements for performing a Number Pooling port of a TN. This will cause the pooled numbers to be owned by a new service provider (the block holder) for distribution to their customers.

No notifications are sent to the SOA systems of the old service provider or the new service provider (the block holder) as a result of a pooled number port. However, as with existing porting activity, downloads of Subscription Versions to the Local SMS's occur.

Requirement 1 Create “Pooled Number” Subscription Version

NPAC SMS shall require the following data from NPAC personnel upon Subscription Version creation for a Pooled Number port:

- 21 Local Number Portability Type - Port Type. This field must be set to “POOL” for an LNP pooled number port.
- 22 Ported Telephone Numbers - this entry is a continuous range of TNs that identifies a group of Subscription Versions that have not previously been ported.
- 23 Due Date - date on which transfer of service of a number pool from an old facilities-based Service Provider to new facilities-based Service Provider is initially planned to occur.
- 24 New Facilities-based Service Provider ID - the identifier of the new facilities-based Service Provider (the service provider identified in the [block-holder-information](#)[number pooling block holder information](#) table as the new block holder).

- ?5 Old Facilities-based Service Provider ID - the identifier of the old facilities-based Service Provider that is the code holder (i.e. the current owner of the block).
- ?6 Authorization from old facilities-based Service Provider - indication that the ported-from Service Provider authorizes the transfer of the pooled numbers. This value will be set to TRUE by the NPAC SMS and can not be changed.
- ?7 Status Change Cause Code - indication of reason for denial of authorized by the Old Service Provider. This field will be set to “no value” by the NPAC SMS.
- ?8 Porting to Original - flag indicating whether or not this is a “porting to original” port. This flag will be set to “FALSE” for a Pooled Number port by the NPAC SMS.

Requirement 2 Create “Pooled Number” Subscription Version - New Service Provider Optional input data

NPAC SMS shall accept the following optional fields from NPAC personnel upon Subscription Version creation for a Pooled Number port:

- ?9 Billing Service Provider ID
- ?10 End-User Location - Value
- ?11 End-User Location - Type

Requirement 3 Create “Pooled Number” Subscription Version - Field-level Data Validation

NPAC SMS shall perform field-level data validations to ensure that the value formats for the following input data, if supplied, is valid according to the formats specified in Table 3-5 upon Subscription Version creation for a Pooled Number port:

- ?12 LNP Type
- ?13 Ported TNs
- ?14 Old Service Provider Due Date
- ?15 New Service Provider Due Date
- ?16 Old Service Provider ID
- ?17 New Service Provider ID
- ?18 Authorization from old facilities-based Service Provider
- ?19 Status Change Cause Code
- ?20 Porting to Original
- ?21 Billing Service Provider ID
- ?22 End-User Location - Value
- ?23 End-User Location – Type

Requirement 3.2 Create “Pooled Number” Subscription Version – Routing Information

NPAC SMS shall automatically populate and use the following information from the Number Pooling [Block information](#) [Block holder information](#) table for the TN range specified:

- ?24 LRN
- ?25 Class DPC
- ?26 Class SSN
- ?27 LIDB DPC
- ?28 LIDB SSN
- ?29 CNAM DPC
- ?30 CNAM SSN
- ?31 ISVM DPC
- ?32 ISVM SSN

Requirement 3.3 Create “Pooled Number” Subscription Version – Range Validation

NPAC SMS shall verify that the range specified in a pooled number port is contained within a block specified in the Number [Pool Block information](#)[Pooling Block holder information](#) table.

Requirement 4 Create “Pooled Number” Subscription Version - Due Date Validation

NPAC SMS shall verify that the due date is the current date upon Subscription Version creation for a Pooled Number port.

Requirement 5.1 Create “Pooled Number” Subscription Version - Ported TN Old NPA-NXX Validation

NPAC SMS shall verify that the NPA-NXX to be ported exists as an NPA-NXX in the NPAC SMS system for the old Service Provider upon Subscription Version creation for a Pooled Number port.

Requirement 5.2 Create “Pooled Number” Subscription Version - Ported TN New NPA-NXX Validation

NPAC SMS shall verify that the NPA-NXX for the range of TN’s to be ported exists in the NPAC SMS Number [Pooling Information](#)[Pooling block holder information](#) table for the new Service Provider upon Subscription Version creation for a Pooled Number port.

RR5-6.4.2 Create “Pooled Number” Subscription Version – Due Date Validation for NPA-NXX effective date

NPAC SMS shall verify that the due date is greater than or equal to the NPA-NXX effective date upon Subscription Version creation for a Pooled Number port.

RR5-6.4.3 Create “Pooled Number” Subscription Version – Due Date Validation for Pool effective date

NPAC SMS shall verify that the due date is greater than or equal to the pool effective date in the Number Pool [Block information](#)[Block holder information](#) table upon Subscription Version creation for a Pooled Number port.

Requirement 6 Create “Pooled Number” Subscription Version - Service Provider ID Validation

NPAC SMS shall verify that the old and new Service Provider IDs exist in the NPAC SMS system upon Subscription Version creation for Pooled Number port.

Requirement 7 – Create “Pooled Number” Subscription Version – Service Provider ID Different Validation

NPAC SMS shall verify that the old and new Service Provider Ids are not the [Service Provider Id](#)[same](#) upon Subscription Version Creation for a Pooled Number Port.

Requirement 8 Create “Pooled Number” Subscription Version - Originating Service Provider Validation

NPAC SMS shall verify that only NPAC Personnel can create Subscription Versions for Pooled Number ports.

Requirement 9 Create “Pooled Number” Subscription Version – Subscription Version Validation

NPAC SMS shall verify that there are no subscription versions with pending, conflict, cancel-pending, or failure status that exist for any of the TN’s in the specified Number Pool [Block information](#)[Block holder information](#) upon Subscription Version creation for a Pooled Number port.

Requirement 10.1 Create “Pooled Number” Subscription Version – No Override of Existing Subscription Versions

NPAC SMS shall not affect any existing subscription versions with an active, partial failure, disconnect pending, old with a failed LSMS list, or sending status that exist in the number pool for a Pooled Number Port.

Requirement 10.2 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 LSMS list, or sending status in the number pool for a Pooled Number Port will bypass and not alter that TN/subscription version, log an information message, and continue processing.

Requirement 11 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 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.

Requirement 12 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 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.

Requirement 13 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 creation for a Pooled Number port.

Requirement 14.1 Create “Pooled Number” Subscription Version - Set to Sending

NPAC SMS shall set a Subscription Version to sending upon successful subscription creation.

Requirement 14.2 Create “Pooled Number” Subscription Versions – No Notifications

NPAC SMS shall suppress all notifications to the old and new service provider SOA systems for Pooled Number ports.

Requirement 14.3 Filters for “Pooled Number” Subscription Versions

NPAC SMS shall apply NPA and/or NPA-NXX (Accepted) Filters to subscription versions downloads to the Local SMS(s) for pooled number ports.

Requirement 14.4 – Prevention of Port to ~~Original~~Original on “Pooled Number” Subscription Versions

NPAC SMS ~~will~~ shall prevent port to original ports for Subscription Versions with an LNP Type of POOL.

Section 5 Modified Requirements

Subscription Version Activation

R5-57.1 Activate Subscription Version - Send to Local SMSs

NPAC SMS shall send the activated Subscription Version for an activated Inter-Service Provider, Intra-Service Provider, or Number Pool port via the NPAC SMS to Local SMS Interface to the Local SMSs

Subscription Version Disconnect

Requirement 15.1 – Disconnect Subscription Version – No Service Provider Disconnect of a non-ported Pooled Number

NPAC SMS shall prevent a disconnect by the Service Provider of a subscription version that has an LNP Type of POOL.

Requirement 15.2 – Disconnect Subscription Version – NPAC ~~Personel~~Personnel Disconnect of a non-ported Pooled Number

NPAC SMS shall allow a disconnect by NPAC personnel of a subscription version that has an LNP Type of POOL.

Assumption – Number Pool Lifetime

Once a TN is pooled in the NPAC SMS it will remain in the pool until a subsequent port occurs.

Requirement 16 – Disconnect Subscription Version – Pooled Number Block holder default routing Restoration

The NPAC SMS will reinstate the block holder default routing, block holder Service Provider Id and the LNP Type to POOL for a subscription version upon a disconnect for a TN belonging to a pool. NOTE: The reinstatement of the block holder default routing will result in an M-Create to the Local SMS.

Requirement 17 - 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 immediately prior to reinstating the default routing.
Section 9 New Requirements

Section 5.1.3.2 System Functionality

RR5-44 Query Subscription Version – LNP Type of POOL

NPAC SMS shall on query requests by authorized NPAC personnel, SOA to NPAC SMS interface users, or NPAC SMS to Local SMS interface return subscription versions with LNP Type of POOL that match the query selection criteria.

Section 8 New Requirements

Requirement 18 – 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. Note: This would mean that a SOA (like today) could potentially get a discrepancy notification for a TN that is not present in the SOA database.

Requirement 19- 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 changes for discrepancy corrections to the block holder (current SP).

Section 9 New Requirements

RR9-5 Pooled Ported Number Report

NPAC SMS shall support reports that list the ported numbers in a pooled number range for a block holder for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low-tech Interface.

RR9-6 Pooled Non-Ported Number Block holder default routing Report

NPAC SMS shall support reports that list the non-ported numbers in a pooled number range for a block holder for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low-tech Interface.

RR9-7 Pooled Number Report

NPAC SMS shall support reports that list the pooled number range and the block holder for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low-tech Interface.

RR9-8 Pooled Number Block holder default routing Report

NPAC SMS shall support reports that list the number pool range, the block holder, and the block holder default routing information for NPAC personnel using the NPAC Administrative Interface and Service Provider personnel using the NPAC SOA Low-tech Interface.

ASN.1 Modifications

```
LNPTType ::= ENUMERATED {
    lspp (0),
    lisp (1),
    pool (2)
}
```

```
LocalSMS-CreateAction ::= SEQUENCE {
    actionId INTEGER,
    subscriptionVersionObjects SET OF SubscriptionVersionObject,
    tn-range TN-Range OPTIONAL -- to be used only on pooled ports
}
```

Verbiage will be placed in the LSMS create action to indicate the following:

There will be no need on the part of the LSMS to validate the tn-range. The LSMS will use the subscriptionVersionObjects to create the subscription versions for the TN range in the LSMS. This is done to insure that the subscription version id's used in the NPAC SMS and the Local SMS are the same.

GDMO Modifications

The subscriptionVersionNewNPA-NXX notification will be added as a valid notification for the NPAC SMS object. The SOA systems will have to support this notification from the NPAC SMS object or at least be able to receive it and log an error.

General Comments

CONTAMINATED BLOCK HANDLING WILL BE DONE BY USING M&P PROCEDURES AND NOT SYSTEM REQUIREMENTS FOR THE INTERIM SOLUTION.

M&P FOR NUMBER POOLING

Creating a Number Pool in the NPAC SMS

For a pooled number port the following steps must be followed:

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1. The NPAC personnel will be notified by the pool administrator of a planned transfer of a block of numbers and the date that the pooled port is to occur. The day that the pooled port is to occur is expected to be 8 days in the future. Blocks to be pooled will be specified in 1000 TN ranges.
2. The NPAC personnel will enter the number pooling block holder default routing information into the NPAC SMS block holder default routing table. If no ports have previously occurred for the NPA-NXX a subscriptionVersionNewNPA-NXX notification will be sent. This notification will have to be sent off of the NPAC SMS object.
3. Prior to the pooled number port the Service Provider that owns the block of numbers (the code holder) will perform intra-service provider ports for the numbers currently active in the block of numbers to be pooled. This will insure that when the pooled number port occurs the routing information for the currently active numbers will be in place on the LSMS's and will not be affected by the pooled port. Note: Working numbers in the block that are ported using the intra-SP port procedure, will not have the "POOL" indicator attribute included on these subscription versions.
4. The NPAC personnel on the due date for the pooled number port will port the block of numbers to the new block holder as defined in the requirements. A script could be created to automatically do the port at a time on the due date (such as 3:00 a.m.) to prevent operator errors.

Removal of Pooled Subscription Versions from the NPAC SMS (De-Pooling)

To remove subscription versions with an LNP Type of POOL is the responsibility of the block holder to coordinate with NPAC Personnel. Only NPAC personnel can remove subscription versions with an LNP Type of POOL. NPAC Personnel will only remove all TNs with an LNP Type of POOL from a pool.

Local SMS Impacts

Impacts exist for Local SMS(s) due to number pooling. Local SMS systems that provision network elements that support range operations may need to put special processing in place as described below:

- On a download of a pooled number port as a create action with a range the Local SMS may provision the range capable network elements with the block holder default routing for the range instead of for each individual TN. The Local SMS must create individual subscription versions in the Local SMS system for future interaction with the NPAC SMS. The routing information for these individual subscription versions may not be provisioned in the range capable network element as would be done in existing porting logic.

- ?33 Upon subsequent porting of a TN in a block the Local SMS may provision the subscription version to the Network Element as a new subscription version and not as a modification of existing routing information in a range capable Network Element.
- On a disconnect or port to original of a pooled number the disconnect will be sent to the Local SMS as a create that re-instates the block holder default routing, the LNP type to POOL, and the block holder Service Provider Id. The Local SMS may identify that this TN is part of a POOL and that the routing information for the TN should be removed from the range capable Network Element so that the default routing for the range will be used.
 - When NPA Splits occur for a pooled NPA-NXX the Local SMS may have to change the range information in the Network Element in addition to the subscription version records for the pooled TN's on the Local SMS. The changes to the individual subscription versions may not be provisioned to the range capable Network Element.
 - Mass Update – See issue below. I am not sure how to handle mass update scenarios.

ISSUE: How do we handle change of default routing for a pool (Subscription Versions with an LNP Type of POOL). Currently there is no broadcast the old is just reinstated upon disconnect to the new routing. I guess a mass update could occur....could the LSMS be smart enough to figure the routing change out without a specific command.

Note: The Local SMS must support the POOL LNP Type. The Local SMS and SOA may also need to support the ability to view and query based upon the POOL LNP Type.