Origination Date: 03/12/08

Originator: LNPAWG

### Change Order Number: NANC 430

### Description: URI Fields (MMS)

### Cumulative SP Priority, Weighted Average: N/A

Functionally Backwards Compatible: Yes

## IMPACT/CHANGE ASSESSMENT

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

**Business Need:**

**Multimedia Media Messaging Service (MMS) Field:**

There is a need to enable the ability for SPs and Clearinghouses to look up routing information for IP-based services associated with ported and pooled numbers. Since default CO code level data does not apply for these TNs, query engines need to be provisioned with a portability and pooling correction. The addition of this field will satisfy this need and enable both individual SPs, as well as Service Bureaus, to automatically update their look up engines with the new routing data. This IP-service routing field is in fact directly analogous to the existing SS7-based DPC/SSN routing fields already supported by NPAC (i.e. – ISVM, LIDB, WSMSC, etc…).

**Description of Change:**

The NPAC/SMS will provide the ability to provision an MMS URI for each SV and Pooled Block record.

This information will be provisioned by the SOA and broadcast to the LSMS upon activation of the SV or Pooled Block and upon modification for those SOA and LSMS associations optioned “on” to send and receive this data.

This field shall be added to the Bulk Data Download file, and be available to a Service Provider’s SOA/LSMS.

This field will be supported across the interface on an opt-in basis only and will be functionally backward compatible.

The OptionalData CMIP attribute will be populated with an XML string. The string is defined by the schema documented in the XML section below. XML is used to provide future flexibility to add additional fields to the SV records and Pool Block records when approved by the LLC.

**Major points/processing flow/high-level requirements:**

This change order proposes to add a new field to the subscription version and number pool block objects. Hence, the FRS, IIS, GDMO, and ASN.1 will need to reflect the addition of this field. This new field will cause changes to the NPAC CMIP interface, however they will be functionally backward compatible and optional by service provider.

**Requirements:**

Section 1.2, NPAC SMS Functional Overview

Add a new section that describes the functionality of the MMS URI (Uniform Resource Identifier) Field (Optional Data). See description of Change above.

Section 3.1, NPAC SMS Data Models

Add new attribute for the MMS URI (Uniform Resource Identifier) Field (Optional Data). See below:

| **NPAC CUSTOMER DATA MODEL** | | | |
| --- | --- | --- | --- |
| **Attribute Name** | **Type (Size)** | **Required** | **Description** | |
| [snip] |  |  |  | |
| NPAC Customer SOA MMS URI Indicator | B | √ | A Boolean that indicates whether the NPAC Customer supports MMS URI information from the NPAC SMS to their SOA. The MMS URI is the network address to the Service Provider’s gateway for multi-media messaging service.  The default value is False. | |
| NPAC Customer LSMS MMS URI Indicator | B | √ | A Boolean that indicates whether the NPAC Customer supports MMS URI information from the NPAC SMS to their LSMS. The MMS URI is the network address to the Service Provider’s gateway for multi-media messaging service.  The default value is False. | |
| [snip] |  |  |  | |

Table 3-2 NPAC Customer Data Model

| **Subscription Version Data MODEL** | | | |
| --- | --- | --- | --- |
| **Attribute Name** | **Type (Size)** | **Required** | **Description** | |
| [snip] |  |  |  | |
| MMS URI | C (255) |  | MMS URI for Subscription Version.  This field may only be specified if the service provider SOA supports MMS URI. The MMS URI is the network address to the Service Provider’s gateway for multi-media messaging service. | |
| [snip] |  |  |  | |

Table 3‑6 Subscription Version Data Model

| **number pooling block hoder information Data MODEL** | | | |
| --- | --- | --- | --- |
| **Attribute Name** | **Type (Size)** | **Required** | **Description** | |
| [snip] |  |  |  | |
| MMS URI | C (255) |  | MMS URI for Number Pool Block.  This field may only be specified if the service provider SOA supports MMS URI. The MMS URI is the network address to the Service Provider’s gateway for multi-media messaging service. | |
| [snip] |  |  |  | |

Table 3‑8 Number Pooling Block Holder Information Data Model

R3-7.2 Administer Mass update on one or more selected Subscription Versions

NPAC SMS shall allow NPAC personnel to specify a mass update action to be applied against all Subscription Versions selected (except for Subscription Versions with a status of old, partial failure, sending, disconnect pending or canceled) for LRN, DPC values, SSN values, MMS URI (if the requesting SOA supports MMS URI data), Billing ID, End User Location Type or End User Location Value.

RR3-210 Block Holder Information Mass Update – Update Fields

NPAC SMS shall allow NPAC Personnel, via a mass update, to update the block holder default routing information (LRN, DPC(s), and SSN(s), MMS URI (if the requesting SOA supports MMS URI data),), for a 1K Block as stored in the NPAC SMS. (Previously B-762)

R3‑8 Off-line batch updates for Local SMS Disaster Recovery

NPAC SMS shall support an off‑line batch download (via 4mm DAT tape and FTP file download) to mass update Local SMSs with Subscription Versions, NPA-NXX-X Information, Number Pool Block and Service Provider Network data.

The contents of the batch download are:

1. Subscriber data:
2. [snip]
3. MMS URI (for Local SMSs that support MMS URI)
4. [snip]
5. Block Data
6. [snip]
7. MMS URI, (for Local SMSs that support MMS)
8. [snip]

RR3-79.1 Number Pool NPA-NXX-X Holder Information – Routing Data Field Level Validation

NPAC SMS shall perform field-level data validations to ensure that the value formats for the following input data, are valid according to the formats specified in the Block Data Model upon Block creation scheduling for a Number Pool, or when re-scheduling a Block Create Event: (Previously N-75.1).

[snip]

MMS URI (if supported by the Block Holder SOA)

RR3-149 Addition of Number Pooling 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 the Subscription Version Data Model upon Block creation for a Number Pool: (Previously B-250)

[snip]

MMS URI (if supported by the Block Holder SOA)

RR3-157 Modification of Number Pooling Block Holder Information – Routing Data

NPAC SMS shall allow NPAC personnel, Service Provider via the SOA to NPAC SMS Interface, or Service Provider via the NPAC SOA Low-tech Interface, to modify the block holder default routing information (LRN, DPC(s), and SSN(s)), and MMS URI field (if supported by the Block Holder SOA), for a 1K Block as stored in the NPAC SMS. (Previously B-320)

R4-8 Service Provider Data Elements

NPAC SMS shall require the following data if there is no existing Service Provider data:

[snip]

NPAC Customer SOA MMS URI Support Indicator

NPAC Customer LSMS MMS URI Support Indicator

R5‑16 Create Subscription Version - New Service Provider Optional input data

NPAC SMS shall accept the following optional fields from NPAC personnel or the new Service Provider upon Subscription Version creation for an Inter-Service Provider port:

1. [snip]
2. MMS URI (if supported by the Service Provider SOA)

R5‑18.1 Create 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 3-6 upon Subscription Version creation for an Inter-Service Provider port:

1. [snip]
2. MMS URI (if supported by the Service Provider SOA)

RR5-5 Create “Intra-Service Provider Port” Subscription Version - Current Service Provider Optional Input Data

NPAC SMS shall accept the following optional fields from the NPAC personnel or the Current Service Provider upon a Subscription Version Creation for an Intra-Service Provider port:

1. [snip]
2. MMS URI (if supported by the Service Provider SOA)

RR5-6.1 Create “Intra-Service Provider Port” 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 3-6 upon Subscription Version creation for an Intra-Service Provider port:

1. [snip]
2. MMS URI (if supported by the Service Provider SOA)

R5‑27.1 Modify Subscription Version - New Service Provider Data Values

NPAC SMS shall allow the following data to be modified in a pending or conflict Subscription Version for an Inter-Service Provider or Intra-Service Provider port by the new/current Service Provider or NPAC personnel:

1. [snip]
2. MMS URI (if supported by the Service Provider SOA)

R5‑28 Modify Subscription Version - New Service Provider Optional input data.

NPAC SMS shall accept the following optional fields from the NPAC personnel or the new Service Provider upon modification of a pending or conflict Subscription version:

1. [snip]
2. MMS URI (if supported by the Service Provider SOA)

R5‑29.1 Modify 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 3-6 upon Subscription Version modification.

1. [snip]
2. MMS URI (if supported by the Service Provider SOA)

R5‑36 Modify Active Subscription Version - Input Data

NPAC SMS shall allow the following data to be modified for an active Subscription Version:

1. [snip]
2. MMS URI (if supported by the Service Provider SOA)

R5‑37 Active Subscription Version - New Service Provider Optional input data.

NPAC SMS shall accept the following optional fields from the new Service Provider or NPAC personnel for an active Subscription Version to be modified:

1. [snip]
2. MMS URI (if supported by the Service Provider SOA)

R5‑38.1 Modify Active 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 3-6 upon Subscription Version modification of an active version:

1. [snip]
2. MMS URI (if supported by the Service Provider SOA)

R5-74.3 Query Subscription Version - Output Data

NPAC SMS shall return the following output data for a Subscription Version query request initiated by NPAC personnel or a SOA to NPAC SMS interface user:

1. [snip]
2. MMS URI (if supported by the Service Provider SOA)

R5-74.4 Query Subscription Version - Output Data

NPAC SMS shall return the following output data for a Subscription Version query request initiated over the NPAC SMS to Local SMS interface:

1. [snip]
2. MMS URI (if supported by the Service Provider LSMS)

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

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

1. [snip]
2. MMS URI (Value set to same field as Block)

Req 1 – Service Provider SOA MMS URI Edit Flag Indicator

NPAC SMS shall provide a Service Provider SOA MMS URI Edit Flag Indicator tunable parameter which defines whether a SOA supports MMS URI.

Req 2 – Service Provider SOA MMS URI Edit Flag Indicator Default

NPAC SMS shall default the Service Provider SOA MMS URI Edit Flag Indicator tunable parameter to FALSE.

Req 3 – Service Provider SOA MMS URI Edit Flag Indicator Modification

NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to modify the Service Provider SOA MMS URI Edit Flag Indicator tunable parameter.

Req 4 – Service Provider LSMS MMS URI Edit Flag Indicator

NPAC SMS shall provide a Service Provider LSMS MMS URI Edit Flag Indicator tunable parameter which defines whether an LSMS supports MMS URI.

Req 5 – Service Provider LSMS MMS URI Edit Flag Indicator Default

NPAC SMS shall default the Service Provider LSMS MMS URI Edit Flag Indicator tunable parameter to FALSE.

Req 6 – Service Provider LSMS MMS URI Edit Flag Indicator Modification

NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to modify the Service Provider LSMS MMS URI Edit Flag Indicator tunable parameter.

Req 7 Activate Subscription Version - Send MMS URI to Local SMSs

NPAC SMS shall, for a Service Provider that supports MMS URI, send the MMS URI attribute for an activated Inter or Intra-Service Provider Subscription Version port via the NPAC SMS to Local SMS Interface to the Local SMSs.

Req 8 Activate Number Pool Block - Send MMS URI to Local SMSs

NPAC SMS shall, for a Service Provider that supports MMS URI, send the MMS URI attribute for an activated Number Pool Block via the NPAC SMS to Local SMS Interface to the Local SMSs.

Req 9 Audit for Support of MMS URI

NPAC SMS shall audit the MMS URI attribute as part of a full audit scope, only when a Service Provider’s LSMS supports MMS URI.

**Appendix B – Glossary**

URI – Uniform Resource Identifier

**Appendix E – Bulk Data Download File Examples.**

NOTE: If a Service Provider supports MMS URI, the format of the Bulk Data Download file will contain delimiters for the attribute.

| **Explanation of the fields in the subscription download file** | | |
| --- | --- | --- |
| **Field Number** | **Field Name** | **Value in Example** |
| 1 | Version Id | 0000000001 |
| [snip] |  |  |
| 999 | MMS URI | Not present if LSMS or SOA does not support the MMS URI as shown in this example. If it were present the value would be as defined in the SV Data Model. |
|  |  |  |

Table E- 1 -- Explanation of the Fields in The Subscription Download File

| **Explanation of the fields in the Block download file** | | |
| --- | --- | --- |
| **Field Number** | **Field Name** | **Value in Example** |
| 1 | Block Id | 1 |
| [snip] |  |  |
| 999 | MMS URI | Not present if LSMS or SOA does not support the MMS URI as shown in this example. If it were present the value would be as defined in the SV Data Model. |
|  |  |  |

Table E- 6 -- Explanation of the Fields in The Subscription Download File

# IIS

Addition to the current IIS flow descriptions that relate to SV and NPB attributes.

Flow B.4.4.1 – Number Pool Block Create/Activate by SOA

Flow B.4.4.2 – Number Pool Block Create by NPAC SMS

Flow B.4.4.12 – Number Pool Block Modify by NPAC SMS

Flow B.4.4.13 – Number Pool Block Modify by Block Holder SOA

If the “SOA Supports MMS URI Indicator” is set in the service provider’s profile on the NPAC SMS, the following attributes may optionally be included:

MMS URI

Flow B.5.1.2 – Subscription Version Create by the Initial SOA (New Service Provider)

Flow B.5.1.3 – Subscription Version Create by Second SOA (New Service Provider)

Flow B.5.1.11 – Subscription Version Create for Intra-Service Provider Port

[snip]

The following items may optionally be provided unless subscriptionPortingToOriginal-SP is true:

[snip]

MMS URI – if supported by the Service Provider SOA

Flow B.5.2.1 – Subscription Version Modify Active Version Using M-ACTION by a Service Provider SOA

Flow B.5.2.3 – Subscription Version Modify Prior to Activate Using M-ACTION

Flow B.5.2.4 – Subscription Version Modify Prior to Activate Using M-SET

[snip]

The current service provider can only modify the following attributes:

[snip]

MMS URI – if supported by the Service Provider SOA

Flow B.5.6 – Subscription Version Query

[snip]

The query return data includes:

[snip]

MMS URI – if supported by the Service Provider (SOA, LSMS)

**GDMO:**

No Change Required.

**ASN.1:**

No Change Required.

**XML:**

Note – the XML shown below is existing NANC 399 and new NANC 428.

<?xml version="1.0" encoding="UTF-8"?>

<xs:schema targetNamespace="urn:npac:lnp:opt-data:1.0" elementFormDefault="qualified" attributeFormDefault="unqualified" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns="urn:npac:lnp:opt-data:1.0">

<xs:simpleType name="SPID">

<xs:restriction base="xs:string">

<xs:length value="4"/>

</xs:restriction>

</xs:simpleType>

**<xs:simpleType name="Generic-URI">**

**<xs:restriction base="xs:string">**

**<xs:minLength value="1"/>**

**<xs:maxLength value="255"/>**

**</xs:restriction>**

**</xs:simpleType>**

<xs:complexType name="OptionalData">

<xs:sequence>

<xs:element name="ALTSPID" type="SPID" nillable="true" minOccurs="0"/>

**<xs:element name="MMSURI" type="Generic-URI" nillable="true" minOccurs="0"/>**

</xs:sequence>

</xs:complexType>

<xs:element name="OptionalData" type="OptionalData"/>

</xs:schema>