1, Introduction. Add text mentioning XML in addition to CMIP, and also the XML Interface Specification (XIS).

This introduction gives readers a brief overview of NPAC SMS functionality. It is intended to prepare you for the detailed sections that follow. If you need more information on any particular area, please consult the applicable detailed sections in the remainder of this document ~~or,~~ the *NPAC SMS Interoperable Interface Specification (IIS), or the NPAC SMS XML Interface Specification (XIS)*.

1.2.13, Recovery Functionality. Add text indicating that Recovery is N/A with the XML Interface (since messages are retried until successful).

The NPAC SMS provides a mechanism that allows a Service Provider to recover messages sent to either the SOA or LSMS, during a period of time that the Service Provider was not available to receive messages from the NPAC SMS. This CMIP Interface recovery mechanism (also referred to as resynchronization) is initiated when a Service Provider’s SOA or LSMS re-associates to the NPAC SMS, by setting the recovery mode indicator to TRUE on the Access Control structure, then requests the recovery of missed messages, by requesting the missed Network Data, Subscription Versions and/or Notifications. The XML Interface does not have a recovery mechanism as messages are retried until successful.

1.2.15, Time References in the NPAC SMS. Change reference from “CMIP interface messages” to “mechanized interface messages”.

**Universal Time Zone** – As a general rule, the NPAC SMS application runs on the universal time zone. The following items use UTC/GMT:

1. NPAC DB (all timestamp fields)
2. ~~CMIP~~mechanized interface messages (SOA and LSMS)

1.5, Assumptions. Update text or add new requirements similar to AR6-3 TN-to-Transaction Ration, and AR6-4 CMIP Transaction Definition.

AR6-3 TN-to-Transaction Ratio

There is one TN per ~~CMIP~~mechanized transaction as specified in R6-28.1, R6-28.2, R6-29.2, RR6-107, RR6-108, and RR6-109. (previously NANC 393, AR-New-1)

AR6-4 ~~CMIP~~Mechanized Transaction Definition

A ~~CMIP~~mechanized transaction is a request/notification and its corresponding response. (previously NANC 393, AR-New-2)

2, Business Process Flows. Update text in this chapter to match changes made to most recent FRS.

3, NPAC Data Administration (data model sections). Update text to indicate some attributes (e.g., NPAC Customer SOA/LSMS Linked Replies Indicator) apply only to the CMIP interface. Add data model section for XML Connection (similar to CMIP network address data model).

| **NPAC CUSTOMER DATA MODEL** | | | |
| --- | --- | --- | --- |
| [snip] |  |  |  | |
| NPAC Customer Allowable Functions | M | √ | Each bit in the mask represents a Boolean indicator for the following functional options:   1. SOA Management 2. SOA Network Data Management 3. SOA Data Download 4. LSMS Network Data Management 5. LSMS Data Download 6. LSMS Queries/Audits   (only applies to the CMIP interface, not the XML interface) | |
| [snip] |  |  |  | |
| NPAC Customer SOA Linked Replies Indicator | B | √ | A Boolean that indicates whether or not the NPAC Customer supports receiving Linked Reply recovery responses over the NPAC SMS to SOA interface (only applies to the CMIP interface, not the XML interface).  The default value is FALSE. | |
| NPAC Customer Local SMS Linked Replies Indicator | B | √ | A Boolean that indicates whether or not the NPAC Customer supports receiving Linked Reply recovery responses over the NPAC SMS to Local SMS interface (only applies to the CMIP interface, not the XML interface).  The default value is FALSE. | |
| Maximum TN Download in Recovery Request | N | √ | A Service Provider specific tunable indicating the maximum number of TNs that can be recovered in a single time-based, recovery request (only applies to the CMIP interface, not the XML interface).  Valid range is 1-10000.  The default value is 2000.  Refer to Appendix C System Tunables for information on the maximum for TN-based SV recovery requests. | |
| Service Provider SOA SWIM Recovery Indicator | B | √ | A Service Provider Boolean that indicates whether or not this Service Provider supports SWIM Recovery over their SOA to NPAC SMS interface (only applies to the CMIP interface, not the XML interface).  The default value is FALSE. | |
| Service Provider LSMS SWIM Recovery Indicator | B | √ | A Service Provider Boolean that indicates whether or not this Service Provider supports SWIM Recovery over their LSMS to NPAC SMS interface (only applies to the CMIP interface, not the XML interface).  The default value is FALSE. | |
| SOA Action Application Level Errors Indicator | B | √ | A Service Provider Boolean that defines whether the NPAC Customer supports Application Level Errors across the SOA Interface for M-ACTIONs (only applies to the CMIP interface, not the XML interface).  The default is FALSE. | |
| LSMS Action Application Level Errors Indicator | B | √ | A Service Provider Boolean that defines whether the NPAC Customer supports Application level Errors across the LSMS Interface for M-ACTIONs (only applies to the CMIP interface, not the XML interface).  The default is FALSE. | |
| SOA Non-Action Application Level Errors Indicator | B | √ | A Service Provider Boolean that defines whether the NPAC Customer supports Application Level Errors across the SOA Interface for all non-M-ACTIONs (only applies to the CMIP interface, not the XML interface). | |
| LSMS Non-Action Application Level Errors Indicator | B | √ | A Service Provider Boolean that defines whether the NPAC Customer supports Application Level Errors across the LSMS Interface for all non-M-ACTIONs (only applies to the CMIP interface, not the XML interface). | |
| SOA Notification Channel Service Provider Tunable | B | √ | A Service Provider Boolean that defines whether the NPAC Customer SOA supports a separate SOA association dedicated to notifications (only applies to the CMIP interface, not the XML interface).  The default is FALSE. | |
| Subscription Version TN Attribute Flag Indicator | B | √ | A Service Provider Boolean that defines whether the NPAC Customer supports receipt of the Subscription Version TN attribute in a Subscription Version Status Attribute Value Change or Subscription Version Attribute Value Change notification (only applies to the CMIP interface, not the XML interface).  The default is FALSE. | |
| Number Pool Block NPA-NXX-X Attribute Flag Indicator | B | √ | A Service Provider Boolean that defines whether the NPAC Customer supports receipt of the Number Pool Block NPA-NXX-X attribute in a Number Pool Block Status Attribute Value Change or Number Pool Block Attribute Value Change notification (only applies to the CMIP interface, not the XML interface).  The default is FALSE. | |
| Service Provider SOA SV Query Indicator | B | √ | A Service Provider Boolean that defines whether a SOA NPAC Customer supports enhanced Subscription Version query functionality over their SOA to NPAC SMS Interface (only applies to the CMIP interface, not the XML interface).  The default is FALSE. | |
| Service Provider LSMS SV Query Indicator | B | √ | A Service Provider Boolean that defines whether a LSMS NPAC Customer supports enhanced Subscription Version query functionality over their LSMS to NPAC SMS Interface (only applies to the CMIP interface, not the XML interface).  The default is FALSE. | |
| Service Provider SOA Supports NPA-NXX Modification Indicator | B | √ | A Boolean that indicates whether the NPAC Customer supports NPA-NXX Modification from the SOA to the NPAC SMS (only applies to the CMIP interface, not the XML interface).  The default value is False. | |
| Service Provider LSMS Supports NPA-NXX Modification Indicator | B | √ | A Boolean that indicates whether the NPAC Customer supports NPA-NXX Modification from the NPAC SMS to the LSMS (only applies to the CMIP interface, not the XML interface).  The default value is False. | |
| SOA XML Extended Errors Indicator | B | √ | A Service Provider Boolean that defines whether the NPAC Customer supports XML Extended Errors across the SOA Interface (only applies to the XML interface, not the CMIP interface).  The default is FALSE. | |
| LSMS XML Extended Errors Indicator | B | √ | A Service Provider Boolean that defines whether the NPAC Customer supports XML Extended Errors across the LSMS Interface (only applies to the XML interface, not the CMIP interface).  The default is FALSE. | |
| NPAC Customer SOA Last Activity Timestamp BDD Indicator | B | √ | A Boolean that indicates whether the NPAC Customer supports the Last Activity Timestamp in the SOA BDD.  The default value is False. | |
| NPAC Customer LSMS Last Activity Timestamp BDD Indicator | B | √ | A Boolean that indicates whether the NPAC Customer supports Last Activity Timestamp in the LSMS BDD.  The default value is False. | |
| [snip] |  |  |  | |

| **NPAC CUSTOMER CONTACT DATA MODEL** | | | |
| --- | --- | --- | --- |
| **Attribute Name** | **Type (Size)** | **Required** | **Description** | |
| NPAC Customer Contact ID | N | √ | A unique sequential number assigned upon creation of the Contact record. | |
| [snip] |  |  |  | |
| Contact Address Line 1 | C (40) | √ | Contact Organization address Line 1. | |
| Contact Address Line 2 | C (40) | ~~√C~~ | Contact Organization address Line 2. Conditional – required in CMIP, optional in XML. | |
| Contact City | C (20) | √ | Contact Organization city. | |
| [snip] |  |  |  | |

| **npac customer Network Address DATA MODEL** | | | |
| --- | --- | --- | --- |
| **Attribute Name** | **Type (Size)** | **Required** | **Description** | |
| [snip] |  |  |  | |
| XML Connection Address – Self Host | C (255) |  | NPAC Primary, IP address for incoming connection from Service Provider. | |
| XML Connection Address – Self Port | N (12) |  | NPAC Primary, TCP port for incoming connection from Service Provider. | |
| XML Connection Address – Self Backup Host | C (255) |  | NPAC Backup, IP address for incoming connection from Service Provider. | |
| XML Connection Address – Self Backup Port | N (12) |  | NPAC Backup, TCP port for incoming connection from Service Provider. | |
| XML Connection Address – Peer Host | C (255) |  | Service Provider Primary, IP address for incoming connection from NPAC. | |
| XML Connection Address – Peer Port | N (12) |  | Service Provider Primary, TCP port for incoming connection from NPAC. | |
| XML Connection Address – Peer Host Backup | C (255) |  | Service Provider Backup, IP address for incoming connection from NPAC. | |
| XML Connection Address – Peer Port Backup | N (12) |  | Service Provider Backup, TCP port for incoming connection from NPAC. | |
| [snip] |  |  |  | |

| **npac customer Request-Delegate DATA MODEL** | | | |
| --- | --- | --- | --- |
| **Attribute Name** | **Type (Size)** | **Required** | **Description** |
| Request NPAC Customer ID | C (4) | √ | An alphanumeric code which uniquely identifies an NPAC Customer that will act as a request SPID |
| Delegate NPAC Customer ID | C (4) | √ | An alphanumeric code that uniquely identifies an NPAC Customer that will act as a delegate SPID associated with a request SPID. |

| **SubscriPTION VERSION Data MODEL** | | | |
| --- | --- | --- | --- |
| **Attribute Name** | **Type (Size)** | **Required** | **Description** | |
| [snip] |  |  |  | |
| CLASS DPC | N (9) | C | DPC for 10-digit GTT for CLASS features. (required for CMIP, optional for the XML interface) | |
| CLASS SSN | N (3) | C | CLASS SSN for the Subscription Version. (required for CMIP, optional for the XML interface) | |
| LIDB DPC | N (9) | C | DPC for 10-digit GTT for LIDB features. (required for CMIP, optional for the XML interface) | |
| LIDB SSN | N (3) | C | LIDB SSN for the Subscription Version. (required for CMIP, optional for the XML interface) | |
| CNAM DPC | N (9) | C | DPC for 10-digit GTT for CNAM features. (required for CMIP, optional for the XML interface) | |
| CNAM SSN | N (3) | C | CNAM SSN for the Subscription Version. (required for CMIP, optional for the XML interface) | |
| ISVM DPC | N (9) | C | DPC for 10-digit GTT for ISVM features. (required for CMIP, optional for the XML interface) | |
| ISVM SSN | N (3) | C | ISVM SSN for the Subscription Version. (required for CMIP, optional for the XML interface) | |
| WSMSC DPC | N (9) | C | DPC for 10-digit GTT for WSMSC features. This field is only required if the service provider supports WSMSC data. (required for CMIP, optional for the XML interface) | |
| WSMSC SSN | N (3) | C | WSMSC SSN for the Subscription Version. This field is only required if the service provider supports WSMSC data. (required for CMIP, optional for the XML interface) | |
| [snip] |  |  |  | |

| **Number pool block holder information Data MODEL** | | | |
| --- | --- | --- | --- |
| **Attribute Name** | **Type (Size)** | **Required** | **Description** | |
| [snip] |  |  |  | |
| CLASS DPC | N (9) | C | DPC for 10-digit GTT for CLASS features. (required for CMIP, optional for the XML interface) | |
| CLASS SSN | N (3) | C | CLASS SSN for the Subscription Version. (required for CMIP, optional for the XML interface) | |
| LIDB DPC | N (9) | C | DPC for 10-digit GTT for LIDB features. (required for CMIP, optional for the XML interface) | |
| LIDB SSN | N (3) | C | LIDB SSN for the Subscription Version. (required for CMIP, optional for the XML interface) | |
| CNAM DPC | N (9) | C | DPC for 10-digit GTT for CNAM features. (required for CMIP, optional for the XML interface) | |
| CNAM SSN | N (3) | C | CNAM SSN for the Subscription Version. (required for CMIP, optional for the XML interface) | |
| ISVM DPC | N (9) | C | DPC for 10-digit GTT for ISVM features. (required for CMIP, optional for the XML interface) | |
| ISVM SSN | N (3) | C | ISVM SSN for the Subscription Version. (required for CMIP, optional for the XML interface) | |
| WSMSC DPC | N (9) | C | DPC for 10-digit GTT for WSMSC features. This field is only required if the service provider supports WSMSC data. (required for CMIP, optional for the XML interface) | |
| WSMSC SSN | N (3) | C | WSMSC SSN for the Subscription Version. This field is only required if the service provider supports WSMSC data. (required for CMIP, optional for the XML interface) | |
| [snip] |  |  |  | |

The following will be added to the Data Model for: NPAC Customer, NPA-NXX, LRN, NPA-NXX-X, and Number Pool Block.

|  |  |  |  |
| --- | --- | --- | --- |
| Origination Timestamp | T |  | A timestamp when a request or reply is created (as distinguished from delivery). Each request or reply sent over the XML interface must have an Origination Timestamp regardless of the system that originates the message.  This timestamp should contain milliseconds accuracy. |
| Activity Timestamp | T |  | A timestamp the NPAC maintains on each object in the database to retain the “Origination Timestamp” for the last update made to a record. The local system should also maintain this timestamp to capture the “Origination Timestamp” for the last update made for data received from the NPAC. This timestamp should contain milliseconds accuracy. |

The following will be added to the Data Model for: Subscription Version.

|  |  |  |  |
| --- | --- | --- | --- |
| New Service Provider Origination Timestamp | T |  | A timestamp when a request or reply (from the New Service Provider) is created (as distinguished from delivery). Each request or reply sent over the XML interface must have an Origination Timestamp regardless of the system that originates the message. This timestamp should contain milliseconds accuracy. |
| Old Service Provider Origination Timestamp | T |  | A timestamp when a request or reply (from the Old Service Provider) is created (as distinguished from delivery). Each request or reply sent over the XML interface must have an Origination Timestamp regardless of the system that originates the message. This timestamp should contain milliseconds accuracy. |
| Activity Timestamp | T |  | A timestamp the NPAC maintains on each object in the database to retain the “Origination Timestamp” for the last update made to a record. The local system should also maintain this timestamp to capture the “Origination Timestamp” for the last update made for data received from the NPAC. This timestamp should contain milliseconds accuracy. |

3, NPAC Data Administration (requirements).

3.2, NPAC Personnel Functionality. Change requirement (RR3-570) that list “CMIP interface” to “mechanized interface”.

RR3-570 SPID Migration Update – GUI Entry by Service Provider and NPAC Personnel – Required Fields

NPAC SMS shall require the originator of a SPID Migration to enter the following fields: (previously NANC 408, Req X10)

* From SPID
* To SPID
* Scheduled Date
* Contact Information
* NPA-NXX ownership effective date (if NPA-NXX is included in the Migration)
* at least one of the following three: NPA-NXX, LRN, and/or NPA-NXX-X
* Pseudo-LRN SV/NPB migration indicator (if any exist, YES/NO).

Note: A Migration request that includes only NPA-NXXs is considered an “online” migration that will be sent over the ~~CMIP~~mechanized interface to Service Providers that support the functionality (SMURF data will be used by Service Providers that do not support the functionality). If migration data includes at least one NPA-NXX-X or LRN, it is considered “offline” and all Service Providers will use SMURF data. A migration request that includes only NPA-NXXs is considered “offline” if pseudo-LRN SVs/NPBs exist within at least one of those NPA-NXXs.

Note: The pseudo-LRN migration indicator field is used for information purposes to NPAC Personnel to determine appropriate M&Ps. If any pseudo-LRN SVs/NPBs exist at the time of migration, they will get migrated per requirements RR3-709 and RR3-710.

3.4, Additional Requirements. Add text indicating LSMS NPA-NXX management is not supported in the XML interface.

RX3-1.1.1 Service Provider NPA-NXX Data Addition

NPAC SMS shall allow Service Providers to add their NPA-NXX data via the NPAC SMS to Local SMS interface or the SOA to NPAC SMS interface. (NPA-NXX management from the LSMS only applies to the CMIP interface, not the XML interface)

RX3-1.1.2 Service Provider NPA-NXX Data Effective Date Validation

NPAC SMS shall allow Service Providers to add their NPA-NXX data with an effective date that is set to a past, present, or future date. (NPA-NXX management from the LSMS only applies to the CMIP interface, not the XML interface)

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 NPA-NXX-X or Number Pooling Block Information. (NPA-NXX management from the LSMS only applies to the CMIP interface, not the XML interface)

RX3-1.2 Service Provider LRN Data Addition

NPAC SMS shall allow Service Providers to add their LRN data via the NPAC SMS to Local SMS interface or the SOA to NPAC SMS interface. (LRN management from the LSMS only applies to the CMIP interface, not the XML interface)

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, orNumber Pooling Block Information. (LRN management from the LSMS only applies to the CMIP interface, not the XML interface)

3.4.2, NPA-NXX Modification. Add text indicating NPA-NXX modification is required in the XML interface.

RR3-665 Service Provider SOA NPA-NXX Modification Flag Indicator

NPAC SMS shall provide a Service Provider SOA NPA-NXX Modification Flag Indicator tunable parameter which defines whether a SOA supports NPA-NXX Modification. (previously NANC 355, Req 8)

NOTE: The tunable parameter is used for both modification transactions sent over the interface as well as modifications messages in the BDD File. If the tunable parameter is set to TRUE, then the download reason in the BDD File will be set to modified. Otherwise, it will be set to new. In the XML Interface, modification must be supported by the Service Provider (interface and BDD File).

RR3-668 Service Provider LSMS NPA-NXX Modification Flag Indicator

NPAC SMS shall provide a Service Provider LSMS NPA-NXX Modification Flag Indicator tunable parameter which defines whether an LSMS supports NPA-NXX Modification. (previously NANC 355, Req 11)

NOTE: The tunable parameter is used for both modification transactions sent over the interface as well as modifications messages in the BDD File. If the tunable parameter is set to TRUE, then the download reason in the BDD File will be set to modified. Otherwise, it will be set to new. In the XML Interface, modification must be supported by the Service Provider (interface and BDD File).

3.6, NPA-NXX Filter Management. Add general requirement indicating this section is not supported in the XML interface.

3.6 NPA-NXX Filter Management Requirements – This section (filters in the NPAC) still applies for a local system that uses the XML interface, but the management of filters (e.g., SOA Creates a Filtered NPA-NXX) does not apply to the local system that uses the XML interface.

Req 1 NPA-NXX Level Filters – Local System Management – CMIP Interface Only

NPAC SMS shall support NPA-NXX Level Filter Management (Create, Delete, Query) from the SOA and the Local SMS in the CMIP Interface.

3.8.4, TN and Number Pool Block in Notifications. Add general requirement indicating this section is not supported in the XML interface.

3.8.4, TN and Number Pool Block in Notifications – This section defines tunable parameters and system functionality for including certain attributes in notifications. This functionality does not apply to the local system that uses the XML interface (i.e. the TN and Number Pool Block will always be included in the notification over the XML interface).

Req 2 TN and Number Pool Block in Notifications – CMIP Interface Only

NPAC SMS shall support TN and Number Pool Block in Notifications tunable parameters in the CMIP Interface.

3.10, Multiple Service Provider Ids Per SOA Association Requirements. Add text indicating this section applies to both the CMIP interface and the XML interface, but update text that lists CMIP terms or functionality (association, CMIP keys, recovery) and make more general (or list corresponding XML terms, or note that it does not apply [e.g., recovery] ).

3.13 Block Holder

RR3-160 Modification of Number Pooling Block Holder Information – Selection Criteria

NPAC SMS shall allow a Service Provider via the SOA to NPAC SMS Interface, to modify Block data by specifying either Block ID (in CMIP or XML), or NPA-NXX-X value and status (in CMIP), or NPA-NXX-X value (in XML), in the request. (Previously B-332)

3.14, Linked Replies. Add text indicating this section is not support in the XML interface.

3.14 Linked Action Replies

The following section defines tunable parameters that enable Linked Action Replies to be sent to Service Provider systems that support this functionality, during recovery. The actual Linked Reply functionality is discussed specifically within the Recovery section of this document. This section is a CMIP interface specific concept and does not apply to the XML interface.

Req 3 Linked Replies – CMIP Interface Only

NPAC SMS shall support Linked Replies in the CMIP Interface.

4, Service Provider Data Administration. R4-2, Modify Service Providers, and R4-8, Service Provider Data Elements, update requirement for XML interface, including items for XML interface connections.

R4‑2 Modify Service Providers

NPAC SMS shall allow modification of Service Provider data via the NPAC SMS to Local SMS interface or the SOA to NPAC SMS interface. Service Providers can only modify their own data. (Service Provider management from the SOA and LSMS only applies to the CMIP interface, not the XML interface)

R4-5.2 Authorized Service Providers View ~~Their Own~~ Service Provider Data – CMIP Interface

NPAC SMS shall allow authorized Service Provider personnel to view their own Service Provider data via the CMIP Interface for the SOA to NPAC SMS interface, the NPAC SMS to Local SMS interface, and the NPAC SOA Low-tech Interface.

Note: Service Provider personnel are restricted from viewing other Service Provider’s data via the CMIP Interface for the SOA to NPAC SMS interface, the NPAC SMS to Local SMS interface, and the NPAC SOA Low-tech Interface.

Req 4 Authorized Service Providers View Service Provider Data – XML Interface

NPAC SMS shall allow authorized Service Provider personnel to view their own Service Provider data (long-form version) and view other Service Provider data (short-form version) via the XML Interface for the SOA to NPAC SMS interface, and the NPAC SMS to Local SMS interface.

R4‑8 Service Provider Data Elements

NPAC SMS shall require the following data if there is no existing Service Provider data: (reference NANC 399)

1. Service Provider name, address, phone number, and contact organization.
2. NPAC customer type.
3. Service Provider allowable functions.
4. Service Provider Network Address of NPAC SMS to Local SMS interface (only applies to the CMIP interface, not the XML interface).
5. Service Provider Network Address of SOA to NPAC SMS interface (only applies to the CMIP interface, not the XML interface).
6. [snip]
7. Service Provider SOA SWIM Recovery Indicator (only applies to the CMIP interface, not the XML interface)
8. Service Provider LSMS SWIM Recovery Indicator (only applies to the CMIP interface, not the XML interface)
9. [snip]
10. SOA Action Application Level Errors Indicator (only applies to the CMIP interface, not the XML interface)
11. LSMS Action Application Level Errors Indicator (only applies to the CMIP interface, not the XML interface)
12. SOA Non-Action Application Level Errors Indicator (only applies to the CMIP interface, not the XML interface)
13. LSMS Non-Action Application Level Errors Indicator (only applies to the CMIP interface, not the XML interface)
14. SOA Notification Channel Service Provider Tunable (only applies to the CMIP interface, not the XML interface)
15. Subscription Version TN Attribute Flag Indicator (only applies to the CMIP interface, not the XML interface)
16. Number Pool Block NPA-NXX-X Attribute Flag Indicator (only applies to the CMIP interface, not the XML interface)
17. [snip]
18. Service Provider SOA SV Query Indicator (only applies to the CMIP interface, not the XML interface)
19. Service Provider LSMS SV Query Indicator (only applies to the CMIP interface, not the XML interface)
20. [snip]
21. Service Provider Network Address of NPAC SMS to Local SMS interface (only applies to the CMIP interface, not the XML interface).
22. Service Provider Network Address of SOA to NPAC SMS interface (only applies to the CMIP interface, not the XML interface).
23. Service Provider XML Connection Address-Primary of NPAC SMS to Local SMS interface (only applies to the XML interface, not the CMIP interface).
24. Service Provider XML Connection Address-Primary of SOA to NPAC SMS interface (only applies to the XML interface, not the CMIP interface).
25. Service Provider XML Connection Address-Secondary of NPAC SMS to Local SMS interface (only applies to the XML interface, not the CMIP interface).
26. Service Provider XML Connection Address-Secondary of SOA to NPAC SMS interface (only applies to the XML interface, not the CMIP interface).
27. SOA XML Extended Errors Indicator (only applies to the XML interface, not the CMIP interface).
28. LSMS XML Extended Errors Indicator (only applies to the XML interface, not the CMIP interface).

R4‑15.1 Modify restrictions on Service Provider data - Service Providers

NPAC SMS shall allow Service Provider data to be modified or added to the Service Provider data with the exception of the data listed in Table 3‑2 NPAC Customer Data Model and the XML Connection Address information in .

4.2, Additional Requirements. Add text indicating LSMS LRN and NPA-NXX management is not supported in the XML interface.

RN4-1 Service Provider Network Data Addition/Deletion

NPAC SMS shall allow Service Providers to add/delete the NPA-NXX and/or LRN data via the NPAC SMS to Local SMS interface and SOA to NPAC SMS interface provided the changes do not cause mass updates to the Subscription Versions. (LRN and NPA-NXX management from the LSMS only applies to the CMIP interface, not the XML interface)

5, Subscription Management. Section 5.1.1, Subscription Version Management, add requirement for XML interface.

Req 5 Subscription Version Optional Data in XML Interface

NPAC SMS shall support subscription version optional data described in the native XML schema document.

R5‑15.1 Create “Inter-Service Provider Port” Subscription Version - New Service Provider Input Data

NPAC SMS shall require the following data from NPAC personnel or the new Service Provider upon Subscription Version creation for an Inter-Service Provider port when **NOT** “porting to original”: (reference NANC 399)

1. Local Number Portability Type ‑ Port Type. This field must be set to “LSPP” for Inter-Service Provider ports.
2. Ported Telephone Number(s) ‑ this entry can be a single TN or a continuous range of TNs that identifies a subscription or a group of Subscription Versions that share the same attributes.
3. Due Date ‑ date on which transfer of service from old facilities‑based Service Provider to new facilities‑based Service Provider is initially planned to occur.
4. New Facilities‑based Service Provider ID ‑ the identifier of the new facilities‑based Service Provider.
5. Old Facilities‑based Service Provider ID ‑ the identifier of the old facilities‑based Service Provider.
6. Location Routing Number (LRN) ‑ the identifier of the ported‑to switch (excluding pseudo-LRN).
7. Class DPC (optional for the XML interface)
8. Class SSN (optional for the XML interface)
9. LIDB DPC (optional for the XML interface)
10. LIDB SSN (optional for the XML interface)
11. CNAM DPC (optional for the XML interface)
12. CNAM SSN (optional for the XML interface)
13. ISVM DPC (optional for the XML interface)
14. ISVM SSN (optional for the XML interface)
15. WSMSC DPC (if supported by the Service Provider SOA), (optional for the XML interface)
16. WSMSC SSN (if supported by the Service Provider SOA), (optional for the XML interface)
17. Porting to Original - flag indicating whether or not this is a “porting to original” port. This flag must be set to “FALSE” for this type of Inter-Service Provider port.
18. SV Type (if supported by the Service Provider SOA)
19. New SP Medium Timer Indicator – indication that New SP considers this a simple port using Medium Timers. (if supported by the Service Provider SOA)

RR5-4 Create “Intra-Service Provider Port” Subscription Version - Current Service Provider Input Data

NPAC SMS shall require the following data from the NPAC personnel or the Current (New) Service Provider at the time of Subscription Version Creation for an Intra-Service Provider port when **NOT** porting to original:

1. LNP Type - port type This field must be set to “LISP for Intra-Service Provider support”.
2. Ported Telephone Number(s) - this entry can be a single TN or a continuous range of TNs that identifies a subscription or group of Subscription Versions that share the same attributes.
3. Due Date - date on which Intra-Service Provider port is planned to occur.
4. New facilities-based Service Provider ID - current Service Provider within which the Intra-Service Provider port will occur.
5. Old facilities-based Service Provider ID - current Service Provider within which the Intra-Service Provider port will occur.
6. Location Routing Number (LRN) - identifier of the ported-to switch
7. Class DPC (optional for the XML interface)
8. Class SSN (optional for the XML interface)
9. LIDB DPC (optional for the XML interface)
10. LIDB SSN (optional for the XML interface)
11. CNAM DPC (optional for the XML interface)
12. CNAM SSN (optional for the XML interface)
13. ISVM DPC (optional for the XML interface)
14. ISVM SSN (optional for the XML interface)
15. WSMSC DPC (if supported by the Service Provider SOA), (optional for the XML interface)
16. WSMSC SSN (if supported by the Service Provider SOA), (optional for the XML interface)
17. Porting to Original – flag indicating whether or not this is a ‘porting-to-original” port. This flag must be set to “FALSE” for this type of Intra-Service Provider port.
18. SV Type (if supported by the Service Provider SOA)

5.1.2.2.6, Subscription Version Cancellation. Add text indicating the different cancel messages between CMIP and XML.

5.1.2.2.6, Subscription Version Cancellation. This section provides the requirements for the Subscription Version Cancellation functionality (including “un-do” of a ‘cancel-pending’ Subscription Version), which is executed upon the NPAC personnel or SOA to NPAC SMS interface user requesting to cancel a Subscription Version. The CMIP Interface uses both a Cancel Request message and a Cancel Acknowledgement message. The XML Interface uses the Cancel Request message for both requests and acknowledgements.

R5‑70 Cancel Subscription Version - Invalid Status Notification

~~NPAC SMS shall send an appropriate error message to the originating user if the status is not pending, cancel-pending, conflict, or disconnect pending.~~

NPAC SMS shall accept a cancel request for a Subscription Version for the following statuses, and will return an appropriate error message to the originating user for any status not listed below:

* Pending (CMIP and XML)
* Conflict (CMIP and XML)
* Disconnect-Pending (CMIP and XML)
* Cancel-Pending (XML only)

RR5-144 Un-Do a Cancel-Pending Subscription Version – Request Data

NPAC SMS shall receive the following data from the Old or New Service Provider to identify a Subscription Version to have a cancel request retracted:

* Ported TN (or a specified range of numbers)
* Subscription Version ID
* Version Status (if TN or TN range is specified, must be cancel-pending)
* New Version Status (can be only pending, in order for it to be returned to a pending-like status) (only applies to the CMIP interface, not the XML interface)

(previously NANC 388, Req 2)

R5-74.3 Query Subscription Version - Output Data - SOA

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: (reference NANC 399)

1. Subscription Version ID
2. Subscription Version Status
3. Local Number Portability Type
4. Ported Telephone Number
5. Old facilities‑based Service Provider Due Date
6. New facilities‑based Service Provider Due Date
7. New facilities‑based Service Provider ID
8. Old facilities‑based Service Provider ID
9. Authorization from old facilities‑based Service Provider
10. Status Change Cause Code
11. Location Routing Number (LRN)
12. Class DPC
13. Class SSN
14. LIDB DPC
15. LIDB SSN
16. CNAM DPC
17. CNAM SSN
18. ISVM DPC
19. ISVM SSN
20. WSMSC DPC (for SOAs that support WSMSC data)
21. WSMSC SSN (for SOAs that support WSMSC data)
22. Billing Service Provider ID
23. End‑User Location Value
24. End User Location Type
25. Customer Disconnect Date
26. Effective Release Date
27. Disconnect Complete Time Stamp
28. Conflict Time Stamp
29. Broadcast Time Stamp
30. Activation Time Stamp
31. Cancellation Time Stamp (Status Modified to Canceled Time Stamp)
32. New Service Provider Creation Time Stamp
33. Old Service Provider Authorization Time Stamp
34. Pre-cancellation Status
35. Old Service Provider Cancellation Time Stamp
36. New Service Provider Cancellation Time Stamp
37. Old Time Stamp (Status Modified to Old Time Stamp)
38. New Service Provider Conflict Resolution Time Stamp
39. Old Service Provider Conflict Resolution Time Stamp
40. Create Time Stamp
41. Modified Time Stamp
42. Porting to Original
43. Download Reason
44. Timer Type (for SOAs that support Timer Type)
45. Business Hours Type (for SOAs that support Business Hours)
46. List of all Local SMSs that failed activation, modification, or disconnect.
47. SV Type (if supported by the Service Provider SOA)
48. Alternative SPID (if supported by the Service Provider SOA)
49. Last Alternative SPID (if supported by the Service Provider SOA)
50. Alt-End User Location Value (if supported by the Service Provider SOA)
51. Alt-End User Location Type (if supported by the Service Provider SOA)
52. Alt-Billing ID (if supported by the Service Provider SOA)
53. Voice URI (if supported by the Service Provider SOA)
54. MMS URI (if supported by the Service Provider SOA)
55. SMS URI (if supported by the Service Provider SOA)
56. New SP Medium Timer Indicator (if supported by the Service Provider SOA)
57. Old SP Medium Timer Indicator (if supported by the Service Provider SOA)
58. Activity Time Stamp

Note: If the New SP Medium Timer Indicator value or Old SP Medium Timer Indicator value is not set on the Subscription Version, then it will not be returned in the query response.

R5-74.4 Query Subscription Version - Output Data - LSMS

NPAC SMS shall return the following output data for a Subscription Version query request initiated over the NPAC SMS to Local SMS interface: (reference NANC 399)

1. Subscription Version ID
2. Subscription Version Status
3. Local Number Portability Type
4. Ported Telephone Number
5. Old facilities‑based Service Provider Due Date
6. New facilities‑based Service Provider Due Date
7. New facilities‑based Service Provider ID
8. Old facilities‑based Service Provider ID
9. Authorization from old facilities‑based Service Provider
10. Status Change Cause Code
11. Location Routing Number (LRN)
12. New facilities-based Service Provider ID
13. Activation Time Stamp
14. Customer Disconnect Date
15. Class DPC
16. Class SSN
17. LIDB DPC
18. LIDB SSN
19. CNAM DPC
20. CNAM SSN
21. ISVM DPC
22. ISVM SSN
23. WSMSC DPC (for Local SMSs that support WSMSC data)
24. WSMSC SSN (for Local SMSs that support WSMSC data)
25. Billing Service Provider ID
26. End-User Location Value
27. End-User Location Type
28. Customer Disconnect Date
29. Effective Release Date
30. Disconnect Complete Time Stamp
31. Conflict Time Stamp
32. Broadcast Time Stamp
33. Activation Time Stamp
34. Cancellation Time Stamp (Status Modified to Canceled Time Stamp)
35. New Service Provider Creation Time Stamp
36. Old Service Provider Authorization Time Stamp
37. Pre-cancellation Status
38. Old Service Provider Cancellation Time Stamp
39. New Service Provider Cancellation Time Stamp
40. Old Time Stamp (Status Modified to Old Time Stamp)
41. New Service Provider Conflict Resolution Time Stamp
42. Old Service Provider Conflict Resolution Time Stamp
43. Create Time Stamp
44. Modified Time Stamp
45. Porting To Original
46. Billing Service Provider ID
47. Local Number Portability Type
48. Download Reason
49. List of all Local SMSs that failed activation, modification, or disconnect.
50. SV Type (if supported by the Service Provider LSMS)
51. Alternative SPID (if supported by the Service Provider LSMS)
52. Last Alternative SPID (if supported by the Service Provider LSMS)
53. Alt-End User Location Value (if supported by the Service Provider LSMS)
54. Alt-End User Location Type (if supported by the Service Provider LSMS)
55. Alt-Billing ID (if supported by the Service Provider LSMS)
56. Voice URI (if supported by the Service Provider LSMS)
57. MMS URI (if supported by the Service Provider LSMS)
58. SMS URI (if supported by the Service Provider LSMS)
59. New SP Medium Timer Indicator (if supported by the Service Provider SOA)
60. Old SP Medium Timer Indicator (if supported by the Service Provider SOA)
61. Activity Time Stamp

RR5-156 Service Provider SOA SV Query Indicator

NPAC SMS shall provide a Service Provider SOA SV Query Indicator tunable parameter which defines whether a SOA supports enhanced SV Query functionality over the SOA-to-NPAC SMS Interface. (previously NANC 285, Req 7)

Note: For Service Providers that do NOT support enhanced SOA SV Query functionality, the NPAC will continue to send a complexityLimitation error message, when the number of SVs in a response exceed the Maximum Subscription Query tunable value. This parameter only applies to the CMIP Interface.

RR5-159 Service Provider LSMS SV Query Indicator

NPAC SMS shall provide a Service Provider LSMS SV Query Indicator tunable parameter which defines whether a LSMS supports enhanced SV Query functionality over the NPAC SMS-to-Local SMS Interface. (NANC 285, Req 10)

Note: For Service Providers that do NOT support enhanced LSMS SV Query functionality, the NPAC will continue to send a complexityLimitation error message, when the number of SVs in a response exceed the Maximum Subscription Query tunable value. This parameter only applies to the CMIP Interface.

6, NPAC SMS Interfaces. Add text after the intro paragraph indicating that the XML Interface was defined under NANC Change Order 372.

Two CMIP-based, mechanized interfaces to the NPAC SMS were defined in the Illinois NPAC RSMS RFP. One interface supports the Service Provider’s Service Order Administration (SOA) systems. This interface is referred to as the SOA to NPAC SMS interface. The second interface supports the Service Provider’s Local Service Management System (LSMS). This interface is referred to as the NPAC SMS to LSMS interface. Both of the interfaces support two-way communications. In addition to the CMIP interface, an XML interface (allowing connection to both SOA and LSMS) was defined under NANC Change Order 372.

6.3, Interface Transactions. Add text for XML interface.

The CMIP protocol provides for six types of transactions over the interface (Reference: ISO 9595 and 9596). They are:

1. Create
2. Delete
3. Set
4. Get
5. M-Action
6. Event Report

R6-22 Manager-agent relationship of CMIP interface transactions

NPAC SMS ~~Interoperable~~ CMIP Interface shall be designed in terms of CMIP transactions in a manager-agent relationship.

The XML protocol uses an HTTPS POST operation for origination of all messages and an HTTPS response for the synchronous acknowledgement over the XML interface.

Req 6 Client-Server relationship of XML interface transactions

NPAC SMS XML Interface shall be designed in terms of XML interface transactions in a client-server relationship.

6.4, Interface and Protocol Requirements.

While it is expected that dedicated links will be used for the interfaces, switched connections should also be supported. Reliability and availability of the links will be essential and high capacity performance will be needed.

R6-23 Open interfaces

The SOA to NPAC SMS Interface and the NPAC SMS to Local SMS Interface shall be open, non-proprietary interfaces and will not become the property of any entity.

Note: This requirement applies to both the CMIP interface and the XML interface.

6.4.1, Protocol Requirements. Add text indicating that R6-24 is CMIP specific. Add a new requirement for the XML interface.

R6-24 CMIP Interface protocol stack

Both of the NPAC SMS CMIP interfaces, as defined above, shall be implemented via the following protocol stack:

| **Interface Protocol Stack** | |
| --- | --- |
| Application | CMISE, ACSE, ROSE |
| Presentation | ANSI T1.224 |
| Session: | ANSI T1.224 |
| Transport: | TCP, RFC1006 |
| Network: | IP |
| Link | PPP, MAC, Frame Relay, ATM (IEEE 802.3) |
| Physical | DS1, DS-0 x n , V.34 |

Table 6‑1 CMIP Interface Protocol Stack

R6-25 Multiple application associations

NPAC SMS shall support multiple application associations per Service Provider.

Req 7 XML Interface protocol

NPAC SMS shall use HTTPS 1.1 as the supported protocol to define XML interfaces, for the SOA to NPAC SMS interface and the Local SMS to NPAC SMS interface, using state-less and session-less connections.

Note: HTTPS 1.0 message will NOT be supported.

6.4.2, Interface Performance Requirements. Current requirements indicate “CMIP transactions per second.” Change to “CMIP ./ XML”.

R6-28.1 SOA to NPAC SMS interface transaction rates - sustained

A transaction rate of 7.0 CMIP / XML transactions (sustained) per second shall be supported by each SOA to NPAC SMS interface association.

R6-28.2 SOA to NPAC SMS interface transaction rates - peak

NPAC SMS shall support a rate of 10.0 CMIP / XML transactions per second (peak for a five minute period, within any 60 minute window) over a single SOA to NPAC SMS interface association.

RR6-107 SOA to NPAC SMS interface transaction rates – total bandwidth

NPAC SMS shall support a total bandwidth of 70.0 SOA CMIP / XML transactions per second (sustained) for a single NPAC SMS region. (previously NANC 393, NewReq 1)

RR6-108 NPAC SMS to Local SMS interface transaction rates – sustained

NPAC SMS shall support a rate of 7.0 CMIP / XML transactions per second (sustained) over each NPAC SMS to Local SMS interface association. (previously NANC 393, NewReq 2)

RR6-109 NPAC SMS to Local SMS interface transaction rates – total bandwidth

NPAC SMS shall support a total bandwidth of 210 Local SMS CMIP/ XML transactions per second (sustained) for a single NPAC SMS region. (previously NANC 393, NewReq 3)

6.4.3, Interface Specification Requirements. Add text indicating that R6-30.1 and R6-30.2 are CMIP specific. Add new requirements for the XML interface.

R6-30.1 CMIP Interface specification

The interoperable interface model defining both the NPAC to Local SMS and the SOA to NPAC SMS shall be specified in terms of ISO 10165-4, "Guideline for the Definition of Managed Objects (GDMO)”.

Note: This requirement is specific to the CMIP interface.

R6-30.2 CMIP Interface specification identification

The interface specification shall be referred to as the “NPAC SMS Interoperable Interface Specification” (NPAC SMS IIS).

Req 8 XML Interface specification identification

The interface specification shall be referred to as the “NPAC SMS XML Interface Specification” (NPAC SMS XIS).

R6-35 NPAC SMS Interoperable Interface Specification and XML Interface Specification extensibility

The interfaces specified shall be capable of extension to account for evolution of the interface requirements.

6.4.5, Application Level Errors. Add text indicating the SP that uses the XML interface may support application level errors (recommended, but optional like it is in CMIP).

Detailed error message functionality has been in the NPAC since the beginning, and was used for NPAC and GUI detailed error messaging. In NPAC Release 3.3, change order Illinois 130 was added that provided optional functionality for detailed error message codes (referred to as “Application Level Errors”) to be transmitted across the CMIP Interface to both SOA and LSMS. With the introduction of the XML Interface, most detailed error codes are used for both the CMIP Interface and the XML Interface (e.g., 7019, A subscription version must be in a pending state to be activated). Some detailed error codes are used only for the CMIP Interface (e.g., 7088, Active subscription versions cannot be modified via CMIP set), and some detailed error codes are used only for the XML Interface. It is not necessary for a SOA or LSMS to support Illinois 130 functionality in order to receive detailed error codes over the XML Interface as separate Service Provider tunables are used for the CMIP Interface versus the XML Interface. The detailed error message codes in the XML Interface are referred to as “Extended Errors”.

Note: For Service Providers that support the XML interface, detailed error codes are recommended to be supported over that interface (but not required).

RR6-110 NPAC SMS CMIP Application Level Errors

NPAC SMS shall provide application level errors in the CMIP messaging in the SOA to NPAC SMS Interface and NPAC SMS to Local SMS Interface for those Service Providers that support this functionality. (previously ILL 130, Req 1)

Req 9 NPAC SMS XML Extended Errors

NPAC SMS shall provide extended errors in the XML messaging in the SOA to NPAC SMS Interface and NPAC SMS to Local SMS Interface for those Service Providers that support this functionality.

Req 10 SOA XML Extended Errors Indicator

NPAC SMS shall provide SOA XML Extended Errors Indicator tunable parameter, which defines whether a Service Provider supports Extended Error Codes across the SOA Interface for XML messages.

Req 11 SOA XML Extended Errors Indicator Default

NPAC SMS shall default the Service Provider SOA XML Extended Errors Indicator tunable parameter to FALSE.

Req 12 SOA XML Extended Errors Indicator Modification

NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to modify the Service Provider SOA XML Extended Errors Indicator tunable parameter.

Req 13 LSMS XML Extended Errors Indicator

NPAC SMS shall provide an LSMS XML Extended Errors Indicator tunable parameter which defines whether a Service Provider LSMS supports Extended Error Codes across the LSMS Interface for XML messages.

Req 14 LSMS XML Extended Errors Indicator Default

NPAC SMS shall default the Service Provider LSMS XML Extended Errors Indicator tunable parameter to FALSE.

Req 15 LSMS XML Extended Errors Indicator Modification

NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to modify the Service Provider LSMS XML Extended Errors Indicator tunable parameter.

6.6, CMIP Request Retry Requirements. Add text indicating that this sub-section is a CMIP specific concept (since messages are retried until successful).

Note: This sub-section is a CMIP specific concept and only applies to the CMIP interface. For the XML interface, messages are retried until successful.

Req 16 XML Retries – Turn Off Continuous Retries

NPAC SMS shall provide a mechanism to end the continuous retries for a message queued to a Service Provider’s XML Interface.

6.7, Recovery. Add text indicating that Recovery is N/A with the XML Interface (since messages are retried until successful).

The following section defines Recovery functionality supported by the NPAC SMS to SOA interface and NPAC SMS to LSMS interface.

Note: This sub-section is a CMIP specific concept and only applies to the CMIP interface. For the XML interface, messages are retried until successful.

6.8, OBFC. Add text indicating that this concept will be maintained with the XML Interface.

Note: This sub-section applies to both the CMIP interface and the XML interface.

6.9, Roll-Up Activity and Abort Behavior. Add text indicating that this concept will be maintained with the XML Interface, but that abort only applies to CMIP since we do not have sessions in XML.

Note: This concept applies to both the CMIP interface and the XML interface, but abort processing only applies to the CMIP interface.

Req 17 Abort Behavior – CMIP Interface Only

NPAC SMS shall support Abort Behavior in the CMIP Interface.

6.10, NPAC Monitoring of SOA and LSMS Associations. Add text to the beginning of this section indicating that this concept will be maintained with the XML Interface, but the heartbeat may be different because we won’t abort a non-response on the XML Interface.

Note: This concept applies to both the CMIP interface and the XML interface, but abort processing for heartbeat non-response only applies to the CMIP interface.

RR6-174 NPAC SMS Application Level Heartbeat Timeout Tunable Parameter

NPAC SMS shall provide an Application Level Heartbeat Timeout tunable parameter that defines the period of time the NPAC should wait after sending an Application Level Heartbeat message to the SOA/Local SMS and not receiving a response from the SOA/Local SMS, before aborting the association (CMIP only). (previously NANC 299, Req 12)

Add text to the end of this section indicating that HTTPS Keep-Alive messages will be used with the XML Interface.

Note: An HTTPS Keep-Alive mechanism will be used to control the connection persistence through directives in the HTTPS header for the XML interface. There will be two types of Keep-Alives, HTTPS and Application Heartbeat.

Req 18 HTTPS Keep-Alive Timeframe Tunable Parameter

NPAC SMS shall provide a tunable parameter which is defined as the HTTPS keep-alive timeframe.

Note: HTTPS keep-alive timeframe will be turned off when this tunable parameter is set to 0.

Req 19 HTTPS Keep-Alive Timeframe Tunable Parameter Modification

NPAC SMS shall provide a mechanism for NPAC Personnel to modify the HTTPS Keep-Alive Timeframe Tunable Parameter.

Req 20 HTTPS Keep-Alive Timeframe Tunable Parameter – Default Value

NPAC SMS shall default the HTTPS Keep-Alive Timeframe Tunable Parameter to 2 minutes.

Req 21 XML Application Inactivity Heartbeat Tunable Parameter

NPAC SMS shall provide a tunable parameter which is defined as the XML Application Inactivity Heartbeat duration.

Note: XML Application Heartbeat has a minimum value of one (1) minute.

Req 22 XML Application Inactivity Heartbeat Tunable Parameter Modification

NPAC SMS shall provide a mechanism for NPAC Personnel to modify the XML Application Inactivity Heartbeat Tunable Parameter.

Req 23 XML Application Inactivity Heartbeat Tunable Parameter – Default Value

NPAC SMS shall default the XML Application Inactivity Heartbeat Tunable Parameter to 15 minutes.

6.11, Separate SOA Channel for Notifications. Add text indicating that the concept of multiple channels will be supported with the XML Interface, and update text that lists CMIP terms or functionality (NSAP, bind request, recovery, abort) and make more general (or list corresponding XML terms).

Note: This concept of multiple channels applies to both the CMIP interface and the XML interface.

6.13, XML Message Batching. Add new section for message batching within the XML Interface.

Req 24 XML Message Batching – Functionality

NPAC SMS shall support batching of multiple requests and replies into a single HTTPS POST message in the XML interface.

Req 25 XML Message Batching – Maximum Byte Size Tunable Parameter

NPAC SMS shall provide a tunable parameter which is defined as the XML Message Batching Maximum Byte Size.

Note: A single (non-batched) message is not permitted to exceed this size. The range for this tunable is 1 to 5MB.

Req 26 XML Message Batching – Maximum Byte Size Tunable Parameter Modification

NPAC SMS shall provide a mechanism for NPAC Personnel to modify the XML Message Batching Maximum Byte Size Tunable Parameter.

Req 27 XML Message Batching – Maximum Byte Size Tunable Parameter – Default Value

NPAC SMS shall default the XML Message Batching Maximum Byte Size Tunable Parameter to 1MB.

Req 28 XML Message Batching – Maximum Batch Size Tunable Parameter

NPAC SMS shall provide a tunable parameter which is defined as the XML Message Batching Maximum Batch Size.

Note: The range for this tunable is one (1) to one hundred (100), inclusive.

Req 29 XML Message Batching – Maximum Batch Size Tunable Parameter Modification

NPAC SMS shall provide a mechanism for NPAC Personnel to modify the XML Message Batching Maximum Batch Size Tunable Parameter.

Req 30 XML Message Batching – Maximum Batch Size Tunable Parameter – Default Value

NPAC SMS shall default the XML Message Batching Maximum Batch Size Tunable Parameter to 100.

Req 31 XML Message Batching – Maximum Batch Size and Byte Size Tunable Parameters – Usage

NPAC SMS shall use the XML Message Batching Maximum Byte Size tunable parameter value and the XML Message Batching Maximum Batch Size tunable parameter value when determining XML message batch size.

6.14, XML Message Delegation. Add new section for delegating messages within the XML Interface.

Req 32 XML Message Delegation – Functionality

NPAC SMS shall support a delegation mechanism in the XML interface that allows a delegate SPID SOA to submit a request on behalf of a request SPID SOA.

Note: Upon validation of the SOA delegation relationship, the request is evaluated as if received from the request SPID. The response to a request is sent to the delegate SPID, not the request SPID. Delegation applies to the SOA, not to the LSMS.

Req 33 XML Message Delegation – Relationship Establishment

NPAC SMS shall provide a mechanism for NPAC Personnel to establish the SOA delegation relationship of a delegate SPID to a request SPID via the NPAC Administrative Interface.

Note: The SOA delegation relationship can be from any one SPID to any other SPID. Delegation applies to the XML SOA and NPAC Low-Tech Interface, not to the LSMS.

Req 34 XML Message Delegation – Relationship Removal by NPAC Personnel

NPAC SMS shall provide a mechanism for NPAC Personnel to remove the SOA delegation relationship of the delegate SPID to the request SPID via the NPAC Administrative Interface.

Note: Messages queued for the request SPID as a result of an activity from the delegate SPID will not be affected.

Req 35 XML Message Delegation – Relationship Removal upon SPID Removal

NPAC SMS shall remove the SOA delegation relationship of the delegate SPID to the request SPID upon deletion of the delegate SPID.

Req 36 XML Message Delegation – Notifications

NPAC SMS shall send all notifications for a request SPID to both the request SPID and the delegate SPID(s).

Note: The delegate SPID(s) must support the notification in order to receive it.

Req 37 XML SPID Delegation – Audit Requests

NPAC SMS shall not allow an audit request to be submitted by a delegate on behalf of a request SPID.

Note: Delegates should request audits using their own SPID value.

Req 38 SPID Delegation – NPAC Personnel

NPAC SMS shall allow NPAC Personnel to view all request SPIDs related to a delegate SPID via the NPAC Administrative Interface.

6.15, XML Notification Consolidation. Add new section for notification consolidation within the XML Interface.

Req 39 XML Notification Consolidation – Attributes and Status

NPAC SMS shall combine attribute value change (AVC) notifications and status attribute value change (SAVC) notifications into one AVC message for scenarios where both notifications are created for an XML SOA.

Note: Refer to the IIS for the list of scenarios.

Req 40 XML Notification Consolidation – Audits

NPAC SMS shall consolidate audit-related notifications into one audit results notification message as described in the XIS.

Note: Refer to the IIS for the audit message flows.

6.16, XML Query Reply. Add new section for query replies within the XML Interface.

Req 41 XML Query Reply – Functionality

NPAC SMS shall support query expressions in the XML interface, with a limitation to ensure too much data is not requested and processed.

Req 42 XML Query Reply – Maximum Byte Size Tunable Parameter

NPAC SMS shall provide a tunable parameter which is defined as the XML Query Reply Maximum Byte Size.

Note: A query reply of results-too-large is returned in the basic code if the query reply byte size is exceeded. In the XML Interface, all systems must support the Enhanced SV Query functionality.

Req 43 XML Query Reply – Maximum Byte Size Tunable Parameter Modification

NPAC SMS shall provide a mechanism for NPAC Personnel to modify the XML Query Reply Maximum Byte Size Tunable Parameter.

Req 44 XML Query Reply – Maximum Byte Size Tunable Parameter – Default Value

NPAC SMS shall default the XML Query Reply Maximum Byte Size Tunable Parameter to 1,000,000.

6.17, XML Concurrent HTTPS Connections. Add new section for multiple incoming HTTPS (server) connections and outgoing HTTPS (client) connections within the XML Interface.

Req 45 XML Concurrent HTTPS Connections – Functionality

NPAC SMS shall support multiple concurrent incoming and outgoing HTTPS connections in the XML interface, per Service Provider ID, up to a maximum number.

Req 46 XML Concurrent HTTPS Connections – Message Ordering – Functionality

NPAC SMS shall support object level message ordering validation with HTTPS connections in the XML interface.

Req 47 XML Concurrent HTTPS Connections – Message Ordering – Origination and Activity Timestamps

NPAC SMS shall ensure that objects contain an Origination Timestamp and Activity Timestamp to support message ordering.

Note: The objects include, SV (includes New SP Origination Timestamp and Old SP Origination Timestamp), Number Pool Block, NPA-NXX, NPA-NXX-X, LRN, and SPID.

Req 48 XML Concurrent HTTPS Connections – Message Ordering – Error Message

NPAC SMS shall issue an error message to the SOA or Local SMS when the message ordering validation encounters a message ordering error.

7, Security. Add text indicating that the same high level of security will be supported with the XML Interface.

Note: The same high-level of security applies to both the CMIP interface and the XML interface.

7.9, OSI Security Environment. Change reference from “OSI Security Environment” to “Mechanized Security Environment”. 7.9.3.1, Encryption, and 7.9.3.2, Authentication, update text in several requirements in these section that indicate CMIP or CMIP-concepts (confirmed mode, access control, associations).

7.9 ~~OSI~~ Mechanized Security Environment

7.9.2 Security Services

R7‑89 Authentication

SOA to NPAC SMS interface and the NPAC SMS to Local SMS interface shall support Authentication (at association setup or XML connection).

7.9.3.1 Encryption

Note: This sub-section contains requirements that are a CMIP specific concept and only applies to the CMIP interface.

7.9.3.2 Authentication

Note: This sub-section contains requirements that are a CMIP specific concept and only applies to the CMIP interface.

7.9.3.3 Integrity and Non-repudiation

R7‑102 Notifications in Confirmed Mode

NPAC SMS shall ensure that all the notifications are sent in the confirmed mode. (CMIP interface only)

7.9.3.6 Key Exchange

Note: This sub-section contains requirements that apply to both the CMIP interface and the XML interface. For the XML interface, the SP-Key is in ascii format. The key list is only applicable for the CMIP interface.

8, Audit Administration

8.2 Service Provider User Functionality

R8‑3 Service Providers Specify Audit Scope

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

1. Specific Service provider network **or** ALL Service Providers networks
2. Specify an activation Date/Time stamp range, i.e., only audit records activated between a specific time window
3. Full audit for all LNP attributes **or** a partial audit where the Service Provider can specify one or more of the following LNP attributes:
4. LIDB data
5. CLASS data
6. LRN data
7. CNAM data
8. ISVM data
9. WSMSC data (only Service Provider Local SMSs that support this attribute will be audited on this attribute)

**Default**: Full audit

Note: Partial audits apply only to the CMIP interface. Full audits apply to both the CMIP interface and the XML XML interface.

Req 49 XML Audits – Delegation

NPAC SMS shall not support audit functionality at the Delegate level.

Note: A Delegate SPID cannot request an audit on behalf of a Request SPID.

Appendix C, System Tunables. Add system tunables (e.g., XML connection information) that are specific to the XML interface.

| **Communications Tunables** | | | |
| --- | --- | --- | --- |
| **Tunable Name** | **Default Value** | **Units** | **Valid Range** |
| **Max Query Reply Byte Size** | 1000000 | Bytes | 1000000-5000000 |
| Maximum query reply size in bytes for the XML Interface. | | | |
| **Max Batch Byte Size** | 1000000 | Bytes | 1000000-5000000 |
| Maximum batch size in bytes for the XML Interface. | | | |
| **Max Batch Message Quantity** | 100 | Messages | 1-100 |
| Maximum number of messages within a batch for the XML Interface. | | | |
| **HTTPS Keep-Alive Timeframe** | 2 | Minutes | 0-30 |
| HTTPS inactivity timeout duration in minutes before issuing a Keep-Alive message for the XML Interface. | | | |
| **XML Application Heartbeat Interval** | 15 | Minutes | 1-60 |
| XML Application-Level inactivity duration in minutes before issuing a Heartbeat message for the XML Interface. | | | |

**SOA Notification Priority Tunables**

Many notifications are sent to both the Old Service Provider and the New Service Provider. As indicated in the table below, some of these notifications can have different priorities based on whether the Service Provider is acting as the Old Service Provider or the New Service Provider for the port. During the notification evaluation process this option was not given to all notifications that are sent to both the Old Service Provider and the New Service Provider for one or more reasons. Some of those reasons were:

* volume of the particular notification was very small
* importance of the particular notification was determined to be equal whether a Service Provider was acting as the Old Service Provider or the New Service Provider for the port

|  |  |  |
| --- | --- | --- |
| **#** | **Notification Name** | **Priority** |
|  | **[snip]** |  |
| **L-2.0** | **Subscription Audit Discrepancy Report**  For the XML interface, notification is N/A, as audit discrepancy is included in a separate Audit Results notification. | MEDIUM |
|  | **[snip]** |  |
| **L-11.0**  **K1** | **Subscription Version Status Attribute Value Change Notification - Conflict**  When the status of a *Pending* SV is set to *conflict*. The notification is sent to both SOAs: Old and New. For the XML interface, notification is N/A, as status is included in a separate Attribute Value Change notification. | MEDIUM |
| **L-11.0**  **K2** | **Subscription Version Status Attribute Value Change Notification - Conflict**  When the status of a *Cancel-Pending* SV is set to *conflict*. Cancel-Pending to Conflict is when the Old Service Provider has cancelled the Pending SV but the New Service Provider has not acknowledged the cancellation by the time the Cancellation Acknowledgement Final Concurrence Timer has expired. The notification is sent to both SOAs: Old and New. For the XML interface, notification is N/A, as status is included in a separate Attribute Value Change notification. | MEDIUM |
| **L-11.0**  **L** | **Subscription Version Status Attribute Value Change Notification**  After Conflict Resolution, when the status of the *Conflict* SV is re-set to *Pending*. The notification is sent to both SOAs: Old and New. For the XML interface, notification is N/A, as status is included in a separate Attribute Value Change notification. | MEDIUM |
|  | **[snip]** |  |

Table C–7 – SOA Notification Priority Tunables

Appendix D, Encryption Key Exchange. Update text that indicate CMIP-concepts. Add new text for XML security.

The ~~mechanized~~ CMIP interface to NPAC SMS requires an exchange of the encryption keys used to verify digital signatures. This exchange will consist of a file containing the 1000 key list, and an acknowledgment of receipt of the list will consist of a file containing the MD5 checksum value of each key in the list. This is a CMIP specific concept and only applies to the CMIP interface. The formats for these files is described here.

The XML interface to NPAC SMS uses certificates and is explained in the XML Interface Specification document. The format for the XML keys is described here.

SP-Key file format:

NPAC\_TO\_SOA | vPy;jgXR1usG

SOA\_TO\_NPAC | ZtEGVh2(BYDm

NPAC\_TO\_LSMS | xa6MozRe@PKe

LSMS\_TO\_NPAC | byaG1k?BZFMG

Appendix E, Download File Examples. Add XML-related attributes that are specific to the XML interface (notifications and audits).

The NPAC Customer Data Model will contain two Service Provider tunables for the XML-related Last Activity Timestamp:

* SOA Supports Last Activity TS in BDD
* LSMS Supports Last Activity TS in BDD

The inclusion of the Last Activity TS in the BDD for a given Service Provider will be determined based on the value of these SP tunables.

| **Explanation of the fields in the subscription download file** | | |
| --- | --- | --- |
| **Field Number** | **Field Name** | **Value in Example** |
| 1 | Version Id | 0000000001 |
| 2 | Version TN | 3031231000 |
| 3 | LRN | 1234567890 |
| 4 | New Current Service Provider Id | 0001 |
| 5 | Activation Timestamp | 19960916152337 (yyyymmddhhmmss) |
| 6 | CLASS DPC | 123123123 (This value is 3 octets) |
| 7 | CLASS SSN | 123 (This value is 1 octet and usually set to 000) |
| 8 | LIDB DPC | 123123123 (This value is 3 octets) |
| 9 | LIDB SSN | 123 (This value is 1 octet and usually set to 000) |
| 10 | ISVM DPC | 123123123 (This value is 3 octets) |
| 11 | ISVM SSN | 123 (This value is 1 octet and usually set to 000) |
| 12 | CNAM DPC | 123123123 (This value is 3 octets) |
| 13 | CNAM SSN | 123 (This value is 1 octet and usually set to 000) |
| 14 | End user Location Value | 123456789012 |
| 15 | End User Location Type | 12 |
| 16 | Billing Id | 0001 |
| 17 | LNP Type | 0 |
| 18 | Download Reason | 0 |
| 19 | WSMSC DPC | Not present if LSMS or SOA does not support the WSMSC DPC as shown in this example. If it were present the value would be in the same format as other DPC data. |
| 20 | WSMSC SSN | Not present if LSMS or SOA does not support the WSMSC SSN as shown in this example. If it were present the value would be in the same format as other SSN data. |
| 21 | SV Type | Not present if LSMS or SOA does not support the SV Type as shown in this example. If it were present the value would be as defined in the SV Data Model. |
|  | Optional Data parameters (e.g., Alternative SPID, Alt-Billing ID, SMS URI) within the Optional Data Field are included/excluded based on a combination of the region’s support for a specific parameter AND the requesting Service Provider’s NPAC Customer profile settings at the time of BDD file generation.  The order of the included parameters is based on the latest version of the LNP XML schema that is available on the NPAC website ([www.npac.com](http://www.npac.com), under the software releases section). | |
| 22+ | Last Activity Timestamp | 19960916152337.123 (yyyymmddhhmmss.fff)  Not present if LSMS or SOA does not support the Last Activity TS as shown in this example. If it were present the value would be in Timestamp format (and include milliseconds). |

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

| **Explanation of the fields in the network service provider download file** | | |
| --- | --- | --- |
| **Field Number** | **Field Name** | **Value in Example** |
| 1 | Service Provider Id | 0001 |
| 2 | Service Provider Name | AMERITECH |
| 3 | Service Provider Type | Not present if the Service Provider does not support SP TYPE. |
| 4 | Last Activity Timestamp | 19960916152337.123 (yyyymmddhhmmss.fff)  Not present if LSMS or SOA does not support the Last Activity TS as shown in this example. If it were present the value would be in Timestamp format (and include milliseconds). |

Table E–2 -- Explanation of the Fields in the Network Service Provider Download File

| **Explanation of the fields in the NETWORK NPA/NXX download file** | | |
| --- | --- | --- |
| **Field Number** | **Field Name** | **Value in Example** |
| 1 | Service Provider Id | 0001 |
| 2 | NPA-NXX Id | 2853 |
| 3 | NPA-NXX Value | 303123 |
| 4 | Creation TimeStamp | 19960101155555 |
| 5 | Effective TimeStamp | 19960105000000 |
| 6 | Download Reason | 0 |
| 7 | Modified TimeStamp | Not present if LSMS or SOA does not support the Modified feature (NANC 355) as shown in this example. If it were present the value would be in the same format as other TimeStamp data. |
| 8 | Last Activity Timestamp | 19960916152337.123 (yyyymmddhhmmss.fff)  Not present if LSMS or SOA does not support the Last Activity TS as shown in this example. If it were present the value would be in Timestamp format (and include milliseconds). |

Table E–3 -- Explanation of the Fields in the Network NPA/NXX Download File

| **Explanation of the fields in the NETWORK LRN download file** | | |
| --- | --- | --- |
| **Field Number** | **Field Name** | **Value in Example** |
| 1 | Service Provider Id | 0001 |
| 2 | LRN Id | 1624 |
| 3 | LRN Value | 1234567890 |
| 4 | Creation TimeStamp | 19960101155559 |
| 5 | Download Reason | 0 |
| 6 | Last Activity Timestamp | 19960916152337.123 (yyyymmddhhmmss.fff)  Not present if LSMS or SOA does not support the Last Activity TS as shown in this example. If it were present the value would be in Timestamp format (and include milliseconds). |

Table E–4 -- Explanation of the Fields in the Network LRN Download File

| **Explanation of the fields in the NETWORK NPA-NXX-X download file** | | |
| --- | --- | --- |
| **Field Number** | **Field Name** | **Value in Example** |
| 1 | Service Provider Id | 0001 |
| 2 | NPA-NXX-X Id | 2853 |
| 3 | NPA-NXX-X Value | 303-123-6 |
| 4 | Creation TimeStamp | 19980101155555 |
| 5 | Effective TimeStamp | 19980105000000 |
| 6 | Modified TimeStamp | 19980105001111 |
| 7 | Download Reason | 0 |
| 8 | Last Activity Timestamp | 19960916152337.123 (yyyymmddhhmmss.fff)  Not present if LSMS or SOA does not support the Last Activity TS as shown in this example. If it were present the value would be in Timestamp format (and include milliseconds). |

Table E–5 -- Explanation of the Fields in the Network NPA-NXX-X Download File

| **Explanation of the fields in the BLOCK download file** | | |
| --- | --- | --- |
| **Field Number** | **Field Name** | **Value in Example** |
| 1 | Block Id | 1 |
| 2 | NPA-NXX-X | 3031231 |
| 3 | LRN | 1234567890 |
| 4 | New Current Service Provider Id | 0001 |
| 5 | Activation Timestamp | 19960916152337 (yyyymmddhhmmss) |
| 6 | CLASS DPC | 123123123 (This value is 3 octets) |
| 7 | CLASS SSN | 123 (This value is 1 octet and usually set to 000) |
| 8 | LIDB DPC | 123123123 (This value is 3 octets) |
| 9 | LIDB SSN | 123 (This value is 1 octet and usually set to 000) |
| 10 | ISVM DPC | 123123123 (This value is 3 octets) |
| 11 | ISVM SSN | 123 (This value is 1 octet and usually set to 000) |
| 12 | CNAM DPC | 123123123 (This value is 3 octets) |
| 13 | CNAM SSN | 123 (This value is 1 octet and usually set to 000) |
| 14 | WSMSC DPC | 123123123 (This value is 3 octets) |
| 15 | WSMSC SSN | 123 (This value is 1 octet and usually set to 000) |
| 16 | Download Reason | 0 |
| 17 | SV Type | Not present if LSMS or SOA does not support the SV Type as shown in this example. If it were present the value would be as defined in the NPB Data Model. |
|  | Optional Data parameters (e.g., Alternative SPID, Alt-Billing ID, SMS URI) within the Optional Data Field are included/excluded based on a combination of the region’s support for a specific parameter AND the requesting Service Provider’s NPAC Customer profile settings at the time of BDD file generation.  The order of the included parameters is based on the latest version of the LNP XML schema that is available on the NPAC website ([www.npac.com](http://www.npac.com), under the software releases section). | |
| 18+ | Last Activity Timestamp | 19960916152337.123 (yyyymmddhhmmss.fff)  Not present if LSMS or SOA does not support the Last Activity TS as shown in this example. If it were present the value would be in Timestamp format (and include milliseconds). |

Table E–6 -- Explanation of the Fields in the Block Download File

| **Explanation of the Potential Notification fields in the Notifications download file** | | |
| --- | --- | --- |
| **Notification** | | |
| **Field Number** | **Field Name** | **Sample Value** |
| SOA Notifications | | |
| subscriptionVersionCancellationAcknowledgeRequest | | |
| 1 | Creation TimeStamp | The time the notification was created.  For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1003 |
| 3 | System Type (SOA=0, LSMS=1) | 0 |
| 4 | Notification ID | 4 |
| 5 | Object ID | 21 |
| 6 | Version TN | 3031231000 |
| 7 | Version ID | 1234567899 |
| subscriptionVersionRangeCancellationAcknowledgeRequest (\* if a consecutive list) | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 0001 |
| 3 | System Type | 0 |
| 4 | Notification ID | 18 |
| 5 | Object ID | 14 |
| 6 | Range Type Format (consecutive list=1, non-consecutive list =2) | 1 |
| 7 | Starting Version TN | 3031231000 |
| 8 | Ending Version TN | 3031232000 |
| 9 | Starting Version ID | 1200000001 |
| 10 | Ending Version ID | 1200001002 |
| subscriptionVersionRangeCancellationAcknowledgeRequest (\* if not a consecutive list) | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 0001 |
| 3 | System Type | 0 |
| 4 | Notification ID | 18 |
| 5 | Object ID | 14 |
| 6 | Range Type Format | 2 |
| 7 | Starting Version TN | 3031231000 |
| 8 | Ending Version TN | 3031231009 |
| 9 | Variable Field Length | Indicates the number of dynamic values for the following field (e.g. 10). |
| 10 | Version ID | 1230000001 |
| 11 | Version ID | 1230000004 |
| 12 | Version ID | 1230000006 |
| 13 | . . . Version ID “n” | 1230000009 |
| subscriptionVersionDonorSP-CustomerDisconnectDate | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 0001 |
| 3 | System Type | 0 |
| 4 | Notification ID | 6 |
| 5 | Object ID | 21 |
| 6 | Customer Disconnect Date | 20050530230000 |
| 7 | Effective Release Date | 20050530230000 |
| 8 | Version TN | 3031231000 |
| 9 | Version ID | 1234567899 |
| subscriptionVersionRangeDonorSP-CustomerDisconnectDate (\* if a consecutive list) | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 0001 |
| 3 | System Type | 0 |
| 4 | Notification ID | 17 |
| 5 | Object ID | 14 |
| 6 | Customer Disconnect Date | 20050530230000 |
| 7 | Effective Release Date | 20050530230000 |
| 8 | Range Type Format | 1 |
| 9 | Starting Version TN | 3032201000 |
| 10 | Ending Version TN | 3032201009 |
| 11 | Starting Version ID | 1234000000 |
| 12 | Ending Version ID | 1234000008 |
| subscriptionVersionRangeDonorSP-CustomerDisconnectDate (\* if not a consecutive list) | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 0001 |
| 3 | System Type | 0 |
| 4 | Notification ID | 17 |
| 5 | Object ID | 14 |
| 6 | Customer Disconnect Date | 20050530230000 |
| 7 | Effective Release Date | 20050530230000 |
| 8 | Range Type Format | 2 |
| 9 | Starting Version TN | 1232201000 |
| 10 | Ending Version TN | 1232201010 |
| 11 | Variable Field Length | Indicates the number of dynamic values for the following field (e.g. 11). |
| 12 | Version ID | 1234000099 |
| 13 | Version ID | 1234000103 |
| 14 | … Version ID “n” | 1234000119 |
| subscriptionVersionNewSP-CreateRequest | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 0001 |
| 3 | System Type | 0 |
| 4 | Notification ID | 9 |
| 5 | Object ID | 21 |
| 6 | Old Service Provider ID | 1003 |
| 7 | Old Service Provider Due Date | 20050530230000 |
| 8 | Old Service Provider Authorization | 0 |
| 9 | Old Service Provider Authorization Time Stamp | 20050520125032 |
| 10 | Subscription Status Change Cause Code | 50 |
| 11 | Subscription Timer Type | 0 |
| 12 | Subscription Business Type | 1 |
| 13 | Version TN | 1232201999 |
| 14 | Version ID | 1234000099 |
| subscriptionVersionRangeNewSP-CreateRequest (\* if a consecutive list) | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 0001 |
| 3 | System Type | 0 |
| 4 | Notification ID | 19 |
| 5 | Object ID | 14 |
| 6 | Old Service Provider ID | 0002 |
| 7 | Old Service Provider Due Date | 20050530230000 |
| 8 | Old Service Provider Authorization | 0 |
| 9 | Service Provider Authorization Time Stamp | 20050520123045 |
| 10 | Subscription Status Change Cause Code | 50 |
| 11 | Subscription Timer Type | 0 |
| 12 | Subscription Business Type | 1 |
| 13 | Range Type Format | 1 |
| 14 | Starting Version TN | 3032201999 |
| 15 | Ending Version TN | 3032202012 |
| 16 | Starting Version ID | 1234000000 |
| 17 | Ending Version ID | 1234000013 |
| subscriptionVersionRangeNewSP-CreateRequest (\* if not a consecutive list) | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 0001 |
| 3 | System Type | 0 |
| 4 | Notification ID | 19 |
| 5 | Object ID | 14 |
| 6 | Old Service Provider ID | 0234 |
| 7 | Old Service Provider Due Date | 20050530230000 |
| 8 | Old Service Provider Authorization | 0 |
| 9 | Service Provider Authorization Time Stamp | 200505220231632 |
| 10 | Subscription Status Change Cause Code | 50 |
| 11 | Subscription Timer Type | 0 |
| 12 | Subscription Business Type | 1 |
| 13 | Range Type Format | 2 |
| 14 | Starting Version TN | 3033301600 |
| 15 | Ending Version TN | 3033301699 |
| 16 | Variable Field Length | Indicates the number of dynamic values for the following field (e.g. 100). |
| 17 | Version ID | 2340000000 |
| 18 | Version ID | 2340000016 |
| 19 | … Version ID “n” | 2340000023 |
| subscriptionVersionOldSP-ConcurrenceRequest | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 0001 |
| 3 | System Type | 0 |
| 4 | Notification ID | 10 |
| 5 | Object ID | 21 |
| 6 | New Current Service Provider ID | 2003 |
| 7 | Service Provider Due Date | 20050530230000 |
| 8 | New Service Provider Creation Time Stamp | 20050518231625 |
| 9 | Subscription Timer Type | 0 |
| 10 | Subscription Business Type | 1 |
| 11 | Version TN | 3033301000 |
| 12 | Version ID | 1234560000 |
| subscriptionVersionRangeOldSP-ConcurrenceRequest (\* if a consecutive list) | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 0001 |
| 3 | System Type | 0 |
| 4 | Notification ID | 20 |
| 5 | Object ID | 14 |
| 6 | New Current Service Provider ID | 2003 |
| 7 | Service Provider Due Date | 20050530230000 |
| 8 | New Service Provider Creation Time Stamp | 20050518231625 |
| 9 | Subscription Timer Type | 0 |
| 10 | Subscription Business Type | 1 |
| 11 | Range Type Format | 1 |
| 12 | Starting Version TN | 3033301000 |
| 13 | Ending Version TN | 3033301009 |
| 14 | Starting Version ID | 1000000001 |
| 15 | Ending Version ID | 1000000010 |
| subscriptionVersionRangeOldSP-ConcurrenceRequest (\* if not a consecutive list) | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 0001 |
| 3 | System Type | 0 |
| 4 | Notification ID | 20 |
| 5 | Object ID | 14 |
| 6 | New Current Service Provider ID | 2003 |
| 7 | Service Provider Due Date | 20050530230000 |
| 8 | New Service Provider Creation Time Stamp | 20050518231625 |
| 9 | Subscription Timer Type | 0 |
| 10 | Subscription Business Type | 1 |
| 11 | Range Type Format | 2 |
| 12 | Starting Version TN | 3033300000 |
| 13 | Ending Version TN | 3033300099 |
| 14 | Variable Field Length | Indicates the number of dynamic values for the following field (e.g. 100). |
| 15 | Version ID | 1000000001 |
| 16 | Version ID | 1000000009 |
| 17 | … Version ID “n” | 1000001011 |
| subscriptionVersionStatusAttributeValueChange | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 0001 |
| 3 | System Type | 0 |
| 4 | Notification ID | 11 |
| 5 | Object ID | 21 |
| 6 | Subscription Version Status | 1 |
| 7 | Subscription Version Status Change Cause Code | 0 |
| 8 | Version TN | 3033301290 |
| 9 | Version ID | 1234500009 |
| 10 | Variable Field Length | Indicates the number of dynamic values for the following field (e.g. 3).  Note: If there aren’t any Service Providers on the Failed list then the last field will be the VersionID. |
| 11 | (failed list) Service Provider ID – Service Provider Name | 2003-TelCo |
| 12 | (failed list) Service Provider ID – Service Provider Name | 2910-Tel S |
| 13 | … | 1034-Tel M |
| subscriptionVersionRangeStatusAttributeValueChange (\* if a consecutive list) | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1001 |
| 3 | System Type | 0 |
| 4 | Notification ID | 14 |
| 5 | Object ID | 14 |
| 6 | Subscription Version Status | 1 |
| 7 | Subscription Version Status Change Cause Code | 0 |
| 8 | Range Type Format | 1 |
| 9 | Starting Version TN | 3034401000 |
| 10 | Ending Version TN | 3034401001 |
| 11 | Starting Version ID | 4420000097 |
| 12 | Ending Version ID | 4420000098 |
| 13 | Variable Field Length | Indicates the number of dynamic values for the following field (e.g. 2).  Note: If there aren’t any Service Providers on the Failed list then the last field will be the Ending VersionID. |
| 14 | (failed list) Service Provider ID – Service Provider Name | 2003-TelCo |
| 15 | (failed list) Service Provider ID – Service Provider Name | 2910-Tel S |
| subscriptionVersionRangeStatusAttributeValueChange (\* if not a consecutive list) | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1001 |
| 3 | System Type | 0 |
| 4 | Notification ID | 14 |
| 5 | Object ID | 14 |
| 6 | Subscription Version Status | 1 |
| 7 | Subscription Version Status Change Cause Code | 0 |
| 8 | Range Type Format | 2 |
| 9 | Starting Version TN | 3034401012 |
| 10 | Ending Version TN | 3034401019 |
| 11 | Variable Field Length | Indicates the number of dynamic values for the following field (e.g. 8). |
| 12 | Version ID | 1000050090 |
| 13 | Version ID | 1000050096 |
| 14 | Version ID | 1000050099 |
| 15 | … Version ID “n” | 1000005100 |
| 16 | Variable Field Length | Indicates the number of dynamic values for the following field (e.g. 3).  Note: If there aren’t any Service Providers on the Failed list then the last field will be the VersionID “n”. |
| 17 | (failed list) Service Provider ID – Service Provider Name | 2003-TelCo |
| 18 | (failed list) Service Provider ID – Service Provider Name | 2910-Tel S |
| 19 | … | 1034-Tel M |
| subscriptionVersionNPAC-ObjectCreation | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1001 |
| 3 | System Type | 0 |
| 4 | Notification ID | 1006 |
| 5 | Object ID | 21 |
| 6 | New Service Provider Creation Time Stamp | 20050518231625 |
| 7 | New Service Provider Due Date | 20050530230000 |
| 8 | Old Service Provider Authorization Time Stamp |  |
| 9 | Old Service Provider Due Date |  |
| 10 | Old Service Provider Authorization |  |
| 11 | New Current Service Provider ID | 1001 |
| 12 | Old Service Provider ID | 1003 |
| 13 | Conflict Time Stamp |  |
| 14 | Status Change Cause Code |  |
| 15 | Subscription Version Status | 1 |
| 16 | Timer Type | 0  This attribute (pipes) is included if the Service Provider supports both Timer Type and Notification BDD Timer Type Business Hour attributes at the time of notification BDD generation. If the Service Provider does not support, the pipes are not included in the notification BDD. |
| 17 | Business Hours | 0  This attribute (pipes) is included if the Service Provider supports both Business Hours and Notification BDD Timer Type Business Hour attributes at the time of notification BDD generation. If the Service Provider does not support, the pipes are not included in the notification BDD. |
| 18 | New SP Medium Timer Indicator | 0  Not present if SOA does not support the Medium Timers Support Indicator at the time of notification BDD generation as shown in this example. If it were present the value would be as defined in the SV Data Model. The value that will be included in the Object Creation Notification is based on the SP that first sent up the request. |
| 19 | Old SP Medium Timer Indicator | 0  Not present if SOA does not support the Medium Timers Support Indicator at the time of notification BDD generation as shown in this example. If it were present the value would be as defined in the SV Data Model. The value that will be included in the Object Creation Notification is based on the SP that first sent up the request. |
| 20 | Version TN | 3034401000 |
| 21 | Version ID | 1239999909 |
| subscriptionVersionRangeObjectCreation (\* if a consecutive list) | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1003 |
| 3 | System Type | 0 |
| 4 | Notification ID | 16 |
| 5 | Object ID | 14 |
| 6 | New Service Provider Creation Time Stamp | 20050518231625 |
| 7 | New Service Provider Due Date | 20050530230000 |
| 8 | Old Service Provider Authorization Time Stamp |  |
| 9 | Old Service Provider Due Date |  |
| 10 | Old Service Provider Authorization |  |
| 11 | New Current Service Provider ID | 0001 |
| 12 | Old Service Provider ID | 1003 |
| 13 | Conflict Time Stamp |  |
| 14 | Status Change Cause Code |  |
| 15 | Subscription Version Status | 1 |
| 16 | Timer Type | 0  This attribute (pipes) is included if the Service Provider supports both Timer Type and Notification BDD Timer Type Business Hour attributes at the time of notification BDD generation. If the Service Provider does not support, the pipes are not included in the notification BDD. |
| 17 | Business Hours | 0  This attribute (pipes) is included if the Service Provider supports both Business Hours and Notification BDD Timer Type Business Hour attributes at the time of notification BDD generation. If the Service Provider does not support, the pipes are not included in the notification BDD. |
| 18 | New SP Medium Timer Indicator | 0  Not present if SOA does not support the Medium Timers Support Indicator at the time of notification BDD generation as shown in this example. If it were present the value would be as defined in the SV Data Model. The value that will be included in the Object Creation Notification is based on the SP that first sent up the request. |
| 19 | Old SP Medium Timer Indicator | 0  Not present if SOA does not support the Medium Timers Support Indicator at the time of notification BDD generation as shown in this example. If it were present the value would be as defined in the SV Data Model. The value that will be included in the Object Creation Notification is based on the SP that first sent up the request. |
| 20 | Range Type Format | 1 |
| 21 | Starting Version TN | 3034401000 |
| 22 | Ending Version TN | 3034402000 |
| 23 | Starting Version ID | 1234500001 |
| 24 | Ending Version ID | 1234501002 |
| subscriptionVersionRangeObjectCreation (\* if not a consecutive list) | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1003 |
| 3 | System Type | 0 |
| 4 | Notification ID | 16 |
| 5 | Object ID | 14 |
| 6 | New Service Provider Creation Time Stamp | 20050518231625 |
| 7 | New Service Provider Due Date | 20050530230000 |
| 8 | Old Service Provider Authorization Time Stamp |  |
| 9 | Old Service Provider Due Date |  |
| 10 | Old Service Provider Authorization |  |
| 11 | New Current Service Provider | 0001 |
| 12 | Old Service Provider ID | 1003 |
| 13 | Conflict Time Stamp |  |
| 14 | Status Change Cause Code |  |
| 15 | Subscription Version Status | 1 |
| 16 | Timer Type | 0  This attribute (pipes) is included if the Service Provider supports both Timer Type and Notification BDD Timer Type Business Hour attributes at the time of notification BDD generation. If the Service Provider does not support, the pipes are not included in the notification BDD. |
| 17 | Business Hours | 0  This attribute (pipes) is included if the Service Provider supports both Business Hours and Notification BDD Timer Type Business Hour attributes at the time of notification BDD generation. If the Service Provider does not support, the pipes are not included in the notification BDD. |
| 18 | New SP Medium Timer Indicator | 0  Not present if SOA does not support the Medium Timers Support Indicator at the time of notification BDD generation as shown in this example. If it were present the value would be as defined in the SV Data Model. The value that will be included in the Object Creation Notification is based on the SP that first sent up the request. |
| 19 | Old SP Medium Timer Indicator | 0  Not present if SOA does not support the Medium Timers Support Indicator at the time of notification BDD generation as shown in this example. If it were present the value would be as defined in the SV Data Model. The value that will be included in the Object Creation Notification is based on the SP that first sent up the request. |
| 20 | Range Type Format | 2 |
| 21 | Starting Version TN | 3034401000 |
| 22 | Ending Version TN | 3034401097 |
| 23 | Variable Field Length | Indicates the number of dynamic values for the following field (e.g. 98). |
| 24 | Version ID | 2050505050 |
| 25 | Version ID | 2050505059 |
| 26 | … Version ID “n” | 2050507019 |
| subscriptionVersionNPAC-attributeValueChange | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1003 |
| 3 | System Type | 0 |
| 4 | Notification ID | 1001 |
| 5 | Object ID | 21 |
| 6 | New Service Provider Creation Time Stamp | 20050518231625 |
| 7 | New Service Provider Due Date | 20050530230000 |
| 8 | Old Service Provider Authorization Time Stamp |  |
| 9 | Old Service Provider Due Date |  |
| 10 | Old Service Provider Authorization |  |
| 11 | Conflict Time Stamp |  |
| 12 | Timer Type | This attribute (pipes) is included if the Service Provider supports both Medium Timers and Timer Type attributes at the time of notification BDD generation. If the Service Provider does not support, the pipes are not included in the notification BDD. |
| 13 | Business Hours | This attribute (pipes) is included if the Service Provider supports both Medium Timers and Business Hours attributes at the time of notification BDD generation. If the Service Provider does not support, the pipes are not included in the notification BDD. |
| 14 | New SP Medium Timer Indicator | 0  Not present if SOA does not support the Medium Timers Support Indicator at the time of notification BDD generation as shown in this example. If it were present the value would be as defined in the SV Requirements and Data Model. |
| 15 | Old SP Medium Timer Indicator | 0  Not present if SOA does not support the Medium Timers Support Indicator at the time of notification BDD generation as shown in this example. If it were present the value would be as defined in the SV Requirements and Data Model. |
|  | Fields 16 through 30 are included/excluded based on S-3.00C notification priority setting at the time of BDD file generation. | |
| 16 | LRN | 1234567890 |
| 17 | CLASS DPC | 123123123 (This value is 3 octets) |
| 18 | CLASS SSN | 123 (This value is 1 octet and usually set to 000) |
| 19 | LIDB DPC | 123123123 (This value is 3 octets) |
| 20 | LIDB SSN | 123 (This value is 1 octet and usually set to 000) |
| 21 | CNAM DPC | 123123123 (This value is 3 octets) |
| 22 | CNAM SSN | 123 (This value is 1 octet and usually set to 000) |
| 23 | ISVM DPC | 123123123 (This value is 3 octets) |
| 24 | ISVM SSN | 123 (This value is 1 octet and usually set to 000) |
| 25 | WSMSC DPC | Not present if LSMS or SOA does not support the WSMSC DPC as shown in this example. If it were present the value would be in the same format as other DPC data. |
| 26 | WSMSC SSN | Not present if LSMS or SOA does not support the WSMSC SSN as shown in this example. If it were present the value would be in the same format as other SSN data. |
| 27 | Billing Id | 0001 |
| 28 | End User Location Value | 123456789012 |
| 29 | End User Location Type | 12 |
| 30 | SV Type | Not present if LSMS or SOA does not support the SV Type as shown in this example. If it were present the value would be as defined in the SV Data Model. |
| 31 | Version TN | 3034401000 |
| 32 | Version ID | 1234567890 |
|  | Optional Data parameters (e.g., Alternative SPID, Alt-Billing ID, SMS URI) within the Optional Data Field are included/excluded based on a combination of the region’s support for a specific parameter AND the requesting Service Provider’s NPAC Customer profile settings at the time of BDD file generation.  The order of the included parameters is based on the latest version of the applicable LNP XML schema that is available on the NPAC website ([www.npac.com](http://www.npac.com), under the software releases section). | |
| subscriptionVersionRangeAttributeValueChange (\* if a consecutive list) | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1003 |
| 3 | System Type | 0 |
| 4 | Notification ID | 15 |
| 5 | Object ID | 14 |
| 6 | New Service Provider Creation Time Stamp | 20050518231625 |
| 7 | New Service Provider Due Date | 20050530230000 |
| 8 | Old Service Provider Authorization Time Stamp |  |
| 9 | Old Service Provider Due Date |  |
| 10 | Old Service Provider Authorization |  |
| 11 | Conflict Time Stamp |  |
| 12 | Timer Type | 0  This attribute (pipes) is included if the Service Provider supports both Medium Timers and Timer Type attributes at the time of notification BDD generation. If the Service Provider does not support, the pipes are not included in the notification BDD. |
| 13 | Business Hours | 0  This attribute (pipes) is included if the Service Provider supports both Medium Timers and Business Hours attributes at the time of notification BDD generation. If the Service Provider does not support, the pipes are not included in the notification BDD. |
| 14 | New SP Medium Timer Indicator | 0  Not present if SOA does not support the Medium Timers Support Indicator at the time of notification BDD generation as shown in this example. If it were present the value would be as defined in the SV Requirements and Data Model. |
| 15 | Old SP Medium Timer Indicator | 0  Not present if SOA does not support the Medium Timers Support Indicator at the time of notification BDD generation as shown in this example. If it were present the value would be as defined in the SV Requirements and Data Model. |
|  | Fields 16 through 30 are included/excluded based on S-3.00C notification priority setting at the time of BDD file generation. | |
| 16 | LRN | 1234567890 |
| 17 | CLASS DPC | 123123123 (This value is 3 octets) |
| 18 | CLASS SSN | 123 (This value is 1 octet and usually set to 000) |
| 19 | LIDB DPC | 123123123 (This value is 3 octets) |
| 20 | LIDB SSN | 123 (This value is 1 octet and usually set to 000) |
| 21 | CNAM DPC | 123123123 (This value is 3 octets) |
| 22 | CNAM SSN | 123 (This value is 1 octet and usually set to 000) |
| 23 | ISVM DPC | 123123123 (This value is 3 octets) |
| 24 | ISVM SSN | 123 (This value is 1 octet and usually set to 000) |
| 25 | WSMSC DPC | Not present if LSMS or SOA does not support the WSMSC DPC as shown in this example. If it were present the value would be in the same format as other DPC data. |
| 26 | WSMSC SSN | Not present if LSMS or SOA does not support the WSMSC SSN as shown in this example. If it were present the value would be in the same format as other SSN data. |
| 27 | Billing Id | 0001 |
| 28 | End User Location Value | 123456789012 |
| 29 | End User Location Type | 12 |
| 30 | SV Type | Not present if LSMS or SOA does not support the SV Type as shown in this example. If it were present the value would be as defined in the SV Data Model. |
| 31 | Range Type Format | 1 |
| 32 | Starting Version TN | 3034401000 |
| 33 | Ending Version TN | 3034401009 |
| 34 | Starting Version ID | 1000000000 |
| 35 | Ending Version ID | 1000000009 |
|  | Optional Data parameters (e.g., Alternative SPID, Alt-Billing ID, SMS URI) within the Optional Data Field are included/excluded based on a combination of the region’s support for a specific parameter AND the requesting Service Provider’s NPAC Customer profile settings at the time of BDD file generation.  The order of the included parameters is based on the latest version of the applicable LNP XML schema that is available on the NPAC website ([www.npac.com](http://www.npac.com), under the software releases section). | |
| subscriptionVersionRangeAttributeValueChange (\* if not a consecutive list) | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1003 |
| 3 | System Type | 0 |
| 4 | Notification ID | 15 |
| 5 | Object ID | 14 |
| 6 | New Service Provider Creation Time Stamp | 20050518231625 |
| 7 | New Service Provider Due Date | 20050530230000 |
| 8 | Old Service Provider Authorization Time Stamp |  |
| 9 | Old Service Provider Due Date |  |
| 10 | Old Service Provider Authorization |  |
| 11 | Conflict Time Stamp |  |
| 12 | Timer Type | 0  This attribute (pipes) is included if the Service Provider supports both Medium Timers and Timer Type attributes at the time of notification BDD generation. If the Service Provider does not support, the pipes are not included in the notification BDD. |
| 13 | Business Hours | 0  This attribute (pipes) is included if the Service Provider supports both Medium Timers and Business Hours attributes at the time of notification BDD generation. If the Service Provider does not support, the pipes are not included in the notification BDD. |
| 14 | New SP Medium Timer Indicator | 0  Not present if SOA does not support the Medium Timers Support Indicator at the time of notification BDD generation as shown in this example. If it were present the value would be as defined in the SV Requirements and Data Model. |
| 15 | Old SP Medium Timer Indicator | 0  Not present if SOA does not support the Medium Timers Support Indicator at the time of notification BDD generation as shown in this example. If it were present the value would be as defined in the SV Requirements and Data Model. |
|  | Fields 16 through 30 are included/excluded based on S-3.00C notification priority setting at the time of BDD file generation. | |
| 16 | LRN | 1234567890 |
| 17 | CLASS DPC | 123123123 (This value is 3 octets) |
| 18 | CLASS SSN | 123 (This value is 1 octet and usually set to 000) |
| 19 | LIDB DPC | 123123123 (This value is 3 octets) |
| 20 | LIDB SSN | 123 (This value is 1 octet and usually set to 000) |
| 21 | CNAM DPC | 123123123 (This value is 3 octets) |
| 22 | CNAM SSN | 123 (This value is 1 octet and usually set to 000) |
| 23 | ISVM DPC | 123123123 (This value is 3 octets) |
| 24 | ISVM SSN | 123 (This value is 1 octet and usually set to 000) |
| 25 | WSMSC DPC | Not present if LSMS or SOA does not support the WSMSC DPC as shown in this example. If it were present the value would be in the same format as other DPC data. |
| 26 | WSMSC SSN | Not present if LSMS or SOA does not support the WSMSC SSN as shown in this example. If it were present the value would be in the same format as other SSN data. |
| 27 | Billing Id | 0001 |
| 28 | End User Location Value | 123456789012 |
| 29 | End User Location Type | 12 |
| 30 | SV Type | Not present if LSMS or SOA does not support the SV Type as shown in this example. If it were present the value would be as defined in the SV Data Model. |
| 31 | Range Type Format | 2 |
| 32 | Starting Version TN | 3034401000 |
| 33 | Ending Version TN | 3034401009 |
| 34 | Variable Field Length | Indicates the number of dynamic values for the following field (e.g. 10). |
| 35 | Version ID | 1000000000 |
| 36 | Version ID | 1000000013 |
| 37 | … Version ID “n” | 1000000016 |
|  | Optional Data parameters (e.g., Alternative SPID, Alt-Billing ID, SMS URI) within the Optional Data Field are included/excluded based on a combination of the region’s support for a specific parameter AND the requesting Service Provider’s NPAC Customer profile settings at the time of BDD file generation.  The order of the included parameters is based on the latest version of the applicable LNP XML schema that is available on the NPAC website ([www.npac.com](http://www.npac.com), under the software releases section). | |
| subscriptionAudit-DiscrepancyRpt | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1003 |
| 3 | System Type | 0 |
| 4 | Notification ID | 2 |
| 5 | Object ID | 19 |
| 6 | Service Provider ID | 0001 |
| 7 | Audit Failure Reason | 2 |
| 8 | Audit Discrepancy TN | 3034401212 |
| 9 | Version ID | 1000000009 |
| subscriptionAuditResults | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1003 |
| 3 | System Type | 0 |
| 4 | Notification ID | 3 |
| 5 | Object ID | 19 |
| 6 | Audit Results Status | 2 |
| 7 | Number of Discrepancies | 1 |
| 8 | Time of Completion | 20050521121419 |
| 9 | Variable Field Length | Indicates the number of dynamic values for the following field (e.g. 3)  Note: If there aren’t any Service Providers on the Failed list then the last field will be Time of Completion. |
| 10 | Failed Service Provider ID – Failed Service Provider Name | 2091-TelX |
| 11 | Failed Service Provider ID – Failed Service Provider Name | 3124-TelN |
| 12 | Failed Service Provider ID – Failed Service Provider Name . . . | 3092-TelY |
| subscriptionAudit-objectCreation | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1003 |
| 3 | System Type | 0 |
| 4 | Notification ID | 1006 |
| 5 | Object ID | 19 |
| 6 | Audit ID | 5303 |
| subscription Audit-objectDeletion | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1003 |
| 3 | System Type | 0 |
| 4 | Notification ID | 1007 |
| 5 | Object ID | 19 |
| 6 | Audit ID | 5049 |
| lnpNPAC-SMS-Operational-Information | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 0001 |
| 3 | System Type | 0 |
| 4 | Notification ID | 1 |
| 5 | Object ID | 12 |
| 6 | Maintenance Start Time | 20050530020000 |
| 7 | Maintenance End Time | 20050530060000 |
| 8 | NPAC Contact Number | 8883321000 |
| 9 | Additional Downtime Information | (graphic string 255) |
| subscriptionVersionNewNPA-NXX | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 0001 |
| 3 | System Type | 0 |
| 4 | Notification ID | 8 |
| 5 | Object ID | (21/12)  \* If this notification is generated by a subscription, then object ID= 21. If this notification is generated by a number pool block, then object ID=12. |
| 6 | NPA-NXX ID | 2853 |
| 7 | NPA-NXX | 303440 |
| 8 | NPA-NXX Effective Time Stamp | 19960101155555 |
| 9 | Service Provider ID | 1003 |
| subscriptionVersionOldSPFinalConcurrenceWindowExpiration | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 0001 |
| 3 | System Type | 0 |
| 4 | Notification ID | 12 |
| 5 | Object ID | 21 |
| 6 | Subscription Timer Type | 0 |
| 7 | Subscription Business Type | 1 |
| 8 | Version TN | 3034401000 |
| 9 | Version ID | 1234567890 |
| subscriptionVersionRangeOldSPFinalConcurrenceWindowExpiration (\* if a consecutive list) | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1003 |
| 3 | System Type | 0 |
| 4 | Notification ID | 21 |
| 5 | Object ID | 14 |
| 6 | Subscription Timer Type | 0 |
| 7 | Subscription Business Type | 1 |
| 8 | Range Type Format | 1 |
| 9 | Starting Version TN | 3034401000 |
| 10 | Ending Version TN | 3034401009 |
| 11 | Starting Version ID | 1234567000 |
| 12 | Ending Version ID | 1234567010 |
| subscriptionVersionRangeOldSPFinalConcurrenceWindowExpiration (\* if not a consecutive list) | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1003 |
| 3 | System Type | 0 |
| 4 | Notification ID | 21 |
| 5 | Object ID | 14 |
| 6 | Subscription Timer Type | 0 |
| 7 | Subscription Business Type | 1 |
| 8 | Range Type Format | 2 |
| 9 | Starting Version TN | 3034401000 |
| 10 | Ending Version TN | 3034401009 |
| 11 | Variable Field Length | Indicates the number of dynamic values for the following field (e.g. 10). |
| 12 | Version ID | 1230000000 |
| 13 | Version ID | 1230000012 |
| 14 | Version ID | 1230000019 |
| 15 | … Version ID “n” | 1230000024 |
| numberPoolBlock-objectCreation | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1003 |
| 3 | System Type | 0 |
| 4 | Notification ID | 1006 |
| 5 | Object ID | 30 |
| 6 | Number Pool Block Creation Time Stamp | 20050501122000 |
| 7 | Number Pool Block ID | 4421 |
| 8 | Number Pool Block NPA-NXX-X | 3033005 |
| 9 | Block Holder SPID | 0001 |
| 10 | SOA Origination | 1 |
| 11 | LRN | 7193000000 |
| 12 | CLASS DPC | 123123123 (This value is 3 octets) |
| 13 | CLASS SSN | 123 (This value is 1 octet and usually set to 000) |
| 14 | LIDB DPC | 123123123 (This value is 3 octets) |
| 15 | LIDB SSN | 123 (This value is 1 octet and usually set to 000) |
| 16 | CNAM DPC | 123123123 (This value is 3 octets) |
| 17 | CNAM SSN | 123 (This value is 1 octet and usually set to 000) |
| 18 | ISVM DPC | 123123123 (This value is 3 octets) |
| 19 | ISVM SSN | 123 (This value is 1 octet and usually set to 000) |
| 20 | WSMSC DPC | 123123123 (This value is 3 octets) |
| 21 | WSMSC SSN | 123 (This value is 1 octet and usually set to 000) |
| 22 | Number Pool Block Status | 1 |
| 23 | SV Type | 0  This attribute (pipes) is included if the Service Provider supports SV Type at the time of notification BDD generation. If the Service Provider does not support SV Type at the time of notification, the pipes are not included in the notification BDD.  Data for this attribute is included if the attribute was included in the original notification which depends on whether or not the Service Provider supported SV Type at the time of notification generation. |
|  | Optional Data parameters (e.g., Alternative SPID, Alt-Billing ID, SMS URI) within the Optional Data Field are included/excluded based on a combination of the region’s support for a specific parameter AND the requesting Service Provider’s NPAC Customer profile settings at the time of BDD file generation.  The order of the included parameters is based on the latest version of the applicable LNP XML schema that is available on the NPAC website ([www.npac.com](http://www.npac.com), under the software releases section). | |
| numberPoolBlock-attributeValueChange | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1003 |
| 3 | System Type | 0 |
| 4 | Notification ID | 1001 |
| 5 | Object ID | 30 |
| 6 | Number Pool Block ID | 1290 |
| 7 | Number Pool Block NPA-NXX-X | 3033006 |
| 8 | SOA Origination | 1 |
| 9 | LRN | 7193000000 |
| 10 | CLASS DPC | 123123123 (This value is 3 octets) |
| 11 | CLASS SSN | 123 (This value is 1 octet and usually set to 000) |
| 12 | LIDB DPC | 123123123 (This value is 3 octets) |
| 13 | LIDB SSN | 123 (This value is 1 octet and usually set to 000) |
| 14 | CNAM DPC | 123123123 (This value is 3 octets) |
| 15 | CNAM SSN | 123 (This value is 1 octet and usually set to 000) |
| 16 | ISVM DPC | 123123123 (This value is 3 octets) |
| 17 | ISVM SSN | 123 (This value is 1 octet and usually set to 000) |
| 18 | WSMSC DPC | 123123123 (This value is 3 octets) |
| 19 | WSMSC SSN | 123 (This value is 1 octet and usually set to 000) |
| 20 | SV Type | 0  This attribute (pipes) is included if the Service Provider supports SV Type at the time of notification BDD generation. If the Service Provider does not support SV Type at the time of notification, the pipes are not included in the notification BDD.  Data for this attribute is included if the attribute was included in the original notification which depends on whether or not the Service Provider supported SV Type at the time of notification generation. |
|  | Optional Data parameters (e.g., Alternative SPID, Alt-Billing ID, SMS URI) within the Optional Data Field are included/excluded based on a combination of the region’s support for a specific parameter AND the requesting Service Provider’s NPAC Customer profile settings at the time of BDD file generation.  The order of the included parameters is based on the latest version of the applicable LNP XML schema that is available on the NPAC website ([www.npac.com](http://www.npac.com), under the software releases section). | |
| numberPoolBlockStatusAttributeValueChange | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1003 |
| 3 | System Type | 0 |
| 4 | Notification ID | 13 |
| 5 | Object ID | 30 |
| 6 | Number Pool Block ID | 3240 |
| 7 | Number Pool Block NPA-NXX-X | 3033006 |
| 8 | Block Status | 4 |
| 9 | Variable Field Length | Indicates the number of dynamic values for the following field (e.g. 3).  Note: If there aren’t any Service Providers on the Failed list then the last field will be the Block Status. |
| 10 | (failed list) Service Provider ID – Service Provider Name | 2003-TelCo |
| 11 | (failed list) Service Provider ID – Service Provider Name | 2910-Tel S |
| 12 | … | 1034-Tel M |
| subscriptionVersionNewSP-FinalCreateWindowExpiration | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 0001 |
| 3 | System Type | 0 |
| 4 | Notification ID | 23 |
| 5 | Object ID | 21 |
| 6 | New Current Service Provider ID | 1234 |
| 7 | Old Service Provider ID | 2001 |
| 8 | Old Service Provider Due Date | 20050530230000 |
| 9 | Old SP Authorization | 0 |
| 10 | Old SP Authorization Time Stamp | 20050520125032 |
| 11 | Status Change Cause Code | 50 |
| 12 | Subscription Timer Type | 0 |
| 13 | Subscription Business Type | 1 |
| 14 | Version TN | 1232201999 |
| 15 | Version ID | 1234567890 |
| subscriptionVersionRangeNewSP-FinalCreateWindow (\* if a consecutive list) | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1003 |
| 3 | System Type | 0 |
| 4 | Notification ID | 22 |
| 5 | Object ID | 14 |
| 6 | New Current Service Provider ID | 1234 |
| 7 | Old Service Provider ID | 2001 |
| 8 | Old Service Provider Due Date | 20050530230000 |
| 9 | Old Service Provider Authorization | 0 |
| 10 | Old Service Provider Authorization Time Stamp | 20050520123045 |
| 11 | Status Change Cause Code | 50 |
| 12 | Subscription Timer Type | 0 |
| 13 | Subscription Business Type | 1 |
| 14 | Range Type Format | 1 |
| 15 | Starting Version TN | 3034401000 |
| 16 | Ending Version TN | 3034401009 |
| 17 | Starting Version ID | 1234567000 |
| 18 | Ending Version ID | 1234567010 |
| subscriptionVersionRangeNewSP-FinalCreateWindowExpiration (\* if not a consecutive list) | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1003 |
| 3 | System Type | 0 |
| 4 | Notification ID | 22 |
| 5 | Object ID | 14 |
| 6 | New Current Service Provider ID | 1234 |
| 7 | Old Service Provider ID | 2001 |
| 8 | Old Service Provider Due Date | 20050530230000 |
| 9 | Old Service Provider Authorization | 0 |
| 10 | Old Service Provider Authorization TimeStamp | 20050530231632 |
| 11 | Status Change Cause Code | 50 |
| 12 | Subscription Timer Type | 0 |
| 13 | Subscription Business Type | 1 |
| 14 | Range Type Format | 2 |
| 15 | Starting Version TN | 3034401000 |
| 16 | Ending Version TN | 3034401009 |
| 17 | Variable Field Length | Indicates the number of dynamic values for the following field (e.g. 10). |
| 18 | Version ID | 2340000000 |
| 19 | Version ID | 2340000016 |
| 20 | … Version ID “n” | 2340000023 |
| LSMS Notifications | | |
| lnpNPAC-SMS-Operational-Information | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 0001 |
| 3 | System Type | 1 |
| 4 | Notification ID | 1 |
| 5 | Object ID | 12 |
| 6 | Maintenance Start Time | 20050530020000 |
| 7 | Maintenance End Time | 20050530060000 |
| 8 | NPAC Contact Number | 8883321000 |
| 9 | Additional Download Time Information | (graphic string 255) |
| subscriptionVersionNewNPA-NXX | | |
| 1 | Creation TimeStamp | For example: 19960101155555  If the notification contains a Message Origination TimeStamp, then it will be used in place of the Creation TimeStamp. The Creation TimeStamp uses the format yyyymmddhhmmss, and the Message Origination TimeStamp uses the format yyyymmddhhmmss.fff. |
| 2 | Service Provider ID | 1003 |
| 3 | System Type | 1 |
| 4 | Notification ID | 8 |
| 5 | Object ID | (21/12) (If this notification is generated by a subscription version, then Object ID=21. If this notification is generated by a pooled block, then Object ID=12. |
| 6 | NPA-NXX ID | 1239 |
| 7 | NPA-NXX | 303400 |
| 8 | NPA-NXX Effective Time Stamp | 050501120019 |
| 9 | Service Provider ID | 0001 |

Table E–7 -- Explanation of the Fields in the Notification Download File