**Origination Date:** 8/31/09

**Originator:** LNPAWG

### Change Order Number: NANC 441

**Description:** FCC Order, SOA Indicator

**Functionally Backward Compatible:** Yes

## IMPACT/CHANGE ASSESSMENT

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

**Business Need:**

(As extracted from the LNPAWG “Recommended Plan for Implementation of FCC Order 09-41”, version 3, 9/17/09)

On May 13, 2009, the Federal Communications Commission (FCC) adopted and released FCC Order 09-41, which mandates industry implementation of a one Business Day porting interval for simple ports.

During the development of the recommended requirements in support of FCC Order 09-41, the LNPAWG identified the following Change Orders required for the NPAC to support the shortened porting interval. These changes in the NPAC will also require changes in Service Provider local systems, e.g., SOA, LSMS, Operational Support Systems (OSSs), etc.

It is necessary for the LNPA WG to develop the detailed technical requirements for these Change Orders in order for NPAC, local system vendors, and Service Providers to develop and implement the software changes in time to meet the mandated implementation date. The development and finalization of these technical requirements will begin immediately.

At a high level, two Change Orders have been identified for development:

* A new additional NPAC timer set (called Medium timers) in support of the shortened interval.
* A method for the NPAC to determine which timer set to utilize on a port.

This change order addresses the need for the implementation of a method for the NPAC to determine which timer set to use in order to support the one Business Day porting interval for simple ports.

**Description of Change:**

Two new SOA attributes will be added to support a shortened porting interval for simple ports (wireline, intermodal) as defined in FCC Order 09-41. This will apply to Subscription Versions, but not to Number Pool Blocks.

In the Service Provider Profile, a new support tunable will be added for NANC 440 (Medium Timers Support Indicator). In addition to indicating support of Medium Timers, this new tunable will identify whether or not an SP supports the use of the new SV attributes. This is needed because of the two-stage implementation (nine months for large carriers, and fifteen months for small carriers), as well as carriers that may obtain a waiver from the FCC on implementation.

The new SV attributes are:

* New SP Medium Timer Indicator
* Old SP Medium Timer Indicator

If a SOA supports the New SP/Old SP Medium Timer Indicator (based on their Medium Timers Support Indicator setting), the new attribute must be sent up in their inter-SP SV Create message, if not their message will be rejected. If a SOA does not support the New SP/Old SP Medium Timer Indicator, they must not send the new attribute up in their inter-SP SV Create message, if they do their message will be rejected. If a SOA that supports the New SP/Old SP Medium Timer Indicator sends up the new attributes in their intra-SP SV Create message, the attributes are ignored.

Since only the Old SP is in a definitive position to determine if a port is simple:

* Modify requests from the New SP for the New SP Medium Timer Indicator will be supported only until the Old SP sends their Create message.
* Modify requests from the Old SP for the Old SP Medium Timer Indicator will be supported until the port is activated.

Modifies of the Old or New Medium Timer Indicator will cause a restart to T1 when the NPAC has received a create message from only one service provider. If both create messages have been received, T1 will not be restarted. Because the T1 timer can be restarted, New Service Providers may need to be included in the notification of T2 expirations for Old Service Provider concurrence. A Service Provider notification priority category will be added to allow a Service Provider to opt-in on receiving T2 expiration notifications as the New Service Provider for lack of Old Service Provider concurrence. Sending a notification to the New Service Provider at T2 expiration avoids the need for the New Service Provider to track NPAC timers, which eliminates the need to inform them of a new timestamp when T1/T2 is restarted. In cases where a modify request was sent with the same value (true -> true, false -> false), a notification will still be sent (as done with current behavior on modifies to the same value), but the T1/T2 will not be cancelled, T1 will not be restarted, and neither Timer Type nor Business Type will be included in the notification.

Both the NPAC Ops GUI and the NPAC LTI GUI will support these Create and Modify features upon initial rollout.

The NPAC will use the values of the New SP/Old SP Medium Timer Indicators sent in the SV Create messages (or information in the SP Profile if not supported) to determine the usage of the Medium Timers for a given SV. This New SP/Old SP Medium Timer Indicator information will be broadcast to the SOAs upon creation/concurrence of the SV (object creation notification and attribute value change notification), for those SOA associations optioned “on” to send and receive this data (NANC 440, Medium Timers Support Indicator).

When both SPs support the Medium Timers Support Indicators, and the values specified by the New Service Provider and Old Service Provider are different, the value specified by the Old Service Provider will prevail (if necessary, the SV Timer Type and Business Type will be changed). Even though T1 and T2 concurrence timers have expired, the change is applicable because subsequent conflict or cancellation acknowledgement timers will use the value contained in the Timer Type attribute and Business Type attribute on the SV to determine conflict or cancellation duration. This updated Timer Type and Business Type information will be sent to both the New Service Provider and the Old Service Provider in an Attribute Value Change notification. If Old Service Provider does not send up their Create, the SV would remain with whatever value is specified in the New Service Provider Create.

These new attributes shall be added to the notification Bulk Data Download file, and be available to a Service Provider’s SOA.

These new attributes will be supported across the interface on an opt-in basis only and will be functionally backward compatible.

All references in the Processing Rules below that refer to “Short” and “Long” relate to the Timer Type settings in the Service Provider’s Profile (Port-In Timer Type, Port-Out Timer Type).

Processing Rules where one or both SPs do **not** support the Medium Timers Support Indicator:

* BAU (Business As Usual)
* Short + Short = Short
* Everything else =Long

Processing Rules where both SPs do support the Medium Timers Support Indicator:

* NSP is Short, OSP is Short, SV is Short regardless of Indicators
* NSP is Short, OSP is Long, (Note: NSP Short/OSP Long, NSP Long/OSP Short, and NSP Long/OSP Long all have the same behavior.)
	+ NSP is First Create,
		- SOA Indicator on SV Create is F (non-simple), SV uses Long,
			* OSP is second Create,
				+ SOA Indicator on SV Create is F (non-simple), SV remains Long
				+ SOA Indicator on SV Create is T (simple), SV switches to Medium
			* OSP does not concur, SV remains Long
		- SOA Indicator on SV Create is T (simple), SV uses Medium,
			* OSP is second Create,
				+ SOA Indicator on SV Create is F (non-simple), SV switches to Long
				+ SOA Indicator on SV Create is T (simple), SV remains Medium
			* OSP does not concur, SV remains Medium
	+ OSP is First Create,
		- SOA Indicator on SV Create is F (non-simple), SV uses Long,
			* NSP is second Create,
				+ SOA Indicator on SV Create is F (non-simple), SV remains Long
				+ SOA Indicator on SV Create is T (simple), SV remains Long
		- SOA Indicator on SV Create is T (simple), SV uses Medium,
			* NSP is second Create,
				+ SOA Indicator on SV Create is F (non-simple), SV remains Medium
				+ SOA Indicator on SV Create is T (simple), SV remains Medium
* NSP is Long , OSP is Short, (Note: NSP Short/OSP Long, NSP Long/OSP Short, and NSP Long/OSP Long all have the same behavior.)
	+ NSP is First Create,
		- SOA Indicator on SV Create is F (non-simple), SV uses Long,
			* OSP is second Create,
				+ SOA Indicator on SV Create is F (non-simple), SV remains Long
				+ SOA Indicator on SV Create is T (simple), SV switches to Medium
			* OSP does not concur, SV remains Long
		- SOA Indicator on SV Create is T (simple), SV uses Medium,
			* OSP is second Create,
				+ SOA Indicator on SV Create is F (non-simple), SV switches to Long
				+ SOA Indicator on SV Create is T (simple), SV remains Medium
			* OSP does not concur, SV remains Medium
	+ OSP is First Create,
		- SOA Indicator on SV Create is F (non-simple), SV uses Long,
			* NSP is second Create,
				+ SOA Indicator on SV Create is F (non-simple), SV remains Long
				+ SOA Indicator on SV Create is T (simple), SV remains Long
		- SOA Indicator on SV Create is T (simple), SV uses Medium,
			* NSP is second Create,
				+ SOA Indicator on SV Create is F (non-simple), SV remains Medium
				+ SOA Indicator on SV Create is T (simple), SV remains Medium
* NSP is Long , OSP is Long, (Note: NSP Short/OSP Long, NSP Long/OSP Short, and NSP Long/OSP Long all have the same behavior.)
	+ NSP is First Create,
		- SOA Indicator on SV Create is F (non-simple), SV uses Long,
			* OSP is second Create,
				+ SOA Indicator on SV Create is F (non-simple), SV remains Long
				+ SOA Indicator on SV Create is T (simple), SV switches to Medium
			* OSP does not concur, SV remains Long
		- SOA Indicator on SV Create is T (simple), SV uses Medium,
			* OSP is second Create,
				+ SOA Indicator on SV Create is F (non-simple), SV switches to Long
				+ SOA Indicator on SV Create is T (simple), SV remains Medium
			* OSP does not concur, SV remains Medium
	+ OSP is First Create,
		- SOA Indicator on SV Create is F (non-simple), SV uses Long,
			* NSP is second Create,
				+ SOA Indicator on SV Create is F (non-simple), SV remains Long
				+ SOA Indicator on SV Create is T (simple), SV remains Long
		- SOA Indicator on SV Create is T (simple), SV uses Medium,
			* NSP is second Create,
				+ SOA Indicator on SV Create is F (non-simple), SV remains Medium
				+ SOA Indicator on SV Create is T (simple), SV remains Medium

Anytime the NPAC sets the Timer Type to Medium for a port, the Business Type will also be set to Medium (e.g., Medium Timers, Medium Business Hours and Medium Business days are assigned as a complete set).

**Open Issues:**

None.

**FRS:**

Section 3.1, NPAC SMS Data Models

Add new indicators for the SOA SV Medium Timers. See below:

| **Subscription Version Data MODEL** |
| --- |
| **Attribute Name** | **Type (Size)** | **Required** | **Description** |
| [snip] |  |  |  |
| New SP Medium Timer Indicator | B | √ | A Boolean that indicates whether the NPAC Customer views this SV as a simple port using Medium Timers when they are the New SP.This field is only required if the service provider supports Medium Timers. |
| Old SP Medium Timer Indicator | B | √ | A Boolean that indicates whether the NPAC Customer views this SV as a simple port using Medium Timers when they are the Old SP.This field is only required if the service provider supports Medium Timers. |
| [snip] |  |  |  |

Table 3‑6 Subscription Version Data Model

R5‑14 Create Subscription Version - Old Service Provider Input Data

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

1. [snip]
2. Old SP Medium Timer Indicator – indication that Old SP considers this a simple port using Medium Timers. (if supported by the Service Provider SOA)

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. [snip]
2. New SP Medium Timer Indicator – indication that New SP considers this a simple port using Medium Timers. (if supported by the Service Provider SOA)

R5-15.2 Create “Inter-Service Provider porting to original” 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 “porting to original” port:

1. [snip]
2. New SP Medium Timer Indicator – indication that New SP considers this a simple port using Medium Timers. (if supported by the Service Provider SOA)

R5‑18.1 Create Subscription Version - Field-level Data Validation

NPAC SMS shall perform field-level data validations to ensure that the value formats for the following input data, if supplied, is valid according to the formats specified in Table 3-6 upon Subscription Version creation for an Inter-Service Provider port:

1. [snip]
2. New SP Medium Timer Indicator – indication that New SP considers this a simple port using Medium Timers. (if supported by the Service Provider SOA)
3. Old SP Medium Timer Indicator – indication that Old SP considers this a simple port using Medium Timers. (if supported by the Service Provider SOA)

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:

1. [snip]
2. New SP Medium Timer Indicator – indication that New SP considers this a simple port using Medium Timers. (if supported by the Service Provider SOA)
3. Old SP Medium Timer Indicator – indication that Old SP considers this a simple port using Medium Timers. (if supported by the Service Provider SOA)

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.

Req-1 Create Intra-Service Provider Port –Medium Timers

NPAC SMS shall accept an intra-service provider Subscription Version Create message from NPAC Personnel or the Current (New) Service Provider, for a Service Provider that supports the New SP/Old SP Medium Timer Indicator, if any of the following attributes are specified:

1. New SP Medium Timer Indicator – this attribute is ignored.
2. Old SP Medium Timer Indicator – this attribute is ignored.

Req-2 Modify Subscription Version – New Service Provider - Medium Timers

NPAC SMS shall accept a Subscription Version Modify message from NPAC Personnel or the New Service Provider that includes the New SP Medium Timer Indicator until the NPAC SMS has successfully processed the Old SP Subscription Version create message.

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

NPAC SMS shall allow the following data to be modified in a pending or conflict Subscription Version for an Inter-Service Provider or Intra-Service Provider port by the new/current Service Provider or NPAC personnel: (reference NANC 399)

1. Location Routing Number (LRN) ‑ the identifier of the ported to switch.
2. Due Date ‑ date on which transfer of service from old facilities‑based Service Provider to new facilities-based Service Provider is planned to occur.
3. Class DPC
4. Class SSN
5. LIDB DPC
6. LIDB SSN
7. CNAM DPC
8. CNAM SSN
9. ISVM DPC
10. ISVM SSN
11. WSMSC DPC (if supported by the Service Provider SOA)
12. WSMSC SSN (if supported by the Service Provider SOA)
13. SV Type (if supported by the Service Provider SOA)
14. Alternative SPID (if supported by the Service Provider SOA)
15. New SP Medium Timer Indicator (if supported by the Service Provider SOA)

R5-27.2 Modify “porting to original” Subscription Version - New Service Provider Data Values

NPAC SMS shall allow the following data to be modified in a pending, or conflict Subscription Version for a “porting to original” port by the new Service Provider or NPAC personnel:

1. Due Date - New Service Provider date on which “port to original” is planned to occur.
2. New SP Medium Timer Indicator (if supported by the Service Provider SOA)

Req-2.1 Modify Subscription Version – Old Service Provider - Medium Timers

NPAC SMS shall accept a Subscription Version Modify message from NPAC Personnel or the Old Service Provider that includes the Old SP Medium Timer Indicator until the NPAC SMS has successfully processed the Subscription Version activate message from the New Service Provider.

R5‑27.3 Modify Subscription Version - Old Service Provider Data Values

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

1. Due Date ‑ date on which transfer of service from old facilities‑based Service Provider to new Service Provider is planned to occur.
2. Old Service Provider Authorization
3. Status Change Cause Code
4. Old SP Medium Timer Indicator (if supported by the Service Provider SOA)

R5‑29.1 Modify Subscription Version - Field-level Data Validation

NPAC SMS shall perform field-level data validations to ensure that the value formats for the following input data, if supplied, is valid according to the formats specified in Table 3-6 upon Subscription Version modification. (reference NANC 399)

1. LNP Type
2. Ported TN(s)
3. Old Service Provider Due Date
4. New Service Provider Due Date
5. Old Service Provider Authorization
6. Status Change Cause Code
7. Old Service Provider ID
8. New Service Provider ID
9. LRN
10. Class DPC
11. Class SSN
12. LIDB DPC
13. LIDB SSN
14. CNAM DPC
15. CNAM SSN
16. ISVM DPC
17. ISVM SSN
18. WSMSC DPC
19. WSMSC SSN
20. Billing Service Provider ID
21. End-User Location - Value
22. End-User Location - Type
23. SV Type (if supported by the Service Provider SOA)
24. Alternative SPID (if supported by the Service Provider SOA)
25. New SP Medium Timer Indicator (if supported by the New Service Provider SOA)
26. Old SP Medium Timer Indicator (if supported by the Old Service Provider SOA)

Req-2.2 Modify Subscription Version – Medium Timers – Timer Type Change

NPAC SMS shall upon receiving a Subscription Version Modify message from the Old or New Service Provider that modifies the New SP Medium Timer Indicator or the Old SP Medium Timer Indicator and causes a change in the Subscription Version Timer Type, delete any existing T1/T2 timer.

Req-2.3 Modify Subscription Version – Medium Timers – Restart T1 Timer

NPAC SMS shall upon receiving a Subscription Version Modify message from the Old or New Service Provider that modifies the New SP Medium Timer Indicator or the Old SP Medium Timer Indicator and causes a change in the Subscription Version Timer Type, restart a new T1 timer in cases where the NPAC has not received a create from both providers.

Req-3 Create/Modify Subscription Version – Medium Timers – Timer Type

NPAC SMS shall set the ***value*** of a Subscription Version Timer Type, based on SP Profile and Subscription Version data contained in Table Req-3.

Note: If one or both service providers don’t support Medium Timers the NPAC sets Timer Type and Business Type as specified in the existing requirements R5-19.3, R5-19.4, R5-19.5 and R5-19.6.

|  |
| --- |
| **NSP is Short, OSP is Short, Timer Type is Short regardless of Indicators** |
|  |
| **NSP is Short, OSP is Long** |
| NSP is First Create | NSP SOA Indicator is F | Timer set to: | Long |
|  | OSP SOA Indicator is F | Timer remains: | Long |
|  | OSP SOA Indicator is T | Timer switches to: | Medium |
|  | OSP no concur | Timer remains: | Long |
| NSP is First Create | NSP SOA Indicator is T | Timer set to: | Medium |
|  | OSP SOA Indicator is F | Timer switches to: | Long |
|  | OSP SOA Indicator is T | Timer remains: | Medium |
|  | OSP no concur | Timer remains: | Medium |
| OSP is First Create | OSP SOA Indicator is F | Timer set to: | Long |
|  | NSP SOA Indicator is F | Timer remains: | Long |
|  | NSP SOA Indicator is T | Timer remains: | Long |
| OSP is First Create | OSP SOA Indicator is T | Timer set to: | Medium |
|  | NSP SOA Indicator is F | Timer remains: | Medium |
|  | NSP SOA Indicator is T | Timer remains: | Medium |
|  |
| **NSP is Long, OSP is Short** |
| NSP is First Create | NSP SOA Indicator is F | Timer set to: | Long |
|  | OSP SOA Indicator is F | Timer remains: | Long |
|  | OSP SOA Indicator is T | Timer switches to: | Medium |
|  | OSP no concur | Timer remains: | Long |
| NSP is First Create | NSP SOA Indicator is T | Timer set to: | Medium |
|  | OSP SOA Indicator is F | Timer switches to: | Long |
|  | OSP SOA Indicator is T | Timer remains: | Medium |
|  | OSP no concur | Timer remains: | Medium |
| OSP is First Create | OSP SOA Indicator is F | Timer set to: | Long |
|  | NSP SOA Indicator is F | Timer remains: | Long |
|  | NSP SOA Indicator is T | Timer remains: | Long |
| OSP is First Create | OSP SOA Indicator is T | Timer set to: | Medium |
|  | NSP SOA Indicator is F | Timer remains: | Medium |
|  | NSP SOA Indicator is T | Timer remains: | Medium |
|  |
| **NSP is Long, OSP is Long** |
| NSP is First Create | NSP SOA Indicator is F | Timer set to: | Long |
|  | OSP SOA Indicator is F | Timer remains: | Long |
|  | OSP SOA Indicator is T | Timer switches to: | Medium |
|  | OSP no concur | Timer remains: | Long |
| NSP is First Create | NSP SOA Indicator is T | Timer set to: | Medium |
|  | OSP SOA Indicator is F | Timer switches to: | Long |
|  | OSP SOA Indicator is T | Timer remains: | Medium |
|  | OSP no concur | Timer remains: | Medium |
| OSP is First Create | OSP SOA Indicator is F | Timer set to: | Long |
|  | NSP SOA Indicator is F | Timer remains: | Long |
|  | NSP SOA Indicator is T | Timer remains: | Long |
| OSP is First Create | OSP SOA Indicator is T | Timer set to: | Medium |
|  | NSP SOA Indicator is F | Timer remains: | Medium |
|  | NSP SOA Indicator is T | Timer remains: | Medium |

Requirement Table Req-3—Medium Timers – Timer Type

Req-4 Create/Modify Subscription Version – Medium Timers – Business Type

NPAC SMS shall set the ***value*** of a Subscription Version Business Type to Medium anytime the Subscription Version Timer Type is set to Medium.

Note: Anytime the Timer Type is currently set to Medium and the NPAC changes it due to a modify SV request, a different Business Type value will be also set as specified in the existing requirements R5-19.5 and R5-19.6.

Req-5 Service Provider SOA Supports New SP Notification of Old SP T2 Expiration Indicator

Deleted.

Req-6 Service Provider SOA Supports New SP Notification of Old SP T2 Expiration Indicator Default

Deleted.

Req-7 Service Provider SOA Supports New SP Notification of Old SP T2 Expiration Indicator Modification

Deleted.

RR5-23.3 Old Service Provider Final Concurrence Timer Expiration Notification – Old SP

NPAC SMS shall upon expiration of the Final Concurrence Timer send a notification to the old service provider via the SOA to NPAC SMS interface to inform them of the timer expiration.

Req-8 Old Service Provider Final Concurrence Timer Expiration Notification – New SP

NPAC SMS shall upon expiration of the Final Concurrence Timer send a notification to the new service provider, based on the Subscription Version Old SP Final Concurrence Timer Expiration Notification priority setting, via the SOA to NPAC SMS interface to inform them of the timer expiration.

**Appendix C – SOA Notification Priority Tunables**

FRS, Table C-7, SOA Notification Priorities Tunables. Create a new row in L-12.0, Subscription Version Old SP Final Concurrence Timer Expiration Notification, making the existing notification Scenario A with the addition of the text in yellow, T2 expiration for Old SP concurrence sent to Old SP, and adding a new Scenario B: T2 expiration for Old SP concurrence sent to New SP, None.

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

NOTE: If a Service Provider supports New SP Medium Timers Indicator and Old SP Medium Timer Indicator, the format of the Bulk Data Download file will contain delimiters for the parameter.

|  |
| --- |
| subscriptionVersionNPAC-ObjectCreation |
| 1 | CreationTimeStamp | For example: 19960101155555 |
| [snip] |  |  |
| 888 | Timer Type | (This attribute will be included with the implementation of NANC 416. For NANC 441, a Timer Type value of 2 [Medium Timers] may be sent in the Object Creation Notification) |
| 888 | Business Type | (This attribute will be included with the implementation of NANC 416. For NANC 441, a Business Type value of 2 [Medium Timers] may be sent in the Object Creation Notification) |
| 999 | New SP Medium Timer Indicator | Not present if SOA does not support the Medium Timers Support Indicator 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. |
| 999 | Old SP Medium Timer Indicator | Not present if SOA does not support the Medium Timers Support Indicator 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. |
| subscriptionVersionRangeObjectCreation (\* if a consecutive list) |
| 1 | CreationTimeStamp | For example: 19960101155555 |
| [snip] |  |  |
| 888 | Timer Type | (This attribute will be included with the implementation of NANC 416. For NANC 441, a Timer Type value of 2 [Medium Timers] may be sent in the Object Creation Notification) |
| 888 | Business Type | (This attribute will be included with the implementation of NANC 416. For NANC 441, a Business Type value of 2 [Medium Timers] may be sent in the Object Creation Notification) |
| 999 | New SP Medium Timer Indicator | Not present if SOA does not support the Medium Timers Support Indicator 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. |
| 999 | Old SP Medium Timer Indicator | Not present if SOA does not support the Medium Timers Support Indicator 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. |
| subscriptionVersionRangeObjectCreation (\* if not a consecutive list) |
| 1 | CreationTimeStamp | For example: 19960101155555 |
| [snip] |  |  |
| 888 | Timer Type | (This attribute will be included with the implementation of NANC 416. For NANC 441, a Timer Type value of 2 [Medium Timers] may be sent in the Object Creation Notification) |
| 888 | Business Type | (This attribute will be included with the implementation of NANC 416. For NANC 441, a Business Type value of 2 [Medium Timers] may be sent in the Object Creation Notification) |
| 999 | New SP Medium Timer Indicator | Not present if SOA does not support the Medium Timers Support Indicator 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. |
| 999 | Old SP Medium Timer Indicator | Not present if SOA does not support the Medium Timers Support Indicator 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. |
| subscriptionVersionNPAC-attributeValueChange |
| 1 | Creation TimeStamp | For example: 19960101155555 |
| [snip] |  |  |
| 888 | Timer Type | Not present if SOA does not support the Medium Timers Support Indicator as shown in this example. If it were present the value would be as defined in the SV requirements and Data Model. |
| 888 | Business Type | Not present if SOA does not support the Medium Timers Support Indicator as shown in this example. If it were present the value would be as defined in the SV requirements and Data Model. |
| 999 | New SP Medium Timer Indicator | Not present if SOA does not support the Medium Timers Support Indicator as shown in this example. If it were present the value would be as defined in the SV requirements and Data Model. |
| 999 | Old SP Medium Timer Indicator | Not present if SOA does not support the Medium Timers Support Indicator as shown in this example. If it were present the value would be as defined in the SV requirements and Data Model. |
| subscriptionVersionRangeAttributeValueChange (\* if a consecutive list) |
| 1 | Creation TimeStamp | For example: 19960101155555 |
| [snip] |  |  |
| 888 | Timer Type | Not present if SOA does not support the Medium Timers Support Indicator as shown in this example. If it were present the value would be as defined in the SV requirements and Data Model. |
| 888 | Business Type | Not present if SOA does not support the Medium Timers Support Indicator as shown in this example. If it were present the value would be as defined in the SV requirements and Data Model. |
| 999 | New SP Medium Timer Indicator | Not present if SOA does not support the Medium Timers Support Indicator as shown in this example. If it were present the value would be as defined in the SV requirements and Data Model. |
| 999 | Old SP Medium Timer Indicator | Not present if SOA does not support the Medium Timers Support Indicator as shown in this example. If it were present the value would be as defined in the SV requirements and Data Model. |
| subscriptionVersionRangeAttributeValueChange (\* if not a consecutive list) |
| [snip] |  |  |
| 888 | Timer Type | Not present if SOA does not support the Medium Timers Support Indicator as shown in this example. If it were present the value would be as defined in the SV requirements and Data Model. |
| 888 | Business Type | Not present if SOA does not support the Medium Timers Support Indicator as shown in this example. If it were present the value would be as defined in the SV requirements and Data Model. |
| 999 | New SP Medium Timer Indicator | Not present if SOA does not support the Medium Timers Support Indicator as shown in this example. If it were present the value would be as defined in the SV requirements and Data Model. |
| 999 | Old SP Medium Timer Indicator | Not present if SOA does not support the Medium Timers Support Indicator as shown in this example. If it were present the value would be as defined in the SV requirements and Data Model. |

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

**IIS:**

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

Flow B.5.1.1 – Subscription Version Create by the Initial SOA (Old Service Provider)

 [snip]

The old service provider SOA must specify the following valid attributes:

[snip]

subscriptionOldSPMediumTimerIndicator – if supported by the Service Provider SOA

[snip]

Step 5.

If the M-ACTION was successful, the NPAC SMS issues, depending upon the old service provider’s TN Range Notification Indicator, an objectCreation or subscriptionVersionRangeObjectCreation M-EVENT-REPORT containing the following attributes to old service provider SOA of subscriptionVersionNPAC creation:

subscriptionVersionID

subscriptionTN

subscriptionOldSP

subscriptionNewCurrentSP

subscriptionOldSp-DueDate

subscriptionOldSP-Authorization

subscriptionOldSP-AuthorizationTimeStamp

subscriptionStatusChangeCauseCode - (if subscriptionOldSP – Authorization set to false)

subscriptionVersionStatus

subscriptionVersionConflictTimeStamp – (if subscriptionOldSP – Authorization set to false)

subscriptionTimerType – if supported by the Service Provider

subscriptionBusinessType – if supported by the Service Provider

subscriptionOldSPMediumTimerIndicator – if supported by the Service Provider SOA

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

[snip]

The new service provider SOA must specify the following valid attributes:

[snip]

subscriptionNewSPMediumTimerIndicator – if supported by the Service Provider SOA

[snip]

Step 5.

If the M-ACTION was successful, NPAC SMS issues, depending upon the old service provider’s TN Range Notification Indicator, an objectCreation or subscriptionVersionRangeObjectCreation M-EVENT-REPORT containing the following attributes to old service provider SOA of subscriptionVersionNPAC creation:

subscriptionVersionID

subscriptionTN

subscriptionOldSP

subscriptionNewCurrentSP

subscriptionNewSP-CreationTimeStamp

subscriptionVersionStatus

subscriptionNewSP-DueDate

subscriptionTimerType – if supported by the Service Provider SOA

subscriptionBusinessType – if supported by the Service Provider SOA

subscriptionNewSPMediumTimerIndicator – if supported by the Service Provider SOA

[snip]

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

[snip]

The new service provider SOA must specify the following valid attributes:

[snip]

subscriptionNewSPMediumTimerIndicator – if supported by the Service Provider SOA

Step 4.

If the M-ACTION was successful, the NPAC SMS issues, depending upon the old service provider’s TN Range Notification Indicator, an attributeValueChange or subscriptionVersionRangeAttributeValueChange M-EVENT-REPORT with the following attributes to the old service provider when the subscriptionNewSP-DueDate changes value.

subscriptionNewSP-DueDate

subscriptionNewSP-CreationTimeStamp

subscriptionNewSPMediumTimerIndicator – if supported by the Service Provider SOA

If the M-ACTION was successful, the NPAC SMS issues, depending upon the new service provider’s TN Range Notification Indicator, an attributeValueChange or subscriptionVersionRangeAttributeValueChange M-EVENT-REPORT to the new service provider for all attributes updated from the preceding list of modifiable attributes in addition to the following:

subscriptionNewSP-DueDate

subscriptionNewSP-CreationTimeStamp

subscriptionNewSPMediumTimerIndicator – if supported by the Service Provider SOA

Flow B.5.1.4 – Subscription Version Create by Second SOA (Old Service Provider)

[snip]

The old service provider SOA must specify the following valid attributes:

[snip]

subscriptionOldSPMediumTimerIndicator – if supported by the Service Provider SOA

[snip]

Step 5.

If the M-ACTION was successful, the NPAC SMS issues, depending upon the old service provider’s TN Range Notification Indicator, an attributeValueChange or subscriptionVersionRangeAttributeValueChange M-EVENT-REPORT attribute value change to the old service provider for all attributes updated from the following list:

[snip]

subscriptionTimerType – if supported by the Service Provider SOA and the value changed as a result of the OldSP-Create Action.

subscriptionBusinessType – if supported by the Service Provider SOA and the value changed as a result of the OldSP-Create Action.

subscriptionOldSPMediumTimerIndicator – if supported by the Service Provider SOA

[snip]

Step 7.

If the M-ACTION was successful, the NPAC SMS issues, depending upon the new service provider’s TN Range Notification Indicator, an attributeValueChange or subscriptionVersionRangeAttributeValueChange M-EVENT-REPORT attribute value change to the new service provider for all attributes updated from the following list:

[snip]

subscriptionTimerType – if supported by the Service Provider SOA and the value changed as a result of the OldSP-Create Action.

subscriptionBusinessType – if supported by the Service Provider SOA and the value changed as a result of the OldSP-Create Action.

subscriptionOldSPMediumTimerIndicator – if supported by the Service Provider SOA

Flow B.5.1.6.3 – Subscription Version Create: No Create Action from the Old Service Provider SOA After Final Concurrence Window

[snip]

1. NPAC SMS sends the new service provider, if they support the notification according to their NPAC Customer SOA Supports New SP Notification of Old SP T2 Expiration Indicator in their service provider profile on the NPAC SMS, of the expiration of the final concurrence window where the old service provider did not send up a Create action for this subscription version, depending upon the new service provider’s TN Range Notification Indicator, a subscriptionVersionOldSPFinalConcurrenceWindowExpiration or subscriptionVersionRangeOldSPFinalConcurrenceWindowExpiration M-EVENT-REPORT.
2. The new service provider SOA returns an M-EVENT-REPORT confirmation to the NPAC SMS.

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

[snip]

The request will be accepted, and any of the following attributes will be ignored:

subscriptionNewSPMediumTimerIndicator

subscriptionOldSPMediumTimerIndicator

Flow B.5.6 – Subscription Version Query

[snip]

The query return data includes:

[snip]

subscriptionNewSPMediumTimerIndicator – if supported by the Service Provider SOA

subscriptionOldSPMediumTimerIndicator – if supported by the Service Provider SOA

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.

**Flow B.5.2.3 - SubscriptionVersion Modify Prior to Activate Using M-ACTION**

The old service provider can only update the following attributes:

[snip]
subscriptionOldSPMediumTimerIndicator – if supported by the Old Service Provider SOA

The new service provider can only update the attributes:

[snip]

subscriptionNewSPMediumTimerIndicator – if supported by the New Service Provider SOA

Step 5.

[snip]
subscriptionTimerType – if supported by the Service Provider SOA.

subscriptionBusinessType – if supported by the Service Provider SOA.

subscriptionOldSPMediumTimerIndicator – if supported by the Old Service Provider SOA

subscriptionNewSPMediumTimerIndicator – if supported by the New Service Provider SOA

Step 7.

[snip]

subscriptionTimerType – if supported by the Service Provider SOA.

subscriptionBusinessType – if supported by the Service Provider SOA.
subscriptionOldSPMediumTimerIndicator – if supported by the Old Service Provider SOA

subscriptionNewSPMediumTimerIndicator – if supported by the New Service Provider SOA

**Flow B.5.2.4 - SubscriptionVersion Modify Prior to Activate Using M-SET**

The old service provider can only update the following attributes:

[snip]
subscriptionOldSPMediumTimerIndicator – if supported by the Old Service Provider SOA

The new service provider can only update the attributes:

[snip]

subscriptionNewSPMediumTimerIndicator – if supported by the New Service Provider SOA

Step 3.

[snip]

subscriptionTimerType – if supported by the Service Provider SOA.

subscriptionBusinessType – if supported by the Service Provider SOA.
subscriptionOldSPMediumTimerIndicator – if supported by the Old Service Provider SOA

subscriptionNewSPMediumTimerIndicator – if supported by the New Service Provider SOA

Step 5.

[snip]

subscriptionTimerType – if supported by the Service Provider SOA.

subscriptionBusinessType – if supported by the Service Provider SOA.
subscriptionOldSPMediumTimerIndicator – if supported by the Old Service Provider SOA

subscriptionNewSPMediumTimerIndicator – if supported by the New Service Provider SOA

**GDMO:**

-- 21.0 LNP NPAC Subscription Version Managed Object Class

subscriptionVersionNPAC MANAGED OBJECT CLASS

 DERIVED FROM subscriptionVersion;

 CHARACTERIZED BY

 subscriptionVersionNPAC-Pkg;

 REGISTERED AS {LNP-OIDS.lnp-objectClass 21};

subscriptionVersionNPAC-Pkg PACKAGE

 BEHAVIOUR

 subscriptionVersionNPAC-Definition,

 subscriptionVersionNPAC-Behavior-1,

 subscriptionVersionNPAC-Behavior-2;

 ATTRIBUTES

subscriptionVersionStatus GET-REPLACE,

subscriptionOldSP GET-REPLACE,

subscriptionNewSP-DueDate GET-REPLACE,

subscriptionNewSP-CreationTimeStamp GET-REPLACE,

DueDate GET-REPLACE,

subscriptionOldSP-Authorization GET-REPLACE,

subscriptionStatusChangeCauseCode GET-REPLACE,

subscriptionOldSP-AuthorizationTimeStamp GET-REPLACE,

subscriptionBroadcastTimeStamp GET-REPLACE,

subscriptionConflictTimeStamp GET-REPLACE,

subscriptionCustomerDisconnectDate GET-REPLACE,

subscriptionEffectiveReleaseDate GET-REPLACE,

subscriptionDisconnectCompleteTimeStamp GET-REPLACE,

subscriptionCancellationTimeStamp GET-REPLACE,

subscriptionCreationTimeStamp GET-REPLACE,

subscriptionFailed-SP-List GET-REPLACE,

subscriptionModifiedTimeStamp GET-REPLACE,

subscriptionOldTimeStamp GET-REPLACE,

subscriptionOldSP-CancellationTimeStamp GET-REPLACE,

subscriptionNewSP-CancellationTimeStamp GET-REPLACE,

subscriptionOldSP-ConflictResolutionTimeStamp GET-REPLACE,

subscriptionNewSP-ConflictResolutionTimeStamp GET-REPLACE,

subscriptionPortingToOriginal-SPSwitch GET-REPLACE,

subscriptionPreCancellationStatus GET-REPLACE,

subscriptionTimerType GET-REPLACE,

subscriptionBusinessType GET-REPLACE,

subscriptionOldSPMediumTimerIndicator GET-REPLACE,

subscriptionNewSPMediumTimerIndicator GET-REPLACE;

NOTIFICATIONS

subscriptionVersionOldSP-ConcurrenceRequest,

subscriptionVersionNewSP-CreateRequest,

subscriptionVersionOldSPFinalConcurrenceWindowExpiration,

subscriptionVersionNewNPA-NXX,

subscriptionVersionCancellationAcknowledgeRequest,

subscriptionVersionDonorSP-CustomerDisconnectDate,

subscriptionVersionStatusAttributeValueChange,

subscriptionVersionNewSP-FinalCreateWindowExpiration,

"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2 : 1992":attributeValueChange

accessControlParameter phoneNumberParameter,

"CCITT Rec. X.721 (1992) | ISO/IEC 10165-2 : 1992":objectCreation

accessControlParameter;

[snip]

subscriptionVersionNPAC-Behavior-2 BEHAVIOUR

 DEFINED AS !

[snip]

The SOA attributes are: New SP Medium Timer Indicator and Old SP Medium Timer Indicator. If a SOA supports the New SP/Old SP Medium Timer Indicator (based on their Medium Timers Support Indicator setting), the new attribute must be sent up in their inter-SP SV Create message, if not their message will be rejected. If a SOA does not support the new SP/Old SP Medium Timer Indicator, they must not send the new attribute up in their inter-SP SV Create message, if they do their message will be rejected. If a SOA that supports the New SP/Old SP Medium Timer Indicator sends up the new attributes in their intra-SP SV Create message, the attributes are ignored. The new attribute is designed for SV Create and SV Modify messages. The Old SP may modify the Old SP Medium Timer Indicator after sending their Create message and before the subscription version is activated by the New SP. The New SP may modify the New SP Medium Timer Indicator until the NPAC receives the Create message from the Old SP. If the NPAC receives the Create message from the Old SP first, the New SP may not modify the New SP Medium Timer Indicator.

The NPAC will use the values of the New SP/Old SP Medium Timer Indicators sent in the SV Create/Modify messages (or information in the SP Profile if not supported) to determine the usage of the Medium Timers for a given SV. This New SP/Old SP Medium Timer Indicator information will be broadcast to the SOAs upon creation/concurrence/modification of the SV (object creation notification after the initial Create message and an attribute value change notification for a concurrence Create or Modify message), for those SOA associations optioned “on” to send and receive this data (Medium Timers Support Indicator).

When both SPs support the Medium Timers Support Indicators, and the values specified by the New Service Provider and Old Service Provider are different, the value specified by the Old Service Provider will prevail. If necessary, the SV Timer Type and Business Type will be changed. Even though T1 and T2 concurrence timers have expired, the change is applicable because subsequent conflict or cancellation acknowledgment timers will use the value contained in the Timer Type attribute and Business Type attribute on the SV to determine conflict or cancellation duration.

An intra-service provider port, for a service provider that supports the New SP Medium Timer Indicator or Old SP Medium Timer Indicator, will be accepted if the Medium Timer attributes are included in the request but they will be ignored.

Modification of the New SP Medium Timer Indicator or Old SP Medium Timer Indicator after the NPAC has received a Create message from only one provider will cause the NPAC to delete any existing T1 or T2 timer for the port and then restart a new T1 timer. When the NPAC has received a Create message from both the New and Old SPs only the Old SP can modify the Old SP Medium Timer Indicator and the NPAC will not restart a new T1 timer. The NPAC will send an Attribute Value Change Notification to the New and Old SP SOA anytime the New or Old SP Medium Timer Indicator is successfully modified. Because the T1 timer can be restarted, New Service Providers may need to be included in the notification of T2 expirations for Old Service Provider concurrence. A Service Provider notification priority category will be added to allow a Service Provider to opt-in on receiving T2 expiration notifications as the New Service Provider for lack of Old Service Provider concurrence. Sending a notification to the New Service Provider at T2 expiration avoids the need for the New Service Provider to track NPAC timers, which eliminates the need to inform them of a new timestamp when T1/T2 is restarted. In cases where a modify request was sent with the same value (true -> true, false -> false), a notification will still be sent, but the T1/T2 will not be cancelled, T1 will not be restarted, and neither Timer Type nor Business Type will be included in the notification.

[snip]

Old service provider SOAs can only modify the following attributes:

subscriptionOldSP-DueDate

subscriptionOldSP-Authorization

subscriptionStatusChangeCauseCode

subscriptionOldSPMediumTimerIndicator

New service provider SOAs can only modify the following attributes:

subscriptionLRN

subscriptionNewSP-DueDate

subscriptionCLASS-DPC

subscriptionCLASS-SSN

subscriptionLIDB-DPC

subscriptionLIDB-SSN

subscriptionCNAM-DPC

subscriptionCNAM-SSN

subscriptionISVM-DPC

subscriptionISVM-SSN

subscriptionWSMSC-DPC

subscriptionWSMSC-SSN

subscriptionEndUserLocationValue

subscriptionEndUserLocationType

subscriptionBillingId

subscriptionSvType

subscriptionOptionalData

subscriptionNewSPMediumTimerIndicator

[snip]

-- 108.0 Subscription Version Business Type

subscriptionBusinessType ATTRIBUTE

 WITH ATTRIBUTE SYNTAX LNP-ASN1.Integer;

 MATCHES FOR EQUALITY;

 BEHAVIOUR subscriptionBusinessTypeBehavior;

 REGISTERED AS {LNP-OIDS.lnp-attribute 108};

-- 999.0 Subscription Version New SP Medium Timer Indicator

subscriptionNewSPMediumTimerIndicator ATTRIBUTE

 WITH ATTRIBUTE SYNTAX LNP-ASN1.MediumTimerIndicator;

 MATCHES FOR EQUALITY;

 BEHAVIOUR subscriptionNewSPMediumTimerBehavior;

 REGISTERED AS {LNP-OIDS.lnp-attribute 999};

subscriptionNewSPMediumTimerBehavior BEHAVIOUR

 DEFINED AS !

 This attribute is used to specify the subscription version

 New SP Medium Timer indicator on whether or not the port is

 a simple port.

!;

-- 999.0 Subscription Version Old SP Medium Timer Indicator

subscriptionOldSPMediumTimerIndicator ATTRIBUTE

 WITH ATTRIBUTE SYNTAX LNP-ASN1.MediumTimerIndicator;

 MATCHES FOR EQUALITY;

 BEHAVIOUR subscriptionOldSPMediumTimerBehavior;

 REGISTERED AS {LNP-OIDS.lnp-attribute 999};

subscriptionOldSPMediumTimerBehavior BEHAVIOUR

 DEFINED AS !

 This attribute is used to specify the subscription version

 Old SP Medium Timer indicator on whether or not the port is

 a simple port.

!;

**ASN.1:**

MediumTimerIndicator ::= BOOLEAN

MediumIndicatorError ::= CHOICE {

 indicator-value [0] BOOLEAN,

 no-value [1] NULL

}

NewSP-CreateData ::= SEQUENCE {

 chc1 [0] EXPLICIT CHOICE {

 subscription-version-tn [0] PhoneNumber,

 subscription-version-tn-range [1] TN-Range

 },

 subscription-lrn [1] LRN OPTIONAL,

 subscription-new-current-sp [2] ServiceProvId,

 subscription-old-sp [3] ServiceProvId,

 subscription-new-sp-due-date [4] GeneralizedTime,

 subscription-class-dpc [6] EXPLICIT DPC OPTIONAL,

 subscription-class-ssn [7] EXPLICIT SSN OPTIONAL,

 subscription-lidb-dpc [8] EXPLICIT DPC OPTIONAL,

 subscription-lidb-ssn [9] EXPLICIT SSN OPTIONAL,

 subscription-isvm-dpc [10] EXPLICIT DPC OPTIONAL,

 subscription-isvm-ssn [11] EXPLICIT SSN OPTIONAL,

 subscription-cnam-dpc [12] EXPLICIT DPC OPTIONAL,

 subscription-cnam-ssn [13] EXPLICIT SSN OPTIONAL,

 subscription-end-user-location-value [14]

 EndUserLocationValue OPTIONAL,

 subscription-end-user-location-type [15] EndUserLocationType OPTIONAL,

 subscription-billing-id [16] BillingId OPTIONAL,

 subscription-lnp-type [17] LNPType,

 subscription-porting-to-original-sp-switch [18]

 SubscriptionPortingToOriginal-SPSwitch,

 subscription-wsmsc-dpc [19] EXPLICIT DPC OPTIONAL,

 subscription-wsmsc-ssn [20] EXPLICIT SSN OPTIONAL,

 subscription-sv-type [21] EXPLICIT SVType OPTIONAL,

 subscription-optional-data [22] EXPLICIT OptionalData OPTIONAL,

 subscription-med-ind [23] EXPLICIT MediumTimerIndicator OPTIONAL

}

NewSP-CreateInvalidData ::= CHOICE {

 subscription-version-tn [0] EXPLICIT PhoneNumber,

 subscription-version-tn-range [1] EXPLICIT TN-Range,

 subscription-lrn [2] EXPLICIT LRN,

 subscription-new-current-sp [3] EXPLICIT ServiceProvId,

 subscription-old-sp [4] EXPLICIT ServiceProvId,

 subscription-new-sp-due-date [5] EXPLICIT GeneralizedTime,

 subscription-class-dpc [6] EXPLICIT DPC,

 subscription-class-ssn [7] EXPLICIT SSN,

 subscription-lidb-dpc [8] EXPLICIT DPC,

 subscription-lidb-ssn [9] EXPLICIT SSN,

 subscription-isvm-dpc [10] EXPLICIT DPC,

 subscription-isvm-ssn [11] EXPLICIT SSN,

 subscription-cnam-dpc [12] EXPLICIT DPC,

 subscription-cnam-ssn [13] EXPLICIT SSN,

 subscription-end-user-location-value [14] EXPLICIT EndUserLocationValue,

 subscription-end-user-location-type [15] EXPLICIT EndUserLocationType,

 subscription-billing-id [16] EXPLICIT BillingId,

 subscription-lnp-type [17] EXPLICIT LNPType,

 subscription-porting-to-original-sp-switch [18]

 EXPLICIT SubscriptionPortingToOriginal-SPSwitch,

 subscription-wsmsc-dpc [19] EXPLICIT DPC,

 subscription-wsmsc-ssn [20] EXPLICIT SSN,

 subscription-sv-type [21] EXPLICIT SVType,

 subscription-optional-data [22] EXPLICIT OptionalData,

 subscription-med-ind [23] EXPLICIT MediumIndicatorError

}

OldSP-CreateData ::= SEQUENCE {

 chc1 [0] EXPLICIT CHOICE {

 subscription-version-tn [0] PhoneNumber,

 subscription-version-tn-range [1] TN-Range

 },

 subscription-new-current-sp [1] ServiceProvId,

 subscription-old-sp [2] ServiceProvId,

 subscription-old-sp-due-date [3] GeneralizedTime,

 subscription-old-sp-authorization [4] ServiceProvAuthorization,

 subscription-status-change-cause-code [5] SubscriptionStatusChangeCauseCode,

 subscription-lnp-type [6] LNPType,

 subscription-med-ind [7] EXPLICIT MediumTimerIndicator OPTIONAL

}

OldSP-CreateInvalidData ::= CHOICE {

 subscription-version-tn [0] EXPLICIT PhoneNumber,

 subscription-version-tn-range [1] EXPLICIT TN-Range,

 subscription-new-current-sp [2] EXPLICIT ServiceProvId,

 subscription-old-sp [3] EXPLICIT ServiceProvId,

 subscription-old-sp-due-date [4] EXPLICIT GeneralizedTime,

 subscription-old-sp-authorization [5] EXPLICIT ServiceProvAuthorization,

 subscription-status-change-cause-code [6]

 EXPLICIT SubscriptionStatusChangeCauseCode,

 subscription-lnp-type [7] EXPLICIT LNPType,

 subscription-med-ind [8] EXPLICIT MediumIndicatorError

}

SubscriptionModifyData ::= SEQUENCE {

 subscription-lrn [0] LRN OPTIONAL,

 subscription-new-sp-due-date [1] GeneralizedTime OPTIONAL,

 subscription-old-sp-due-date [2] GeneralizedTime OPTIONAL,

 subscription-old-sp-authorization [3] ServiceProvAuthorization OPTIONAL,

 subscription-class-dpc [4] EXPLICIT DPC OPTIONAL,

 subscription-class-ssn [5] EXPLICIT SSN OPTIONAL,

 subscription-lidb-dpc [6] EXPLICIT DPC OPTIONAL,

 subscription-lidb-ssn [7] EXPLICIT SSN OPTIONAL,

 subscription-isvm-dpc [8] EXPLICIT DPC OPTIONAL,

 subscription-isvm-ssn [9] EXPLICIT SSN OPTIONAL,

 subscription-cnam-dpc [10] EXPLICIT DPC OPTIONAL,

 subscription-cnam-ssn [11] EXPLICIT SSN OPTIONAL,

 subscription-end-user-location-value [12] EndUserLocationValue OPTIONAL,

 subscription-end-user-location-type [13] EndUserLocationType OPTIONAL,

 subscription-billing-id [14] BillingId OPTIONAL,

 subscription-status-change-cause-code [15]

 SubscriptionStatusChangeCauseCode OPTIONAL,

 subscription-wsmsc-dpc [16] EXPLICIT DPC OPTIONAL,

 subscription-wsmsc-ssn [17] EXPLICIT SSN OPTIONAL,

 subscription-customer-disconnect-date [18] GeneralizedTime OPTIONAL,

 subscription-effective-release-date [19] GeneralizedTime OPTIONAL,

 new-version-status [20] VersionStatus OPTIONAL,

 subscription-sv-type [21] EXPLICIT SVType OPTIONAL,

 subscription-optional-data [22] EXPLICIT OptionalData OPTIONAL,

 subscription-new-sp-med-ind [23] EXPLICIT MediumTimerIndicator OPTIONAL,

 subscription-old-sp-med-ind [24] EXPLICIT MediumTimerIndicator OPTIONAL

}

SubscriptionModifyInvalidData ::= CHOICE {

 subscription-lrn [0] EXPLICIT LRN,

 subscription-new-sp-due-date [1] EXPLICIT GeneralizedTime,

 subscription-old-sp-due-date [2] EXPLICIT GeneralizedTime,

 subscription-old-sp-authorization [3] EXPLICIT ServiceProvAuthorization,

 subscription-class-dpc [4] EXPLICIT DPC,

 subscription-class-ssn [5] EXPLICIT SSN,

 subscription-lidb-dpc [6] EXPLICIT DPC,

 subscription-lidb-ssn [7] EXPLICIT SSN,

 subscription-isvm-dpc [8] EXPLICIT DPC,

 subscription-isvm-ssn [9] EXPLICIT SSN,

 subscription-cnam-dpc [10] EXPLICIT DPC,

 subscription-cnam-ssn [11] EXPLICIT SSN,

 subscription-end-user-location-value [12] EXPLICIT EndUserLocationValue,

 subscription-end-user-location-type [13] EXPLICIT EndUserLocationType,

 subscription-billing-id [14] EXPLICIT BillingId,

 subscription-status-change-cause-code [15]

 EXPLICIT SubscriptionStatusChangeCauseCode,

 subscription-wsmsc-dpc [16] EXPLICIT DPC,

 subscription-wsmsc-ssn [17] EXPLICIT SSN,

 subscription-customer-disconnect-date [18] EXPLICIT GeneralizedTime,

 subscription-effective-release-date [19] EXPLICIT GeneralizedTime,

 new-version-status [20] EXPLICIT VersionStatus,

 subscription-sv-type [21] EXPLICIT SVType,

 subscription-optional-data [22] EXPLICIT OptionalData,

 subscription-new-sp-med-ind [23] EXPLICIT MediumIndicatorError,

 subscription-old-sp-med-ind [24] EXPLICIT MediumIndicatorError

}