

Wireless Change Order Requirements – 075/3122/98

The following wireless change orders are documented in detail below:

NANC 201 - Unique Sets of Timers

NANC 202 - Unique Sets of Business Days/Hours

NANC 203 - Wireless Addition of WSMSC DPC and SSN Information

Downtime Required	Yes	No
Recommendation Explanation		

Installation	Staged	Flash Cut
Recommendation Explanation		

Business Justification

The T&O LNPA Wire line Wireless Integration Task Force will provide the business justification for the wireless change orders.

Merged Change Order Tracking

Note: This table contains change orders that have been clarifications to previously documented wireless change orders and have been merged in this document as indicated. Merged change orders will not be referenced separately as wireless requirements.

Requirement Retained	Requirement Merged and Removed
NANC 201	NANC 221
NANC 202	NANC 221
NANC 203	NANC 222

Change Order Number: NANC 201

IMPACT/CHANGE ASSESSMENT

<u>FRS</u>	<u>IIS</u>	<u>ASN.1</u>	<u>GDMO</u>	<u>NPAC</u>	<u>SOA</u>	<u>LSMS</u>
<u>Y</u>	<u>Y</u>		<u>Y</u>	<u>Y</u>	<u>Y</u>	

Unique Sets of Timers

Wireless to wireless porting needs tunable values/timers defined that are independent from wire line tunable values/timers by region. It was discussed that to support the wireless need in a generic manner that a unique set of tunable timers be defined.

Two approaches were discussed:

The NANC T&O Group selected SOLUTION 2.

Solution 1 - Maximum Flexibility for Unique Timer Set Support

In this option the service provider would specify the timers to be used on each subscription version port request.

Cons:

Nothing to prevent a Service Provider from using shortened timers inappropriately. If short timers are used inappropriately the port could occur before the other Service Provider has an opportunity to stop it. This could result in customer service issues for call completion/service.

A proposed solution is to force Service Provider concurrence.

Pro:

Maximum Flexibility for selecting timers to be used on a subscription version port.

Solution 2 – Service Provider ID Associated with Timer Type

A service provider profile would specify the set of timers the NPAC SMS would use for subscription version porting (in and out) for this service provider.

Con:

This approach limits service provider flexibility. One Service Provider can only use one set of timers for porting in and porting out.

Pro:

This approach prevents use of inappropriate timers without changes to the business process flows or the NPAC SMS interface.

Timers to be in the unique timer set would include:

<u>Tunable Timer</u>	<u>Long Timer Default</u>	<u>Short Timer Default</u>	<u>Value Range</u>
<u>Create Subscription Version Initial Concurrence Window (T1 Timer)</u>	<u>9 business hours</u>	<u>1 business hour</u>	<u>1-72 business hours</u>
<u>Create Subscription Version Final Concurrence Window (T2 Timer)</u>	<u>9 business hours</u>	<u>1 business hour</u>	<u>1-72 business hours</u>
<u>Conflict Restriction Window</u>	<u>12:00 noon on the business day of the due date</u>	<u>N/A</u>	<u>00:00 – 24:00</u>
<u>Conflict Resolution New Service Provider Restriction</u>	<u>6 business hours</u>	<u>6 business hours</u>	<u>1-72 business hours</u>
<u>Cancellation Initial Concurrence Window</u>	<u>9 business hours</u>	<u>9 business hours</u>	<u>1-72 business hours</u>
<u>Cancellation Final Concurrence Window</u>	<u>9 business hours</u>	<u>9 business hours</u>	<u>1-72 business hours</u>

NOTE: Support of two additional timer types, medium 1 and medium 2 was discussed to potentially support wire line to wireless and wireless to wire line porting. The requirements developed do not include these two timer types due to the fact that the values or these timer sets are not yet defined. The requirements developed do not preclude inclusion of the additional timer types.

Service providers can specify in their profile as defined below the timers to be used for porting in when they are the new service provider or porting out were they are the old service provider. Due to this fact the NPAC will have to use the longer timer of the timers supported by the service provider. (Another option discussed was to reject the message if the timers supported did not match.) This selection of the longer timers by the NPAC SMS may result in longer timers being used when a service provider expects short timers to be used.

The following table illustrates the outcome of timers to be used based on the combinations possible.

<u>N</u> <u>e</u> <u>w</u> <u>-</u> <u>S</u> <u>e</u> <u>r</u> <u>v</u> <u>i</u> <u>c</u> <u>e</u> <u>-</u> <u>P</u> <u>r</u> <u>o</u> <u>v</u> <u>i</u> <u>d</u> <u>e</u> <u>r</u>	<u>OLD Service Provider</u>		
	<u>Timer Type</u>	<u>Port Out- Short</u>	<u>Port Out- Long</u>
	<u>Port In – Short</u>	<p><u>When both the old and new service providers support short timers for a subscription version port short timers will be used.</u></p> <p><u>No action is necessary by either the old or new service provider operations personnel.</u></p>	<p><u>When the new service provider supports short timers and the old service providers supports long timers for a subscription version port long timers will be used.</u></p> <p><u>The new service provider who supports the short timers will have to recognize that the long timers are being used instead of the expected short timers.</u></p>

	<p><u>Port In – Long</u></p>	<p><u>When the new service provider supports long timers and the old service providers supports short timers for a subscription version port long timers will be used.</u></p> <p><u>The old service provider who supports the short timers will have to recognize that the long timers are being used instead of the expected short timers.</u></p>	<p><u>When both the old and new service providers support long timers for a subscription version port long timers will be used.</u></p> <p><u>No action is necessary by either the old or new service provider operations personnel.</u></p>
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NOTE: Change order NANC 214 should be implemented prior or with this change order. NANC 214 is related to the conflict processing with subscription versions with due dates the same day as the day they are entered into the NPAC SMS.

FRS Modifications

1. The following requirements would need to be updated to add the timer type:

- R4-29 Service Provider subscription query options

R4-29 Service Provider subscription query options

NPAC SMS shall receive the attributes to be searched on for queries regarding Subscription Versions associated with the Service Provider. Allowable attributes are the following data elements from *Error: Reference source not found*:

- Subscription Version ID
- Subscription Version Status
- Local Number Portability Type
- Ported Telephone Number
- Old facilities-based Service Provider Due Date
- New facilities-based Service Provider Due Date
- New facilities-based Service Provider ID
- Authorization from old facilities-based Service Provider
- Local Routing Number (LRN)
- Class DPC
- Class SSN
- LIDB DPC
- LIDB SSN
- CNAM DPC
- CNAM SSN
- ISVM DPC
- ISVM SSN
- Billing Service Provider ID

- End User Location Value
- End User Location Type
- Customer Disconnect Date
- Effective Release Date
- Disconnect Broadcast Complete Time Stamp
- Conflict Time Stamp
- Activation Time Stamp
- Cancellation Time Stamp (Status Modified to Cancel Time Stamp)
- New Service Provider Creation Time Stamp
- Old Service Provider Authorization Time Stamp
- Pre-cancellation Status
- Old Service Provider Cancellation Time Stamp
- New Service Provider Cancellation Time Stamp
- Old Time Stamp (Status Modified to Old Time Stamp)
- New Service Provider Conflict Resolution Time Stamp
- Create Time Stamp
- Modify Time Stamp
- Porting To Original
- Status Change Cause Code
- *Timer Type*

- R5-74.3 Query Subscription Version - Output Data

R5-74.3 Query Subscription Version - Output Data

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

- Subscription Version ID
- Subscription Version Status
- Local Number Portability Type
- Ported Telephone Number
- Old facilities-based Service Provider Due Date
- New facilities-based Service Provider Due Date
- New facilities-based Service Provider ID
- Old facilities-based Service Provider ID
- Authorization from old facilities-based Service Provider
- Status Change Cause Code
- Location Routing Number (LRN)
- Class DPC
- Class SSN
- LIDB DPC
- LIDB SSN
- CNAM DPC
- CNAM SSN
- ISVM DPC
- ISVM SSN
- Billing Service Provider ID
- End-User Location Value
- End User Location Type
- Customer Disconnect Date
- Effective Release Date

- Disconnect Broadcast Complete Time Stamp
- Conflict Time Stamp
- Activation Time Stamp
- Cancellation Time Stamp (Status Modified to Canceled Time Stamp)
- New Service Provider Creation Time Stamp
- Old Service Provider Authorization Time Stamp
- Pre-cancellation Status
- Old Service Provider Cancellation Time Stamp
- New Service Provider Cancellation Time Stamp
- Old Time Stamp (Status Modified to Old Time Stamp)
- New Service Provider Conflict Resolution Time Stamp
- Create Time Stamp
- Modified Time Stamp
- Porting to Original
- List of all Local SMSs that failed activation, modification, or disconnect.
- *Timer Type (for SOAs that support Timer Type)*

1. The following additional requirement would have to be added to support the timer type validation at subscription version creation:

The following requirements support selection of the longer timers:

R5-19.3 Create Subscription Version – Timer Type Selection

NPAC SMS shall if the old and new service provider timer types match set the subscription version timer type to that timer type.

R5-19.4 Create Subscription Version – Timer Type Selection - Mismatch

NPAC SMS shall if the old and new service provider timer types do not match set the subscription version timer type to the longer timer type of the port out type for the old service provider and the port in type of the new service provider.

2. Appendix C would need to be updated to show each type of tunables (the defaults and ranges). The existing tunables would be modified to indicate they are the long timers and new rows would be added for the short tunables. Values would be as specified in the table above.

3. Requirements would need to be developed for the new tunables.

R5-21.1 Initial Concurrence Window - Tunable Parameter

NPAC SMS shall provide a *long and short* Initial Concurrence Window tunable parameters which is defined as the number of business hours subsequent to the time the Subscription Version was initially created by which both Service Providers can authorize transfer of service if this is an Inter-Service Provider port.

R5-21.2 Initial Concurrence Window - Tunable Parameter Modification

NPAC SMS shall allow the NPAC SMS Administrator to modify the *long and short* Initial Concurrence Window date tunable parameters.

R5-21.3 Long Initial Concurrence Window - Tunable Parameter Default

NPAC SMS shall default the *long* Initial Concurrence Window date tunable parameter to 9 business hours.

R5-21.4 Short Initial Concurrence Window - Tunable Parameter Default

NPAC SMS shall default the *short* Initial Concurrence Window date tunable parameter to 1 business hours.

R5-23.1 Final Concurrence Window - Tunable Parameter

NPAC SMS shall provide a *long and short* Final Concurrence Window tunable parameters which is defined as the number of business hours after the concurrence request is sent by the NPAC SMS by which time both Service Providers can authorize transfer of subscription service for an Inter-Service Provider port.

R5-23.2 Final Concurrence Window Tunable - Tunable Parameter Modification

NPAC SMS shall allow the NPAC SMS Administrator to modify the *short and long* Final Concurrence Window tunable parameters.

R5-23.3 Long Final Concurrence Window Tunable - Tunable Parameter Default

NPAC SMS shall default the *long* Final Concurrence Window tunable parameter to 9 business hours.

R5-23.4 Short Final Concurrence Window Tunable - Tunable Parameter Default

NPAC SMS shall default the *short* Final Concurrence Window tunable parameter to 1 business hours.

RR5-42.5 Conflict Subscription Version – Short Timer Usage

NPAC SMS shall not apply the Conflict Restriction Window Tunable to subscription versions being ported using short timers.

RR5-32.1 Cancellation-Initial Concurrence Window - Tunable Parameter

NPAC SMS shall provide a *short and long* Cancellation-Initial Concurrence Window tunable parameters, which is defined as the number of business hours after the version is set to Cancel Pending by which the non-originating Service Provider is expected to acknowledge the pending cancellation.

RR5-32.2 Cancellation-Initial Concurrence Window - Tunable Parameter Modification

NPAC SMS shall allow the NPAC SMS Administrator to modify the *short and long* Cancellation-Initial Concurrence Window tunable parameters.

RR5-32.3 Long Cancellation-Initial Concurrence Window - Tunable Parameter Default

NPAC SMS shall default the *long* Cancellation-Initial Concurrence Window tunable parameter to 9 business hours.

RR5-32.4 Short Cancellation-Initial Concurrence Window - Tunable Parameter Default

NPAC SMS shall default the *short* Cancellation-Initial Concurrence Window tunable parameter to 9 business hours.

RR5-33.1 Cancellation-Final Concurrence Window - Tunable Parameter

NPAC SMS shall provide a *short and long* Cancellation-Final Concurrence Window tunable parameters which is defined as the number of business hours after the second cancel pending notification is sent by which both Service Providers are expected to acknowledge the pending cancellation.

RR5-33.2 Cancellation-Final Concurrence Window Tunable Parameter Modification

NPAC SMS shall allow the NPAC SMS Administrator to modify the *short and long* Cancellation-Final Concurrence Window tunable parameters.

RR5-33.3 Long Cancellation-Final Concurrence Window - Tunable Parameter Default

NPAC SMS shall default the *long* Cancellation-Final Concurrence Window tunable parameter to 9 business hours.

RR5-33.4 Short Cancellation-Final Concurrence Window - Tunable Parameter Default

NPAC SMS shall default the *short* Cancellation-Final Concurrence Window tunable parameter to 9 business hours.

RR5-12.3 Conflict Resolution New Service Provider Restriction Tunable Parameter

NPAC SMS shall provide a *long and short* Conflict Resolution New Service Provider Restriction tunable parameters which is defined as a number of business hours after the subscription version is put into conflict that the NPAC SMS will prevent it from being removed from conflict by the New Service Provider.

RR5-12.4 Long Conflict Resolution New Service Provider Restriction - Tunable Parameter Default

NPAC SMS shall default the *long* Conflict Resolution New Service Provider Restriction tunable parameter to 6 business hours.

RR5-12.5 Short Conflict Resolution New Service Provider Restriction - Tunable Parameter Default

NPAC SMS shall default the *short* Conflict Resolution New Service Provider Restriction tunable parameter to 6 business hours.

RR5-12.5 Conflict Resolution New Service Provider Restriction Tunable Parameter Modification

NPAC SMS shall allow the NPAC SMS Administration to modify the *long and short* Conflict Resolution New Service Provider Restriction tunable parameters.

4. The service provider profile would be updated as follows:

Table 3-2 would be modified to add:

<u>NPAC New Functionality Support</u>	<u>M</u>		<p><u>Each bit in the mask represents a Boolean indicator is set to true if a service provider does NOT support the functionality defined below. This bit mask is used to support backward compatibility.</u></p> <ul style="list-style-type: none"> <u>Timer Type – True if the SOA support of timer type over the interface.</u>
<u>Port In Timer Type</u>	<u>E</u>	<u>X</u>	<p><u>Timer type supported by the Service Provider for porting were they are the New Service Provider:</u></p> <p><u>S – Short Timers</u></p> <p><u>L – Long Timers</u></p>
<u>Port Out Timer Type</u>	<u>E</u>	<u>X</u>	<p><u>Timer type supported by the Service Provider for porting were they are the Old Service Provider:</u></p> <p><u>S – Short Timers</u></p> <p><u>L – Long Timers</u></p>

GDMO/ASN.1 Modifications

1. A GET only Timer Type attribute would need to be added to the subscriptionVersion managed object class. A note would be added that it is only returned on SOA queries to service providers that support that information. The behavior would also be updated to note that the attribute would only be emitted on object creation notifications to service providers that support it.

2. The attribute will be added to the T1 and T2 notifications for the SOA's that support the Timer Type attribute.

-- 8.0 LNP Log Record for the Subscription Version Old SP Concurrence Request

-- Notification

lnpLogOldSP-ConcurrenceRequestRecord MANAGED OBJECT CLASS
DERIVED FROM "CCITT Rec. X.721 (1992) | ISO/IEC 10165-2 : 1992":eventLogRecord;

CHARACTERIZED BY
lnpLogOldSP-ConcurrenceRequestPkg;

CONDITIONAL PACKAGES
subscriptionTimerTypePkg PRESENT IF
!present if the Old SP SOA supports timer type!;
REGISTERED AS {LNP-OIDS.lnp-objectClass 8};

lnpLogOldSP-ConcurrenceRequestPkg PACKAGE

BEHAVIOUR
lnpLogOldSP-ConcurrenceRequestDefinition,
lnpLogOldSP-ConcurrenceRequestBehavior;

ATTRIBUTES
subscriptionTN GET,
subscriptionVersionId GET,
subscriptionNewCurrentSP GET,
subscriptionNewSP-DueDate GET,
subscriptionNewSP-CreationTimeStamp GET,
accessControl GET
subscriptionTimerType GET;

;

lnpLogOldSP-ConcurrenceRequestDefinition BEHAVIOUR

DEFINED AS !
The lnpLogOldSP-ConcurrenceRequestRecord class is the managed
object that is used to create log records for the
subscriptionVersionOldSP-ConcurrenceRequest Notification.
!;

lnpLogOldSP-ConcurrenceRequestBehavior BEHAVIOUR

DEFINED AS !
This log record can be used by any CME wanting to log the
subscriptionVersionOldSP-ConcurrenceRequest Notification.
!;

-- 26.0 LNP Log Record for the Subscription Version Final Concurrence

-- Timer Expiration

lnpLogOldSPFinalConcurrenceWindowExpirationRecord MANAGED OBJECT CLASS
DERIVED FROM "CCITT Rec. X.721 (1992) | ISO/IEC 10165-2 : 1992":eventLogRecord;

CHARACTERIZED BY
lnpLogOldSPFinalConcurrenceWindowExpirationPkg;

CONDITIONAL PACKAGES
subscriptionTimerTypePkg PRESENT IF
!present if the Old SP SOA supports timer type!;
REGISTERED AS {LNP-OIDS.lnp-objectClass 26};

lnpLogOldSPFinalConcurrenceWindowExpirationPkg PACKAGE

BEHAVIOUR
lnpLogOldSPFinalConcurrenceWindowExpirationDefinition,
lnpLogOldSPFinalConcurrenceWindowExpirationBehavior;

ATTRIBUTES
subscriptionTN GET,
subscriptionVersionId GET,

```

_____ accessControl GET,
_____ subscriptionTimerType GET;
_____ ;

lnpLogOldSPFinalConcurrenceWindowExpirationDefinition BEHAVIOUR
_____ DEFINED AS !
_____ The lnpLogOldSPFinalConcurrenceWindowExpirationRecord class is
_____ the managed object that is used to create log records for the
_____ subscriptionVersionOldSPFinalConcurrenceWindowExpiration
_____ Notification.
_____ !;

lnpLogOldSPFinalConcurrenceWindowExpirationBehavior BEHAVIOUR
_____ DEFINED AS !
_____ This log record can be used by any CME wanting to log the
_____ subscriptionVersionOldSPFinalConcurrenceWindowExpiration
_____ Notification.
_____ !;

-- ??.0 LNP Subscription Timer Type Package

subscriptionTimerTypePkg PACKAGE
_____ BEHAVIOUR subscriptionTimerTypePkgBehavior;
_____ ATTRIBUTES
_____ subscriptionTimerType GET;
_____ REGISTERED AS {LNP-OIDS.lnp-package ??};

_____
subscriptionCustomerInformationPkgBehavior BEHAVIOUR
_____ DEFINED AS !
_____ This package provides for conditionally including the
_____ subscriptionTimerType attribute.
_____ !;

-- 9.0 LNP Subscription Version New SP Create Request Notification

subscriptionVersionNewSP-CreateRequest NOTIFICATION
_____ BEHAVIOUR subscriptionVersionNewSP-CreateRequestBehavior;
_____ WITH INFORMATION SYNTAX LNP-ASN1.VersionNewSP-CreateRequest
_____ AND ATTRIBUTE IDS
_____ tn subscriptionTN,
_____ version-id subscriptionVersionId,
_____ service-prov-id subscriptionOldSP,
_____ service-prov-due-date subscriptionOldSP-DueDate,
_____ service-prov-old-authorization subscriptionOldSP-Authorization,
_____ service-prov-authorization-creation-time-stamp
_____ subscriptionOldSP-AuthorizationTimeStamp,
_____ status-change-cause-code subscriptionStatusChangeCauseCode,
_____ access-control accessControl,
_____ subscription-timer-type subscriptionTimerType;
_____ REGISTERED AS {LNP-OIDS.lnp-notification 9};

subscriptionVersionNewSP-CreateRequestBehavior BEHAVIOUR
_____ DEFINED AS !
_____ This notification requests that a new service provider send
_____ a create request for a subscription version for which
_____ concurrence for porting the number has not been received.
_____ The TN, the version id and the old service provider id,
_____ authorization flag and authorization timestamp values are sent.
_____ !;

```

-- 10.0 LNP Subscription Version Old SP Concurrence Request Notification

```
subscriptionVersionOldSP-ConcurrenceRequest NOTIFICATION
  BEHAVIOUR subscriptionVersionOldSP-ConcurrenceRequestBehavior;
  WITH INFORMATION SYNTAX LNP-ASN1.VersionOldSP-ConcurrenceRequest
  AND ATTRIBUTE IDS
    tn subscriptionTN,
    version-id subscriptionVersionId,
    service-prov-id subscriptionNewCurrentSP,
    service-prov-due-date subscriptionNewSP-DueDate,
    service-prov-authorization-creation-time-stamp
      subscriptionNewSP-CreationTimeStamp,
    access-control accessControl,
    subscription-timer-type subscriptionTimerType;
REGISTERED AS {LNP-OIDS.lnp-notification 10};
```

```
subscriptionVersionOldSP-ConcurrenceRequestBehavior BEHAVIOUR
  DEFINED AS !
  This notification requests that a old service provider send
  a create request for a subscription version for which
  concurrence for porting the number has not been received.
  The TN, the version id, and the new service provider id,
  authorization flag and creation timestamp values are sent. If
  the old service provider supports timer type, it will be sent.
  !;
```

-- 12.0 LNP Subscription Version Final Concurrence Timer Expiration
-- Notification

```
subscriptionVersionOldSPFinalConcurrenceWindowExpiration NOTIFICATION
  BEHAVIOUR
subscriptionVersionOldSPFinalConcurrenceWindowExpirationBehavior;
  WITH INFORMATION SYNTAX
    LNP-ASN1.VersionOldSPFinalConcurrenceWindowExpiration
  AND ATTRIBUTE IDS
    tn subscriptionTN,
    version-id subscriptionVersionId,
    access-control accessControl,
    subscription-timer-type subscriptionTimerType;
REGISTERED AS {LNP-OIDS.lnp-notification 12};
```

```
subscriptionVersionOldSPFinalConcurrenceWindowExpirationBehavior BEHAVIOUR
  DEFINED AS !
  This notification will be sent by the NPAC SMS upon expiration of
  the Final Concurrence Timer to the old service provider via the SOA
  to NPAC SMS interface to inform them of the timer expiration. If
  the old service provider supports timer type, it will be sent.
  !;
```

```
VersionNewSP-CreateRequest ::= SEQUENCE {
  version-create-request [0] VersionCreateConcurrenceRequest,
  service-prov-old-authorization [1] ServiceProvAuthorization,
  subscription-status-change-cause-code [2]
SubscriptionStatusChangeCauseCode,
  subscription-timer-type Integer OPTIONAL
}
```

```
VersionCreateConcurrenceRequest ::= SEQUENCE {
  tn PhoneNumber,
```

```

version-id LnpKey,
service-prov-id ServiceProvId,
service-prov-due-date GeneralizedTime,
service-prov-authorization-creation-time-stamp GeneralizedTime,
access-control LnpAccessControl,
subscription-timer-type Integer OPTIONAL
}

```

```

VersionOldSPFinalConcurrenceWindowExpiration ::= SEQUENCE {
  tn PhoneNumber,
  version-id LnpKey,
  access-control LnpAccessControl,
  subscription-timer-type Integer OPTIONAL
}

```

3. The following attribute needs to be added to the GDMO:

Subscription Version Timer Type

```

subscriptionTimerType ATTRIBUTE
  WITH ATTRIBUTE SYNTAX LNP-ASN1.Integer;
  MATCHES FOR EQUALITY, ORDERING;
  BEHAVIOUR subscriptionTimerTypeBehavior;
  REGISTERED AS {LNP-OIDS.lnp-attribute ??};

```

subscriptionTimerTypeBehavior BEHAVIOUR

DEFINED AS !

This attribute is used to specify the subscription version timer type being used to set tunable timers.

Current valid values are:

0 for long timers (used primarily for wireline to wireline)

1 for short timers (anticipated use for wireless to wireless)

Long timers (0) is set if any of the two service providers supports only long timers.

!;

The NPAC will have to put M&P or functionality in the install processes to set the port in and out timers supported for service providers defined in the NPAC SMS database.

Change Order Number: NANC 202

IMPACT/CHANGE ASSESSMENT

<u>FRS</u>	<u>IIS</u>	<u>ASN.1</u>	<u>GDMO</u>	<u>1</u>	<u>N P A C</u>	<u>SO A</u>	<u>LSMS</u>
<u>Y</u>	<u>Y</u>		<u>Y</u>	<u>Y</u>		<u>Y</u>	

Unique Sets of Business Days/Hours

Business hours/days for timers is need to support for wireless to wireless porting. Saturday must be added and time must also be increased. Default business hours will be 8:00 to 8:00 CT. The tunable would be configurable by region. NPAC defined Holiday are OK as defined for wireless to wireless.

<u>Tunable</u>	<u>Short Business Hours/Days Default</u>	<u>Long Business Hours/Days Default</u>	<u>Value Range</u>
<u>Business Day Duration</u>	<u>12 calendar hours</u>	<u>12 calendar hours</u>	<u>1 – 24</u>
<u>Business Day Start Time</u>	<u>Determined per Region</u>	<u>Determined per Region</u>	<u>00:00 – 24:00</u>
<u>Holidays</u>	<u>As specified today</u>	<u>As specified today</u>	<u>As specified today</u>
<u>Business Days</u>	<u>M-F</u>	<u>M-Saturday</u>	<u>M-Sunday</u>

Two approaches were discussed:

The NANC T&O Group selected SOLUTION 2.

Solution 1 - Maximum Flexibility for Unique Business Days/Hours Support

In this option the service provider would specify the business days/hours to be used on each subscription version port request.

Cons:

Nothing to prevent a Service Provider from using longer business days/hours inappropriately. If long timers are used inappropriately the port could occur before the other Service Provider has an opportunity to stop it. This could result in customer service issues for call completion/service.

A proposed solution is to force Service Provider concurrence.

Pro:

Maximum Flexibility for selecting business days/hours to be used on a subscription version port.

Solution 2 – Service Provider ID Associated with Business Days/Hours Type

A service provider profile would specify the business days/hours the NPAC SMS would use for subscription version porting for this service provider.

Con:

This approach limits service provider flexibility. One Service Provider can only use one set of business days/hours.

Pro:

This approach prevents use of inappropriate business days/hours without changes to the business process flows or the NPAC SMS interface.

FRS Modifications

1. The following requirements would need to be updated to add the business hours/days type:

- R4-29 Service Provider subscription query options

R4-29 Service Provider subscription query options

NPAC SMS shall receive the attributes to be searched on for queries regarding Subscription Versions associated with the Service Provider. Allowable attributes are the following data elements from **Error: Reference source not found**:

- Subscription Version ID
- Subscription Version Status
- Local Number Portability Type
- Ported Telephone Number
- Old facilities-based Service Provider Due Date
- New facilities-based Service Provider Due Date
- New facilities-based Service Provider ID
- Authorization from old facilities-based Service Provider
- Local Routing Number (LRN)
- Class DPC
- Class SSN
- LIDB DPC
- LIDB SSN
- CNAM DPC
- CNAM SSN
- ISVM DPC
- ISVM SSN
- Billing Service Provider ID
- End User Location Value
- End User Location Type
- Customer Disconnect Date
- Effective Release Date
- Disconnect Broadcast Complete Time Stamp
- Conflict Time Stamp
- Activation Time Stamp
- Cancellation Time Stamp (Status Modified to Cancel Time Stamp)
- New Service Provider Creation Time Stamp
- Old Service Provider Authorization Time Stamp
- Pre-cancellation Status
- Old Service Provider Cancellation Time Stamp
- New Service Provider Cancellation Time Stamp

- Old Time Stamp (Status Modified to Old Time Stamp)
- New Service Provider Conflict Resolution Time Stamp
- Create Time Stamp
- Modify Time Stamp
- Porting To Original
- Status Change Cause Code
- *Business Hour Type*

- R5-74.3 Query Subscription Version - Output Data

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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:

- Subscription Version ID
- Subscription Version Status
- Local Number Portability Type
- Ported Telephone Number
- Old facilities-based Service Provider Due Date
- New facilities-based Service Provider Due Date
- New facilities-based Service Provider ID
- Old facilities-based Service Provider ID
- Authorization from old facilities-based Service Provider
- Status Change Cause Code
- Location Routing Number (LRN)
- Class DPC
- Class SSN
- LIDB DPC
- LIDB SSN
- CNAM DPC
- CNAM SSN
- ISVM DPC
- ISVM SSN
- Billing Service Provider ID
- End-User Location Value
- End User Location Type
- Customer Disconnect Date
- Effective Release Date
- Disconnect Broadcast Complete Time Stamp
- Conflict Time Stamp
- Activation Time Stamp
- Cancellation Time Stamp (Status Modified to Canceled Time Stamp)
- New Service Provider Creation Time Stamp
- Old Service Provider Authorization Time Stamp
- Pre-cancellation Status
- Old Service Provider Cancellation Time Stamp
- New Service Provider Cancellation Time Stamp
- Old Time Stamp (Status Modified to Old Time Stamp)
- New Service Provider Conflict Resolution Time Stamp
- Create Time Stamp
- Modified Time Stamp

- Porting to Original
- List of all Local SMSs that failed activation, modification, or disconnect.
- *Business Hour Type (for SOAs that support Business Hours)*

2. The following additional requirement would have to be added to support the business hours/days type validation at subscription version create.

The following requirements support selection of the shorter business hours/days timers:

R5-19.5 Create Subscription Version – Business Hours and Days Selection

NPAC SMS shall if the old and new service provider business hours and days match set the subscription version business type to the business type for the business hours and days supported.

R5-19.6 Create Subscription Version – Business Hours and Days Selection - Mismatch

NPAC SMS shall if the old and new service provider business hours and days do not match set the subscription version timer type to the shorter business hours and days.

1. Appendix C would need to be updated to show each long and short business hour/days (the defaults and ranges). The Business Day Duration and Business Day Start Time that exist would be modified to reflect that they are the short business hours/days. New rows would be added to the table for the long business hours/days with values and defaults as indicated in the table above.

2. Requirements would need to be added/modified for the new business hours/days types:

RR3-10 Business Hours and Days

NPAC SMS shall support definition and processing of *long and short* business hours and days for operations involving business time calculation.

RR3-11.1 Business Day Definition -Short

NPAC SMS *short* business days shall be Monday through Friday excluding NPAC operations-defined holidays.

RR3-11.2 Business Day Definition -Long

NPAC SMS *long* business days shall be Monday through Saturday excluding NPAC operations-defined holidays.

RR3-12.1 Business Day Duration - Tunable Parameter

NPAC SMS shall provide a *short and long* Business Day Duration tunable parameter, which is defined as the number of hours from the tunable business day start time.

RR3-12.2 Business Day Duration - Tunable Parameter Modification

NPAC SMS shall allow the NPAC SMS Administrator to modify the *short and long* Business Day Duration tunable parameter.

RR3-12.3 Short Business Day Duration - Tunable Parameter Default

NPAC SMS shall default the *short* Business Day Duration tunable parameter to 12 hours.

RR3-12.4 Long Business Day Duration - Tunable Parameter Default

NPAC SMS shall default the long Business Day Duration tunable parameter to 12 hours.

RR3-13.1 Business Day Start Time - Tunable Parameter

NPAC SMS shall provide a *short and long* Business Day Start Time tunable parameter, which is defined as the start of the business day in Central Standard Time.

RR3-13.2 Business Day Start Time - Tunable Parameter Modification

NPAC SMS shall default the *short and long* Business Day Start Time tunable parameter to the value specified by the contracting region.

RR3-13.3 Short Business Day Start Time - Tunable Parameter Default

NPAC SMS shall default the *short* Business Day Start Time tunable parameter to 7:00 AM, Central Standard Time

RR3-13.4 Long Business Day Start Time - Tunable Parameter Default

NPAC SMS shall default the *long* Business Day Start Time tunable parameter to 8:00 AM, Central Standard Time.

3. The service provider profile would be updated as follows:

Table 3-2 would be modified to add:

NPAC New Functionality Support	<u>M</u>		<u>Each bit in the mask represents a Boolean indicator is set to true if a service provider does NOT support the functionality defined below. This bit mask is used to support backward compatibility.</u>
--------------------------------	----------	--	--

			<ul style="list-style-type: none"> <u>Business Hours – True if the SOA supports business days/hours over the interface.</u>
<u>Business Hour/Days</u>	<u>E</u>	<u>X</u>	<u>Business Hours supported by the Service Provider:</u> <u>S – Short Business Hours</u> <u>L – Long Business Hours</u>

GDMO/ASN.1 Modifications

1. 1. A GET only business type attribute would need to be added to the subscriptionVersion managed object class. A note needs to be added that it will be returned on queries only for SOA's that support the business hours/days. The behavior would be updated to note that the attribute would only be emitted on object creation notifications for SOAs that support it.

2. The business type attribute will be added to the T1 and T2 notifications for the SOA's that support the Business Type attribute.

-- 8.0 LNP Log Record for the Subscription Version Old SP Concurrency Request Notification

```
lnpLogOldSP-ConcurrencyRequestRecord MANAGED OBJECT CLASS
DERIVED FROM "CCITT Rec. X.721 (1992) | ISO/IEC 10165-2 :
1992":eventLogRecord;
CHARACTERIZED BY
lnpLogOldSP-ConcurrencyRequestPkg;
CONDITIONAL PACKAGES
subscriptionBusinessTypePkg PRESENT IF
!present if the Old SP SOA supports business type!;
REGISTERED AS {LNP-OIDS.lnp-objectClass 8};
```

```
lnpLogOldSP-ConcurrencyRequestPkg PACKAGE
BEHAVIOUR
lnpLogOldSP-ConcurrencyRequestDefinition,
lnpLogOldSP-ConcurrencyRequestBehavior;
ATTRIBUTES
subscriptionTN GET,
subscriptionVersionId GET,
subscriptionNewCurrentSP GET,
subscriptionNewSP-DueDate GET,
subscriptionNewSP-CreationTimeStamp GET,
accessControl GET
subscriptionBusinessType GET;
;
```

```
lnpLogOldSP-ConcurrencyRequestDefinition BEHAVIOUR
DEFINED AS !
The lnpLogOldSP-ConcurrencyRequestRecord class is the managed
object that is used to create log records for the
subscriptionVersionOldSP-ConcurrencyRequest Notification.
```

!;

lnpLogOldSP-ConcurrenceRequestBehavior BEHAVIOUR

DEFINED AS !

This log record can be used by any CME wanting to log the
subscriptionVersionOldSP-ConcurrenceRequest Notification.

!;

-- 26.0 LNP Log Record for the Subscription Version Final Concurrence
-- Timer Expiration

lnpLogOldSPFinalConcurrenceWindowExpirationRecord MANAGED OBJECT CLASS

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

1992":eventLogRecord;

CHARACTERIZED BY

lnpLogOldSPFinalConcurrenceWindowExpirationPkg;

CONDITIONAL PACKAGES

subscriptionBusinessTypePkg PRESENT IF

!present if the Old SP SOA supports business type!;

REGISTERED AS {LNP-OIDS.lnp-objectClass 26};

lnpLogOldSPFinalConcurrenceWindowExpirationPkg PACKAGE

BEHAVIOUR

lnpLogOldSPFinalConcurrenceWindowExpirationDefinition,

lnpLogOldSPFinalConcurrenceWindowExpirationBehavior;

ATTRIBUTES

subscriptionTN GET,

subscriptionVersionId GET,

accessControl GET,

subscriptionBusinessType GET;

;

lnpLogOldSPFinalConcurrenceWindowExpirationDefinition BEHAVIOUR

DEFINED AS !

The lnpLogOldSPFinalConcurrenceWindowExpirationRecord class is
the managed object that is used to create log records for the
subscriptionVersionOldSPFinalConcurrenceWindowExpiration
Notification.

!;

lnpLogOldSPFinalConcurrenceWindowExpirationBehavior BEHAVIOUR

DEFINED AS !

This log record can be used by any CME wanting to log the
subscriptionVersionOldSPFinalConcurrenceWindowExpiration
Notification.

!;

-- ??.0 LNP Subscription Business Type Package

subscriptionBusinessTypePkg PACKAGE

BEHAVIOUR subscriptionBusinessTypePkgBehavior;

ATTRIBUTES

subscriptionBusinessType GET;

REGISTERED AS {LNP-OIDS.lnp-package ??};

subscriptionCustomerInformationPkgBehavior BEHAVIOUR

DEFINED AS !

This package provides for conditionally including the
subscriptionBusinessType attribute.

!;

-- 9.0 LNP Subscription Version New SP Create Request Notification

subscriptionVersionNewSP-CreateRequest NOTIFICATION
BEHAVIOUR subscriptionVersionNewSP-CreateRequestBehavior;
WITH INFORMATION SYNTAX LNP-ASN1.VersionNewSP-CreateRequest
AND ATTRIBUTE IDS
tn subscriptionTN,
version-id subscriptionVersionId,
service-prov-id subscriptionOldSP,
service-prov-due-date subscriptionOldSP-DueDate,
service-prov-old-authorization subscriptionOldSP-Authorization,
service-prov-authorization-creation-time-stamp
subscriptionOldSP-AuthorizationTimeStamp,
status-change-cause-code subscriptionStatusChangeCauseCode,
access-control accessControl,
subscription-business-type subscriptionBusinessType;
REGISTERED AS {LNP-IDS.lnp-notification 9};

subscriptionVersionNewSP-CreateRequestBehavior BEHAVIOUR
DEFINED AS !
This notification requests that a new service provider send
a create request for a subscription version for which
concurrency for porting the number has not been received.
The TN, the version id and the old service provider id,
authorization flag and authorization timestamp values are sent.
!;

-- 10.0 LNP Subscription Version Old SP Concurrency Request Notification

subscriptionVersionOldSP-ConcurrencyRequest NOTIFICATION
BEHAVIOUR subscriptionVersionOldSP-ConcurrencyRequestBehavior;
WITH INFORMATION SYNTAX LNP-ASN1.VersionOldSP-ConcurrencyRequest
AND ATTRIBUTE IDS
tn subscriptionTN,
version-id subscriptionVersionId,
service-prov-id subscriptionNewCurrentSP,
service-prov-due-date subscriptionNewSP-DueDate,
service-prov-authorization-creation-time-stamp
subscriptionNewSP-CreationTimeStamp,
access-control accessControl,
subscription-business-type subscriptionBusinessType;
REGISTERED AS {LNP-IDS.lnp-notification 10};

subscriptionVersionOldSP-ConcurrencyRequestBehavior BEHAVIOUR
DEFINED AS !
This notification requests that a old service provider send
a create request for a subscription version for which
concurrency for porting the number has not been received.
The TN, the version id, and the new service provider id,
authorization flag and creation timestamp values are sent. **If**
the old service provider supports business type, it will be sent.
!;

-- 12.0 LNP Subscription Version Final Concurrency Timer Expiration
Notification

subscriptionVersionOldSPFinalConcurrencyWindowExpiration NOTIFICATION
BEHAVIOUR
subscriptionVersionOldSPFinalConcurrencyWindowExpirationBehavior;
WITH INFORMATION SYNTAX


```
LNP-ASN1.VersionOldSPFinalConcurrenceWindowExpiration  
AND ATTRIBUTE IDS  
tn subscriptionTN,  
version-id subscriptionVersionId,  
access-control accessControl,  
subscription-business-type subscriptionBusinessType;  
REGISTERED AS {LNP-OIDS.lnp-notification 12};
```

```
subscriptionVersionOldSPFinalConcurrenceWindowExpirationBehavior BEHAVIOUR  
DEFINED AS !  
This notification will be sent by the NPAC SMS upon expiration of  
the Final Concurrence Timer to the old service provider via the SOA  
to NPAC SMS interface to inform them of the timer expiration. If  
the old service provider supports business type, it will be sent.  
!;
```

```
VersionNewSP-CreateRequest ::= SEQUENCE {  
version-create-request [0] VersionCreateConcurrenceRequest,  
service-prov-old-authorization [1] ServiceProvAuthorization,  
subscription-status-change-cause-code [2]  
SubscriptionStatusChangeCauseCode,  
subscription-business-type Integer OPTIONAL  
}
```

```
VersionCreateConcurrenceRequest ::= SEQUENCE {  
tn PhoneNumber,  
version-id LnpKey,  
service-prov-id ServiceProvId,  
service-prov-due-date GeneralizedTime,  
service-prov-authorization-creation-time-stamp GeneralizedTime,  
access-control LnpAccessControl,  
subscription-business-type Integer OPTIONAL  
}
```

```
VersionOldSPFinalConcurrenceWindowExpiration ::= SEQUENCE {  
tn PhoneNumber,  
version-id LnpKey,  
access-control LnpAccessControl,  
subscription-business-type Integer OPTIONAL  
}
```

3. The following attribute needs to be added to the GDMO:

Subscription Version Business Type

```
subscriptionBusinessType ATTRIBUTE  
WITH ATTRIBUTE SYNTAX LNP-ASN1.Integer;  
MATCHES FOR EQUALITY, ORDERING;  
BEHAVIOUR subscriptionTimerTypeBehavior;  
REGISTERED AS {LNP-OIDS.lnp-attribute ??};
```

```
subscriptionBusinessTypeBehavior BEHAVIOUR  
DEFINED AS !
```

```
This attribute is used to specify the subscription version  
business hours/days type being used to set tunable timers.
```

Current valid values are:

0 for short business hours/days

(used primarily for wireline to wireline)

1 for long business hours/days

(anticipated use for wireless to wireless)

Short business hours (0) is set if any of the two

service providers supports only short business hours.

!;

The NPAC will have to put M&P or functionality in the install processes to set the business hours/days supported for service providers defined in the NPAC SMS database.

Change Order Number: NANC 203

IMPACT/CHANGE ASSESSMENT

<u>FRS</u>	<u>IIS</u>	<u>ASN.1</u>	<u>GDMO</u>	<u>2 N P A C</u>	<u>SO A</u>	<u>LSMS</u>
<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>

Wireless Addition of WSMSC DPC and SSN Information

Wireless Short Message Service Center (WSMSC) needs to be added as a new set of DPC and SSN information that is part of the subscription version received from SOA, stored on the NPAC SMS, and sent to the LSMS for wireless to wireless porting. Validation rules for DPC and SSN information are assumed to be those in place today.

A bit mask in the NPAC SMS will be used to indicate which LSMS and SOA systems support the new fields. SOA systems would need to recompile if they intend to send the WSMSC DPC and SSN information. LSMS systems would need to recompile if they indicated to the NPAC SMS that they would support downloading of the WSMSC DPC and SSN information.

FRS Modifications

1. The following information is needed in the subscription version data table in section 3.1.3.

<u>WSMSC DPC</u>	<u>N (9)</u>		<u>DPC for 10-digit GTT for WSMSC features.</u>
<u>WSMSC SSN</u>	<u>N (3)</u>		<u>WSMSC SSN for the Subscription Version.</u>

1. Requirement R3-8 should be updated to include the WSMSC DPC and SSN information in the download file. It would be noted that this data would only be present if the LSMS supports the WSMSC DPC and SSN data.

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

NPAC SMS shall support an off-line batch download (via 4mm DAT tape and FTP file download) to mass update Local SMSs with Subscription Versions and Service Provider Network data.

The contents of the batch download are:

- Subscriber data:
 - Version ID
 - TN
 - LRN
 - New Current Service Provider ID
 - Activation Request Timestamp
 - Version Status
 - CLASS DPC
 - CLASS SSN
 - LIDB DPC
 - LIDB SSN
 - ISVM DPC
 - ISVM SSN
 - CNAM DPC
 - CNAM SSN

 - *WSMSC DPC (for Local SMS's that support WSMSC data)*
 - *WSMSC SSN (for Local SMS's that support WSMSC data)*
 - End User Location - Value
 - End User Location - Type
 - Billing ID
 - LNP Type
 - Download Reason
 - Network data:
 - NPAC Customer ID
 - NPAC Customer name
- NPA-NXX-Download Data:
 - NPA-NXX ID
 - NPA-NXX Value
 - NPAC Customer ID
 - Effective TimeStamp
 - Download Reason
- LRN-Download Data:
 - LRN ID
 - LRN Value
 - Download Reason

1. The download data file format in the appendix would also have to be updated. The WSMSC DPC and SSN fields would be added to the end of the line if the Service provider requesting the file supports the data.

2. The following requirements would also need to be updated to add the WSMSC DPC and SSN information:

R3-6.1 Administer mass changes for NPA splits, LRN changes, LIDB changes, CLASS, ISVM, CNAM AND WSMSC

NPAC SMS shall allow NPAC personnel to perform NPA splits, LRN, LIDB, CLASS, ISVM, CNAM and WSMSC mass changes that affect multiple Subscription Versions, with version statuses of active, pending, conflict, cancel pending, deferred disconnect or failed.

- **R4-29 Service Provider subscription query options**

R4-29 Service Provider subscription query options

NPAC SMS shall receive the attributes to be searched on for queries regarding Subscription Versions associated with the Service Provider. Allowable attributes are the following data elements from **Error: Reference source not found**:

- Subscription Version ID
- Subscription Version Status
- Local Number Portability Type
- Ported Telephone Number
- Old facilities-based Service Provider Due Date
- New facilities-based Service Provider Due Date
- New facilities-based Service Provider ID
- Authorization from old facilities-based Service Provider
- Local Routing Number (LRN)
- Class DPC
- Class SSN
- LIDB DPC
- LIDB SSN
- CNAM DPC
- CNAM SSN
- ISVM DPC
- ISVM SSN
- **WSMSC DPC**
- **WSMSC SSN**
- Billing Service Provider ID
- End User Location Value
- End User Location Type
- Customer Disconnect Date
- Effective Release Date
- Disconnect Broadcast Complete Time Stamp
- Conflict Time Stamp
- Activation Time Stamp
- Cancellation Time Stamp (Status Modified to Cancel Time Stamp)
- New Service Provider Creation Time Stamp
- Old Service Provider Authorization Time Stamp
- Pre-cancellation Status
- Old Service Provider Cancellation Time Stamp
- New Service Provider Cancellation Time Stamp
- Old Time Stamp (Status Modified to Old Time Stamp)
- New Service Provider Conflict Resolution Time Stamp
- Create Time Stamp
- Modify Time Stamp
- Porting To Original
- Status Change Cause Code

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

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”:

- Local Number Portability Type - Port Type. This field must be set to “LSPP” for Inter-Service Provider ports.
- 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.
- 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.
- New Facilities-based Service Provider ID - the identifier of the new facilities-based Service Provider.
- Old Facilities-based Service Provider ID - the identifier of the old facilities-based Service Provider.
- Location Routing Number (LRN) - the identifier of the ported-to switch.
- Class DPC
- Class SSN
- LIDB DPC
- LIDB SSN
- CNAM DPC
- CNAM SSN
- ISVM DPC
- ISVM SSN
- **WSMSC DPC (if supported by the Service Provider SOA)**
- **WSMSC SSN (if supported by the Service Provider SOA)**
- 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.

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

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 3-5 upon Subscription Version creation for an Inter-Service Provider port:

- LNP Type
- Ported TN(s)
- Old Service Provider Due Date
- New Service Provider Due Date
- Old Service Provider ID
- New Service Provider ID
- Authorization from old facilities-based Service Provider
- Status Change Cause Code
- LRN
- Class DPC

- Class SSN
- LIDB DPC
- LIDB SSN
- CNAM DPC
- CNAM SSN
- ISVM DPC
- ISVM SSN
- **WSMSC DPC**
- **WSMSC SSN**
- Porting to Original
- Billing Service Provider ID
- End-User Location – Value
- End-User Location - Type

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

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:

- LNP Type - port type This field must be set to “LISP for Intra-Service Provider support.
- 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.
- Due Date - date on which Intra-Service Provider port is planned to occur.
- New facilities-based Service Provider ID - current Service Provider within which the Intra-Service Provider port will occur.
- Old facilities-based Service Provider ID - current Service Provider within which the Intra-Service Provider port will occur.
- Location Routing Number (LRN) - identifier of the ported-to switch
- Class DPC
- Class SSN
- LIDB DPC
- LIDB SSN
- CNAM DPC
- CNAM SSN
- ISVM DPC
- ISVM SSN
- **WSMSC DPC (if supported by the Service Provider SOA)**
- **WSMSC SSN (if supported by the Service Provider SOA)**

- RR5-6.1 Create “Intra-Service Provider Port” Subscription Version - Field-level Data Validation

RR5-6.1 Create “Intra-Service Provider Port” Subscription Version - Field-level Data Validation

NPAC SMS shall perform field-level data validations to ensure that the value formats for the following input data, if supplied, is valid according to the formats specified in Table 3-4 upon Subscription Version creation for an Intra-Service Provider port:

- LNP Type
- Ported TN(s)
- Current Service Provider Due Date
- Old Service Provider ID
- New Service Provider ID
- LRN
- Class DPC
- Class SSN
- LIDB DPC
- LIDB SSN
- CNAM DPC
- CNAM SSN
- ISVM DPC
- ISVM SSN
- **WSMSC DPC**
- **WSMSC SSN**
- Billing Service Provider ID
- End-User Location - Value
- End-User Location - Type

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

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:

- Location Routing Number (LRN) - the identifier of the ported to switch.
- Due Date - date on which transfer of service from old facilities-based Service Provider to new facilities-based Service Provider is planned to occur.
- Class DPC
- Class SSN
- LIDB DPC
- LIDB SSN
- CNAM DPC
- CNAM SSN
- ISVM DPC
- ISVM SSN
- **WSMSC DPC**
- **WSMSC SSN**

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

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 3-4 upon Subscription Version modification.

- LNP Type
- Ported TN(s)
- Old Service Provider Due Date
- New Service Provider Due Date
- Old Service Provider Authorization
- Status Change Cause Code
- Old Service Provider ID
- New Service Provider ID
- LRN
- Class DPC
- Class SSN
- LIDB DPC
- LIDB SSN
- CNAM DPC
- CNAM SSN
- ISVM DPC
- ISVM SSN
- **WSMSC DPC**
- **WSMSC SSN**
- Billing Service Provider ID
- End-User Location - Value
- End-User Location - Type

- R5-36 Modify Active Subscription Version - Input Data

R5-36 Modify Active Subscription Version - Input Data

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

- Location Routing Number (LRN) - the identifier of the ported to switch
- Class DPC
- Class SSN
- LIDB DPC
- LIDB SSN
- CNAM DPC
- CNAM SSN
- ISVM DPC
- ISVM SSN
- **WSMSC DPC**
- **WSMSC SSN**

- R5-38.1 Modify Active Subscription Version - Field-level Data Validation

R5-38.1 Modify Active Subscription Version - Field-level Data Validation

NPAC SMS shall perform field-level data validations to ensure that the value formats for the following input data, if supplied, is valid according to the formats specified in Table 3-4 upon Subscription Version modification of an active version:

- LRN
 - Class DPC
 - Class SSN
 - LIDB DPC
 - LIDB SSN
 - CNAM DPC
 - CNAM SSN
 - ISVM DPC
 - ISVM SSN
 - **WSMSC DPC**
 - **WSMSC SSN**
 - Billing Service Provider ID
 - End-User Location – Value
 - End-User Location - Type
- **R5-74.3 Query Subscription Version - Output Data**

R5-74.3 Query Subscription Version - Output Data

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

- Subscription Version ID
- Subscription Version Status
- Local Number Portability Type
- Ported Telephone Number
- Old facilities-based Service Provider Due Date
- New facilities-based Service Provider Due Date
- New facilities-based Service Provider ID
- Old facilities-based Service Provider ID
- Authorization from old facilities-based Service Provider
- Status Change Cause Code
- Location Routing Number (LRN)
- Class DPC
- Class SSN
- LIDB DPC
- LIDB SSN
- CNAM DPC
- CNAM SSN
- ISVM DPC
- ISVM SSN
- **WSMSC DPC (for SOAs that support WSMSC data)**
- **WSMSC SSN (for SOAs that support WSMSC data)**
- Billing Service Provider ID
- End-User Location Value
- End User Location Type
- Customer Disconnect Date

- Effective Release Date
- Disconnect Broadcast Complete Time Stamp
- Conflict Time Stamp
- Activation Time Stamp
- Cancellation Time Stamp (Status Modified to Canceled Time Stamp)
- New Service Provider Creation Time Stamp
- Old Service Provider Authorization Time Stamp
- Pre-cancellation Status
- Old Service Provider Cancellation Time Stamp
- New Service Provider Cancellation Time Stamp
- Old Time Stamp (Status Modified to Old Time Stamp)
- New Service Provider Conflict Resolution Time Stamp
- Create Time Stamp
- Modified Time Stamp
- Porting to Original
- List of all Local SMSs that failed activation, modification, or disconnect.

- R5-74.4 Query Subscription Version - Output Data

R5-74.4 Query Subscription Version - Output Data

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

- Subscription Version ID
- Ported Telephone Number
- Location Routing Number (LRN)
- New facilities-based Service Provider ID
- Activation Time Stamp
- Customer Disconnect Date
- Class DPC
- Class SSN
- LIDB DPC
- LIDB SSN
- CNAM DPC
- CNAM SSN
- ISVM DPC
- ISVM SSN
- *WSMSC DPC (for Local SMS's that support WSMSC data)*
- *WSMSC SSN (for Local SMS's that support WSMSC data)*
- End-User Location Value
- End-User Location Type
- Billing Service Provider ID
- Local Number Portability Type

3. The service provider profile would be updated as follows:

Table 3-2 would be modified to add:

<u>NPAC New Functionality Support</u>	<u>M</u>		<p><u>Each bit in the mask represents a Boolean indicator is set to true if a service provider does NOT support the functionality defined below. This bit mask is used to support backward compatibility.</u></p> <ul style="list-style-type: none"> <u>LSMS WSMSC DPC SSN Data – True if the LSMS system does not support WSMSC DPC and SSN Data in subscription versions.</u> <u>SOA WSMSC DPC SSN Data – True if the SOA system does not support WSMSC DPC and SSN Data in subscription versions.</u>
---------------------------------------	----------	--	--

GDMO Modifications

1. WSMSC attributes would need to be added to the subscriptionVersion managed object class.

subscriptionWSMSC-DPC GET-REPLACE
subscriptionWSMSC-SSN GET-REPLACE

2. Behavior in the subscriptionVersion NPAC managed object class behavior should be modified to as follows:

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
subscriptionEndUserLocationValue
subscriptionEndUserLocationType
subscriptionBillingId
subscriptionWSMSC-DPC
subscriptionWSMSC-SSN

3. The following attributes need to be added to the GDMO:

Subscription Version WSMSC Destination Point Code

subscriptionWSMSC-DPC ATTRIBUTE
WITH ATTRIBUTE SYNTAX LNP-ASN1.DPC;
MATCHES FOR EQUALITY, ORDERING;
BEHAVIOUR subscriptionWSMSC-DPCBehavior;

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

subscriptionWSMSC-DPCBehavior BEHAVIOUR

DEFINED AS !

This attribute is used to specify the subscription version
WSMSC Destination Point Code.

The data is stored in BCD (e.g. a value of FFF would be
displayed as 255.255.255).

!;

LNP Subscription Version WSMSC SSN

subscriptionWSMSC-SSN ATTRIBUTE

WITH ATTRIBUTE SYNTAX LNP-ASN1.SSN;

MATCHES FOR EQUALITY, ORDERING;

BEHAVIOUR subscriptionWSMSC-SSN-Behavior;

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

subscriptionWSMSC-SSN-Behavior BEHAVIOUR

DEFINED AS !

This attribute is used to specify the subscription version
WSMSC SSN.

!;

4. The following behavior needs to be modified in the
subscriptionVersionModify action.

New service providers can only modify the following attributes
for pending, cancel-pending, or conflict subscription versions:

subscriptionLRN

subscriptionNewSP-DueDate

subscriptionCLASS-DPC

subscriptionCLASS-SSN

subscriptionLIDB-DPC

subscriptionLIDB-SSN

subscriptionCNAM-DPC

subscriptionCNAM-SSN

subscriptionISVM-DPC

subscriptionISVM-SSN

subscriptionEndUserLocationValue

subscriptionEndUserLocationType

subscriptionBillingId

subscriptionWSMCS-DPC

subscriptionWSMCS-SSN

5. The following behavior needs to be modified in the
subscriptionVerionsNewSP-Create Action

The new service provider must specify valid values for the
following attributes:

subscriptionTN or a valid subscriptionVersionTN-Range
subscriptionLRN
subscriptionNewCurrentSP
subscriptionOldSP
subscriptionNewSP-DueDate
subscriptionCLASS-DPC
subscriptionCLASS-SSN
subscriptionLIDB-DPC
subscriptionLIDB-SSN
subscriptionCNAM-DPC
subscriptionCNAM-SSN
subscriptionISVM-DPC
subscriptionISVM-SSN
subscriptionLNPTType
subscriptionPortingToOriginal-SPSwitch
subscriptionWSMCS-DPC
subscriptionWSMCS-SSN

ASN.1 Modifications

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] LNPTType,
 subscription-porting-to-original-sp-switch [18]
 SubscriptionPortingToOriginal-SPSwitch,
subscription-wsmcs-dpc [19] EXPLICIT DPC OPTIONAL,
subscription-wsmcs-ssn [20] EXPLICIT SSN 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 LNPTType,  
subscription-porting-to-original-sp-switch [18]  
EXPLICIT SubscriptionPortingToOriginal-SPSwitch,  
subscription-wsmcsc-dpc [19] EXPLICIT DPC,  
subscription-wsmcsc-ssn [20] EXPLICIT SSN  
}
```

```
SubscriptionData ::= SEQUENCE {  
subscription-lrn [1] LRN OPTIONAL,  
subscription-new-current-sp [2] ServiceProvId OPTIONAL,  
subscription-activation-timestamp [3] GeneralizedTime OPTIONAL,  
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]  
EndUserLocationValue OPTIONAL,  
subscription-end-user-location-type [13] EndUserLocationType  
OPTIONAL,  
subscription-billing-id [14] BillingId OPTIONAL,  
subscription-lnp-type [15] LNPTType,  
subscription-download-reason [16] DownloadReason,  
subscription-wsmcsc-dpc [17] EXPLICIT DPC OPTIONAL,  
subscription-wsmcsc-ssn [18] EXPLICIT SSN OPTIONAL  
}
```

```
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-wsmc-dpc [19] EXPLICIT DPC OPTIONAL,
subscription-wsmc-ssn [20] EXPLICIT SSN 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-wsmc-dpc [16] EXPLICIT DPC OPTIONAL,
subscription-wsmc-ssn [17] EXPLICIT SSN OPTIONAL
}

```

Auditing of new DPC and SSN Values

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:

- Specific Service provider network **or** ALL Service Providers networks
- Full audit for all LNP attributes **or** a partial audit where the Service Provider can specify one or more of the following LNP attributes:
 - LIDB data
 - CLASS data
 - LRN data
 - CNAM data
 - ISVM data

- WSMSC data (only Service Provider Local SMS systems that support this attribute will be audited on this attribute)

Default: Full audit

R8-9 NPAC Personnel Specify Audit Scope

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

- Specific Service Provider network or ALL Service Providers networks.
- Full audit for all LNP attributes or a partial audit where the Service Provider can specify one or more of the following LNP attributes:
 - LIDB data
 - CLASS data
 - LRN data
 - CNAM data
 - ISVM data
 - WSMSC data

Default: Full audit

```

AuditAttributes ::= CHOICE {
  specific-audit [0] SEQUENCE {
    lidb-data BOOLEAN,
    class-data BOOLEAN,
    cnam-data BOOLEAN,
    isvm-data BOOLEAN,
    lrn-data BOOLEAN,
    wsmc-data BOOLEAN OPTIONAL -- OPTIONAL for backward
                                -- compatibility
  },
  all-data [1] NULL
}

```

```

MismatchAttributes ::= SEQUENCE {
  seq0 [0] SEQUENCE {
    lsms-subscriptionLRN LRN,
    npac-subscriptionLRN LRN
  } OPTIONAL,
  seq1 [1] SEQUENCE {
    lsms-subscriptionNewCurrentSP ServiceProvId,
    npac-subscriptionNewCurrentSP ServiceProvId
  } OPTIONAL,
  seq2 [2] SEQUENCE {
    lsms-subscriptionActivationTimeStamp GeneralizedTime,
    npac-subscriptionActivationTimeStamp GeneralizedTime
  } OPTIONAL,
  seq3 [3] SEQUENCE {
    lsms-subscriptionCLASS-DPC DPC,
    npac-subscriptionCLASS-DPC DPC
  } OPTIONAL,
  seq4 [4] SEQUENCE {
    lsms-subscriptionCLASS-SSN SSN,
    npac-subscriptionCLASS-SSN SSN
  } OPTIONAL,

```



```
seq5 [5] SEQUENCE {
  lsms-subscriptionLIDB-DPC DPC,
  npac-subscriptionLIDB-DPC DPC
} OPTIONAL,
seq6 [6] SEQUENCE {
  lsms-subscriptionLIDB-SSN SSN,
  npac-subscriptionLIDB-SSN SSN
} OPTIONAL,
seq7 [7] SEQUENCE {
  lsms-subscriptionISVM-DPC DPC,
  npac-subscriptionISVM-DPC DPC
} OPTIONAL,
seq8 [8] SEQUENCE {
  lsms-subscriptionISVM-SSN SSN,
  npac-subscriptionISVM-SSN SSN
} OPTIONAL,
seq9 [9] SEQUENCE {
  lsms-subscriptionCNAM-DPC DPC,
  npac-subscriptionCNAM-DPC DPC
} OPTIONAL,
seq10 [10] SEQUENCE {
  lsms-subscriptionCNAM-SSN SSN,
  npac-subscriptionCNAM-SSN SSN
} OPTIONAL,
seq11 [11] SEQUENCE {
  lsms-subscriptionEndUserLocationValue EndUserLocationValue,
  npac-subscriptionEndUserLocationValue EndUserLocationValue
} OPTIONAL,
seq12 [12] SEQUENCE {
  lsms-subscriptionEndUserLocationType EndUserLocationType,
  npac-subscriptionEndUserLocationType EndUserLocationType
} OPTIONAL,
seq13 [13] SEQUENCE {
  lsms-subscriptionBillingId BillingId,
  npac-subscriptionBillingId BillingId
} OPTIONAL,
seq14 [14] SEQUENCE {
  lsms-subscriptionLNPTType LNPTType,
  npac-subscriptionLNPTType LNPTType
} OPTIONAL,
seq15 [10] SEQUENCE {
  lsms-subscriptionWSMCS-DPC DPC,
  npac-subscriptionWSMCS-DPC DPC
} OPTIONAL,
seq16 [10] SEQUENCE {
  lsms-subscriptionWSMCS-SSN SSN,
  npac-subscriptionWSMCS-SSN SSN
} OPTIONAL
}
```

Backward Compatibility

The following table indicates if a change order is Backward Compatible (BC) and gives further detail if the change order is not backwards compatible or if there is a question about backwards compatibility.

<u>Change Order Description</u>	<u>BC?</u>	<u>Notes</u>
<u>NANC 201- Unique Sets of Timers</u>	<u>TBD</u>	
<u>NANC 202- Unique Sets of Business Days/Hours</u>	<u>TBD</u>	
<u>NANC 203- Wireless Addition of WSMSC DPC and SSN Information</u>	<u>TBD</u>	<u>If a SOA does not send this information it will not be impacted. If an LSMS does not indicate to the NPAC SMS that it does not want to receive the information then it will not receive it in subscription version downloads, in the download files or in audit processing.</u>