**Origination Date:** 9/9/04

**Originator:** LNPAWG

### Change Order Number: NANC 396

**Description:** NPAC Filter Management – NPA-NXX Filters

**Cumulative SP Priority, Average:** #16, 14.43

**Functional Backward Compatible:** YES

**IMPACT/CHANGE ASSESSMENT**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| FRS | IIS | GDMO | ASN.1 | **NPAC** | SOA | LSMS |
| Y | N | N | N | Med | None | None |

**Business Need:**

The existing NPAC Filter Management process only allows a filter to be applied for a particular NPA-NXX if that particular NPA-NXX has previously been opened within NPAC. The NPAC also supports the ability for a SOA/LSMS to manage their own filters over the CMIP interface. Using this method, however, SOA/LSMS administrators must still wait upon receipt of a new code opening from the NPAC to create a new filter for those cases where they do not want to receive any Subscription Versions for that NPA-NXX. Because of how the NPAC Filter Management process works in conjunction with the SOA/LSMS implementation options, SOA/LSMS administrators are manually unable to efficiently filter out unnecessary Subscription Versions based on NPA-NXX for the purpose of SOA/LSMS capacity management. As a result, unnecessary Subscription Versions are sent to a SOA/LSMS or an unnecessary amount of resources are spent by the end user monitoring NPA-NXX activity at the NPAC in real-time to ensure Subscription Versions that are not needed are indeed not being sent to their SOA/LSMS. An unnecessary amount of resources are also spent by the NPAC maintaining these filters for carriers.

Alternatively, a SOA/LSMS could implement an automated mechanism to manage filters over the CMIP interface, based on a local database table (or file). This table (or file) would contain codes that the SOA/LSMS wishes to filter out. So, when a new code is opened in NPAC and broadcast to the SOA/LSMS, the automated mechanism could issue a new filter request to the NPAC over the CMIP interface. The issue with this approach is that it requires every SOA/LSMS (that wishes to use this functionality) to implement this feature.

**Description of Change:**

This Change order proposes that filters may be implemented for an NPA-NXX before it is entered into the NPAC or a filter should be able to be implemented at the NPA level to account for any NXX in a particular NPA, even before an NXX may exist under that NPA within NPAC.

Major points/processing flow/high-level requirements:

1. The NPAC will **continue to support** filters at the NPA-NXX level.
	1. The NPAC will keep the existing edit rule where an NPA-NXX must already exist in the NPAC in order to create a filter for that NPA-NXX. Note: in order to allow NPAC Personnel to manage updates, this rule will not apply to NPAC Personnel.
	2. The existing NPA-NXX filters will continue to be supported for NPAC personnel to maintain, via the NPAC GUI, for a requesting Service Provider.
	3. The existing NPA-NXX filters will continue to be supported across the CMIP interface.
2. The NPAC will **add support** of filters at the NPA level.
	1. The NPAC existing “*NPA-NXX must exist*” edit rule will NOT apply when creating NPA filters.
	2. The new NPA filters will be supported for NPAC personnel to maintain, via the NPAC GUI, for a requesting Service Provider.
	3. Once an NPA filter is added, all subordinate NPA-NXX filters will be deleted.
	4. The new NPA filters can also be removed by NPAC Personnel via the NPAC GUI.
3. Existing filter functionality related to broadcasts will remain in the NPAC (i.e., the NPAC will NOT broadcast data to an LSMS that has a filter for a given NPA or NPA-NXX).
4. No modifications required to local systems (SOA, LSMS).
5. No tunable changes.
6. No report changes.

**Jul ’08 LNPAWG**, discussion. Need to develop requirements for Sep ’08 review. The existing Filter requirements are sufficient for existing NPA-NXX functionality, so only those below for NPA filters are needed:

**Requirements:**

RR3-7 Query Filtered NPA-NXXs for a Local SMS

NPAC SMS shall allow a Service Provider to query filtered NPA-NXXs for a given Local SMS via the NPAC SMS to Local SMS interface and the SOA to NPAC SMS interface.

NOTE: .The NPAC SMS maintains NPA-level filters internally. Therefore, they are NOT returned as a result of a query request.

Req 1 Create Filtered NPA for a Local SMS – Existing NPA-NXX not Required

NPAC SMS shall allow NPAC Personnel on behalf of a requesting Service Provider to create a filtered NPA for a given Local SMS, via the NPAC Administrative interface.

Req 2 Create Filtered NPA for a Local SMS – Delete Subordinate NPA-NXXs

NPAC SMS shall delete all subordinate NPA-NXX filters when a filtered NPA is created for a given Local SMS.

Req-3 Filtered NPA Behaviour for a Local SMS

NPAC SMS shall treat a filtered NPA the same as a filtered NPA-NXX for broadcasts and BDD files for a given Local SMS.

Note: A filtered NPA is equivalent to a filtered NPA-NXX for every NXX under that NPA.

Req-4 Delete Filtered NPA for a Local SMS

NPAC SMS shall allow NPAC Personnel on behalf of a requesting Service Provider to delete a filtered NPA for a given Local SMS, via the NPAC Administrative interface.

Req-5 Create Filtered NPA for a SOA – Existing NPA-NXX not Required

Deleted.

Req-6 Create Filtered NPA for a SOA – Delete Subordinate NPA-NXXs

Deleted.

Req-7 Filtered NPA Behaviour for a SOA

Deleted.

Req-8 Delete Filtered NPA for a SOA

Deleted.

Req-9 Filtered NPA Behaviour – Overlap Allowed

NPAC SMS shall allow the creation of an NPA-NXX Filter (6-digits) even if the corresponding NPA Filter (3-digits) already exists.

Note: Allowing overlap allows the Service Provider to maintain filtering functionality when moving from a 3-digit basis to a 6-digit basis.

Req-10 Create Filtered NPA-NXX for a Local SMS – NPAC Personnel – Existing NPA-NXX Not Required

NPAC SMS shall allow NPAC Personnel to create a filtered NPA-NXX for a given Local SMS, even if the corresponding NPA-NXX network data does **NOT** exists in the NPAC SMS.

Note: This is needed to allow NPAC Personnel to manage filtering functionality for a Service Provider.

Req 11 Delete Filtered NPA-NXX – Deletion of NPA-NXX

NPAC SMS shall delete an NPA-NXX filter when the corresponding NPA-NXX network data is deleted.

IIS:

No change required.

GDMO:

Behavior description for NPA-level filter. (modified in yellow)

-- 25.0 LNP Service Provider Filter NPA-NXX Managed Object Class

lsmsFilterNPA-NXX MANAGED OBJECT CLASS

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

 CHARACTERIZED BY

 lsmsFilterNPA-NXX-Pkg;

 REGISTERED AS {LNP-OIDS.lnp-objectClass 25};

lsmsFilterNPA-NXX-Pkg PACKAGE

 BEHAVIOUR

 lsmsFilterNPA-NXX-Definition,

 lsmsFilterNPA-NXX-Behavior;

 ATTRIBUTES

 lsmsFilterNPA-NXX-ID GET,

 lsmsFilterNPA-NXX-Value GET;

 ;

lsmsFilterNPA-NXX-Definition BEHAVIOUR

 DEFINED AS !

 The lsmsFilterNPA-NXX class is the managed object

 used to identify the NPA-NXX values for which a service provider

 does not want to be informed of subscription version broadcasts,

 network downloads, or SOA notifications.

 !;

lsmsFilterNPA-NXX-Behavior BEHAVIOUR

 DEFINED AS !

 NPAC SMS Managed Object used for the Local SMS to NPAC SMS interface

 and the NPAC SMS to SOA interface.

 All attributes are read only. Once created, the lsmsFilterNPA-NXX

 object can be deleted via the Local SMS or SOA interface. The

 lsmsFilterNPA-NXX-ID is specified by the NPAC SMS.

 The Local SMS or SOA can M-DELETE, M-CREATE and M-GET the

 lsmsFilterNPA-NXX objects on the NPAC SMS. (LSMS Network Data

 Association Function).

 The NPAC SMS maintains NPA-level filters internally. Even though

 they filter all subordinate NPA-NXXs, they are not broadcast or returned in a query result, over the

 Local SMS or SOA interface.

 !;

ASN.1:

No change required.