**Origination Date:** 11/14/06

**Originator:** LNPAWG (from PIM 51)

### Change Order Number: NANC 414

**Description:** Validation of Code Ownership in the NPAC

**Cumulative SP Priority, Average:** #3, 5.67

**Functional Backward Compatible:** YES

**IMPACT/CHANGE ASSESSMENT**

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

**Business Need:**

Because there is no validation of ownership when a code is opened in NPAC’s network data, codes sometimes are opened in NPAC under the wrong SPID. When code ownership is incorrectly indicated in the NPAC’s network data, SOA failures occur whenever a carrier submits a new SP create request for a non-ported number. Further, some carriers rely on the NPAC’s network data to determine the proper destination for the LSR/WPR. Code ownership errors thus can cause fall-out and delay the porting process.

There have been instances of carriers working around the NPAC’s validation of TN ownership when code ownership data is not correct in NPAC. This is done by entering the wrong old-SP SPID value, to match the NPAC’s code ownership data, in the new SP’s create request. This allows the pending SV create request to pass the NPAC’s TN ownership validation. While this approach allows the NPAC porting processes to proceed, but the actual current service provider does not receive NPAC notifications about the impending port. In the long term, this work around could impact all carriers in a region because correcting the code ownership (and SV ownership) errors requires a time-consuming manual or NANC 323 SPID migration.

An incorrect code ownership indication in NPAC’s network data delays the porting process and can create a substantial burden on industry to correct subsequent errors in individual ported TN records.

**Open Issues:**

There appear to be two open questions that must be answered in order to design and implement this change order.

* Source of code-ownership data

The source of code ownership data must be reliable and must be public. Should the NPAC rely on NANPA data? Or should some other methodology be used to verify code ownership?

**Dec ’06 LNPAWG con call:** The logical choice is the NANPA public data. This provides OCN to code cross reference.

* Source of all OCN related to each NPAC SPID

Each NPAC SPID may be associated with more than one OCN. A public source for the related OCN data must be determined and a method to keep this information current must be developed.

**Dec ’06 LNPAWG con call:** The major question raised and discussed is the source for code ownership. Several other discussion items included:

How will we get and maintain the table for this data?

Do we really need to have all this data?

In previous discussions, the thought was to store the OCNs in the NPAC (implementation side). This way we would have a cross-reference to NPAC SPID. It could be based on their NPAC profile.

It appears that the big issue is how to get the data started. We would need everyone to provide the initial data.

We could have one option where we reject the NPA-NXX Create if the cross-reference is not found.

Aren’t we just moving the problem to a different area? What prevents the cross-reference table from getting problems?

One benefit is that we eliminate the typo question that was raised previously.

How do we keep problems from happening on an on-going basis?

Can’t we be more proactive, rather than reactive?

The NPAC would request that they fill out the profile as things change. However, it still relies on the SP providing the data.

Would carriers have access to this data?

Collectively, we need to decide what we want because we’re starting to define requirements here.

This seems like a big problem and hard to administer (the maintenance of the data).

One question we need to answer is whether or not we should allow an SP to add their own cross-reference entries.

If we’re going to do it, this sounds like it is the simplest way to do it.

Another question to ask, whether we want a manual effort to do this on a monthly basis until we get this implemented, since this was also part of the PIM. We would have to do a one-time clean-up regardless of whether we do the manual process as an interim solution.

We need to determine the M&P on how to get the data to NeuStar. Is it an Excel spreadsheet, Help Desk, on the web site, over the interface?

We also still need to determine if carriers can view other carrier’s data.

The Change Order was accepted on a consensus vote. Service Providers should come prepared to the January ’07 meeting to discuss the issues raised during the con call.

**Jan ’07 LNPAWG meeting:** Logical choice would be for code holder to provide data to NeuStar:

* Using SP-provided OCN to SPID relationship data, NPAC can resolve operational items.
* Issues come up if OCN to SPID relationship data is not provided to NPAC in timely fashion: NPAC would inappropriately reject, or accept, a request if ownership information is missing or outdated.
* Initially, SPs provide set of OCNs associated with each NPAC SPID.
* Initially, NPAC performs manual review to identify code ownership errors. (This can be done as part of the NPAC SMS software change proposed in this change order, when the new validation is implemented, or can be performed as a separate manual activity performed as time permits once the new validation is implemented.)
* Ongoing, SPs notify NPAC when their OCN to SPID association information changes.

Maintenance of OCN to SPID relationship information will be described in the M&P write-up.

Manual portion of this change order (if industry decides to perform) adds the following:

* Perform an initial review
* Perform manual or NANC 323 migration to correct code ownership errors.
* Perform subsequent reviews on some regular basis (e.g., monthly) of codes opened since previous review.
* Perform subsequent manual or NANC 323 migrations as new code ownership errors are revealed.

Next step. NeuStar to develop requirements.

**Meeting Discussions:**

**Mar ’07 LNPAWG meeting:** Additional points from meeting discussion:

* A routine creation of the discrepancy list should be provided.
* The update of the code assignee table needs to be done on a regular basis (daily, weekly, monthly). After some discussion it was generally agreed, that a daily occurrence was logical. The NPAC would implement a tunable for the update interval, granularity will be number of days.
* Any discrepancies must be resolved by the appropriate SP. In most cases this will require the code holder to correct the NANP’s code assignee record before the NPAC can change the code assignee value that is used by the NPAC for the code validation process defined in this change order. For the Canadian region the source is “CNA”. The edit or validation step will only work once the SP corrects the data source. Upon correction, the SP should notify NPAC personnel of the updated/correct information.

**May ’07 LNPAWG meeting:** Additional points from meeting discussion:

* The group agreed that the manual code validation process should be implemented. The request from the LNPAWG will be sent to the NAPM LLC.
* The Service Providers will be collecting OCN-to-SPID relationship information and providing that information to NeuStar.

**Jul ’07 LNPAWG meeting:** Additional points from meeting discussion:

* The focus of this change order is now on the mechanized validation since the manual validation process was finalized at the last meeting.
* As discussed during the May ’07 meeting, it was assumed that Service Providers were using a single SPID per OCN (today’s environment generally has one NPAC SPID for all of that Service Provider’s valid OCNs). One SP reported that this is not the case for them (they have two SPIDs on the same OCN). This means that the SPID-to-OCN relationship can be many-to-many (rather than the assumed one-to-many), which complicates the mechanized validation.
* The OCN-to-SPID relationship data will not be entered over the CMIP interface, but would be entered by NPAC Personnel via the NPAC GUI. Detailed M&Ps would need to be developed to address the “duplicate” entry issue (many-to-many).

**Description of Change:**

The proposed change is to verify code ownership when new NPA-NXXs are opened in the NPAC. This will alleviate the problem of NPA-NXXs that are opened under the wrong SPID, which causes operational issues for both back-office systems and port requests. The following items apply:

* NANPA website is the public data source for code ownership.
* SPs provide the set of OCNs associated with each NPAC SPID.
* SPs notify NeuStar for any code ownership changes that are not reflected accurately on the NANPA website. (This can occur if SP performs code transfer without notifying NANPA.)
* NeuStar enhances the NPA-NXX Create request validation rules to verify code ownership.
* Code ownership applies to NPA Splits (if the OCN of the new NPA-NXX is not associated with the owner of the old NPA-NXX, the NPAC will reject the split request).

Nov ’08 LNPAWG, discussion. Requirements 1 through 7 in the attachment are only applicable when requirement 8 (regional tunable) is set to TRUE.

**Requirements:**

Req 1 Valid NPA-NXXs for each SPID

NPAC SMS shall establish a list of valid NPA-NXXs for each SPID using information obtained from an industry source.

Req 2 Maintaining List of Valid NPA-NXXs for each SPID

NPAC SMS shall maintain the list of valid NPA-NXXs for each SPID using information obtained from an industry source.

Req 3 Updating List of Valid NPA-NXXs for each SPID

NPAC SMS shall update the list of valid NPA-NXXs for each SPID using information obtained from an industry source.

Req 4 Valid OCNs for each SPID

NPAC SMS shall establish a list of valid OCNs for each SPID using information obtained from each SPID entity.

Req 5 Maintaining List of Valid OCNs for each SPID

NPAC SMS shall maintain the list of valid OCNs for each SPID using information obtained from each SPID entity.

Req 6 Updating List of Valid OCNs for each SPID

NPAC SMS shall update the list of valid OCNs for each SPID using information obtained from each SPID entity.

Req 7 Rejection of NPA-NXXs that Do Not Belong to the OCN/SPID

NPAC SMS shall reject a Service Provider request to open an NPA-NXX for portability if the associated OCN/SPID does not own that NPA-NXX.

Req 8 Regional NPAC NPA-NXX Ownership Edit Flag Indicator

NPAC SMS shall provide a Regional NPA-NXX Ownership Edit Flag Indicator, which defines whether or not NPA-NXX Ownership edits will be enforced by the NPAC SMS for a particular NPAC Region.

Req 9 Regional NPAC NPA-NXX Ownership Edit Flag Indicator Modification

NPAC SMS shall provide a mechanism for NPAC Personnel to modify the Regional NPA-NXX Ownership Edit Flag Indicator.

Req 10 Regional NPAC NPA-NXX Ownership Edit Flag Indicator – Default Value

NPAC SMS shall default the Regional NPA-NXX Ownership Edit Flag Indicator to TRUE.

Req 11 Rejection of NPA Split for an NPA-NXX that Does Not Belong to the OCN/SPID

NPAC SMS shall reject an NPA Split request if the OCN of the new NPA-NXX is not associated with the owner of the old NPA-NXX.

Assumptions:

1. If Service Providers do not provide a list of OCNs for each SPID, then only the SPID value will be populated in the ownership table.
2. All OCN-to-SPID ownership data must be provided by a date determined by NeuStar, prior to the rollout of this feature.

IIS:

No change required.

GDMO:

No change required.

ASN.1:

No change required.