Change Order Form

**Origination Date** (mm/dd/yyyy): 10/02/2024

**Originator(s)**: iconectiv

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**(NOTE: Originator(s) to complete this section of the form along with Sections 1, 2 and 3)**

1. **CO Name/Description: New Pseudo-LRN NPA-NXX-X SIC-SMURF File**

**Functional Backwards Compatible:** Yes

**IMPACT/CHANGE ASSESSMENT**

|  |  |  |
| --- | --- | --- |
| DOC | FRS | IIS |
| Y | N |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CMIP | GDMO | ASN.1 | **NPAC** | SOA | LSMS |
| N | N | Y | OPT | OPT |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XML | XIS | XSD | **NPAC** | SOA | LSMS |
| N | N | Y | OPT | OPT |

1. **Business Need:**

Currently, though NPBs having a pseudo-LRN (LRN = 000-000-0000) and the associated NPA-NXX-Xs are migrated when the NPA-NXX of the NPB exists in the NPA-NXX Selection Input Criteria SPID Migration Update Request Files (SIC-SMURF file), some local systems are only migrating the NPA-NXX-Xs that exist in the NPA-NXX-X SIC-SMURF file, which would not be the case for pseudo-LRN NPBs. For thousands-blocks, in addition to migrating a pseudo-LRN NPB object based on its NPA-NXX being included in the NPA-NXX SIC-SMURF file, the associated NPA-NXX-X object is migrated as well, since the two objects must be kept in sync. Additionally, there may be occasions an NPA-NXX-X that indicates it is a pseudo-LRN block is migrated by the NPAC, but the NPB does not exist. In these cases the local system does not have a way to determine that the -X is related to a pseudo-LRN NPB, and should be migrated in the SOA/LSMS, because the -X download sent to the SOAs/LSMSs does not include a pseudo-LRN indicator.

Because some local systems may not migrate -X objects for a pseudo-LRN block, consensus was reached during the discussion of PIM 154 that a new pseudo-LRN NPA-NXX-X SIC-SMURF file is needed. See also PIM 154.

1. **Description of Change:**

This change order introduces a new pseudo-LRN NPA-NXX-X SIC-SMURF file, which NPAC will produce in addition to the existing NPA-NXX, LRN, and NPA-NXX-X SIC-SMURF files.

Requirements are added to describe the new file generated by the NPAC/SMS, and its file name structure and data format. The structure of the file name and the format of the included data are similar to the naming and format specifications for the existing NPA-NXX-X SIC-SMURF file, which only contains non-pseudo-LRN NPA-NXX-Xs. The timing, delivery, and retention of preliminary and final Pseudo-LRN NPA-NXX-X SIC-SMURF files will match those for the existing three files, so those general requirements will not change.

The same file will be produced and put in the SFTP directory for all service providers, and the service providers can choose whether or not to use the file as a means to update pseudo-LRN NPA-NXX-Xs in their SOAs and LSMSs, if supported.

**FRS:**

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### 3.2.2 Service Provider ID (SPID) Migration Update

The following section defines how the NPAC SMS supports modification of Service Provider ID on Local Number Portability information. With the introduction of NANC 408 in NPAC SMS Release 3.4, two new aspects have been added, 1.) an on-line self-service feature in the LTI that can be used by Service Provider Personnel optionally in lieu of spreadsheets submitted via e-mail to NPAC Personnel, and 2.) an interface message enhancement that allows NPA-NXX ownership changes to be sent via a new mechanized interface message. NPAC Personnel will continue to generate Selection Input Criteria SPID Migration Update Request Files (SIC-SMURF) to all Service Providers (as a primary means of update by those that do not support the new interface message to update their databases, and as a backup means of update for those that do support the new interface message). With the introduction of CO (TBD) in NPAC SMS Release X.X, a new SIC-SMURF file for pseudo-LRN NPA-NXXs-Xs has been added. Additionally, SIC-SMURFs will be used by Service Providers that support the interface message when the migration involves non-pseudo LRN NPA-NXX-Xs, pseudo-LRN NPA-NXX-Xs (if supported by the Service Provider), and/or LRNs. SIC-SMURFs are placed in all Service Providers’ Secure FTP sites at the beginning of a maintenance window; updates are performed independently off-line during the maintenance window by each Service Provider to its own databases.

#### **3.2.2.1 SPID Migration Updates and Processing (NANC 323)**

With functionality in NANC 323, SIC-SMURFs are generated by NPAC Personnel and distributed (via Secure FTP) to all Service Providers. With the introduction of NANC 408, SPID Migrations may be performed as defined in sections 3.2.2.2 and 3.2.2.3.

RR3-255 SPID Migration Update – OpGUI Entry

NPAC SMS shall allow NPAC Personnel, via the NPAC SMS Administrative Interface, to enter selection input criteria (mandatory: migrating away from SPID, migrating to SPID; at least one of the following three: NPA-NXX, LRN, and/or NPA-NXX-X) for a partial SPID Migration Update Request Process. (previously NANC 323 Req 1)

RR3-256 SPID Migration Update – Generation of SIC-SMURF Files

NPAC SMS shall provide a mechanism that generates SIC-SMURF for NPA-NXX, LRN, NPA-NXX-X, and Pseudo-LRN NPA-NXX-X upon completion of the entry of the selection input criteria in the NPAC SMS Administrative Interface, for a partial SPID Migration Update Request Process in the NPAC SMS. (previously NANC 323 Req 2)

Note: The NPAC will always produce NPA-NXX, LRN, NPA-NXX-X, and Pseudo-LRN NPA-NXX-X SIC-SMURF for each defined SPID Migration.  For the network data components that do not have data migrating, NPAC SMS will produce an empty SIC-SMURF File (a zero byte file with the appropriate file name defined in Appendix E). For example, if a particular SPID Migration only has NPA-NXX data being migrated, the NPAC will produce the NPA-NXX SPID Migration File with its migrating data, as well as produce empty LRN, NPA-NXX-X, and Pseudo-LRN NPA-NXX-X SPID Migration Files.

RR3-257 SPID Migration Update – NPAC SMS Processing of Requested Data

For non-pseudo-LRN Subscription Version, Number Pool Block, and NPA-NXX-X data, NPAC SMS shall provide a mechanism to migrate SPID information according to the requested selection input criteria, when changing from one SPID to another SPID in selected NPA-NXX, LRN, and/or NPA-NXX-X data, and subordinate Number Pool Block and Subscription Version data, in the NPAC SMS.
For pseudo-LRN Subscription Version, Number Pool Block, and NPA-NXX-X data, NPAC SMS shall provide a mechanism to migrate SPID information according to the requested selection input criteria, when changing from one SPID to another SPID in selected NPA-NXX data, and subordinate Subscription Version, Number Pool Block, and NPA-NXX-X data, in the NPAC SMS. (previously NANC 323 Req 3)

[snip]

RR3-260 SPID Migration Update – SIC-SMURF File Names

NPAC SMS shall follow the SIC-SMURF file naming convention as described in Appendix E. (previously NANC 323 Req 6)

RR3-261 SPID Migration Update – SIC-SMURF File Formats

NPAC SMS shall follow the SIC-SMURF file format as described in Appendix E. (previously NANC 323 Req 7)

RR3-262 SPID Migration Update – SIC-SMURF NPA-NXX File Processing – Update NPA-NXX Network Data

NPAC SMS shall use the SIC-SMURF NPA-NXX file to update the SPID associated with NPA-NXXs in the NPAC SMS, from the *migrating away from SPID* value to the *migrating to SPID* value, during the partial SPID Migration Update Request Process. (previously NANC 323 Req 8)

[snip]

RR3-709 SPID Migration Update – SIC-SMURF NPA-NXX File Processing – Update SV Data for Pseudo-LRN Records

NPAC SMS shall update the new service provider SPID on subscription versions, where LRN equals 000-000-0000, associated with the NPA-NXX that was updated in the NPAC SMS, from the *migrating away from SPID* value to the *migrating to SPID* value, during the partial SPID Migration Update Request Process. (previously NANC 442, Req 39)

RR3-710 SPID Migration Update – SIC-SMURF NPA-NXX File Processing – Update Number Pool Block Data for Pseudo-LRN Records

NPAC SMS shall update the new service provider SPID on Number Pool Blocks, where LRN equals 000-000-0000, associated with the NPA-NXX that was updated in the NPAC SMS, from the *migrating away from SPID* value to the *migrating to SPID* value, during the partial SPID Migration Update Request Process. (previously NANC 442, Req 40)

Req 1 SPID Migration Update – SIC-SMURF NPA-NXX File Processing – Update NPA-NXX-X Data for Pseudo-LRN Records

NPAC SMS shall update the NPAC Customer ID on NPA-NXX-Xs, where the NPA-NXX-X data indicates the block has a pseudo-LRN, associated with the NPA-NXX that was updated in the NPAC SMS, from the *migrating away from SPID* value to the *migrating to SPID* value, during the partial SPID Migration Update Request Process. (previously CO TBD, Req 1)

RR3-264 SPID Migration Update – SIC-SMURF LRN File Processing – Update LRN Data

NPAC SMS shall use the SIC-SMURF LRN file to update the SPID associated with LRNs in the NPAC SMS, from the *migrating away from SPID* value to the *migrating to SPID* value, during the partial SPID Migration Update Request Process. (previously NANC 323 Req 10)

RR3-265 SPID Migration Update – SIC-SMURF LRN File Processing – Update Block Data

NPAC SMS shall update the blockholder SPID on Number Pool Blocks associated with the LRN that was updated in the NPAC SMS, from the *migrating away from SPID* value to the *migrating to SPID* value, during the partial SPID Migration Update Request Process. (previously NANC 323 Req 11)

RR3-266 SPID Migration Update – SIC-SMURF LRN File Processing – Update SV Data

NPAC SMS shall update the new service provider SPID on subscription versions, regardless of LNP Type, associated with the LRN that was updated in the NPAC SMS, from the *migrating away from SPID* value to the *migrating to SPID* value, during the partial SPID Migration Update Request Process. (previously NANC 323 Req 12)

RR3-267 SPID Migration Update – SIC-SMURF NPA-NXX-X File Processing – Update NPA-NXX-X

NPAC SMS shall use the SIC-SMURF NPA-NXX-X file to update the SPID associated with NPA-NXX-Xs in the NPAC SMS, from the *migrating away from SPID* value to the *migrating to SPID* value, during the partial SPID Migration Update Request Process. (previously NANC 323 Req 13)

[snip]

#### **3.2.2.2 SPID Migration Online GUI (NANC 408)**

[snip]

RR3-569 SPID Migration Update – GUI Entry by Service Provider and NPAC Personnel

NPAC SMS shall allow Service Provider Personnel, via the NPAC Low-Tech Interface, and NPAC Personnel, via the NPAC Administrative Interface, to “select and request” a SPID Migration, by entering selection input criteria (mandatory: migrating away from SPID, migrating to SPID; at least one of the following three: NPA-NXX, LRN, and/or NPA-NXX-X) for a partial SPID Migration Update Request Process. (previously NANC 408, Req 2)

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

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

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

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

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

[snip]

RR3-594 Completed SPID Migration Retention – Tunable Parameter

NPAC SMS shall provide a Regional Completed SPID Migration Retention tunable parameter, which is defined as the number of days before a completed SPID Migration will be purged from the database. (previously NANC 408, Req X26)

RR3-595 Completed SPID Migration Retention – Tunable Parameter Default

NPAC SMS shall default the Completed SPID Migration Retention tunable parameter to 365 days. (previously NANC 408, Req X27)

RR3-596 Completed SPID Migration Retention – Tunable Parameter Modification

NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify the SPID Migration Completed Migrations Retention tunable parameter. (previously NANC 408, Req X28)

RR3-597 Completed SPID Migration Retention – Housekeeping Purge

NPAC SMS shall purge completed SPID Migrations from the database after tunable Completed SPID Migration Retention days have passed since the completion of the SPID Migration. (previously NANC 408, Req X29)

[snip]

RR3-624 Generation of Preliminary SMURF files

NPAC SMS shall generate and distribute Preliminary SMURF files for a SPID Migration tunable days (tunable Preliminary SPID Migration SMURF Files Lead Time) prior to the scheduled date for the SPID Migration. (previously NANC 408, Req X50)

Note: The files are not generated if the SPID Migration is manually performed/executed prior to the scheduled date lead time.

RR3-625 Generation of Final SMURF files

NPAC SMS shall generate and distribute the Final SMURF files for a SPID Migration at the start of the Service Provider Maintenance Window, in which the SPID Migration will be executed. (previously NANC 408, Req X51)

[snip]

#### **3.2.2.3 SPID Migration Interface Messages (NANC 408)**

[snip]

RR3-643 Service Provider Secure FTP SMURF File

NPAC SMS shall provide SMURF Files in a Service Provider’s Secure FTP directory. (previously NANC 408, Req 34)

Note: This is the mechanism that providers that support the interface message will be expected to recover missed SPID migration messages. Based on FRS requirement RR3-274 the NPAC does not include SPID migration data in the recovery messages sent over the CMIP interface.

[snip]

***Appendix E. Download File Examples***

The NPAC can generate Bulk Data Download files for Network Data (including SPID, LRN, NPA-NXX and NPA-NXX-X), Subscription Versions (including Number Pool Blocks) and Notifications.

All fields within files discussed in the following section are variable length. The download reason in all “Active-like” download files is always set to new. The download reason in all “Latest View” download files is set to the appropriate download reason based on activation/modification/deletion activity. ASCII 13 is the value used as the value for carriage return (CR) in the download files. ASCII 10 is the value used for line feed (LF) in the download files.

All Time Stamps contained within the download files and SMURF files, and file names are in GMT (Greenwich Mean Time). Files that contain three timestamps reference the time the files is created, and start and end time range. When the time range is not specified, the default start timestamp is 00-00-0000000000 and the default end timestamp is 99-99-9999999999. The SIC-SMURF files contain a single timestamp in the filename. This timestamp for all SIC-SMURF files generated from the same SPID migration (same Migrating FROM and Migrating TO SPIDs) shall be identical.

If full BDD files are produced they will be compressed into “gz” format. This shall be true for all file types. Delta BDD files will not be compressed.

[snip]

SIC-SMURF NPA-NXX Download File

The SIC-SMURF NPA-NXX download file is used as input to the SPID migration update process in the NPAC SMS and all SOAs/LSMSs, to convert NPA-NXX data, pseudo-LRN Subscription Version, pseudo-LRN Number Pool Block, pseudo-LRN NPA-NXX-X, and scheduled pseudo-LRN Number Pool Block (NPAC only) data from the Old SPID to the New SPID. This file contains individual fields that are pipe delimited, with a line feed (LF) after each SIC-SMURF NPA-NXX record.

The file name for the SIC-SMURF NPA-NXX download file will be in the format:

 SIC-SMURF-NPANXX.OldSPID.NewSPID.DD-MM-YYYYHHMMSS

(The SIC-SMURF-NPANXX portion is the literal string "SIC-SMURF-NPANXX". The OldSPID is the four digit ID of the Old Service Provider. The NewSPID is the four digit ID of the New Service Provider. The timestamp for all SIC-SMURF files generated from the same SPID Migraration (same Migrating FROM and Migrating TO SPIDs) will be identical)

The SIC-SMURF NPA-NXX file given in the example would be named:

 SIC-SMURF-NPANXX.0001.0002.25-12-1996081122

[snip]

SIC-SMURF LRN Download File

The SIC-SMURF LRN download file is used as input to the SPID migration update process in the NPAC SMS and all SOAs/LSMSs, to convert LRN, Block (SOA/LSMS optional), Subscription Version, and scheduled event for Block (NPAC only) data from the Old SPID to the New SPID. This file contains individual fields that are pipe delimited, with a line feed (LF) after each SIC-SMURF LRN record.

The file name for the SIC-SMURF LRN download file will be in the format:

 SIC-SMURF-LRN.OldSPID.NewSPID.DD-MM-YYYYHHMMSS (The SIC-SMURF-LRN portion is the literal string "SIC-SMURF-LRN". The OldSPID is the four digit ID of the Old Service Provider. The NewSPID is the four digit ID of the New Service Provider.)

The SIC-SMURF-LRN file given in the example would be named:

 SIC-SMURF-LRN.0001.0002.25-12-1996081122

[snip]

SIC-SMURF NPA-NXX-X Download File

The SIC-SMURF NPA-NXX-X download file is used as input to the SPID migration update process in the NPAC SMS and all SOAs/LSMSs, to convert NPA-NXX-X data (SOA/LSMS optional) corresponding to non-pseudo-LRN blocks from the Old SPID to the New SPID. This file contains individual fields that are pipe delimited, with a line feed (LF) after each SIC-SMURF NPA-NXX-X record.

The file name for the SIC-SMURF NPA-NXX-X download file will be in the format:

 SIC-SMURF-NPANXXX.OldSPID.NewSPID.DD-MM-YYYYHHMMSS

(The SIC-SMURF-NPANXXX portion is the literal string "SIC-SMURF-NPANXXX". The OldSPID is the four digit ID of the Old Service Provider. The NewSPID is the four digit ID of the New Service Provider.)

The SIC-SMURF-NPA-NXX-X file given in the example would be named:

 SIC-SMURF-NPANXXX.0001.0002.25-12-1996081122

| Explanation of the fields in the SIC-SMURF NPA-NXX-X download file |
| --- |
| Field Number | Field Name | Value in Example |
| 1 | Old Service Provider Id | 0001 |
| 2 | New Service Provider Id | 0002 |
| 3 | NPA-NXX-X Value | 3123820 |

Table E–10 -- Explanation of the Fields in the NPA-NXX-X SMURF File

Example File:

0001|0002|3123820(CR) (end of NPA-NXX-X 1)

0001|0002|3123824(CR) (end of NPA-NXX-X 2)

0001|0002|3123862(CR) (end of NPA-NXX-X 3)

0001|0002|3123868(CR) (end of NPA-NXX-X 4)

0001|0002|3123928(CR) (end of NPA-NXX-X 5)

SIC-SMURF Pseudo-LRN NPA-NXX-X Download File

The SIC-SMURF pseudo-LRN NPA-NXX-X download file can be used as input to the SPID migration update process for all SOAs/LSMSs that support both NPA-NXX-X data and pseudo-LRN data, to convert pseudo-LRN-related NPA-NXX-X data from the Old SPID to the New SPID. SOAs/LSMSs that do not support either NPA-NXX-X data or pseudo-LRN data can ignore the file. This file contains individual fields that are pipe delimited, with a line feed (LF) after each SIC-SMURF pseudo-LRN NPA-NXX-X record.

The file name for the SIC-SMURF pseudo-LRN NPA-NXX-X download file will be in the format:

 SIC-SMURF-PLRN-NPANXXX.OldSPID.NewSPID.DD-MM-YYYYHHMMSS

(The SIC-SMURF-PLRN-NPANXXX portion is the literal string "SIC-SMURF-PLRN-NPANXXX". The OldSPID is the four digit ID of the Old Service Provider. The NewSPID is the four digit ID of the New Service Provider.)

The SIC-SMURF pseudo-LRN NPA-NXX-X file given in the example would be named:

 SIC-SMURF-PLRN-NPANXXX.0001.0002.25-12-1996081122

| Explanation of the fields in the SIC-SMURF pseudo-LRN NPA-NXX-X download file |
| --- |
| Field Number | Field Name | Value in Example |
| 1 | Old Service Provider Id | 0001 |
| 2 | New Service Provider Id | 0002 |
| 3 | NPA-NXX-X Value | 3123821 |

Table E–11 -- Explanation of the Fields in the pseudo-LRN NPA-NXX-X SMURF File

Example File:

0001|0002|3123821(CR) (end of pseudo-LRN NPA-NXX-X 1)

0001|0002|3123825(CR) (end of pseudo-LRN NPA-NXX-X 2)

0001|0002|3123863(CR) (end of pseudo-LRN NPA-NXX-X 3)

0001|0002|3123869(CR) (end of pseudo-LRN NPA-NXX-X 4)

0001|0002|3123929(CR) (end of pseudo-LRN NPA-NXX-X 5)

**IIS:**

No Change Needed.

**EFD (IIS APPENDICES A AND B):**

No Change Needed.

**GDMO:**

No Change Needed.

**ASN.1:**

No Change Needed.

**XIS:**

No Change Needed.

**XSD:**

No Change Needed.