

Potential Change Orders for NPAC SMS Release 4.0 – Business Need Description

Table of potential Change Orders for NPAC SMS Release 4.0 (summer of 2001) sorted in order of cumulative SP priority (i.e., weighted average). The weighted average is based on the summary of a priority vote by each SP at the Oct LNPAWG meeting, then divided by the number of voting SPs. 1.00 is the highest possible priority and 22.00 is the lowest possible priority.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 227 & NANC 254	Failed TN Problems	High	Med-Low / N/A	4.83
NANC 219	NPAC Monitoring of Associations	Low	N/A / N/A	5.33
NANC 240 & NANC 198	No SV Cancel on T2 Expiration	Med/High	? / N/A	5.33
NANC 191 & NANC 291	DPC/SSN Value Edit	Low	N/A / N/A	5.42
NANC 297	Sending SVs in Recovery	Med/Low	N/A / N/A	7.50
NANC 192	NPA Split Load File	Medium	N/A / N/A	8.08
NANC 299	NPAC Interface Heartbeat	Medium	N/A / N/A	9.58
NANC 230	Donor SOA PTO	Medium	Med / N/A	9.83
NANC 249	Modification Disconnect Pending Date	Low	Med / N/A	10.33
NANC 294	Due Date Edit (7 PM)	Medium	N/A / N/A	10.50
NANC 200	NPA Split Notifications	Med/Low	Med/Med	10.75
LL 130	Application Level Errors	High	High/High	10.83
NANC 217	Mass Update SPID	High!	High/High	12.50
NANC 187	Recovery Linked Replies	Medium	Med/Med	12.58
NANC 285	SOA/LSMS Query Size	Low	Med-High / Med-High	12.92
NANC 169	Delta Bulk Data Download for Subscription Versions	Medium	N/A / N/A	13.92
NANC 179	TN Range Notification	Medium	Med-High / N/A	14.42
NANC 232	First Port Notification on Web BB	Low	N/A / N/A	14.92
NANC 193	Split Problems (Medium High)	High!	N/A / N/A	16.08
NANC 287	ASN1. Notification Recovery	Low!	Low/Low	18.75
NANC 218	Conflict Timestamp Broadcast SOA	Low	Low / N/A	18.83
LL 23	Detailed Integrity Report	Low	N/A / N/A	19.75

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 227 & NANC 254	Failed TN Problems	High	Med-Low / N/A	4.83

Business Need

Currently, the NPAC will not permit information about an active ported number to be changed until all SPs have acknowledged receipt of the original information broadcast by NPAC about the number.

Consequently, an error such as wrong LRN cannot be fixed until the original, incorrect, information is broadcast successfully to all SPs. In this example, the customer could receive no incoming calls for hours or even days after cut-over.

Likewise, a subsequent port by a currently ported customer would be prevented by lack of successful broadcast of the original ported number information to all SPs.

With this change order, SPs can make changes quickly to minimize impact on newly ported customer’s service and can do ports as scheduled when partial broadcast failure situations occur. Without this change order, only a complex and error prone manual method employed by NPAC personnel is available to circumvent this NPAC software restriction.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 219	NPAC Monitoring of Associations	Low	N/A / N/A	5.33

Business Need

Currently SP associations can be down without SP awareness. This change order is requesting the ability for the NPAC to quickly recognize aborted associations and issue alarms. This enhancement will reduce the length of time a SP’s association is down. This will decrease the number of partial failures and reduces the impacts of ported customers service due to incomplete/incorrect routing data in SP’s network.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 240 & NANC 198	No SV Cancel on T2 Expiration	Med/High	? / N/A	5.33

Business Need

Currently the NPAC cancels an SV as a result of the new SP failing to send up a matching create within 18 hours. Additional work effort and operational concerns are created when this occurs, including the new SP re-contacting the old SP, and having to re-do the LSR/FOC paper work. In addition to excessive contact between both SPs, the extra work created can delay the actual port and increase the likelihood of disconnects in error. This change order will eliminate the cancellation of the SV and reduce the level of effort and operational issues.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 191 & NANC 291	DPC/SSN Value Edit	Low	N/A / N/A	5.42

Business Need

The current environment allows the new SP to send up final Global Title Translation data. This final GTT data is broadcasted by NPAC to all applicable subtending SPs in the Region. This has resulted in service-affecting TCAP routing errors for subtending SPs who do not have route sets built based on final GTT to the new SP, causing trouble-shooting expense and re-broadcast of the data to modify the DPCs to non-final GTT. This issue is addressed by NANC 291.

In addition, invalid GTT data (e.g. a DPC with no SSN, a DPC with Network ID set to 000, etc.) contained within the new SP CREATE has also resulted in TCAP routing errors when broadcasted to subtending SPs. This issue is addressed by NANC 191.

These two Change Orders will ensure that GTT data is formatted consistent with SS7 signaling standards and contains only non-final DPCs in accordance with recommendations documented in T1S1.6 standards for Local Number Portability. This will mitigate the trouble-shooting and NPAC broadcast expense due to incorrect or invalid GTT data.

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Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 297	Sending SVs in Recovery	Med/Low	N/A / N/A	7.50

Business Need

The current NPAC SMS implementation for LSMS recovery does not support the recovery of SVs with a status of sending. Therefore, at the completion of SV recovery processing, an SP is not guaranteed to have recovered all missed/failed SVs and has to request the NPAC Personnel to resend all missed/failed SVs. This change order will result in an LSMS recovering all missed/failed SVs, an operational cost savings, and database integrity between the NPAC SMS and LSMS.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 192	NPA Split Load File	Medium	N/A / N/A	8.08

Business Need

Current NPA Split processing requires each SP to notify the NPAC of NPA-NXXs involved in an NPA Split. This process is new to SPs and is causing confusion, missed NPA Split processing, extra data clean up work for the SPs, and possible customer affecting outages.

This Change Order would eliminate the current NPAC process of SP notification, prevent manual data entry, and establish the means for NPAC to use the industry standard data from the LERG to make sure the NPA Split processing is consistent within the industry.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 299	NPAC Interface Heartbeat	Medium	N/A / N/A	9.58

Business Need

In today’s operating environment, the NPAC doesn’t know if an SP’s SOA/LSMS association is available to receive downloads and other messages unless there is a failure to respond to an NPAC message. There are a number of reasons that may cause the SOA/LSMS association to be unavailable ranging from the transmission facility going down to software application problems.

If an association is unavailable when a download to activate a ported number is sent, partial failures will occur. Partial failures indicate that one or more SPs did not update their routing tables, and many calls intended for the ported customer will fail.

There are often long periods of time when there are no messages being sent across a given NPAC – SOA/LSMS association. Therefore, there is no way to know if the association is working. This change order would establish a periodic “heart-beat” monitor to determine the status of the SOA/LSMS.

This change order will facilitate monitoring SOA/LSMS availability and will minimize partial failure situations, thereby saving resolution time and improving customer service.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 230	Donor SOA PTO	Medium	Med / N/A	9.83

Business Need

The current implementation does not allow an SP to revert an intra-ported TN from 10-digit LRN routing to 6-digit routing without disconnecting the TN. The disconnecting of the TN creates operational problems because the systems think that the TN is deleted/disconnected yet the customer is still in service. This change order will enable SPs to perform a "port to original" of an intra-ported TN. This will increase operational effectiveness and uninterrupted customer service.

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Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 249	Modification Disconnect Pending Date	Low	Med / N/A	10.33

Business Need

The current situation requires an SP to cancel the existing order and create a new order to change a pending disconnect date. This change order would allow modification of the customer disconnect date resulting in labor savings in the work center.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 294	Due Date Edit (7 PM)	Medium	N/A / N/A	10.50

Business Need

Currently the NPAC SMS operates on GMT (Greenwich Mean Time) and operating business hours (e.g., timers, due dates, etc.) are 7AM – 7 PM. When emergency porting conditions are encountered, the NPAC operating system prohibits the SP from initiating same day porting events due to the difference between GMT and SP time zones creating a variance in the date. There is a manual process requiring conversion of local time to GMT to ensure the dates on the SVs match. This change order would eliminate the manual process for these situations to ensure customers are not out of service any longer than necessary and omissions to large customer porting conversions are quickly resolved.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 200	NPA Split Notifications	Med/Low	Med/Med	10.75

Business Need

Currently not all SPs are aware of NPA Splits and are not performing their database updates, thus causing database errors and industry confusion. In order to ensure that customer service is not negatively affected during an NPA Split, it is essential that the NPAC and all SPs databases be synchronized.

This change order will provide notifications via the NPAC interface to all SPs regarding NPA – NXX Split information.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
ILL 130	Application Level Errors	High	High/High	10.83

Business Need

The current interface has very limited error message detail. This change order will allow understanding of errors more rapidly by returning a text explanation of the error. This will reduce the amount of time it takes work centers to manually research errors and resolve troubles.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 217	Mass Update SPID	High!	High/High	12.50

Business Need

Currently the NPAC does not have the ability to broadcast a mass update on SPID. SPs are experiencing the need to change the SPID on ported telephone numbers. Examples that cause this situation for SPs are mergers, service area trading, data system consolidations, etc. In order make SPID change for given ported telephone numbers, the current NPAC operation requires each involved active ported telephone numbers to be deleted, and each involved pending telephone numbers to be cancelled. During the transition period, call routing can be affected and customer service is impacted. Once these actions have been taken and the NPAC network data updated, the active and pending ported telephone numbers information must be re-created. This functionality causes the customer to be out of service during this process and also increase the porting traffic over the interface.

This Change Order would allow the NPAC to perform this functionality without affecting the customer while reducing porting traffic over the interface.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 187	Recovery Linked Replies	Medium	Med/Med	12.58

Business Need

Current recovery functionality provides recovery data to be sent in a single message for subscription, network, and notification data. Due to large porting volumes, the size of these messages has increased and will soon exceed maximum message size for the SOA/LSMS interfaces causing recovery of missed or lost data to become impossible for these interfaces. This change order will provide recovery data to the SP in smaller multiple linked messages.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 285	SOA/LSMS Query Size	Low	Med-High / Med-High	12.92

Business Need

Currently the NPAC responds with an error message of Criteria Too Large for queries with a response greater than 150 SVs

This change order will prevent the NPAC from sending the Criteria Too Large error message if it reaches the maximum tunable value (150 SVs) for SVs queries. The NPAC will return 150 SVs at a time with the ability to query subsequent data until all SVs are returned.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 169	Delta Bulk Data Download for Subscription Versions	Medium	N/A / N/A	13.92

Business Need

Currently the NPAC does not have the ability to create a delta bulk data download file by date and time range. This change order is expected to help with an SP's capability to 'catch-up' faster after an extended outage, as porting volume increases. The ability to create a delta bulk data download file by date and time range (downloading only the actual data required) reduces the work effort of the SP while getting the SP back in-sync with the NPAC in a more timely manner which in turn ensures proper call routing.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 179	TN Range Notification	Medium	Med-High / N/A	14.42

Business Need

Currently SOA systems receive notifications on a TN by TN basis. This change order will allow them to receive a single notification from the NPAC for a TN range instead of individual notifications for each TN. This will reduce the number of messages received and time required by SPs to compare outputs to their internal service order processing systems.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 232	First Port Notification on Web BB	Low	N/A / N/A	14.92

Business Need

Currently first port notification information is a single event broadcast. SPs would like to see historical documentation of first ports available outside of SOA/LSMS/LTI interfaces. This change order would place "first port" notifications on the web, similar to the NPA-NXX openings that are on the web today.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 193	Split Problems (Medium High)	High!	N/A / N/A	16.08

Business Need

N/A. Removed from R4 consideration.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 287	ASN1. Notification Recovery	Low!	Low/Low	18.75

Business Need

Currently, there is an ASN.1 definition error that requires a change order due to the fact that a recompile action is necessary for all SOAs and LSMSs. This will change a field that is defined as optional to required.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 218	Conflict Timestamp Broadcast SOA	Low	Low / N/A	18.83

Business Need

Currently the SP does not know exactly when a telephone number was placed into conflict with out querying the NPAC database. SPs need to take action to resolve the conflict in order to complete the port.

This change order will provide a timestamp on the NPAC broadcast to the SPs SOA. This will minimize traffic to the NPAC and ensure the SP can take timely action.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
ILL 23	Detailed Integrity Report	Low	N/A / N/A	19.75

Business Need

N/A. Removed from R4 consideration.

Change Order #	Description	NPAC Effort	SOA/LSMS	Weighted Avg
NANC 138	Definition of Cause Code	Low	N/A / N/A	N/A

Business Need

Currently the “NPAC SMS Automatic Conflict from Cancellation”, notification does not have a distinct Cause Code.

This Change Order will provide a notification with a Cause Code enabling the SP to take the proper action to minimize service interruption for the customer being ported.