NANC CHANGE ORDER SUMMARY

FOR

NPAC SMS FUNCTIONALITY

**Rev: 131  
to be used for March 2009 (Denver) meeting**

03/01/09

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# Open Change Orders

| **Open Change Orders** | | | | | | | |
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| **Chg Order #** | **Orig. / Date** | **Description** | **Priority** | **Category** | **Proposed Resolution** | **Level of Effort** | |
|  |  |  |  |  |  | **NPAC** | **SOA LSMS** |
| NANC 437 | Telcordia  1/8/09 | **Multi-Vendor NPAC SMS Solution**  **Business Need:**  Refer to separate document. |  |  | Func Backward Compatible: TBD  **Jan ’09 LNPAWG,** discussion**:**  A walk-thru of the proposed solution took place. Telcordia will be providing addition information prior to the Mar ’09 LNPAWG meeting. | TBD | TBD |
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# Accepted Change Orders

| **Accepted Change Orders** | | | | | | | | |
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| **Chg Order #** | **Orig. / Date** | **Description** | **Priority** | **Category** | **Proposed Resolution** | **Level of Effort** | | |
|  |  |  |  |  |  | **NPAC** | | **SOA LSMS** |
| NANC 372 | Bellsouth 11/15/02 | **SOA/LSMS Interface Protocol Alternatives**  **Business Need:**  Currently the only interface protocol supported by the NPAC to SOA and NPAC to LSMS interface is CMIP. The purpose of this change order is to request analysis be done to determine the feasibility of adding other protocol support such as CORBA or XML. The primary reasons for looking into a change would be 1) Performance, and 2) Implementation complexity.  (continued) |  |  | Func Backwards Compatible: TBD  **Dec ’02 LNPAWG**, discuss this change order in January ’03 in the new arch review meeting. | High | | High / High |
| NANC 372 (con’t) | **Jan ’03 APT**, discussion:   * The team began with a discussion on the CMIP Alternative Business Need in order to determine if we need to improve CMIP or identify an alternative. * Dave Cochran, BellSouth and the originator of NANC Change Order 372, discussed potential drivers and cited: * Cost of maintaining internal CMIP interface expertise and resources * Ability to take advantage of in-house expertise for some of the newer architectures, e.g., CORBA, XML, JAVA, J2E * It was stated that CMISE was considered a reasonable protocol for managing network elements in the mid-1990s due to its flexibility. * LNP rules include encryption/decryption functionality. We need to discuss authentication and associated issues. * It was mentioned that if lowering the level of encryption is identified as a benefit for a new protocol, we should also consider that for CMIP. * CMIP is a very robust protocol for describing and managing network elements, but where that robustness begins to become burdensome is subjective. * We need to keep in mind that we need a real-time interface.   **Feb ’03 APT**, discussion:  Dave Cochran, BellSouth, will be providing more input (business drivers, data, operational feedback, etc.) to facilitate further discussion. Sub-tasks still need to be prioritized.  **Dec ’03 APT**, discussion:  No further discussion at this time. Leave off list of change orders discussed during the APT meeting.  **Jan ’07 APT**, discussion:  The APT was activated during the Nov ’06 LNPAWG meeting. No discussion on alternative interfaces took place during that meeting, but change orders (including 372) were reviewed during the Jan ’07 meeting. The brief discussion included: *CMIP-to-XML/SOAP -- It was asked if there is a business need to transition from CMIP to XML/SOAP? It was suggested that since we are tunneling XML into CMIP, we should explore the future evolution of the interface. Service Providers are to discuss internally any drivers for moving from CMIP to XML/SOAP for the SOA and LSMS interfaces including the impact of increasing the size of messages*.  **Mar ’07 APT**, discussion:  More discussion took place regarding an additional NPAC interface using XML/SOAP. For the May ’07 meeting, Service Providers and vendors are to bring any additional data or information to share with the group.  (continued) | | | | | | | |
| NANC 372 (con’t) | **May ’07 APT**, discussion:  1. The IT industry is generally moving towards an XML/SOAP interface. However, there are performance issues and questions. Message size would be greatly increased. Need to investigate compression capabilities.  2. It will be worth pursuing for the long term. Not sure what is next step. Need to find a business driver for pursuing this.  3. The WICIS transfer is planning on implementing a flash-cut to XML (Sep ’08). Plan is to continue to support CORBA interface for testing purposes only. Keep this in mind when planning the NPAC implementation.  4. The group will discuss more during the Jul ’07 mtg, including pros/cons analysis, LOE, and any input on the business case.  **Jul ’07 APT**, discussion:  1. In response to May ’07 #3 above, a question was asked about the ATIS decision to move WICIS from CORBA to XML/SOAP. It was explained that the major driver for the ATIS recommendation was to consolidate the various systems onto a single interface type (XML/SOAP), and not necessarily specific to WICIS. It was also mentioned that the NPAC would be supporting two interface types by adding XML/SOAP, since both CMIP and XML/SOAP would need to be supported on the NPAC for the foreseeable future. Sunsetting of the CMIP interface (and only having the XML/SOAP interface) was briefly discussed, but it was also mentioned that the industry has never sunset any previous NPAC functionality.  2. All Service Providers will investigate internally whether or not their companies are moving towards XML/SOAP, and whether or not they support the ATIS position of consolidating interface types towards XML/SOAP. This will be discussed again at the Sep ’07 meeting, to gauge industry interest in developing an XML/SOAP interface for the NPAC.  **Sep ’07 APT**, discussion:  1. Deb Tucker, VZW, provided the historical info (from multiple ATIS documents) for ATIS and the single interface item. The current situation for most Service Providers is that new systems are going with XML and legacy systems stay on their existing protocols based on each company’s cost/benefit analysis. The group agreed to continue to discuss this item in future meetings. From the NPAC perspective, support for both interfaces is required since a flash cut cannot be assumed.  2. Given the APT’s charter, the correct way to look at this change order is from an architecture perspective. Several items to consider: messaging (continue to use a session approach like CMIP, or an approach like web-services where it’s set up then broken down when the message is done?), security (how does it change with a web services approach?), message content/architecture (same messages used today with CMIP will be used for XML?), performance/message compression, business rules/error handling, efficiencies in data model (e.g., having DPC at the LRN level), audits (the effect on large messages).  3. Business Case. Need to get to the point where the group can either build or not build a strong business case. May need a document to define an XML/SOAP interface which would help answer the question on the business case. Security will be the first issue discussed at the Nov ’07 meeting. | | | | | | | |
| NANC 372 (con’t) | **Nov ’07 APT**, discussion:  1. The wireless group has been discussing this. They will summarize their recent discussion, and forward some relevant bullet points on to the Architecture team. These bullet points will be used as starting point discussions.  2. The group will further discuss dedicated link versus VPN (http/https. Private network/public network), IP security, .data security (encryption). | | | | | | | |
| NANC 382 | NeuStar 4/4/03 | **“Port-Protection” System**  **(The following is the original request. Subsequent modifications were made during several LNPAWG meetings. Refer to the bottom of this change order for the current version.)**  **Overview:**  *The “Port Protection” system is a competitively neutral approach to preventing inadvertent ports that gives end-users the ability to define their portable telephone numbers as “not-portable.” The NPAC SMS enforces the “not-portable” status of a telephone number so long as it remains in effect. No Local Service Provider (LSP) can invoke or revoke “port protection” on a working telephone number; end-users completely control the portability of their portable telephone numbers.*  **Business Need:**  Inadvertent porting of working numbers is a concern to both Local Service Providers (LSPs) and their customers. In today’s LNP environment, an LSP cannot absolutely assure its customers that their terminating service will not be interrupted, even if it can insure that physical plant is operated without failure. This is because any LSP by mistake may port a telephone number away from that number’s current serving switch.  The inadvertent port can occur in a number of ways, but the most common occurrences appear to be caused by two errors: (1.) when the wrong telephone number submitted to NPAC for a conventional inter-SP port, and (2.) when intra-SP ports are not done before a pooled block is created. There is a similar inadvertent port problem for non-working numbers, but erroneous moves of non-working numbers are not directly service-affecting and are not addressed here.  NeuStar suggests the following competitively neutral method to prevent inadvertent ports of working TNs. | TBD | FRS, IIS, GDMO, ASN.1 | Interface and Functional Backwards Compatible: NO  **Description of Change:**  **(The following is the original request. Subsequent modifications were made during several LNPAWG meetings. Refer to the bottom of this change order for the current version.)**  See next page. | | TBD | TBD / TBD |
| NANC 382 (con’t) | Continuation of NANC 382, Port-Protection System, Proposed Resolution section:  -- System Architecture --  Changes to the NPAC SMS are required, to establish a table of “Port-Protected TNs” in which portable numbers that no longer can be ported are listed. A step must be added to the NPAC SMS’s validation process in order to check this new table whenever an inter-SP port or pooled block create is attempted.[[1]](#footnote-2) An interface change could be required as well if industry wishes to know when a request’s rejection is due to the involved number being on the “Port Protection” list.  Creation of an IVR system is required, to receive end-user requests for protection of their numbers from porting (or to remove this protection) and to relay the information to the NPAC SMS. The system would automatically modify the NPAC’s “Port-Protection” tables based on the end-user requests it receives. Access to the IVR would be through the end-user’s current LSP customer rep. Any other LSP willing to assist the end-user could be involved.  The end-user’s telephone number is entered in the NPAC’s “Port Protection” tables whenever “port-protection” is requested. The end-user cannot reach the “Port-Protection” IVR system directly, but instead must be connected through a local Service Provider’s customer contact system, much like what is done in the PIC selection process, where the Service Provider’s customer rep advances the call to a third-party verification service, then leaves the call to allow the third-party verifier and end-user to converse.  The IVR system must recognize the LSP as authorized to participate in the “Port Protect” process. (The LSP need not be a facility-based provider.)  Arrangements for security handshakes must be made in advance with each participating LSP.  A telephone number may be added to or removed from the “Port Protection” list whenever and as often as the end-user wishes.  To maintain the proposal’s competitive neutrality, the process assumes any LSP may assist the end-user. However, the possibility of end-users invoking or revoking “Port Protection” on telephone numbers other than their own would be mitigated if only an LSP with which the end-user had a contractual relationship could participate, i.e., only the current LSP or a new LSP in a pending port request situation.  (con’t) | | | | | | | |
| NANC 382 (con’t) | Continuation of NANC 382, Port-Protection System, Proposed Resolution section:  -- System Operation --  The end-user’s telephone number is entered in the NPAC’s “Port Protection” tables whenever “port-protection” is requested. The end-user cannot reach the “Port-Protection” IVR system directly, but instead must be connected through a local Service Provider’s customer contact system, much like what is done in the PIC selection process, where the Service Provider’s customer rep advances the call to a third-party verification service, then leaves the call to allow the third-party verifier and end-user to converse.  The IVR system must recognize the LSP as authorized to participate in the “Port Protect” process. (The LSP need not be a facility-based provider.)  Arrangements for security handshakes must be made in advance with each participating LSP.  A telephone number may be added to or removed from the “Port Protection” list whenever and as often as the end-user wishes.  To maintain the proposal’s competitive neutrality, the process assumes any LSP may assist the end-user. However, the possibility of end-users invoking or revoking “Port Protection” on telephone numbers other than their own would be mitigated if only an LSP with which the end-user had a contractual relationship could participate, i.e., only the current LSP or a new LSP in a pending port request situation.  When the NPAC attempts to create a pending SV or a pooled block, the NPAC will check the “Port Protection” list in its validation process for inter-SP port (including Port-to-Original) and “-X” create requests. [[2]](#footnote-3)  The “Port Protection” validation does not occur for intra-SP ports. These may represent inadvertent ports, but validation necessary to determine whether override would be appropriate is not feasible. The validation occurs for only those deletes that are “Port-to-Original” situations.  (con’t) | | | | | | | |
| NANC 382 (con’t) | Continuation of NANC 382, Port-Protection System, Proposed Resolution section:  -- Process Flow --  The end-user contacts an LSP (or an LSP contacts the end-user). *(It is not inherently necessary for there to be Service Provider involvement in this process, but NeuStar is not prepared to operate a system which does not involve LSP participation.)*  End-user indicates desire to invoke (or revoke) “Port Protection.”  LSP customer rep places end-user on hold and calls the “Port-Protection” IVR.  LSP provides its pre-assigned ID information to IVR system.  *(LSP arrange for security codes before attempting to assist end-users with the “Port-protection” process.)*  LSP brings end-user on to the active line and leaves call; end-user interacts with IVR.  Using a standard script, the IVR confirms caller is authorized to make changes to the telephone number account, determines the caller’s name, and lists the telephone number(s) to be added to (or removed from) the “port-protection” table. The customer may actually enter the TN desired. The call is recorded.  The IVR system then enters this information into an automated ticket system.  Completion of the ticket automatically sends triggers an update of the NPAC’s “port-protection” table.  *In the case of a number that has been entered in the port-protection table, but is no longer assigned to an end-user, the current Service Provider itself can ask that the number be removed from the “port-protection” table. The provider would have to be recognized by the NPAC as the code/block owner and would have to state that the number is not assigned to an end-user.* | | | | | | | |
| **Continuation of NANC 382, “Port-Protection” System**  **This change order was reviewed and revised during the May through Sep ’03 LNPAWG meetings. The final version of the open change order at the time of acceptance (for development of more detailed information) is shown below:**  **Overview:**  The “Port Protection” system is a competitively neutral approach to preventing inadvertent ports. The system makes it possible for end-users to define their portable telephone numbers as “not-portable.” The NPAC SMS prevents the port of a “not-portable” telephone number (TN) through its automated validation processes. A Local Service Provider (LSP) can invoke or revoke “port protection” for a working TN, but only at the end-user’s request.  **Business Need:**  Inadvertent porting of working TNs is a concern to both Local Service Providers (LSPs) and their customers. In today’s LNP environment, an LSP cannot absolutely assure its customers that their terminating service will not be interrupted, even if it can insure that the physical plant is operated without failure. This is because another LSP by mistake may port a TN away from that number’s current serving switch.  The inadvertent port can occur in a number of ways, but the most common occurrences appear to be caused by two errors: (1.) the wrong TN is submitted to the NPAC SMS for a conventional inter-SP port, and (2.) intra-SP ports are not done before a thousands-block is created. There are similar inadvertent port scenarios for non-working TNs, but erroneous moves of non-working TNs are not immediately service-affecting and are not addressed here.  NeuStar suggests the following competitively neutral method to prevent inadvertent ports of working TNs. | | | | Interface and Functional Backwards Compatible: NO  **This change order was reviewed and revised during the May through Sep ’03 LNPAWG meetings. The final version of the open change order at the time of acceptance (for development of more detailed information) is shown below:**  **Description of Change:**  -- System Architecture --  Changes to the NPAC SMS are required to establish a table of “Port Protected” TNs, in which portable numbers that no longer can be ported are listed, and to add a validation step that rejects attempts to port a TN that is on the list. The validation is performed on the new-SP’s *Create* message for an inter-SP port, when a thousands block is created, and, optionally, for an intra-SP port. (The optional intra-SP port validation is invoked on a SPID-specific basis.) The rejection notification sent when a request fails this NPAC SMS validation will indicate that the TN is on the Port Protection list. No interface change is required for this rejection message, since a new optional attribute will be added to accommodate the new error text.  LSP requests to add TNs to the Port Protection table are made to the NPAC Help Desk via e-mail (the TNs involved are shown on an Excel attachment to the e-mail message). LSPs use the same approach to delete TNs from the table.  (con’t) | | | | |
| NANC 382 (con’t) | Continuation of NANC 382, Port-Protection System, Proposed Resolution section:  -- System Operation --  A TN is added to the NPAC’s Port Protection table when an LSP requests this action. The same process applies when an LSP requests the removal of a TN from the table.  The NPAC Help Desk accepts requests to change Port Protection table entries only from pre-authorized representatives of an LSP. (The LSP need not be a facility-based provider.) A TN may be added to or removed from the “Port Protection” list as often as required.  When the NPAC SMS receives the new SP’s *Create* request, it will check the Port Protection table during the *Pending SV Create* validation process for inter-SP ports (including Port-to-Original SV deletes). Optionally[[3]](#footnote-4), the validation is performed for intra-SP ports.  The NPAC SMS also will make this validation check in connection with “-X” create requests.[[4]](#footnote-5)  The validation is not applied to Modify requests[[5]](#footnote-6)  In the disconnect scenario, the NPAC SMS will check the Port Protection list and, if the TN is found, will remove the involved disconnected ported TN from the list. This automatic removal of a disconnected TN from the Port Protection list can occur only in the case of a disconnected TN that was ported. A non-ported TN that is disconnected must be removed from the list by the LSP having the disconnected non-ported TN in its inventory.  (con’t) | | | | | | | |
| NANC 382 (con’t) | Continuation of NANC 382, Port-Protection System, Proposed Resolution section:  -- Process Flow --  **NPAC Help Desk**   * The end-user contacts an LSP (or an LSP contacts the end-user). * End-user indicates to LSP his desire to invoke (or revoke) “Port Protection.” * LSP contacts NPAC Help Desk via e-mail to request change. * The NPAC Help Desk updates the Port Protection table.   **NPAC SMS**   * NPAC SMS applies the Port Protection validation (1.) to the new-SP Create request of an inter-SP port, (2.) to a Block Creation request, and (3.) optionally at the individual SPID level, to an intra-SP port request. If the TN is found on the Port Protection list, NPAC SMS rejects the request and indicates that a Port Protection validation failure is the reason for the request’s rejection. * Disconnect of a ported TN results in automatic removal of the TN from the Port Protection list; disconnect of a non-ported TN requires owning LSP to request the disconnected TN’s removal from the list. * An LSP’s regional NPAC SMS Profile indicates whether the Port Protection validation should be applied also to its intra-SP port requests. | | | | | | | |
| 382 (cont) | **Nov ’03 LNPAWG**, discussion:  The group discussed the high-level steps. There were a couple of updates that were requested. These steps will be evaluated once the policy issues/questions are discussed:   1. For intra-ports, let the port go through and keep them on the list. 2. In steps 4.b, no need to look at the list, just allow the Old SP Create to happen. If they are on the list, then for now, leave it on the list. 3. For step 8, add that this does NOT apply to PTO.   Policy issues/questions: (at the Jan ’04 LNPAWG, we would discuss if and how, we might Tee this up at NANC).  What types/classes of numbers can be placed on the list? What criteria? What kind of criteria.  Who can put it on the list and remove it from the list? This is an authorization question.  What is the PROCESS for getting them on and off the list? How mechanically, do you put/remove it on the list.  Who can access the list, need a process to access the list. What is shown when they access the list (police, other authority)  Other points discussed:   1. Want more than just the IVR way to get numbers on/off the list. 2. Want some type of pre-validation process to “ping” the list and see if someone is on the PPL. 3. Want the ability to audit the list. | | | | | | | |
| NANC 390 | Qwest  10/16/03 | **New Interface Confirmation Messages SOA/LSMS – to - NPAC**  **Business Need:**  Service Provider systems (SOA/LSMS) need to know (in the form of a positive acknowledgement from the NPAC) that the NPAC has received their request message, so the systems (SOA/LSMS) do not unnecessarily resend the message and cause duplicate transactions for the same request.  Based on the current requirements for the NPAC, the NPAC acknowledgement message (generally referred to as "a response to a request" from the SOA/LSMS) is not returned until AFTER the NPAC has completed the activity required by that request. During heavy porting periods, transactions that require many records to be updated may take longer than normal for a response to be received from the NPAC. In the case of a delayed response, the SOA/LSMS may abort the association to the NPAC (e.g., after the 15 minute Abort timer expires). When the association is re-established, the SOA/LSMS may resend messages to the NPAC because they haven’t received a response to the first message and thus believe the NPAC did not receive the original message. This behavior can lead to a duplicate transaction for the same request thus: 1.) causing a heavy volume of transactions over the NPAC to SOA/LSMS interface, 2.) slowing Porting completion, 3.) causing an increase of Porting costs, 4.) causing duplicate message processing at the NPAC, and 5.) possibly causing manual intervention by NPAC and Service Provider personnel, etc. | TBD | FRS, IIS, GDMO, ASN.1 | Func Backwards Compatible: NO  A new message will be explored during the Nov ’03 LNPAWG meeting.  Additionally, a discussion item needs to occur regarding the possible inclusion of Service Provider profile settings to support this new feature. | | High | Med-High / Med-High |
| NANC 390 (con’t) | **Nov ’03 LNPAWG**, discussion:  Explained the current functionality, and the fact that higher priority transactions will be worked before other requested work, which can cause delays in responses. In the case where previously submitted work was re-sent to the NPAC, the NPAC may have to re-do work it has already done.  Providers may see a backup in their SOA traffic, thereby causing them to process extra data as well.  A toggle would need to be added for backwards compatibility. Providers that support the new confirmation message would use the new method/flow, and other providers would continue to use the current method/flow. There is definitely a benefit to this, but to obtain the benefit would require changes to the SOA as well.  It was agreed that this would be accepted as a change order, and would continue to be worked with the Architecture group in December.  **Feb ‘04** – Refer to the Architecture Planning Team’s working document for the latest information on this change order. Attached here:    **Jul ’08 LNPAWG**, discussion. Need to develop requirements for Sep ’08 review. See below:  Req-1 Service Provider SOA Interface Confirmation Message Indicator  NPAC SMS shall provide a Service Provider SOA Interface Confirmation Message Indicator tunable parameter which defines whether a SOA supports Interface Confirmation Messages.  Req-2 Service Provider SOA Interface Confirmation Message Indicator Default  NPAC SMS shall default the Service Provider SOA Interface Confirmation Message Indicator tunable parameter to FALSE.  Req-3 Service Provider SOA Interface Confirmation Message Indicator Modification  NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to modify the Service Provider SOA Interface Confirmation Message Indicator tunable parameter. | | | | | | | |
| NANC 390 (con’t) | Req-4 Service Provider SOA Interface Confirmation Message – Indicator set to FALSE  NPAC SMS shall process a Service Provider SOA request when a Service Provider SOA Interface Confirmation Message Indicator tunable parameter is set to FALSE, by using the following Interoperability Interface Specification flows:   * B.2.1 – SOA Initiated Audit * B.2.2 – SOA Initiated Audit Cancellation by the SOA * B.2.3 – SOA Initiated Audit Cancellation by the NPAC * B.2.6 –Audit Query on the NPAC * B.2.7 – SOA Audit Create for Subscription Versions within a Number Pool Block * B.3.5 – Service Provider Modification by the SOA * B.3.7 – Service Provider Query by the SOA * B.4.1.4 – NPA-NXX Creation by the SOA * B.4.1.6 – NPA-NXX Deletion by the SOA * B.4.1.8 – NPA-NXX Query by the SOA * B.4.2.2 – LRN Creation by the SOA * B.4.2.3 – LRN Deletion by the SOA * B.4.2.4 – LRN Query by the SOA * B.4.2.11 – Scoped/Filtered GET of Network Data from SOA * B.4.3.4 – Service Provider NPA-NXX-X Query by the SOA * B.4.4.1 – Number Pool Block Create/Activate by the SOA * B.4.4.13 – Number Pool Block Modify by the Block Holder SOA * B.4.4.33 – Number Pool Block Query by the SOA * B.5.1.1 – Subscription Version Create by the Initial SOA (Old Service Provider) * B.5.1.2 – Subscription Version Create by the Initial SOA (New Service Provider) * B.5.1.3 – Subscription Version Create by the Second SOA (New Service Provider) * B.5.1.4 – Subscription Version Create by the Second SOA (Old Service Provider) with Authorization to Port * B.5.1.5 – Subscription Version Activated by the New Service Provider SOA * B.5.1.11 – Subscription Version Create for Intra-Service Provider Port * B.5.1.12 – Subscription Version for Inter- and Intra-Service Provider Port-to-Original * B.5.1.13 – Subscription Version for Inter- and Intra-Service Provider Port-to-Original: All LSMSs Fail * (continued) | | | | | | | |
| NANC 390 (con’t) | (continued)   * B.5.1.14 – Subscription Version for Inter- and Intra-Service Provider Port-to-Original: Partial Failure * B.5.1.17 – Subscription Version Port-to-Original of a Ported Pool TN Activation by SOA * B.5.1.17.13 – Subscription Version Port-to-Original of a Pool TN – Creation Prior to NPA-NXX-X Effective Date * B.5.1.18 – Subscription Version Inter-Service Provider Create by either SOA (Old or New Service Provider) with a Due Date which is Prior to the NPA-NXX Effective Date * B.5.2.1 – Subscription Version Modify Active Version Using M-ACTION by a Service Provider SOA * B.5.2.3 – Subscription Version Modify Prior to Activate Using M-ACTION * B.5.2.4 – Subscription Version Modify Prior to Activate Using M-SET * B.5.2.7 – Subscription Version Modify Disconnect-Pending Version Using M-ACTION by a Service Provider SOA * B.5.3.1 – Subscription Version Cancel by Service Provider SOA after Both Service Provider SOAs have Concurred * B.5.3.2 – Subscription Version Cancel: No Acknowledgment from a SOA * B.5.3.3 – Subscription Version Cancels with Only One Create Action Received * B.5.3.4 – Subscription Version Cancel by Current Service Provider for Disconnect-Pending Subscription Version * B.5.3.5 – Un-Do Cancel-Pending Subscription Version Request * B.5.4.1 – Subscription Version Immediate Disconnect * B.5.4.2 – Subscription Version Disconnect With Effective Release Date * B.5.4.7.1 – SOA Initiates Successful Disconnect Request of Ported Pooled TN * B.5.4.7.3 – Subscription Version Disconnect Request of Ported Pooled TN With Effective Release Date * B.5.4.7.14 – Subscription Version Immediate Disconnect of a Contaminated Pooled TN Prior to Block Activation (after Effective Date) * B.5.5.2 – Subscription Version Conflict Removal by the New Service Provider SOA * B.5.5.4 – Subscription Version Conflict by Old Service Provider Explicitly Not Authorizing (2nd Create) * B.5.5.5 – Subscription Version Conflict Removal by the Old Service Provider SOA * B.5.6 – Subscription Version Query * B.6.4 – lsmsFilterNPA-NXX Creation by the SOA * B.6.5 – lsmsFilterNPA-NXX Deletion by the SOA * B.6.6 – lsmsFilterNPA-NXX Query by the SOA * B.7.3 – Sequencing of Events on Initialization/Resynchronization of SOA * B.7.3.1 – Sequencing of Events on Initialization/Resynchronization of SOA using SWIM | | | | | | | |
| NANC 390 (con’t) | Req-5 Service Provider SOA Interface Confirmation Message – Indicator set to TRUE  NPAC SMS shall process a Service Provider SOA request when a Service Provider SOA Interface Confirmation Message Indicator tunable parameter is set to TRUE, by using the following Interoperability Interface Specification flows:   * B.2.1C – SOA Initiated Audit – Confirmed * B.2.2C – SOA Initiated Audit Cancellation by the SOA – Confirmed * B.2.3C – SOA Initiated Audit Cancellation by the NPAC – Confirmed * B.2.6C –Audit Query on the NPAC – Confirmed * B.2.7C – SOA Audit Create for Subscription Versions within a Number Pool Block – Confirmed * B.3.5C – Service Provider Modification by the SOA – Confirmed * B.3.7C – Service Provider Query by the SOA – Confirmed * B.4.1.4C – NPA-NXX Creation by the SOA – Confirmed * B.4.1.6C – NPA-NXX Deletion by the SOA – Confirmed * B.4.1.8C – NPA-NXX Query by the SOA – Confirmed * B.4.2.2C – LRN Creation by the SOA – Confirmed * B.4.2.3C – LRN Deletion by the SOA – Confirmed * B.4.2.4C – LRN Query by the SOA – Confirmed * B.4.2.11C – Scoped/Filtered GET of Network Data from SOA – Confirmed * B.4.3.4C – Service Provider NPA-NXX-X Query by the SOA – Confirmed * B.4.4.1C – Number Pool Block Create/Activate by the SOA – Confirmed * B.4.4.13C – Number Pool Block Modify by the Block Holder SOA – Confirmed * B.4.4.33C – Number Pool Block Query by the SOA – Confirmed * B.5.1.1C – Subscription Version Create by the Initial SOA (Old Service Provider) – Confirmed * B.5.1.2C – Subscription Version Create by the Initial SOA (New Service Provider) – Confirmed * B.5.1.3C – Subscription Version Create by the Second SOA (New Service Provider) – Confirmed * B.5.1.4C – Subscription Version Create by the Second SOA (Old Service Provider) with Authorization to Port – Confirmed * B.5.1.5C – Subscription Version Activated by the New Service Provider SOA – Confirmed * B.5.1.11C – Subscription Version Create for Intra-Service Provider Port – Confirmed * B.5.1.12C – Subscription Version for Inter- and Intra-Service Provider Port-to-Original – Confirmed * B.5.1.13C – Subscription Version for Inter- and Intra-Service Provider Port-to-Original: All LSMSs Fail – Confirmed * (continued) | | | | | | | |
| NANC 390 (con’t) | (continued)   * B.5.1.14C – Subscription Version for Inter- and Intra-Service Provider Port-to-Original: Partial Failure – Confirmed * B.5.1.17C – Subscription Version Port-to-Original of a Ported Pool TN Activation by SOA – Confirmed * B.5.1.17.13C – Subscription Version Port-to-Original of a Pool TN – Creation Prior to NPA-NXX-X Effective Date – Confirmed * B.5.1.18C – Subscription Version Inter-Service Provider Create by either SOA (Old or New Service Provider) with a Due Date which is Prior to the NPA-NXX Effective Date – Confirmed * B.5.2.1C – Subscription Version Modify Active Version Using M-ACTION by a Service Provider SOA – Confirmed * B.5.2.3C – Subscription Version Modify Prior to Activate Using M-ACTION – Confirmed * B.5.2.4C – Subscription Version Modify Prior to Activate Using M-SET – Confirmed * B.5.2.7C – Subscription Version Modify Disconnect-Pending Version Using M-ACTION by a Service Provider SOA – Confirmed * B.5.3.1C – Subscription Version Cancel by Service Provider SOA after Both Service Provider SOAs have Concurred – Confirmed * B.5.3.2C – Subscription Version Cancel: No Acknowledgment from a SOA – Confirmed * B.5.3.3C – Subscription Version Cancels with Only One Create Action Received – Confirmed * B.5.3.4C – Subscription Version Cancel by Current Service Provider for Disconnect-Pending Subscription Version – Confirmed * B.5.3.5C – Un-Do Cancel-Pending Subscription Version Request – Confirmed * B.5.4.1C – Subscription Version Immediate Disconnect – Confirmed * B.5.4.2C – Subscription Version Disconnect With Effective Release Date – Confirmed * B.5.4.7.1C – SOA Initiates Successful Disconnect Request of Ported Pooled TN – Confirmed * B.5.4.7.3C – Subscription Version Disconnect Request of Ported Pooled TN With Effective Release Date – Confirmed * B.5.4.7.14C – Subscription Version Immediate Disconnect of a Contaminated Pooled TN Prior to Block Activation (after Effective Date) – Confirmed * B.5.5.2C – Subscription Version Conflict Removal by the New Service Provider SOA – Confirmed * B.5.5.4C – Subscription Version Conflict by Old Service Provider Explicitly Not Authorizing (2nd Create) – Confirmed * B.5.5.5C – Subscription Version Conflict Removal by the Old Service Provider SOA – Confirmed * B.5.6C – Subscription Version Query – Confirmed * B.6.4C – lsmsFilterNPA-NXX Creation by the SOA – Confirmed * B.6.5C – lsmsFilterNPA-NXX Deletion by the SOA – Confirmed * B.6.6C – lsmsFilterNPA-NXX Query by the SOA – Confirmed * B.7.3C – Sequencing of Events on Initialization/Resynchronization of SOA – Confirmed * B.7.3.1C – Sequencing of Events on Initialization/Resynchronization of SOA using SWIM – Confirmed | | | | | | | |
| NANC 390 (con’t) | GDMO/ASN.1  **Nov ’08 LNPAWG**, request to include GDMO, see the following:  (open this file with NotePad or WordPad) | | | | | | | |
| NANC 400 | NeuStar  1/5/05 | **URI Fields**  **Business Need:**  Refer to separate document (last update Mar ’05). | TBD | TBD | Func Backwards Compatible: Yes  **Dec 05** – moved to Accepted per LNPAWG discussion    **Mar ’08 LNPAWG,** discussion**:**  With the FCC lifting abeyance on NANC 400, discussion took place on the change order. Several Service Providers requested that NANC 400 be broken up into four separate and distinct change orders, one for each URI Type. These four will be 429, 430, 431, and 432. | | N/A | N/A |
| NANC 401 | VeriSign  1/13/05 | **Separate LSMS Association for OptionalData Fields**  **Business Need:**  Refer to separate document (last update Jun ’05). | TBD | TBD | Func Backwards Compatible: Yes  **Jan 06** – moved to Accepted per LNPAWG discussion | | High | None / High |
| NANC 403 | NeuStar  3/30/05 | **Only allow Recovery Messages to be sent during Recovery**  The current documentation does NOT specifically state that ALL recovery messages should only be sent to the NPAC during recovery (it is currently indicated for notifications and SWIM data). This change order will clarify the documentation to include ALL data.  This will require some operational changes for Service Providers that utilize Network Data and/or Subscription Data recovery while in normal mode. | TBD | TBD | Func Backwards Compatible: Yes  The proposed solution is to update the FRS, IIS and GDMO recovery description to indicate that network data and subscription data recovery requests sent during normal mode will be rejected.  No sunset policy will be implemented with this change order. | | Low | None / None-Med |
| NANC 403  (con’t) | Proposed Solution:  FRS, new requirements:  **Req 1 All Data Recovery Only in Recovery Mode**  NPAC SMS shall allow a SOA or LSMS to recover data ONLY in recovery mode.  **Req 2 Recovery Restriction Tunable Parameter**  NPAC SMS shall provide a Regional Recovery Restriction in Recovery Mode Only tunable parameter which is defined as an indicator on whether or not the restriction of recovery requests only be allowed while in recovery mode is supported by the NPAC SMS for a particular NPAC Region.  **Req 3 Recovery Restriction Tunable Parameter Default**  NPAC SMS shall default the Regional Recovery Restriction in Recovery Mode Only tunable parameter to TRUE.  **Req 4 Recovery Restriction Tunable Parameter Modification**  NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to modify the Regional Recovery Restriction in Recovery Mode Only tunable parameter.  IIS, section 5.2.1.9, add the following text:  All recovery requests can only be sent to the NPAC when the SOA/LSMS is in recovery mode, otherwise an error message is returned (failed).  IIS, section 5.3.4, change the following text:  ~~Service Provider and Notification~~ All recovery requests can only be sent to the NPAC when the SOA/LSMS is in recovery mode, otherwise an error message is returned (failed).  GDMO, lnpDownload notification, add the following text in the behavior section:  All recovery requests can only be sent to the NPAC when the SOA/LSMS is in recovery mode, otherwise an error message is returned (failed).  **Dec 05** – moved to Accepted per LNPAWG discussion. | | | | | | | |
| NANC 415 | NeuStar 12/1/06 | **SIP and H.323 URIs in the NPAC**  **Business Need:**  Refer to separate document (last update Dec ’06). | TBD | TBD | Func Backwards Compatible: YES | | Low | Med |
| NANC 419 | AT&T  3/15/07 | **User Prioritization of Recovery-Related Notifications**  **Business Need:**  The existing NPAC Notification Priority process only allows a certain type of notification to have a different priority from another type. Using this method, however, SOAs cannot distinguish between the ***reason*** for a certain type of notification. For example, a Status Attribute Value Change notification could indicate that all LSMSs successfully responded and a pending SV is moving to active, or it could indicate that a discrepant LSMS has just completed recovery and a partial-failure SV is moving to active.  As a result, an SP that is recovering SVs could cause the activating SOA to experience unintended delays in receiving notifications for different activities because the recovery process generates its own set of notifications. This unintended delay could happen hours after the initial activity, when the SOA is otherwise relatively lightly loaded, causing confusion to the SOA users. |  |  | Func Backwards Compatible: TBD  Develop a mechanism that further defines certain notifications as initiated by regular activity versus recovery activity. With this change order the two instances would be differentiated, and an SP could indicate a different prioritization for one versus the other.  **May ’07 APT:**  The business need/scenario was explained during the APT meeting, with agreement from the group that the text captured the current business need. The group also agreed to recommend acceptance of this change order by the LNPAWG. The CMA will add additional text to this change order, then send out prior to the Jun ’07 LNPAWG con call, with a recommendation of approval from the APT.  Example of current notification:  Notification -- L-11.0 A1 SV SAVC Activates to new SP priority.  Definition -- When an INTER or INTRA SV has been created in the Local SMSs (or ‘activated‘ by the SOA) and the SV status has been set to: *Active* or *Partial-Failure*. The notification is sent to both SOAs: Old and New. If the status has been set to *Partial-Failure*, this notification contains the list of Service Providers (SP) LSMSs that have failed to receive the broadcast. | | Med | None / None |
| NANC 419 (con’t) | Proposed Resolution:  Add a new scenario to the list of notification priorities (42 listed in the FRS, Appendix C). The new one will be specific to notifications generated as a result of recovery requests (not to be confused with notification recovery). This will allow notifications generated where the *reason* is recovery to have a lower priority than the same notification generated where the *reason* is a SOA GUI user working real-time with a customer request.  In the example above, notification L-11.0 A1 would have a lower priority in a recovery-related SV activate scenario where one LSMS failed the initial SV activate download, but successfully recovered that SV activate download at a later time, whereas a different instance of notification L-11.0 A1 would have a higher priority in a regular SV activate scenario where all LSMSs successfully processed the SV activate download.  **Jun ’07 LNPAWG con call:**  The change order was accepted by the LNPAWG during the call. Detailed requirements will begin to be developed.  **Jul ’07 LNPAWG meeting:**  Upon further discussion, it was agreed that instead of just one new notification that would be generated as a result of a recovery request, the type of activity (activate, modify, disconnect) should also be accounted for in the proposed solution. The group will discuss the complexity of different types of activity, and whether this is needed and/or confusing to manage. With this new ability to “change the order”, the issue of out-of-sequence notifications needs to be discussed as well.  The attached document describes the proposed new notifications in blue. These will be discussed during the Sep ’07 LNPAWG meeting.    **Sep ’07 LNPAWG meeting:**  All participants were not available to discuss this at this time. Discussion will carry forward into the Nov ’07 meeting.  **Nov ’07 LNPAWG meeting:**  After a brief discussion, it was agreed that no solid business case could be identified for keeping this at the “type of activity” level, so instead of one each for activate, modify, and disconnect, just a single recovery notification will be used for all three types. | | | | | | | |
| NANC 423 | VeriSign  9/11/07 | **Low Tech Interface (LTI) Transaction Filter**  **Business Need:**  (PIM 64) – Currently, when a SPID has both LTI & SOA connectivity/usage, LTI generated transactions are broadcast to their respective SOA as well. This potentially creates more work for the SOA when receiving unwanted LTI data. This change order requests functionality that filters out or eliminates unwanted LTI transaction data broadcast to the SOA. Should the need arise to see this data in the SOA it could be obtained via an Audit-in activity.  **Nov ’07 LNPAWG**, discussion:  Clarification was provided by VeriSign on the specific situation, whereby the LTI is used for a specific SPID that only uses the LTI for half their users, and the SOA for the other half of those users. The ones initiated from the LTI would use this indicator to determine whether or not to send transactions to the SOA. |  |  | Func Backwards Compatible: Yes  The NPAC SMS would add a tunable parameter to the SPID-level customer profile that could be set to allow the suppression of LTI initiated transactions to the respective SOA.  Req 1 – Service Provider SOA LTI Transaction Indicator  NPAC SMS shall provide a Service Provider SOA LTI Transaction Flag Indicator tunable parameter which defines whether a SOA will receive/not-receive LTI-generated transactions over their SOA connection.  Req 2 – Service Provider SOA LTI Transaction Indicator Modification  NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to modify the Service Provider SOA LTI Transaction Flag Indicator tunable parameter.  **Req 3 – Service Provider SOA LTI Transaction Indicator Usage**  NPAC SMS shall send LTI-generated transactions over the SOA connection only when the Service Provider SOA LTI Transaction Flag Indicator tunable parameter is set to TRUE. | | Med | None-Low / None |
| NANC 425 | LNPA WG  9/12/07 | **Large Volume Port Transactions and SOA Throughput Using Message Efficiency (son of NANC 397)**  **Business Need:**  Review the Sep ’07 meeting discussion in NANC 397. Going forward, discussion of everything outside of the 25K/hr increase will be documented in this change order  **Nov ’07 LNPAWG,** discussion**:**  After some initial discussion on the various options of NANC 397 that have moved into NANC 425, the group questioned the need to continue looking into this change order when 397 will meet the performance needs. The group agreed to let 425 go dormant for now, and will bring up in the future if necessary. |  |  | Func Backwards Compatible: TBD | | N/A | N/A / N/A |
| NANC 431 | LNPA WG  3/12/08 | **URI Fields (PoC)**  **Business Need:**  Refer to separate document (last update Mar ’08). |  |  | Func Backwards Compatible: Yes  **Mar ’08 LNPAWG,** discussion**:**  With the FCC lifting abeyance on NANC 400, discussion took place on the change order. Several Service Providers requested that NANC 400 be broken up into four separate and distinct change orders, one for each URI Type. These four will be 429, 430, 431, and 432. | | Low | Med / Med-High (new down-stream inter-face). After first one, next one is Low. |
| NANC 432 | LNPA WG  3/12/08 | **URI Fields (Presence)**  **Business Need:**  Refer to separate document (last update Mar ’08). |  |  | Func Backwards Compatible: Yes  **Mar ’08 LNPAWG,** discussion**:**  With the FCC lifting abeyance on NANC 400, discussion took place on the change order. Several Service Providers requested that NANC 400 be broken up into four separate and distinct change orders, one for each URI Type. These four will be 429, 430, 431, and 432. | | Low | Med / Med-High (new down-stream inter-face). After first one, next one is Low. |
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# Next Documentation Release Change Orders

| **Next Documentation Release Change Orders** | | | | | | | |
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| **Chg Order #** | **Orig. / Date** | **Description** | **Priority** | **Category** | **Proposed Resolution** | **Level of Effort** | |
|  |  |  |  |  |  | **NPAC** | **SOA LSMS** |
| NANC 436 | NeuStar  8/22/08 | **Optional Data – alternative End User Location and alternative Billing ID**  **Business Need:**  Refer to separate document. |  |  | Func Backwards Compatible: Yes  **Sep ’08 LNPAWG,** discussion**:**  A review and discussion took place on the three fields, and the process and benefit of adding them to the OptionalData attribute in both the SV and Pooled Block records. The change order was accepted, and will be slated to be implemented before the end of the year. | Low | TBD |
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# Next Release (R3.4) Change Orders

| **Next Release (R3.4) Change Orders** | | | | | | | | |
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| **Chg Order #** | **Orig. / Date** | **Description** | **Priority** | **Category** | **Proposed Resolution** | **Level of Effort** | | |
|  |  |  |  |  |  | **NPAC** | | **SOA LSMS** |
| NANC 147 | AT&T  8/27/97 | **Version ID Rollover Strategy** Currently there is no strategy defined for rollover if the maximum value for any of the id fields (sv id, lrn id, or npa-nxx id) is reached. One should be defined so that the vendor implementations are in sync. Currently the max value used by Lockheed is a 4 byte-signed integer and for Perot it is a 4 byte-unsigned integer.  **Sep 99 LNPA-WG** (Chicago), since the version ID for all data is driven by the NPAC SMS, the rollover strategy should be developed by Lockheed. SPs/vendors can provide input, but from a high level, the requirement is to continue incrementing the version ID until the maximum ([2\*\*31] –1) is achieved, then start over at 1 (**Jan/Mar/May ’07 LNPAWG mtgs** – it was mentioned that the reference here to “1” is confusing since that is not the decimal equivalent when a 32-bit number is rolled over, so instead of “1” the correct reference should say “minus [2\*\*31] – 1”.), and use all available numbers at that point in time when a new version ID needs to be assigned (e.g., new SV-ID for a TN).  Dec ’05 comments: NeuStar provided a list of five record types that could have numbers that roll over (since they come across the interface). Local vendors have action item to determine if they will have a prob with numbers that come “out of order”. | High | FRS | Func Backwards Compatible: NO  A strategy on how we look for conflicts for new version id’s must be developed as well as a method to provide warnings when conflicts are found.  **Oct 98 LNPAWG** (Kansas City), it was requested that we begin discussing this in detail starting with the Jan 99 LNPAWG meeting. Beth will be providing some information on current data for the ratio of SV-ID to active TNs (so that we can get a feel for how much larger the SV-ID number is compared to the active TNs).  **Sep 99 LNPA-WG** (Chicago), Lockheed will begin developing a strategy for this.  **Jun 00 LNPA-WG** (Chicago), AT&T analysis and calculation (using current and projected porting volumes) indicate that a need for a version ID rollover strategy is more than five years away. Therefore, this change order is removed from R5, and will be discussed internally by NeuStar technical staff.  **Jul 00 LNPAWG**: NeuStar will track the problem. It will be a NeuStar internal design. Change order to stay on open list for possible later Document Only changes.  **Jan 06 LNPAWG**: Moved to accepted. | Low | | None / None |
| NANC 147 (con’t) |  |  |  |  | **Mar 06 LNPAWG**: Action IDs and Audit IDs are now expected to rollover in 7 months in the SE Region. NANC 147 will document the rollover strategy. There will be no initiative to go to 64 bit IDs.  **Sep 06 LNPAWG**: Action IDs and Audit IDs are now expected to rollover in less than two (2) months in the SE Region. Since these numbers are really transaction numbers and are purged on a regular basis, reuse is not an issue. The rollover strategy is to begin at 1. No vendor reported an issue with this approach. (**Jan/Mar/May ’07 LNPAWG mtgs** – it was mentioned that the reference here to “1” is confusing since that is not the decimal equivalent when a 32-bit number is rolled over, so instead of “1” the correct reference should say “minus [2\*\*31] – 1”. As discovered during industry testing in early 2007, some vendors did have a problem with this; these vendors plan to address the problem with software patches to their customers).  NANC 147 is still needed to document the rollover strategy for long-term data (like SV-ID), where an inventory of available numbers needs to be established. At last check, this will be needed in ~850 months. NeuStar will continue to monitor the usage of SV-IDs. |  | |  |
| NANC 147 con’t | **Version ID Rollover Strategy (Proposed Resolution section, continued)**  The requirements for the long-term inventory functionality are listed below:  Req-1 NPAC SMS Record ID Maximum Value Rollover  NPAC SMS shall roll over a record ID attribute in instances when the ID reaches the maximum value of (2\*\*31)-1, and start with an ID that is equal to the minimum value of minus (2\*\*31)-1.  Note: Record ID attributes include audit ID, action ID, subscription version ID, LRN ID, NPA-NXX ID, NPA-NXX-X ID, and Number Pool Block ID.  Req-2 NPAC SMS Record ID Inventory Mechanism  NPAC SMS shall provide an inventory mechanism for persistent ID attributes (Subscription Version ID, LRN ID, NPA-NXX ID, NPA-NXX-X ID, Number Pool Block ID) in instances when the ID reaches the maximum value of (2\*\*31)-1, and must roll over to the minimum value of minus (2\*\*31)-1.  Req-3 NPAC SMS Record ID Inventory – adding ID Values  NPAC SMS shall, after a roll over, add ID values to the ID inventory for a specific persistent ID attribute (Subscription Version ID, LRN ID, NPA-NXX ID, NPA-NXX-X ID, Number Pool Block ID) when that specific ID value **does not** exist in either the active database or history database, based on the frequency defined in the inventory mechanism.  Req-4 NPAC SMS Record ID Inventory – skipping ID Values  NPAC SMS shall, after a roll over, skip ID values when adding to the ID inventory for a specific persistent ID attribute (Subscription Version ID, LRN ID, NPA-NXX ID, NPA-NXX-X ID, Number Pool Block ID) when that specific ID value **does** exist in either the active database or history database, based on the frequency defined in the inventory mechanism.  Req-5 NPAC SMS Record ID Inventory – issuing new ID Values  NPAC SMS shall issue an ID value from the ID inventory for a specific persistent ID attribute (Subscription Version ID, LRN ID, NPA-NXX ID, NPA-NXX-X ID, Number Pool Block ID) when creating a record that requires a new ID value, and the ID attribute has been rolled over.  (continued) | | | | | | | |
| NANC 147 con’t | **Version ID Rollover Strategy (Proposed Resolution section, continued)**  Req-6 NPAC SMS Record ID Inventory – skipping ID Value of Zero  NPAC SMS shall, after a roll over, skip ID value zero (0) when adding to the ID inventory for a specific persistent ID attribute (Subscription Version ID, LRN ID, NPA-NXX ID, NPA-NXX-X ID, Number Pool Block ID), based on the frequency defined in the inventory mechanism. | | | | | | | |
| NANC 355 | SBC 4/12/02 | **Modification of NPA-NXX Effective Date (son of ILL 77)**  **Business Need:**  When the NPAC inputs an NPA Split requested by the Service Provider and the effective date and/or time of the new NPA-NXX does not match the start of PDP, the NPAC cannot create the NPA Split in the NPAC SMS. To correct this problem the NPAC can contact the Service Provider and have them delete and re-enter the new NPA-NXX specified by the NPA Split at the correct time, or the NPAC can delete and re-enter the NPA-NXX for the Service Provider.  However, the NPA-NXX may already be associated with the NPA Split at the Local SMS, and the subsequent deletion of the NPA-NXX will cause that specific record to be old time-stamped. When the NPA-NXX is re-created, that new record will have a different time stamp, and it requires a manual task for the Service Provider to search for new NPA-NXX records which might match the NPA Split. If identified and corrected, it will be added. If not identified, it will affect call routing after PDP. |  | FRS, IIS, GDMO | Func Backwards Compatible: NO  This activity would only be allowed by NPAC personnel, via the GUI, to modify the NPA-NXX Effective Date.  At the time of modification request, all existing pending subscription versions must have a due date greater than the new effective date in order for the change to occur. If one or more pending subscription versions have a due date less than the new effective date, a change would not be made and an error message would be returned to the NPAC user.  It would be the responsibility of the owner of the NPA-NXX to resolve issues of pending versions with due dates prior to the new effective date before a change could be made.  For valid requests, the NPAC will notify the SOA/LSMS of a modified effective date (M-SET).  **Jan ’03 LNPAWG**, approved, move to accepted category. | | Med | Med / Med |
| NANC 355 con’t | **Modification of NPA-NXX Effective Date (Proposed Resolution section, continued)**  The requirements for the modification functionality are listed below:  **Nov ’08 LNPAWG**, discussion. Requirements 1 through 17 are only applicable when requirement 18 (regional tunable) is set to TRUE.  Req-18 Regional NPA-NXX Modification Flag Indicator – Tunable Parameter  NPAC SMS shall provide a Regional NPA-NXX Modification Flag Indicator tunable parameter, which is defined as an indicator on whether or not NPA-NXX Modification capability will be supported by the NPAC SMS for a particular NPAC region.  Req-19 Regional NPA-NXX Modification Flag Indicator – Tunable Parameter Default  NPAC SMS shall default the NPA-NXX Modification Flag Indicator tunable parameter to TRUE.  Req-20 Regional NPA-NXX Modification Flag Indicator – Tunable Parameter Modification  NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify the NPA-NXX Modification Flag Indicator tunable parameter.  Req-1 Modify NPA-NXX data for a Service Provider  NPAC SMS shall allow NPAC personnel to modify an existing NPA‑NXX for a Service Provider via the NPAC Administrative Interface.  Req-2 NPAC SMS download of network data to the Local SMS and SOA – Modification  NPAC SMS shall be able to communicate modification of NPA‑NXX data for a Service Provider to Local SMSs and SOAs.  Req-3 Service Provider NPA-NXX Data Modification  NPAC SMS shall reject a Service Provider request to modify their NPA-NXX data via the NPAC SMS to Local SMS interface, the SOA to NPAC SMS interface, or the SOA Low-tech Interface.  Req-4 Modification of NPA-NXX – Effective Date Modification from OpGUI  NPAC SMS shall allow NPAC personnel to modify the effective date for an NPA-NXX as stored in the NPAC SMS via the NPAC Administrative Interface.  Req-5 Modification of NPA-NXX – Effective Date versus Current Date  NPAC SMS shall allow the NPAC personnel to modify the effective date for an NPA-NXX if the current date is less than the existing effective date for the NPA-NXX.  Req-6 Modification of NPA-NXX – New Effective Date versus No Pending SVs  NPAC SMS shall allow the NPAC personnel to modify the effective date for an NPA-NXX if no pending Subscription Versions exist within the NPA-NXX. | | | | | | | |
| NANC 355 con’t | **Modification of NPA-NXX Effective Date (Proposed Resolution section, continued)**  Req-7 Modification of NPA-NXX – Validation Error  NPAC SMS shall report an error to the NPAC Personnel and reject the modification of an NPA-NXX, if validation errors occur as defined in Requirements Req-5 and Req-6.  Req-8 Service Provider SOA NPA-NXX Modification Flag Indicator  NPAC SMS shall provide a Service Provider SOA NPA-NXX Modification Flag Indicator tunable parameter which defines whether a SOA supports NPA-NXX Modification.  Req-9 Service Provider SOA NPA-NXX Modification Flag Indicator Default  NPAC SMS shall default the Service Provider SOA NPA-NXX Modification Flag Indicator tunable parameter to FALSE.  Req-10 Service Provider SOA NPA-NXX Modification Flag Indicator Modification  NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to modify the Service Provider SOA NPA-NXX Modification Flag Indicator tunable parameter.  Req-11 Service Provider LSMS NPA-NXX Modification Flag Indicator  NPAC SMS shall provide a Service Provider LSMS NPA-NXX Modification Flag Indicator tunable parameter which defines whether a LSMS supports NPA-NXX Modification.  Req-12 Service Provider LSMS NPA-NXX Modification Flag Indicator Default  NPAC SMS shall default the Service Provider LSMS NPA-NXX Modification Flag Indicator tunable parameter to FALSE.  Req-13 Service Provider LSMS NPA-NXX Modification Flag Indicator Modification  NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to modify the Service Provider LSMS NPA-NXX Modification Flag Indicator tunable parameter. | | | | | | | |
| NANC 355 con’t | **Modification of NPA-NXX Effective Date (Proposed Resolution section, continued)**  Req-14 Modification of NPA-NXX – Service Provider SOA NPA-NXX Modification Flag Indicator set to FALSE  NPAC SMS shall process an NPA-NXX modification request when a Service Provider SOA NPA-NXX Modification Flag Indicator tunable parameter is set to FALSE, by sending the following:   * NPA-NXX Delete * NPA-NXX Create (with new Effective Date)   Req-15 Modification of NPA-NXX – Service Provider SOA NPA-NXX Modification Flag Indicator set to TRUE  NPAC SMS shall process an NPA-NXX modification request when a Service Provider SOA NPA-NXX Modification Flag Indicator tunable parameter is set to TRUE, by sending the following:   * NPA-NXX Modification (with new Effective Date)   Req-16 Modification of NPA-NXX – Service Provider LSMS NPA-NXX Modification Flag Indicator set to FALSE  NPAC SMS shall process an NPA-NXX modification request when a Service Provider LSMS NPA-NXX Modification Flag Indicator tunable parameter is set to FALSE, by sending the following:   * NPA-NXX Delete * NPA-NXX Create (with new Effective Date)   Req-17 Modification of NPA-NXX – Service Provider LSMS NPA-NXX Modification Flag Indicator set to TRUE  NPAC SMS shall process an NPA-NXX modification request when a Service Provider LSMS NPA-NXX Modification Flag Indicator tunable parameter is set to TRUE, by sending the following:   * NPA-NXX Modification (with new Effective Date) | | | | | | | |
| NANC 355 con’t | **Modification of NPA-NXX Effective Date (Proposed Resolution section, continued)**  **Nov ’08 LNPAWG**, discussion. Minor clarifications on the requirements. The IIS Flow and GDMO should be included for the next meeting:  IIS Change: add a new flow for the Modification of NPA-NXX Effective Date.  B.x.y Modification of NPA-NXX Effective Date Using M-SET  This scenario reflects the message flow for a Modification of an NPA-NXX Effective Date.  1. M-SET Request serviceProvNPA-NXX (NPAC SMS internal) 2. M-SET Response serviceProvNPA-NXX (NPAC SMS internal) 3. M-SET Request serviceProvNPA-NXX (from NPAC SMS to SOA if SP SOA tunable TRUE) or M-DELETE and M-CREATE Request serviceProvNPA-NXX  (from NPAC SMS to SOA if SP tunable FALSE) 4. M-SET Response serviceProvNPA-NXX (from SOA to NPAC SMS if SP SOA tunable TRUE) or M-DELETE and M-CREATE Response serviceProvNPA-NXX  (from NPAC SMS to SOA if SP tunable FALSE) 5. M-SET Request serviceProvNPA-NXX (from NPAC SMS to LSMS if SP LSMS tunable TRUE) or M-DELETE and M-CREATE Request serviceProvNPA-NXX (from NPAC SMS to LSMS if SP LSMS tunable FALSE) 6. M-SET Response serviceProvNPA-NXX (from LSMS to NPAC SMS if SP LSMS tunable TRUE) or M-DELETE and M-CREATE Response  serviceProvNPA-NXX (from NPAC SMS to LSMS if SP LSMS tunable FALSE) | | | | | | | |
| NANC 355 con’t | **Modification of NPA-NXX Effective Date (Proposed Resolution section, continued)**  GDMO Change: Attribute and Behavior description for Modification of NPA-NXX Effective Date. (modified in yellow)  -- 18.0 LNP Service Provider NPA-NXX Managed Object Class  serviceProvNPA-NXX MANAGED OBJECT CLASS  …  serviceProvNPA-NXX-PKG PACKAGE  ATTRIBUTES  serviceProvNPA-NXX-EffectiveTimeStamp GET-REPLACE,  …  serviceProvNPA-NXX-Behavior BEHAVIOUR  DEFINED AS !  All attributes (except NPA-NXX Effective Date) are read-only.  The serviceProv-NPA-NXX\_EffectiveTimeStamp can only be modified  if the current date is prior to the current value of the  Effective Date, and can only be modified by NPAC Personnel. | | | | | | | |
| NANC 396 | LNPA WG  9/9/04 | **NPAC Filter Management – NPA-NXX Filters**  **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. | TBD | FRS, IIS | Func Backwards Compatible: YES  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. | | Med | Med / Med |
| NANC 396 (con’t) | Proposed Solution (continued):  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.    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 fliters are needed:  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, for all NPA-NXX combinations under that NPA.  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.  (continued) | | | | | | | |
| NANC 396 (con’t) | (continued)  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, query results, 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, for all NPA-NXX combinations under that NPA.  Req-5 Create Filtered NPA for a SOA – 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 SOA, via the NPAC Administrative interface, for all NPA-NXX combinations under that NPA.  Req-6 Create Filtered NPA for a SOA – Delete Subordinate NPA-NXXs  NPAC SMS shall delete all subordinate NPA-NXX filters when a filtered NPA is created for a given SOA.  Req-7 Filtered NPA Behaviour for a SOA  NPAC SMS shall treat a filtered NPA the same as a filtered NPA-NXX for broadcasts, query results, and BDD files for a given SOA.  Note: A filtered NPA is equivalent to a filtered NPA-NXX for every NXX under that NPA.  Req-8 Delete Filtered NPA for a SOA  NPAC SMS shall allow NPAC Personnel on behalf of a requesting Service Provider to delete a filtered NPA for a given SOA, via the NPAC Administrative interface, for all NPA-NXX combinations under that NPA.  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. | | | | | | | |
| NANC 397 | Verizon Wireless and SNET Diversif’d Group  7/28/04 | **Large Volume Port Transactions and SOA Throughput**  **Overview:**  *Service Providers have voiced concerns about the volume of port transactions that the NPAC can process per second when mass changes need to be made and broadcasted to the industry. Now that wireless service providers are porting throughout the United States, the volume of port transactions has increased and will continue to increase in general, and mass changes will need to be made more frequently as well. The consolidations of Carriers and Switches will also generate an increase in the number of Mass Modifications for the update of the Network Data Tables (LIDB, CNAM, CLASS, ISVM and SMSSC).*  **Business Need:**  As wireless service providers are continually managing their networks and load-balancing the traffic and subscribers on them, the need for HLR and DPC database changes may become more frequent and of larger volumes in the future. For example, the wireless carrier may need to modify LRNs for 100,000 ported in subscribers to effectively change their switch designations. Ultimately, the NPAC must be able to handle those 100,000 transactions in a short amount of time. The desired process would be to modify all the records in one evening rather than having to split up the changes over a period of days or weeks. Similarly, Service Providers who have consolidated or have changed business plans need to update the Network Tables in order to ensure proper routing to Database Storage (LIDB, CNAM, etc.).  (continued) | TBD | N/A | Func Backwards Compatible: YES  The performance impacts to the SOAs, NPAC, and LSMSs need to be determined for large volume ports.  As porting volumes increase, it will be very important for all systems to be capable of reliably receiving downloads while retaining their association under heavier loads.  All systems should be able to maintain their current required availability level under heavy loads. Large volume porting should not require scheduled downtime.  The current plan is for service providers to start compiling technology migration forecast estimates and provide this information to Steve Addicks by March ’05. At that time, the Architecture Team will begin a review of the data (without service provider names) and begin some analysis on next steps. | | High | Med-High / Med-High |
| NANC 397 con’t | Intense coordination is required to effect the changes necessary to properly route the queries associated with these databases, including LERG, LARG and CNARG updates, GTT changes in STPs and end office routing changes. Additionally, modifications need to be made to the Network Tables in the NPAC and the transaction limitations force such modifications to be spread over weeks and/or months straining the resources of an industry already processing changes on a 24X7 basis. The two methods available for large volume NPAC changes are 1) modifications done through the SOA and 2) modifications done using the industry Mass Modification process. Processing through the SOA, at the current rate of 4 to 6 transactions per second, it could take more than 4 hours to make LRN changes to 100,000 subscribers. If something goes wrong and the Service Provider needs to back out of the changes, then another 4 hours would be required to make the corrections. This could start to creep into regular business hours in large volume ports. There is a concern about technology migrations and the current 25K/night operational limitation (originally submitted as PIM 43, and now turned into a change order). This is not an immediate need, but something that should be planned for the three-five years out timeframe.  (**May ’07 LNPAWG mtg** – the following paragraph is retained for historical purposes, even though the quantity limitation on the industry Mass Modification notification process has been updated. The current value as of Mar ’07 is set to 10,000 changes per hour, per region, seven days a week). The industry Mass Modification process is limited to 25,000 changes per region per day Monday through Friday and 50,000 changes per region per day Saturday and Sunday. This limitation applies to all service providers requesting a change, so if more than one service provider wishes to make changes on a particular day, the limitation encompasses all service providers wishing to modify records. A wireless subscriber migration involves more than just that service provider; it also involves each of that service provider’s roaming partners updating their networks on the same night, resulting in a very large coordinated effort among many parties.  There are also concerns about multiple wireless service providers doing these same types of migrations on the same nights and what coordination needs to take place to ensure that all service providers are able to manage their networks as needed and when needed. Using the Mass Modification method for large volume projects requires a high level of coordination and scheduling especially if other service providers in the region also need to do large modifications at the same time.  Additional updates between the NPAC and the SOA may be needed using the Mass Modification process. This adds additional time and coordination to fully complete a large volume project. | | | | **Jan 06** – moved to Accepted per LNPAWG discussion.  **Jan, Mar 07** – continued discussion in Architecture Planning Team’s meeting.  For the May meeting, the requirements will be included to reflect current values and new values that would be necessary for 25K/hr.  (Continued next page) | | | |
| NANC 397 con’t | **Large Volume Port Transactions and SOA Throughput (Proposed Resolution section, continued)**  The current (Mar ‘07) industry Mass Modification notification process is set to 10,000 changes per hour, per region, seven days a week.  Current requirements, NANC 393, FRS 3.3, downloads to the LSMS are 14,760/hr. Change bars indicate new numbers to support 25K/hr.  R6-28.1 SOA to NPAC SMS interface transaction rates - sustained  A transaction rate of ~~4.0~~ 7.0 CMIP transactions (sustained) per second shall be supported by each SOA to NPAC SMS interface association.  R6-28.2 SOA to NPAC SMS interface transaction rates - peak  NPAC SMS shall support a rate of 10.0 CMIP operations per second (peak for a five minute period, within any 60 minute window) over a single SOA to NPAC SMS interface association.  R6-29.2 NPAC SMS to Local SMS interface transaction rates - peak  ~~NPAC SMS shall, support a rate of 5.2 CMIP operations per second (peak for a five minute period, within any 60 minute window) over each NPAC SMS to Local SMS interface association.~~ ***This requirement will be deleted. Therefore, the LSMS performance rate will be strictly a sustained rate.***  RR6-107 SOA to NPAC SMS interface transaction rates – total bandwidth  NPAC SMS shall support a total bandwidth of ~~40.0~~ 70.0 SOA CMIP transactions per second (sustained) for a single NPAC SMS region. (previously NANC 393, NewReq 1)  RR6-108 NPAC SMS to Local SMS interface transaction rates – sustained  NPAC SMS shall support a rate of ~~4.0~~ 7.0 CMIP transactions per second (sustained) over each NPAC SMS to Local SMS interface association. (previously NANC 393, NewReq 2) | | | | | | | |
| NANC 397 con’t | **Large Volume Port Transactions and SOA Throughput (Proposed Resolution section, continued)**  Current requirements, NANC 393, FRS 3.3, downloads to the LSMS are 14,760/hr. Change bars indicate new numbers to support 25K/hr.  RR6-109 NPAC SMS to Local SMS interface transaction rates – total bandwidth  NPAC SMS shall support a total bandwidth of ~~156~~ 210 Local SMS CMIP transactions per second (sustained) for a single NPAC SMS region. (previously NANC 393, NewReq 3)  **May 07** – continued discussion in Architecture Planning Team’s meeting.  The updated requirements were reviewed. The performance increase would likely affect more than just software changes (i.e., hardware, network). When questioned again on the need to allow half the time for the backout, Verizon Wireless responded that a problem may not be known until the entire migration was completed, and therefore the back-out requirement would need a comparable time interval to perform the backout.  NeuStar suggested an option that would use a new message to indicate “starting migration now”, and a subsequent message to indicate “migration complete” or “migration should be backed out”. This approach allows a potential to use much more of the maintenance window for the initial broadcast, since database backout or commits will be much faster than additional SV modification broadcasts. Discussion will continue during the Jul ’07 APT mtg.  (continued) | | | | | | | |
| NANC 397 con’t | **Large Volume Port Transactions and SOA Throughput (Proposed Resolution section, continued)**  **Jul ‘07** – continued discussion in Architecture Planning Team’s meeting.  The discussion was centered on the volume number and the various options on the approach to accomplishing the 100K updates overnight. Pros and cons for each of these were discussed. 1.) is it 100K in eight hours with a single message to indicate begin and another single message to indicate end? (effectively up to 100,002 messages, assuming no ranges), 2.) is it 100K in four hours to allow a full backout by sending 100K backout messages? (effectively up to 200,000 messages, assuming no ranges), 3.) is it 100K in eight hours utilizing TN lists where there is enough time to perform both the updates as well as a potential back-out? (potentially as few as two messages, assuming one message with a list of 100K TNs, and another single message with a list of 100K TNs to back-out) 4.) is it a case where 100K+ could be accomplished using a selection criteria rather than TNs or TN-Ranges? (a single message that says “update where LRN =xyz”) 5.) is it a case where associating DPC data with an LRN and broadcasting as network data rather than SV data would help? (much fewer messages, but quantity unknown at this time) or 6.) is it a higher number than 100K to accommodate a large company merger where millions of numbers may be involved? This item reflects the discussion on NANC 349 and the batch offline mode, since the group agreed to stop working on 349 and just work the volume issues here in 397. (could possible use any method)  1. The single message approach. This method clearly cuts down on the number of messages sent across the CMIP interface. However, the updates to the SCP have been identified as the bottleneck, so this method might not be that effective. Additionally, this method is only effective if vendors and Service Providers implement the functionality to process this new message. This would require development on the NPAC side as well.  2. The full-backout approach. This method requires 50% of the time to be allocated for updates to be sent out, and the other 50% for revert-back messages to be sent out. It is expected that the quantity of messages would be the same for both the initial updates and the back-outs. The benefit of this method is that existing messages could be used, so no new development is required.  3. The TN range approach. This method reduces the number of messages sent across the CMIP interface. The current ASN.1 definition does not support a TN/TN-range list for modify requests, so there would be development required (GDMO/ASN.1 changes and NPAC code changes). The max size of the message would have to be discussed.  4. The selection criteria approach. This method reduces the number of messages sent across the CMIP interface AND minimize the size of those messages. The selection criteria may be sub-divided to better manage the groups of updates.  5. The single DPC associated to an LRN approach. This method could potentially cut down many messages. However, it loses the flexibility to associate more than one pair of DPC/SSN values to a single LRN, which several Service Providers indicated they use in production today. With this approach, the NPAC network data would be expanded to include associated DPC/SSN with each LRN. Other desired DPC values will continue to be populated at the SV level on an exception basis.  6. The larger volume question. This question is currently under discussion at the LNPAWG. | | | | | | | |
| NANC 397 con’t | **Large Volume Port Transactions and SOA Throughput (Proposed Resolution section, continued)**  **Sep ‘07** – continued discussion in both the LNPAWG meeting (Change Management agenda item) and the Architecture Planning Team’s meeting.  The discussion during the LNPAWG meeting centered on the selection criteria. VZW, as originator of this change order, indicated that the LRN selection (change from value A to value B) is one way that changes are made. Would also want capability to perform a subset of the LRN. Very unlikely to use NPA as a criteria. The selection criteria could include any/all of the following: SPID, LRN, NPA or NPA ranges or lists, NPA-NXX or NPA-NXX ranges or lists, LNP Type. One problem that has not been discussed is “how best to handle failed lists?”, since it’s criteria based, and not TN based like production today.  Another option to include in this list is to add capacity. After some discussion, the group agreed to use 397 as the increase in performance numbers, and move all of the alternative options into a new change order. That new change order will be discussed during the APT meeting.  The discussion during the APT meeting provided a re-cap of the LNPAWG discussion, and walked through each of the six points from the Jul ’07 meeting notes (above).  1.) not needed for new change order, 2.) not needed for new change order, 3.) look at message efficiency and incorporate both TN lists and TN-range lists, 4.) the issue is determining the failed list. This assumes that the DBs are in sync. There are complex queries in both places. May need to break out these issues and talk through them to get agreement that we won’t pursue these at this time. 5.) today there are SPs that use more than one DPC for a single LRN code. Continue discussion on having the DPC at the LRN level and DPC at the SV level for exception basis (what are the pros/cons). Would want to explicitly broadcast at the LRN level, so that we know they have this data. Also a conversion effort to clean up or sync up the SVs to use this new approach, 6.) continue to discuss large volume as necessary.  For NANC 397, the group agreed to document that this 25K/hr would occur in no more than four regions at a time.  **Nov ‘07** – continued discussion in the LNPAWG meeting (Change Management agenda item). The group accepted 397 as the change order that updates the transaction rate from 4.0/sec up to 7.0/sec. All other options have been moved into NANC 425, and will be discussed as necessary under that change order.  No additional requirements work is anticipated for NANC 397 now that the numbers have been updated. This change order is now awaiting prioritization and implementation. | | | | | | | |
| NANC 408 | T-Mobile  10/20/05 | **SPID Migration Automation Change**  **Business Need:**  Refer to separate document (last update Nov ’07). | TBD | TBD | Func Backwards Compatible: Yes    **Jul ’08 LNPAWG**, discussion. Need to develop requirements for Sep ’08 review. See below:  Req-1 SPID Migration Update – GUI Availability/Selection function for Service Provider  NPAC SMS shall allow Service Provider Personnel, via an online mechanism, to query for available SPID Migration timeslots.  Req-2 SPID Migration Update – GUI Entry by Service Provider  NPAC SMS shall allow Service Provider Personnel, via an online mechanism, 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.  (continued) | | High | Med |
| NANC 408 (con’t) | (continued)  Req-3 SPID Migration Update – GUI Entry Service Provider – Confirmation by NPAC Personnel  NPAC SMS shall, via an online mechanism, require NPAC Personnel to “confirm” a SPID Migration as defined in Req-2.  Note: In an A-to-B migration, “confirmation” will involve validation by SPID A. M&Ps will be defined for this function.  Req-4 SPID Migration Update – Cancellation Window – Tunable Parameter  NPAC SMS shall provide a SPID Migration Cancellation Window tunable parameter, which is defined as the minimum length of time between the current date (exclusive) and the SPID Migration date (inclusive), when a Service Provider is cancelling a currently scheduled SPID Migration.  Req-5 SPID Migration Update – Cancellation Window – Tunable Parameter Default  NPAC SMS shall default the SPID Migration Cancellation Window tunable parameter to two (2) business days.  Req-6 SPID Migration Update – Cancellation Window – Tunable Parameter Modification  NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify the SPID Migration Cancellation Window tunable parameter.  Req-7 SPID Migration Update – GUI Cancellation by Service Provider  NPAC SMS shall allow Service Provider Personnel, via an online mechanism, to cancel a currently scheduled SPID Migration where they are the migrating-to SPID, if the SPID Migration date is at least SPID Migration Cancellation Window tunable parameter number of days into the future.  Req-8 SPID Migration Update – GUI Cancellation by Service Provider – Notification to NPAC Personnel  NPAC SMS shall, via an online mechanism, require NPAC Personnel to “confirm” a SPID Migration Cancellation as defined in Req-7.  Req-9 SPID Migration Update – GUI Modification of NPA-NXX Owner by NPAC Personnel  NPAC SMS shall, via an online mechanism, allow NPAC Personnel to modify the NPA-NXX Service Provider ID (code owner), in cases when there are no (zero) active-like subscription versions in that NPA-NXX that is being migrated.  Note: Unlike other SPID Migration activity (i.e., SMURF file generation), this function is allowed during any NPAC uptime. ‘Active-like’ Subscription Versions are defined as Subscription Versions that contain a status of active, sending, partial failure, old with a Failed SP List, or disconnect pending. M&Ps will indicate that this online activity will be performed as close to the Maintenance window as practical.  Req-10 SPID Migration Update – GUI Modification of NPA-NXX Owner by NPAC Personnel – Notification to Local SMS and SOA  NPAC SMS shall notify all accepting Local SMSs and SOAs of the modification of the NPA-NXX owning Service Provider, immediately after validation of a modification as defined in Req-9. | | | | | | | |
| NANC 408 (con’t) | (continued)  Req-11 SPID Migration Update – Pending-Like SVs Cleaned Up  NPAC SMS shall clean up pending-like Subscription Versions at the time of SPID Migration where the migrating-from Service Provider in the NPA-NXX that is being migrated is the Old Service Provider SPID in those Subscription Versions, by setting the status to Cancelled.  Req-12 Regional SPID Migration Online Functionality Indicator – Tunable Parameter  NPAC SMS shall provide a Regional SPID Migration Online Functionality Indicator tunable parameter, which is defined as an indicator on whether or not SPID Migration Online Functionality capability will be supported by the NPAC SMS for a particular NPAC region.  Req-13 Regional SPID Migration Online Functionality Indicator – Tunable Parameter Default  NPAC SMS shall default the SPID Migration Online Functionality Indicator tunable parameter to TRUE.  Req-14 Regional SPID Migration Online Functionality Indicator – Tunable Parameter Modification  NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify the SPID Migration Online Functionality Indicator tunable parameter.  Req-15 Service Provider SOA Automated SPID Migration Indicator  NPAC SMS shall provide a Service Provider SOA Automated SPID Migration Indicator tunable parameter which defines whether a SOA will receive/not-receive automated SPID Migration transactions over their SOA connection.  Req 16 Service Provider SOA Automated SPID Migration Indicator Modification  NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to modify the Service Provider SOA Automated SPID Migration Indicator tunable parameter.  Req 17 Service Provider SOA Automated SPID Migration Indicator Usage  NPAC SMS shall send automated SPID Migration transactions over the SOA connection only when the Service Provider SOA Automated SPID Migration Indicator tunable parameter is set to TRUE. | | | | | | | |
| NANC 408 (con’t) | (continued)  Req-18 Service Provider LSMS Automated SPID Migration Indicator  NPAC SMS shall provide a Service Provider LSMS Automated SPID Migration Indicator tunable parameter which defines whether an LSMS will receive/not-receive automated SPID Migration transactions over their LSMS connection.  Req 19 Service Provider LSMS Automated SPID Migration Indicator Modification  NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to modify the Service Provider LSMS Automated SPID Migration Indicator tunable parameter.  Req 20 Service Provider LSMS Automated SPID Migration Indicator Usage  NPAC SMS shall send automated SPID Migration transactions over the LSMS connection only when the Service Provider LSMS Automated SPID Migration Indicator tunable parameter is set to TRUE.  **Nov ’08 LNPAWG**, discussion. Minor clarifications on the requirements. Requirements 1 through 11 are only applicable when requirement 12 (regional tunable) is set to TRUE. The IIS Flow and new message should be included for the next meeting:  IIS Change: add a new flow for the SPID Migration Action.  B.x.y Online SPID Migration Using SPID Migration Action  This scenario reflects the message flow for a SPID Migration from the NPAC SMS to the SOA and the NPAC SMS to the Local SMS. This action is used to change SPID ownership of NPA-NXX, NPA-NXX-X, and LRN during a SPID Migration.  1. M-ACTION Request lnpSpidMigration (from NPAC SMS to SOA if SP SOA tunable TRUE) or SMURF file processing (from NPAC SMS to SOA  FTP site if SP tunable FALSE) 2. M-ACTION Response lnpSpidMigration (from SOA to NPAC SMS if SP SOA tunable TRUE) or SMURF file processing (from NPAC SMS to SOA  FTP site if SP tunable FALSE) 3. M-ACTION Request lnpSpidMigration (from NPAC SMS to LSMS if SP LSMS tunable TRUE) or SMURF file processing (from NPAC SMS to SOA  FTP site if SP tunable FALSE) 4. M-ACTION Response lnpSpidMigration (from LSMS to NPAC SMS if SP LSMS tunable TRUE) or SMURF file processing (from NPAC SMS to SOA  FTP site if SP tunable FALSE) | | | | | | | |
| NANC 408 (con’t) | (continued)  The attached e-mail was sent out to the LNPAWG distro on 12/14/07. It addresses the new message. The reference to localSMS-SpidMigrationAction should be changed to lnpSpidMigrationAction.    **GDMO: (new)**  -- x.0 LNP SPID Migration Action  lnpSpidMigration ACTION  BEHAVIOUR  lnpSpidMigrationDefinition,  lnpSpidMigrationBehavior;  MODE CONFIRMED;  WITH INFORMATION SYNTAX LNP-ASN1. lnpSpidMigrationAction;  WITH REPLY SYNTAX LNP-ASN1.lnpSpidMigrationReply;  REGISTERED AS {LNP-OIDS.lnp-action x};  lnpSpidMigrationDefinition BEHAVIOUR  DEFINED AS !  The lnpSpidMigration is the action that is  used on the NPAC SMS via the SOA to NPAC SMS interface and the  NPAC SMS to Local SMS interface to initiate SPID ownership  changes related to a SPID Migration.  !;  lnpSpidMigrationBehavior BEHAVIOUR  DEFINED AS !  Preconditions: This action is issued from an lnpNetwork object.  Postconditions: After this action has been executed by the NPAC, the  SOA or LSMS receiving this message will update all applicable local  records for NPA-NXX, NPA-NXX-X, and LRN. | | | | | | | |
| NANC 408 (con’t) | (continued)  The SOA or LSMS must change the SPID attribute on the applicable  records to the ***migrating-to-sp*** value.  The action success or failure and reasons for failure will be  returned in the Action Reply.  lnpSpidMigrationPkg PACKAGE  BEHAVIOUR lnpSpidMigrationPkgBehavior;  ACTIONS  lnpSpidMigration;  REGISTERED AS {LNP-OIDS.lnp-package xx};  lnpSpidMigrationPkgBehavior BEHAVIOUR  DEFINED AS !  This package provides for conditionally including the  lnpSpidMigration action.  !;  **GDMO: (modified)**  lnpNetwork MANAGED OBJECT CLASS  DERIVED FROM "CCITT Rec. X.721 (1992) | ISO/IEC 10165-2 : 1992":top;  CHARACTERIZED BY  lnpNetworkPkg;  CONDITIONAL PACKAGES  lnpDownloadPkg PRESENT IF  !the object is instantiated on the NPAC SMS!,  lnpSpidMigrationPkg PRESENT IF  !the object is instantiated on the NPAC SMS!;  REGISTERED AS {LNP-OIDS.lnp-objectClass 11};  **ASN.1:**  lnpSpidMigrationReply ::= ResultsStatus | | | | | | | |
| NANC 408 (con’t) | (continued)  **Jan ’09 LNPAWG**, discussion. Minor clarifications on the ASN.1. Remove the “more-data” element within the LocalSMS-SpidMigrationAction structure.  LocalSMS-SpidMigrationAction ::= SEQUENCE { actionId                       [1] INTEGER, migration-from-sp              [2] ServiceProvId, migration-to-sp                [3] ServiceProvId, migration-creation-timestamp   [4] GeneralizedTime OPTIONAL,  migration-due-date             [5] GeneralizedTime OPTIONAL,  migration-activation-timestamp [6] GeneralizedTime OPTIONAL,  ~~more-data                      [7] BOOLEAN~~ spidMigrationObjects           [~~8~~7] SET OF SpidMigrationObject, } | | | | | | | |
| NANC 413 | NeuStar 05/31/06 | **Doc Only Change Order: GDMO**  The current documentation needs to be updated:  **added in** **Aug ’06**  1. subscriptionVersionNewSP-Create ACTION. Behavior clarification (new text in **bold**).  New service providers must specify valid values for the following attributes, when the service provider's "SOA Sv Type Data" indicator is TRUE, and must NOT specify these values when the indicator is set to FALSE **or when the subscriptionPortingToOriginal-SPSwitch is FALSE (ignored if value set to TRUE)**:  subscriptionSvType  **When the subscriptionPortingToOriginal-SPSwitch is FALSE**  **(ignored if value set to TRUE)** the new service provider may specify valid values for the following attributes:          subscriptionEndUserLocationValue          subscriptionEndUserLocationType          subscriptionBillingId  **added in Aug ‘06**  2. subscriptionVersionModify ACTION. Behavior clarification (new text in **bold**).  New service providers can only modify the following attributes for pending or conflict subscription versions**, and when** **the subscriptionPortingToOriginal-SPSwitch is FALSE (ignored if value set to TRUE)**: |  | GDMO | Func Backwards Compatible: YES  Correct the current documentation. | | Low | None / None |
| NANC 413 (con’t) | **Doc Only Change Order: GDMO (continued)**  **added in** **Apr ’07**  3. Behavior clarification (new text in **bold**) for the following attributes:  auditDiscrepancyVersionId, serviceProvLRN-ID, serviceProvNPA-NXX-ID, subscriptionAuditId, subscriptionVersionId, lsmsFilterNPA-NXX-ID, numberPoolBlockId, serviceProvNPA-NXX-X-ID.  For the attribute actionId, this entire paragraph will be added.  The NPAC SMS currently uses a 32-bit signed integer for the Naming ID Value. The maximum value is ([2\*\*31] - 1) or ~~2.14B~~ **2147483647 and the minimum value is -(2\*\*31) or** -**2147483648. Rollover will take place when an ID of maximum value is incremented. The next ID value after the maximum of 2147483647 will be -2147483648**. It is anticipated that all Service Providers will be able to successfully handle Naming ID Values ~~up to this maximum~~ **within this range as well as rollover after the maximum value is reached**.  **added in** **Jun ’07**  4. Behavior clarification (new text in blue) for the incorrect usage of >:  --  -- 21.0 LNP NPAC Subscription Version Managed Object Class  --  subscriptionVersionNPAC-Behavior-2 BEHAVIOUR  DEFINED AS !  been returned. The subscription version linked replies will be sorted by  TN and then by subscription version ID so a filter can be created to  return the next set of data where the TN value is greater than or equal to the last  TN returned plus one, OR the TN is equal to the last TN returned AND the  subscription version id is greater than or equal to the last subscription version id  returned plus one. (e.g., (TN >= 123-456-789~~0~~1 OR (TN = 123-456-7890 AND ID >= 123~~4~~5))  !; | | | | | | | |
| NANC 414 | LNPA WG (from PIM 51) 11/14/06 | **Validation of Code Ownership in the NPAC**  **Business Need:**  Refer to separate document (last update Jul ’07). | TBD | TBD | Func Backwards Compatible: TBD    **Nov ’08 LNPAWG**, discussion. Minor clarification on the requirements.  Requirements 1 through 7 in the attachment are only applicable when requirement 8 (regional tunable) is set to TRUE. | | Med | None-Low |
| NANC 416 | LNPA WG 09/13/06 | **BDD File for Notifications – Adding New Attributes**  **Business Need:**  As indicated in NANC 412, doc-only FRS updates, two attributes are not included in the Notification BDD file, even though they are part of the actual notification that is sent to the SOA. With this change order (action item 0906-02), those two attributes will be added to the BDD file, Business Type and Timer Type for Object Creation Notifications, so that the CMIP notification and the BDD file are consistent.  This change order would require development effort for both SOA systems and the NPAC. | TBD | FRS | Func Backwards Compatible: TBD  **Nov ’08 LNPAWG**, discussion. Minor clarification on the requirements. The attached shows the placement of the two attributes in the BDD file. These attributes will be included when the Service Provider Notification BDD Attributes Indicator is set to TRUE. | | Low | Low |
| NANC 416 (con’t) |  | (continued)  Req 1 Service Provider Notification BDD Attributes Indicator  NPAC SMS shall provide a Service Provider Notification BDD Attributes Indicator tunable parameter which defines whether a Service Provider supports the Timer Type and Business Hours attributes in their BDD Files.  Req 2 Service Provider Notification BDD Attributes Indicator Default  NPAC SMS shall default the Service Provider Notification BDD Attributes Indicator tunable parameter to FALSE.  Req 3 Service Provider Notification BDD Attributes Indicator Modification  NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to modify the Service Provider Notification BDD Attributes Indicator tunable parameter. | | | | | | |
| NANC 417 | Syniverse 12/18/06 | **Provide record count(s) for BDD Files and Delta BDD Files**  **Business Need:**  Refer to separate document (last update Mar ’07). | TBD | FRS | Func Backwards Compatible: TBD | | Low | Low |
| NANC 418 | Syniverse 12/18/06 | **Post-SPID Migration SV Counts**  **Business Need:**  Refer to separate document (last update Mar ’07). | TBD | M&P | Func Backwards Compatible: YES    **Nov ’08 LNPAWG**, discussion. Minor clarification on the requirements.  This count includes all SVs (LSPP, LISP, POOL) under an LRN. For this change order, it will be broken down by pooled and non-pooled counts. | | Low | Low |
| NANC 420 | NeuStar  3/31/07 | **Doc-Only Change Order: FRS Updates**  **Business Need:**  1. Remove unnecessary page break in Table 0-1 Notation Key between RR and RX abbreviation description. Remove RR table entry described as “This is a requirement that was identified in a NPAC SMS release subsequent to 1.X.” – this description was erroneously added in version 3.0.0. The original RR description (last table entry), “This is a requirement that was identified as a new requirement for the system, during post-award meetings with the Illinois LCC.” – should remain (with correction of LCC to LLC).  2. Prepaid Wireless SV Type -- With the implementation of NANC 399 and SV Type, several placeholder values were set aside for future use. During the Mar ’07 LNPAWG mtg, it was agreed to begin using one of these placeholder values. In both the intro section (1.2.16) and the data model section (SV data model – table 3-6, and Number Pool Block data model – table 3-8), the text for “SV Type 4” should be replaced with “Prepaid Wireless”.  (continued) |  |  | Func Backwards Compatible: Yes  Update the current documentation to be consistent and reflect the current behavior. | | Low | None / None |
| NANC 420 (con’t) | **Doc-Only Change Order: FRS Updates (continued)**  **added in** **Apr’08**  3. Text correction for the following requirement:  RR5-179 Create Inter-Service Provider PTO Subscription Version – New Service Provider Optional input data  NPAC SMS shall accept the following optional fields from NPAC personnel or the new Service Provider upon Subscription Version creation for an Inter-Service Provider port, when the Porting to Original flag is set to True.  New text should read:  RR5-179 Create Inter-Service Provider PTO Subscription Version – New Service Provider ~~Optional input~~ data attributes – Rejected  NPAC SMS shall ~~accept~~ reject an Inter-Service Provider Create Request that includes the following ~~optional fields~~ data attributes from NPAC personnel or the new Service Provider ~~upon Subscription Version creation for an Inter-Service Provider port~~, when the Porting to Original flag is set to True.   1. LRN 2. Class DPC 3. Class SSN 4. LIDB DPC 5. LIDB SSN 6. CNAM DPC 7. CNAM SSN 8. ISVM DPC 9. ISVM SSN 10. WSMSC DPC (if supported by the Service Provider SOA) 11. WSMSC SSN (if supported by the Service Provider SOA) 12. Porting to Original 13. Billing Service Provider ID 14. End-User Location - Value 15. End-User Location - Type 16. SV Type 17. Alternative SPID   (continued) | | | | | | | |
| NANC 420 (con’t) | **Doc-Only Change Order: FRS Updates (continued)**  **added in** **Apr’08**  4. Text correction for the following requirement:  RR5-180 Create “Intra-Service Provider Port” (PTO) Subscription Version – Current Service Provider Optional input data  NPAC SMS shall accept the following optional fields from NPAC personnel or the new Service Provider upon Subscription Version creation for an Inter-Service Provider port, when the Porting to Original flag is set to True.  New text should read:  RR5-180 Create “Intra-Service Provider Port (PTO) Subscription Version – Current Service Provider ~~Optional input~~ data attributes – Rejected  NPAC SMS shall ~~accept~~ reject an Intra-Service Provider Create Request that includes the following ~~optional fields~~ data attributes from NPAC personnel or the Current Service Provider ~~upon Subscription Version creation for an Inter-Service Provider port~~, when the Porting to Original flag is set to True.   1. LRN 2. Class DPC 3. Class SSN 4. LIDB DPC 5. LIDB SSN 6. CNAM DPC 7. CNAM SSN 8. ISVM DPC 9. ISVM SSN 10. WSMSC DPC (if supported by the Service Provider SOA) 11. WSMSC SSN (if supported by the Service Provider SOA) 12. Porting to Original 13. Billing Service Provider ID 14. End-User Location - Value 15. End-User Location - Type 16. SV Type 17. Alternative SPID | | | | | | | |
| NANC 421 | NeuStar 03/31/07 | **ASN.1 and GDMO Updates for Prepaid Wireless SV Type**  The current **ASN.1** needs to be updated:  1. Prepaid Wireless SV Type.  With the implementation of NANC 399 and SV Type, several placeholder values were set aside for future use. During the Mar ’07 LNPAWG mtg, it was agreed to begin using one of these placeholder values. The ASN.1 change is shown below:  SVType ::= ENUMERATED {  wireline (0),  wireless (1),  voIP (2),  voWiFi (3),  ~~sv-type-4~~ prepaid-wireless (4),  sv-type-5 (5),  sv-type-6 (6)  }  (continued) |  |  | Func Backwards Compatible: YES  Update the current documentation. | | Low | Low / Low |
| NANC 421 (con’t) | **ASN.1 and GDMO Updates for Prepaid Wireless SV Type (continued)**  The current **GDMO** needs to be updated  1. GDMO Behavior clarification (new text in blue) for both the SV Type attribute (#153, shown below) and the Number Pool Block SV Type attribute (#155, not shown below, but same change):  --  -- 153.0 Subscription Version SV Type  --  subscriptionSvTypeBehavior BEHAVIOUR  DEFINED AS !  This attribute is used to specify the subscription version  type.  The possible values are:  0 : wireline  1 : wireless  2 : VoIP  3 : voWiFi  4 : ~~sv-type-4~~ prepaid-wireless  5 : sv-type-5  6 : sv-type-6  !; | | | | | |  |  |
| NANC 422 | NeuStar  6/30/07 | **Doc-Only Change Order: IIS Updates**  **Business Need:**  1. Correct section 4.8, Subscription Version Queries, for the enhanced SV Query functionality over the SOA/LSMS interfaces. The text gives an example using the > operator. CMIP does not support >, so the reference text should be changed from “> value”, to “>= value + 1”, as shown below:  All subscription versions where ((TN >= 303-555-015~~0~~1) OR (TN = 303-555-0150 AND subscription version ID >= 123~~4~~5). |  |  | Func Backwards Compatible: Yes  Update the current documentation to be consistent and reflect the current behavior. | | Low | None / None |
| NANC 424 | VeriSign  9/11/07 | **Number Pool Block (NPB) Donor Disconnect Notification Priority Indicator**  **Business Need:**  (PIM 65) – When Number Pool Blocks (NPBs) are disconnected, the defined flow (IIS B.4.4.24) includes an SV Donor Disconnect notification to the Donor SOA. In some instances, the Donor SOA may not wish to receive these notifications. In the current notification prioritization functionality, there is no option to indicate a priority level specific to a de-pool and the associated SV Donor Disconnect notifications. Without this option, the Donor SOA may receive unwanted notifications (if not supporting range notifications, could receive up to 1000 notifications).  **Nov ’07 LNPAWG**, discussion:  VeriSign validated that the documented description and proposed resolution meets the business need. |  |  | Func Backwards Compatible: Yes  The NPAC SMS would add a notification category specific to the SV Donor Disconnect notification when an NPB is disconnected.  Req 1 – Service Provider SOA Suppress NPB De-Pool SV Donor Disconnect Notification Indicator  NPAC SMS shall provide a Service Provider SOA Suppress NPB De-Pool SV Donor Disconnect Flag Indicator tunable parameter which defines whether a SOA will receive/not-receive SV Donor Disconnect Notifications as a result of a Number Pool Block Disconnect.  Req 2 – Service Provider SOA Suppress NPB De-Pool SV Donor Disconnect Notification Indicator Modification  NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to modify the Service Provider SOA Suppress NPB De-Pool SV Donor Disconnect Flag Indicator tunable parameter.  **Req 3 – Service Provider SOA Suppress NPB De-Pool SV Donor Disconnect Notification Indicator Usage**  NPAC SMS shall send Number Pool Block Disconnect initiated SV Donor Disconnect notifications only when the Service Provider SOA Suppress NPB De-Pool SV Donor Disconnect Notification Flag Indicator tunable parameter is set to FALSE. | | Low | None-Low / None |
| NANC 426 | VeriSign  10/10/07 | **Provide Modify Request Data to the SOA from Mass Updates**  **Business Need:**  (PIM 66) – Currently, when the NPAC conducts a mass update for a SOA customer; the SOA does not receive any notifications containing the modified attributes. For SOAs that maintain SV data beyond the time of port activation, this creates an out-of-synch situation between the SOA database and the NPAC database.  **Nov ’07 LNPAWG**, discussion:  VeriSign validated that the documented description and proposed resolution meets the business need. |  |  | Func Backwards Compatible: Yes  The NPAC SMS would add a tunable parameter to the SPID-level customer profile that could be set to allow the sending/suppression of modify data to the respective SOA as a result of a mass update.  Req 1 – Service Provider SOA Mass Update Notification Indicator  NPAC SMS shall provide a Service Provider SOA Mass Update Notification Flag Indicator tunable parameter which defines whether a SOA will receive/not-receive notifications containing modified attributes as a result of a Mass Update.  Req 2 – Service Provider SOA Mass Update Notification Indicator Modification  NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to modify the Service Provider SOA Mass Update Notification Flag Indicator tunable parameter.  **Req 3 – Service Provider SOA Mass Update Notification Indicator Usage**  NPAC SMS shall send notifications containing modified attributes as a result of a Mass Update over the SOA connection only when the Service Provider SOA Mass Update Notification Flag Indicator tunable parameter is set to TRUE. | | Med | Low-Med / None |
| NANC 426 (con’t) | **Provide Modify Request Data to the SOA from Mass Updates (continued)**  IIS Change: add a new notification for the modified attributes to flow B.8.3, Mass Update.  Current flow. 1. M-SET Request subscriptionVersion 2. M-SET Response subscriptionVersion 3. M-EVENT-REPORT Request subscriptionVersionStatusAttributeValueChange 4. M-EVENT-REPORT Response subscriptionVersionStatusAttributeValueChange  Updated flow. 1. M-SET Request subscriptionVersion 2. M-SET Response subscriptionVersion 3. M-EVENT-REPORT Request subscriptionVersionStatusAttributeValueChange 4. M-EVENT-REPORT Response subscriptionVersionStatusAttributeValueChange 5. M-EVENT-REPORT Request subscriptionVersionAttributeValueChange (include the modified attributes) 6. M-EVENT-REPORT Response subscriptionVersionAttributeValueChange  For flow B.8.3.1, Mass Update for a range of TNs that contains a Number Pool Block, the same type of change will apply. In this case, two notifications will be added, one for the SVs, and one for the NumberPoolBlock.  FRS, Table C-7, SOA Notification Priorities Tunables. Create a new row in S-3.00, Attribute Value Change, For Mass Update, None. | | | | | | For |  |
| NANC 427 | Qwest  1/08/08 | **Error Reduction for DPC entries in new ported and pooled records**  **Business Need:**  Refer to separate document (last update Mar ’08). |  |  | Func Backwards Compatible: No    **Jul ’08 LNPAWG**, discussion. Need to develop requirements for Sep ’08 review. See below:  Req-1 DPC Entries Information Source for LTI or NPAC Personnel entries  NPAC SMS shall obtain DPC information from each Service Provider that will be making subscription version create requests as the New Service Provider via the SOA Low-Tech Interface or NPAC Administrative Interface.  (continued) | | Med-High | None-Med / None |
| NANC 427 (con’t) | (continued)  Req–2 DPC Entries Information Maintenance  NPAC SMS shall allow NPAC Personnel, via the NPAC Administrative Interface, to maintain the Service Provider DPC information.  Req–3 DPC Entries Information – Multiple Entries  NPAC SMS shall allow multiple entries of DPC-SSN pair for each GTT Type (CLASS, LIDB, CNAM, ISVM, WSMSC).  Req‑4 Create Subscription Version – DPC Field-level Data Validation  NPAC SMS shall perform field-level data validations to ensure that the values for the following input data, if supplied, is valid according to the Service Provider DPC source data, when Creating Subscription Versions via the SOA Low-Tech Interface or NPAC Administrative Interface for an Inter-Service Provider port:   1. Class DPC 2. Class SSN 3. LIDB DPC 4. LIDB SSN 5. CNAM DPC 6. CNAM SSN 7. ISVM DPC 8. ISVM SSN 9. WSMSC DPC 10. WSMSC SSN   (continued) | | | | | | | |
| NANC 427 (con’t) | (continued)  Req‑5 Create “Intra-Service Provider Port” Subscription Version – DPC Field-level Data Validation  NPAC SMS shall perform field-level data validations to ensure that the values for the following input data, if supplied, is valid according to the Service Provider DPC source data, when Creating Subscription Versions via the SOA Low-Tech Interface or NPAC Administrative Interface for an Intra-Service Provider port:   1. Class DPC 2. Class SSN 3. LIDB DPC 4. LIDB SSN 5. CNAM DPC 6. CNAM SSN 7. ISVM DPC 8. ISVM SSN 9. WSMSC DPC 10. WSMSC SSN   Req-6 Create Subscription Version – Validation of DPCs for Subscription Version Creates  NPAC shall reject New Service Provider Subscription Version Create requests from the SOA Low-Tech Interface or NPAC Administrative Interface if a valid DPC reference does not exist in the Service Provider DPC source data.  **Nov ’08 LNPAWG**, discussion. Minor clarification on the requirements. Requirements 1 through 6 in the attachment are only applicable when requirement 7 (regional tunable) is set to TRUE.  Req-7 Regional LTI DPC Validation Indicator – Tunable Parameter  NPAC SMS shall provide a Regional LTI DPC Validation Indicator tunable parameter, which is defined as an indicator on whether or not LTI DPC validation capability will be supported by the NPAC SMS for a particular NPAC region.  Req-8 Regional LTI DPC Validation Indicator – Tunable Parameter Default  NPAC SMS shall default the LTI DPC Validation Indicator tunable parameter to TRUE.  Req-9 Regional LTI DPC Validation Indicator – Tunable Parameter Modification  NPAC SMS shall allow NPAC SMS Personnel, via the NPAC Administrative Interface, to modify the LTI DPC Validation Indicator tunable parameter. | | | | | | | |
| NANC 428 | NeuStar  3/12/08 | **Update NPAC file transfer method from FTP to Secure-FTP**  **Business Need:**  In essence, SFTP is an interactive file transfer program, similar to FTP, except that SFTP performs all operations in an encrypted manner. It utilizes public key authentication and compression. It connects and logs into a specified host, then enters an interactive command mode. Utilizing SFTP requires the installation of the OpenSSH suite of tools. OpenSSH encrypts all traffic (including passwords) to reduce the likelihood of eavesdropping and connection hacking. |  |  | Func Backwards Compatible: No  The major reason for implementing SFTP versus FTP is security. In FTP all data is passed back and forth between the client and server without the use of encryption. Therefore data, passwords, and usernames are all transferred in clear text making them susceptible to eavesdropping, man-in-the-middle attacks, and integrity issues. The implementation of SFTP (Secure File Transfer Protocol) is estimated to be a 6-12 month coordinated effort between NeuStar and the industry.  **Jul ’08 LNPAWG**, discussion. Need to develop requirements for Sep ’08 review. See below:  Ten existing requirements need to have text changed from “FTP” to “Secure FTP”. | | Low | Low / Low |
| NANC 429 | LNPA WG  3/12/08 | **URI Fields (Voice)**  **Business Need:**  Refer to separate document (last update Mar ’08). |  |  | Func Backwards Compatible: Yes  **Mar ’08 LNPAWG,** discussion**:**  With the FCC lifting abeyance on NANC 400, discussion took place on the change order. Several Service Providers requested that NANC 400 be broken up into four separate and distinct change orders, one for each URI Type. These four will be 429, 430, 431, and 432. | | Low | Med / Med-High (new down-stream inter-face). After first one, next one is Low. |
| NANC 430 | LNPA WG  3/12/08 | **URI Fields (MMS)**  **Business Need:**  Refer to separate document (last update Mar ’08). |  |  | Func Backwards Compatible: Yes  **Mar ’08 LNPAWG,** discussion**:**  With the FCC lifting abeyance on NANC 400, discussion took place on the change order. Several Service Providers requested that NANC 400 be broken up into four separate and distinct change orders, one for each URI Type. These four will be 429, 430, 431, and 432. | | Low | Med / Med-High (new down-stream inter-face). After first one, next one is Low. |
| NANC 433 | LNPA WG  3/12/08 | **VoIP SV Type**  **Business Need:**  During the discussion of FCC Order 07-188, participants agreed that the SV Type values should be modified to align with the definition in the Order. This led to the following three changes.  **Nov ’08 LNPAWG**, discussion on adding additional placeholders. The group agreed to add 7,8,9:  1. VoIP SV Type in the FRS-- In both the intro section (1.2.16) and the data model section (SV data model – table 3-6, and Number Pool Block data model – table 3-8), the text for “voIP” should be replaced with “Class 2 Interconnected VoIP”, and “SV Type 5” should be replaced with “Class 1 Interconnected VoIP”.  2. VoIP SV Type in the ASN.1 – The text should be changed.  SVType ::= ENUMERATED {  wireline (0),  wireless (1),  class2InterconnectedV~~v~~oIP (2),  voWiFi (3),  prepaid-wireless (4),  ~~sv-type-5~~ class1InterconnectedVoIP (5),  sv-type-6 (6),  sv-type-7 (7),  sv-type-8 (8),  sv-type-9 (9)  }  (continued) |  |  | Func Backwards Compatible: Yes  Update the current definitions. | | Low | Low / Low |
| NANC 433 (con’t) |  | 3. VoIP SV Type in the GDMO – The text should be changed.  GDMO Behavior clarification (new text in blue) for both the SV Type attribute (#153, shown below) and the Number Pool Block SV Type attribute (#155, not shown below, but same change):  --  -- 153.0 Subscription Version SV Type  --  subscriptionSvTypeBehavior BEHAVIOUR  DEFINED AS !  This attribute is used to specify the subscription version  type.  The possible values are:  0 : wireline  1 : wireless  2 : class2InterconnectedVoIP  3 : voWiFi  4 : prepaid-wireless  5 : ~~sv-type-5~~ class1InterconnectedVoIP  6 : sv-type-6  7 : sv-type-7  8 : sv-type-8  9 : sv-type-9  !;  4. VoIP SV Type in the IIS – No text changes needed. |  |  |  | |  |  |
| NANC 434 | LNPA WG  3/12/08 | **VoIP SP Type**  **Business Need:**  During the discussion of FCC Order 07-188, participants agreed that the SP Type values should be modified to align with the definition in the Order. This led to the following three changes:  1. VoIP SP Type in the FRS-- In the data model section (NPAC Customer data model – table 3-2), the text for “SP Type3” should be replaced with “class1Interconnected VoIP”.  2. VoIP SP Type in the ASN.1 – The text should be changed.  ServiceProviderType ::= ENUMERATED {  wireline (0),  wireless (1),  non-carrier (2),  ~~sp-type-3~~class1InterconnectedVoIP (3)  sp-type-4 (4)  sp-type-5 (5)  }  3. VoIP SP Type in the GDMO – The text should be changed.  GDMO Behavior clarification (new text in blue) for the SP Type attribute (#151, shown below):  --  -- 151.0 LNP Service Provider Type  --  serviceProviderTypeBehavior BEHAVIOUR  DEFINED AS !  This attribute is used to specify the service provider type. The valid values are” wireline, wireless, ~~and~~ non-carrier, and class 1 Interconnected VoIP.  !;  4. VoIP SP Type in the IIS – No text changes needed |  |  | Func Backwards Compatible: Yes  Update the current definitions. | | Low | Low / Low |
| NANC 435 | LNPA WG  6/9/08 | **URI Fields (SMS)**  **Business Need:**  Refer to separate document (last update Jun ’08). |  |  | Func Backwards Compatible: Yes  **Jun ’08 LNPAWG,** discussion**:**  After walking through the Business Need section, and a brief explanation of the Description of Change, the group agreed to accept this change order, and allow it to be prioritized along with the change orders for the next package. | | Low | Med / Med-High (new down-stream inter-face). After first one, next one is Low. |
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# Awaiting SOW Change Orders

| **Next Release (TBD) Change Orders** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Chg Order #** | **Orig. / Date** | **Description** | **Priority** | **Category** | **Proposed Resolution** | **Level of Effort** | |
|  |  |  |  |  |  | **NPAC** | **SOA LSMS** |
| NANC 402 | Nextel  2/9/05 | Validate Code Owner (SPID) Before Opening Code  Business Need:  Refer to separate document (last update May ’07). | TBD | TBD | Func Backwards Compatible: Yes    Sep ’07 LNPAWG discussion:  The request from the LNPAWG to the NAPM LLC has been completed. The next step will be for the NAPM LLC to request an SOW from NeuStar for the manual cleanup. |  |  |
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# Cancel – Pending Change Orders

| **Cancel - Pending Change Orders** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Chg Order #** | **Orig. / Date** | **Description** | **Priority** | **Category** | **Proposed Resolution** | **Level of Effort** | |
|  |  |  |  |  |  | **NPAC** | **SOA LSMS** |
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# Current Release Change Orders

| **Current Release Change Orders** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Chg Order #** | **Orig. / Date** | **Description** | **Priority** | **Category** | **Proposed Resolution** | **Level of Effort** | |
|  |  |  |  |  |  | **NPAC** | **SOA LSMS** |
|  |  | See Implemented List for details on Release 3.3. |  |  |  |  |  |

# Summary of Change Orders

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| --- | --- | --- |
| **Release # / Target Date** | **Change Orders** | **Backward Compatible** |
| Open | NANC 437 – Multi-Vendor NPAC SMS Solution |  |
| Accepted | NANC 372 – SOA/LSMS Interface Protocol Alternatives  NANC 382 – “Port-Protection” System  NANC 390 – New Interface Confirmation Messages SOA/LSMS – to - NPAC  NANC 400 – URI Fields  NANC 401 – Separate LSMS Association for OptionalData Fields  NANC 403 –Only allow Recovery Messages to be sent during Recovery  NANC 415 – SIP and H.323 URIs in the NPAC  NANC 419 – User Prioritization of Recovery-Related Notifications  NANC 423 – Low Tech Interface (LTI) Transaction Filter  NANC 425 – Large Volume Port Trans and SOA Throughput Using Message Efficiency (son of NANC 397)  NANC 431 – URI Fields (PoC)  NANC 432 – URI Fields (Presence) |  |
| Next Doc Release | NANC 436 – Optional Data – alternative End User Location and alternative Billing ID |  |
| Next Release. R3.4 | NANC 147 – Version ID Rollover Strategy  NANC 355 – Modification of NPA-NXX Effective Date (son of ILL 77)  NANC 396 –NPAC Filter Management – NPA-NXX Filters  NANC 397 – Large Volume Port Transactions and SOA Throughput  NANC 408 –SPID Migration Automation Changes  NANC 413 – Doc Only Change Order: GDMO  NANC 414 – Validation of Code Ownership in the NPAC  NANC 416 – BDD File for Notifications – Adding New Attributes  NANC 417 – Provide record count(s) for BDD Files and Delta BDD Files  NANC 418 – Post-SPID Migration SV Counts  NANC 420 – Doc Only Change Order: FRS  NANC 421 – ASN.1 and GDMO Updates for Prepaid Wireless SV Type  NANC 422 – Doc-Only Change Order: IIS Updates  NANC 424 – Number Pool Block (NPB) Donor Disconnect Notification Priority Indicator  NANC 426 – Provide Modify Request Data to the SOA from Mass Updates  NANC 427 – Error Reduction for DPC entries in new ported and pooled records  NANC 428 – Update NPAC file transfer method from FTP to Secure-FTP  NANC 429 – URI Fields (Voice)  NANC 430 – URI Fields (MMS)  NANC 433 – VoIP SV Type  NANC 434 – VoIP SP Type  NANC 435 – URI Fields (SMS) |  |
| Awaiting SOW | NANC 402 – Validate Code Owner (SPID) Before Opening Code |  |
| Cancel-Pending |  |  |
| Current Release | See Implemented List for details on R3.3 |  |

1. It is appropriate to prevent the creation of a pooled block if any non-ported number in the block is “port-protected” since to allow the block’s creation would result in an inadvertent port of these numbers if the block eventually is assigned to another switch. But the intra-SP porting activity required before creating a contaminated block must be allowed to occur without requiring end-users to temporarily lift the port restrictions on their numbers. It therefore appears that an exception to the port protection validation is required, to allow a protected number to be intra-SP ported even if the number is “Port Protected.” Without network data that is unavailable to NPAC today, the NPAC could not reliably determine whether an intra-SP port maintains the telephone number’s association with the same switch from which the number was served before the intra-SP port occurred. A reasonable compromise appears to suppress the “Port-Protect” check when validating intra-SP ports rather than develop an elaborate validation process to address this scenario more completely. [↑](#footnote-ref-2)
2. A modify of an active SV’s or block’s LRN can result in the move of a telephone number to a different switch and thus could result in an inadvertent port. NeuStar is not proposing the “Port Protect” validation be applied to Modify actions because of the complexity of such validation. [↑](#footnote-ref-3)
3. The validation of intra-SP ports occurs only if the involved SP has indicated in its NPAC SMS profile that this validation is desired. [↑](#footnote-ref-4)
4. It is appropriate to prevent the creation of a pooled block if any non-ported number in the block is on the Port Protection list, since to allow the block’s creation would result in an inadvertent port of these numbers when (if) the block eventually is assigned to another switch. But the intra-SP porting activity, necessary before creating a contaminated block, is allowed to occur without requiring that the port restrictions be lifted from TNs in the block. This exception to the Port Protection validation is provided in order to allow a TN to be intra-SP ported even if the TN is on the Port Protection list. The option to include intra-SP ports in the Port Protection validation process is provided at the individual LSP’s request. [↑](#footnote-ref-5)
5. A modify of the LRN in an active SV or block record also can result in the move of a telephone number to a different switch and thus could result in an inadvertent port. However, NeuStar is not proposing the Port Protection validation be applied to Modify actions because of the complexity of such a validation. [↑](#footnote-ref-6)