LNPA WORKING GROUP

April 2004 Meeting

Final Minutes

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| --- | --- |
| Chicago, Illinois | Host: NeuStar |

**TUESDAY 4/6/04**

Tuesday, 4/6/04, Attendance:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | **Company** | **Name** | **Company** | | |
| Wendy Wheeler | Alltel | Leah Luper | | SBC (phone) |
| Cheryl Gordon | Alltel | Liz Coakley | | SBC |
| Paul LaGattuta | AT&T | Robin Meier | | SBC |
|  |  | Tim Waters | | SNET (phone) |
| Stephen A. Sanchez | ATTWS | Lee Swindle | | Southern (phone) |
| Lonnie Keck | ATTWS (phone) | Craig Bartell | | Sprint |
| Ron Steen | BellSouth (phone) | Jeff Adrian | | Sprint PCS |
| Dave Cochran | BellSouth | Susan Tiffany | | Sprint PCS) |
| Marian Hearn | Canadian LLC | Glenn Mills | | Syniverse |
| Brenda Haysom | Centel Wireless (phone) | John Malyar | | Telcordia |
| Mark Wood | Cingular | Jason Kempson | | Telcordia |
| Laurie Itkin | Cricket Communications | Cara Smith | | Telcove (phone) |
| Dennis Robins | Electric Lightwave (phone) | Jean Anthony | | Telecom Software (phone) |
| Jason Lee | MCI (phone) | Paula Jordan | | T-Mobile |
| Syed Saifullah | NeuStar | Frank Reed | | T-Mobile |
| Amy Putnum | NeuStar (phone) | Tom Williams | | TracFone |
| Gene Johnston | NeuStar | Ken Soltesz | | US Cellular |
| Jim Rooks | NeuStar | Chris Toomey | | US Cellular |
| John Nakamura | NeuStar | Ginny Cashbaugh | | US Cellular |
| Shannon Sevigny | NeuStar (phone) | George Stonesifer | | US Cellular |
| Larry Vagnoni | NeuStar | Maggie Lee | | VeriSign |
| Marcel Champagne | NeuStar | Gary Sacra | | Verizon |
| Stephen Addicks | NeuStar | Earl Scott | | Verizon (phone) |
| Mindi Patterson | NeuStar | Jim Castagna | | Verizon (phone) |
| Susan Ortega | Nextel | Deborah Stephens | | Verizon Wireless |
| Brad Bloomer | OnStar | Blaine Reeve | | Western Wireless Corp. |
| Dave Garner | Qwest |  | |  |
| Charles Ryburn | SBC |  | |  |
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Attached are the Action Items assigned at the April, 2004 LNPA meeting. Also included are the remaining open Action Items from previous meetings.

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NOTE: ALL ACTION ITEMS REFERENCED IN THE MINUTES BELOW HAVE BEEN CAPTURED IN THE “APRIL 2004 LNPA ACTION ITEMS” FILE ATTACHED ABOVE.

**MEETING MINUTES:**

2004 Meeting Schedule:

* Starting with the April 2004 meeting, the Wireless Number Portability Operations (WNPO) team will meet all day on Monday of LNPA week from 8:30am to 5pm local time.
* Starting with the April 2004 LNPA meeting, the LNPA Working Group will meet on Tuesday from 8:30am to 5pm local time and Wednesday from 8:30am to 5pm local time.
* The Architecture Planning Team (APT) will meet from 8:30am to 3pm local time on Thursday of LNPA week.
* Following is the schedule for 2004, the host companies, and the meeting locations. Also indicated is the date of the month’s NANC meeting, if applicable:

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| --- | --- | --- | --- | --- |
| MONTH  **(2004)** | **LNPA MEETING**  **DATE** | **HOST COMPANY** | **MEETING LOCATION** | **NANC MEETING DATE** |
| JANUARY | WEEK OF 1/5 | QWEST AND NEUSTAR | PHOENIX, ARIZONA | 1/13/04 |
| FEBRUARY | WEEK OF 2/2 | TSI | TAMPA, FLORIDA | NO NANC |
| MARCH | WEEK OF 3/8 | BELL SOUTH | BIRMINGHAM ALABAMA | 3/16/04 |
| APRIL | WEEK OF 4/5 | NEUSTAR | CHICAGO, ILLINOIS | NO NANC |
| MAY | WEEK OF 5/3 | SPRINT | OVERLAND PARK, KANSAS | 5/18/04 |
| JUNE | WEEK OF 6/14 | CANADIAN CONSORTIUM | OTTAWA, CANADA | NO NANC |
| JULY | WEEK OF 7/19 | TEKELEC | RALEIGH, NORTH CAROLINA | 7/13/04 |
| AUGUST | WEEK OF 8/16 | T-MOBILE | NEWPORT BEACH, CALIFORNIA | NO NANC |
| SEPTEMBER | WEEK OF 9/7 | COX | ATLANTA, GEORGIA | 9/14/04 |
| OCTOBER | WEEK OF 10/4 | NEXTEL | RESTON, VIRGINIA OR LAS VEGAS, NEVADA | NO NANC |
| NOVEMBER | WEEK OF 11/1 | VERIZON WIRELESS | NASHVILLE, TENNESSEE | 11/9/04 |
| DECEMBER | WEEK OF 12/6 | AT&T | NEW YORK, NEW YORK | NO NANC |

03/04 Minutes Review:

The following changes were made to the DRAFT March 2004 LNPA Minutes during the April 2004 meeting. These changes will be reflected in the FINAL March 2004 LNPA Minutes.

* Page 2 – Reflect the new meeting times and days as of the April meetings for the WNPO and LNPA.
* Page 11, Last bullet under PIM 30 – Reflect the exact text from the NANC LNP Architecture document for when service providers can block default routed calls. It should now read, “Unless specified in business arrangements, carriers may block default routed calls incoming to their network in order to protect against overload, congestion, or failure propagation that are caused by the defaulted calls.”
* Page 12, PIM 32 – In the embedded minutes to the 3-25-04 conference call to discuss PIM 32, add “As an optional step,” to the beginning of process Step 5. Reissue the conference call minutes to the LNPA and WNPO distribution lists.
* Page 20, New Business – Regarding the item introduced by Dave Garner, Qwest, add the following text to the end of the item: “Dave cautioned the LNPA that if this were implemented in the U.S., issues could possibly arise due to our LNP design, e.g., issues related to serving a Phoenix number in New York City.”

NANC Intermodal Issue Management Group (IMG) Update – Sue Tiffany, Sprint PCS and WNPO Co-Chair:

* Sue Tiffany provided the following readout on the efforts of the Intermodal Porting IMG to develop a recommendation for the intermodal porting interval.
* The Firm Order Confirmation (FOC) interval options under consideration by the group are:
* C1: One hour
* C2: 5 hours for an error-free order
* The Activation interval options under consideration by the group are:
* A1: 2 day interval for a simple port, 3 day interval for a non-simple or non-intermodal (wireline to wireline) port. Requires that systems’ software must recognize simple from complex ports, wireline from intermodal ports.
* A2: 2 day interval, shorten existing timers for all ports
* A3: Old Network Service Provider (ONSP) sends Create and sets 10-digit trigger no later than 24 hours before established due date
* The IMG is shooting to get the final document to NANC by 4/30/04

Inter-species Task Force (ITF) Update and Inter-modal Port Issues referred to OBF – Lonnie Keck, AT&T Wireless and OBF Wireless Committee Co-Chair:

* The ITF continues to conduct virtual meetings every 2 weeks.
* One issue that the ITF is working is development of a standard wireless FAX form for porting from wireless to wireline carriers.
* It was reported that major ILECs are opposed to development of a new form.
* The form under development is built based on LSOG 6 with data elements that would be on an LSOG 6-like form, however, it is not an OBF-sanctioned LSOG 6 form.
* The OBF would not maintain change control on the form.
* 3 vendors are working on the new form now.
* Issue related to due date and time changes on FOC – New Issue 2744 has been accepted by the Wireless Workshop. The suggested resolution is for the WICIS standard to be modified to relax edits to allow the Inter-carrier Communications Process (ICP) to accept due date and time changes.
* There is an ongoing effort to identify WICIS/LSOG discrepancies.
* OBF Issue 2631 (Create New Local Service Migration Practice) was introduced by a CLEC to identify the minimum data elements required for porting from a national level. To be referred to the ITF.
* OBF is looking to develop guidelines on how to share information between the LNPA/WNPO teams given that the OBF is not an open industry forum ala LNPA.

Lost Port Requests Due to Incorrect Fax No. – Sue Tiffany, Sprint PCS and WNPO Co-Chair:

* Sue Tiffany reported that there is an ongoing effort among carriers to identify the correct fax numbers for sending LSRs/WPRs. There is also an open issue where wireless carriers can only send to one fax number per provider.

May 24th Rollout of Wireless Porting Outside the Top 100 MSAs – Sue Tiffany, Sprint PCS and WNPO Co-Chair:

* A question was asked if the industry could establish an interim conference call so rural carriers could participate in a question/answer session prior to the May 24th implementation of wireless porting outside the Top 100 MSAs.
* It was suggested that these carriers join the WNPO and LNPA sessions.
* A vendor asked that guidelines be put in place for any scheduled industry call such that there are no vendor-specific questions, only general industry-wide questions.
* Subsequent to this discussion, the CTIA agreed to take the lead on industry calls scheduled for 4/20/04 and 4/27/04 from 2:00pm-3:30pm eastern time. The focus of these calls will be to allow carriers operating outside the Top 100 MSAs an opportunity to ask questions related to their upcoming May 24th implementation. The call logistics will be sent out to the WNPO and LNPA.

Top MSA Lists – Cheryl Gordon, Alltel:

* Cheryl Gordon provided a brief description of the effort to develop a single Excel Workbook containing two spreadsheets – one with the WNPO-recommended list of portable rate centers, and the other containing the FCC-mandated list of rate centers opened to pooling. Attached is the developed file.



* Development of this workbook was in response to an action item assigned to the LNPA by NANC to clarify for the industry which areas of the country are currently opened for Local Number Portability and Telephone Number Pooling.
* It was noted that on May 24, 2004, when porting outside the top 100 Metropolitan Statistical Areas (MSAs) becomes effective, the portability of a rate center will be governed by the Bonafide Request (BFR) process, rather than its location in a top 100 MSA. At that time, the porting list will cease to exist. Sources to determine the portability of specific NXX codes are the Number Portability Administration Center (NPAC) and the Local Exchange Routing Guide (LERG).
* The pooling list will continue to be maintained and administered by the Pool Administrator, and updated as necessary in accordance to FCC mandates. The following website links can be utilized to access information pertaining to areas opened to pooling.

. [www.nationalpooling.com/pool\_by\_state/index.htm](file:///C:\Users\mdoherty\AppData\Local\Temp\7zOCE16E348\www.nationalpooling.com\pool_by_state\index.htm)

<http://140.239.119.101/pool_by_state/index.htm>

* The entire industry thanks Cheryl Gordon, Alltel, for her efforts in developing the workbook and providing needed clarification on the areas in the country opened to both porting and pooling.

Wireless Number Portability Operations (WNPO) Committee Report as reported by Maggie Lee, Verisign and WNPO Co-Chairperson:

* The NANC Issue Management Group (IMG) continues to discuss the inter-modal porting interval. Their goal is to submit a recommendation to NANC by 4/30/04.
* The attached two contributions were accepted by the WNPO and sent back to the submitters for clarification.

 

* The NPA Split Matrix, which reflects carriers’ NPA requirements, Old NPA or New NPA, on LSRs received during the permissive dialing period of an NPA split, will be forwarded to the NNPO for completion.
* Regarding the need for accurate jurisdictional information for accurate billing, the ATIS Network Interconnection Interoperability Forum (NIIF) and Network Inter-Operability Committee (NIOC) are working with the TR45 standards group on Jurisdictional Information Parameter (JIP) population. The NIIF and NIOC held a meeting to discuss this issue. They will develop rules for populating the JIP that can satisfy both wireline and wireless carriers. The resultant document will be sent to the LNPA for input.
* A new WNPO Subcommittee, the Carrier Contact Taskforce, is working with the NIIF to get the NIIF National LNP Directory contact list updated.
* The attached contribution on the Wireless Conflict Timer, submitted by AT&T Wireless, recommends raising the value of the timer higher than its current six business hour value. The contribution was not accepted at the April WNPO meeting.



March 2004 Architecture Planning Team (APT) Meeting Report (Jim Rooks – NeuStar):

* The APT met on 03/11/04. Attached is the meeting agenda.



* NeuStar teed up an issue related to a post-323 migration scenario where an LSMS has an SV that has a SPID different than NPAC. If a provider does an audit on that TN, NPAC will send a Modify to attempt to change the SPID. SPID is part of the Distinguished Name and cannot be changed via a Modify. Sending a Modify will not work because some LSMS implementation’s toolkit will reject the Modify and put the SV on the partial fail list with possibly no way to get it off. NeuStar sought guidance from the group on how to handle this scenario.

Four possible options were discussed as to how NPAC should respond to an audit request on that TN. Those options are:

1. Status Quo – NPAC sends a Modify in an attempt to modify the SPID, which could knock the SV onto the Partial Fail list with possibly no way to remove it from the list. Deemed not acceptable by the APT group. Some provider systems will likely reject the Modify.
2. Change the SPID attribute by sending an activate to the LSMS with the same SV ID. This was also deemed not acceptable as it would allow NANC 323 functionality to take place over the interface.
3. Ignore the SPID attribute discrepancy with no indication that the SV is discrepant. This would be logged in the NPAC error log. This is the short-term solution and has been implemented by NeuStar in Release 3.2.2. It is currently in turn-up testing.
4. Ignore the SPID attribute discrepancy with a notification that the SV is discrepant. This would also be logged in the NPAC error log. Questions remain as to the type of notification (e.g. automated notification over the interface, manual e-mail, etc.) and whether this notification would specifically indicate that the SPID is discrepant. This is a possible long-term solution.

* The APT conducted a review of the LNPA Traffic Model.
* The average % participation in porting activity across all SOAs and all regions is 29%, with the high being 40%.
* Currently, most porting activity is single TN operations. The 80/20 rule used to develop Exhibit N requirements no longer applies.
* Using the projected porting activity for the 4Q04 Busy Season, the APT calculated the LSMS interface throughput requirement for the upcoming Busy Season as 2.5 messages per second sustained and 5.2 peak for 5 minutes duration (1 peak per hour).
* For SOA interface throughput requirements, the APT calculated 3.5 messages per second sustained as a possible proposal for a new FRS requirement for SOA interface sustained throughput. The group also derived 4.8 messages per second peak as a possible proposal for a new FRS requirement for SOA interface peak throughput.
* Change Order Rankings discussion:
* A number of APT members provided their rankings for the 14 Change Orders under discussion. Additional input is forthcoming from members. Vendor participation in the ranking process was invited and encouraged. NeuStar will compile the overall rankings when input from members is completed. This overall ranking will determine the order of the Change Orders the APT will address.
* Historical copies of Subscription Versions (SVs):
* NeuStar will create a Change Order to eliminate creation of the “clone” snapshots of active SVs that are not broadcast to the LSMS.

NPAC Forecasting Group (NFG) Meeting Update (Paul LaGattuta, AT&T and LNPA Co-Chair):

* Paul LaGattuta walked the group through the attached presentation detailing the WNPO-authorized changes to the WNPO Traffic Model. The churn rate assumption was changed from 50% to 35%, and the assumed % of ported numbers within the churn was lowered from 80% to 50%. A 10% contingency factor will be applied to the entire year’s data and concentrated in the last 6 months of the year.



* These changes to the assumptions will be incorporated into the NFG Traffic model and the LNPA Traffic Model used in the APT.

PIMs:

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* PIM 22 – PIM 22 remains open. The group will move forward with developing the requirements for NANC Change Order 375.

 

* PIM 24 – This PIM, submitted by the Pool Administrator and AT&T Wireless, addresses instances where service providers are not following guidelines for block donation. For example, in some instances, contaminated blocks are being donated as non-contaminated blocks, or blocks with greater than 10% contamination are being donated. This is causing customers to be taken out of service or blocks to be exchanged for a less contaminated or non-contaminated block.



The LNPA and NAPM/LLC had previously approved the sharing of information between NPAC and the Pool Administrator whereby the Pool Administrator is able to obtain the necessary information from NPAC to ensure, to the extent possible, that service providers are complying with the pooled block donation process. The PA submitted Change Order 23 for FCC consideration. PA Change Order 23 was subsequently withdrawn and PA Change Order 24 was submitted to the FCC by the PA. The Numbering Oversight Working Group (NOWG) recommended to the FCC a trial of the proposed resolution in selected pools initially. The FCC subsequently recommended that the PA submit another Change Order based on the NOWG recommendation for a trial. On 2/9/04, the PA submitted Change Order 26 based on this recommendation to conduct a trial in one NPA in each NPAC region. PA Change Order 24 will remain open. The results of the trial will dictate the disposition of Change Order 24. The PIM will remain open pending the FCC’s decision.

* PIM 28 – This PIM, submitted by Sprint PCS, addresses interface differences between the WPRR (wireless) and FOC (wireline). The FOC allows for a due date and time change on confirmations, however, the WPRR does not. When a wireline carrier sends an FOC with a change in due date or time, the wireless carrier cannot process the change and does not allow the port to complete. This accepted PIM was referred to the Ordering and Billing Forum (OBF) Wireless Workshop and Local Ordering and Provisioning (LSOP) Committee. On 2/24/04, the OBF sent the attached response stating that the Local Service Ordering and Provisioning Committee (LSOP) accepted this issue (Issue 2729) on February 9, 2004, during OBF #85 and referred it to be worked by the Interspecies Task Force (ITF). During the April LNPA, it was stated that new Issue 2744 has been accepted by the Wireless Workshop. The suggested resolution is for the WICIS standard to be modified to relax edits to allow the Inter-carrier Communications Process (ICP) to accept due date and time changes. This resolution would likely be in a major WICIS release in 2005.

This PIM will continue to be tracked by the LNPA as it is worked in the ITF.

 

* PIM 29 – This PIM, submitted by Sprint PCS, addresses scenarios where customers porting from a wireline carrier are disconnected in the donor switch before the wireless carrier activates the port.



During the discussion at the April meeting, Service Providers responded to the following action items assigned at the March LNPA meeting:

1. to investigate internally if it is feasible for them to monitor the NPAC for evidence that the port has occurred before removing donor switch translations associated with the ported number.

SBC stated that they have a process to monitor NPAC for simple ports only in the Southwest and West Coast Regions and is testing the process in the Midwest Region. Verizon Communications and Qwest stated that they currently comply with the NANC flows. Qwest delays the disconnect to the day after due date. Verizon delays until after the due date in some areas and takes a sup to the LSR late on the due date to stop the disconnect in other areas. Qwest pointed out that the root cause of the problem is that the process is broken in the LSR/FOC process. If the New Service Provider hasn’t received the FOC in 24 hours, they should contact the Old Service Provider. BellSouth monitors for activation for simple ports but also believes that the fallout issues need to be addressed. One clearinghouse vendor has implemented a manual workaround to the due date/time issue which has resulted in a decrease in the number of customers disconnected before activation. Some wireline providers stated that they could not commit to a long-term process for monitoring the NPAC with the many open issue causing FOC/LSR fallout on inter-modal ports. There is an ongoing effort in the ITF to resolve discrepancies between WICIS and LSOG.

1. to answer the following question: If they send up an authorizing Old Service Provider Create, can its notification be used by the New Service Provider to indicate that an FOC/WPRR not received has been issued and lost in transit and approval to activate the port on the due date on that SV Create is granted?

Qwest and Verizon stated that they send an FOC and then an Old Service Provider Create to NPAC. This item remains open for discussion at the May LNPA meeting.

* PIM 30 – This PIM, submitted by Alltel, seeks to clarify the N-1 LNP architecture query responsibilities, and whether wireless carriers are obligated to perform default number portability queries when the N-1 carrier fails to dip the call.



Gary Sacra, LNPA Co-Chair, forwarded to the LNPA and WNPO distribution lists the attached cites sent to him by LNPA members defining the N-1 Local Number Portability architecture.



At the April LNPA meeting, Gary Sacra, Verizon Communications, discussed the following Verizon interpretation of the N-1 carrier’s query responsibilities based on a reading of the industry documentation and end office switch functionality:

* LOCAL CALL:

The originating carrier is the N-1 carrier and is responsible for performing the query in its network or entering into an agreement with another entity to perform the queries on its behalf.

* TOLL CALL:
* For an interLATA Toll call, the IXC is the N-1 carrier and is responsible for performing the query in its network or entering into an agreement with another entity to perform the queries on its behalf.
* For an intraLATA Toll call where the originating carrier is the Pre-subscribed IntraLATA Carrier for the calling party, the originating carrier is the N-1 carrier and is responsible for performing the query in its network or entering into an agreement with another entity to perform the queries on its behalf.
* For an intraLATA Toll call where the originating carrier is NOT the Pre-subscribed IntraLATA Carrier for the calling party, the Pre-subscribed IntraLATA Carrier is the N-1 carrier and is responsible for performing the query in its network or entering into an agreement with another entity to perform the queries on its behalf.
* DEFAULT QUERIES (A.K.A. QUERY OF LAST RESORT OR DONOR SWITCH QUERIES)
* If an LNP query is not performed previously in the call path, the call will continue to route on the dialed digits until it could eventually reach the LERG-assigned switch for the dialed NPA-NXX. This will put that LERG-assignee in the position of performing a default LNP query if the dialed digits are within a portable NPA-NXX.
* A carrier may bill the N-1 carrier for performing the default query when the N-1 carrier default routes a call unqueried.
* Unless specified in business arrangements, carriers may block default routed calls incoming to their network in order to protect against overload, congestion, or failure propagation that are caused by the defaulted calls.

This PIM remains open and will be discussed further at the May meeting. The LNPA agreed to document its consensus on N-1 responsibilities based on its assessment of FCC cites and industry documentation. This will be documented in LNPA meeting minutes and the PIM 30 resolution for possible reference by a service provider seeking to escalate if they feel they are receiving an inordinate amount of default routed calls.

Gary Sacra, as Verizon’s LNPA representative, will provide the specific FCC

Order and industry documentation cites that Verizon used to develop its interpretation of the N-1 architecture presented at the April LNPA meeting. This action item is related to PIM 30.

* PIM 31 – This PIM, submitted by Syniverse (formerly TSI), seeks to address fallout that occurs in cases where the wireline Old Service Provider involved in a port issues a jeopardy notification with a change in due date to the wireless New Service Provider. Wireless carriers currently cannot support jeopardy notices with changes to the due date and time. This PIM was accepted by the LNPA. Rob Smith, Syniverse, and Wireless Service Providers took an action to quantify and provide examples of why wireline carriers are placing these previously confirmed ports in jeopardy. This will determine the disposition of the PIM. Wireline Service Providers have an action to answer the following questions:

1. are you issuing jeopardies after a confirmed FOC to a wireless provider,
2. if yes, under what conditions,
3. if yes, what steps are you taking at NPAC with regard to the pending port,
4. if no action is being taken at NPAC today, why not?

BellSouth stated preliminarily that they can’t envision why they would issue a jeopardy for a wireless provider because there is no loop involved. Electric Lightwave stated that this gets to their concern regarding the eventual rewording of the definition of Conflict Cause Value 51 (currently FOC not issued) as it relates to NANC Change Order 375. The objection centers on a service provider placing a port into Conflict using Cause Value 51 after they have sent back the FOC, but issued a subsequent jeopardy. Although a FOC has been issued, using Conflict Cause Value 51 would allow only the Old Service Provider to remove Conflict status.



* PIM 32 - This PIM, submitted by Syniverse (formerly TSI), seeks to address issues related to the process for obtaining a Customer Service Record (CSR), which contains information necessary to complete a Local Service Request (LSR) for porting in a reseller number. This PIM was accepted by the LNPA.



NOTE: This PIM was discussed on Wednesday, April 7th, during the April LNPA meeting.

Rob Smith, Syniverse, took an action to modify the PIM to remove the reference to Type 1 numbers. Type 1s are now addressed in PIM 34.

Paula Jordan, LNPA Co-Chair, recapped March 25th conference call to discuss PIM 32. On the call, a short-term solution was agreed to. The WNPO will craft a recommendation for the New Local Service Provider to identify the Type 1 or Reseller Old Local Service Provider in the remarks section of the WPR. The WNPO will also craft an issue and a recommendation to the Ordering & Billing Forum (OBF) Wireless Workshop to develop in the WICIS standards a parameter on the WPR to identify the OLSP in this porting scenario. Attached are the minutes to that 3/25/04 conference call.



The purpose of PIM 32 is to discuss possible long-term solutions. BellSouth stated that they allow limited access to the CSR for Type 1s but they have interconnect agreements with resellers that prevent access to CSRs.

A discussion ensued on how the optional step got into the NANC LNP Flows stating that the New Local Service Provider could request the CSR from the Old Local Service Provider (OLSP) to obtain the account number of the reseller. It was stated that Option B, adopted by the LNPA in the flows, required communication with the Old Network Service Provider, not the OLSP. It was then stated that Option B addresses the LSR/FOC exchange and not the CSR request.

To port reseller numbers from some network service providers, wireless providers need the CSR for the account number of the reseller. Not all network service providers require the account number.

Wireline Service Providers that require an account number on the LSR sent to them are to answer the following questions:

**For porting a reseller number:**

1. Who should the CSR request be sent to, the Old Local Service Provider or the Old Network Provider?
2. For LSR population, is the required account number the End User account number or the Reseller account number?
3. Can the proper account information required for LSR population be obtained from a CSR request to the Old Network Service Provider in lieu of a request to the Old Local Service Provider?
4. In order to prevent wireless carriers from having to interface with two different providers when porting in a reseller number, can any edit that requires the reseller account number on the LSR be relaxed to allow the LSR to go through with just the TN, Customer Name and Address, and End User Account Number? If not, what would it take to relax the edit?

* NEW PIM 34 – This PIM, submitted by Syniverse (formerly TSI), seeks to address issues related to the process for obtaining a Customer Service Record (CSR), which contains information necessary to complete a Local Service Request (LSR) for porting in a Type 1 Cellular number. This PIM was accepted by the LNPA.



NOTE: This PIM was discussed on Wednesday, April 7th, during the April LNPA meeting.

Wireline Service Providers that require an account number on the LSR sent to them are to answer the following questions:

**For porting a Type 1 number:**

1. Who should the CSR request be sent to, the Old Local Service Provider or the Old Network Service Provider?
2. For LSR population, is the required account number the End User account number or the Billing Telephone Number of the Type 1 provider?
3. Can the proper account information required for LSR population be obtained from a CSR request to the Old Network Service Provider in lieu of a request to the Old Local Service Provider (Type 1 provider)?
4. In order to prevent wireless carriers from having to interface with two different providers when porting in a Type 1 number, can any edit that requires the Type 1 provider’s Billing Telephone Number on the LSR be relaxed to allow the LSR to go through with just the TN, Customer Name and Address, and End User Account Number? If not, what would it take to relax the edit?

A member questioned how it would be validated that the right customer is being ported if the process was streamlined per above.

BellSouth stated that they allow access to CSRs for porting Type 1s.

* NEW PIM 35 – This PIM, submitted by TelCove, seeks clarification why service providers must do local system turn-up testing when their vendors must also pass certification testing on their products. NeuStar responded that vendor certification testing verifies messaging across the interfaces, not edit or GUI behavior. Service provider turn-up testing verifies business rules, behavior, and edits. There are separate documents and test cases for certification and turn-up testing. Also, vendors cannot know every permutation of their software used by their customers. Vendors doing turn-up testing on behalf of a provider must test using a system that mirrors the provider’s production system. To do otherwise violates turn-up testing requirements. Service providers are ultimately responsible for ensuring turn-up testing is compliant because they are the NPAC User signing the User Agreement. This PIM was not accepted.



**WEDNESDAY 4/7/04**

Wednesday, 4/7/04, Attendance:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | **Company** | **Name** | **Company** | | |
| Wendy Wheeler | Alltel | Charles Ryburn | | SBC |
| Cheryl Gordon | Alltel | Liz Coakley | | SBC |
| Paul LaGattuta | AT&T | Robin Meier | | SBC |
| Bob Frasca | AT&T (phone) | Tim Waters | | SNET (phone) |
| Stephen A. Sanchez | ATTWS | Craig Bartell | | Sprint |
| Lonnie Keck | ATTWS (phone) | Jeff Adrian | | Sprint PCS |
| Ron Steen | BellSouth (phone) | Susan Tiffany | | Sprint PCS) |
| Dave Cochran | BellSouth | Glenn Mills | | Syniverse |
| Marian Hearn | Canadian LLC | Colleen Collard | | Tekelec (phone) |
| Mark Wood | Cingular | John Malyar | | Telcordia |
| Dennis Robins | Electric Lightwave (phone) | Jason Kempson | | Telcordia |
| Karen Mulberry | MCI | Jean Anthony | | Telecom Software (phone) |
| Jason Lee | MCI (phone) | Paula Jordan | | T-Mobile |
| Syed Saifullah | NeuStar | Frank Reed | | T-Mobile |
| Gene Johnston | NeuStar | Tom Williams | | TracFone |
| Jim Rooks | NeuStar | Ken Soltesz | | US Cellular |
| John Nakamura | NeuStar | Chris Toomey | | US Cellular |
| Shannon Sevigny | NeuStar (phone) | Ginny Cashbaugh | | US Cellular |
| Larry Vagnoni | NeuStar | George Stonesifer | | US Cellular |
| Stephen Addicks | NeuStar | Kevin Lewis | | Verizon |
| Mindi Patterson | NeuStar | Gary Sacra | | Verizon |
| Susan Ortega | Nextel | Earl Scott | | Verizon (phone) |
| Brad Bloomer | OnStar | Deborah Stephens | | Verizon Wireless |
| Dave Garner | Qwest | Blaine Reeve | | Western Wireless Corp. |
|  |  |  | |  |

**MEETING MINUTES:**

Change Management Discussion:

* **NANC 375 – PIM 22 Change Order**:
* NeuStar clarified that only the Old Service Provider can remove Conflict on Cause Values 50 and 51. Housekeeping is business as usual. Ports remaining in Conflict will be removed after 30 days. NeuStar will bring in draft requirements for the May LNPA meeting.
* **NANC 392 – Historical Copies of Subscription Versions (SVs):**
* The Change Order proposes to eliminate creation and storage of the SV clones that are created when an SV is updated. This Change Order will not result in the elimination of the creation and storage of the SVs that are broadcast to LSMSs. NeuStar will bring in draft requirements based on this criteria for the May LNPA meeting.
* **NANC 323 – SPID Migration:**



* NeuStar walked the group through the attached process flows, narratives, migration form, and User M&Ps for the NANC 323 SPID Migration process and discussed the changes since last month’s review.
* A member asked why the blank SPID form is to be posted on the secure NPAC website. NeuStar stated that the general source for these types of forms is the secure website. It is not anticipated that there will be many changes to the form over time so a carrier could download it and store it internally for their use.
* Each SPID migration must be contained within the same LERG-effective date and within the same region.
* It was agreed that we need to add to the Service Provider Checklist considerations if the migration is in multiple regions and its impacts.
* A note will be added in the NANC 323 Narrative and Service Provider Checklist saying that involved service providers in a canceled port as a result of a migration should properly address their respective LSRs/WPRs. The Service Provider Checklist which will also contain a reference to this. If a pending SV is cancelled by NPAC, SPID A is no longer involved in that port, and the LSR/FOC process will need to be re-initiated again between the two appropriate service providers, but not involving SPID A. It would not be appropriate to send another create up when the cancel is received.
* A discussion ensued on the minimum and maximum number of records impacted in migration. It was suggested that it would be helpful if volume parameters were identified by this group for 323 testing. It was stated that the number of impacted records will be specific to the migration. We will gain more experience with actual migrations. Since we will be doing the migration after the LERG-effective date, it was suggested that a significant number of SPID changes on individual SVs may be done via inter and intra-SP ports prior to migration in order for customers to maintain service when the LERG transfer is affected.
* There was discussion on determining the service provider maintenance window timeframe needs in considering the overall window timeframe. Who collects this and disseminates it to SPID B? NeuStar stated that they did not feel it was appropriate for them to disseminate this information because they would be providing information about one service provider to another service provider. There was differing understandings among the members on what we would do if NPAC could complete within the established window but most service providers could not. Some thought we would possibly extend the window, others thought we would bring NPAC back up at the established end of the window and any carriers who have not completed would continue to work their migration until completed and then come back up. PATH FORWARD: Determine window length based on NPAC estimate. Any service providers that estimate they need longer will continue to process after NPAC comes back up if they, in fact, need longer. NPAC will stay down until end of window and then come back up. Service provider estimates will be sent from service providers directly to SPID B. The SPID B contact information will be included in the notification that NeuStar sends out to service providers. Figure 1, Box 5 in the narrative will have text that SPID B will contact NPAC if they are changing their migration plan based on service provider timeframe estimates received.
* Since SPID B is in control of deciding whether or not to continue, it was suggested that criteria should be developed for SPID B to follow when deciding to continue with a planned migration based upon service provider estimates. This will be documented as an issue and discussed at a later time.
* Another conference call was scheduled for April 19th, 3-4pm eastern, to discuss the Service Provider Checklist. Bridge is 816-650-7809, pin 3152589.
* The group then reviewed the draft M&Ps included in the zip file attached above. LNPA members have an action to get any comments to Mindi Patterson, NeuStar, by close of business eastern time on 4/21/04.

NPAC Technology Migration Update – NeuStar:

* NeuStar stated that the planned NPAC technology migration is on schedule. Attached is the latest Migration Project Plan.



* The regional rollout order approved by the NAPM/LLC is as follows:
* 5/16/04 Western
* 6/6/04 Southeast and Mid-Atlantic
* 6/27/04 Southwest and Northeast
* 7/11/04 West Coast and Midwest
* NeuStar stated that the hardware is in place.
* Two or three providers have started testing this week and are working out connectivity issues.
* 24 hour maintenance windows were approved by the LLC. The day will be set up as an NPAC SMS holiday to avoid timer expirations during the window.

Invalid NPAC Transactions (NeuStar):

* NeuStar introduced an issue related to service providers sending invalid transactions to NPAC. The attached file details the top 10 types of invalid transactions by volume.



* NeuStar stated that it sometimes takes longer to process these invalid transactions and they can come in fast spurts that bog down the NPAC during peak porting periods. Because they can come in so fast, the problem is not always identified until NPAC is bogged down. This slows NPAC responses to valid transactions. NPAC has taken providers off-line when it was identified.
* NeuStar further stated that the situation has been improving. The % of invalid NPAC transactions went from 6% to 4% of total NPAC transactions. NeuStar’s goal is to reduce to 1%. NeuStar is working with identified providers and improvements have been made.

INC Liaison on Grandfathered Codes:

* The attached liaison from the Industry Numbering Committee (INC) was discussed. INC is looking to validate their technical concerns regarding the porting of numbers within grandfathered wireless codes.



* It was stated that this is not an issue for wireless to wireless porting, but for wireless to wireline porting of numbers within these grandfathered codes. For porting into wireline carriers, this results in a mini-overlay with 10-digit dialing and customer notification impacts. No NPAC impacts were identified. Wireless carriers present stated that they want to be able to port these numbers between wireless carriers.
* Since the USTA has filed a petition with the FCC on this very issue, the group agreed it is premature to discuss this in this forum until the FCC responds to the petition and gives providers an opportunity to file comments. The LNPA consensus is to await the FCC’s response to the USTA petition.
* Gary Sacra will draft a response to the liaison for review by the LNPA and WNPO membership. The review cycle for the LNPA and WNPO will be 1 week, at which time Gary will send the response to the INC.

Review of March Action Items:



* Item 0304-01: This item was completed and is Closed. NeuStar subsequently determined that this is a code change.
* Item 0304-02: This item was completed and is Closed. NPAC will reject a modify SPID request received from a SOA over the interface
* Item 0304-03: This item was Closed. Reference Item 0304-07 for tracking.
* Item 0304-04: This item was completed and is Closed.
* Item 0304-05: This item was completed and is Closed.
* Item 0304-06: This item remains Open.
* Item 0304-07: This item remains Open and will be discussed at the May APT meeting. NeuStar has implemented Option 3. The APT discussion will center on the type of notification for a possible long term solution.
* Item 0304-08: This item was completed and is Closed. See PIM 29 discussion in these minutes.
* Item 0304-09: This item remains Open for discussion at the May LNPA meeting.
* Item 0304-10: This item was completed and is Closed.
* Item 0304-11: This item was completed and is Closed. See PIM 32 discussion in these minutes.

Action Items Remaining Open from Previous Meetings:

* Item 1103-14: Item remains Open. This will continue to be discussed in the Architecture team. Implementation of the “un-Cancel” request will require SOA development. SOA vendors need to determine if their systems have rules that prevent support of the resultant state change from cancel pending to pending. One SOA vendor stated that their system did not require development to support the state change. The answer to this question will determine backwards compatibility for requirements development.
* Item 1103-15: Item was Closed. It was agreed that we will await experience from actual migrations.
* Item 1203-09: Item was Closed. Additional feedback from service providers indicates that their systems are not re-sending requests after receiving a positive response to the request from NPAC.
* Item 1203-11: Item was Closed. This issue has advanced to Change Order 392.
* Item 0104-07: This is an ongoing agenda item for the APT. The item is Closed.
* Item 0104-09: Item remains Open and has been deferred to a later to-be-determined LNPA meeting.
* Item 0104-11: This item has been completed and is Closed.
* Item 0204-14: This item has been completed and is Closed.
* Item 0204-18: Item remains Open. Service providers will monitor and provide feedback on whether or not this issue is improving.
* Item 0204-20: Item remains Open until the July 2004 WNPO and LNPA meetings.

New Business:

* Sue Tiffany, WNPO Co-Chair, reminded the group that the CTIA will host conference calls on April 20th and 27th for question and answer sessions for rural carriers in preparation for the May 24th launch of wireless porting outside the Top 100 MSAs. Wireline participation is encouraged.

**THURSDAY 4/8/04 ARCHITECTURE PLANNING TEAM (APT)**

Thursday, 4/8/04, Attendance:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | **Company** | **Name** | **Company** | | |
| Paul LaGattuta | AT&T | Dave Garner | | Qwest |
| Bob Frasca | AT&T (phone) | September Jansky | | SBC |
| Steve Sanchez | ATTWS | Steven Pechar | | SBC |
| Dave Cochran | BellSouth | Bill Reilly | | Sprint (phone) |
| Ron Steen | BellSouth (phone) | Sue Tiffany | | Sprint |
| Marian Hearn | Canadian LLC | Colleen Collard | | Tekelec (phone) |
| Keagan O’Rourke | ESI (phone) | John Malyar | | Telcordia |
| Jason Lee | MCI (phone) | Jean Anthony | | TSE (phone) |
| Karen Mulberry | MCI | Ginny Cashbaugh | | US Cellular |
| Steve Addicks | NeuStar | George Stonesifer | | US Cellular |
| John Nakamura | NeuStar | Chris Toomey | | US Cellular |
| Jim Rooks | NeuStar | Kevin Lewis | | Verizon |
| Larry Vagnoni | NeuStar | Gary Sacra | | Verizon |
| Susan Ortega | Nextel (phone) | Deb Stephens | | Verizon Wireless |
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**MEETING MINUTES:**

* Mission Statement: To assess Number Portability industry production technical issues within the purview of the LNPA Working Group and develop recommendations for the strategic direction of the Number Portability architecture.
* The APT met on 4/8/04. Attached is the meeting agenda.



Performance Requirements:

* **How much throughput is needed on the SOA?**
* **Review the March’04 LNPA Traffic Model**
* **Discussion on distribution of volume across the SOAs**
* **Review of Sustained and Peak SOA/LSMS Throughput Requirements**
* The APT discussed the latest NPAC Forecasting Group (NFG) Traffic Model (attached). Total pooling and porting events projected for 2004 is 111 Million. This is substantially lower.



* Changes since the last version:
* Changed NFG WNP assumptions for subscriber data based upon CTIA data and analyst estimate.
* Changed wireless pooling forecast to 1.2M per month through end of 2004 from 800K based upon actuals from 2003.
* Changed churn rate from 50% to 35% per NFG recommendations.
* Changed % of churn requiring a port from 80% to 50%, which then ramps up by 10 percent per year (per NFG recommendation).
* **LSMS Throughput Sustained and Peak Requirements Discussion:** With the new Traffic Model assumptions, the projected LSMS throughput requirement reflected during the 4Q04 Busy Hour is now less than or equal to 1 message per second for each region. However, it would be ill-advised to use 1 per second as the requirement because if all messages in the hour came in the first second, we would abort. Using the West Coast projected data, which has the highest projection of 3479 messages in the Busy Hour, we would need to support 4 messages per second sustained to clear in 15 minutes to prevent aborting. This equates to total bandwidth of 156 messages per second (30 LSMSs \* 4.0 messages/second + 30 LSMSs \* 1.2 messages per second (peak of 5.2). The assumption still is one peak per hour.
* **SOA Throughput Sustained and Peak Requirements Discussion:** Previously, the group determine that the top 5 SOAs represented 67% of the total SOA messaging traffic. The total bandwidth was calculated and multiplied by 67% to come up with a total bandwidth requirement for the top 5 SOAs. This was then divided by 5 to derive a possible single SOA interface throughput requirement. After reviewing this methodology, the group felt that dividing by 5 inappropriately spread the messaging traffic evenly among the top 5 SOAs. A new methodology was discussed to project the sustained and peak rates for SOA interface throughput. It was agreed to use the top SOA % participation (40% from the Mid-Atlantic Region), and the top SOA message traffic in the Busy Hour (19,326 from the Northeast Region) and plug this into the 4Q04 Summary spreadsheet for the Northeast Region. This resulted in a sustained rate projection of 4.3 messages per second. Next, using 100% participation in the Northeast Region, the total NPAC bandwidth requirement was 10.7 messages per second. This was also determined to be the projected peak rate if a single SOA were to use 100% of the total NPAC bandwidth in a given period of time.
* Question for consideration on testing NPAC to these rates: Will NPAC need to test distributing the total bandwidth of 10.7 messages per second over 1 SOA vs. multiple SOAs?
* The Traffic Model used to derive these sustained and peak rates does not include the 10 Million wireless contingency factor.

**CMIP Interface Improvements/Performance, and Operational/Functional Benefits related Change Orders:**

* **Review of the Architecture Team Change Order Matrix. Discuss individual company feedback on priorities. Compilation of rankings,**
* Discuss change orders (highest priority first) related to Interface/ Performance/Efficiency/Functionality contained in the APT Change Order working document.
* The APT discussed the process for numerically ranking the NANC Change Orders contained in the attached Revision 13 of the APT Working Document.



* The final compilation was calculated as follows for each Change Order:

1. Each member ranked each Change Order from 1 to 14, with 1 being the highest rank,
2. The submitted ranking numbers for the Change Order was summed,
3. The sum was divided by the number of APT members ranking that Change Order,
4. When this was completed for each Change Order, the Change Orders were ranked from lowest result to highest result. The lower the result, the higher the ranking for the Change Order.

* A discussion then ensued on how this process will play into the overall ranking in the LNPA. The APT will develop its ranking to determine our focus and send our high ranking ones to the LNPA for consideration in the rankings for the next package by the full LNPA.
* AT&T stated that they would like to add NANC Change Orders 299 (NPAC Monitoring of SOA and LSMS Associations via Heartbeat) and 321 (Regional NPAC NPA Edit of Service Provider Network Data - NPA-NXX Data) as additional Change Orders of interest. AT&T also stated that they would like to have the option of the service provider initiating the heartbeat. NeuStar stated that this option is in the current requirements. Since there are no changes required in either Change Order, it was agreed that they will stay in the LNPA for consideration when we prioritize for the next package.
* A question was asked regarding whether we want to bring all change orders into the APT and rank them from a technical perspective. This will be discussed in the APT readout next month in the LNPA. NeuStar will provide our ranked list and the list of outstanding change orders and ask for LNPA guidance on whether they want the APT to rank these as well.
* A member suggested that we need to develop the criteria that the APT uses to rank change orders. Our initial criteria for picking which change orders to work were those that affected performance and did not have requirements developed yet. We then ranked them based on each service providers perceived benefit.
* The APT then reviewed the 14 change orders in the APT Working Document attached above. Following is the compiled ranking, with 1 being the highest priority, and 14 being the lowest:

1. NANC 351 – Recovery Enhancements – SWIM recovery
2. NANC 368 – Outbound Flow Control: This is for NPAC outbound flow control, but it may be beneficial to implement in the SOA. High and low threshold defaults are 100 and 10, respectively. Ranges are 50-500 and 1-500, respectively.
3. NANC 348 – BDD for notifications: Only time-based delta BDDs are supported.
4. NANC 390 – New Interface Confirmation Messages SOA/LSMS-to-NPAC: Also eliminates the need for ILL 130.
5. NANC 347/350 – CMIP Interface Enhancements – abort behavior: By raising the 15 minute abort timer to 60 minutes, as we have today, we have somewhat implemented a portion of this change order, but 347/350 will abort the association if no activity after 15 minutes. In today’s world, an SV could stay stuck in sending for 60 minutes.
6. NANC 383 – Separate SOA channel for notifications: Will also require profile setting for backward compatibility. If round-robining is not implemented, we will not be able to have multiple channels for notifications.
7. NANC 388 – Un-do a “Cancel-Pending” SV: Will go from cancel-pending back to pending. Only the service provider that put the port into cancel-pending can undo.
8. NANC 385 – Timer Calculation - Maintenance Window Behavior same as Holidays: Maintenance window time will not be included in timer expiration calculations.
9. NANC 384 – NPAC Change Order Effectiveness Matrix: Not completed yet.
10. NANC 352 – Recovery Enhancements – recovery of SPID
11. NANC 353 – Round Robin Broadcasts Across SOA Associations: Will possibly tee up for delete-pending.
12. NANC 349 – Batch File Processing
13. ILL 130 – Application Level Errors: Not needed if NANC 390 is implemented.
14. ILL 5 – Round Robin Broadcasts Across LSMS Associations: Will possibly tee up for delete-pending.

Current Issues:

* **Post-NANC 323 SPID mismatch discussion (Action Items 0304-02, 0304-03, 0304-07)**
* The APT discussed the 4 options for addressing SPID mismatches between NPAC and an LSMS after a NANC 323 SPID migration when an audit is initiated on the mismatched SV. Those options for how NPAC should respond to an audit request on that TN are:

1. Status Quo – NPAC sends a modify in an attempt to modify the SPID, which could knock the SV onto the Partial Fail list with possibly no way to remove it from the list. Deemed not acceptable by the APT group.
2. Change the SPID attribute by sending an activate to the LSMS with the same SV ID. This was also deemed not acceptable as it would allow NANC 323 functionality to take place over the interface.
3. Ignore the SPID attribute discrepancy with no indication that the SV is discrepant. This would be logged in the NPAC error log.
4. Ignore the SPID attribute discrepancy with a notification that the SV is discrepant. This would also be logged in the NPAC error log. Questions remain as to the type of notification (e.g. automated notification over the interface, manual e-mail, etc.) and whether this notification would specifically indicate that the SPID is discrepant.

* NeuStar stated that in order to resolve this issue immediately, NPAC will ignore the SPID attribute discrepancy and log an error in the NPAC error log (Option No. 3). The APT discussion in May will center on the type of notification for a possible long term solution (Action Item 0304-07). Related Action Items 0304-02 and 0304-03 are closed.
* **Performance Test Bed requirements**
* Attached is the requirements for NANC 389 – Production Equivalent Test Bed.



* The test bed is to support 12 messages per second (sustained) total bandwidth. Individual bandwidth between a single SOA and the NPAC test bed to support up to 2 messages per second.
* A question was asked as to if the wireless community is really asking for another region to be created for testing based on the requirement that the test bed mimic production. It was suggested that wireless carriers may want to revisit requirements based on current porting experience and cost of creating a new region.
* Steve Sanchez, AT&T Wireless, will take the requirements document to the WNPO to finalize requirements. It will not come back to the APT unless the WNPO wishes to discuss again in the APT. Plans are to then send it to the LNPA and packaged to the LLC to be sent to NeuStar for a Statement of Work (SOW).
* **SOA Vendor development for NANC Change Order 388 – Change a “Cancel Pending” SV? (Action Item 1103-14)**
* Action Item remains Open. This will continue to be discussed in the Architecture team. Implementation of the “un-Cancel” request will require SOA development. SOA vendors need to determine if their systems have rules that prevent support of the resultant state change from cancel pending to pending. One SOA vendor stated that their system did not require development to support the state change. The answer to this question will determine backwards compatibility for requirements development.
* **Resending requests after timeout (Action Item 1203-09)**
* Action Item was Closed. Additional feedback from service providers indicates that their systems are not re-sending requests after receiving a positive response to the request from NPAC.
* **Historical copies of SVs and pooled blocks (Action Item 1203-11)**
* Action Item was Closed. This issue has advanced to Change Order 392.

**New Topics for APT:**

* **Discuss topics for next month**
* Change Orders and list development to be sent to LNPA
* Sustained/Peak throughput and total bandwidth discussion/traffic model
* CMIP alternative discussion
* NANC 323 SPID mismatch notification (Action Item 0304-07)
* SOA Vendor development for NANC Change Order 388 – Change a “Cancel Pending” SV? (Action Item 1103-14)