LNPA WORKING GROUP July 7-8, 2015 Meeting FINAL Minutes

Mont Tremblant, QC, Canada

Host: Canadian LNP Consortium INC.

TUESDAY July 7, 2015 Attendance

		ndance	
Name	Company	Name	Company
Lonnie Keck	AT&T	David Malfara	LNP Alliance (phone)
Renee Dillon	AT&T	Bonnie Johnson	Minnesota DoC (phone)
Ron Steen	AT&T	Wayne Jortner	NASUCA (phone)
Teresa Patton	AT&T	Lynette Khirallah	NetNumber
Tracey Guidotti	AT&T (phone)	Dave Garner	Neustar
Jackie Voss	ATIS (phone)	Fariba Jafari	Neustar
Aelea Christofferson	ATL	Gary Sacra	Neustar
Anna Kafka	Bandwidth.com	Jim Rooks	Neustar
Lisa Jill Freeman	Bandwidth.com	John Nakamura	Neustar
Matt Ruehlen	Bandwidth.com	Lavinia Rotaru	Neustar
Bassam Attuan	Bell Canada	Marcel Champagne	Neustar
Louise Ferland	Bell Canada	Mubeen Saifullah	Neustar
Matt Peacock	Bell Canada	Brent Struthers	Neustar (phone)
Kevin Keaveny	Big River Telephone	Tara Farquhar	Neustar (phone)
Matt Nolan	Bright House (phone)	Rosemary Emmer	Sprint
Rodger McNabb	Canadian LNP	Suzanne Addington	Sprint
Jan Doell	CenturyLink (phone)	Shaunna Forshee	Sprint (phone)
Randee Ryan	Comcast (phone)	Jeanne Kulesa	Synchronoss
Beth O'Donnell	Cox (phone)	Margie Mersman	TCA (phone)
Wendy Trahan	GVNW (phone)	Luke Sessions	T-Mobile
Doug Babcock	iconectiv	Paula Campagnoli	T-Mobile
George Tsacnaris	iconectiv	Rajeev Veettil	TNS
Joel Zamlong	iconectiv	Tanya Golub	US Cellular (phone)
John Malyar	iconectiv	Jason Lee	Verizon (phone)
Steven Koch	iconectiv	Jim Castagna	Verizon (phone)
Kim Isaacs	Integra (phone)	Deb Tucker	Verizon Wireless
Bridget Alexander	JSI	Kathy Rogers	Verizon Wireless
Karen Hoffman	JSI (phone)	Scott Terry	Windstream
Connie Stufflebeem	Kiesling Assoc, (phone)	Dawn Lawrence	XO

NOTE: OPEN ACTION ITEMS REFERENCED IN THE MINUTES BELOW HAVE BEEN CAPTURED IN THE "JULY 7-8, 2015 WG ACTION ITEMS" FILE AND ATTACHED HERE.



LNPA WORKING GROUP MEETING MINUTES:

May 12-13, 2015 Draft LNPA WG Meeting Minutes Review:

The May 12-13, 2015, meeting minutes were reviewed and some typos were noted and corrected. After the corrections, the minutes were approved as final.

Updates from Other Industry Groups

OBF Committee Update – Deb Tucker:

OBF

ORDERING SOLUTIONS COMMITTEE

WIRELESS SERVICE ORDERING SUBCOMMITTEE

The Wireless Service Ordering Subcommittee held a checkpoint call June 9, 2015. With no items offered for discussion, the Subcommittee scheduled the next checkpoint call for January 8, 2016. In the event industry activity occurs prior to that date that may impact the Subcommittee, meetings will be scheduled accordingly.

OBF

ORDERING SOLUTIONS COMMITTEE

LOCAL SERVICE ORDERING SUBCOMMITTEE

The LSO Subcommittee met June 18, 2015 to progress Issues 3373 and 3477.

Issue 3373, LSOG: Standardization of RT of "Z" in the 099 practice for REQTYP "C" to be utilized by all providers

Participants reviewed and updated the Response Types in OBF-LSO-3373a2v9_LR-R008.xls for REQTYP C, REQTYP J, REQTYP E and REQTYP A with the intent of standardizing the fields

that have unanimous usage of Response Types across all companies. Participants continue to work action items related to this issue.

Issue 3373 remains open.

Issue 3477, LSOG: Standard field length minimums identified and repeating/# of occurrences on each field

Participants reviewed the SPEC data characters on the LSR Form and noted that this field is a minimum of 5 and maximum of 7 characters per Common Language and LSOB 2Q14. Participants are to determine by the next meeting why OBF-LSO-2014-00013R008.LSO LSR, EU, NP MIN-MAX-REPEATv8 lists the minimum characters for the SPEC field as 1 instead of 5.

Issue 3477 remains open.

The LSO has scheduled virtual meetings for July 9 and July 30, 2015.

INC Update – Dave Garner:

INC Issues Readout

LNPA WG Meeting – May 2015

Dave reported that the INC has not held a meeting since the last LNPA WG meeting in May. Therefore there are no INC issues to be reported at this meeting.

However, there is one item of note relative to industry numbering. On June 18, 2015, the FCC issued Report and Order FCC 15-70 establishing a process to authorize interconnected VoIP providers to obtain telephone numbers directly from Numbering Administrators rather than through intermediaries. A copy of FCC 15-70 is embedded here:

VoIP - FCC press release on Number ot

NANC Future of Numbering Working Group Update – Dawn Lawrence

Future of Numbering (FoN) Working Group Report to the LNPA WG

FTN 4: Geographic Issues: (David Greenhaus).

• Cover letter was submitted to the NANC at the June 4, 2015 meeting.

- Awaiting NANC action to forward the letter and whitepaper to the FCC.
- It was agreed to leave it open until the NANC presented the letter and whitepaper to the FCC.

FTN 8: All IP Addressing: (Michael Rothchild).

- Mr. Rothchild e-mailed the FTN-8 Subcommittee summary and closing statement to the group. The summary was read by Dawn Lawrence for those participants on the call only.
- The subcommittee recommended it is not necessary to reconsider E.164 numbering policy until NANP exhaust is forecasted by the NANPA to occur within approximately 15 years. According to the recommendation, the anticipated all-IP environment is very dynamic and that NANP exhaust is not currently anticipated until beyond 2045. Therefore, the FoN will continue to monitor exhaust forecasts in the future.
- After some discussion, it was agreed that if this item received no further action at the NANC, then FTN-8 will be closed.

NANC Meeting Readout – Paula Campagnoli

- Paula reported the election of Dawn Lawrence to the vacant CLEC tri-chair position on the LNPA Working Group.
- The NANC had no questions about the non-geographic porting white paper prepared by the LNPA Working Group.
- There was considerable discussion concerning the LNPA vendor transition. The LNPA WG has not yet been selected as the entity that will disseminate information to the public.

<u> Change Management – Neustar</u>

Change Order Summary

Determine what NPAC Functionality should be considered for Sunsetting - Neustar



Action Item 051215-01 – Neustar to add descriptions to the elements in RR3-780 of the FRS.

John reviewed the revisions made to the FRS.

Action Item 051215-01 is closed.



John Nakamura discussed and summarized changes in the 6/30/15 NANC change order document:

- NANC 449 Active-Active SOA, updated per May action item, see change bars.
- NANC 458 Notification Suppression, moved to implemented list.
- NANC 459 Doc-Only LTI Unused User ID Disable Period, moved to implemented list.

John then reviewed the Error and Flow Document. No questions. John then reviewed the NANC Change Order document.

- NANC 458 and NANC 459 were removed from the document because they have been
- incorporated into the FRS.
 NANC 449 also had changes based on agreements at the May 2015 meeting. John took an action item to provide updates to NANC 449 for September 2015 meeting.

John then reviewed the Release 3.4.8 test plan document.

- John will include the suppression table from the FRS in the test plan document. This table identifies when notifications are suppressed or sent under certain prerequisite conditions.
- John will accept the changes discussed at this meeting.



Action Item 010615-05 – Local systems vendors are to review all items remaining on the sunset list to determine impacts and level of effort to remove for each item on the list.

Gary has updated the information in the LOE table on the Sunset list.

Action Item 010615-05 is closed.

Teresa Patton stated that we need to see if any carriers have a problem with sunsetting any of these items and determine the timeframe if some have issues.

John Malyar suggested that we could separate out the ones that have no local system LOEs.

Neustar will develop 2 change orders – one with those items that have no local system LOE in the table and one with the items that have a local system LOE in the table.

New Action Item 070715-05 – John Nakamura to develop two change orders for implementing removal of the features on the Sunset List from the NPAC. One change order will be for removal of features that impact local systems. The other change order will be for removal of features that have no impacts to local systems.

Jan Doell asked if we will work these change orders separately or include them in a ranking session. Paula responded these will be considered separately and when the 2 change orders are

reviewed, the question will be asked if the group wants them sent to the NAPM for an SOW request.

Best Practice 04 Discussion

Jan Doell introduced a discussion of v5 of the N-1 Interpretation document (BP04). She said that some carriers are dropping calls to EAS codes contrary to the responsibilities stated in the document. The N-1 document was developed by the WG in response to an action item assigned by NANC at the May 18, 2004 meeting. It states that on inter-LATA EAS calls, the donor carrier is responsible for doing the LNP query based on the document. The paper was presented by Gary Sacra at the January 19, 2005 NANC meeting. NANC Chairman Atkinson stated that he would work with the FCC to determine how the paper should be codified (Public Notice, whether it is a rule change, or another process.)

Jan took an action to update BP 4 to note what took place at the NANC meetings with regard to the N-1 White Paper.

New Action Item 070715-02 – Jan Doell, CenturyLink, will update Best Practice 04 to indicate that it was approved by the NANC and forwarded to the FCC. BP04 contains a white paper describing various scenarios for routing of ported numbers, and it indicates which entities should perform the N-1 query in each instance.

Discussion of a PIM Suggesting Time Frames for Dealing with Disputed Ports

Action Item 010615-03 – Bandwidth.com (Lisa Jill Freeman) will prepare a PIM suggesting some time frames and activities for a best practice to deal with disputed ports.

Lisa Jill Freeman introduced a proposed PIM on disputed ports to address situations regarding numbers that are ported and now working with a different end user.

The WG developed guidelines for inadvertent ports that had Neustar confirm port backs on behalf of the New SP in the inadvertent port when the New SP cannot be contacted to get the number back and the end user back in service. This proposed PIM also seeks to include and address disputed ports where there is a disagreement on the authority to port a number that was ported.

Lisa Jill and Aelea Christofferson stated that the Old Network SP cannot notify the losing Reseller that they are about to lose a customer through porting per FCC Order 07-188. There was disagreement about this statement. Lonnie Keck stated that the wireless process does call for sending the WPR to the losing Reseller. Many wireline providers simply send or post a loss notification to the losing Reseller.

It was suggested that the LNPA WG attempt to clarify in the definition of disputed ports to include cases where the number was ported and is now working with a different end user.

Lonnie also indicated that this issue had been discussed at the WG in the past with no resolution due to service providers not being able to reach agreement.



This PIM was accepted to work as PIM 86. A sub-committee, as documented in the new action item below was formed to work on potential revisions to the dispute resolution process.

Action Item 010615-03 is closed.

New Action Item 070715-01 – The disputed port PIM submitted by Bandwidth.com was accepted to be worked as <u>PIM 86</u>. Lisa Jill Freeman (Bandwidth) will lead a subcommittee to work on details for a process to resolve disputed ports. If approved, the process will be documented as an LNPA WG Best Practice. The sub-committee participants are Suzanne Addington (Sprint), Jan Doell (CenturyLink), Bridget Alexander (JSI), Lonnie Keck (AT&T), Tracey Guidotti (AT&T), Jason Lee (Verizon), Deb Tucker (Verizon), Scott Terry (Windstream), Aelea Christofferson (ATL Communications), Randee Ryan (Comcast), and Luke Sessions (T-Mobile).



PIM XXX - Process to handle Disputed Ports

Bandwidth Port Out Changes – Matt Ruehlen

Bandwidth (SPID 979E) is implementing a new automated port out process and is taking this opportunity to give notice to the LNPA WG members. A launch date has not yet been set. A summary of the changes is included here and an LSR user guide is embedded:

- New port out process does *NOT* impact wireless carriers only affects wireline.
- New port out process replaces email based submission and attached LSRs with a web portal that carriers will access to submit/track requests.
 - Web portal will contain basic LSR fields (see screenshot in attached User Guide).
 - Web portal affords order management (viewing status of in flight LSRs, FOCs, canceled orders).
 - If a carrier would like to take advantage of automation or e-bond, Bandwidth offers an API to build to (in lieu or addition to the UI).
- Bandwidth has been testing with a few carriers and invites any interested carriers to earlyadopt and test.
- Contact Matt Ruehlen or Anna Kafka with interest or questions (<u>mruehlen@bandwidth.com</u>, <u>akafka@bandwidth.com</u>).

• Launch date is not yet decided, but will be announced to the industry with 60 day notice, with emails/announcements along the way, and reminders via bounce-back emails from the current LSR email address.



Number Portability Issues Discussion

Service Providers Charging for Port Requests

The question was asked about whether or not FCC orders allow service providers to charge for porting out telephone numbers. There was discussion about whether or not this is allowed. No one suggested that charging to port numbers out is allowed, but several stated that it does not violate FCC orders to charge a tariffed fee to process a service order and that this language is usually included in interconnection agreements.

Service Providers sending an FOC on a Port Request without checking the validation fields

Some service providers send FOCs to a port request without actually checking the validation fields. This causes porting issues if the fields are not accurate. The validation fields are intended to minimize porting errors. Not validating accuracy of the validation fields can allow the wrong number to be ported putting customers out of service. However, as stated by one service provider, when they get a FOC, they naturally assume that the port is valid and can proceed.

IP Transition effects on Number Portability

- Paula Campagnoli stated that she understands that the ATIS has formed a Testbed Landscape Team. Mary Retka, CenturyLink, and Gary Richenaker, iconectiv, are chairs of this committee.
- Dave Malfara, from LNP Alliance, stated that they believe the IP transition and LNPA transition should be worked simultaneously because the IP transition will likely drive changes in the NPAC. He also stated that there is an opinion among the IP-NNI Task Force that the NPAC could become a Tier 1 Registry that points to other databases for routing information.
- Joel Zamlong suggested that Mary Retka or Gary Richenaker, Co-Chairs of the ATIS Testbed Group, be asked to provide a status of the group's efforts. He will try to get Gary and/or Mary on the bridge at 9:00am on Wednesday morning.

Porting Process for non-carriers to perform ports – ATL Communications

Aelea Christofferson informed the LNPA WG that the PIM she proposed bringing into the LNPA WG would not be pursued at this time. She stated that a presentation would be made at the NANC. It may be brought back here in the future.

Develop Guidelines for new Service Providers to start Porting Numbers

The Porting Guidelines sub-committee has developed a draft checklist that is embedded here:



Bridget Alexander led a discussion about the document. She reported that interconnected VoIP has been added to the chart due to the recent FCC order. Work on the document will continue and be reported on in subsequent LNPA WG meetings.

PIM 84 & 85 – Wireless-to-Wireless Reseller Response Time – Sprint

Sprint is reintroducing PIMs 84 and 85 regarding Reseller timing guidelines and validations.





Both PIMs were accepted to be worked. There was discussion on each one:

- PIM 84
 - This PIM seeks to develop a BP on wireless Reseller porting timeframes and suggests that a wireless reseller must respond to a porting request within 2.5 hours.
 - VZW and AT&T objected to a 2.5 response time when Resellers are involved. The
 majority of resellers today can meet the 2.5 hours, but many smaller carriers who use
 manual processes take longer. AT&T Mobility and VZW suggested 6 hours. That was
 not acceptable to Sprint. They stated that they could live with 4 hours.
 - Jan asked why wireless carriers act differently than wireline carriers when it comes to Resellers, i.e., why don't they just send them a loss notification. AT&T Mobility and VZW, and Sprint stated that they do not have the authority in their agreements with their Resellers to do that. Jan asked if that could be negotiated. Lonnie responded that was not likely without an FCC Order.
 - Luke said that T-Mobile could accept 4 hours, but not 6 hours.
 - There was no agreement reached on the porting timeframe for wireless Resellers. PIM 84 was placed in a status of closed with no agreement.
 - Sprint asked that it be documented that there were objections to the 2.5 hours.
 - PIM 84 was closed with no agreement being reached.
- PIM 85
 - Service Providers asked for more time to review PIM 85.
 - PIM 85 discussion will be placed on the agenda for the September meeting.

Attendance						
Name	Company	Name	Company			
Lonnie Keck	AT&T	Karen Hoffman	JSI (phone)			
Renee Dillon	AT&T	David Malfara	LNP Alliance (phone)			
Ron Steen	AT&T	Bonnie Johnson	Minnesota DoC (phone)			
Teresa Patton	AT&T	Lynette Khirallah	NetNumber			
Jackie Voss	ATIS (phone)	Dave Garner	Neustar			
Aelea Christofferson	ATL	Fariba Jafari	Neustar			
Anna Kafka	Bandwidth.com	Gary Sacra	Neustar			
Lisa Jill Freeman	Bandwidth.com	Jim Rooks	Neustar			
Matt Ruehlen	Bandwidth.com	John Nakamura	Neustar			
Matt Peacock	Bell Canada	Lavinia Rotaru	Neustar			
Marian Hearn	Canadian LNP	Marcel Champagne	Neustar			
Rodger McNabb	Canadian LNP	Mubeen Saifullah	Neustar			
Mary Retka	CenturyLink (phone)	Shannon Sevigny	Neustar Pooling (phone)			
Vicki Goth	CenturyLink (phone)	Rosemary Emmer	Sprint			
Randee Ryan	Comcast (phone)	Suzanne Addington	Sprint			
Beth O'Donnell	Cox (phone)	Jeanne Kulesa	Synchronoss			
Wendy Trahan	GVNW (phone)	Margie Mersman	TCA (phone)			
Doug Babcock	iconectiv	Luke Sessions	T-Mobile			
George Tsacnaris	iconectiv	Paula Campagnoli	T-Mobile			
Joel Zamlong	iconectiv	Rajeev Veettil	TNS			
John Malyar	iconectiv	Tanya Golub	US Cellular (phone)			
Steven Koch	iconectiv	Jason Lee	Verizon (phone)			
Natalie McNamer	iconectiv (phone)	Deb Tucker	Verizon Wireless			
Carolee Hall	Idaho PUC (phone)	Kathy Rogers	Verizon Wireless			
Kim Isaacs	Integra (phone)	Scott Terry	Windstream			
Bridget Alexander	JSI	Dawn Lawrence	XO (phone)			

WEDNESDAY July 8, 2015 Attendance

IP Transition effects on Number Portability – Continued from Tuesday

ATIS Test Bed Landscape Team Readout – Mary Retka and Gary Richenaker

• Team was created by ATIS TOPS Council to investigate where existing and proposed IP transition testbeds share common infrastructure, so that SPs may implement their testbeds more efficiently.

- The areas of interest identified by the TOPS council included numbering, IP routing, spoofing, and caller ID, but the team could develop other use cases based upon participant interest.
- Information has been provided to TOPS Council in a paper with landscape summary and next steps.
- IP routing options on the table currently do not appear to impact the porting process. The LNPA WG analyzed the current options in the fall of 2014 and came to this conclusion.
- Dave Malfara, LNP Alliance, suggested that the LNPA WG could serve as a consolidator of information among the various disassociated industry groups and efforts for both the IP transition and the LNPA transition.
- Jim Castagna, Verizon, stated that there is no current or future goal within any of the industry groups to develop a business migration plan for IP routing. SPs are interconnecting on an IP basis today and are choosing the best routing method that works for them.
- Dave Mulfara, LNP Alliance, disagreed with Mr. Castagna's statement. Mr. Mulfara asked that his reasoning be included as follows:
 - First, that small carriers have NOT been successful in commercial negotiations with ILECs regarding IP interconnection so, while Verizon's statement that "SPs are interconnecting on an IP basis today and are choosing the best routing method that works for them" is true of SOME SPs, it is NOT true that all SPs are willing to conduct those negotiations with other SPs on an unqualified basis.
 - Second, I disagreed that the resulting, ad hoc and myriad ways in which TN routing information exchange would ultimately be negotiated (I count no less than 14 in the IP-NNI Routing Report) under such arrangements is in the best interest of the industry. I expressed that a universal and standardized mechanism (such as the LERG and NPAC database in the circuit-switched world) is needed.
- Mary Retka, CenturyLink was requested to provide a list of industry groups that should come to the LNPA WG and provide readouts of their work.
- Rosemary Emmer, Sprint, said that there is a NANC IMG that the industry groups that are working on IP and numbering issues are supposed to provide readouts to. She also said that she thinks that Henning Schulzrinne might be working on an NPAC prototype that could port numbers and manage ports in an IP environment.
- Jason Lee, Verizon, asked if there is any work to bridge PSTN numbers into the work on IP call spoofing. Mary responded that this would be an excellent use case to test in the ATIS test bed.

LNPA Transition Discussion

- Paula Campagnoli stated that the WG has not received any instructions or directive related to its role in the LNPA transition.
- There was no further discussion at this meeting

Develop the LNPA WG Report to the (NANC, FON, IMG, etc.)

- No WG report necessary for NANC as there is no meeting prior to next LNPA WG meeting.
- Paula will talk to the NANC Chair on how the LNPA WG should proceed as a result of the FCC Order allowing VoIP providers to obtain numbers directly from the NANPA and the PA. It might require a new flow or process.

- There is a FON meeting scheduled prior to the next LNPA WG meeting. Dawn will share her report with the Tri-chairs.
- No information about the IMG meeting schedule.

<mark>New Business</mark>

NPAC Tracer Data Discussion

The NAPM LLC is concerned that some non-NPAC users are obtaining NPAC data and sharing in unauthorized ways. These non-users provide NPAC user data to their subscribers on internet sites. The NAPM LLC has asked Neustar to investigate how they are getting the data. It seems apparent that they are getting it directly or indirectly from an authorized user. It is possible that the user is not aware of the "leak" of the data.

Neustar and the NAPM LLC have devised a plan to insert unique "tracer data" into user LSMSs and then checking some of the offending sites to see if it appears. The embedded PowerPoint file discusses the plan:



- As described, the tool would insert the tracer data into each User LSMS in an NPAC Region simultaneously and be distinguished by different New SP SPIDs and the LRNs that are associated with those SPIDs. Highlights of the tool, as described to the WG were as follows:
 - Tracer data SVs will not be added to NPAC
 - Same TN will be used for an NPAC Region
 - Tracer data SVs distinguished by different New SP SPIDs
 - LRN of tracer data is owned by New SP SPID
 - LNP Type is inter-provider port
 - If WSMSC and SV Type supported by New SP, they will be sent in tracer data
 - After SVs are inserted, non-User website under investigation will be tested for a hit on SP serving TN
 - LSMS cleanup will be done by disconnecting tracer data SVs
- Upon testing the non-User website under investigation, a hit on the serving New SP would identify the LSMS data source.
- Gary requested that at the conclusion of the tracer data discussion during the WG meeting, the WG Tri-Chairs assign two action items as follows:
 - 1. LNPA WG Action Item assigned to SPs requesting any concerns or objections with use of their SPID as New SP SPID in any tracer data SV
 - 2. LNPA WG Action Item to Local System Vendors and SPs for any concerns with inserting tracer data SVs in their systems
- The LNPA WG Tri-Chairs agreed to assign these action items. If there are no significant objections from the SPs and the Local System Vendors, it was agreed that the Tri-Chairs would send a recommendation to the NAPM LLC to request an SOW from Neustar for development of the tracer data tool. As part of the tracer data tool development, Neustar

would obtain 7 unassigned TNs (1 per NPAC Region) from volunteer SP(s) for use in the tracer SVs.

New Action Item 070715-03 – Service providers are to determine if they have any concerns or objections to the use of their SPID as New SP SPID in any tracer data SVs used to try to determine the source of unauthorized access to NPAC data. Refer to the presentation below for more details. Concerns or objections are to be forwarded to the LNPA WG Tri-chairs by August 7, 2015. No response by that date infers no concerns or objections.

See the NPAC Tracer Data PowerPoint file embedded above.

New Action Item 070715-04 – Service providers and Local Systems vendors are to determine if they have any concerns or objections to insertion of tracer data SVs in their system. Refer to the presentation above for more details. Concerns or objections are to be forwarded to the LNPA WG Tri-chairs by August 7, 2015. No response by that date infers no concerns or objections.

As noted, responses to the 2 action items are due by August 7th. No response to the action items infers concurrence. If no objections, the Tri-Chairs will request that the NAPM LLC request an SOW from Neustar.

• There were no objections or concerns expressed by any SP or Local System Vendor during the WG discussion.

Discussion of Need for August 2015 LNPA WG Call

The August 12, 2015 conference call is canceled.

Review of 2015 LNPA Working Group Meeting Schedule

Dates for 2016 meetings and conference calls will be considered at the September meeting.

MONTH (2015)	NANC MEETING DATES	LNPA WG MEETING/CALL DATES	HOST COMPANY	MEETING LOCATION
January		6 th -7 th	iconectiv	Scottsdale, AZ
February		11 th 19 th		Conference Call
March		$3^{rd} - 4^{th}$	Verizon Wireless	Alpharetta, GA
April		8 th		Conference Call
May		$12^{th} - 13^{th}$	Neustar	Ft. Lauderdale, FL
June		10^{th}		Conference Call
July		$7^{\text{th}} - 8^{\text{th}}$	CLNPC	Mont Tremblant, QC,
				Canada
August		12 th		Conference Call
September		$1^{\text{st}} - 2^{\text{nd}}$	Comcast	Denver, CO
October		14 th		Conference Call
November		$3^{rd} - 4^{th}$	T-Mobile	Seattle, WA
December		9 th		Conference Call

2015 Meetings and Conference Calls

Next Conference Call ... August 12, 2015 This call is canceled. Next Meeting ... September 1-2, 2015: Location...Denver, CO ...Hosted by Comcast