North American Numbering Council
Meeting Transcript
February 21, 2013 (Final)

I. Time and Place of Meeting. The North American Numbering Council (NANC) held a meeting commencing at 10:00 a.m., at the Federal Communications Commission, 445 12th Street, S.W., Room TW-C305, Washington, D. C. 20554.

II. List of Attendees.

Voting Council Members:

1.	Hon. Betty Ann Kane	NANC Chairman (NARUC – DC)
2.	Hon. Geoffrey G. Why	NANC Co-Chairman (NARUC – MA)
3.	Cyd Anglin	AT&T Inc.
4.	Greg Rogers	Bandwidth.com, Inc.
5.	Mary Retka	CenturyLink
6.	Valerie R. Cardwell/Mary McManus	Comcast Corporation
7.	Suzanne Howard/Beth O'Donnell	Cox Communications, Inc.
8.	Michael Altschul	CTIA
9.	Gregory T. Diamond	Level 3 Communications, LLC
10.	Hon. Paul Kjellander/Carolee Hall	NARUC – Idaho
11.	Michael Balch	NARUC - Iowa
12.	Lynn Slaby	NARUC – Ohio
13.	Wayne Jortner	NASUCA Maine Consumer Advocates
14.	Tom Dixon	NASUCA
15.	Jerome Candelaria	NCTA
16.	JT Ambrosi	SMS/800, Inc.
17.	Rosemary Emmer	Sprint Nextel
18.	Natalie McNamer	T-Mobile USA, Inc.
19.	Thomas Soroka, Jr.	USTA
20.	Kevin Green/Ann Berkowitz	Verizon
21.	Brendan Kasper	Vonage

Special Members (Non-voting):

John Manning	NANPA
Amy Putnam	PA
Faith Marcotte	Welch & Company
Jean-Paul Emard	ATIS

Commission Employees:

Marilyn Jones, Designated Federal Officer (DFO)
Michelle Sclater, Alternate DFO
Ann Stevens, Deputy Chief, Competition Policy Division

Sanford Williams, Competition Policy Division
Carmell Weathers, Competition Policy Division

III. Estimate of Public Attendance. Approximately 20 members of the public attended the meeting as observers.

IV. Documents Introduced.

(1)   Agenda
(2)   NANC Meeting Transcript – February 21, 2013
(3)   North American Numbering Plan Administration (NANPA) Report to the NANC
(4)   National Thousands Block Pooling Administrator (PA) Report to the NANC
(5)   Numbering Oversight Working Group (NOWG) Report
(6)   Billing and Collection Agent Report
(7)   Billing and Collection Working Group (B&C WG) Report to the NANC
(8)   North American Portability Management (NAPM) LLC Report to the NANC
(9)   Local Number Portability Administration Working Group (LNPA WG) Status Report to the NANC
(10)   Industry Numbering Committee (INC) Report to the NANC
(11)   Future of Numbering (FoN) Working Group Report to the NANC
(12)   Numbers and the PSTN Technology Transition: Updates from Henning Schulzrinne, FCC's Chief Technology Officer

V. Table of Contents.

VI.   Summary of the Meeting

CHAIRMAN KANE: Let me officially call the meeting to order. This is the regularly quarterly meeting of the North American Numbering Council. I am Betty Ann Kane, the Chairman of the Numbering Council, and Commissioner, Chairman of the D.C. Public Service Commission.

We are meeting at 10:12 a.m. We are in the hearing room of the Federal Communications Commission at 445 12th Street, S.W. in Washington.

First I want to welcome two new members. I want to welcome Commissioner Lynn Slaby of the Ohio Public Commission.

FEMALE SPEAKER: We cannot hear you.

CHAIRMAN KANE: You cannot hear us? Can everybody hear me?

FEMALE SPEAKER: Now we can.

CHAIRMAN KANE: I want to welcome Commissioner Lynn Slaby of the Ohio Public Utility Commission, one of the appointees from the National Association of Regulatory Utility Commissioners, and Gregory Diamond representing Level Three. Is he here?

MR. DIAMOND: Good morning, Chairman Kane. This is Greg Diamond. I'm on the bridge. Thanks so very much. I'm glad to be back on the NANC.

CHAIRMAN KANE: Very good, welcome back.

MR. DIAMOND: Thank you.

CHAIRMAN KANE: And now I will go around the room so that for the record we know who is here and when we finish that with the people physically present, I will ask the people on the bridge to identify themselves.

MS. ANGLUND: This is Cyd Anglin from AT&T.

MS. RETKA: Mary Retka from CenturyLink.

MS. HOWARD: Suzanne Howard, Cox Communications.

MR. ALCHAL: Michael Altschul, representing CTIA.

MR. SLABEY: Lyn Slaby, Ohio Commissioner with NARUC.

MR. CANDELARIA: Jerome Candelaria on behalf of NCTA.

MS. EMMER: Rosemary Emmer, Sprint-Nextel.

MS. MCNAMER: Natalie McNamer T-Mobile.

MR. GREEN: Kevin Green, Verizon.

MS. JONES: Marilyn Jones, FCC.

CHAIRMAN KANE: Okay, let's start with the folks on the bridge. Who's first?

MALE SPEAKER: (Unintelligible) and Mike Balch, NARUC.

MR. KJELLANDER: Paul Kjellander, Commissioner of Idaho, Member of the Board.

MS. FABER: Teresa Faber, Ohio PC.

MS. WYNN: Cheryl Winn, Ohio PUC.

MR. CLAY: Mel Clay, NAPM LLC.

MR. SOROKA: Tom Soroka, U.S. Telecom.

MS. HALL: Carolee Hall, Idaho staff, PUC.

MS. BEATON: Rebecca Beaton, Washington State Commission staff.

MS. HYMAN: Linda Hyman, NeuStar Pooling.

MS. GETZ: This is Sally Getz, Indiana Telecommunications staff.

MALE SPEAKER: (Unintelligible), Maine Public Advocate.

MS. BAKKE: Kathy Bakke, Wisconsin Public Service Commission.

MR. RON STEEN: LNPA Working Group.

MR. KASPER: Brendan Kasper, Vonage.

MALE SPEAKER: (Unintelligible) Communications.

FEMALE SPEAKER:Heather (Unintelligible).

MR. DIXON: Tom Dixon, Board Member.

MR. AMBROSI: J.T. Ambrosi, (unintelligible) 800 Board Member.

FEMALE SPEAKER:Kim Isaccs, Integra.

ANNOUNCEMENT AND RECENT NEWS

CHAIRMAN KANE: Okay and I will as usual ask those folks who are NANC members or alternates who are on the bridge if you would also e-mail in your name so that we are sure we get it correctly and that e-mail goes to carmel.weathers at FCC.gov. And we want to welcome Carmel for supporting us at our NANC meeting, welcome.

Marilyn, is there any other recent news besides the appointment of two members?

MS. JONES: No, no other news.

APPROVAL OF MEETING TRANSCRIPT

CHAIRMAN KANE: Okay, thank you. You have the transcript of the December 13, 2012 meeting which was sent out electronically to everyone. Are there any additions or corrections to that transcript? Are there any objections to approving the transcript? Then I will

consider it approved unanimously.

Let me back up. The agenda should go into the record as Item 1 and the transcript will go into the record as Item 2.

REPORT OF THE NORTH AMERICAN NUMBERING PLAN ADMINISTRAOR (NANPA)

The third item on our agenda is the report of the North American Numbering Plan Administrator, the NANPA, and will put this to have in your packet mailed out as Item 3, Exhibit 3.

MR. MANNING: Good morning, everybody. My name is John Manning, Director with the North American Numbering Plan Administration group.

The focus of my presentation this morning will center primarily on a review of 2012 activity as it relates to the numbering resources that we administer as part of the NANP, as well as looking at area code relief activity and some other additional items.

Beginning on page two of my presentation, at the top of that presentation is a chart that outlines the assignments and other information associated with central office code administration.

You'll see that in 2012 we assigned a total of 2,637 central office codes. Net assignments were approximately a little more then 2,000 codes, 2,065 codes, and for the year of 2012 we processed slightly more then 10,240 code applications which when looking over the seven years is the lowest quantity of applications we processed in the past seven years.

Looking at assignment activity you can see that in 2012 total assignments decreased approximately 250 codes as compared to 2011. In addition, other then in 2009, 2012 was the lowest quantity of total and net assignments for the year.

If you look at the average over the last seven years, we're averaging around 2,350 or so net assignments per year since 2006. In terms of the quantity of disconnects in 2012, 270 of these codes were returned by two different service providers.

And one final note is that in 2012, 95 percent of all code assignments requests were in pooling areas. This has been slightly increasing over the years. We're at 95 percent for 2012.

At the middle of page two and on to page three, I list for you a variety of code reports that are available on the NANPA website. These are public reports. They are available so if you're interested in terms of the assignments made in a particular state or area code, or if you want to look at historical information in terms of the quantities of central office codes assigned on a month-by-month basis, these types of reports will provide you that information.

Continuing on page three, looking at 2012 and the top NPAs and states in terms of CO code assignments, the chart in the middle of the page shows you that for 2012, the top NPA or NPA complex that received the most in terms of net assignments was in Texas, in fact two of the top three were in Texas, both the Dallas, Fort Worth area, and the Houston complex area where two of the top three areas, and looking at Georgia and particularly Atlanta and the surrounding area, which would be 470 and 404, made the top ten in terms of this aspect.

Of interest as you see Oklahoma, Oklahoma 405 and Oklahoma 918, and quite often people would look at something like this and say why is Oklahoma on this list.

CHAIRMAN KANE: Let's not diss Oklahoma.

(LAUGHTER)

MR. MANNING: No, no, lovely place of Oklahoma. But the question does come up, what happened in Oklahoma and primarily most of these assignments were made in the first half of the year and although NANPA does not receive any information in terms of the applications

themselves that describe or say what the numbers were used for, we have worked with the Oklahoma Public Service Commission staff who investigated these items and their information that they got, a lot of these resources were used for lifeline services.

Continuing on in the chart you see that New York, Pennsylvania, Colorado, and Florida round out the top area codes.

Looking at the top five states in terms of net assignments, not surprisingly Texas in the number one. New York, Georgia, Florida, and Oklahoma, New York, Texas, and Florida were on the list in 2011 and Georgia was there in 2010.

Any questions with regard to CO code assignments?

CHAIRMAN KANE: Any questions on the bridge? Thank you.

MR. MANNING: Okay, looking at area code assignment activity, since we had our meeting in December there's only been one additional area code assigned since the middle of December and that was in Kentucky's 364 to relieve the area code 270.

So in 2012, we assigned three area codes and we saw six area codes go into service, five of those are for geographic area codes, one of those was a non-geographic area code, the 566 NPA.

And also in 2012, we had one area code that was assigned, the 582 in Pennsylvania, and that was moved from assigned to reserve status.

Now looking at relief planning activity, looking at those area codes projected to exhaust in the next 12 months, Pennsylvania 570 has been on the list for quite some time.

At the last meeting I noted that the Pennsylvania Commission took action to expand the permissive dialing period when that decision is made from three to six months before the new area code comes into service. We're still anticipating that that particular area code will be

exhausting in the next 12 months and expect that the Pennsylvania Public Service Commission will provide that direction here shortly.

Texas 512 has been on the list for awhile. They started 10 digit permissive dialing on December 1st, mandatory 10 digit dialing will begin on June 1st, with the effective date of the new 737 area code beginning July 1, 2013.

I mentioned earlier Kentucky, Kentucky 270. On December 17th the Kentucky Public Service Commission ordered an all services overlay. The new 364 will overlay the same geographic territory as the 270 area code. Ten digit permissive dialing will begin on August 3, 2013, with mandatory dialing to start February 1, 2014. The effective date of the new 364 area code will be March 3, 2014.

Continuing on page four, just some other relief activities we've been tracking. I mentioned at the last meeting, in Nevada they have a plan in place where they will begin the implementation of their all services overlay with permissive dialing beginning August 3rd of this year.

In California on January 16th and 17th, they conducted, they being the California Public Utilities Commission, conducted some local jurisdictional meetings and hearings to gather input from the public on some alternative plans for relieving the 415 area code. We will be taking that information back using that public input and subsequently will file a recommendation with the California PUC.

On January 30th of this year, NANPA filed an amendment to its petition updating the status of the Houston area code complex. The current projected exhaust of this complex is for fourth quarter 2014.

And in Indiana, I had mentioned at the last meeting we had filed a petition back in

August of 2102. There are ten educational sessions and field hearings planned beginning in

March of this year and running through May.

And finally, two area code relief activities are just getting underway in South Carolina

843. NANPA has scheduled a relief planning meeting for the 843 area code on March 21st of

this year.

In Oklahoma 405 we've scheduled a relief planning meeting for March 28, 2013.

Any questions on area codes or area code relief planning?

Okay, starting at the bottom of page five I'm going to briefly run through just a status of

some of the other resources that NANPA administers, starting first with Feature Group B, Carrier

Identification Codes. The chart if you focus your intention on that, kind of tells the story very

quickly.

In 2012, we only made one assignment of a Feature Group B Carrier Identification Code.

There were six codes returned so the net yearly assignment is minus five. Presently there are 270

Feature Group B kicks assigned. The case as you can see through the chart, there is not a lot of

activity in terms of assignments of this particular resource.

Continuing on page six, Feature Group D, Carrier Identification Codes 2012, we assigned

39 of these codes and reclaimed or returned 37 codes for net assignments of over two codes.

Presently approximately 2,040 Feature Group D kicks are assigned leaving over 7,700 available

for assignment.

Although this particular resource is more active than the Feature Group B, you can also

see over the past ten years the quantity of assignments has been declining over time.

5YY NPA, in 2012, we assigned 365 5YY NXX codes. We had eight codes returned, net

assignments of 257. At the end of 2012, there were 2,669 5YY NXX codes assigned. At the end

of the year we had 495 codes available for assignment.

Again you can look at the history of this resource over the past ten years. You can see it was very active starting in 2007 running through 2012, although 2012 was roughly half of what we experienced in terms of assignments in 2011 and 2010.

On page seven, for NPA 900 we only had one assignment, no returns, for nearly net assignment of just one code. There are currently 101 codes assigned of this resource, 652 available for assignment. Again, similar to Feature Group D Carrier Identification Codes, not a lot of activity in the 900 NPA space.

And 555 line numbers, I'll give you the assignment activity 2002 to 2012. We only assigned one of these resources, one of these line numbers in 2012.

Finally on page eight, concluding with the 800, 855 line number assignments, the 456 area code assignments, vertical service codes, and ANIII information digit pairs, we made no assignments of these resources in 2012.

I'll pause here. Any questions on these other resources and their status?

CHAIRMAN KANE: Any questions on the bridge? I have a general question, John, probably for general information. You can't read too much into it but obviously looking at the patterns can you conclude from it some changes in the whole telecommunications industry?

For example, the growth of the non-geographic numbers and the carrier identification codes, could one conclude from that that there are fewer individual telephone companies or carriers? Is that going too far to conclude that?

MR. MANNING: Well, I think it's certainly a contributing factor in it. A lot of your new local exchange or competitive local exchange carriers get CICs because they provide the long distance aspect as well. They come in and get them. Of course we get switchless resellers

as well that can get carrier identification codes but I think what you are seeing in part is the evolving telecom market and the types of players.

CHAIRMAN KANE: Consolidations.

MR. MANNING: Yes. Okay, let me go ahead and continue on page eight. Under NANPA contract and NANPA changer orders, back in September I noted to you that with the contract award NeuStar was doing a couple different items with regard to the NANP administration system.

First of all was the adding of something called a demilitarization zone or DMZ to the system which was for security and improvement along those lines.

The second phase was a total rewrite of the software or at least the software platform and a refresh of all of the technology that is the hardware and network gear associated with the system.

We are in the middle of that activity right now. We have been rewriting the software and testing it with the anticipation that we will roll out NAS on its new hardware platform and new software platform in April of this year so we're on schedule to complete that work.

With regard to the NANPA change orders, there's only one outstanding NANPA change order, and with regard to the change orders now you'll see in my reports, Chairman, per your advice, we're going to include in there the actual contract number to delineate between old change numbers and new change numbers.

The outstanding change order deals with INC issue 692 and 702. Both of these issues dealt with changes to the 5YY resource and specific in terms of system changes in terms of what a service provider will be applying for and what will be required as they submit the application and some system enhancements in terms of reporting and other queries that are available to those

applicants to be able to have a better understanding of where they stand in the application process. We anticipate that this particular change order will be implemented in the summer of 2013.

On page nine, just a few informational items. I know the NOWG will tell you about the collection of the surveys but we have posted to our website and just recently took it down, the 2012 NANPA survey. We made that available and encouraging all entities to submit that particular survey.

The 2012 NANPA Annual Report will be published at the end of March. We are currently in the process of putting that document together.

The NANPA 2012 Annual Operations Review will take place April 16th and 17th. It is during that review that we will go over in detail beginning on pages 10 through roughly around 20 or so, our NANPA highlights document which is basically a rundown of all of the activities that NANPA has been involved with for 2012. I will not go through that document here but we will go over that document in some detail during our operational review in April.

We published our 4th quarter NANPA newsletter in the first week of January 2013. It says 2012 on your report. And the April 2013 area code and NANP exhaust projections will be available at the end of April. We will be using the same assumptions and methodology we have been using in the past.

As I've just mentioned, pages 12 running through approximately page 19 is the highlights document. If you read that or have any questions about that feel free to contact me about it.

And beginning on page 20 are the area codes that exhaust in the next 36 months, just a rundown of where those particular area codes stand in terms of relief planning activity.

And that concludes my presentation. Are there any additional questions?

CHAIRMAN KANE: Any questions? Thank you, John.

MR. MANNING: Okay, thank you.

REPORT OF THE NATIONAL THOUSANDS BLOCK POOLING ADMINISTRATOR (PA)

CHAIRMAN KANE: Our next item is the report of the Thousands Block Pooling Administrator. And while she is coming up, we have had a couple of people join us since we did the go around. Just for the record.

MS. CARDWELL: Hi, good morning. Comcast Corporation, Valerie Cardwell.

MR. DALTON: Hi, this is Mike Dalton with the Montana Public Service Commission.

MS. GOGLER: Tiki Gogler with XO Communications.

CHAIRMAN KANE: Anybody else new on the bridge?

MR. ROGERS: Greg Rogers with Bandwidth joined.

MR. POLK: Jim Polk, Public Service Commission in Florida.

MS. GETZ: This is Sally Getz with the PUC in Indiana. I am new to the NOWG Working Group.

CHAIRMAN KANE: Very good, welcome.

MS. WEBBER: Good morning. My name is Florence Webber and I will be providing the PA report today on behalf of Amy Putnam. And so with that in mind keeping with tradition I would like to start out by saying pooling is fine and going very strong.

Starting on page two, the first table we have is the PA activity summary data and this is a rolling 12 month total that we always provide and basically this is just the type of block activity as well as the total applications that are processed on a monthly basis.

I wanted to point out that in December we processed 7,626 applications which made 2012 our second highest year in applications. 2011 was actually the year to beat for us however we were short just by 2,023 applications and as you can see, the numbers then again jumped up in January and 15,136 applications were processed by the PA.

Jumping down to the PA summary data, this information is as of March 2012 through January 2013, and basically this is since we've implemented the permanent RNA function back in March, and again here it's just the total applications processed on a month-to-month basis and the type of applications that were processed, nothing out of the ordinary here.

Jumping to page three, the next three tables are totals from the last 12 months so here we have the Part Three summary data and the type of Part Three disposition provided which is approved, denied, suspended, and withdrawn. Also below that we have the Part Three summary data sorted by type, again that's the totals from the last 12 months and it's based on the type of application that we process.

And then jumping to page four, we have NXX codes opened and the different types of codes that we opened for pooling or for LRN purposes, dedicated customer and pool replenishment, and again that's a total of the last 12 months.

And then the next table is the summary of rate center information changes, again nothing out of the ordinary there in December and January since we last reported to the NANC.

Then moving on to page five, we have our reclamation summary, again that's between February of 2012 through January of 2013, and nothing out of the ordinary there in terms of the total blocks on the overdue Part Fours and the number of the blocks that are added each month.

And then here we have the PAS performance and the RNAS performance data between February and January of 2013. Here we do have two instances of down time that occurred over

the weekend of January 25th on both systems however no users were affected by this.

If there are any questions please let me know.

Jumping to page seven under other pooling related activities, our fist contract extension ended on February 14th and we did receive another four month contract extension which goes through June 14th of this year and that's contract MOD 24.

Also the 15 day pre-solicitation notification regarding the pooling contract RFP was posted to the fedbusops website on February 8th and so the RFP is expected to be made available on or after February 28th.

In the next section, contract reporting, since we last reported all of our contracts have been submitted and posted to our websites on time.

Moving on to page eight, the only pending petition out there with the FCC at this point for delegated authority is Montana and I believe that's the same since we last reported, no changes.

And then the next item is the p'ani administration which is an area in which I'm currently involved in so I'll give you some highlights to that and a little more detailed information.

We are still working on reconciling the p'ani data. We're 90 percent close to being done on working on the discrepancies where either one or more carriers, well, multiple providers in this case, are reporting on either the same p'ani range or part of an existing range so we are moving through that process and it is almost 90 percent complete in resolving those ranges.

Also we are still working on identifying those assignees where the assignor reported the range as being assigned but we never received any type of initial reports from those carriers so we're still trying to identify those carriers as well as determine if those ranges are in use or not.

And then this is ongoing, which we anticipate will be an ongoing item, is duplicate

assignment issues. Basically when we make an assignment and the carrier attempts to load the range and it comes back as already being loaded to another provider, then we work with the existing provider and provide them with a new range and try to determine if the range needs to be shown assigned in our system or either needs to be removed from the 911 database. So that's an ongoing issue.

Also in December, on December 13th to be exact, we implemented the annual reporting requirement in RNAS and basically this is an INC requirement that carriers must file starting in 2013, an annual report of all of the p'ani's that are assigned to them as of the proceeding year, 12/31, and they need to specify to us whether the ranges itself are in use or not.

And also this is a good opportunity for people to identify if there are any ranges out there that they have failed to report to us initially and we can go ahead and get those records updated or if there are any ranges that could also be made available, it's a good opportunity for them to review their data. And that information is due to us by April 1st.

Also we posted our 2012 Annual Report and this is a little different than the Pooling Annual Report. This is a requirement that's in the INC guidelines, the p'ani administration guidelines, and basically it's just showing actually that we have like three tables of information.

The first one is showing the number of p'ani's that are being requested, assigned, returned, and modified so it's an actual count. It's not a count based on the application.

And then we also provide the actual request and the Part Three disposition. The type of request that we process are for new p'ani's, modifies, returns, and in some case canceling of those returns.

And then lastly as part of that annual report we also provide what the projected exhaust is of the 211 and 511 NXX for each MPA and that basically is based on the available inventory,

what's currently assigned and what the projected forecast demand is in that given MPA and so far we're in good shape. We also have a requirement that we need to notify the INC within one year of exhaust within any given MPA so we're in good shape at this point.

Any questions:

CHAIRMAN KANE: Florence, do you have the date of when the Montana petition for delegated authority was filed with the FCC, how long that's been pending?

MS. WEBBER: Yes, that was actually filed back in November of 2010.

CHAIRMAN KANE: Okay, we'll make an inquiry as to the status of that. Yes, Natalie.

MS. MCNAMER: Natalie McNamer, T-Mobile. I had one question regarding the pANI's. I appreciate all the work that you guys have done to try to reconcile, getting all the data from the service providers and making sure that there aren't duplicates but you had mentioned that with these duplicate assignment issues that are still ongoing, about when you guys assign something and it goes to be put in the databases, is that happening often or is that few and far between?

MS. WEBBER: It depends on how you define often. Sometimes it happens all at once and then sometimes we may not see anything for a few weeks and it depends on how quickly ranges are loaded, that we're notified if the ranges are already loaded to another provider or not. It happens more frequently than not I should say but as we are notified we work with both providers that are affected by it and try to resolve the information.

MS. MCNAMER: Great, thank you.

MS. WEBBER: You're welcome.

CHAIRMAN KANE: Any other questions? Any questions on the bridge?

MS. WEBBER: Okay, we're on page nine here. In reference to the NOWG, we continue to participate in our regular monthly meetings on December 18th and January 25th. We also posted the annual performance survey to our website and sent a notice, as well as a reminder notices to both the PAS and RNAS users.

Also we do have operational review scheduled in March, on March 13th and March 14th, in the Concord, California office. We'll be meeting with the NOWG then.

In reference to change orders we have not submitted any change orders since the last NANC meeting. We do have two change orders that are pending implementation and that is tentatively scheduled for the weekend of April 26th. One is an INC driven issue allowing carriers to retrieve over-contaminated blocks and the second one is just some enhancements to our FTP process.

CHAIRMAN KANE: I'm sorry, Florence, you said April 26th. It says April 6th.

MS. WEBBER: April 6th, I'm sorry.

CHAIRMAN KANE: April 6th, okay, thank you.

MS. WEBBER: Okay, any questions?

On item six, other PA activities, for the very old overdue Part Four project, this is our fourth time working on this project. We received approval from the FCC on January 24th.

We had about a third of the blocks that are on the reclamation list that were prior to January 1st of 2012, so we began notifying all the affected parties, that's the carriers as well as the State Commissions as of January 25th, and as of February 10th I'm happy to report that more then 50 percent of those overdue Part Fours have been resolved so progress has been made.

All right, lastly here on page ten, are our preliminary 2012 highlights. This is in advance of our annual report which we will posting to our website by the end of March, so at that time

our detailed highlights will be available but here we're just showing the productivity for the 2012 calendar year for both the pooling administration as well as pANI.

And one of the biggest milestones last year for us was implementing the permanent RNA function back on March 19th, which resulted in a new system, a new website, basically a new type of numbering administrator so it's one of big kudos for us.

Any questions at this point?

CHAIRMAN KANE: Questions? Yes, Jerome.

MR. CANDELARIA: Jerome Candelaria. Just a general question on training and education. I noticed in Mr. Manning's report that NANPA provides assistance in education and actually created a training video on the topic of requesting the assignment of CO codes in a pooling rate center. I'm wondering if this type of training video is in conjunction with the work you're doing or if you have your own videos.

FEMALE SPEAKER:Commissioner Kane --

CHAIRMAN KANE: Excuse me, is there someone on the bridge?

FEMALE SPEAKER:Yes, Commissioner Kane, this is --

COMMISSIONER KANE: You can't hear? Would you pull your mic closer, thank you, and everybody, thank you.

MR. CANDELARIA: Sorry, Jerome Candelaria, NCTA.

COMMISSIONER KANE: Is it okay now?

MR. CANDELARIA: Can you hear me? I was just asking about the training program and to what extent it has worked in conjunction NANPA video production.

MS. WEBBER: We already have in place training videos for the PA that gives you a step-by-step on how to submit applications through the pooling administration system so we

already have that established and posted to our website and it's getting great reviews.

CHAIRMAN KANE: Rosemary.

MS. EMMER: Rosemary Emmer, Sprint-Nextel. Florence, nice job delivering the presentation. Thank you for coming to do that. I just wanted to second Natalie and say thanks for all the work that you've been doing on the p'ani for all this time for us and for the team.

I just wanted to remind everybody in this room actually that these PA reviews, operational reviews, and the NANPA reviews that are coming up in March and April, they are a wealth of information and I say this every year. If you have a chance to go to one of these, one is in California and one is here in Sterling, in one day you get a whole years worth of numbering information and they deliver it in a way that you can understand what they're talking about.

It's a great place to ask questions. If you see these things in these reports, most of them are quarter to quarter that you just don't really understand, it's a perfect place to do that and I would just encourage everyone to go to these if you can. They put an incredible amount of work into them.

And I guess just contact Natalie if you want more specific detail, so thank you.

CHAIRMAN KANE: Okay, thank you. And Natalie, again what are the dates of those two reviews?

MS. MCNAMER: Natalie McNamer, T-Mobile. It's in our presentation that we haven't gotten to yet.

CHAIRMAN KANE: Okay, you'll get to that.

MS. MCNAMER: It's March 13th and 14th in Concord, California, and then it's mid-April for the NANPA in Sterling, but we also have a conference bridge open.

CHAIRMAN KANE: Very good, thank you. And let me echo, you know, sometimes

to the public this may look as very technical that we deal with here, all these numbers and letters, and acronyms, but particularly we're talking about, this is a very good example of how important this is actually to the general public and to the country.

I noticed there was an emergency for example allocation of a p'ani for Newtown, Connecticut and that just brings home how important 911 and the whole telecommunications systems is to many parts of our lives. Thank you, Florence, and we'll put this in the record as Exhibit 4.

MS. WEBBER: Thank you.

REPORT OF THE NUMBERING OVERSIGHT WORKING GROUP (NOWG)

CHAIRMAN KANE: All right, moving right along we now have the report of the Numbering Oversight Working Group.

MS. MCNAMER: Good morning. I am Natalie McNamer with T-Mobile. I am one of the Tri-Chairs for the Numbering Oversight Working Group along with Laura Dalton with Verizon Wireless, and Karen Riepenkroger with Sprint-Nextel.

A lot of my report has been covered by the NANPA and the PA, and Rosemary stole all my thunder so this should be quick. I'm joking.

(LAUGHTER)

But we wanted to review today, we're going to go over with the NANC the NANPA and PA performance evaluation process that we're beginning to go through, the NANPA change orders, PA change orders, a quick review of the annual reports by the NANPA and the PA, and then we will show our participating companies and our meeting schedule.

On slide three, we have the NANPA and the PA performance evaluation process. Each year we put out the surveys which the NANC had approved at out last meeting to be put out.

There are three surveys this year, one for the NANPA, one for the PA, and a separate one for the RNA functions.

So far as of last Thursday when we completed our presentation, for the NANPA surveys we had 36 industry and other respondents, and seven regulators had responded. For the PA we received 35 industry and other respondents and 16 regulators. And under the RNA we had eight industry and other respondents and one regular respondent.

So at the next NANC meeting we will update the NANC on what the final numbers are for all the number of companies and regulators we've received.

Timeline of activities, from March to May, so beginning rather quickly, the NOWG will begin an analysis of the survey results. We will have the operational reviews with the NANPA and the PA and then we will prepare draft performance report sections and then do a compilation and review of the performance report drafts.

We are scheduled for June 3rd to meet with the FCC to review the preliminary performance reports and we will present at the June NANC meeting for approval of those reports.

Are there any questions on the NANPA and PA performance evaluation process?

CHAIRMAN KANE: Questions?

MS. MCNAMMER: The next two slides we just have the outstanding NANPA and the PA change orders which John and Florence went over already.

The annual reports, we just wanted to let the NANC know that we have reviewed NANPA's annual report already and that will be published towards the end of March I believe, John had reported, and then we will be getting the PA's annual report soon and we will have time to provide any feedback.

Both the NANPA and the PA are very generous in allowing the NOWG a preview of the reports so that if we do have any feedback we can provide it to them before they publish it so we do want to thank them for allowing us to have that initial review.

The next item is we have our NOWG participating companies and if you heard on the bridge earlier, who is not listed on here yet is a very brand new member, Sally Getz from the Indiana Utility Regulatory Commission. She will begin attending the NOWG meetings with us and we are very happy to welcome her.

Next are the dates for the NOWG upcoming meetings. The PA operational review in Concord will be March 13th and 14th, and then the NANPA operational review in Sterling will be April 16th and 17th, and we do have conference bridges available.

So if anybody is interested in any of the meetings of the NOWG they can contact one of the three Tri-Chairs at the e-mails listed on the last page.

Are there any questions on the NOWG presentation?

CHAIRMAN KANE: Any questions on the bridge? Thank you very much. We'll put this in the record as Exhibit 5.

And the report of the North American Numbering Plan, Billing and Collection Agent, which will be Item 6.

REPORT OF THE NORTH AMERICAN NUMBERING PLAN BILLING AND
COLLECTION (NANP B&C) AGENT

MS. MARCOTTE: Good morning. My name is Faith Marcotte and I'm from Welch LLP. My voice as you can see is a little harsh so if you have trouble hearing me or understanding me, please let me know.

So we will start with the regular financial report on page one. You can see that we have

$1.8 million in the bank and receivables are about $200,000. That leaves us with total assets of $2 million. We have about $545,000 of liabilities which leaves us with a Fund balance of $1.5 million. The liabilities are listed below and that's generally one month of fees for the vendors.

On page two is a forecast of the Fund up to June 13th which is our funding year. In the total column versus the budget column, you can see we were anticipating $1.5 million of a surplus which was our contingency provision. We are now anticipating a balance of $435,000. In the box on the bottom right hand of the page you can see where the differences lie.

The bulk of the difference is the admin contract, NANP admin contract. It came in at $1.3 million more than the previous year, and the other offsetting balance is $300,000 that we had provided for carrier audits which it does not appear will be happening so we're now going to be left with $400,000 in our Fund at the end of June. That's what we anticipate.

On page four it shows the accrued liabilities for the next six months. You can see the balance goes down after March and that's when the NANP admin goes down to the regular amount of $160,000 a month, otherwise there are no changes coming up.

On page five is our deliverables and there is nothing new here to report, just the regular items. Our contract is extended to the end of March and I believe we will be hearing soon about that one.

The next part of our report is on the budget and contribution and that's for the next year funding year. It goes July 13th to June 14th.

If you go to page three of that report it holds the numbers which is our budget for the 2013-2014 year versus the 2012-2013 year. So the NANP admin is projected based on the contract, that will be to $2.2 million less what Canada and the Caribbean countries will be paying which is $128,000 that leaves $2 million that the U.S. carriers will be paying.

The Thousands Block Pooling, that number is just based on the previous year since we don't know what the new contract will be. P'ani admin is based on the monthly amount put aside for p'ani. The carrier audits, we're using the same $300,000 that we have in the previous years.

Billing and Collection agent, again we don't have our contract so it's based on the previous year. The data collection agent, the amount of $57,000, that's based on data from USAC. The operations audit is based on the previous year as well as the next items, bad debits, interest income and the late filing fees, those are all based on the previous years.

And then we have provided $1 million for the contingency. It's less than the previous year because in the previous year we also had the NANP admin contract that had not been negotiated yet so we've allowed a million for the pooling contract and our contract to be re-bid, so it's down to $6 million and $5,000 that the U.S. carriers have to fund.

Are there any questions on the budget?

On the next page, normally we provide options based on using the funding balance up or not, but it's well established that we always use the fund up so we have now changed it since there is uncertainty as to the revenue number of the carriers, and we will not get that data until the end of April, so the Working Group decided to provide options based on various levels of what that revenue will be.

So option one is based on $198 billion, option two is based on $196 billion, and option three is based on $194 billion. So the various contribution factors are 0000280, 283, and 286. So the Working Group will be talking to you about those and how we are going to proceed from there.

Are there any questions?

CHAIRMAN KANE: Are there any questions on this report? Okay, I know we'll go right now into the Working Group but will put this into the record as Exhibit 6, the two reports here. Rosemary will have the report of the Billing and Collection Working Group that follows right on this report.

REPORT OF THE BILLING AND COLLECTION WORKING GROUP (B&C WG)

MS. EMMER: Good morning. I'm Rosemary Emmer with Sprint-Nextel and I Chair this committee with Tim Decker of Verizon.

The Billing and Collection Working Group is responsible for overseeing the performance of the functional requirements for the B&C agent which is Welch and we review the performance of the B&C agent and track deliverables of their performance with respect to the functional requirements.

The B&C Working Group determines the financial impact of the numbering initiatives and activities that may need to be included in the budget, which affect the contribution factor. So that's what we do.

So our current activities, we are monitoring the monthly billing and collections and deliverables. We are in the midst of planning the budget and contribution factor for the upcoming fiscal year which I'm going to go into more detail about in a minute, and we have just finished developing something new, a contingency plan to have on file for future reference in the event and extenuating circumstances were to arise where our expenditures exceed the proposed budget.

So this plan was just finalized on Tuesday and it will be delivered shortly on e-mail if it

hasn't already but we're going to talk about it at the next NANC meeting for review and possible endorsement or codification or whatever from the NANC.

And I just wanted to point out two special people to thank, Mary Retka and Michelle Thomas. They did pretty much all of the work on this particular contingency plan and they did a nice job so thank you.

So Faith went over the specifics of the proposed upcoming budget but I would like to summarize at a high level just to make sure everybody understands exactly what we're going to ask the NANC to reach consensus on today as far as the contribution factor because it is different than we have done in the past.

So basically we need a budget of approximately $6 million and we plan to use up all the surplus that we have had at the end of the year and roll it into next years budget as we've done in the past. So that's about a half million so that leaves us about $5.5 million to budget for. So keep in mind we have $1 million in the Fund for contingency purposes this year.

So we fund the budget by dividing the budgeted amount required, so that's $5.5 million to be funded by U.S. carriers, by the revenue base to get the contribution factor. So we asked USAC for preliminary revenue numbers at the end of April based on our submitted together, our 499s.

So the FCC will send out the pubic notice in May so we can bill in June. So that's sort of like the timeline that we go on every year for sending out the contribution factor and how we get to that number and that of course will remain the same.

But the B&C Working Group generally makes the best guess as to what the revenue numbers will be and we ask the NANC to reach consensus on that particular contribution factor.

So for a decade or so that worked out just fine but because of the instability in the

economy the last few years we've had to ask the NANC to change the contribution factor at the last minute. We've done this now a couple years in a row --

(Recording Interrupted)

MS. EMMER: -- It's just administratively challenging and we thought we should have a lesson learned from it.

In 2009 recall, the revenue base dropped a shocking $17 billion, and then 2010, another $8 billion, in 2011, another $8 billion and so who can really plan for that.

So this year to simplify the process, we have reached agreement at the B&C Working Group to roll out a contribution factor range.

So last year the revenue base was $202 billion. This year we would like to go ahead with a contribution factor between $4 to $8 billion or lower -- not a contribution factor but based on the revenue based coming in at $4 to $8 billion lower, and so that's how we got the $194 billion to $198 billion, that's in the (unintelligible) so that's how we got to those numbers.

So we would like to be able to proceed with the contribution factor that is going to be -- whatever the contribution factor that's going to come in provided the revenue base falls between that range.

Then instead of having the NANC re-reach consensus on a different number, we just roll out one number in between NANC meetings. On e-mail we roll out the actual contribution number provided it falls within this revenue base range and then we ask for objections, that kind of thing.

So that way we're not confusing the whole world by changing contribution factors. We're going within the range based on the revenue base.

Does anyone have any questions on it? Yes.

MR. GREEN: Kevin Green, Verizon. I was just wondering how you came out with the projections of $4 to $8 billion less.

MS. EMMER: Well, in 2009, the revenue base dropped $17 billion. In 2010 it dropped $8 billion, and in 2011 it dropped $8 billion so while we'd like to think it's not going drop, we're thinking that it's a dead guess that perhaps between $4 to $8 billion.

MS. MCNAMER: Natalie McNamer, T-Mobile. So is what you're going to ask for is a range of a factor, like when I'm looking here like from .000028 and .000286, or we're just going to wait to see what the revenues come in at?

MS. EMMER: Yes, we're just saying that we're guessing that the revenue is going to come in $4 to $8 billion less than it did last year, therefore we would have a contribution factor somewhere, whatever the contribution factor comes out at.

So we would like consensus that we can just move on with that, whatever that contribution factor is today, but we're going to be sending that out via e-mail in between meetings so everyone will know exactly what the contribution factor is and they'll be able to send in an objection, you know, if we needed to call an emergency meeting or whatever. We've talked about doing that before when we've rolled out the contribution factor early before then we could.

And then of course anyone who wants to join our B&C Working Group calls, you're welcome to join them in between now and the time the contribution factor is set if you'd like.

CHAIRMAN KANE: So just to be clear, first on the timing, what is again the date at which we will know what the actual revenue base is?

MS. EMMER: Well, we don't really have a specific date. We just asked USAC for the preliminary numbers at the end of April because we have to wait for the 499s to be submitted.

CHAIRMAN KANE: Okay, the 499s are due on April 1st of each year, right?

MS. EMMER: I don't know what the date is.

CHAIRMAN KANE: That's what it says, US carrier reported on April 1st 2012 for form 499 so I'm correct in assuming that April 1, 2013, the 499A would also be due and then sometime after those are all in, there would be a report.

MS. EMMER: Yes.

CHAIRMAN KANE: Is that 30 days? I'm trying to get a sense, between April 1st and the June 20th NANC meeting when in that time period will there be a knowledge, okay this is the revenue base.

MS. EMMER: Okay, so the end of April is when the Welch & Company is going to call and ask for this information and hopefully get it soon after.

CHAIRMAN KANE: Okay, so say April 30th?

MS. EMMER: Yes. But what's important to note is, and the reason why this becomes an issue each year is because our billing cycle is June --

CHAIRMAN KANE: It's very tight.

MS. EMMER: We have to send the bills out and the FCC needs the time to send out a public notice and then we have to follow all those rules and so that's why really between the end of April and the middle of May, you know, we're always kind of in this crunch time with the actual contribution factor number. Does that answer your question?

CHAIRMAN KANE: Yes. If we're going to reach consensus I want us to all be clear as to what kind of timeline we'll be working on.

So April 1st the forms are due. April 30th Welch should be able to be informed what that number is. They will then let you all know. You will send out a notice to the NANC saying

here's the actual number and that assumes that the number is somewhere between $194 and $198, and therefore the contribution factor based on what we discussed today will be X. Let us know if you have an objection within X amount of time.

MS. EMMER: Yes.

CHAIRMAN KANE: So that would be May 15th maybe. Well, no, then there has to be a public notice so somewhere between the 1st of May and the 15th of May, we should expect the notice would go out.

FEMALE SPEAKER: Welch has to send something to the FCC first and then the FCC sends a public notice out and then they still have to have time to gear up to do the billing.

CHAIRMAN KANE: Right, but I'm talking about the NANC approval of or the lack of objection, would be around the middle of May.

MS. EMMER: Yes, I think that's the safest way to say the middle of May instead of actual dates because it's never the same date each year that we get --

FEMALE SPEAKER: It's a challenging timeframe.

MS. EMMER: Yes.

CHAIRMAN KANE: Yes, it is a challenging timeframe.

MS. EMMER: So mid-May is good.

CHAIRMAN KANE: Go ahead, Mary.

MS. RETKA: This is Mary Retka from Century Link. I think the important thing that we've all got to understand from this given the difference in our budget cycle and the fiscal year is that based on everything you can see, obviously this year we're doing 0000254 as our factor and we're looking at something in the 000028 to 29 range.

So it's really important that carriers and I think especially important for those

associations that are here at the table or on the phone, to make sure that their members are aware that that's going to be a higher bill than it has been in the past and if you kind of look over our factor, it has generally gone down until 2011, when it started to ramp up. And so I just want to make sure we're very clear that carriers are aware that there will be a higher factor.

CHAIRMAN KANE: And besides those who are on the phone or at the meeting, what's the process for alerting those carriers, giving them a heads up that the NANC has now, assuming we approve or agree to this process, has approved or agreed on consensus that the factor is going to be somewhere between 000028 and 0000286.

MS. RETKA: Because they will be made aware of it through the public notice, that's why I'm stating that perhaps associations at the table might want to let them know that because the public notice will likely come out right before the actual billing.

CHAIRMAN KANE: Yes, the public notice will come out somewhere around the middle of May.

FEMALE SPEAKER: Or end of May, depending on timing.

CHAIRMAN KANE: Or end of May. Tiki.

MS. GAUGLER: Rosemary, I just wanted to ask more specifically, are you asking for a consensus on again just the range of the billing factor or are you asking that it's going to be tied to those particular revenue amounts?

I guess my question is, is what happens if the revenue amounts are different from this, how is that going to be handled and what happens if it's between, say it's $197 billion, I mean is it just you're looking at the range of the factor or something more specific?

MS. EMMER: We came up with this range just based on guessing and we think that this is what it might come in at so we're asking the NANC to reach consensus on that range at this

point. I mean the revenue base is tied to the contribution factor.

MS. GAUGLER: I understand but I'm saying, are you saying for right now that we are looking at a range between 0000286 and 000028, or are you saying that if it's 0000286 it's $194 billion. In other words, what happens when it comes in $195 billion or are we just looking at the range? I'm not sure if I'm asking that clearly.

We're just asking for this range. There's three numbers here, that's what I'm trying to figure out, or are we looking at a range between the two. Is that third point -- you have three scenarios here. I'm not understanding why we have three and what happens in between those points. That's what I'm saying or are we just a range that's a beginning and an end.

MS. EMMER: Oh, okay, I understand. So I guess as creatures of habit we have always given three options all these years since the very beginning. We've always had three options for contribution factor so not even really I think thinking about that, we've come up with the three I think just out of --

MS. GAUGLER: Illustration purposes in other words?

MS. EMMER: But we're going in between the two.

MS. RETKA: Low, medium, and high. This is Mary Retka from Century Link. So if it is $197 for example, you would see a factor somewhere between 0000283 and 000028.

MS. GAUGLER: Okay, so what you're asking is a range of the factors regardless of -- that it will be calculated based on this. I understand. I'm just trying to understand why we have three points but you're saying it's for illustration purposes.

MS. RETKA: Right, it will give a sense that this is low, medium, and high, you know, if we're right about the range that it comes in on.

MS. GAUGLER: Okay, I understand. So we're really not voting or dealing with

three specific numbers, we're looking a range.

MS. EMMER: Right, which is the difference between all the years and this year.

MS. GAUGLER: Got it.

CHAIRMAN KANE: So you would ask us to reach consensus that there would be a contribution factor somewhere between 000028 and 0000286.

Now Tiki's other question was what if the revenue base turns out to be $190, then we go back to the drawing board because that's a broad --

MS. EMMER: Right. Then we're going to have to let the NANC know ASAP. We're going to have to send a very detailed e-mail explaining exactly what it is and why, and then what the contribution factor would be in that case. And then we might want to have a call or we might do the same, ask for objections depending on how low it is or depending on which --

FEMALE SPEAKER: Could impact carriers much more if the revenue base is much lower.

CHAIRMAN KANE: Right.

MS. MCNAMER: Natalie McNamer with T-Mobile. I mean your factors are just based on the amount of money that is needed to fund this so that money we know, so depending on what the revenues come in, the factor is going to change appropriately. Is that a correct statement?

CHAIRMAN KANE: The budget will be fixed but the revenue can vary.

MS. MCNAMER: Right, but we know what we need to fund so all it is, is figuring out what the factor is for each of us t pay based on what that revenue comes in at, the funding amount is not changing.

CHAIRMAN KANE: Mary.

MS. RETKA: Not necessarily. We have two contracts that have been extended and we don't know where they might come out at.

So look at this year. We were planning on a factor that would reflect a NANPA amount that was similar to what it was in the past and it wasn't and that could happen again this year.

So when you say the budget, it's a forecast. So to the extent you can forecast, you do the best job you can however that's the reason we decided we need a contingency plan because we came very close this year to needing one. And so next year we'll be set up should something in the baseline numbers that we build on come in differently.

But the other piece that Rosemary has been talking about on the other end of it is how much to make the factor pull in from the participants is based on the revenue. That's the other unknown. You do the best job you can when you're budgeting.

CHAIRMAN KANE: But the budget that this years decision will be based on will be based on the $6 billion budget which has a million dollar contingency in it, and next year assuming what comes up with the recommendations on a contingency plan, there may be another factor that has to be --

Are there any other questions about this recommendation from the Working Group?

All right, let me restate it again then. We're being asked to reach consensus that the contribution factor for the coming year would be somewhere between 000028 and 0000286 based on an assumption that the revenue base would be between $194 and $198.

And that we are agreeing to a process that as soon as that revenue base is known, that the NANC members will be notified by e-mail as to what the actual contribution factor will be and there will be an opportunity to object, and barring any significant objection whatever that calculation turns out to be between that range of contribution factor, that will go into effect.

And that if the revenue is outside of those perimeters there will need to be a longer, more detailed e-mail and maybe even a conference call process. Any questions about that?

All right, do I hear any objection to going forward with this process for this year? Anyone on the phone? Okay, thank you.

Then I will say we have reached unanimous agreement on this and would again as Mary said, urge the associations to let their members know, give them an alert because it looks like whatever happens there is going to be an increase in the contribution factor, and in planning ahead for budgets, carriers, rates et cetera, the sooner they know the better.

And hopefully would also urge the USAC as soon as they get that information to make it available as soon as possible to Welch, as soon as possible after April 1st.

And maybe in that contingency plan, when you're looking at the contingency plan, we also might look at the timing of some of these things. I don't know how much it's written in stone. The forms come in April 1st and the billing is July 1st, June 1st?

MS. EMMER: The billing is June for July.

CHAIRMAN KANE: June, that's a very tight timeframe given it has to be a public process and if there's some way to look at the change in that. Okay, thank you very much and thank for your work on this.

MS. EMMER: Thank you. I still have a little more. So page six shows the contribution factor history. So knowing you're going to get an e-mail about this in May or so, and looking for potential objections you might keep page six or at least just note that that's where it is so you can look at the history.

Page seven shows who our current carrier participation is on this team and we always welcome new participants.

Page eight has our upcoming meeting schedule as well as Tim Decker's and my contact information so if you have any questions about this moving forward or if you just want to join the calls, you know, the couple of calls that we're going to have between now and the middle of May, feel free to reach out to either Tim or myself and we'll be happy to answer your questions or invite you to the meetings.

CHAIRMAN KANE: Thank you very much. And if I haven't done it already this will be Exhibit 7 for the record.

The next item is the Number Portability Management LLC report, the FON PAC. We will mark your report, your document as number 8.

REPORT OF THE NORTH AMERICAN PORTABILITY MANAGEMENT LLC (NAPM LLC)

MR. DECKER: Thank you. Good morning, everyone. My name is Tim Decker with Verizon Communications and I Co-Chair the NAPM LLC along with Mel Clay with AT&T.

Most of my report is going to be on the FoNPAC activities, which is the future of endpact. We have no LLC activities to report but that doesn't mean there wasn't any LLC activity.

So what I'm going to do is outline what the FoNPAC has received, what they have done, and what the future dates are.

So on January 24th, the SWG provided the edits from the FCC on the RFP documents which was the RFP, TRD, and the vendor qualification survey to the NAPM LLC and the FON PAC for review and comment.

The FoNPAC met and reviewed the documents and provided the SWG with suggested

edits and were approved by the NAPM LLC on January 28th.

On January 30th, the FoNPAC Co-Chairs and the SWG met to review the documents and reach consensus on suggested edits that were provided to the FCC.

On February 5th, the FCC issued a public notice releasing the RFP documents to potential respondents and commencing the bid process.

A public copy of those documents is available. For any interested party you can find the RFP documents on the NAMP LLC public website which is www.napmllc.org and that would be under the RFI/RFP tab under the resource documents for anybody in the public who like to look at those.

Okay, the following dates were included in the RFP which were provided by the FCC.

On February 5th, the vendors may request logging credentials to access the ISTA smart source tool from the FON PAC and they have to do that in order to respond to the RFP's. Again on February 5th the RFP survey, vendor qualification survey, and the TRD survey were made available on the ISTA tool to the vendors.

The date that they are due back, April 5th is when the responses are due back. It's the cutoff date. August 5th, the FON PAC will make a recommendation to the SWG for selection, and then the estimated date for the FCC to approve the vendor selection is September 20th.

And that's all I have. Does anybody have any questions?

CHAIRMAN KANE: Thank you. I want to thank the FON PAC, and we will have the report next from SWG. Thank you for really not only work (unintelligible) but particularly for turning that around so quickly when we finally did get it back from the FCC, for you all to look at and to give it that review and get it back. I think that was a real milestone getting that out on the street if you will on February 5th. So thank you.

And I know you've got a lot of work ahead in that time period after April 5th, between April 5th and September, but I want to thank you at your end for keeping it on time.

MR. DECKER: You're welcome. Thank you.

CHAIRMAN KANE: And the SWG report.

REPORT FO THE LNPA SELECTION WORKING GROUP (SWG)

MS. BERKOWITZ: Good morning. I'm Ann Berkowitz with Verizon, and along with Tiki Gaugler of XO, and Commission Whye of Massachusetts, I'm one of the Tri-Chairs of the SWG.

Our report basically duplicates what Tim just reported so I will spare you a few minutes of time. We worked through with the RFP on the same dates and when we received at the FCC, worked with the FON PAC and the LLC in getting it out.

And I don't have anything else to report at this time for the SWG. Any questions?

CHAIRMAN KANE: Thank you. I'll repeat our thanks to all of you for all of your work on that and staffs too, I know working with the members of the SWG.

MS. GAUGLER: I just think the key date to point out is that we will be looking at this at the NANC sometime around August of this year, just for everyone to note that.

CHAIRMAN KANE: Thank you. The SWG report will be Document 9 for the record.

REPORT OF THE LOCAL NUMBER PORTABILITY ADMINISTRATION (LNPA) WORKING GROUP

MS. JORDAN CAMPAGNOLI: Hi, I'm Paula Jordan Campagnoli with T-Mobile. I'm one of the Chairs of the LNPA Working Group along with Linda Peterman and Ron Steen of AT&T.

This report basically will cover the elections that were held at the last LNPA Working

Group meeting, update on the Best Practices documents that we've been working on, and also the development of a new impact interface.

So the first subject is the LNPA Working Co-Chair election. Elections were held for the Co-Chair position vacated by Gary Sacra. Ron Steen of AT&T was nominated and elected to fill this position.

Also the nominations and elections were also held for the Co-Chair positions currently held by Linda Peterman of EarthLink Business and Paula Jordan Campanoli of T-Mobile and both Linda and Paula were re-elected. We couldn't get anybody to volunteer so we're still there.

(LAUGHTER)

And so the LNPA would request the NANC to approve the elections of Ron Stein, Linda Peterman, and Paula Jordan Campanoli to serve as Co-Chairs of the LNPA Working Group.

CHAIRMAN KANE: Any objection to that recommendation? It's unanimous.

MS. JORDAN CAMPANOLI: The LNPA Working Group as you all know is continuing to work on the Best Practices documents. We are in our final stages and so at the March meeting it is planned that we will do one final go through.

The carriers have been working this Best Practice document internally in their companies and we have requested them to come to the March LNPA Working Group meeting so that we can finalize the document so we're hoping to have it done at the March meeting.

There are two Best Practices that we had sent to the NANC quite a while ago. It's Best Practice 67 and Best Practice 70 and we were wondering if there's any status on those two Best Practices.

MS. JONES: This is Marilyn Jones, FCC. Those Best Practices are still being worked at the Commission and there is no estimated time of release.

MS. JORDAN-CAMPAGNOLI: All right, thank you.

MS. JONES: You're welcome.

MS. JORDAN CAMPAGNOLI: Okay, any questions so far? Okay, development of the new impact interfaces, we continue to work -- it's NANC change order 372 which develops technical requirements for the new (unintelligible) impact and impact to LSMS, interface utilization extensible markup language XML as of new protocol. So we're still working on that.

The working assumption is that the new interfaces will coexist with the current CMET interfaces and would be an optional impact for endpact users so the endpact user will still be able to use either the CMET or the XML when it's turned up.

Any questions? Okay, that's the end of my report.

CHAIRMAN KANE: Two timing questions, when were those two Best Practices sent to the FCC?

MS. JORDAN CAMPAGNOLI: Best Practice 67 was sent I think in May of 2011. It was approved by the NANC. And September 2011, for Best Practice 70 was approved by the NANC at those meetings.

CHAIRMAN KANE: Thank you.

MS. JORDAN CAMPAGNOLI: Any other questions? All right, thank you.

CHAIRMAN KANE: Thank you very much. This will be Document 10.

The Industry Numbering Committee, the INC report.

This will be Document 11. Natalie.

STATUS OF INDUSTRY NUMBERING COMMITTEE (INC) ACTIVITIES

MS. MCNAMER: It's still good morning. I'm Natalie McNamer with T-Mobile. I will now be presenting the Industry Numbering Committee report to the NANC.

As I said, I'm Natalie McNamer with T-Mobile and I am the INC chair. I assist in leading the INC along with my Vice-Chair Dana Crandall with Verizon Wireless.

Today's presentation is also pretty brief. I wanted to review again and have the information here for all new NANC members and even current NANC members, information about the INC, and what the INC is, and what we consist of and what we work on.

Page three of our presentation just talks about INC meetings and our membership. Since the last NANC meeting we held one face-to-face meeting in February and our next INC meeting will be held in Minneapolis, Minnesota on April 23rd to the 25th. You can go to the ATIS website to see information on our future meetings.

To become a member of INC or ATIS, we have included in our presentation the links to that and if any folks need to understand more how the INC operates we also included that link, or any members can feel free to contact myself or Dana Crandall if there are any specific questions or anybody from the ATIS staff would be glad to help you. Jean-Paul is actually here today if anybody has any immediate ATIS questions for him.

Are there any questions on general INC or ATIS?

Okay, on slide four, the INC wanted to review with the NANC Issue 719 which title is, Available Red Blocks or PSTN Activation Has Not Been Confirmed.

Currently, you know, pooling has done just a great job that everybody has been using the pools. Well, now the pools don't have that many blocks left in them so most rate center pools are now being replenished by the opening of new codes rather than companies being able to donate blocks anymore.

When a new code is opened the blocks that aren't assigned to the code holder are placed into the pool with the future available date and marked in red so that you can easily see that the

code holder has not yet confirmed activation in the PSTN and that all other code holder

responsibilities have been met. So on top of being in the PSTN, there are other things that the

code holder must do to make these blocks viable for other carriers to use.

So when the code holders don't fulfill these responsibilities within the required

timeframes, there are negative impacts to the block holders that have to accept these red blocks

from the pool because there are no other blocks available.

The INC added text to the Thousands Block Pooling guidelines outlining what the

negative impacts are to the block holders, to note that after the code holder has belatedly loaded

the code in the NPAC, NPAC personnel will now have two business days to add that block into

the NPAC.

And we wrote in verbiage expanding the PA's ability to facilitate and streamline

communication between the block holder and the code holder when the code holder hasn't

fulfilled the responsibilities. This is kind of a confusing issue so I want to stop here and see if

anybody has any questions.

The next issue we talked about at the last NANC, it's Issue 748 and it's Impacts on

Numbering Resources and Numbering Administration with Transition from the PSTN to IP. As

we presented last time, we opened this issue to begin monitoring this type for what's going on

with these projects.

At our last INC, we had two presentations given to us, one was called the Future of

Telephone Numbers, TN 3.0 by Tom McGary from NeuStar, and that presentation was similar to

a presentation given to the Future of Numbering Group in November 2012, and provides a high

level global view of how TNs may be used in the future.

The next presentation was Begin the IP Transition in Numbering, Steps away from TDM

Standard Operations, and that was given by Mark Lancaster of AT&T and that included a more detailed view of how the TNs may be obtained, ported, routed, and reported as the industry transitions to IP.

So we are in the process of still collecting everything.

CHAIRMAN KANE: Are those two documents available, those presentations?

MS. MCNAMER: All of the documents on the INC website are available to ATIS members and any State Commissions can have access to those. You just have to contact ATIS. Veronica Lancaster can get access to the State Commissions.

CHAIRMAN KANE: Okay, but they're not publicly available yet?

MS. MCNAMER: No, they're not.

CHAIRMAN KANE: Okay, that's kind of a prelude to the last two items on the agenda. We're kind of entering the future now and a lot of thought --

MS. MCNAMER: Yes.

MS. HOWARD: When you say that these documents are available to ATIS members, is it the general membership or only members of INC? That's what I'm always confused on.

MS. MCNAMER: Let me have Jean Paul from ATIS answer that. There's different ways to be a member.

MS. HOWARD: I understand all that. I'm asking directly, are those two documents available only to INC members?

CHAIRMAN KANE: Come pick up the mic on the table. Pick up Natalie's mic.

MR. EMARD: My name is Jean-Paul Emard. I'm with ATIS. These documents are available to INC members, yes. The answer is to INC members, absolutely.

MS. HOWARD: (Off microphone, unintelligible)

-- there are also ATIS memberships.

MR. EMARD: If you are an ATIS member that is not a one fee pays all member, you only have access to those groups in which you participate. So if you are a member --

MS. HOWARD: Okay, that answers my question.

MR. EMARD: So if you're a member of the OBF, the ordering and billing forum of which we have many, they would not have access to the INC documents because they only belong to the ordering and billing forum. If you are a one fee pays all you have access to everything that ATIS has within its password protected site.

Getting back to INC, as Natalie I believe has alluded, anyone, I want to make sure I get this correct, any ATIS member obviously has access. Any ATIS INC member has access to the INC documents, and any state regulator has access to those documents as well.

So if you are new member sitting around the table or on the phone, you may contact Veronica Lancaster who was mentioned I believe on the last slide of the presentation and she will work with you to get you your password in order to be able to follow along with the INC work. I hope that answers the question. Thank you.

CHAIRMAN KANE: But Jean Paul, they still would be considered confidential documents only for that use, right? When a State Commission gets a document and depending on their FOIA requirements, how it is to be kept confidential so that's important for the states to know.

MR. EMARD: That is correct. It is "fair use" by the obtainer of the document. It is not to be freely transmitted or put on to other public websites.

CHAIRMAN KANE: Thank you.

MR. EMARD: Thank you very much, Madam Chairman.

MS. HOWARD: I mean interested parties I'm assuming could also contact the contributor which we have included in here.

CHAIRMAN KANE: Sure. Thank you very much. You have a little more?

MS. MCNAMER: Yes. The next page, on page six we have listed the issues in initial pending which we've talked about kind of when we reviewed the change orders with the NANPA and PA. That's all that those are.

And then the issues that we placed into final closure since the last NANC meeting are on page seven.

The last page of the presentation includes all of the relevant INC web pages and Veronica's contact information for anybody that needs to contact her.

CHAIRMAN KANE: Thank you very much. And then moving into our last two presentations, I think we're picking right up on that theme of the future of numbering and the transition to the IP world, the Future of Numbering Working Group. This will be Document 12.

REPORT OF THE FUTURE OF NUMBERING WORKING GROUP (FoN WG)

MR. NEWMAN: Good morning, Adam Newman, Telecordia Technologies. I'm one of the three Future of Numbering Working Group Co-Chairs along with Don Gray from the Nebraska Commission and Jim Castagna from Verizon.

I have a brief presentation for you today. The first slide lists our conference call meetings since our last report to NANC. We met January 2nd and February 6th and that's a trend. As you'll see in the last slide we meet the first Wednesday of every month.

So slide three is the beginning of our active issues table. They are not in numerical order. They are sort of in the order of newness and they're being worked.

The issue 006 is our machine-to-machine, M2M demand issue. It was submitted earlier this fall. Actually two meetings ago at our January meeting we agreed to a number of next steps to begin progressing this issue and so those are within the next steps column to the right and we're going to look to measure the ongoing consumption of the non-geographic resources that are being used for M2M today. And I actually think Henning's presentation is going to talk a little bit about that as well.

And we're doing work to identify the standard activities focused on the long term solutions for machine-to-machine addressing. And those are sort of the first two steps to this process and as a result of those two steps we will then agree to sort of what the next steps would be.

And then for issue 007, which is the issue that was brought in on PSTN to IP transition, it was brought in at the same time and is in the same status so at our January meeting we agreed to a work path for that.

And so the initial one is to evaluate the recommendations that were being developed and finalized and then any resultant regulatory, or mandates, or NANC directives that come to us as a result of things like the PSTN to IP TAC recommendation that's been recently submitted.

And in addition ATIS has just released its report as well on PSTN to IP transition that has a numbering appendix that we haven't looked at yet. It was just publicized but I know INC will be looking at it and there may be things in there the Future of Numbering Working Group may also want to look at.

And so once we look at those recommendations and evaluate those items, and I think we'll hear some more from Henning's report that may also roll into some of these issues, we'll agree on what our future actions on that particular issue are.

CHAIRMAN KANE: Thank you very much. Any questions?

MR. NEWMAN: So we do have a little more.

CHAIRMAN KANE: Okay, just on that part, no questions.

MR. NEWMAN: If there are questions on those two issues. So there are some things that are related, and some of our other issues.

So issue one, which we haven't worked in a while, is new and future services that we're keeping open to monitor for new services that may come in and consume resources.

And issue two is the telematics and the use of NAMP numbers. Sort of the work that we were doing there has morphed a little bit into the two newer issues on MTM and PSTN to IP transition.

We're keeping them open for now in case they have some independent activities that aren't resolved by issue six and issue seven but it may be the case that if we do work issue six and issue seven, that issues one and two will either be withdrawn or closed without other work. It's one of those -- it's sort of while they're open they're not being actively worked while we work six and seven.

Issue 004 is geographic issues impacting NAMP numbering policy decisions so this is the issue that was opened to look at the continuing geographic desensitization of number usage.

There was actually a specific NANC action item for another issue that got folded into the issue quite a long time ago when the OUR of Jamaica was a member of the NANC, for us to look at the use of NAMP numbers outside of NAMP jurisdictions.

I'm paying a little more attention to this, this time because this is also at least somewhat related to a couple other points that Henning's is going to present shortly after me. So we do have open issues. What it comes down to in geographic use of numbers in PSTN to IP transition

and MTM use of numbers in future of numbering where we have projects opened that we're beginning work on, that are related to these issues.

Any questions on our open issues?

So slide five is our either closed or not accepted issues. We have a couple closed issues and the one issue not accepted that I referred to is that action item that's been folded into the geographic issue.

And then on slide six as I mentioned in FON, the Future of Numbering meets the first Wednesday of every month. The next meeting is Wednesday, March 6th. If you would like to be added to the FON mailing list send me an e-mail and generally I add you before we send things out for the next months meeting and that's how you'll get the acknowledgement that you're added.

So that was my report for today, unless there are any questions.

CHAIRMAN KANE: Thank you.

MR. NEWMAN: I'm sorry, one thing. So this goes to Suzanne's question a little bit earlier. So as Natalie mentioned, the TN3 auto presentation was given to us at Future of Numbering. We did specifically seek permission to post that to the Future of Numbering Working Group portion of the NANC website. And so I don't recall if I completed my action item to make sure that got posted yet but it will be posted from that perspective.

CHAIRMAN KANE: Thank you very much. All right, so for the final presentation we have a guest, I guess we're their guests here, but he is part of the FCC and Henning Schultzman is going to give us an overview and some information on sort of what's going on, on the technology transition work that's going on I guess internally at the FCC and it's impact on numbering.

As you recall at our last meeting at the end, we said, and this is really something we've seen for the last two presentations also, that we're going to need to pay more attention to.

The IP transition, the technology transition, the growth of machine-to-machine, and then I liked that word that Adam used, the geographic desensitization of numbering usage. I can't think of an acronym of it and please don't think of one for it, but desensitization.

All right, you have a presentation. It's up on the screen but we also handed out paper copies of it as well. And thank you. If you would introduce yourself, tell us what you do at the FCC, and then what this group is all about and what you'd like to share with us.

NUMBERS AND THE PSTN TECHNOLOGY TRANSITION: UPDATES FROM HENNING SCHULZRINNE, FCC'S CHIEF TECHNOLOGY OFFICER, BASED ON THE WORK OF THE FCC'S TECHNOLOGICAL ADVISORY COUNCIL, THE FCC'S TECHNOLOGY TRANSITIONS POLICY TASK FORCE AND THE FTC-FCC CALLER ID SPOOFING PREVENTION EFFORTS

MR. SCHULZRINNE: Thank you. Thank you first of all for the opportunity to talk about a topic that I think we will be hearing a lot more about, not just me, actually many more people, because I think more then in the last decade or so, we'll be seeing either in an organized fashion or maybe not so much, a dramatic change in how numbers are used, what consumers expect of numbers, how the industry is organized and all of these things. I think it will be probably the largest single change since say local number portability.

So I'm going to try to see if I can remember to do that. So you'll have your paper slides and we also for those who prefer to look at a screen, there's a version shown on the screen as well.

CHAIRMAN KANE: And we'll put the paper copy in as Exhibit 13.

MR. SCHULZRINNE: Excellent, thank you. So I'll talk a little about the technology transition policy task force which is an internal organization, a group of people within the Commission that is looking broadly at topics related to the transition of the public switch telephone network from primarily a TDM circuit switch environment to an all IP environment, which obviously I suspect all of you in some way or another are involved with or at least affected by. It is at this point not a rule making body. It is a body that looks at a broad range of related topics.

Also as was briefly mentioned before, the FCC has had a Technological Advisory Council also known as TAC for many years. The TAC looks at a broad range of upcoming technology issues in the wireless space, wireline space, machine-to-machine, and last year looked at the transition of a PSTN, and numbering and databases was one of a sub-group that I will report on.

As has been mentioned a few times, machine-to-machine as opposed to human users of numbering resources are becoming increasingly important. I'll say a few things about that as to what I believe some of the impacts might be.

What I'm trying to initiate here and I really look forward to discussion both within this forum as well as on an ongoing basis going forward, is that we take a broader look at numbering telephone numbers, 164 numbers and other numbering resources as not completely divorced from what's going on elsewhere, in particular, internet space.

Not just in the telephone internet space and real time communication space, but what else is happening because I think we can learn a number of things, namely what others have done in the area of IP addresses and domain names in particular that we can use as we transition numbers to see which of those models or aspects of those models might be applicable as options going

forward.

And I'll talk briefly about some possible technical considerations from an all IP environment as well.

Next slide, please. So the task force that the Commission has set up is essentially an attempt to recognize that the transition to an all IP environment that will be taking place or already is taking place, is not a single office affair but really requires contributions by everybody.

So we have as a fundamental notion the technology changes but some of the high level objectives don't. We want to continue at the Commission to protect consumers. We need to insure public safety. We need to maintain an enhance universal service and preserve competition. Those are goals that really don't change just because the transition technology changes.

We are currently in the phase of gathering data on what would be the impact on a technology, economic, policy basis for that transition and then look at existing policies that may need to be changed as well as new policies that do what I suspect we all want, namely we want to encourage continued investment innovation and numbering is not the largest but certainly one part of that, empower and protect consumers.

Again I think we need to remember numbers are probably the single most important part of what a telephone system and related aspects present to the consumer besides voice or video aspects themselves, promote competition.

Again numbers have and will continue to be a crucial aspect of insuring and enhancing competition as well as maintaining resiliency and reliability in that, in particular we want to continue to insure that if you have a telephone number regardless of who you are, you can reach

that number. That may seem obvious, and why would that not happen. It doesn't happen all by itself.

I don't know if some of you are familiar with other countries but for example in Lebanon, depending on which number you have to reach, you have to have a handset of that one, recalling early parts of the U.S. history pre Bell System.

Let me talk about the next slide. Technology Advisory Committee, the TAC, has looked at a number of recommendations, I won't read through all of those but you will see some of those highlighted in more detail in those.

I should emphasize for those of you not familiar with TAC, the TAC is a federal advisory committee. It does not make Commission policy but we look to the TAC to identify issues, solutions, and approaches to help us address all of these issues.

The theme I would say -- I would like to highlight a few items both in near term and longer term. The current model that has evolved where numbers have acquired additional flexibility and functionality over time probably has reached somewhat of a breaking point. It is time to look more fundamentally as to what we want numbers to be in an all IP, mobile heavy at least infrastructure space where geography is becoming less important to consumers.

Consumers retain for example their cell phone numbers long after they might have moved out of a certain area, where issues such as toll free numbers don't necessarily have the same meaning in an environment where those numbers really aren't toll free in a mobile space, and where increasingly we are facing an environment where not all actors are of a kind that are assembled around the table, namely upstanding participants in telecommunication infrastructure but where some are abusing the infrastructure for economic gain or even more nefarious disruptive purposes, so that we have to insure that numbers remain a trustable part of the

infrastructure which increasingly is no longer the case.

Thus privacy security, anti-spoofing are as important as issues that we've long dealt with such as portability and we also have to as (unintelligible) in more detail, look at the impact of non-human users, particular machine-to-machine communication in that.

So you can see with a recommendation, I'd be happy to talk about any of those in more detail but you'll see some of those elaborated as we go forward.

Next slide; the potential Commission actions that they suggested was to look at a more formal rule making on the numbers and identifiers, some of the issues related to the Vonage petition that will be appearing. I will also look at those in more detail.

Also as we transition from an environment that is geographically oriented in terms of billing and other factors, that as we move to a more bill and keep environment because of USF reform, that some of a construct such as ladders and rate centers may not be nearly as important as they were. And we will probably look at other IP providers to see how we can better integrate those into the broader infrastructure beyond just voice.

Next slide; we obviously by mandate, mainly talk here about 10 digit numbers however we should recall that from a consumer perspective there are any number of other numbering plans that have evolved over years and some of these have been mentioned earlier today, the (unintelligible) and star numbers that are used, the voice short codes, SMS short codes, and 911 codes, toll free numbers and premium numbers.

One thing that I think it's worth remembering is that it is clear that if somebody were to come to us today as a community and say design some numbers that are non-geographic, shorter then 10 digits, and have certain properties, that we would end up with a system that looks the way it does today.

There is no rational way that I can see from a consumer user interface perspective for example, that certain things only work for SMS, others only work for voice, some work in certain areas, some work only from certain cell phone providers, not from land line, or voice over IP.

From a consumer perspective that's hard to rationalize. There are technical reasons or historical reasons but not I would argue consumer facing reasons in that.

And as consumers increasingly see these services as integrated services as opposed to separate services, those reasons I think should lead us to look again as to whether we can unify those in a sensible way so that if that makes sense then SMS short codes are just as dialable on a voice of IP device as they are on a mobile device, on a land line device that once it has IP will have text capabilities built into it and all of those, so that those distinctions only remain if they are indeed technically justified or have other justifications beyond just simply historical artifacts.

I also wanted to point out that we are not alone even though obviously we are all kind of concerned about telephone numbers that it is now a 30 to 40 year history of other identifiers that for many users are probably at least as important as telephone numbers are.

Here I have tried since it was probably most relevant to compare three types of identifiers, namely comfortable well familiar phone numbers, the domain name systems, the fcc.gov type of thing, and IP addresses so those are the lower level 32 bit, 128 bit identifiers for IP version six that are used to identify network interfaces and are generally not user visible.

In the telecommunication networking business we generally distinguish two roles for these types of entities, namely phone numbers, domain names, and IP addresses. Namely they can serve as an identifier, they identify something.

It could be a device, a human, a service, whatever it happens to be, or they could be a

locator, meaning to actually help us to find whatever network, not so much for human but a network to find where it is and how to get to it.

And almost all systems have evolved by historical evolution and technical necessity aspect of both. Clearly the phone number was initially largely an instruction set to mechanical switches to perform a certain sequence of operations to reach a certain piece of copper cable, reaching a certain subscriber outlet.

So they were primarily locators but they have become identifiers in a sense. They are largely no longer used in a way of routing directly as in identifying a particular port because they can move around by forwarding and other means.

Domain names have always been only identified --

(Recording Interrupted)

MR. SCHULZRINNE: -- Don't tell you where they are. A .com website could be anywhere in the world, even a .US website could be physically located anywhere in the world and the provider of that website could change without the domain name changing obviously.

IP addresses however on the other side are primarily locators. They tell you which internet service provider has that particular host attached to it, thus in particular, and I want to just mention that because it often is mentioned on the context of machine-to-machine, they are not a replacement for telephone numbers because they identify interfaces not devices, not services of high level entities. They look similar in some way, they're identified as numbers, but they have a very different role.

I won't go through all of the rows here but as you can see, we also differ in how country specific they are, phone numbers obviously mostly are, IP addresses are not. They are regional to some extent for allocation reasons but that is very much invisible.

The number of devices that can share such a name or identifier generally also differs. For example, for domain name system, any number of hosts -- if you go to Goggle.com, that is not one big really huge computer, that is thousands of computers that all respond to that name.

IP addresses, generally speaking with a few exceptions is just one interface, maybe one plug on a device, and similarly if you look at the number of names per device, again it can differ where internet based technologies generally have a much larger flexibility in that which is good for redundancy and number of services.

They also differ as to who controls those. I am purposely avoiding any notion of ownership here since this is not really port property in its classical sense and this is true for phone numbers, domain names, and IP addresses, even though those have very different properties as to what you can do with those in that.

But generally all of them interestingly enough, independently have evolved to model where they are time limited in a sense. Unless you pay for them, you lose them and you essentially use them but you don't own them in a physical sense.

They are also very different in who can obtain those numbers. We are all familiar with how phone numbers are assigned, at least currently, but if you look at the domain name system, different top level domains, for example, .edus, only accessible to recognized educational institution, typically four year institutions are similar. .mil is not something that you or I can probably acquire because it's related to the U.S. military and so on.

In some countries you have to be a physical resident of those countries. Some countries, the country of Trafalu for example, which conveniently got the domain name .tv, they used to sell postage stamps, now they sell domain names for TV stations that you might have seen.

IP addresses are available to just about anybody but it's need based.

Porting is very different between those. I think we all recognize that porting and telephone number space is fairly complex, sometimes a somewhat manual process, and it doesn't always work. So wireless to wireline for example, depends on geography. Where you've moved to suddenly may not work and it may be on rate centers and other concepts that make no sense to consumers.

In a domain name system the holder of that domain name can change the service within about an hour. So if I have a new web hosting company and I don't like my old one, if I have my own domain name I can change service and this would be true for telephone service as well, as soon as it takes for that change to propagate through the system.

IP addresses, I can change providers, again without really informing anybody except my old provider that I'm no longer their customer but it's just a routing cable entry. It happens in a fully decentralized manner. It's just automatic. If I change routing providers or service providers, that will percolate through the network within relatively short minutes and no central coordination takes place.

Delegation takes place in different ranges. For example, domain names you can sub-delegate easily to other entities so that's where entities that have web pages hosting for example, delegate to that.

Identify information also differs. Generally speaking except for people in this room and the companies they work for, information about telephone numbers is relatively hard to obtain although that's changing a little bit in ways that are both good and not so great from a privacy perspective.

DNS and IP have had Who Is data which is a public service which identifies for example who is responsible for a particular domain name or IP address range. And most recently they

have in the IP address space, have assigned cryptographic mechanisms to verify that information.

I won't go in great detail through the next page, communication identifiers.

Next slide, please. All I want to point out is that even in the communication space we are now seeing a transition to other modes of identifiers, in particular cipoils have existed for a number of years. These basically look like e-mail identifiers and once we are in an IMS internet media sub-system environment, it is quite possible, at least technologically speaking, to no longer have telephone numbers at all for real time communication.

You could use something which looks very close to an e-mail address with all the properties that go along with that that I mentioned earlier. Those are certainly possibilities that I would -- from a personal perspective, many people now think of their e-mail address more as their identifier that they relate to, that they maintain and that they publish as opposed to their telephone number in that.

We also have service specific identifiers that some people have claimed could serve as a substitute, those would be the Facebook type identifiers.

I do not believe that is a long term option for a number of reasons, consumer facing, you can't port them, you can't take your Facebook identifier to Google Plus say, and they are generally fairly limited in terms of the services they offer.

I want to briefly, on the next slide, please, talk about how just as a kind of leveling exercise, how a very different system for identifier assignment has evolved in the internet that some you might know about but I suspect some may not.

So if you substitute labels, this may actually not look all that unfamiliar. There is no NANC yet for domain names but I can fulfill some of those same roles.

Here on the slide I show funding flow, what may have evolved. Namely they don't have

a revenue based model, they have a fixed per identifier model. We are registrars of a consumer facing entities that do not necessarily provide services of any other nature that often do these days. We often provide web hosting, e-mail forwarding and so on but they don't have to.

All they do is manage numbers themselves, they contact registries, and they collect money. The registrars collect about, depending on what you pay, $10 to $15 a year for a .com name. They then pass on a fixed fee to the .com registry for each name, and they in turn pass some money on to a central regulator or type entity in that.

Different registries operate for different number ranges in that and there are some entities in particular the .edu and .gov, which are not currently under I Can at all.

And then once you have a domain name, you associate your web hosting e-mail or whatever with that, which is relatively independent of that. For example, your directory service, your domain name service could be a third party unrelated to your registrar.

The next page which I don't have to belabor is that we are seeing a change in numbering resource usage over time, a slow growth generally speaking in that, but the number resources that we are finding just changing from a ILAC environment to a largely and mobile environment, and to some lesser extent a CLAC environment.

Next page; again, on page 11 this is well known to you but I wanted to point out something that is probably relevant as we discuss issues of number exhaust, particularly from machine-to-machine, in the sense that because of historical artifacts, only relatively small fraction of the numbers that are theoretically available in our 10 digit number space can actually be used for assigning. That's not a good thing.

We should I believe look at which of those restrictions are still necessary so that those ranges, those slices that are currently not available can actually be put to wider use in that,

simply because the restrictions are often based on incremental dialing for example, as opposed to on block dialing and other modern signaling systems which just no longer impost those constraints or human factor considerations such as that you don't want area code 911. That is no longer an issue. If that device is a machine-to-machine device, it doesn't care that its identifier has an area code 911 for example.

Our next slide, again from a consumer facing perspective, I think we've made things more difficult then they need to be. I don't think it's anybody's intent but the notion that wherever you go, the notion of dialing changes based on who you're trying reach and what's going on just doesn't seem like the most ideal way. That's not the way e-mail works or any other modern systems work.

Getting to a more rational way of allowing dials by permission dialing seems like something we should be able to tackle in a relatively short basis simply because also the modality of interaction changes as we move towards a mobile dominated environment.

So having the notion that you have to know where you are -- when I remember being in Atlanta and suddenly trying to dial a phone number and I had to go in the phone book and figure out, did I have o dial that area code or not, did I dial the 1 or not, because it didn't work that way. I got some cryptic voice recording telling me what I wasn't supposed to do or not. We should be able to do better than that.

Next slide; if we look at machines, there is a fear, not completely unjustified that robots will take over. We will run out of numbers and we will have to dial 16 digits just because there are parking meters, and traffic lights, or what have you that all want telephone numbers.

I would argue that, and this requires obviously more in depth analysis, but that many of the devices that we think of as machine-to-machine will not need telephone numbers simply

because they won't have cellular devices on them and they will be Y5 devices for cost reasons in building use and so on.

If you look at the large number of devices that are likely to occur, those are likely to be vehicles just simply because there are lots of them around, tablets to some extent, but those again tend to be associated with humans.

And if you look at other plausible users at a large scale, not just a few hundred here and there, even if you look at parking meters like the ones which are in Washington, D.C. now that can read your credit card, there's only five million of those and there will probably be many more of those (unintelligible) meters as opposed to individual ones, so again not likely to have a large impact. Even smart meters because they are household based are not likely to change that.

Also we should keep in mind that we do have ten billion numbers available in theory if we move all the restrictions that we have currently on number usage which are largely based on Legacy constraints.

Next slide, please. So why do we have phone numbers for machine-to-machine at all? Again as I mentioned in many -- there's legacy reasons, 2G only works on phone numbers but if we move forward to a 4GIMS environment, technically this isn't really necessary.

They work just fine on CIP address and CIP URIs on whatever meter at electricco.com -- will work just fine without a phone number except that many of existing standards haven't quite caught up to that for whatever reason.

So the reasons for those tend to be customer billing records which I suspect many of you are familiar with, that's used as an identifier. PPGP and other standards bodies had assumed for historical and in some cases I think competition reasons, that those would also be phone numbers, again the underlying protocol standards do not require that.

SMS Wakeup for some of the tablets is used for addressing, those like Kindles to wake them up and download books. And often we have had no real alternative. IP addresses are not alternatives for phone numbers for reasons I alluded to earlier. We should think of other identifiers such as CIP identifiers, particularly for machine-to-machine as possible alternatives.

Next slide; if we do a rough projection, by 2050 we will have about 439 million U.S. residents and if we take the current number of 2.5 numbers per person, that's about 1.1 billion roughly speaking, so that's not too bad. Again we have 10 billion numbers available.

All of the other numbers as you can see on the slide are in order of magnitude less. It's unlikely even if every vehicle is connected that we will suddenly have 500 million vehicles in that since the number of vehicles per person is going down rather than up.

The number of Smart meters, even if every household has one, it's only about 120 total counting both households and businesses, and then no other large scale users that I see as likely in the immediate future.

Simply because of the likely means of communication, many of the other ones, light bulbs, and in-home devices, and in-building devices will use a local Y5 base and similar wireless communication, Zigby and other type of modes for cost and power reasons.

Slide 16, next slide; so the Future of Numbering committee has looked at some of those but I think it's time to pick up the pace a little bit. What do we really want from numbers as opposed to how are we constrained by the Legacy? Should we more formally treat numbers as names? We move a notion that they be used as routing mechanisms. So this is a long tradition, a discussion in the internet community, technical community, so this is not something we have to reinvent. We should draw on that.

Should numbers have an optional or mandatory geographic component? Are numbers

part of a states cultural history? Here I have two magazines that I found that use area codes as

their magazine title in that. I don't how common that is but it does seem to be part of our

identity in some cases.

Slide 17, next slide, please. So if we look at a numbering question, how do we separate

devices and numbers, we're getting to that.

We're having a number of services, Goggle Voice, Boxeo, Twileo, just to name three that

pop to mind, that essentially provide a complete divorce from a device in that sense. They have

a number acquired somehow through partners typically, presumably, and they use that

forwarding mechanism to reach any number of other devices.

Should numbers be licensed to an individual, namely separating the service from the

number? That's the domain name model. That I think is a question that I think we need to settle

very quickly.

I believe it has a number of advantages. It simplifies number portability because those

issues are no longer tied to each other, one can now separate those and so if we move some of

the incentives to delay porting or make that difficult -- but we have to then deal with issues such

as will my 212 number which is the Manhattan area code, apparently fairly popular, increases the

rental value of your condo in Manhattan if you have one of those, is that something you can put

in your will. Can somebody buy up all the local numbers if it's tariffed that way, and what is the

role of the government administrator in all of that?

Next slide, please. I do want to talk about something that has become an increasingly

important issue, namely security and trustworthiness.

I don't want to be over dramatic but I believe that unless we do something about the

telephone number assignment and validation system, that we have a crisis of confidence on our

hands.

Numbers are no longer trustworthy. They are used for nefarious purposes because businesses still use those as customer identifiers by caller ID. The model of trust us, we are a phone company, we won't lie about telephone numbers, no longer works. Not because the phone companies are less trustworthy but we have many more players that are just hard to police.

The reality is we have spoof numbers. We have non-carrier entities that use numbers, and I'm not talking about the ones who are in front of a commission, I'm talking about people that probably the only commission they will probably ever be in front of is a jury of 12, but they have -- it's hard to prevent because of international consideration, in particular the use of numbers by them and indirectly, or by entities that use their services.

We do need to get away from a number of database models to a cryptographically available fiber model. The internet couldn't rely on anything but that. We are far beyond the notion that you can just have a number to look up in a database and there's no cryptographic verification. The number of system players is too large. The number of entities that could interject themselves is too large. A cryptographic means needs to be part of design.

We can no longer proceed as we have in the past if we want telephone numbers to have any value at all as an identifier for billing, for customer identification, for any of the other purposes that we used them at. The band-aids that we have no longer work.

The question that your system needs to answer is, is this caller authorized to use that number? Note that I didn't say the devices number. Doctors legitimately use the office number for example when they make calls as opposed to their personal cell phone number. That is a presumable legitimate use that serves its societal purpose.

If your robot caller uses that number it is indistinguishable by the system today but

clearly has very bad consequences. Bank accounts have been cleaned out because of robot call activity, because of spoofing activity.

We do that in IP. Nobody would connect to a bank unless it showed that green bar or the lock item on that. Nowadays if your bank calls you, your credit card company calls you, and they claimed to be Visa, or MasterCard, or your local bank, you see the telephone number and a caller ID. You have no way of validating that and they actually ask you to do something which they never -- to trust that number even though there's really no reason to.

Next slide, slide 19. We have a hoarding problem. In domain name system we use pricing for that, namely cost a non-trivial amount of money to hoard identifiers so it would take a non-trivial chunk to buy up all of 212, maybe Donald Trump can do that, but that has at least not happened so far simply because we have more available. That may in itself not be sufficient.

There have been proposals that you could actually fund all of USF out of that. It would cost about $10.60 per telephone number if you did that. And in the IP address space we can see that we have demonstrated need models that work which are somewhat similar I believe to existing models as well.

Next slide, slide 20. Who assures identity? In the web world we have an old model where you just simply rely on the domain name system. This has worked somewhat well because it has been difficult to intercept the path between you and the domain name system by evil third parties. Now we are moving towards a DNS, domain name security system where domain name records are signed.

For e-mail and web, particularly e-mail unfortunately, less so we have what are called X509 certificates which essentially allow you to trace back the ownership of that, temporary ownership, license if you like, of that domain to an authorized entity.

Depending on what you have, you have either basic ones which are pretty cheap or called extended validation screen certifications where the entity has to not just provide a name but also has to actually show that they are licensed to do business under that name, that they're located in a specific geographic space, et cetera.

Slide 21; caller ID spoofing is becoming increasingly an issue. There are services available that I am not recommending here to anybody that allow you for all kinds of purposes to spoof numbers. Some of you, if you talk to your fraud and security folks in your companies I'm sure they can tell you much more about it.

We know that it is illegal. I don't have to emphasize that. The problem that occurs is that we have no effective way of policing that at a large scale and because there are legitimate and other uses, not all uses of number spoofing are illegal, namely they have to have an intent to defraud, cause harm, or wrongfully obtain anything of value. So companies that exist, some legitimate, some less so, serve those needs both legitimate and otherwise.

As you can see on the slide, which is a few months old, I'm not sure anybody needs to spoof particular identifier at the moment. That is the kind of prank type of models that have been used and indeed they have been used. I kept that screen shot because it has been used for political purposes, not at the presidential level but at the local political level as well.

Slide 22; caller ID spoofing is used for all kinds of secondary purposes beyond just pretending to be a presidential candidate. It is used for example, to call your trusted brokerage and have them clean out the account. That has happened.

It is used to harass and intimidate, used for bomb threats, so called swatting type of attacks where you call 911 and you try to get the local swat team to show up at your former friend's house and so on. You can use it in all kinds of toll fraud.

It can be used to obtain (unintelligible) information. By simply spoofing the number, you can call that number on some device that you know and you now get the caller ID for that number. Very simple, nothing you can do about it.

Next slide; we also in ATIS and others, I saw a presentation just yesterday that was made to the INC group on that. We have this proliferation of databases that have emerged over time. It is not clear that that's the most sane and efficient way to provide numbering information.

The consequences of having this proliferation of databases are that they often get out of sync. It is complicated to administer. Because of the structure we have incentives to have local versions of those which means sometimes numbers that get ported, that information doesn't make it everywhere in a reasonable amount of time, information gets out of date, people who shouldn't have access to information do, cryptographic information isn't available.

All of these I think means that the concept of these proliferation of databases has probably reached their sell by date and we should be looking urgently at what the next generation should be recognizing, that we need to provide Legacy interfaces for quite awhile.

The problem is really very simple. Looking up a number for internal routing use, this is not for the public but for carriers that need to route telephone numbers that arrive for customers, is pretty simple technologically these days. In goes the number, out goes the record, that's what you want and you want to provide access to different pieces of that record to different entities but it's not that hard to do that.

The scale isn't as large. From a scale perspective I could run that database on my laptop if not big volume, but the size, not a problem.

It is not hard to add additional information without creating new databases. What do we need to include in the databases are things like carrier codes, (unintelligible), the type of service,

who owns it, public key information.

Again I cannot emphasize enough, any redesign of a database needs to assume that entities that are less then trustworthy have access to that information and consumers and other entities, third parties acting on their behalf, need to validate ownership in the consumer sense of the word, namely who's authorized to use that number independently of the carrier.

That is a non-negotiable condition I believe for any future numbering system otherwise we have failed to provide a secure system knowing that we could do better.

I think a set of requirements for the database are relatively simple. We need to have an extensible, securable set of fields that we can add, multiple interfaces are fine. It doesn't have to be, it could be ENUM in some cases, it could be a web base interface, could be any Legacy interface, that's pretty easy to do, and we need to think about how we have multiple providers of that information, however where that information is automatically synchronized, even if there are multiple providers as opposed to sending spreadsheets around by FDP.

Let me conclude, last slide. I believe we all collectively have an opportunity to think strategically. We need to keep the old system running but we have to do more then that, otherwise particularly because of number spoofing and other issues, trust in the system will erode, people will no longer be able to trust the telephone system overall because without trustable identifier, no network communication system is trustworthy.

We have a technology transition. It may be a few years before it takes broad hold but voice of LTE is coming soon. That is an all IP system. As many of you know, many of the MSO are already all IP as we have it and there's going to be an increasing push towards IP, to voice of IP, to voice of IP interconnection where many of the security issues for example can be addressed much better.

Thus we have a number of opportunities as well as challenges. We need to get to more efficient usage, 100 percent usability should be our goal. I believe if we achieve that machine-to-machine communication is not a major reason to worry. We still may not want every device to have telephone numbers for any number of other reasons but we have 10 billion numbers, we should use them.

Improved porting efficiency across all cases of use. The consumer should have to worry about does porting work just because of certain -- of my life history of transitions between wireless and wireline for example.

The consumer experience needs to be uniform, predictable, reliable, and explainable. I should be able to explain how numbers work to a five year old, or maybe more importantly to my 80 year old mother. That should be something that should work without requiring an engineering degree and importantly illegal number spoofing just needs to be a thing of the past. There is no excuse for that to persist. We have the technology to make it happen.

I really think we're falling short on our consumer obligations if there is one more case of somebody being pranked, their finances being -- they're being robbed of their bank account, or other bad things happening because we can't get together to make the numbering system secure.

The question I believe -- many of those are some of the hard legal questions, who can "own" access numbers. That I think we can evolve over time. Many of the issues are independent of that. We shouldn't hold up things just because we can't quite decide as to which entities might have access to a numbering system. We should be flexible in deciding that I believe so that the system design, the engineering design doesn't make too many assumptions on who owns and operates different pieces of that.

The domain name system for example has evolved fairly dramatically over its history as

to who can assign numbers with the registry. The registrar system emerged much later after the

domain system had been in operation for 20 years but we should move to a model quickly.

So my challenge to all of us is let's get on with it. We know how to do it. We all want

something I believe that is more secure in future proof and let's move it.

CHAIRMAN KANE: Thank you very much. You've given us an awful lot to think

about. Questions or comments? Mary.

MS. RETKA: Mary Retka from CenturyLink. Thanks, Henning, it was really interesting

to see the presentation. I sense though that you've done some background work as part of

several groups so we've got a lot of splinters looking at what should be the future and the level

of uncomfortability I think around this table may be around why hasn't there been some

interaction before now with this group in relationship to all of the effort we have.

I understand the concern about trustworthiness of numbering. I think it some ways that's

a difference between the work that's done around numbering and the technology evolution effort

and the technology evolution effort actually makes it a more difficult problem rather than a less

difficult problem.

So I just would have a concern for and would ask you to address how this organization

which is the baseline, you know, you've got your infrastructure here, it isn't intended to be part

of that especially given that no matter what we do going forward, we are all the folks that are

impacted.

MR. SCHULZRINNE: That's why this is not a call for the Commission, or not a

proposal for the Commission to go on its own, that's why I'm here. This is really an attempt I

think to be honest.

I think numbering has not received the kind of high level attention at the Commission in

awhile that it probably deserves in my opinion and the transition of a technology is an opportunity to do that.

The work that FRN has done for example has laid a lot of good groundwork. The work now at least at that level seems to be completed so I think this is an opportunity now to see what -- as the technology of transition seems to be happening a little quicker then maybe some of us had anticipated, that what are next steps and that I think has to be a collaborative effort between everybody around the table, other players that may not be represented here but have a stake in that, consumer organizations for example, directly, technology organizations that will build the infrastructure in that, all of those.

And what I'm trying to figure out is what is the best way organizationally because again you alluded to that. There has been lots of people have been doing good work but it's not always clear how we get from the study part to the doing part.

And I think that's the problem that I think I'm trying to address is, whatever next step -- that we now understand some of the options, what questions do we need to address still that we are unsure about both in terms of the numbering itself as well as the infrastructure, and who should best address those so that it is addressed once as opposed to replicating the same work ten times. Does that make sense?

CHAIRMAN KANE: Rosemary.

MS. EMMER: Rosemary Emmer with Sprint-Nextel. Thank you for presenting this to us today.

My questions are similar to Mary's but I would just like to leave here knowing like what procedurally you're looking for, for the NANC.

Like do you want the NANC to join the TAC meetings or do you want to have an IMG

underneath the NANC, like a working group or something underneath the NANC that's just ready, willing, and able to answer your questions, or like procedurally how can we engage going forward so that we're not in a situation again or the next time where we're reading all these things about numbering and we're like oh, wow, this is the first we've heard of the numbering piece. So how can we work together like that?

MR. SCHULZRINNE: And to some extent I'll have to turn the question back to you because I'm a NANC newcomer, my first meeting that I've been at so I can tell you few things and one of the things that is my homework assignment is indeed to talk to the technology transition task force in particular as to -- because we are getting just out of the fact gathering stage now and into the more doing stage, about options and so on, is what the best model is. Is it a sub-group that it engages?

What I can say is we already have as part of a docket for the technology transition task force, we have the opportunity for groups and entities to come to us and talk to us about that from their perspective individually and certainly I'm trying to see what we can work out, and again I look to the Chair and other participants to make suggestions since you have a long history of knowing organizationally what works well.

Maybe a sub-group is the right model for that and so the question that I need to figure out is really what is the right output? Is it a report or is it something a little more then that. So that's what we're trying to figure out exactly what does it lead to as next.

Because the Future Numbering Group, I looked at a report. It was a really nice report and addresses I think many of the issues that I alluded to here and many beyond those but what are the next steps.

MS. EMMER: Right. So if we were to individually join your meetings, or the TAC

meetings, or whatever meetings, that would be individual contributions based on our company basically but if we were to at some point either use the FoN or something we already have, or what might be an idea is to start a new working group that's just separate.

I was thinking an IMG except that there's many topics and an issue management group usually only just has a specific task, but if we were to do one or the other, an IMG GR Working Group, then your questions or your concerns would be taken care of outside of -- it would be off the record.

It would be for anyone who wanted to attend just like the LNPA Working Groups is now, whatever, and then they can come to consensus on things and then bring it here and then I think procedurally you're getting the information that you need and you're getting it from all the right players. You're getting the technical people on one end.

So anyway thank you for the presentation and thank you for answering that question and I'm sure the NANC Chair will be able to work with you to figure out what we should do next.

MR. SCHULZRINNE: I look forward to that.

CHAIRMAN KANE: Yes, thank you and let me say, this is the reason, these very questions, that I wanted to have this briefing because this is an internal task group, exactly right, with internal to the FCC and we are the organization chartered by the FCC to advise the FCC on numbering issues.

And so what I would look at, I appreciate knowing what you all are doing, how does this sit with our mission, and our responsibility, and our charge from the FCC to be the folks who advise the FCC on how numbers are handled.

I saw a couple eyebrows went up on your slide seven when you were talking about porting and you said for phone numbers it's complex, often manual and wireline to wireless may

not work. We have spent so much time here with so much good work in making portability

work, and making it work well, and making it work quickly so I mean even a place where we

could technical information, there be some glitches, there was the smaller rural areas that didn't

start right away but I'm not aware of very much of it being manual, certainly not often manual,

and I'm also not aware of wireline to wireless not working.

MR. SCHULZRINNE: I'm sorry that was a typo of mine. It's wireless to wireline

because of geographic constraints because you can't get into the rate center, if you move, if you -

-

CHAIRMAN KANE: Oh, I see.

MR. SCHULZRINNE: Then you can't move it even if it's within -- because of rate

center issues.

CHAIRMAN KANE: Right, like my daughter moved from Delaware with a 302

mobile phone. She couldn't make that her land line so she kept the mobile phone as well as the

land line.

Yes, I understand, so that should be wireless to wireline may not work.

But actually this is the group, number one I'd say in terms of numbers, we've been

charged with sort of advising the FCC on how the numbers should be doled out and how they

should be managed and so I hope we can find a role not just for a sub-group or certainly you'll

provide input to your group, but this really I think needs to be a central focus of what we do over

the next several years too. Natalie, I think you were next.

MS. MCNAMER: Usually, I mean one the things that I guess I've struggled with

sometimes is what does the FCC need from us and usually, you know, in my mind it would be

the FCC telling us what they need us to work on and what they need our advice on.

It's kind of hard when we start looking at things of like well, do we just go knock on the door and say, hey, we thought you might like this, kind of thing, so that's where I think when we are looking to the FCC, we're looking for the direction of what do you want us to advise you on.

MR. SCHULZRINNE: Yes, and see like I said earlier, I see that this half hour was hopefully the beginning of a conversation and really mean the word conversation as in a back and forth, that we can identify issues where we need your expertise and vice versa, is that the policy choices that the Commission eventually has to make on moving forward will clearly ultimately influence the design perimeters along the requirements that -- the broad brush requirements, liability, resiliency, competition, et cetera that I mentioned earlier in that.

So I see that as -- and this is why I wanted to find a way that we have an ongoing means that is relatively quick in a sense that I don't think we want a five year process. We want something where it can be an ongoing engagement whereas a group of people that are familiar with the issues so they don't have to be brought up to speed, that are willing to actually work on those issues, and particularly what I would encourage, and this is one where at all levels we need to look beyond the people who have always worked on numbers.

Those have important contributions to make but there's other experiences we can draw on that will at least answer some of the, what if questions, because some of this is potentially risky. We don't want to break things in the process but we don't want to be so conservative that we'll be doing the same type -- that we'll have the same system housed in the Smithsonian presumably at that point in ten years because I think we don't have that much time.

So if we can find a way that is not just report based like you said, is where a big thud of paper lands on somebody's doorstep, but something which is more interactive, that might help.

CHAIRMAN KANE: Henning, where does the transition policy task force sit

organizationally within the Commission, that is who does the task force have to report to?

MR. SCHULZRINNE: The task force reports to the Chairman so it is led by Sean Lev who's our general counsel and assisted by Rebekah Goodheart, also from the General Counsel's office and it has representatives from every office and bureau as well as the chief economist and myself.

CHAIRMAN KANE: And the technology advisory council, where does that fit?

MR. SCHULZRINNE: It's a federal advisory committee similar to NANC in a statutory sense.

CHAIRMAN KANE: Also reports to the Chairman not to a particular bureau?

MR. SCHULZRINNE: It also reports to the Chairman or to -- I don't know what the reporting relationship -- it's a commission entity, as to know whether they formally report to and what that means, all committees report to a Chairman I believe by --

CHAIRMAN KANE: Yes, but usually there's a bureau or --

MR. SCHULZRINNE: We have a DFO, Walter Johnson in our case that deals with the TAC. The TAC meetings themselves are -- some of your companies have representatives on the TAC from the engineering side typically. The meetings they have are public.

Now I will say that the TAC itself will not be tackling that particular problem in the spring. They are finished their report, their slides, they will probably condense into a report but that's not an ongoing agenda item so while you're invited to --

CHAIRMAN KANE: Numbering is not there, not ongoing.

MR. SCHULZRINNE: No. They do it on a topic basis. They are not an ongoing numbering or PSTN or whatever. We are assigned specific topics that are of a short term nature, typically a year or less when they report under -- some topics I expect tend to be evergreen but

the other topics are dealt with and then maybe picked up a few years later.

CHAIRMAN KANE: Thank you. Yes, you're next.

MS. ANGLUND: This is Cyd Angland from AT&T. I first want to echo your call for urgency. I totally agree, just to point out the horse is out of the barn. These things are happening and ongoing and the problem is getting bigger and the speed of the transition is -- you know, this train is coming down the track to just use several metaphors there. Sorry about that.

And the other is, will this presentation be available to the membership electronically so we can share it?

MR. SCHULZRINNE: Yes, and as far as I know I have no particular -- I don't think there's anything secret on there so feel free to distribute that. You don't have to be an ATIS member.

MS. ANGLUND: It would just be a lot more convenient if we can get it electronically.

CHAIRMAN KANE: Yes, and the updated one because I was looking at the one that I got yesterday.

MR. SCHULZRINNE: Yes, I got some last minute updates from colleagues and so there are a few typos in there.

CHAIRMAN KANE: That's fine because I did get it electronically.

MR. SCHULZRINNE: Otherwise we will give the latest version.

MS. ANGLUND: We will look forward to working these issues in the near term.

MS. RETKA: Mary Retka from CenturyLink. And I want to again bring forward that this is I know a very complex situation and as Cyd said, you know, to some extent things are already being worked. You've got the technology transition, the regulatory transition and the

regulatory constructs for the technology transition, as well as the addressing schemes that are very different between the technology and I think your presentation brings that out quite well.

But in a sense as you look at all of those aspects, as well as the potential that parties are inappropriately using in conflict with regulation and legalities, using the resources, where you're looking at a regulatory construct for something that is an legal issue, I think we've got a little bit of effort ahead of us because I think you're asking for some things to be solved by bodies that may not have the appropriate capability to address those.

MR. SCHULZRINNE: I recognize that NANC is an important but certainly won't be the only participant in that. In some aspects for example, security of databases are probably dealt with best in other bodies but all of these pieces have connections.

So for example, just to give you one, the assignment of numbers to entities would be much harder to do the number spoofing if cryptographic certificates would be issued along with numbers by a number administrator.

I'm not saying that's the only way to do that but that is the only technically known way that we do that and we do variations in the internet world for that today and that affects the assignment of numbers, mainly whatever services that numbering administrator -- what we need to do is assign for example cryptographic certificates of usage to Century Link say, four of a block of numbers that you've just obtained. You can then delegate that.

You can prove to the rest of the world, including parties that you've never met and you have no idea who they are among carriers and possibly third parties that want to validate calls that come in to the call center, say to a bank, that you indeed -- it was a Century Link customer calling as opposed to somebody else.

So while some of the detail database issues are probably beyond the scope of this group,

assignment, particularly the ability to validate assignments across a very large infrastructure will probably affect this body fairly fundamentally.

CHAIRMAN KANE: Other questions on the bridge? Anyone on the phone? All right, well, thank you very much. I think we've got a lot ahead of us in terms of some interesting ways. We will certainly give some thought to the best way for NANC as a council obviously as well as for the individual companies, individual members, we have state members.

And Henning, we have been broadening even the industry and the sectors of the industry who are eligible and who have always been eligible but who are now coming to participate in the work of the NANC sometimes for these very reasons.

I was thinking too about the spoofing issues. I was cleaning out some closets the other day and I found this little device. I had to look to see, it was about this big but it wasn't an iPhone. It had little numbers on it.

It was a tone dialer, and I don't know if anybody else here is old enough to remember, when you first went to calling cards and when you used them in a pay phone, remember pay phones, and there was this fear and there was a problem. There was a real problem.

You'd be standing there with your card and somebody would look over your shoulder and see what your long distance MCI or whatever the card was and so you could get a little tone dialer and it would put your numbers in. Well, somehow that problem of the card that somebody could spy over your shoulder was taken care of by evolution in technology et cetera.

So I'm not saying spoofing is going to go away but there may be a way to deal with it without totally changing how we assigned numbers but it's just an example of how things change and how we do need to be involved and we look forward -- I think it will an interest to each of us as well as to NARUK and the states if we move towards a more and more non-geographic

assignment. There are all kinds of different roles for the states about area code and overlays and all of those other things too. And we do have consumer representative on the NANC from NASUCA. Thank you very much.

MR. SCHULZRINNE: Thank you again.

SUMMARY O F ACTION ITEMS

CHAIRMAN KANE: All right, I think that concludes our prepared agenda. Do we have any action items? I don't believe we have any action items. The action we took was to accept the recommendation in terms of the contribution factor and I will reduce that to writing, get it out to everybody from the transcript, exactly what it was we agreed to and the alerts on the time schedule to expect that, and the recommendation that the associations give a heads up to their various members also.

And I am going to check on the status of the Montana request for delegation of authority because it's been over two years.

Are there any public comments. Rosemary, not public but go ahead.

PUBLIC COMMENTS AND PARTICIPATION

MS. EMMER: This is Rosemary Emmer with Sprint-Nextel and I just have a quick unique public comment. There is a gentleman named Michael Sorrell, M-I-C-H-A-E-L S-O-R-R-E-L-L for the transcriber, who has worked behind the scenes at the NANC for over five years now to provide the LNPA Working Group, the LLC, the NOWG, and the B&C Working Group copies that are on the table and over there. And he works for FedEx in Reston and he's always met the deadlines even if we've given him the report the night before or whatever.

And most of you don't even know about this or know this person and I thought that it would be good to just, you know, put that public comment out there on the record to thank him

for all that he's done, a single unique person for all of these years that has helped us. Thank you.

OTHER BUSINESS

CHAIRMAN KANE: Thank you. We will recognize and thank him for his work. Is there any other business? All right then we will stand adjourned. Our next meeting is June 20th and then our meeting after is September 19th, which is just about the time that we will be expecting the recommendation on the results of the RFP and the vendor selection. Thank you very much.

(Meeting Adjourned)

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<u>CERTIFICATE OF AGENCY</u>

I, Carol J. Schwartz, President of Carol J. Thomas Stenotype Reporting Services, Inc., do hereby certify we were authorized to transcribe the submitted Audio CD's, and that thereafter these proceedings were transcribed under our supervision, and I further certify that the forgoing transcription contains a full, true and correct transcription of the audio CD's furnished, to the best of our ability.

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CAROL J. SCHWARTZ

PRESIDENT

ON THIS DATE OF:

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