

**North American Numbering Council
Meeting Transcript
Tuesday, May 29, 2018 (Final)**

I. Time and Place of Meeting. The North American Numbering Council Meeting (NANC) held a meeting commencing at 9:30 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. Honorable Travis Kavulla | NANC Chairman (NARUC - MT) |
| 2. David Greenhaus | 800 Response Information Services, LLC |
| 3. Susan Gately | Ad Hoc Telecommunications Users
Committee |
| 4. Jacqueline Wohlgemuth | ATIS |
| 5. Jacquelyne Flemming | AT&T |
| 6. Betty Sanders | Charter |
| 7. Beth Choroser | Comcast Corporation |
| 8. Courtney Neville | Competitive Carriers Association |
| 9. Matthew Gerst | CTIA |
| 10. Greg Green | Fatbeam LLC |
| 11. Craig Lennon | Google |
| 12. Honorable Paul Kjellander / Carolee Hall | NARUC - ID |
| 13. Honorable Karen Charles Peterson | NARUC – MA |
| 14. Barry Hobbins | NASUCA |
| 15. M. Teresa Hopkins | Navajo Nation Telecommunications
Regulatory Commission |
| 16. Jerome Candelaria | NCTA |
| 17. Brian Ford | NTCA |
| 18. Julie Oost | Peerless Network |
| 19. Professor Henning Schulzrinne | |
| 20. Richard Shockey | SIP Forum |
| 21. Scott Freiermuth | Sprint |
| 22. Paul Nejedlo | TDS Telecommunications |
| 23. David Casem | Telnyx |
| 24. Bridget Alexander White | USConnect |
| 25. Dana Crandall | Verizon |
| 26. Robert McCausland | West Telecom Services |

Special Members (Non-voting):

- | | |
|-------------------|-----------|
| 1. Glenn Reynolds | iconectiv |
| 2. Tom McGarry | Neustar |
| 3. Ann Berkowitz | Somos |

Commission Employees:

Marilyn Jones, Designated Federal Officer (DFO)
Michelle Sclater, Alternate DFO
Kris Monteith, Chief, Wireline Competition Bureau (WCB)
Ann Stevens, Deputy Chief, Competition Policy Division (CPD), WCB
Myrva Charles, Contracting Officer Representative, CPD, WCB
Darlene Bidy, Management Analyst, CPD, WCB

III. Estimate of Public Attendance. Approximately 10 members of the public attended the meeting as observers.

IV. Documents Introduced.

- (1) Agenda
- (2) NANC Meeting Transcript – April 27, 2018
- (3) North American Portability Management LLC Report to NANC
- (4) Local Number Portability Administration Transition Oversight Manager Report
- (5) Toll Free Number Modernization Issues Working Group (WG) Recommendation
- (6) Nationwide Number Portability Issues WG Recommendation
- (7) Numbering Administration Oversight WG Report

V. Table of Contents.

1. Welcoming Remarks/ Announcements & Recent News/ Approval of Transcript.....	3
2. Discussion of the North American Portability Management LLC Report.....	4
3. Discussion of the Local Number Portability Administration Transition Oversight Manager Report.....	7
4. Remarks by FCC Chairman Ajit Pai.....	13
5. Overview, Discussion, and Approval of the Toll Free Number Modernization WG Recommendation.....	17
6. Overview, Discussion, and Approval of the Nationwide Number Portability Issues WG Recommendation.....	42
7. Discussion of Numbering Administration Oversight WG Report.....	79
8. Public Comments and Participation.....	88
9. Other Business.....	88

VI. Summary of the Meeting

WELCOMING REMARKS/ ANNOUNCEMENTS & RECENT NEWS, APPROVAL OF TRANSCRIPT

Travis Kavulla: A hush falls over the room. Well, hello, everyone. We'll call this meeting to order. Thank you for being here today. I'm a one-man show today. Diane Holland will be joining us by phone. I'll save some announcements that I have really for the end of the meeting under other business other than to, number one, thank the workgroups for the submission of their reports, which we'll be considering today, as well as thanking the Call Authentication Trust Anchor Working Group for wrapping up their work and also for the industry for starting up the governance authority which the report anticipated.

With that, you've all had an opportunity, I hope, to review the transcript from the previous meeting. Are there any corrections? If not, we will mark that transcript as approved as the minutes of the Advisory Committee. We'll turn now to our first agenda item, which is a discussion of the North American Portability Management LLC. Teresa.

Male Voice: Anyone know the hotspot access?

Travis Kavulla: That's a good question, Paul. Hold on.

Male Voice: Well, it's right behind the wall.

Male Voice: FCC823302.

Male Voice: Thank you.

DISCUSSION OF THE NORTH AMERICAN PORTABILITY MANAGEMENT LLC
REPORT

Teresa Patton: Well, good morning, everyone. My name is Teresa Patton. I'm one of the Co-Chairs for the NAPM LLC. My report consists of the following. In regards to the LNPA transition, the cutover of the NPAC was successfully completed on schedule for all seven regions on May 20th. We were able to reach final acceptance on May 25th. Congratulations to all who participated in this monumental transition. In regards to the wind down activities with the Neustar Master Services Agreement, negotiations were completed on May 25th. The last bill from Neustar will be sent to the industry on June 11th.

In regards to the Transition Oversight Management, the NAPM LLC will end its engagement with the TOM on May 31st. The NAPM LLC continued to file transition status reports with the FCC on the last day of each month. Consistent with the completion of the transition, the NAPM LLC will file its final report on June 8th. Throughout the transition process, the NAPM LLC did meet regularly with the FCC and TOM to provide transition status as well as to keep the FCC apprised of issues of concerns pertinent to the transition.

In regards to statements of work and amendments for Neustar, we completed Change Order 5 which amended Statement of

Work 97 to support rollback services. Then Change Order 6 amended Statement of Work 97 to close out the final contract.

With iconectiv, we had Statement of Work 6 which implemented certain revisions to Exhibits F, H, and I of the Master Services Agreement and corrected certain typographical errors in the MSAs. SOW 15 implemented requirements for NANC 505 through NANC 513 addressing many differences of our local system gateway nonconformance issues with the NPAC FRS and IIS that surfaced during vendor testing.

Currently, there are 11 potential SOWs open addressing differences or local system gateway nonconformance issues that were identified during the testing that are being discussed by the LNP Transition Oversight Committee. Any changes resulting from these discussions and subsequent industry alignment will require new SOWs to be negotiated. Our Escrow Storage Agreement for NPAC software with a third-party agent was approved as well.

In regards to Contract Implementation Committee or the CIC team, in partnership with the LNPA vendor, the CIC reviewed six findings reports of providers of telecommunication-related services or PTRS users to validate the need for NPAC data access. They provided feedback on the selection of an auditor to determine metrics, to define the plan and review and approve the Gateway Evaluation audit in accordance with the MSA.

Rosemary Leist, T-Mobile, has reinstated her position as NAPM LLC secretary effective April 1st. Suzanne Addington with Sprint is retiring at the end of June. The NAPM wishes to thank her for all of her contributions over the years, including the extensive efforts toward making the NPAC transition successful. The NAPM LLC remains open to new members. As a continued incentive to encourage new membership, the LLC has approved extending the waiver for the new membership initiation fee of \$10,000 through December 31st of this year.

Then finally, the NAPM wishes to thank everyone for all of their hard work that enabled the transition to be successful, including Tim Decker, Paula Campagnoli, Jan Doell, and Ron Steen who were a part of this from the very beginning but have moved on to other activities, and to Mel Clay who we lost a few years back. Again, thanks and congratulations to everyone on the completion of the NPAC transition.

Travis Kavulla: Thank you, Teresa. Are there any questions?

Matthew Gerst: Hi, Matt Gerst with CTIA. I just wanted to say also congratulations on the successful transition. Very promising what this holds for the future. A question as to whether the TOM or the NAPM is going to be completing a final report that's just very short, just a summary of what steps were taken that were successful as sort of a roadmap for the future,

say if there's going to be other transitions like this, just a document of what is necessary to actually complete something successfully like this.

Teresa Patton: We do have a final report that will be filed with the FCC. I don't think we've contemplated including those types of items. But I definitely think we'll take that under advisement and see what we can include.

Travis Kavulla: Any other questions or comments from around the table? Thank you for your work, Teresa.

Teresa Patton: Thank you.

Travis Kavulla: Now, we'll turn to a discussion of the Local Number Portability Administration Transition Oversight Manager and Greg from PwC.

DISCUSSION OF THE LOCAL NUMBER PORTABILITY ADMINISTRATOR

TRANSITION OVERSIGHT MANAGER REPORT

Greg Chiasson: Good morning. Chairman Kavulla, distinguished members of the NANC, thank you for the opportunity to present with you today. My name is Greg Chiasson. I'm a partner with PricewaterhouseCoopers or PwC. I'm here today representing the Transition Oversight Manager or TOM. Since our last report to the NANC on March 16th, the LNPA transition to iconectiv was successfully completed. The new NPAC was formally accepted by the NAPM on May 25th. This caps a three-year

transition effort. I'd like to take a minute and review some of the details.

Ancillary Services, including the Enhanced Law Enforcement Platform or ELEP, Wireless Do-Not-Call, and public safety Interactive Voice Response or IVR services were successfully launched on March 4th. Users of these services continued to be on boarded through business-as-usual processes.

As of May 21st, there are 2,872 IVR -- we have IVR users registered. There are 679 wireless do-not-call users. The NPAC migration for the Southeast region and the nationwide migration of nonpublic safety IVR service was successfully completed on April 8th. The NPAC migration for the Midwest, Northeast, and Mid-Atlantic regions successfully completed on May 6th. The NPAC migration for the Western, Southwest, and West Coast regions successfully completed on May 20th. Throughout the migration, the TOM provided onsite support and industry-wide status updates as well as facilitated the checkpoint decision-making meetings for all the regional migrations.

Migrations overall went very smoothly. Post-migration performance has been good. All regions satisfactorily completed their soak periods. NPAC users are submitting porting transactions at expected levels via their respective standard interfaces. The iconectiv NPAC is successfully processing porting transactions. I'll note that as of May 21st, there are

1,546 service provider and PTRS users registered. No critical or high severity defects are outstanding. All the lower severity issues are being resolved through business-as-usual processes. Correspondingly, as Teresa mentioned, the NAPM provided final acceptance on May 25th.

Throughout the migration, the TOM continued our transition outreach and education program or TOEP. We held monthly webcasts on March 14th, April 18th, and May 8th and additionally conducted a special pre-region one migration webcast on April 4th. This outreach was a key TOM focus.

I wanted to share some interesting statistics around the scale of the TOEP or outreach program. Since the first webcast on December '15, the TOM conducted 29 TOEP webcasts for 7,359 cumulative participants. In the course of those webcasts, we asked 42 polling questions and responded to 307 inquiries that came during the course of those webcasts. We also hosted 5 contingency rollback industry working sessions with 622 participants. We supported 3 NARUC meetings, 26 LNPA Working Group and Transition Oversight Subcommittee meetings, 9 quarterly NANC meetings, and about a half dozen industry conferences. We also posted 134 public documents and announcements on the NAPM LLC website.

As Teresa mentioned, this is our final report to the NANC and effective May 31st, the TOM is concluding its support of the

LNPA transition. I'd like to take this opportunity to acknowledge and thank the members of the NANC for the opportunity to provide updates to this forum. I'd also like to thank the FCC, especially the leadership and staff of the FCC's Wireline Competition Bureau. They have truly been outstanding in their support of the transition. I'd also like to thank the LNPA Working Group and Transition Oversight Subcommittee, which helped resolve a number of technical areas where requirements were not clear.

Just a side comment, I'll note that the important work of this group continues as there are several pending issues where the industry needs to decide how the new NPAC is going to operate. I'd also like to thank the NAPM LLC especially its transition team, the LNPAs, the local system vendors, and all of the industry stakeholders for their support and efforts throughout the transition. This transition truly was a team effort. I want to extend my congratulations to everyone. Thank you.

Travis Kavulla: Thank you, Greg. Are there any questions? Greg, usually, I have to wait for the end of the week to learn a piece of jargon. What is a soak period?

Greg Chiasson: A soak period was when we laid out the regional migrations, we migrated the first region, the Southeast region initially, we let it basically soak or run for a month.

The idea of that soak period is you shake out any issues. There were a few minor issues that were resolved in that period. Then we migrated the remaining six regions in two waves of three. The second group had a two-week soak period. The last group had essentially a one-week soak period. It's part of the risk management and the migration process to have these observation or soak periods.

Travis Kavulla: So at this point, you're confident that as your work concludes, any issues that would arise in the transition will already have arisen?

Greg Chiasson: Absolutely. If you think about it, the first migration was at the beginning of April. So we have essentially been running for two months now. I think anything that's going to fall out, it's probably been determined at this point. It's not to say that you might not get a few minor issues coming out as an ongoing operation. But I wouldn't expect anything that would be an undue cause for concern.

Travis Kavulla: Thank you. Other questions or comments? All right. Thank you for your work on this initiative.

Greg Chiasson: Thank you.

Travis Kavulla: I do want to take a minute to recognize two members of Neustar's Numbering Team who are leaving the company. Tom McGarry will be leaving Neustar at the end of the week, John Manning in mid-June. Not only will Neustar be losing

a combined almost 40 years of service, but the NANC will be losing 70 years of experience in the telecom industry as both of them began working in the industry directly from college to work for phone companies back in 1983.

For Tom, as the NANC was re-chartered and reformed last year, he's been Neustar's designated member. Because of his expertise and longtime industry leadership in the area of telephone numbering and networking tied with his experience in IP telephony, he's been very active in all the workgroups, I think. He's broadcast his opinions candidly and with vigor, some of which we'll be discussing today. He has a unique resource and displayed a key role in pushing change in numbering from number conservation methods in the late 1990s and early 2000s to the discussions that led to the NNP report that we're going to be hearing about today. On behalf of the NANC, Tom, thank you for your leadership and your knowledge in this industry that you've been willing to share over the years.

This is John Manning. He's been the face of the North American Numbering Plan Administration and has attended NANC meetings for almost two decades, both reporting to the Council and working in the background to help it run. Many of you know John as a friend and colleague always ready to share his wit and wisdom with the NANC and its members. Suffice it to say that we're all much more informed due to his prodigious efforts

beyond what he gave the NANC. On this body, he really showed, I think, how a professional should conduct one's self no matter the circumstances. John, thank you also for your leadership, knowledge, and professionalism in all of our recent endeavors.

We're waiting for Chairman Pai at this point who I know would like to make some remarks of his own about the transition which we have just heard some about. I think rather than diving into the substance of the draft reports from the topical workgroups, we'll just stand by and await Chairman Pai's arrival. So discuss amongst yourselves. We're on a recess.

[Pause 0:17:50 - 0:25:50]

Travis Kavulla: All right. We'll come back. I hope you've had another moment to wake up or so before we engage in the substance of our meeting today. But we'll yield for some remarks from Chairman Pai. Thank you again for joining us.

REMARKS BY FCC CHAIRMAN AJIT PAI

Ajit Pai: Thank you, Chairman Kavulla. I think you framed it exactly right. Before you get to the substance of the meeting, you get to hear the fluff of my remarks -- [cross-talking]

Travis Kavulla: Didn't mean it that way.

Ajit Pai: I'm just kidding, I'd say, although it's accurate in this case. I do want to say good morning to all of you. Thanks so much for being here. As I've said before to

this very room, I really appreciate your work. I know it's very much in the weeds. Part of it is that not just that the issues are very difficult, but just there's so much confusion about what it is you do.

So, in preparation for this morning's remarks, I actually went on Google. I just typed in NANC. On the first page, you see the question: Have you been burned by a NANC biblical counselor? You'll also see a page for non-noradrenergic, non-cholinergic transmitters which are neurotransmitters other than epinephrine and a few other things we might know. I think a lot of people just don't understand what it is NANC does and that it deserves its own headlines, both on the Internet and in real life.

Of course, we're not here to talk about your search results. We're here to celebrate a recent and extremely important event which was the successful Local Number Portability Administrator or LNPA transition. This is something that was important for consumers, for communications companies, for law enforcement and public safety communities, for everybody who relies on a telephone number. Some 70 million ports, as I understand it, are processed each year through this system. This past Friday, May 25th, was a cardinal day for the LNPA system. The new LNPA contract took full effect with iconectiv as the new administrator. iconectiv has already processed more

than three million ports since the first regional cutover in April.

Now, as with many transitions of these works, this process was difficult. The fact that nobody has noticed it outside of these halls, I think, is a signal of its success. These are often the areas where, I would hope the public would recognize your efforts, the hard work that went on in this room and among many of the individuals who led the efforts. Of course, the fact that this means that you might not get all the credit you deserve. It wasn't a given that it was going to be a successful effort. I think the outcome that we got was a result of the hard work of so many people.

I want to thank you in particular on not just the heads of our NANC, Chairman Kavulla and the Vice Chair Holland, but especially the NAPM co-chairs, Tim Kagele and Teresa Patton, for the years of hard work on this project. Literally a decade, I think, in some cases, countless hours spent in addition to very challenging day jobs. You have guided the ship, so to speak, into ports. You see what I did there? I'm here all week.

I do also want to thank the terrific staff of the FCC's Wireline Competition Bureau and Public Safety & Homeland Security Bureau as well as the Office of General Counsel. This issue has been ongoing so long that I actually worked on it as a staffer in the Office of General Counsel. Perhaps, odd though

it is that I'd be thanking part my own efforts, I want to thank staff of OGC as well as the bureaus for leading this effort. Thank you again for the indulgence. Congratulations on a job well done. Thank you, Chairman Kavulla.

Travis Kavulla: Thank you. Thank you for your interest in riding herd on the topic, making sure it happened on time. Thank you also, on a different topic, for the Call Authentication Trust Anchor.

Ajit Pai: Yes.

Travis Kavulla: A blessing. You know, it's kind of a blessing as a type of regulatory action. We appreciate you endorsing that model so that it can get stood up quickly and without any kind of regulatory delay.

Ajit Pai: Actually, thank you for the effort in doing this. This is consistently the number one issue that pops up. I did a roundtable, for example, recently in the rural part of Florida. It's about any topic you want to talk about. We talked about rural broadband deployment, some other stuff. Someone asked about robocalling. You could feel the lightning of anger going through the room. What are you guys doing about this? To be able to talk about the call authentication efforts that you've made is tremendously helpful. Thank you for all the work. It can't be issued by fiat. We have to develop it, of course. That is an effort that we are very happy to support.

Travis Kavulla: Thank you, Chairman Pai. Google's represented here so maybe they can tweak the algorithm to get the real NANC, the OG NANC on the top of the charts.

Ajit Pai: I knew I should have picked Bing. Damn answer. Sorry about that.

Travis Kavulla: Thanks for joining us.

Ajit Pai: Thank you, too.

Travis Kavulla: Now, we will now turn to our overview and discussion and hopefully approval of the Toll Free Number Modernization Workgroup recommendation. For that purpose, we'll go to Craig Lennon.

OVERVIEW, DISCUSSION, AND APPROVAL OF THE TOLL FREE NUMBER

MODERNIZATION WG RECOMMENDATION

Craig Lennon: Good morning, Chairman Kavulla, Commission staff.

Travis Kavulla: Just pull that a little closer if you would.

Craig Lennon: Okay. Can you hear me now?

Travis Kavulla: Yes.

Craig Lennon: Good morning, Commission staff and fellow NANC members. This morning, it is my privilege to be representing the Toll Free Assignment Modernization Working Group or TFAM for short, and to be sharing with the NANC a summary of the team's final report findings. However, before I

begin, I would like to take a second to thank all the TFAM Working Group members for their hard work, their careful consideration of the issues, and their considerable investment of time in the team's effort during the last several months.

Lastly and especially, I would like to thank Working Group Co-chair Susan Gately of Ad Hoc Telecommunications Users Committee. It is only due to Susan's extraordinary efforts and leadership of this Working Group that I sit here this morning prepared to summarize its completed final report findings. On behalf of the team, thank you again, Susan.

I would like to begin by quickly providing the NANC with some context on the TFAM Working Group and how it went about its deliberations. The Working Group was comprised of 24 participants of which there are 16 primary members, six alternates or substitutes, and two nonvoting members all from various sectors of the telecoms industry. The group formed in early 2018 and first met on February 15th of this year. It has now been just over 100 days since the initial session. The group has held dozens of meetings, researching, discussing, and debating the assigned subject matter. The working group took its charter from the referral letter received by the NANC chairman on December 7th from the Wireline Competition Bureau.

The referral letter outlined three principal areas of focus for the group. In general, these areas are: (1) questions

concerning a market-based approach to toll-free number assignment and what rule changes are needed; (2) questions regarding the development of a secondary market for toll-free numbers and what rule changes are needed; and (3) questions regarding the setting aside or reserving of desirable toll-free numbers for government or public interest use.

The TFAM Working Group divided its efforts into three corresponding thought groups, each focusing on one of these specific areas, each delivering preliminary reports to the larger TFAM itself where consensus was then later reached. Here is a high-level summary of each.

As I just mentioned, the first area concerns the market-based approach to number assignment specifically the referral letter ask, should the Commission revise any of its current rules to promote a market approach to assigning toll-free numbers, notwithstanding the Commission's proposed revision to the first-come, first-served rule? If so, which rules? If so, how? What are the implications of such revisions? While there was scant if any support within the group for the concept of implementing a market-based approach to toll-free number assignment, the group nonetheless diligently evaluated specific rule changes that would be necessary to make such an assignment process successful.

As a result, several rule changes are being recommended by the TFAM along with the proposed language. These recommended rule changes are rooted in some assumptions the group has made and called out in the final report. For example, the assumption that the Commission will be moving forward with the market-based assignment mechanism, an assumption that there will be robust enforcement of these new and existing rules, and that rolling back the proposed trial of market-based assignment is out of scope for this team.

With that said, the Working Group proposes changes to three existing definitions found in Section 52.101 of Commission rules specifically NASC, responsible organization or RespOrg, and toll-free subscriber. Also, the introduction of three new definitions in Section 52.101 and Section 52.103 of Commission rules specifically toll-free customer, high value status, and transitional status. Lastly, changes to the rules applicable to two status categories in Section 52.103 of Commission rules specifically disconnect status and unavailable status.

Additionally, the Working Group notes that the current first-come, first-served assignment mechanism works well as a fair, efficient, and non-discriminatory method in assigning toll-free numbers. It is recommended by the Working Group that the Commission include rules and protections in any new assignment method to preserve these characteristics while

protecting against the potential for conflicts of interest, collusion, and number exhaust.

The second area of focus is that concerning the promotion of a secondary market, specifically the referral letter ask, should the Commission revise its current rules including the hoarding and brokering rules to promote development of a secondary market for toll-free numbers? What are the implications of those rule revisions? The Working Group acknowledges that minor revisions to the FCC broking rule would be beneficial in: (1) allowing toll-free number subscribers to transfer their rights to use a toll-free number when the subscriber sells business assets associated with its toll-free number; (2) if the toll-free number is mistakenly returned to the spare pool and picked up by another carrier; and (3) to correct a fraudulent or unauthorized transfer of a toll-free number or inadvertent transfer of a shared use number. However, the TFAM Working Group recommends that the FCC's current rules be maintained in substantially similar form and effect because they continue to play an important role in the equitable and efficient use of toll-free numbers.

Upon its review, the TFAM found its recommendation to be in line with the last 20 years of precedence. In its 1997 Order, the Commission found that hoarding and brokering of toll-free numbers are contrary to the public interest and thus subject to

sanction by the Commission. The Commission later reaffirmed its rules in 2007 finding that the public's interest concerns still exist and that their practices would hasten the depletion of particular toll-free number codes.

The Working Group also raises additional concerns regarding the ability to generate and distribute proceeds from the secondary market and to what level these proceeds would offset the cost of administering a secondary market itself.

Finally, the TFAM highlights skepticism of seeking a secondary market to assist in resolving other types of issues such as trademark disputes.

The final area of consideration concerns the setting aside or reservation of desirable toll-free numbers for government use specifically the referral letter asks, should the Commission set aside certain desirable toll-free numbers for use, without cost, by government or nonprofit health, safety, education, or other public interest organizations? If so, how should this number set aside system be structured? What should be the roles, if any, of the Commission and the Toll Free Number Administrator? What are the implications of the Commission setting aside certain numbers for these purposes?

The Working Group also reached consensus that the Commission should not set aside certain desirable toll-free numbers for use without cost by government or other public

interest organizations. The Working Group cited several reasons for reaching this conclusion. The TFAM noted the historically infrequent need for Commission action regarding toll-free numbers for public interest purposes. The Working Group identified only three prior instances of toll-free numbers requiring Commission action of this type of the public interest effort. In all cases, this was post their initial assignment.

The TFAM also points out the difficulty in determining a number's pre-assignment desirability and any impact a set-aside would have on reducing the need for later Commission action however uncommon. Additionally, the TFAM cites the difficulty in determining the eligibility or even priority of various public interest organizations and the undue process burden this may place on the Commission and/or the requesting organization itself. With over 1.5 million 501(c)(3) charities in the U.S. alone today and many similar federal and state services, it is not hard to imagine a very complex and newer [sounds like] system being required for this purpose. Lastly, the availability of obtaining toll-free numbers has not shown to be a cost prohibitive act today.

The TFAM is pleased to submit its final report today to the NANC in response to the referral letter of December 7th. With that, I would like to thank the NANC once again for allowing me

to provide an update on behalf of the TFAM Team. We'd be happy to answer any questions anyone has at this time.

Travis Kavulla: Okay. Thank you, Craig. Are there any questions? Yes, Henning.

Henning Schulzrinne: Henning Schulzrinne. I was not obviously on the committee. So this is a bit of an outsider perspective. I'm not an expert certainly with operational aspects of 800 numbers. But I was struck in your report by the referral to the difficulty of the lack of enforcement of hoarding and other prohibited activities. You might admonish or we recommend that the Commission should continue to do that and maybe implicitly maybe do a little bit of a better job at it.

Given that this has been a problem now for probably two decades or so under a variety of chairmen and a variety of administrations, I was curious if your committee had any recommendations besides these exhortations which we know generally don't work all that well. We've tried it for 20 years given that this is not a political issue, whereas, I think, while [sounds like] divergent. It just seems very hard practically to enforce that for a variety of reasons. I wonder if your committee had talked about how for perfect storm observers and the Commission enforcement activities, it would be easier to detect and possibly automatically prevent the hoarding and unauthorized resale of 800 numbers. Because I don't see

that changing unless you change something in the mechanism, the rules, the reporting requirements, whatever it happens to be.

Craig Lennon: Yes. I'll take a stab at it and allow others to chime in who were on the committee as well. I think one of the things that was definitely widely discussed as part of our efforts was around the scope of the referral letter itself. The referral letter itself, we saw as the scope asking very specific questions around rule changes and what proposals we might have around that to serve the questions as asked.

I think your point is very well-made, it's that had we been asked to actually look at the level of enforcement that's taking place on existing rules or what mechanisms could be put in place to assist in the enforcement of existing rules, I think there probably would be much more to say on that. Maybe it's something that this group or future groups could take a look at. I think what you probably see in our report is not ignorance to that but more of a willful passing of that issue as out of scope.

Susan Gately: Yeah. Susan Gately here. Yes, I would agree that's entirely would be stepped around the issue of how you might change the enforcement mechanism because it was not in the scope of what we were asked to look at. There were some discussions of it including as an example whether or not the FCC's fee on toll-free numbers, which I think is about \$0.12 a

month, whether that could be increased to make additional funds available for enforcement activity. But at the end of the day, we decided that really was out of the scope of what we have been asked to do. We had a lot of ground to cover as it was. We should stick to our knitting.

Travis Kavulla: Go ahead, Henning.

Henning Schulzrinne: If I were to add, I think it seems like a topic that would merit a follow-on activity. Because I think that we'll be dealing with some of the same issues more broadly in numbering, not just for 800 numbers. That's already ongoing. I just see it as difficult unless we change the mechanisms. We see this in robocalling. It's all good to talk about enforcement and so on, what we now know given limited staff resources and limited ability to demand information from people who have no interest in revealing that. I thought that may actually require regulatory action to make it even feasible to get to an enforced version.

Craig Lennon: Yeah. I would echo that. I think in fact, to your point, I see a lot of the work being done around robocalling, the various venues that the work is taking place, whether it be enforcement-based fines and then other industry efforts. I think, to your point, is that that might be a venue that has not been explored when it comes to these issues. The rules do seem to empower the ability to do that. Potentially in

the toll-free space, a multi-venue effort to combat that would make sense similar to the robocall.

Travis Kavulla: Other questions or discussion? I guess I did have one question. I gather Craig, that you've understood the assignment that the workgroup was given to presume that the Commission would move toward market-based approaches to allocating certain 800 numbers. In light of that, you've sort of taken that as a given. So if you're going to do this, here are some of the rule changes you would need to make, right?

Craig Lennon: Right.

Travis Kavulla: I mean in light of that, there seems to be nevertheless some commentary present about the overall wisdom of moving toward a market-based mechanism. I wonder if the presence of that commentary is really logically consistent with what you've understood the assignment to be. I don't know if you have any comment to offer on that.

Craig Lennon: No. I would agree. Your interpretation is that I think as part of our initial consternation on this issue was trying to find a way forward to make rule change recommendations that would lead to a successful market-based assignment process while there wasn't really much interest in the group itself in delivering that or that as an end state rather. I think what you see in the report is the work to make

recommendations that would be required to change existing rules to allow for that type of mechanism.

Then to your point, some commentary on the interest generally in having that be the end state and also some commentary as you mentioned around noting that you are changing existing rules to facilitate that. What we saw as out of scope was any plan to change them back or anything around that nature. I do think that's how we saw the scope of what we're working on. It's my hope that the NANC agrees that what we delivered was an ability to move forward in that market-based assignment with those recommendations.

Travis Kavulla: Susan, did you have anything to add?

Susan Gately: The only thing I would add is that there was in fact a fair amount of discussion relative to what language should be put in of that nature relative to not really supporting a market-based assignment mechanism. Part of the logic for including that was a desire to point out some of the dangers inherent in doing that. So that when the Commission, if it goes forward with this and it designs some sort of an auction mechanism or another piece that's beyond the scope of what we were asked to look at. We weren't asked to look at how you would set up the market-based mechanism, but the Commission be aware that people looking at this had seen a fair amount of danger. Whatever they put in as an assignment mechanism needed

to have protections in there. I think that was part of the goal of putting that language in that.

Travis Kavulla: Yeah. I just want to make sure that if criticism of the underlying market-based approach is just kind of passing in nature, I worry that it sounds like it was the subject of some measure of deliberation in the working group. I just want to make sure that it wasn't one of these things where people got together and they said, "Well, we all really don't like this change. But we're going to propose some rules changes that might accommodate it if you really want to do it, but you shouldn't." I think it's fine having some caveat in language like as present. I just want to make sure that the caveat was subject to a kind of robust deliberation.

Because to an outsider looking at the report, I mean the first come, first served method of allocating these numbers is praised in the report as efficient. It's efficient in the sense of like giving out door prizes, right? I mean yeah, you get rid of the door prizes pretty quickly but it's an economically efficient way to allocate goods seemingly. There's some underlying at least theoretical merit that we've seen in trying to auction off potentially valuable public resources as opposed to just giving the right to use them away for free to whoever shows up first. I don't understand the details and the fears about collusion or potential illiquidity in a market such as

this, but the kind of blackboard economics of it resonates to me, again without having happily been on the workgroup to discuss all the fine details with you.

Robert McCausland: Mr. Chairman, Bob McCausland at West. I was not a member of this particular working group. My initial reaction when I read the recommendations were I think similar to what you're describing or reacting to. But then after I reread it and considered the recommendations, I concluded that they are fair. I, too, share a lot of concerns. I'm not opposed to the market-based approach. But in the end, I think that it's a very fair analysis of the types of rule changes that would be necessary. Also, there's a recognition that there would be a notice of inquiry or notice of proposed rulemaking to follow that would provide parties to provide further input and guidance to the Commission.

Travis Kavulla: Fair comment. Let's go down here.

Julie Oost: I'm Julie Oost with Peerless Network. I participated on the working group and in the many, many discussions that we had surrounding that. Perhaps, its semantics, I'm not quite sure. But I thought the questions were very clear that should the Commission do this. We struggled because we said no. We just don't want to say no without saying why. I don't think we went into it saying, "Okay, but we have to assume that they're going to do it. Then here's what changes

needed to be made at a minimum." That was kind of secondary. We had a few days' worth of discussions on should this be done at all and then how do you say no professionally and then give some alternatives.

So that the alternatives in here were kind of our response to, if you don't agree with our assessment of the no, then we want to give some alternative. So we don't just have a two-liner of, "No, it's working fine. History proves out that it's working fine." Hard to define what's desirable and leave it at that. We did feel compelled to try and give an alternative. But I don't think that was the driving force of the report. It was the, "No, here's why. Then if you disagree, here are some alternatives and things that at a minimum needed to be changed." That's how I saw it. Perhaps, we're seeing the same thing but I just wanted to give my two cents on how I approached the discussions.

Travis Kavulla: I think that's a good point. That's the vein in which I understood the report. I just wanted to be sure. I think some of the phrasing might be cleaned up to make it a little more clear, the kind of logical structure of what the report presents. David and then back to Henning.

David Greenhaus: David Greenhaus with the 800 Response Information Services. I was also an active participant on this group. The way that I looked at it is we spent a lot of time

analyzing what are we being asked to respond to. It became very clear that we put it into our assumptions among a few others that we were being asked to respond to something that the basis of which we did not necessarily agree with. I think we would be remiss in not stating that. If you put it, for instance, in a military sense, if we were being asked to go and being ordered to go take that hill, most of us thought that's not a good idea. It's not going to work out very well. But we take our orders and we have a job to do. We'll do the best we can in responding to these specific questions that we were asked and we analyzed.

I would agree with others. I think the basis of our response, I think it would be very important that we make that comment, make it clear that we're responding to provide particular rule changes assuming something is going to happen. But we don't think that should happen. That's my view of kind of how we responded.

Henning Schulzrinne: Just one of the things that I even weave into the narrow scope that I think you were given, it wasn't always clear what the assumptions were as to what these more market-based mechanisms might be. I sometimes weighed it as implying an auction-based mechanism because that is clearly something the Commission does for spectrum in particular and maybe some other resources as well.

However, we know our domains and particularly numbering-related domains like domain names, the number of market-based mechanisms have been used that are not auctions. For example, simply prices that are fixed but higher than kind of purely administrative prices would be \$10 a year type of order as opposed to the sub-dollar a year type of model, which whatever the problems are with domain names certainly make hoarding economically less efficient, if nothing else, without going to a full-blown auction model that you might have.

If I were to say one part of that was missing even within the much narrower scope is to say and discuss to your comment, namely considering a market-based mechanism is not a binary thing as it is a market-based mechanism or if it is a nonmarket-based mechanism. There's a range of mechanism. I would have, I think, benefitted certainly from having a closer discussion as to what you would consider within the scope of market-based mechanisms. What are kind of the range of when does it stop being purely administrative, old-fashioned, whatever you want to call it. And when is it, I mean, a full-blown libertarian bitcoin distribution-based in that. And where do you see the tradeoffs, as in where does the good news and benefits of existing system access and fairness and so on stop [sounds like]? Where do some of the other benefits, prevention of hoarding and avoiding to having to [indiscernible] resale, where

can you find that balance in that? To be quite honest, I was missing that a little bit in the report.

Craig Lennon: Yeah. One comment I'll make on that. I think what is important to point out and from our perspective is, it is important that we separated into the three areas of consideration. The first area of consideration, which is about new number assignment, we weren't asked to evaluate the benefits, pros or cons of any market-based analysis. We were asked to simply refer to rule changes that would enable it. In some ways, it's, in our view, a *fait accompli*. In fact, in the December 7th letter, it is fairly unambiguous about a blind Vickrey auction for the 833 code. It is fairly prescriptive of this will happen and it will happen like this. It doesn't really ask for our consideration.

Where that isn't true is in the second point around the secondary market. I think you will find at least in that section, we looked to historical precedents that we took some guidance from the Commission over the last 20 years. They've looked at this issue, specifically around hoarding and brokering, and found it to undermine fair and efficient utilization and lead to exhaust.

Then beyond that, we did talk about proceeds. Okay, assuming it could raise some money, where would those proceeds legally even be allowed to go and if the areas that we saw where

they could go didn't make a lot of sense to benefit the ecosystem? I think you will find elements of that in the second piece. You will not find it in the first. It's really because we saw in the first that it is not what we were being asked.

Henning Schulzrinne: I'll make one final comment having sat on the other side just as in every phone call too. I've always appreciated when advisory committees, if they saw that the question maybe was either too narrow or maybe too constraining that I certainly always appreciate it being asked, "Can we deviate from that? Can we open up the question a bit in that?" This obviously depends on the DFO as to what their goals and objectives are. I wouldn't quite feel as constrained. Fortunately, I didn't have a need to run a committee so I don't want to second-guess that. For a future one, one might want to do that a little bit more interactively.

Travis Kavulla: Susan.

Susan Gately: Hi. We, in fact, did go back to the Commission with a question regarding what we should do. We were told to assume that it would be the auction.

Henning Schulzrinne: Okay.

Travis Kavulla: In terms of procedural next steps, the Commission took regulatory action where it seemed to bless a Vickrey auction for whatever 17,000 - 13,000, numbers out of the 833 blocks. These administrative rules, if promulgated, would

lay the foundation for that auction to occur, referring to the Subpart A of your work.

Susan Gately: Those rules would correct the existing toll-free rules so that the auction could happen. They do not set up an auction mechanism there. That still would need to happen. But they would make changes within the existing rules that would facilitate layering an auction on top of the existing system.

Travis Kavulla: The previous commission action has been to identify conceptually an auction mechanism. Then at these report issues from us with the CFR changes, they presumably will adopt some CFR changes and establish timing parameters, details around an auction.

Susan Gately: They would need to develop an entire auction mechanism because there -- I mean other than saying that they're thinking of a Vickrey auction, there were not details as to how that would be run, who would run it, who would be able to participate in it. None of those parameters were determined.

Travis Kavulla: Okay. But they've settled on like a Vickrey as opposed to the highest bidder clearing press.

Susan Gately: Well, I don't know that they've settled. It was teed up in the NPR minutes. There has not been an order come out from that yet.

Travis Kavulla: Sorry to leap ahead. But then Subpart B then is just a little -- the secondary market, there's been

still less concrete regulatory action from the Commission related to that.

Susan Gately: Yes.

Travis Kavulla: Okay. David.

David Greenhaus: I just wanted to make one more point, which is, well, from an economic point of view, the three transfer of assets to the highest best use based on a monetary value is often the best way to approach an issue like this. But we did not do it. There hasn't been any kind of analysis in the big picture how is the entire industry going to make out in this type of situation. In other words, we don't know how much money would be raised in an auction. We don't know how much money would be additional expenses of carriers, of educating the public and educating the carriers, and what's a Vickrey auction. Probably, a few if anybody even knows what it is, how it works, the cost associated with just educating the public.

We don't have that cost-benefit analysis. Of course, being a public resource, you're not going to end up with a true market-based system. It's going to be some sort of a hybrid. I think that's another issue that has not been fully analyzed in order to be able to reach any conclusion that this is a good thing; this is going to be good for the economy, for businesses, for the industry. I just want to mention that.

Travis Kavulla: Respectfully, David, I think we're almost in some ways in agreement but from different angles on this. My view is because there are so many details yet to be written about what this market-based mechanism is, it would seem premature for anyone to have a fairly well-defined view on whether it's good, bad, provident, improvident to transition away from a first come, first served model. My druthers would be to have a draft report that's a little more reticent on that, raising the red flags of, here are the issues you need to deal with, the possibility of collusion if there's a lack of liquidity, the possibility that this actually makes some of the problems you're purporting to solve worse if you don't do it the right way. But not just saying, "We're not very fond of this. But if you really want to do it, here's how you can with the CFR." I just wonder whether or not some of that language might be softened or maybe more tentative somehow and contextualized within where we are now in this multiphase regulatory process.

Susan Gately: The one thought to that is the first of the three questions asked for rule changes. The other two questions asked whether it should be done. The question was, "Should we establish a secondary market?" In that case, the answer, it's a yes or a no with some explanation. The same was true with the question relative to the set aside. In response to the question for the primary assignment of numbers, the high value numbers,

that's the area where there is probably commentary that people could determine they did not want us to include.

Travis Kavulla: Any other discussion or questions?

Jay Carpenter: Question from the bridge.

Travis Kavulla: Sure, go ahead. Identify yourself and ask the question.

Jay Carpenter: My name is Jay Carpenter. My entity is Phoneword. I was a champion of a white paper within the Future of Numbering Working Committee for a number of years. We basically looked at the market-based allocation mechanism. Over a course of about six years, I believe, we produced about a 14-page white paper. My question is, was that reviewed? My second question is, have you looked at other market-based allocation methods such as the Australian model?

Susan Gately: This is Susan Gately. We did review the Future of Numbering report. We did not specifically review any other number-based assignment mechanisms because we were not recommending a method one way or the other. We were developing rule changes and expressing some concern with the implementation of those rule changes. But we were not trying to design an assignment mechanism. But we did review the Future of Numbering report on toll-free services.

Jay Carpenter: Thank you.

Travis Kavulla: Any other discussion? Maybe just a procedural note. This report is due to the Bureau, June 7th. It probably needs another round, I think, of a few technical editing to just clean up. I think it would also benefit just from another look at making clear of what the working group understood and was told by the Bureau what its scope of work would be and maybe another look at some of the language we've just been talking about before it goes out.

Male Voice: Thank you. We actually did struggle initially on the first call, too, with the clarity of the scope of work. I just thought I would share that with the group here today. Because it was so broad in nature, we actually asked a lot of questions initially. It took us a little while to actually get going. I kind of expected some of these discussions. Just thought I would share that with the group.

Travis Kavulla: Each of us on the NANC has had their own working group. Thank God, mine submitted the report first. The CATA people were just sitting back, I guess. I'm vaguely aware of some of that back and forth. It might just be a good idea to try to memorialize it somehow in the report. Just so we know what this report is meant to be a definitive comment on and what the report is not meant to be a definitive comment on, on the part of the NANC. I don't hear anyone saying, "Don't do the report," though, so far. Are there any other questions or

comments? If not, Craig, would you like to offer a motion that, subject to a few revisions, that the NANC adopt this report and submit it to the Bureau by June 7th?

Craig Lennon: Yes, I would.

Travis Kavulla: Okay. Would you like to second that motion, Susan?

Susan Gately: I second the motion.

Travis Kavulla: All right. Is there any other discussion on the motion? Seeing none, I'll call the question on the motion. Those who are in favor of it, please say aye. Aye.

Voices: Aye.

Travis Kavulla: Any opposed? All right. We'll mark that draft report as approved, subject to another revision. We'll get that. I'll liaise with you, Craig and Susan, about that. I don't think any other changes will be so substantial to round trip. But we can definitely make sure that all of your workgroup members are included in what those might be if that's acceptable to you. But we'll talk about that offline.

All right, let's move on and turn now to the overview discussion and approval of the Nationwide Number Portability Issues Working Group recommendation, a draft report, and several appendices have been previously distributed and are available on the website, nanc-chair.org. Courtney Neville will be leading our conversation on this today. Thank you to her and her co-

chair, Rich, for their leadership. Thank you, Craig and Susan, for your leadership of the working group.

OVERVIEW, DISCUSSION, AND APPROVAL OF THE NATIONWIDE NUMBER

PORTABILITY ISSUES WG RECOMMENDATION

Courtney Neville: Great. Thanks. That's a tough act to follow but we'll do our best. Can everybody hear me okay? Okay. Yes. I had the privilege along with Rich Shockey of co-chairing the NNP Issues Working Group. We had 28 individual voting members and four individual nonvoting members. Many of whom are represented in this room and on the bridge. So thank you to all of you. It was quite a fun and interesting five months, I will say.

Our working group, like the rest of those here around the table, was launched as a result of the December 7th letter from the Wireline Bureau. We were tasked to determine whether any of the four models identified in the FCC's October NPRM and the ATIS 2016 reports were preferable in terms of achieving nationwide number portability. We were also asked to specify potential costs, benefits, and likely consequences of these models and then recommend next steps for achieving NNP. That led to this 25-ish page report that you all hopefully reviewed over your Memorial Day weekend.

The importance of NNP, as you all know, is that it allows consumers to port their number without geographic boundaries.

It also promotes competition among providers of all shapes and sizes and will likely be a jumping-off point for increased innovation and opportunities moving forward once it is achieved. You'll note that the reports had specific findings for each of the models. Overall, as we noted at the last NANC meeting and in our April progress report, we dispensed of a particular discussion of the GR-2982-CORE model early on in our meetings. We found that it was developed for use with legacy networks and is therefore no longer a valid solution in the current network environments. That being said, we had a lot on our plate in tackling our remaining models, commercial agreements, NGLRN, NLRN, and as we noted, any other considerations that are identified at the end of our report.

With regard to commercial agreements, we found that it has been identified as an interim solution that's currently in use by certain service providers. That being said, there are some hang-ups with regard to bargaining power and cost associated with these third-party negotiations. It is important for both the working group and the NANC and the Commission more generally to consider more long-term solutions like NGLRN and NLRN and the like.

Regarding NGLRN, we found that while it is an important solution to look out for a long-term solution, there were some impediments like requiring new infrastructure, changing existing

interconnection paradigms, and potential cost that might be absorbed by providers or consumers.

Similarly, we believe the NLRN model deserves more consideration as well although it may be limited as a result of adapting markets and environments. We also generally have a section at the end of the report that discussed costs associated with all of these technical solutions and believe the FCC should consider those more broadly. To that end, we recommend a second notice of inquiry be launched so that we can further dive into these remaining issues, both at the working group level and to allow for a more general comment from the public.

We also recommend that the FCC potentially task ATIS with a survey of the NLRN model and whether providers would be interested in testing that model. Then as I noted, we provide a recommendation that both the NANC and the Commission and industry more widely consider potential costs and regulatory barriers to each of these models.

That's an overview of the report. I welcome any questions. As I noted, I thank everybody who's in the room who participated in our discussions. I look forward to your questions.

Travis Kavulla: Okay. Thank you very much, Courtney. Questions? Henning.

Henning Schulzrinne: I will just maybe offer some color commentary if you like.

Courtney Neville: Go for it, Henning.

Henning Schulzrinne: I think you summarized a complex and long -- I mean long in terms of the detailed document. So I won't add to that. I just want to call out to maybe say it a little bit more bluntly than you were saying it. This particular topic has obviously attracted a fair number of reports over a number of years and are largely consistent. I don't think there is a large amount of disagreement. Indeed, the current report draws to some large extent on previous and actually concurrent work that was being done by ATIS in that particular case.

I think from a kind of high level recommendation perspective, adding more reports doesn't seem to be a powerful work. It seems to be one of those things where it is clear that none of the solutions are without cost or effort, which just happens to be real life. Nothing worthwhile is without cost or effort. Expecting it to be, I think, somewhat colors the overall conclusions.

It is fair to say that if the consumer benefits that you alluded to that attach to a nationwide number portability and as an aside, we should always recognize that we actually have partial nationwide number portability by hook and crook, I mean in a sense that we don't have it by regulatory or legal. We have it because of workarounds or because of activities

particularly Voice over IP providers over -- top Voice over IP providers in particular and most prominently, the large mobile providers at least have instituted. So when we talk about nationwide number portability, we're really talking about extending it as opposed to inventing it.

In any event, it is clear that the question is not, is there a freebie effort that we could just essentially change, I mean the wording in a wall that would magically enable that? It is somebody will have to pay for that across the industry to make that possible. But that's nothing new. Number portability -- I was not around for this discussion -- was not an uncontroversial thing. There were many of the same considerations, namely, this is difficult, it requires technical changes, somebody's going to have to pay for that. But a decision was made that the consumer benefit and competitive benefits in particular to the industry were some modest expense which turned out to be, I think given the contribution factors, to be relatively modest and as a fraction of industry revenues.

So I think the point has come to essentially say unless somebody is willing to spend money, this isn't going to happen. This isn't going to happen next year. This isn't going to happen in five years. This isn't going to happen until the very last TDM switch is going to make its migration to the Smithsonian Museum of American History. And I suspect most of

us will make a different migration to six feet under long before that.

So we have to be honest to the Commission that industry and consumers isn't going to get that unless somebody makes an effort and pay some money for that. I think that's the highest level of conclusion which, unfortunately, is a little bit blurred. We're blurring the lead a little bit in the report and that's unavoidable with such structure and so on.

So I think the more interesting question really is not is there some low cost kind of version about the equivalent of what you see on infomercials' no effort and lose 50 pounds type of thing in three weeks. It is the how much effort would it take, and is it worth that effort. Or conversely, and this is what I'm worried about longer term is should the recommendation and inclusion be that at least we don't want to propagate the problems that we've had with the lack of nationwide number portability to the next levels of technology?

Many of the small carriers, whose concerns were represented on the group, are transitioning to Voice over IP even though the last remaining ones will be around using TDM for quite a while at least in part. We should also recognize the encumbrance, and this was true for number portability, have no in-hand incentive. This has not come up. But it's pretty clear that actually for most encumbrance number probability is a net negative. They're

likely to lose customers because customers will have one less reason to stick around to a provider that they might otherwise want to leave for better and greener grass elsewhere. So we should not rely on the encumbrance as a note of what is feasible and what is not feasible.

Unfortunately the committee, by giving that short timeline, really did not have both the technical depth, I believe, and the time to explore other alternatives which would provide maybe a more gradual or partial national number portability. So for example, one option that I think would be worth exploring is in areas where technology is not a hindrance, namely, for providers that run all-IP or nearly all-IP, IP backbone versus the last mile type of thing where the switches at least are all-IP capable, whether it is useful for those areas to support national number portability even if that is not a good cost-benefit tradeoff or the most legacy-encumbered service territories in that [sounds like].

The other high level conclusion which I think is somewhat of a surprise to me simply because I'm not working in that area is because national number portability exists for probably at this point three quarters of subscribers - namely the Voice over IP and the mobile subscribers in that - that any regulatory, financial, taxation, fee-based mechanism that rely on numbers being tied to geography are extremely brittle at best. And

probably it is high time for anybody who deals with that to think ahead that this is not a sustainable model. NNP, as discussed in the committee, isn't going to break that. This has already broken because three quarters, as is said of the U.S. population, already has at least theoretical access to nationwide number probability even if it's not called that.

So I think the longer term suggestion that I would make is let's look not at identifying a set of reasons not to do it but see what can we do to get or make partial progress to avoid replicating the same constraints in Voice over IP, for example, and mobile technologies that we have today in legacy and see if we can get 80 percent of a benefit without relying essentially on the legacy technology to prevent our progress for consumers and competition overall.

Travis Kavulla: Tom?

Tom McGarry: I actually don't have any comments on Henning's comments other than agreeing with him. I have different comments, so if there are other people that want to talk. Yes, any questions?

Travis Kavulla: Does anyone want to respond to Henning? I'll ask that first. Rich.

Richard Shockey: This is Rich Shockey. First of all, like all of the committees that were constituted, we were under substantial time constraints. And getting proper clarification

from staff one way or the other proved difficult at times in that limited scope of what we could ultimately recommend over time.

That said, national number portability, as Henning correctly points out, has many other externalities and cost factors which were imponderable for us - including access charges, All Call Query on origination, potential consumer impacts on national ten-digit dialing and stuff like that. That could have been dealt with in more depth, but we did not have five years to do it.

Of course, Henning correctly points out that this actually has been studied multiple times in various fora. And I think the general conclusions that we have come to is that commercial agreements and that the National LRN solution clearly point to the most cost effective solution available today. And that even with National LRN, it is clear that there is going to have to be some kind of tactical testing round to actually see how feasible this is for legacy switches. There are some legacy switches out there that are almost as old as I am, and that's saying something. It is very clear that they may have configuration issues which will prohibit them from offering number probability forever. And of course Henning correctly points out this is all tied up in the all-IP transition which is ongoing. We have never set a date specific, but it does complicate the

deliberations over national number portability that we had to face.

Travis Kavulla: Yes.

David Casem: I think I agree with sort of --

Travis Kavulla: If you'd just introduce yourself.

David Casem: Sorry. David Casem from Telnix. I agree pretty much with all you said, Rich. The fundamental issue is I think this is one of the few industries where it's acceptable that the equipment being used in production is nearly as old as you. So I think there needs to be a change in the paradigm, so to speak, to force those operators to start the upgrade.

With respect to the IP transition, this came up near the end of our discussions. I think some of the members of the group, particularly those that are sort of in an incumbent role, were looking to add language as suggested that the industry would be better served by focusing on the IP transition. I think we need to think about nationwide number portability as potentially a means to an end with respect to the IP transition, that allowing or having a mechanism for nationwide number portability will make the IP transition potentially easier.

Travis Kavulla: Okay. Now is your time, Tom.

Tom McGarry: I will actually comment on something that was just said. I think that anybody -- I've had kind of an old standby that I used during this process. Anybody that says wait

until old ATIS go away, wait until old rate centers go away, or wait until everybody's IP is just trying to delay the issue. So they're not really trying to solve the problem.

But what I wanted to say, if you haven't read the report, I'll summarize it for you. It says do not pursue nationwide number portability. That's really what it says. It's 25 pages of a parade of horrors, of how bad it's going to be when we do it. The recommendations don't advance the effort anymore. There's one recommendation that says ask ATIS to do a survey of would people want to test.

My personal opinion is that we should take commercial agreements off the board. We all understand that. Great. My personal thinking also is, and I've been public about this, that it's almost impossible to test everything for NLRN. I don't think we know. I think we'd go down a year, a 24-month effort only to find out that the answer is no. It doesn't work.

There should be ongoing work, by the way. I don't think that -- it's not clear to me that the consensus of the group really was don't pursue nationwide number portability. I think there are smaller and more advanced carriers who are actually interested in pursuing nationwide number portability. They almost form, you know, an industry segment.

What I would suggest as next steps is, again, being that I personally don't think NLRN is doable, not really to pursue

that. Although if you want to pursue, what would the test plan look like? Who would have to do it? What would be a success? I think that's possibly worthwhile. Secondly, I would pursue more work on the NGLRN solution and any variations on it such as - Henning suggested a variation earlier when he talked - and would focus on technology.

One of the problems that the group had is, well, one of the problems that the industry has in numbering has always been the realm of people who pay attention to policy. You know, should a phone number be aged for 30 days or 45 days or something like that? This is a very heavy technology. The nationwide number portability issue really gets deep into technology interconnection, the relation to numbering and interconnection. And most people, the vast majority of people on the group didn't understand it. I would say there's, you know, I could probably count them on one hand - the people that actually had a grasp of understanding the issues that we were talking about. So I would stress that any further work that would be done on it stress the fact that this is a technical effort and we really want to hear from technical people.

So in summary, you know, I don't think that everybody wants to stop work on nationwide number portability. I do think there are people here at this table that would like to pursue it. And

I suggest that any further work that gets done really focus on the technology. Thank you.

Travis Kavulla: Courtney and Rich, would you like to respond to any of the criticisms you've heard?

Courtney Neville: Yes. Thanks, Rich. I'll go first, if you don't mind. So I appreciate all the comments and, in fact, they've been made as noted from working group members which I think is important because you all have the context of the extensive discussions that we had on each point that's raised here. I will note, as I said at the outset, that this is a consensus report. So to that end, there were of course issues and comments that were raised that may not have made it into the report in order to find that careful balance. Also, as Rich said, there was limited timing. But as Henning and Tom correctly pointed out, we did rely on a lot of the past very useful reports that were provided both by other working groups in this committee and elsewhere.

That being said, I do think the report does a great job of highlighting the importance of nationwide number portability, in fact, that industry should continue to work together to find the solution towards that. But hopefully, as evidenced by all of the comments here, it shows that there are some more discussions that need to be had and, I agree, some more technical evaluations as Tom noted.

Travis Kavulla: Rich.

Richard Shockey: This is Rich Shockey. I want to make it perfectly clear that it was the consensus of the working group to reject NGLRNs for any number of perfectly rational reasons principally being, one, cost because it envisioned an entirely new system of gateways that would in essence deal with IP interconnection and not national number portability. Two, it is the consensus of the working group that NLRN is probably workable considering that we have a number of experiences with the FCC suspending the rules during national disasters that allowed for porting in and out of various jurisdictional LATA boundaries one way or the other.

We specifically asked staff to see what potential complaints there had been during these national emergencies, and whether or not the porting rules caused substantive consumer complaints. The staff informed us that in fact there were very few, if any, complaints that actually had been rendered here. The problem that I had seen with NGLRNs is it was dealing with a problem that we were not asked to deal with, which is a national system of all-IP interconnection. The SIP Forum and ATIS studied that four years ago, which we noted in the report, and that there was absolutely no industry-wide consensus on how that would ultimately be accomplished. So I'm perfectly proud of

this report as it now stands, and I frankly reject Mr. McGarry's comments.

Travis Kavulla: Okay. Before we go to you, Julie, why don't we wrap up the NGLRN topic and go back to Tom.

Tom McGarry: So you knew what I was about to say?

Travis Kavulla: Yeah, I did. I don't fully understand it, but I know it's on point to you, Tom.

Tom McGarry: Yeah. As Rich pointed out, there was actually a lot of benefits to the NGLRN model which involved implementing IP parts of the network and modernizing number administration through any platform to modernize number administration - actually the goal of this committee. But all of that was taken out of the document.

By the way, in the last two or three weeks, as a non-voting member, actually I couldn't say anything on any of the calls. So they deleted all of that stuff out and put all new stuff in. And, you know, I was not allowed to give comment which is fine by me. I did want to point out that there were benefits to the model that were included in the report but ultimately taken out.

Travis Kavulla: Courtney.

Courtney Neville: Sorry. I just want to respond on the process there. Tom, it's disappointing to hear you say that. But while you are correct that in the last few weeks of finalizing the reports the discussions were much more prevalent

among the voting members, I have the attendance sheets and I believe all other nonvoting members did join and in fact helped to clarify the descriptions on the report. So, like I said, that's disappointing to hear you say that. But that was not what the organization of the working group was meant to be. So that's just a little note on process.

Travis Kavulla: Julie.

Julie Oost: Thank you. Julie Oost with Peerless Network. I'm not trying to be critical. I read the report and I didn't walk away thinking it was very clear, as you said. I wasn't on the calls, but you said it's very clear that NGLRNs were rejected. It doesn't seem clear to me. I don't profess to know the technicalities, but I thought the report did a nice job of laying out the benefits and cost at the level that it did. And I agree that there should be more.

It seems to me if you had more time and could dive into all the technical pieces, that some of those hurdles could be overcome. But to me, it wasn't very clear what model. Perhaps as clear as Mr. Shockey stated it. Perhaps that needs to be worked out instead of saying that these have costs and benefits. But maybe study it again. That was just my takeaway. And again I'm not trying to be overly critical of that, but it seemed like Mr. Shockey thought that there was, you know, consensus on

something, that I don't see consensus in the report. So that's just a couple of observations that I had.

Richard Shockey: The consensus conclusions really were broad. They are the conclusions we made in the first essentially paragraph which is, after careful deliberation, the basis of what are the options we are going to recommend to the NANC. And these are the recommendations that we made. We did not recommend NGLRNs, period. We think that in terms of cost, benefit and technical feasibility, the commercial agreements however flawed they are, and NLRNs however flawed they may be, were the best possible options.

However, given the time constraints, there were other considerations we could have brought up including those lovely things called access charges, intercarrier compensation, All Call Query - which is a technical issue that you really have to deal with which is really the N minus one problem - as well as potential what we thought would be consumer confusion potentially if you did not mandate national ten-digit dialing. There is good reason for actually doing that in an all IP network, but we were not charged to go there.

And again, based on experience that the industry has had in consensus reports on all-IP interconnection, there is no consensus. That is an area that I have considerable knowledge of having spent almost ten years doing ENUM and other things

like it. We at the ATIS so far were not able to conclude any recommendation to industry or to the Commission on how to proceed with those kinds of solutions. Ergo, you know, what are we going to do?

Travis Kavulla: Just a couple of questions from my part. As Henning pointed out, the first recommendation of the report is to have a second notice of inquiry on the part of the FCC. But you know it's not really scoped out, at least not that I'm seeing what you would have the FCC ask for comments around. I wonder if there's room to make the report a little more clear on that front. Because all of the things that have been talked about as impediments are alluded to throughout the course of the document, but it is wanting I think a bit in well-defined next steps.

Courtney Neville: That's a fair point and we can certainly, with editorial privileges if the report is approved, add some more detail there. But I think our recommendation there was to flesh out the issues that are actually being raised here today which clearly require more industry comments. But we're happy to further clarify that in the report.

Travis Kavulla: It is interesting, the point that's being raised, that there may be small carriers interested in nationwide number portability. I mean are these carriers able to avail themselves of commercial agreements? Or does it run up

against the dilemma of a sort of market power and bargaining power that the report alludes to in terms of commercial agreements being a solution?

Courtney Neville: Yeah, that's a great question and in fact something, not as a co-chair but as an individual member, that we raised on the calls several times. There are some smaller providers that do avail themselves of commercial agreements and others do find issues with them, which is why we had to further elucidate that in the commercial agreement section. And as I noted, it was a source of a lot of discussion in the last few weeks.

Travis Kavulla: Brian.

Brian Ford: Brian Ford, NTCA. Yes, some of our members have looked at commercial agreements. Most have found that it's not a commercially feasible way to offer NNP. You know, they have bigger issues to worry about and they have bigger problems to solve. They understand that if they do enter into commercial agreements, they are going to have to cover the cost of getting calls to port in numbers and to their service areas. And they've looked at that. So, yeah, there are costs there and our members are certainly aware of them.

Travis Kavulla: Henning and then David.

Henning Schulzrinne: This goes to your NOI question as I think just to add a little bit to that. Having had the dubious

privilege of trying to work on cost benefit analysis, I know how difficult those are to do well particularly with technology that is integrated into a much broader case. But that would be certainly one of the items that I think an NOI could explore because one of the difficulties that the committee had by necessity is the lack of any real data to quantify the cost. Because it's not just that there is a cost, there's a cost to almost anything but, whatever, the costs are significant.

And conversely, also this is by the nature of the NANC, is since it is really very limited to no consumer representation on the NANC. And in particular instances, since it is very difficult also, even it were, to quantify what the competitive and consumer supplies or whatever other benefit consumer feature type of benefits would be, that would be one that the NOI is probably better equipped to tease out since there's at least a potential for a broader consumer input.

Because in the end NNP, yes, it's done for the benefit of industry competitors but it is also - and I believe we've seen that in the broader number portability - the biggest beneficiaries are these days consumers that can retain a number that they've had for many years as part of their identity these days, when they switch providers. So it is largely about consumer benefit and it's just very difficult to quantify that.

That said, the NOI is offering an excuse to delay. So I will say that it should have, in my opinion, a clear goal as to what that should be - I mean what should be the outcome of the NOI - and stray beyond the three or four, realistically three options, into maybe exploring some nuance since we seem to be very good about finding problems with those. To be revisiting those three options again and again.

Travis Kavulla: David.

David Casem: So I think, just to sort of touch on the commercial agreement section. That was the section I think we spent a good amount of time on versus some of the other sections because I think there was some debate as to the influence of market power as it related to the ability to negotiate reasonable commercial agreements. That to some extent is something that we've struggled with as an interconnected VoIP provider. I guess this question is to the chair. I mean can we have more time?

Travis Kavulla: I wonder when someone is going to ask that question. The reality is I don't know. I'm not the one who sets the deadline. We have a deadline of June 7th right now. It sounds as though - both the people who are agreeing and disagreeing - that more time would have been beneficial. I will say that before going forward with any kind of request for additional time we'd want to scope out exactly the things that

we are going to use, the questions that we're going to use that time to resolve.

David Casem: Yeah. Ultimately I think one of the recommendations was to do testing, voluntary testing, at the last meeting. ATIS came back and pretty much questioned the viability of such testing. So there is a real potential here that while National LRN may be the most convenient step forward after commercial agreements and the one that get us the biggest bang for the buck, that it may just not work as Tom has alluded to.

So I think concurrently it makes sense to look at NGLRN, and that again is something that occurred in the last meeting when we already had concluded our deliberations. So more time to understand the technical feasibility of both NLRN and then how something like NGLRN would work I think would be beneficial.

Travis Kavulla: I love that these acronyms are essentially the same but for one letter. So the NLRN that the report recommends, ATIS survey providers, and maybe test, we've heard ATIS itself and I think Tom doubt the meaningfulness or technical feasibility of that. It's that I wonder. I mean is the -- Courtney and Rich, what is the status of your confidence in that recommendation?

Courtney Neville: Right. So David raises a good point that was a topic of discussion at the very last meeting, and

ATIS did raise some concerns. That being said, they weren't fully fleshed out. But if I may, this is related both to the NOI question and David's note about additional time.

I think Henning raised some good points, that quantitative data would be extremely helpful. I also just wanted to tie it back to Tom's important point that further technical evaluation would be helpful as well which could be something that the NOI could ask for. I know that the October item from last year anticipated those questions, but it seems like the record lacks a bit of that information as we did go back and review and were not able to incorporate as many technical evaluations as we would have liked in the report. That being said, if more time is the solution, that would be something we could pursue. But I think maybe having other participants or analysis both on the cost and the technical aspects would be helpful as well.

Henning Schulzrinne: A new set of questions would be good.

Travis Kavulla: A new set of questions, okay. Rich.

Richard Shockey: True. But I think one of the things that staff will have to evaluate is what is appropriate for the NANC versus what is appropriate for the docket itself. Because there is now a reasonably extensive record pointing out some of the problems that any solution, anything we'd have to confront including intercarrier compensation and access charges which this building well understands is the ultimate rat hole of

regulatory environment at the FCC, because if I recall correctly, the ICC docket is the longest standing open docket in the history of the FCC.

Female Voice: Except separation.

Travis Kavulla: Separation?

Male Voice: You need to emphasize this.

Richard Shockey: Right. Which everyone around here had sort of memorized in some way, shape or form, separating it to a very narrowly scoped series of questions makes a lot of sense. I actually do agree with Henning that there may be a partial solution. If you look at the structure of the industry now, how telephone numbers are actually used, it's perfectly clear that between advanced IP networks and mobile, you're looking at over 65 percent to 70 percent of the total market. Applying a set of potential rules only for those two segments while realizing that some legacy TDM providers are not going to be able to do this and they're not going to be able to do this ever. There is just no possible way they can do that. It may well be rational. But that, I think, is a question for the docket to confront versus a very narrowly focused series of clarification on technical issues which this group does have the technical expertise to address.

Travis Kavulla: So what I'm hearing from the co-chairs is a kind of concession that certain topics for a further

commission proceeding in NOI should be more clearly scoped so that we're not just saying here's the report that says have another proceeding and then maybe later you'll yet another report. We want to like try to move the ball and scope those questions. Then secondly, from understanding what you just said, Rich, there may be things, technical specifications that are identified for future work either of this work group or some new technical committee within the NANC.

Richard Shockey: Yes.

Travis Kavulla: And what would the subject matter of the technical work be? Would it be NGLRN?

Richard Shockey: No.

Travis Kavulla: Okay.

Richard Shockey: You know what I'm going to say there. The other problem with NGLRNs, as I see is that --

Travis Kavulla: I don't mean to open that Pandora's box.

Richard Shockey: Okay.

Travis Shockey: I really was just asking, in relation to your question, what --

Richard Shockey: Some of us do have strong opinions about this.

Travis Kavulla: I can tell.

Richard Shockey: The idea would be there may have to be impacts on SOA analysis and some interfaces that we're not

necessarily aware of. There may be impacts again on interconnection we are just not aware of. The social impacts of national ten-digit dialing obviously in certain states, there are nine of them that have single NPAs that are allowed. Yeah, I know. And we all know who they are. I can recite them from memory. That would cause some consternation if a 703 number was ported to Montana, for instance. Like was this really a local call? That is certainly something that we can take a longer look at. But to ask the NANC to investigate it I think really requires separating what is appropriate for the docket which is -- and what is appropriate for the members of this room.

Travis Kavulla: Henning.

Henning Schulzrinne: I do think one of the problems that the committee had by necessity, given the short timeline, was that it was largely limited to looking at proposals that have been advanced previously which was okay for commercial agreements because that's a generic term - that's really not a technical term - and for NLRN because that's also been explored. But for solutions that fall a little bit outside those, we got stuck a little bit on let's say a particular description of a technology which was liked by some and hotly disliked by certain other people.

It might be helpful particularly in environments where we do have more design flexibility - namely, in partial or all-IP

environment - to see fair solutions that at least get us out of a mode that the success of NANC in ten years will not be debating TDM but why some old sub-switches cannot be upgraded to support national number portability.

Are there other things that would facilitate some version of a commercial agreement but not quite just the existing one, as in having a number space in every switch and all the traditional stuff? Are there ways to make that happen? And so I do believe kind of broadening our -- are there creative solutions out there that will cost money, it won't be free, that actually can advance us towards the goal?

That might be quite helpful, but I do believe that would require or would be benefiting from kind of setting the assumptions for example. Would it be, should we assume that intercarrier compensation will have migrated to [indiscernible] and keep at that particular juncture as opposed to having to bring that in each and every time we talk about that?

Richard Shockey: I agree with Henning. The only concern that I have is if we go down this road and we at least start to think about allowing certain carriers, advanced mobile networks, mobile networks, and cable operators, and particularly in some segments of the incumbent industry namely Verizon Fios and U-verse in one way or the other to allow for number portability there, are we then inadvertently disadvantaging traditional TDM

operators? And that's an anti-competitive problem. But I think Henning is correct, we're going to hurt somebody somehow somewhere no matter what we do.

Travis Kavulla: David.

David Casem: It's 2018. I mean if you're still on TDM, I think it's time to get with the program, to put it simply. Secondly, I think the issues here, so intercarrier compensation I think, out of scope; ten-digit dialing, out of scope. I mean generally speaking I think this is a solvable problem, and I think we can solve the problem at the NANC. I think we can put a working group together that can actually address these issues and figure it out. So I don't think it's impossible. I do think it's complicated, but we can absolutely do it.

Travis Kavulla: Well, this has been a bit of a confounding conversation thus far. I wonder if we wouldn't benefit from trying to understand, trying to engage in a kind of taxonomy where we identify certain questions that relate to this. But are calls to be made within the context of a docket by the Commission? And we scope out some other work which we propose in this report to be undertaken as a further step by the NANC even while getting this report out in the near future.

I don't know what people think of that, but it would seem to fit sort of within what the draft report is anticipating which is saying that there are certain questions that really

should be docketed and for consideration by the Commission. And there are another set of questions that involve kind of technical examinations of certain of these models that might be undertaken by a subcommittee of the NANC. Am I understanding that correctly, Courtney and Rich?

Courtney Neville: I think that's right.

Travis Kavulla: Okay. Can you engage in that exercise in the next week?

Courtney Neville: Just to be clear, are you asking that we identify both sets of questions or more clearly elucidate those two pathways in the report? If it's the latter, I think that that's certainly feasible. The former might require more time.

Travis Kavulla: I think it really is the latter. I view it as, I mean to the degree that the report, as I think we are all able to concede, makes certain determinations. But many of the determinations it makes are preliminary or call for further work. It sort of kicking the can. So in the process of kicking the can, maybe scoping more clearly just what questions should be within those paths is kind of what I'm getting at.

Courtney Neville: Okay. I think we can certainly take a stab at that.

Travis Kavulla: Does that satisfy to some degree some of the concerns that have been raised? Okay. How do you want to round trip that iteration?

Courtney Neville: I was going to ask you the same. So I'll defer to whatever would be easiest for the NANC.

Travis Kavulla: Okay. Well, let us. I mean between now and the June 7th deadline, we do not have another publicly noticed meeting. I would suggest to you that you include some of the -- I don't know whether this is permissible, Marilyn. So let me just venture this. But given that the work group has now reported to the full NANC, maybe it would be a good idea to have several of the more opinionated members of the NANC engage with some of the leaders of the work group on this particular revision. Then it can be disseminated to the full membership with a couple of days to spare.

Courtney Neville: If I may elaborate on that? It seems like actually the more opinionated as characterized members are actually on our working group. So perhaps we red line, for a lack of better word, the reports within the working group and then recirculate it to the NANC if that works. And if there are any others that are in the working group that I may have missed, please raise your hand now if you like -- okay. Sure thing. Any others other than Peerless?

Travis Kavulla: Uh-uh. Okay.

Courtney Neville: Okay.

Travis Kavulla: Hold on. Karen.

Karen Charles-Peterson: Thank you, Mr. Chairman. Karen Charles-Peterson of Massachusetts. My question has to do with time and the complexity of these issues that were just raised. And since the members of the NANC who are so opinionated are also on the working group, I'm asking the question did these issues not get raised during the working group. So my concern is just time. I mean we have June 7th and I feel like whatever will come back to the full NANC for our review may just lead to more questions and not lead to a full report being available by the deadline.

I guess the second part of my question is I know we didn't talk about how to address an extension, but if we could sort of raise that question to try to get an answer. And I'm looking at our DFO for some direction on that. But maybe --

Travis Kavulla: There's a lunch break coming up, so it might be able to be addressed then.

Marilyn Jones: Sure. I could put together -- I could tee it up with the bureau during the lunch break. But I think what the NANC chair propose is probably a better solution. It's probably best to give some type of recommendation. Because I'm not sure we can get an extension. Are we going to get actual recommendation from an extension? Because it seems like they would want to do testing and stuff. And how long is that going to take? I'm not sure how long an extension you would need.

Karen Charles-Peterson: So if I can --

Travis Kavulla: Karen.

Karen Charles-Peterson: I'll put my tent back up, sorry about that. Just to address that issue, in thinking through the extension, I'm thinking that it's not really to address the testing that was mentioned earlier but just to address some of the questions that just were raised this morning so that the working group has enough time. And it's really what the extension is for, correct me if I'm wrong, to address them fully and to provide concrete direction.

Travis Kavulla: Yeah. I tend to think that what we've been discussing is more lucidly identifying essentially questions that need to be answered in the follow up work, whether it be in NOI or within the NANC. And I don't know whether that requires more time than June 7th. Obviously we are closing in on this deadline rather quickly. Jerome.

Jerome Candelaria: Just so I understand. So the chair's proposal is not contemplating calling the question on the report subject to the additions in fleshing out what would be proposed to the FCC.

Travis Kavulla: That actually is what I was contemplating.

Jerome Candelaria: Oh, okay.

Travis Kavulla: Because we won't be able to have another NANC meeting before what is currently a June 7th deadline. Now

I'm happy to try to get some reasonable extra time because June 7th seems like a hard push for this amount of work. Then perhaps we could convene by teleconference or we could circulate the document somehow subject to people's objections. But the reality is we've been given a deadline and I don't have unilateral power to change it. And when we've requested extensions in the past, it actually sometimes takes a while to obtain those.

Jerome Candelaria: And also noting that it was a consensus. It was a product of a consensus working group. And it sounds like in tracking the previous report, there are some tweaks that could be done. But nothing seems to stand in the way of an actual adoption.

Travis Kavulla: I agree with that, and I don't think anything we've been talking about -- I mean there are obviously people who actively disagree with certain elements of the report. I'm not supposing that the NANC somehow reverse or overturn what the report opines on to the degree that those -- to the degree that people feel strongly that the report should say something that it doesn't, you know, I think they should write separately in a minority opinion. I'm merely saying the report itself anticipates further work. It would be beneficial if the report more lucidly defines that work. Courtney, and then Brian. Or Brian and then -- [cross-talking]

Brian Ford: Just noting, Mr. Chairman, that people who don't like parts of the report can either vote against it now or they can go to the fifth floor and the eighth floor.

Travis Kavulla: That's exactly the case.

Brian Ford: That's what I plan to do.

Travis Kavulla: And previously we've had the CATA workgroup attracted -- I mean the CATA workgroups report was revised. After a draft was circulated, it was revised in anticipation of the NANC's meeting. Nevertheless, there was a point that Henning made separately in a minority opinion which was attached to the report. That's perfectly acceptable as an approach. Obviously anyone can file comments to the FCC itself as well. I mean it's not meant to be. We're advising the commission.

Brian Ford: Exactly. Perhaps one way to solve this now is on the recommended next steps. We say the NOI, instead of exploring regulatory forms to commercial agreements, maybe we ask the FCC to ask questions about all of the options and actually perform an actual cost-benefit analysis. I mean the commission is in the process of standing up a bureau of economic analysis. Maybe we actually put them to work and ask them to ask those questions. And then I don't how this works but perhaps, Mr. Chairman, you could create a small working group of the committee of the full NANC on your own motion and we can

talk through some of these issue. I don't know if that's how that works. Marilyn would have to answer that. But I don't know if Chair Kavulla has the ability to just create a working group.

Travis Kavulla: I'm pretty sure I do not.

Brian Ford: Okay. Okay.

Travis Kavulla: I'm not sure. But based on my brief experience heading up the NANC, I don't think so.

Brian Ford: But perhaps the report also is just to add in a bullet on recommended next steps to create another, a smaller working group to give those folks a little bit more time to explore both the cost-benefit analysis to technical issues. And you know I would be happy to participate in that, but I think maybe we could just end this now instead of extending it.

Travis Kavulla: Yeah. Courtney.

Courtney Neville: I'm actually very glad that Brian spoke before me because those were going to be my exact recommendations. While I defer to what the NANC would prefer, I think that extending the working group's work to further add to this report is not going to get us any further to not kicking the can down the road. I think what I was going to recommend is to, similar to what Brian said, that we red line the recommendations to further identify that the FCC should explore in the same docket or a new docket and then also have a more

technical - and separate - evaluation. But I am hesitant to commit us to doing anything other than that by June 7th.

Travis Kavulla: So in terms of elucidating the recommendations, you're willing to do that and vote on the reports subject to that revision?

Courtney Neville: Correct. Yeah.

Travis Kavulla: Committing to working with the people you've heard from today and get it out the door on June 7th.

Courtney Neville: My opinion as co-chair - and, Rich, feel free to jump in - is that that's the best approach forward.

Richard Shockey: I completely agree as well. Clearly within the report in the first paragraph, one way or the other I think the question that you've identified is a central one. There is going to be additional work that's going to be needed to do in separating that work into what is appropriate for the docket and is appropriate for NANC. A couple of paragraphs and a couple of bullet items should be able to address those concerns fairly clearly. That actually is about all we're capable of doing given the deadline.

Travis Kavulla: Okay. My proposal -- David.

David Casem: Yeah. And I will add that, I mean I think, again this is just a function of the deadline. Is that correct?

Travis Kavulla: Yeah.

David Casem: Because I think there is more work that we could do as a working group.

Travis Kavulla: And I think to the degree that you believe there is more work that you can and should do, that you should memorialize that in the recommendation as essentially a request or proposal to the FCC to re-scope this work group or a different subcommittee that deals traffics and more technical elements in order to accomplish that work. Does that make sense?

Richard Shockey: Yeah.

Courtney Neville: Yes.

Travis Kavulla: All right. Is everyone on the same page? Okay. Courtney, would you like to propose a motion that the NANC approve the report subject to a revision of the recommended next steps which will further scope this work streams?

Courtney Neville: So moved.

Travis Kavulla: Rich, would you like to second that.

Richard Shockey: I second the motion, Mr. Chairman.

Travis Kavulla: Okay. Is there other discussion on the motion? Hearing none, as many as are in favor of the motion, please say aye.

Voices: Aye.

Travis Kavulla: Any opposed? Okay. David, opposed? Any others? The motion carries. And subject to those revisions,

the report is adopted. Unlike the other working group, we'll work on some of the procedural details of how to go about this later. So why don't you and Rich and the co-chairs of the toll-free just plan to have a little brief meeting after we conclude today to talk about that. All right. Brian.

Brian Ford: Motion to skip the lunch break and move on to the rest of the agenda. For those of us who are --

Travis Kavulla: Are people okay with skipping a lunch break and moving directly? Commissioner Kjellander, you're next up. So it would really be up to -- you can say whether you want lunch or not.

Paul Kjellander: I'm okay with skipping the next report.

Travis Kavulla: So ladies and gentleman, I'm going to have to step out to take a call at some point in the near future, but that's no reason why you can't continue. I don't have my vice-chair here, so I guess Marilyn is going to assume the powers of the chair when I have to step out. But let's then go on to the Numbering Administration Oversight Work Group report by Chairman Kjellander. And then after that, we'll go right into public comment and other business as is necessary.

DISCUSSION OF THE NUMBERING ADMINISTRATION OVERSIGHT WG REPORT

Paul Kjellander: Thank you, Chairman Kavulla and members of the NANC. I apologize for the cold. But I was told that if

I continue to present the report with a cold, you'd be soft on me. So I appreciate it.

As a quick overview, the Numbering Administration Oversight Working Group oversees the activities and reviews the performances of the numbering administrators - including a North American Numbering Plan administrator, the pooling administrator, the NANP billing and collection agent, and the Local Number Portability administrator. Through the assistance of two subcommittees, the FCC Contract Oversight Subcommittee and the Local Number Portability Oversight Subcommittee.

First let's move to the activities of the FCC Contract Oversight Subcommittee which is co-chaired by Betty Sanders of Charter and Philip Linse from CenturyLink. And they had been very busy. I had a chance to sit on their most recent monthly call which they have every month. To say that it is robust and fills the time very creatively and they actually accomplish a lot of things is an understatement.

Going forward, the subcommittee anticipates continued work on ensuring technical requirement documents are up to date and within the parameters for the FCC to develop its RFP, for fulfilling the PA and the NANPA functions upon the anticipated exploration of contract extensions. To offer us up some more on what's been going on there, here is Betty Sanders. Hopefully.

Betty Sanders: Thank you. Can you hear me?

Travis Kavulla: Not quite. Bring it a little closer. I believe it's on now. Thank you.

Betty Sanders: Can you hear me? No.

Travis Kavulla: There you go. Just hold it up. Yeah.

Betty Sanders: Can you hear me now?

Voices: Yes.

Betty Sanders: All right. Okay. Thank you for that. I appreciate it. There's not a lot more to add except for the fact that we have been extremely busy. We hit the floor running because we had some things that we were concerned about, which was the annual audit and the annual survey and things of that nature. So I'll just run through that.

We've established the calendar for the year. We have the meetings established for the rest of the year. We've had month's review of the deliverable of the billing and collections agent. The budget and contribution factor has been established and that was based on some historical data which is in the report, and that is for approval by the NANC. We've had monthly reports with the NANPA and the PA, and we've established dates for the annual review of the PA and the NANPA. They will not be face-to-face this time. We would do them via the phone. But those dates were set for June 13th for the PA and July the 11th for the NANPA.

Let's see what else. I can read our mission if you don't have the report in front of you. The Numbering Administration Oversight Working Group oversees the activities and reviews the performances of the number administrators including the NANPA, the pooling administrator, and NANP billing and collections through the assistance of this Contract Oversight Committee. I won't read what those committees are because you're aware what those vendors do. The contracts in themselves have been extended for the B&C. They were extended in April and they've been extended for five years, which is great. So now we're out from April to five years, 2023. So one less thing to think about for a while.

The NANPA and the PA, they have been extended through September the 30, 2018. So as mentioned, we are billing it based on -- for the TRD, which we're working on a combined TRD for the PA and the NANPA. So that's one of the things we're working on. The annual survey should be posted June 1st for vendors and those two and carriers to conduct the survey. Because that's part of the annual review, so we'll be gathering the data. The contribution factor that is yet to be approved is 0.0000427. That is unchanged from the previous factor, and this is being submitted for 2018 October to September 2019 for approval.

Other than that, we have members that represent the industry. Our voting members - AT&T, Bandwidth, CenturyLink, Charter, Cox, Maine PUC, Sprint, Verizon, Washington PUC. And we have some nonvoting members - Neustar, Somos, and Telcordia which is iconectiv. Our next meeting will be June 26th. They're held via conference call, and we can send that out to anyone who wants to listen in and participate. But it's normally a two-hour call because we're including all three vendors, so we have to allot a lot of time to be on these calls but it's worthwhile. So if there's nothing else, I have nothing else to say.

Travis Kavulla: So we need a vote on the contribution factor?

Betty Sanders: Yes.

Travis Kavulla: Would you like to move its approval?

Betty Sanders: I move for the approval of the contribution factor of, that's .0000427 for the period of October 2018 to September 2019.

Travis Kavulla: All right. Thank you. You missed one zero.

Betty Sanders: Oh, I did? Okay.

Travis Kavulla: We don't want to increase it by a thousand percent.

Betty Sanders: Dot 0000427.

Travis Kavulla: There you go. Is there a second?

Male Voice: I second.

Travis Kavulla: Any discussion? Okay. Seeing none, as many as are in favor of the motion, please say aye.

Voices: Aye.

Travis Kavulla: Any opposed? Okay. That motion carries. Thank you. Does that conclude your report? That concludes your report?

Betty Sanders: That does conclude my report. Chairman Kjellander.

Paul Kjellander: Mr. Chairman, in the essence of efficiency, just to demonstrate that Betty Sanders and her workers are very efficient, she covered a tremendous amount of what I was going to deal with. So I'm grateful. That saves me some time and effort.

Unless Amy Putman from the Pooling Administrator or John Manning from NANPA have anything they'd like to add. Nothing? Okay. Then I'll move to the last section that I just want to touch on and I'll be very brief.

The second subcommittee that our oversight working group oversees is the Local Number Portability Oversight Subcommittee, the LNP. The LNPA has been working through the transition from Neustar to iconectiv, which was successfully completed on May 25th as we heard earlier. There still remains a few

transitional issues that the current industry groups are working to resolve. Currently the LNP oversight working group is under review and still being formed. There remain some conflicts among some of the member's affiliations that need to be resolved prior to the launch of this group's activities. We expect, now that the transition is nearly complete for more activity to be happening on that subcommittee's front. So with that, my report is complete.

Travis Kavulla: Okay. Thank you.

Paul Kjellander: I'm being informed that perhaps I was incorrect. One moment. [Pause] One point of clarification. Mark Jackson with the B&C -- is Mark here? Where? Oh Mark, I'm sorry. I called earlier to see if you had anything to say, and apparently I missed your hand come up.

Mark Jackson: I'm sorry. [Off-mic]

Paul Kjellander: That's fine. Because I believe that there is an action item associated with your B&C contract. Is that correct?

Travis Kavulla: Okay. Introduce yourself.

Mark Jackson: Yes. I'm Mark Jackson. I'm a partner at Welch LLP. I'm acting as the billing and collection agent. The main purpose of my being here was to essentially present the budget which Betty did quite well. So I didn't really have

anything additional to add unless anyone has any questions about the upcoming budget.

Travis Kavulla: Does anyone? Thank you for being here, Mark.

Paul Kjellander: Excuse me though. I think that the clarification was that what we needed to approve earlier in that motion was approving the budget and the contribution factor. I think the only thing that was approved officially was the contribution factor. So with that, I think - unless I'm mistaken - there needs to be a clarification then or a vote on the approval of the budget, if I'm not mistaken. Is that correct? So perhaps maybe to clarify things --

Mark Jackson: Sorry. I think that will be a question for the chair.

Marilyn Jones: So Mark, if you could, could you just go over the budget for us. Because we know the contribution factor, and so [inaudible]. Then we could put the budget after that.

Mark Jackson: Absolutely. So the budget is made up -- and I trust that it was in your previous package as well. Most of it is fairly consistent with what was happening in the previous year. I'll just highlight sort of two significant changes that you may have noticed. It's that in the current year's budget there is no line item or there is no amount set aside for change

orders. Whereas, in the previous year there was \$741,000 set aside for change orders, and that's provided to us from Neustar.

Then the other side or the other sort of significant difference is the anticipated surplus. As of September 30th, we're expecting a surplus of about just under \$1.3 million as compared to anticipated surplus of about \$384,000. That additional surplus is due to, in the current active years when setting the budget up for that, the contingency fee of \$1 million was set up. That contingency fee has not had to be used and we don't anticipate that you're going to need to use that fee within the remaining period, up until September 30th.

As well there is a \$200,000 set aside each year for potential carrier audits to be conducted by the FCC, and to date there have been no carrier audits carried through for the current year. So that money again will reduce the anticipated cost for the budget. So the total budgeted funds to be funded before the contingency allowance is \$4,639,875. And then again that is funded through based on the contribution factor as determined by the anticipated revenues for the upcoming year.

So are there any questions about the actual, the budget details themselves?

Paul Kjellander: I would move for approval of the budget.

Mark Jackson: Does anyone second?

Female Voice: I second.

Male Voice: I'll second.

Paul Kjellander: I'm not sure if I have authority, but does all approve?

Marilyn Jones: All in favor of approving the budget, say aye.

Voices: Aye.

Marilyn Jones: All opposed? None opposed? Thank you, Mark. The budget is approved. Commissioner Kjellander, anything else?

Paul Kjellander: I've been told that I'm officially done.

Marilyn Jones: Thank you.

Mark Jackson: Thank you.

PUBLIC COMMENTS AND PARTICIPATION

Marilyn Jones: Okay. Let's move to the public comment section. Any comments from the public? Anyone over the phone? No comments from the public? Okay. Let's move to the other business section.

OTHER BUSINESS

Marilyn Jones: I haven't spoken with Commissioner Kavulla about this, but I'm working with the Bureau to finalize our meeting dates for the rest of the year. We haven't been able to get those finalized yet. So as soon as I get some dates, I'll pass those around to the group.

Anybody else has any other business to cover with the group? No? Okay. The meeting is adjourned at this time. Thank you everyone.