

**North American Numbering Council
Meeting Transcript
Thursday, September 12, 2019 (FINAL)**

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

II. List of Attendees.

Voting Council Members:

- | | |
|--------------------------------------|--------------------------------------|
| 1. Travis Kavulla | NANC Chair (R Street Institute) |
| 2. Susan Gately | Ad Hoc Telecommunications Users Cmte |
| 3. Jacquelyne Flemming | AT&T |
| 4. Jacqueline Wohlgemuth | ATIS |
| 5. Lisa Jill Freeman | Bandwidth.com |
| 6. Betty Sanders | Charter Communications |
| 7. Beth Choroser | Comcast Corporation |
| 8. Courtney Neville | Competitive Carriers Association |
| 9. Matthew Gerst | CTIA |
| 10. Honorable Karen Charles Peterson | NARUC - MA |
| 11. Barry Hobbins | NASUCA |
| 12. Jerome Candelaria | NCTA |
| 13. Julie Oost | Peerless Network |
| 14. Richard Shockey | SIP Forum |
| 15. Shaunna Forshee | Sprint |
| 16. Paul Nejedlo | TDS Telecommunications |
| 17. David Casem | Telnyx |
| 18. Bridget Alexander White | USConnect |
| 19. Mike Saperstein | USTelecom |
| 20. Dana Crandall | Verizon |
| 21. Darren Krebs | Vonage |
| 22. Robert McCausland | West Telecom Services |

Special Members (Non-voting):

- | | |
|------------------|-----------|
| 1. Chris Drake | iconectiv |
| 2. Ann Berkowitz | Somos |

Commission Employees:

Marilyn Jones, Designated Federal Officer (DFO)
Michelle Sclater, Alternate DFO
Carmell Weathers, Special Assistant to the DFO
Kris Monteith, Chief, Wireline Competition Bureau (WCB)
D'wana Terry, Associate Bureau Chief, WCB
Daniel Kahn, Associate Bureau Chief, WCB
Pam Arluk, Chief, Competition Policy Division (CPD), WCB

Heather Hendrickson, Assistant Division Chief, CPD, WCB
Edward Krachmer, Assistant Division Chief, CPD, WCB
William Andrie, Attorney-Advisor, CPD, WCB
Janice Gorin, Attorney-Advisor, CPD, WCB
Jordan Reth, Attorney-Advisor, CPD, WCB
Connor Ferraro, Attorney-Advisor, CPD, WCB
Robert McConnell, Telecommunications Accessibility Specialist, Disability Rights Office,
Consumer & Governmental Affairs Bureau (CGB)
Josh Zeldis, Attorney-Advisor, Consumer Policy Division, CGB
Myrva Charles, Contracting Officer Representative (COR) CPD, WCB
Darlene Biddy, COR-Alt/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 – June 20, 2019
- (3) Numbering Administration Oversight Working Group’s (NAOWG’s) Contract Oversight Subcommittee Report, September 12, 2019
- (4) FCC Reassigned Numbers Database Extension Order, DA 19-905
- (5) Interoperable Video Calling (IVC) Working Group Draft Report, August 2019
- (6) North American Portability Management LLC (NAPM LLC) Report to the NANC, September 12, 2019

V. Table of Contents.

1. Welcome Remarks	3
2. Remarks by FCC Chairman Ajit Pai.....	3
3. Announcements/Recent News/Approval of Minutes.....	7
4. Discussion of the Secure Telephone Identity (STI) – Governance Authority.....	12
5. Update and Discussion of the NAOWG Report on the Technical and Operational Issues for the Reassigned Numbers Database.....	13
6. Update, Discussion, and Approval of the Interoperable Video Calling (IVC) Working Group Report.....	20
7. Discussion of the NAPM LLC Report	32
8. Public Comments and Participation.....	36
9. Other Business.....	37

VI. Summary of the Meeting.

WELCOME REMARKS

Travis Kavulla: I believe we're on. So in lieu of roll call and because of Chairman Pai's propensity to sneak into rooms unnoticed, I think we'll just recognize him immediately, so he doesn't have to sit through the preliminaries. Thank you for joining us. Mr. Chairman, the floor is yours.

REMARKS BY FCC CHAIRMAN AJIT PAI

Ajit Pai: Well, thank you, Chairman Kavulla and members of the NANC. Hopefully what happens in the NANC stays in the NANC. But, no. Honestly I'm just pleased to be here to acknowledge and thank all of you for the NANC's many accomplishments during this term. After a tremendously productive 2018, the entire country's wondering could they top it in 2019. And again you did not disappoint, so I'm really grateful for that. You brought a lot of work and energy to tackle some of the pressing telecom issues, the numbering issues that we put before you. I would especially like to thank our distinguished chairman, Travis Kavulla, for leading this group. Some of the issues you handle are very challenging. One might even say life critical. So I don't think it's an accident that we picked as a chairman someone whose name, Travis Kavulla, is an anagram for a survival talk. It's no coincidence I suspect. But I also want

to thank former Vice Chair Diane Griffin Holland for her service. She's an old friend and she's forgotten more about this area than I will ever know.

The expert guidance that all of you have contributed to these efforts have produced reports and recommendations on some of the top issues that had been really helpful to the Commission's ongoing work to foster efficient and impartial numbering administration. We've certainly benefited from your dedication on the NANC.

Just to do a quick recap. In 2019 the NANC explored the technical solutions necessary to make Nationwide Number Portability a reality for all consumers in the United States, which is no small feat as you know. You also assisted the FCC on something that's close to my heart, which is the National Suicide Hotline Improvement Act of 2018 implementation. We tasked you with the responsibility of examining the feasibility of a three-digit dialing code and, if so, what that three-digit dialing code would be.

Since we issued our report, I'm pleased to say that I've gotten a tremendous amount of feedback not just from the folks on Capitol Hill and folks in the administration but from individuals across the country who even to this day will email me and say thank you for shining a light on some of these mental health and suicidal ideation issues. This is something that touches everybody from all walks of life. Your work in

this regard is going to stand the test of time and quite honestly save lives.

You also started evaluating how to facilitate interoperable video calling which will allow service providers to voluntarily offer the capability to make or receive a video call between 10-digit telephone numbers for any consumer. Obviously, we're excited about this service. I must confess as a personal matter I'm terrified once my kids get phones, what this is going to mean for me. But, nonetheless, innovation proceeds apace. You begin developing technical requirements for reassigned number's database, something that's important for us, to tackling our number one consumer protection priority which is stopping what former Senator Fritz Hollings rightly and fully called the scourge of civilization which is unwanted robocalls.

All of this comes on top of the amazing accomplishments that you made during the past year at the successful LNPA transition which I described the last time I was here. The SHAKEN/STIR Framework, which folks here know all too well, which is going to continue to help us implement the anti-robocalling efforts that we've pursued. You also provided recommendations in our toll-free modernization proceeding where we're going to hold our first of its kind auction of toll-free numbers in the 833 code.

Finally, you helped the FCC consolidate our contracts for the North American Numbering Plan and Pooling Administrators which

will result in much more cost-effective and efficient operations by a combined administrator.

Suffice it to say that NANC has punched way above its weight in terms of the accomplishments that you've achieved. You've also done so in a consensus-based manner which is something that is quite rare in Washington and certainly in this field. So I want to thank all of you again for your service on this important counsel.

I also want to thank the FCC's terrific staff. Our DFO, Marilyn Jones, the alternative DFO, Michelle Sclater. Luckily you were not incapacitated so we didn't have to rely on the alternative DFO. And special assistant Carmell Weathers. Of course the intrepid staff of the WCB, the Wireline Competition Bureau led by our fantastic Chief K. Mo or she's more colloquially known Kris Monteith, for the hard work and support that all of them have contributed to these efforts.

I apologize for having to abscond, but I really do want to express again my appreciation to all of you for taking time out of your busy schedules to contribute the laboring oar on these important issues. So, thanks so much and apologies for [inaudible], thank you.

Travis Kavulla: Thank you, Mr. Chairman, for your support of the Advisory Council. We will call the roll at this time.

Fine. A survival talk.

Ajit Pai: I did that myself.

Travis Kavulla: Is there like a computer program you got that from? You didn't do that yourself.

Female Voice: He definitely did that himself.

Ajit Pai: If you follow my Twitter feed, you'll know it's all from there.

Travis Kavulla: All right.

Ajit Pai: If you want to waste your time at 1:00 AM in the morning.

Travis Kavulla: I'll remember that, the survival talk.

Marilyn.

ANNOUNCEMENTS/RECENT NEWS/APPROVAL OF MINUTES

Marilyn Jones: Instead of roll call, the NANC members on the phone, can you announce yourself? And I will pass around the roll for those attending in person.

Susan Gately: Hi. Susan Gately here for Ad Hoc.

Marilyn Jones: Thank you, Susan.

Julie Oost: Julie Oost with Peerless Network.

Marilyn Jones: Thank you, Julie.

Ann Berkowitz: Ann Berkowitz, Somos.

Marilyn Jones: Thank you, Ann.

Bridget White: Bridget White, USConnect.

Marilyn Jones: Thank you, Bridget.

Jackie Wohlgemuth: Jackie Wohlgemuth, ATIS.

Lynda Hyman: Lynda Hyman, Pooling Administration.

Marilyn Jones: Thank you, Linda.

Shaunna Forshee: Shaunna Forshee, Sprint.

Marilyn Jones: Thank you, Shaunna.

Travis Kavulla: Anyone else?

Rosemary Leist: Rosemary Leist, T-Mobile. Not a NANC member, but I want to say hi to everybody. Thanks.

Travis Kavulla: Hi, Rosemary.

Rebecca Beaton: Rebecca Beaton, Washington State Commission staff.

Marilyn Jones: Thank you, Rebecca.

Travis Kavulla: It sounds like we have a relatively full complement. A couple of announcements just for housekeeping. We've just received an order from the Wireline Competition Bureau and Consumer and Governmental Affairs Bureau granting a partial extension to the NAOWG's work. That order has been circulated to the council members by email and is available in hard copy before you. Nothing like an in-person meeting of the NANC as a regulatory forcing mechanism. So thank you to the bureaus for that. We look forward to reviewing it. We might be able to get I think just a quick readout for the benefit of our meeting when we come to that item on the agenda of it.

Tim Kagele will be replacing Brent Struthers, not permanently but for the purposes of this meeting, giving the Governance Authority talk for the STI. Just on a personal level, this is like I keep joking like the last day of school of the NANC meeting. So feel free to pick fights and whatnot, but also pursue your work without acrimony if it so moves you. It's been a real pleasure to chair the group over the last term of

the charter. I understand from the commission that it will be re-chartered shortly so that you can all get along with the work that has been granted an extension to.

You guys have produced some excellent reports in my own estimation on all the topics, I won't read them out again, that Chairman Pai covered. But it's pretty rare that such a frankly an obscure advisory committee to the federal government can work on topics of such profound consumer impact be it robocalling or suicide prevention.

As many of you know, I work mostly in the energy industry. I have to say there's really no corollary at the federal agency that regulates energy to advisory committees like this for it just takes pleadings and issues orders. They rarely get people together in the same room to try to hammer out issues.

Notwithstanding all of the arcana of the FACA Act that governs the deliberative proceedings and the fact that we grind to a standstill when the government shuts down and all these other stuff, it still is a better regulatory model in my estimation than one that solely focused around litigation which is what happens I have to say in a lot of agencies.

I've tried in our quarterly NANC meetings to promote deliberation to make sure that people are actually discussing the issues that come before us and creating a sort of record in the transcript that the commission can review. But as all of you know, the real work happens in the working groups, in the technical subcommittees some of which have met weekly for a

couple of hours at a time to come up with the corpus of work that the advisory committee has eventually put out to the Commission. For that dedication, I really have to thank all of you that are participants in those working groups. I know it takes a lot of time and it's just a lot of legwork to produce on all of those fronts. So for me to you, thank you very much for all of your hard work. Yes, Marilyn.

Marilyn Jones: Hi. This is Marilyn, the DFO. I want to echo the thanks of the chairman of the NANC and the chairman of FCC, to you all. As you know, we're re-chartering the NANC on September 18th. So I want to thank all of you that submitted nominations for that new charter. The bureau is working very hard to be able to announce the new membership for that charter before the expiration of this current charter. In that vein, the division has doubled the size of the NANC team. So we've been able to get help from some of my colleagues in the CPD. They're seated here today with Carmell, Connor Ferraro, Jordan Reth and Janice Gorin. They bring a lot of energy to the team, so don't be surprised if you see the NANC come into the 21st century with maybe a Twitter account or a blog. They're really great to work with. I appreciate them. Thank you guys.

Also I wanted to mention that a little birdie told me that Courtney Neville will be resigning from the CCA soon. So, Courtney, I want to take this opportunity to thank you on behalf of Kris Monteith and the Wireline Competition Bureau for

your contributions and leadership to the NNP and for keeping Rich in line.

Courtney Neville: I will miss that.

Marilyn Jones: Yes. Who's going to do that for us now? You did an excellent job. You guys provided a great foundation for our NNP efforts. We thank you for that. Best of luck with your new endeavors.

Courtney Neville: Thank you.

Marilyn Jones: You're welcome.

Travis Kavulla: We have one item to turn to before going to Tim, and that is the approval of the minutes from the June meeting. Commissioner Peterson, thank you for chairing that on my behalf. I'll ask if there are any corrections at the moment. Is there a motion to approve those minutes?

Robert McCausland: I move to approve the minutes.

Travis Kavulla: And?

Richard Shockey: I second.

Travis Kavulla: Excellent. It's been moved and seconded that the minutes be approved. Any corrections or discussion?

Seeing none, I'll call the question on the motion. All in favor, please say aye.

Male/Female Voices: Aye.

Travis Kavulla: Any opposed? Okay. The minutes are adopted. We'll turn now to our discussion of the Secure Telephone Identity Governance Authority. Tim, thank you for standing in for Brent today.

DISCUSSION OF THE SECURE TELEPHONE IDENTITY (STI) -

GOVERNANCE AUTHORITY

Tim Kagele: Great. Thank you, commissioner. Good morning.

My name is Tim Kagele. I am representing the STI-GA board of directors which is comprised of a diverse group of 11 other companies and/or industry associations. I'm here to provide two important updates regarding the industry's voluntary efforts to implement the STIR/SHAKEN Framework.

First, the STI-GA board communicated to the industry via an August 27th media release that the contract between iconectiv, the selected PA vendor, and ATIS STI-GA had been executed.

Secondly, in the same media release, the STI-GA board also communicated its approval and release of the service provider code token access policy. This policy details which service providers can apply for STI certificates, the digital certificates used for signing calls and/or authenticating caller ID, and the SPC token access policy as well as other important information can be found on the ATIS STI-GA website which you can find on the www.atis.org/sti-ga website.

There is quite a bit of information out there for folks. So if you haven't been out there lately, I would encourage you to go out there and look at that. Lastly, the board will review this policy on a quarterly basis to determine whether any changes are necessary.

In closing, the STI-GA notes that after just over one year of operations it has successfully met all proposed timelines outlined in the NANC CATA Working Group report. It remains committed to the industry's timely implementation of the SHAKEN Framework and looks forward to playing an important role in helping the industry authenticate telephone calls. That concludes the STI-GA's report. I'm happy to take any questions.

Travis Kavulla: Thank you. Any questions? Yes.

Sarah: Sarah with Telnix. I was just wondering what the membership composition of the GA will look like in the coming years.

Tim Kagele: Good question. Currently the board is approved for 12. As there are interested parties that come to the attention of the STI-GA, we'll continue to review that to ensure that we have a diverse group of representation.

Sarah: Thank you.

Travis Kavulla: Any other questions for Tim?

Tim Kagele: Okay. Thank you.

UPDATE AND DISCUSSION OF THE NAOWG REPORT ON THE TECHNICAL AND OPERATIONAL ISSUES FOR THE REASSIGNED NUMBERS DATABASE

Travis Kavulla: Thank you. Moving right along then, we'll acknowledge for an update and discussion on the Numbering Administration Oversight Working Group, the NAOWG, Phil Linse. He has been hard at work on a report on the technical and

operational issues for the reassigned number database for the TRD for the RND. One thing I don't know that I'll miss about the NANC is the free-flowing acronyms. If you see me on the street a year from now, quiz me to see how many I remember. Phil, thank you for your hard work on this. I don't know. Well, you can give your report. Then, if there's anything to say about the order that's just come out, I'm reading it right now. Maybe we can have a little bit of a readout toward the end of your discussion.

Philip Linse: Excellent. Thank you, Chairman. My name is Philip Linse with CenturyLink. I am a co-chair along with Betty Sanders with Charter for the Contract Oversight Subcommittee. And then I'm also standing in in behalf of Commissioner Kjellander regarding the NAOWG. This report is going to be focused specifically on the contract oversight work that we've been doing, as well as the reassigned numbers database or the RND work that's been ongoing.

The Contract Oversight Subcommittee oversees the three contracts currently with the billing and collections agent, the NANPA and the Pooling Administrator. As part of this report, the two main things we're going to touch on is the status of the RND as well as some small but significant developments with regard to how the industry pays their bills associated with the contribution factor that was most recently released over these last couple of months.

The reassigned numbers database, of course we just received an order extending the ability for the group to work and develop the technical requirements document. I think the date is now January 13th. So in the report I've given an outline, more of a timeline as to kind of the work that we've been undergoing. If you would like more detail, there's plenty of that in this report.

Finally, the B&C issue that came up. We have moved away from a current banking vendor. From an industry's perspective, what this means is instead of paying your amount pursuant to the contribution factor to -- I think it was formerly New York Mellon. It's now going to be Bank of America. So when you receive your invoices, look at the top of that invoice.

There'll be information, routing numbers, things like that that are going to be more for routing to a new bank vendor instead of the New York Mellon Bank vendor.

The benefits of that are I think fairly significant in that it allows for credit card transactions where, prior to this point, credit card transactions were not allowed. This will assist with the providers that either realize late in the game that maybe they may be going into red light status. That will allow them to pay their bill easier with a credit card or even some of the smaller rural providers that only have a small amount that they pay, that will provide some convenience for them. In addition, this transition to the new banking vendor will reduce

some of the fees associated with what we currently pay associated with the banking administration.

With that, I think that's about it as far as what I think people want to hear about today. If there's any questions about the report or any details that you need clarified, please let me know.

Just as a status around the contract. We're currently in a bridge contract with the NANPA. That's a 12-month contract that will expire on November 1st. The Pooling Administrator, the same. November 1st is the end date of that bridged contract. And then the B&C agent will be -- it's a five-year contract. It began May 1, 2018.

Then further in the report there's a list of the members of the Contract Oversight Committee, if you like to refer to that. I won't go into that. We don't need to.

Travis Kavulla: You can find this slide deck that Phil has been reading off of on the NANC chair's website under the September 2019 meeting. It will be listed as the NANC Contract Oversight Subcommittee activity.

So the order that was issued this morning provides for a couple of things related to the NAOWG's RND TRD extension request. They are that the working group submit an adequate workplan including a detailed timeline by September 30th showing how the NANC will complete its work by the specified dates. Those dates are January 13, 2020 for the presentation of the technical requirements document, the TRD, to the commission.

And then a month from that, February 13, 2020, to complete its work on recommendations for the mechanisms for the fee structure and pricing for users of the database. So sort of a bifurcation of the work stream to wrap up the TRD, and then to get a fee structure settled.

I don't believe I'm missing anything. Thank you to the bureaus for granting an extension. Phil, I don't know if you have --

Philip Linse: No.

Travis Kavulla: Well, it's an order of the Commission. So you can react to it if you want but --

Philip Linse: Yes. I would like to thank the Commission for doing this in such an expeditious way, in time for us to keep moving along with our work. We've got some momentum and we've had some momentum. We had really good contribution from the group. It's really been a joy working with the folks on the group because we are making headway and I don't see that we will need any additional extensions. I'll say that right now anyway. So we'll see how that works, unless something else comes up anyway.

I also want to thank the chairman for his leadership and appreciate his patience. Even I know things have come up amongst the many personal things. And congratulations on your new addition to your family. I know that has been very interesting, dealing with some of the things that have come up amongst all of that. I appreciate all your patience and your efforts on that. Thank you.

Travis Kavulla: I never knew that the duties of the chair would entail like cradling an infant and talking to Phil on a Sunday about an extension request of one of our workgroups products.

Philip Linse: Yes.

Travis Kavulla: So thank you, Phil, for being so tireless in pursuing the work of the NAOWG in this regard.

Philip Linse: Thank you.

Travis Kavulla: Any other questions?

Julie Oost: Chairman Kavulla, a question from the phone please.

Travis Kavulla: Sure. Just identify yourself and then ask your question.

Julie Oost: Absolutely. This is Julie Oost with Peerless Network. I first want to thank you, Chairman, for your leadership as well. In that vein, I want to say that my questions are not in the spirit of picking a fight but in the spirit of understanding the process. I like the outcome. I'm not opposed to the outcome on the extension of time, but I'm trying to understand the process of the letter that went from the NANC to the FCC about the timeframe to complete the reassigned number database.

So how that process should work and whether the Committee was made aware of it. I may have missed it, the full NANC committee. And what the kind of the normal procedure is, from a letter getting from the NANC to the FCC and how that process

works. Should issues be discussed before the letter goes to the FCC? Things of that nature. So if someone can help me out with understanding the process of how that worked and how we got there, I'd really appreciate it.

Travis Kavulla: Sure. Thank you for your question, Julie. So I field the requests from -- this is how I've discharged my duties. You know I stand to be corrected if I'm wrong. Soon my views on this are going to be fully moot, but I'm happy to provide my insight. So I field the requests and give advice and have a kind of channel of communication from the people who lead our working groups - in this case, the technical subcommittee that's been tasked with this work. The leadership of that subcommittee came to me expressing a need for an extension. I asked them to package that into a letter for my review. I considered whether to send it under my signature or request that the subcommittee submit it under their signature upon consideration of the fact that it was a procedural request and not one that went to the merits of the substance of the issue under deliberation.

I decided to send it to the Commission myself. There was no interceding opportunity for a NANC meeting. In further considerations when there was a discussion of whether to reply to an opposition to that request, I'll just be candid, I said, no, we certainly don't engage in kind of debates with our members on pleadings. That I was happy to submit a request on the procedure based on my understanding of the subcommittee's

consensus view of it, but that we weren't going to get into anything that approached litigation on the underlying merits of the item. So that's how I would sort of explain the rationale for the extension request.

Obviously, like anything, the subcommittee proposes to the working group which in turn proposes to the NANC. It's ultimately subject to the view of the FCC acting in this case through delegation to the appropriate bureaus. Any other questions?

Julie Oost: Thank you very much.

Travis Kavulla: Sure thing, Julie. Anything else from you, Phil?

Philip Linse: I'm good.

UPDATE, DISCUSSION, AND APPROVAL OF THE IVC WORKING GROUP

REPORT

Travis Kavulla: Okay. Thank you. We will turn then to a working group report. This is an update discussion and approval of the Interoperable Video Calling report. I believe, Matt, you're going to lead on this particular item. This report was circulated in its final draft form last month for your consideration, and today we'll hear a summary report of it. We'll have a discussion, any questions you have. Then, if everyone's on the same page which I hope they are, we'll move to a vote. Matt.

Matthew Gerst: Well, thank you again to the North American Numbering Council and Chairman Pai for the opportunity to co-chair the NANC's Interoperable Video Calling Working Group. As I noted at the last meeting, you put together a working group that is diverse and knowledgeable and charged to consider a very challenging issue - whether telephone numbers can be a catalyst for interoperability in the video calling market. We worked diligently for almost a year to learn about the issues from each other, particularly from people who are representatives of the deaf and hard of hearing community, and respond to the Commission's charge.

My co-chair David Bahar, who's unfortunately not here today, and I presented an overview of our findings at the last meeting and today we ask for your approval of our working group's final report. I'll briefly describe our findings. The working group recognize that today most video calling services only offer the ability to make video calls within the same service, i.e., they are non-interoperable video calls. As a result, many consumers maintain accounts with multiple video calling services and platforms to be able to communicate with consumers using different video calling services and platforms. Though the nature of consumer demand for interoperable video calling is relatively unstudied, the IVC Working Group understands that consumers, including those representing the deaf and hard of hearing communities, desire interoperable video calling.

In order to achieve interoperable video calling, the working group identified three distinct elements. You need addressing, signaling, and media. Addressing refers to the ability of an originating service to identify a receiving device and service that will support the signaling and media necessary to complete the communication. For example VRS users, that's video relay services, use an interstate telecommunications location relay services database, called the ITRS database of 10-digit telephone numbers for purposes of addressing to support interoperable VRS.

Signaling and media require interoperating video calling services and devices to then support the relevant standards and agreed upon technical specifications. Given that the IVC Working Group reports to the North American Numbering Council, the IVC Working Group focused on the issue of addressing as the interoperability issue most germane to the NANC's scope of work.

After reviewing the commission's ITRS database as an example, the working group chose to focus on two distinct theoretical frameworks for using 10-digit telephone numbers to facilitate addressing. There is a database approach and a platform-based approach. The database approach would contain telephone numbers and other necessary information to determine whether an originating video call can be completed to a receiving device and service similar in nature to the function of the ITRS database.

The platform approach utilizes network operator capabilities to facilitate the addressing function that may use a variety of identifiers such as a telephone number or other unique identifiers to enable the originating service to query whether the receiving device and service can accept a video call. The IVC Working Group was not able to reach consensus on a particular path within the time allotted because both approaches raise significant operational and technical questions that require further evaluation.

Of relevance to the NANC, the working group recommends further study through specific use cases by numbering and technical subject matter experts of the two primary frameworks to determine which option is more viable for achieving broad interoperability of video communications. Additionally, further evaluation is necessary regarding whether existing numbering databases can and should be utilized to facilitate interoperable video calling. The issues to evaluate include but are not limited to performance, security, legal, and operational issues including cost recovery mechanisms such as how the database will be funded and which parties will bear the cost as well as any efficiencies that can be achieved.

The working group recommends that the NANC, in accordance with FCC direction, identify the appropriate numbering experts to develop and provide advice to the NANC on the use of existing numbering databases and commercially available interoperability databases for purposes of evaluating the facilitation of a

database approach to interoperable video calling. The designated entities should provide recommendations on the technical and operational feasibility of using existing or commercially available databases to support the database approach to telephone numbers-based interoperable video calling or the development of a new database.

The working group's final report also includes recommendations for further technical study of issues that may not be within the NANC's purview but are relevant to the issue of interoperable video calling. So due to the necessity of further study to determine the proper approach, the need for additional input of numbering administration, further study of necessary technical standards and further study of the technical and operational feasibility of interoperating with video relay services, the working group requested an extension of its charter to further evaluate the recommendations of numbering and technical subject matter experts in order to provide more specific recommendations to the NANC. Once such input has been acquired, then the IVC Working Group members remain available and willing to continue to work with the NANC and the Commission to further evaluate those recommendations. We ask for your consensus approval of our report.

Again, I want to express my appreciation to my co-chair David for the excellent leadership that he's brought to this working group. I also want to express our joint appreciation for the

significant contributions of all of our working group members.
I'd be happy to answer any questions.

Travis Kavulla: Thank you, Matt. Thank you, David.

Questions? Yes, Bob.

Robert McCausland: Bob McCausland at West Telecom Services. I was a little bit disappointed in the recommendations of this draft because it's somewhat internal-looking. It looks at everything it seems more from the industry's perspective. As I think you know, Matt, from our discussion back in July, I was hoping also to see a more outward looking consideration of something perhaps similar to what the Federal Trade Commission did back in 2012 and '13 with the robocall challenge where the commission framed an opportunity for app developers outside of our industry and outside of our typical groups to look for commercial solutions that might help.

In this instance, it would be to bridge together different video service provider capabilities and probably to a very large extent rely on some of the work that the working group did in terms of the databases that would have to be part of this anyway. Had the working group looked at that in earnest? Was their decision a purposeful decision not to consider that or was that something that just didn't really come up during the relevant time period?

Matthew Gerst: This is Matt. No, that wasn't something that was considered during the relevant time period. One of the challenges that we had as a working group was the format and

the way in which we had to conduct the meetings. In order to make sure that the meeting was fully accessible, we're limited to very specific times to make sure we had specific services in place. That tends to be sometimes of a challenge to actually having a robust discussion. So in order to meet our timelines, which were pretty tight set by the Commission, we chose to stick to the four corners of the presentation that we provided in July. That's an interesting recommendation. I'm sure the working group would be interested in considering that in the future.

Robert McCausland: You're not aware of any reason why that should not be considered, correct?

Matthew Gerst: I'm not aware.

Robert McCausland: Great. Thank you.

Chris Drake: Thank you for the report, Matt. I guess I have one-and-a-half questions here. The platform approach basically acknowledges there would be no provision to route directly between A and B which may be over the top. You know, walled garden type of video calling services. But there would be provision for interoperability with an endpoint on the PSTN. Later it refers to the PSAP as an endpoint. So if the work continues, my question is will you leave the IVC A to B to be out of scope because fundamentally you're trying to enable PSAP interoperability or will you pick that up and try to find a way the platform approach can address full interoperability?

Matthew Gerst: I think that's probably an issue for one of the technical subject matter experts to address, and some further study and recommendation. One of the challenges, in addition to the actual process, was the limited information that we actually had available to us. That doesn't mean that there isn't a lot of information already out there just in terms of what was contributed from the working group members was kind of targeted. So that's why our recommendation is to look outward at expert bodies who could provide contributions and recommendations that the working group could then evaluate.

Travis Kavulla: Any other questions? Yes, Rich.

Richard Shockey: I did want to note some excellent points on the report. Specifically the idea that we would try and extend RFC 6116 to support HTTPS access which could solve any number of problems not just for the VRS but potentially all IP interoperability and other issues that we're going to deal with in the NANC.

However, my warning would be as someone who had spent 15 years in the ITF, so it's probably going to take two years at minimum to extend 6116 to support HTTPS. That's number one. The second thing that I was curious about was, given the proliferation of numbering databases we have in the United States, why there was no consideration given to using the NPAC.

Matthew Gerst: Actually, there was a pretty significant discussion about that within the working group. Ultimately it didn't make it into the report because there wasn't any

consensus on whether that database could serve the purpose essentially. So ultimately we decided to generalize rather than specify what the recommendations are, which is how we ended up with a generic database approach using examples like the ITRS database as an example of a type of commonly used database.

The NPAC is certainly something that's worth consideration and evaluation, but there was a lot of concern that the NPAC is currently not intended to be used for that purpose even if it possibly could. And that in order to create and enable the NPAC to be actually used for that purpose, it would raise a number of not just technical questions although those could probably be overcome but more operational and legal and jurisdictional questions.

Richard Shockey: Fair enough.

Travis Kavulla: Any other? Yes, one more over here.

Chris Drake: Chris Drake, iconectiv, LNPA Administrator. It is noted in the report at the end of the database section that the NPAC does have IP addresses and that the ability to support this merits further study. So it wasn't left out of the report. I think at the level of insight that was available, it's a perfectly good sentence for that. If the continued work, which is to understand the NPAC and its ability to serve this purpose, we'd be happy to be part of that.

Just off of a gut feeling is I'm not actually all that concerned about some of those factors that you finished your

answer with. I think they're all manageable. The NPAC supports a variety of stakeholder segments, including law enforcement. In fact PSAPs and telemarketers beyond the service provider community. Fundamentally, all those businesses who wish to engage and communicate with the consumers, they all use the NPAC in a form or another. So it's something we can certainly look at. It's at your discretion as the working group continues.

Travis Kavulla: Rich.

Richard Shockey: I'd like to emphasize what Chris Drake has said because I was personally involved in making sure the NANC 400 series of URI fields, while I used to work for this little company in Sterling called Neustar, they're all there and they're easily enabled in some way, shape, or form. Whether it be national number portability or all-IP interconnection, that may well be one of the issues that we have to deal with in the next term of the NANC.

Matthew Gerst: One response I think I want you all to consider is the scope of work, what it means to be an interoperable video calling service. There are services that currently use the NPAC that are traditional telephone-telecom services. These are the companies that support the NPAC, contribute information, have access to it. The market of video calling service is generally dominated by non-telecommunications companies. So when we talk about what it means to be interoperable and using the NPAC, we're talking about

potentially having the NPAC be applied to companies that aren't necessarily traditionally thought of as NPAC users.

That was a significant discussion that we didn't have fully enough time to explore nor did we think we had enough of the expertise within the working group to fully explore that type of an issue. It doesn't mean that the NPAC isn't potentially a solution. It just means it raises a lot of questions that the working group wasn't prepared to address at this time. In addition to that, it wasn't clear that there is consensus within the group to even view the NPAC as the only solution. It sounds like, from our discussion, there are potentially many commercially available solutions that are out there or could be developed in the commercial market separate from the NPAC that might also be just as valid or useful.

Because we didn't have all that information in front of us, we weren't able to come with a recommendation. So for that reason we're asking that the appropriate technical bodies and experts - you may not be within the working group or may not be sitting around this table - study and come up with some recommendations and provide them to the working group for the working group to evaluate. Does anyone in the working group want to jump in and -- no? Okay.

Jackie Flemming: This is Jackie Flemming. I agree with what Matt said. I think one of the issues, as Matt explained, with looking at just the NPAC is that, as Matt explained, the majority of the interoperable are the video products that are

out there do not involve traditional carriers. I will definitely speak for us. There was a concern with security of the NPAC, a number of issues there as to why we went to talking about a database in general and not getting so specific as to target in on the NPAC. So definitely those are issues that can be addressed by others, but I don't think the working group really has the expertise to delve in there.

Chris Drake: Chris Drake again. Those are all very fair comments. I wasn't trying to imply it should be the only thing we look at. Only that if you wish to have some expertise at the table, we were willing to be part of that. All your points are well-made, that the people provisioning into the NPAC are different people. The receiving end of the NPAC as a broadcast mechanism is quite diverse with a lot of stakeholders. We'd have to look at that difference. It's fair enough. So we're just willing to be participants if that is desirable. Not forcing this vehicle on anybody, okay?

Travis Kavulla: Anyone else dying to get in on this conversation? Okay. Well, thank you for the hard work on it. Coming in at only 11 pages, it's one of our shorter reports. That just means there's plenty of other follow-on opportunities for an exhaustive discussion of some of the issues raised here today. Are there any other comments to be made on this report right now? Hey, Matt, would you like to move to adoption?

Matthew Gerst: Sure. For the hard-fought 11 pages, yes, I move that the NANC approve the Interoperable Video Calling Working Group's final report.

Travis Kavulla: Is there a second?

Female Voice: I second.

Travis Kavulla: We take a second from Jackie. You've had enough, Rich, the seconds. Any other discussion? All right. I'll call the question on the motion for the adoption of the Interoperable Video Calling final report. All in favor please say aye.

Male/Female Voices: Aye.

Travis Kavulla: Any opposed? That motion carries unanimously, and the report is adopted. Thank you for all your hard work. We'll now round-trip to Tim for a discussion of the North American Portability Management, the NAPM LLC.

DISCUSSION OF THE NAPM LLC REPORT

Tim Kagele: Good morning again. My name is Tim Kagele, I work for Comcast and I'm one of the co-chairs of the North American Portability Management LLC. I share that role with my colleague from AT&T, Teresa Patton. We're pleased to give you an update on behalf of the NAPM's activities over the last quarter. In terms of statements of work and/or contractual amendments, the following iconectiv SOWs and amendments have been approved or are under review by the NAPM LLC.

SOW 23 which allows for the development of a new ancillary service offering that would permit use of a limited set of NPAC-derived data for purposes of protecting against account takeover fraud was approved by the NAPM LLC. This service is expected to be available during the fourth quarter of this year.

Next, the Contract Implementation Committee or CIC as we call it. In partnership with iconectiv, the CIC reviewed four findings of reports of providers of telecommunications-related services or PTRS users that are non-service providers to validate the need for NPAC data access. The CIC also reviewed potential service level in fractions service level 1 - service availability, and service level 20 - unscheduled service unavailability notification. Requirements were not met in the West Coast NPAC region during the month of July 2019 resulting in an industry credit of \$52,850 which will be applied by the vendor to September service provider billing statements.

In terms of general updates, members of the NAPM LLC Security Advisory Committee or SAC and representatives from the FCC Public Safety Homeland Security Bureau and the vendor iconectiv met to discuss refinements in the providers of PTRS user applications. That process as it relates to the review of company foreign ownership. The NAPM is also reporting that 19 PTRS user contracts were terminated due to their failure to complete the annual qualification certification.

The NAPM LLC also responded to membership inquiries by Granite Telecommunications and Telnyx by providing new membership information packages to each of those companies.

Then, lastly, the NAPM LLC conducted an onsite visit of iconectiv's data center in Richardson, Texas consistent with the requirements set forth in the master services agreement. So that concludes the NAPM's official report.

Before I turn it over to my colleague, Deb Tucker from Verizon who's going to give you an update on TOSC-related former LNPA Working Group activities, let me just ask if there are any questions about the NAPM LCC's report.

Travis Kavulla: Tim, just maybe elaborate as a practical matter what consequences there are for consumers out of non-performance of the West Coast NPAC. I mean demystifying the jargon somewhat that is in the contract and resulted in the credit, what actually went wrong and what was unavailable during that time.

Tim Kagele: I don't know. I might let Chris speak to that one in terms of the actual failure, but I think just generically there was a server failure that resulted in a minor outage in the West Coast region's NPAC which prevented or impeded the ability to port for a small period of time. And because of the rigor that's been introduced in the contract between the vendor and the NAPM, those service level requirements number 1 and number 20, were toggled in a way that because of that measurement period a credit to service providers in their

monthly billing was remitted or is to be remitted by the vendor for the month of September.

Travis Kavulla: Is this the first time this has occurred, the credit under the new arrangement?

Tim Kagele: There may have been one other time. I'm not sure. Chris, do you know?

Chris Drake: For that particular SLA, I don't think so. There are lots of SLAs.

Tim Kagele: Yes. Overall it's been a very, very -- all of the NPAC database has been very solid, performing well. Does it help?

Travis Kavulla: Yes, thank you.

Tim Kagele: Thank you.

Travis Kavulla: I don't mean to stump you on the final day.

Tim Kagele: No, no, no.

Travis Kavulla: That's on unfair last day of school thing as well.

Tim Kagele: That's okay. If there are no other questions, then I'll turn it over to my colleague Deb Tucker from Verizon.

Deborah Tucker: Thank you, Tim. I just have an announcement.

I'm Deb Tucker with Verizon. I'm currently the chair of the LNPA Transition Oversight Subcommittee. I was previously a tri-chair of the NANC LNPA Working Group. That's no longer in place at this time. The former LNPA Working Group does have a list of best practices that carriers and vendors continue to follow regarding various number portability situations. Some

of the best practices were formally endorsed by the NANC and others were provided as guidelines.

I'm here now to make an announcement regarding Best Practice 73 for the unauthorized port flow. That is available on the numberportability.com website under industry info LNPA Working Group best practices. The LNPA Working Group formed a sub team that established the flow that's referenced in that Best Practice 73. This team recently regrouped informally since this work is not transition-related to supplement the documentation to address the increased level of fraudulent porting activity that is taking place. This is an announcement to inform the NANC members of the modifications and the supplemented best practice will be updated on the number portability LNPA best practices site later this week. Are there any questions? Thank you for giving me the opportunity to make this announcement.

PUBLIC COMMENTS AND PARTICIPATION

Travis Kavulla: Thank you. All right. Now is the time appointed in our agenda for any public comment or participation. Is there any? I see some deliberation in the audience. Please, if you have something to say, we've got another hour. Not that's a requirement, that we use up that hour. Going once. Going twice. Okay, no public comment. Is there is any other business to raise before the NANC today on the part of our members?

OTHER BUSINESS

Kris Monteith: Yes.

Travis Kavulla: Yes, Kris.

Kris Monteith: Good morning, all. This is the last meeting of this iteration of the NANC and I just wanted to echo the chairman's comments and thank all of you for your service. For those of you that are leaving the NANC, we will miss you. We hope to see many of you back in the re-chartered NANC.

I also did want to take this opportunity to again, echo the chairman's words and Marilyn's words, to thank Chair Kavulla for all of his work. I am sure that you join me in the sentiment that it has been a great pleasure to work with him over the past two years. He's done a tremendous job. He brought a lot of energy and enthusiasm to the job as the Chairman said. We hope that you will have lots of time in your new position to spend with your little boy or your new addition to your family and we wish you the very best going forward. Don't be a stranger either, Travis.

Travis Kavulla: I will. I will look to the FCC for a regular -- the grass is always greener on the other side front as I continue my relationship with other federal regulatory agencies, Kris. Thank you very much.

Kris Monteith: Well, thank you again.

Travis Kavulla: Absolutely. All right. On that happy note, I think we can adjourn. Thank you all for your work in this

duration of the NANC's charter. We're adjourned. I'll even use this.