

UNITED STATES OF AMERICA  
FEDERAL COMMUNICATIONS COMMISSION

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CONSUMER ADVISORY COMMITTEE

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MEETING

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FRIDAY  
JANUARY 27, 2017

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The Advisory Committee met in the Commissioners Meeting Room, 445 12th Street, S.W., Washington, D.C., at 9:00 a.m., Eduard Bartholme, Chairman, presiding.

## FF COMMISSIONERS PRESENT:

AJIT PAI, Chairman

## COMMITTEE MEMBERS PRESENT:

EDUARD BARTHOLME, Committee Chairman  
ZAINAB ALKEBSI, Deaf and Hard of Hearing Consumer  
Advocacy Network  
ELIZABETH BARKET, Competitive Carriers  
Association  
DEBRA BERLYN, National Consumers League  
JOSLYN DAY, Massachusetts Department of  
Telecommunications and Cable  
MARK DEFALCO, Appalachian Regional Commission  
AMINA FAZLULLAH, Benton Foundation  
DANA FLOBERG, Free Press  
B. LYNN FOLLANSBEE, USTelecom  
CLAIRE GARTLAND, Electronic Privacy Information  
Center  
PAUL GOODMAN, Center for Media Justice Media  
Action Grassroots Network  
DALLAS HARRIS, Public Knowledge  
MITSUKO HERRERA, National Association of  
Telecommunications Officers and Advisors  
IRENE LEECH, Consumer Federation of America  
ROSS LIEBERMAN, American Cable Association  
ANDY LOMELI, National Hispanic Media Coalition  
KENNETH MALLORY, National Association of State  
Utility Consumer Advocates  
KEN MCELDOWNEY, Consumer Action  
STEVEN MORRIS, NCTA- The Internet and Television  
Association  
STEVE POCIASK, American Consumer Institute  
ANGELA SIEFER, National Digital Inclusion  
Alliance  
LARRY WALKE, National Association of Broadcasters  
OLIVIA WEIN, National Consumer Law Center  
KRISTA WITANOWSKI, CTIA- The Wireless Association

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## COMMISSION STAFF:

SCOTT MARSHALL, Designated Federal Official

ANITA DEY

BEAU FINLEY

BRITTANY GOMES

KURIAN JACOB

CHARLES MEISCH, JR.

KAREN PELTZ STRAUSS

MARK STONE

ANTONIO SWEET

D'WANA TERRY

\*Present by teleconference

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## TABLE OF CONTENTS

Welcome & Call to Order .....	5
Introductions & Meeting Logistics .....	12
Remarks of Chairman Ajit Pai .....	16
Consumer and Governmental Affairs Bureau Update .....	40
Consumer Device Security by Kurian Jacob.....	65
Electronics Engineer, Cybersecurity and Communications Reliability Division, Public Safety and Homeland Security Bureau	
Break .....	89
Spoofing Technologies and Robocalling by Antonio Sweet.....	00
Technology Policy Advisor, Office of Strategic Planning, FCC	
ROBOCALL STRIKE FORCE & NEXT STEPS:	
Linda Vandeloop, AT&T.....	113
Questions:.....	124
ATSC 3.0 BROADCAST STANDARD INTRODUCTION:	
Patrick McFadden, NAB.....	128
Questions:.....	139
INCENTIVE AUCTIONS UPDATE:	
Charles Meisch, Jr., FCC.....	160
Questions:.....	174
REPORT BACK FROM WORKING GROUPS:	
USF/Digital Inclusion:	
Amina Fazlullah, Benton Foundation.....	181
Technology Transitions:	
Steve Pociask, ACI.....	184
Privacy:	
Debra Berlyn, NCL.....	187
CLOSING REMARKS:	
Edward Bartholme, Chairman.....	190

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P-R-O-C-E-E-D-I-N-G-S

9:01 a.m.

CHAIR BARTHOLME: Thank you all for taking time out of your busy schedules to join us today. We appreciate having so many of you here in the room. I know a couple of people are on the phone line, and we're happy to have those folks with us as well.

Welcome to CAC number nine. This is the ninth iteration of the CAC. We were appointed last October and this is our first meeting, and we're glad to have everybody here with us today.

I want to start by thanking CTIA for the food because that's probably one of the more important elements of the day, so breakfast and lunch are all brought to you by CTIA. Thanks, Krista.

It's great to see a lot of familiar faces and a lot of new faces at the table. I think we have an exciting opportunity over the next couple of years to really provide some valuable input to the Commission.

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1                   We're going to have Chairman Pai join  
2                   us here in a short while, and we'll probably get  
3                   to hear a little bit more about what he sees as the  
4                   vision over the next few years, and how we can  
5                   hopefully fit into that vision and be helpful and  
6                   provide insights and feedback.

7                   As some of you know, we got a quick start  
8                   to this CAC because we were given a task right off  
9                   the bat, and one of our working groups has been very  
10                  active, and the other two have at least started to  
11                  have phone calls.

12                  So we're underway already, and I think  
13                  we've got a little bit of a head of steam heading  
14                  into this meeting, and we'll have some more time  
15                  to talk about and have focused discussions around  
16                  the working groups later this afternoon.

17                  We did something a little bit different  
18                  this time around with the CAC in that we had  
19                  orientation sessions prior to this first meeting,  
20                  so that was a chance to hear from staff and other  
21                  people here about how things should work, sort of  
22                  the legalities and logistics of meetings.

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1           If you have any questions, feel free to  
2           ask Scott or I at any point during the day. We're  
3           happy to answer those, and if we don't have an  
4           answer, we can find the person in the building who  
5           would have an answer and track that down for you.

6           So I think one of the first things that  
7           we always do at our meetings is go around the table  
8           and introduce ourselves, so we'll start with -

9           MR. MARSHALL: Should we wait until the  
10          Chairman gets here for introductions?

11          CHAIR BARTHOLME: Okay, I was just  
12          informed that the Chairman asked us to wait and do  
13          that when he's here, so we'll wait and do that when  
14          he's here. I'm not going to start tap dancing, but  
15          we've got a couple of minutes, Scott. Did you want  
16          to?

17          MR. MARSHALL: Well, I didn't know we  
18          made a dynamic duo there, right? Hello,  
19          everybody, and welcome. It's always good to have  
20          old friends back and lots of new ones too.

21          Ed, I don't remember mentioning this,  
22          but there are 11 of you from CAC 8th that are

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1 returning with us, but the remainder out of our 29  
2 are either people that are entirely new to CAC or  
3 have been here in many years past, so there you go,  
4 so it will be a good chance to make some new friends  
5 and get reacquainted with some old ones as well.

6 For those of you that are new to the  
7 building, by the way, the restrooms are right out  
8 the door to my right at the intersecting corridor.  
9 The restrooms will be on your left sort of in that  
10 corridor going back toward the 12th Street lobby.

11 If you need anything, let me know. Is  
12 Brittany in the room, Ed, at the moment? Brittany  
13 actually keeps me on track all the time, and runs  
14 this thing really, if the truth must be known, so  
15 I really want to express my appreciation to her.

16 And I know that - wave madly, Brittany.  
17 I can't see you, but wave. Okay, there, good,  
18 good. If you need anything during the day, copying  
19 or anything of that sort, or if you think I've done  
20 something wrong, you can complain to her too, but  
21 anyway, thanks, Brittany. I think that's all I  
22 have at the moment, Ed.

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1 CHAIR BARTHOLME: A couple of quick  
2 other logistical things.

3 MR. MARSHALL: Oh, yeah, we do have a  
4 couple, yeah, yeah, yeah, yeah, go ahead.

5 CHAIR BARTHOLME: When you would like  
6 to speak, find a microphone and raise your hand.  
7 It's not me waving at you all day. It's so that  
8 the people in the booth know which mics to make  
9 active, and that's part of the live feed and some  
10 of the disability access that we have going on in  
11 the room.

12 The Wi-Fi password, which does change  
13 quarterly, the current one, everybody got a pen and  
14 ready to write this down, is FCC082481, and that  
15 -

16 MR. MARSHALL: It will be on the agenda  
17 next time.

18 CHAIR BARTHOLME: One more time, it's  
19 FCC082481, and that should get you connected to  
20 Wi-Fi.

21 MR. MARSHALL: And we did send out a  
22 bunch of stuff electronically, and one document we

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1 didn't provide in the packet, which is the long  
2 mailing list with your contact info. If you could  
3 do me the great favor of reviewing that for accuracy  
4 and letting me know if there are any errors or  
5 changes, that would be great because we want to make  
6 sure that we can stay in touch with you.

7 And also, if you will, it's real  
8 important for you to designate an alternate rep.  
9 As you've seen from our working groups so far, they  
10 are getting larger and larger, and invariably that  
11 means conflicts when we're trying to have  
12 concurrent sessions in the afternoon.

13 So it would be really helpful for you  
14 to have an alternate who can attend those on your  
15 behalf if you're interested in participating, or  
16 to call in, and that's why we've also provided  
17 bridges for each one of those working groups, and  
18 more on that later.

19 CHAIR BARTHOLME: If your alternate  
20 changes, please keep us posted on that so that we  
21 can add them to the appropriate LISTSERVs and those  
22 sorts of things.

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1           One other thing that kind of helps with  
2 the flow of the day, we're going to have a number  
3 of people presenting. If you do have a question  
4 or would like to sort of interact and be part of  
5 the conversation, we ask that you turn your tent  
6 card up like this just so that it's evident who  
7 wants to be engaged, and you don't have to sit there  
8 with your hand up for five minutes while we're  
9 getting through other discussions and questions.  
10 Are we good?

11           MR. MARSHALL: Okay, yeah, I think  
12 we've fairly well covered it so far. Any questions  
13 that anyone would like to raise for either Ed or  
14 I while we're waiting for the Chairman?

15           MEMBER MCELLOWNEY: Someone put a cell  
16 phone on the table. I don't know if someone lost  
17 it or it was just for what use for it.

18           CHAIR BARTHOLME: It's recording.

19           MEMBER MCELLOWNEY: Recording? Okay,  
20 good, never mind.

21           CHAIR BARTHOLME: And we have our first  
22 speaker who just entered the room.

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1 MR. MARSHALL: Excellent.

2 CHAIR BARTHOLME: Welcome.

3 MR. MARSHALL: What timing, perfect.

4 CHAIRMAN PAI: Happy new year. Hi,  
5 how are you doing? It's good to see you.

6 MR. MARSHALL: Hi, how are you? Good  
7 to see you too, Chairman.

8 CHAIR BARTHOLME: So we're very  
9 pleased to be joined by Chairman Pai. I was told  
10 that you wanted us to defer introductions until you  
11 were here, so -

12 CHAIRMAN PAI: Yes.

13 CHAIR BARTHOLME: Would you like to  
14 start with us going around the room?

15 CHAIRMAN PAI: If that's okay. I  
16 don't want to impose, but -

17 CHAIR BARTHOLME: No, that would be  
18 wonderful.

19 CHAIRMAN PAI: - that would be nice.

20 CHAIR BARTHOLME: I'm Ed Bartholme  
21 with Call for Action, and we'll go to my right.

22 MR. MARSHALL: And I'm Scott Marshall,

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1 and I actually do work for you, sir.

2 CHAIRMAN PAI: Yeah?

3 MR. MARSHALL: And I staff the Consumer  
4 Advisory Committee.

5 MEMBER ALKEBSI: Good morning, Zainab  
6 Alkebsi, Deaf and Hard of Hearing Consumer Advocacy  
7 Network.

8 MEMBER LOMELI: Good morning, Andy  
9 Lomeli with the National Hispanic Media Coalition.

10 MEMBER BERLYN: Good morning, Debra  
11 Berlyn, and I'm representing the National  
12 Consumers League.

13 MEMBER WEIN: Good morning, Olivia  
14 Wein, National Consumer Law Center.

15 MEMBER MCELDOWNEY: Ken McEldowney,  
16 Consumer Action.

17 MEMBER HARRIS: Dallas Harris with  
18 Public Knowledge.

19 MEMBER WITANOWSKI: Krista  
20 Witanowski, CTIA.

21 MEMBER HERRERA: Mitsuko Herrera with  
22 NATOA and Montgomery County.

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1 CHAIRMAN PAI: And also an occasional  
2 retweeter and favorite of mine on Twitter.

3 MEMBER HERRERA: Yes, yes.

4 CHAIRMAN PAI: Thank you for that.

5 MEMBER MALLORY: Good morning,  
6 everyone, Kenneth Mallory with the National  
7 Association of State Utility Consumer Advocates.

8 MEMBER POCIASK: And Steve Pociask  
9 with the American Consumer Institute.

10 MEMBER SIEFER: Good morning, Angela  
11 Siefer from the National Digital Inclusion  
12 Alliance.

13 MEMBER FLOBERG: Dana Floberg with  
14 Free Press.

15 MEMBER GARTLAND: Claire Gartland with  
16 the Electronic Privacy Information Center.

17 MEMBER LEECH: Irene Leech with the  
18 Consumer Federation of America.

19 MEMBER FOLLANSBEE: Lynn Follansbee  
20 with USTelecom.

21 MEMBER MORRIS: Steve Morris with  
22 NCTA.

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1                   MEMBER LIEBERMAN:    Ross Lieberman,  
2                   American Cable Association.

3                   MEMBER WALKE:    Larry Walke, National  
4                   Association of Broadcasters.

5                   MEMBER DAY:    Good morning, Joslyn Day,  
6                   Massachusetts Department of Telecommunications  
7                   and Cable.

8                   MEMBER GOODMAN:    Good morning, Paul  
9                   Goodman with the Center for Media Justice and Media  
10                  Action Grassroots Network.

11                  MEMBER DEFALCO:    Good morning, Mark  
12                  Defalco with the Appalachian Regional Commission.

13                  MEMBER BARKET:    Liz Barket with the  
14                  Competitive Carriers Association.

15                  CHAIR BARTHOLME:    Oh, and a couple of  
16                  people on the phone who couldn't join us, if you  
17                  guys want to chime in and introduce yourselves?

18                  MR. CARROLL:    Sean Carroll with the  
19                  Massachusetts Department of Telecommunications  
20                  and Cable.

21                  MEMBER SCHWANTES:    Hi, Ed, it's Jon  
22                  Schwantes with Consumers Union.

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1                   MEMBER NULL: This is Eric Null with  
2 the Open Technology Institute.

3                   CHAIRMAN PAI: Well, great, well, good  
4 morning, everyone. Happy Friday. I guess every  
5 Friday is a happy Friday, and I really appreciate  
6 all of you coming here and taking time out of your  
7 busy schedules on a Friday morning, without coffee  
8 apparently, most of you, to labor in these  
9 important fields.

10                   This is my first week on the job, but  
11 I'm really glad that one of the first public  
12 remarks, that I'm giving this to you because I think  
13 that the focus of this Committee really is where  
14 the rubber meets the road in terms of the FCC's  
15 mission.

16                   I appreciate all of the work that you're  
17 doing on all of these different issues, and I just  
18 wanted to highlight a couple of the consumer  
19 related issues that are important to me, and that  
20 I hope that the FCC will tackle going forward, and  
21 that I hope also will appeal to you.

22                   The first one is one that I hear about

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1 a lot, including from my own mom. She just called  
2 me, "Why can't you guys do something about that?"  
3 and now actually I can't defer by saying, "Well,  
4 that's somebody else's problem." It's now my  
5 problem, but, and that is robocalls. You've  
6 gotten them. I've gotten them. You know, you're  
7 sitting there enjoying a program or eating dinner,  
8 and you just get these calls.

9 Artificial or prerecorded calls are  
10 intrusive. They're unwanted. They're just,  
11 frankly, a nuisance, and in fact, they are the  
12 number one source of consumer complaints that we  
13 receive here at the FCC.

14 Now, a lot of these robocalls are a  
15 scam, and I noted with interest some of the recent  
16 stories about call centers in India that were  
17 busted up thanks in part to the cooperation of the  
18 U.S. government and the Indian government, where  
19 entire businesses are set up and predicated on  
20 robocalling people in the United States pretending  
21 to be an IRS agent, and threatening Americans,  
22 especially elderly people, immigrant populations

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1 here in the United States, and other vulnerable  
2 populations. "If you don't send us a check for X  
3 amount, the IRS is coming after you."

4 They were receiving \$150,000 to  
5 \$250,000 a day per call center just from this one  
6 operation. So just think about that and multiply  
7 it across all of these different scams across all  
8 of the country, how many consumers must have been  
9 harmed.

10 Former Senator Fritz Hollings, one of  
11 my favorite Senators growing up who I had the  
12 pleasure of meeting a couple of years ago, put it  
13 well when he referred to robocalls as "the scourge  
14 of civilization." I think everyone who has  
15 received one of these calls could probably agree.

16 Unfortunately, the problem is only  
17 getting worse, and that's why I hope the Commission  
18 will take aggressive action, hopefully with your  
19 counsel, to end it.

20 I think there are a lot of solutions  
21 that the FCC can and should pursue, for example,  
22 enforcement action against unscrupulous

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1 telemarketers and other robocallers who are  
2 preying on innocent consumers, as well as the  
3 establishment of safe harbor so that carriers can  
4 block spoofed calls from overseas without fear of  
5 liability.

6 I'd also urge you to think about several  
7 additional issues that I'm thinking about as well.  
8 For example, how can we make it easier for consumers  
9 to tell us about robocalls that they receive, and  
10 to make it easier for the enforcement bureau to take  
11 action to track down and shut down those fraudulent  
12 robocallers?

13 Similarly, would carving out a safe  
14 harbor for telephone companies seeking to provide  
15 those call blocking services to their customers  
16 encourage experimentation that would allow them to  
17 use different types of technological solutions to  
18 help solve that problem from the carrier end?

19 Would creating a reassigned numbers  
20 database give callers the ability to avoid dialing  
21 wrong numbers by mistake? And last, but certainly  
22 not least, would granting the petition of 51

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1 consumer advocacy organizations, including some of  
2 you, to overturn the FCC created exemption for  
3 federal contractors, would that help close a  
4 potential loophole in our robocalling regulations?

5 I know there are a lot of complicated  
6 issues here to tackle, and the legal thicket is  
7 pretty challenging, but nonetheless, I hope to work  
8 with you so that we can once and for all help channel  
9 Rachel from cardholder services into more  
10 productive social activities.

11 Turning away from robocalling, which is  
12 of course an area of consumer complaint, I want to  
13 turn to something proactive, one of my core  
14 priorities here at the FCC so long as I have the  
15 privilege of serving, and that is closing the  
16 digital divide.

17 I believe at my core that every American  
18 who wants internet access should be able to get it,  
19 but in too many places in this country, Americans  
20 are being left behind, and I've seen that for myself  
21 in my travels from tiny Fort Yukon, Alaska near the  
22 Arctic Circle to Carthage, Mississippi.

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1           We need to do what we can to ensure that  
2 all Americans are participants in, rather than  
3 spectators of the digital economy. So last year  
4 to help address this problem, I put some ideas on  
5 the table as part of what I've called a digital  
6 empowerment agenda. This included several  
7 proposals.

8           First and foremost was the creation of  
9 what I've called gigabit opportunity zones, and  
10 essentially the idea here, which would require  
11 Congressional authorization, would be to set up a  
12 geographic area, it could be as small as a city  
13 block or as large as a rural county, in which the  
14 median income of that area was 75 percent or less  
15 of the national median.

16           And in those areas, the federal  
17 government would provide tax incentives to the  
18 private sector to build out broadband if the state  
19 and local governments adopted broadband deployment  
20 friendly regulations, and if there were  
21 appropriate safeguards on the federal level to make  
22 sure that there was oversight for the use of those

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1 funds.

2 We would also be able to, under my  
3 proposal, offer entrepreneurs tax incentives in  
4 terms of relieving them from the employer side  
5 payroll taxes, to encourage them to create jobs,  
6 to hire people who are living in those gigabit  
7 opportunity zones.

8 So imagine a block of Detroit that needs  
9 to be revitalized, or a part of rural Nebraska where  
10 people don't have broadband. This could be a  
11 solution, I think, for incentivizing the private  
12 sector to build some of these networks, to make the  
13 business gates easier for deployment.

14 I think it would also be a platform for  
15 job creation and entrepreneurship. Just think  
16 about how many entrepreneurs out there probably  
17 have a good idea, but for want of expression of that  
18 idea over the internet to the world, that idea  
19 simply withers on the vine. My hope is that  
20 through these gigabit opportunity zones, we can  
21 create a greater opportunity for these folks to  
22 take advantage of the digital age.

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1           The next thing that I proposed was a  
2 three-step plan to boost mobile broadband in rural  
3 America, and this hit home with me when I was  
4 driving this past fall from Wichita to Des Moines,  
5 and that's an exciting drive by the way if you ever  
6 have the chance to do it, but I noticed that there  
7 were long stretches where I simply couldn't get any  
8 signal at all.

9           I would just look at my phone, and at  
10 most it would have one or two bars, and it got me  
11 thinking how can we change this situation so that  
12 everyone in Ottumwa or Topeka can have the same  
13 expectation of a 4G LTE signal that we do here in  
14 the FCC's building, and so I came up with a  
15 three-step plan as I mentioned.

16           One is to increase the build out  
17 obligations for wireless carriers, and we would do  
18 this by increasing the percentage requirement,  
19 percentage coverage requirement for certain  
20 licenses.

21           So right now for example, when we grant  
22 a license to a carrier, we'll say, "Okay, you can

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1 have this license on the condition that you build  
2 out to, say, 66 percent of your coverage area within  
3 10 years." I propose increasing that to 95 percent  
4 to make sure that all - as many Americans as  
5 possible within that service area are covered.

6 To also ease the case for build out to  
7 those areas, we would extend the license terms. So  
8 for example, instead of 10 years, it would be 15  
9 years. And my hope is that that long-term time  
10 frame as well as the heightened expectation will  
11 give more rural Americans the chance to benefit  
12 from the mobile revolution.

13 Secondly, I've also proposed moving  
14 forward with a Mobility Fund phase two, which is  
15 a highly technical and complicated item, I know,  
16 but essentially here, we would make sure that  
17 federal subsidies would be devoted to solving the  
18 problem for the lack of mobile connectivity in  
19 areas where the private sector simply can't or  
20 won't do the job, and also subsidizing the  
21 deployment of current networks to the extent  
22 necessary where the private sector otherwise

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1 wouldn't be providing any service at all, and of  
2 course basing the funds on current needs and  
3 current facts.

4           The third thing I proposed in terms of  
5 a mobile broadband solution was something I've  
6 called a rural dividend. So right now, as all of  
7 you know, we option spectrum, and then we get money  
8 back for that spectrum, and we deposit it into the  
9 Treasury. Well, I've proposed a rural dividend,  
10 that is setting aside 10 percent of the money that  
11 we get from those spectrum options and devoting  
12 that to rural broadband.

13           And to give you an example of the kind  
14 of money we're talking about, if we had this policy  
15 in place the last 10 years, the U.S. government  
16 would have an extra \$7 billion that we could have  
17 used to build out mobile broadband in parts of this  
18 country that simply don't have it. I think that  
19 would be a pretty powerful solution that would  
20 benefit a lot of Americans.

21           The third and last part of the digital  
22 empowerment agenda that I talked about was removing

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1 some of the general regulatory barriers to  
2 broadband deployment, and here I had in mind the  
3 whole grab bag of sort of regulatory obstacles that  
4 stand in the way of people - of building out  
5 broadband, using our existing authority at the FCC  
6 to remove state and local barriers to deployment,  
7 for example, unreasonable fees that are charged to  
8 companies big and small to attach broadband  
9 infrastructure, reforming the pole attachment  
10 rules to reduce the cost of deployment.

11 I was visiting with a very small fiber  
12 company in Louisiana called Southern Light, and  
13 they told me how that's one of the biggest cost  
14 elements for them, and they don't have a fleet of  
15 people to negotiate these deals, and so essentially  
16 if the pole attachment case is too difficult, they  
17 simply won't deploy in that area. And if you look  
18 at their map of fiber deployment in Mississippi for  
19 example, there are huge patches where entire cities  
20 are left out because they simply can't get access  
21 to those poles.

22 The third thing, we would be developing

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1 model code for communities that want to have a  
2 broadband friendly approach. One of the things  
3 I've heard from a lot of municipalities is, "We  
4 really like the idea, but we - there's no person  
5 in our group within our city government who has the  
6 ability to sit down and write down, 'Okay, here are  
7 the guidelines that we think we should pursue.'  
8 Wouldn't it be nice if we had an off the shelf rack  
9 approved by the FCC where we could simply pull it  
10 out and say, 'Okay, this is a plan that's friendly  
11 to consumers and would encourage deployment.'"

12 Fourth would be speeding up the  
13 deployment of broadband on federal lands. I've  
14 consistently been surprised that it takes twice as  
15 long on average for people to get the requisite  
16 permits and approvals when they're trying to cite  
17 infrastructure on federal lands than it does on  
18 private lands, and I would hope to - especially to  
19 the extent that a lot of federal lands involve  
20 either a lot of tribal areas that are either a part  
21 of federal land or abut federal land. I think that  
22 would be a really powerful solution to making sure

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1 that tribal broadband is boosted.

2 And last, but not least, something that  
3 has gotten a lot of bipartisan support, and that  
4 is making dig once the national policy of the land.  
5 It seems elementary to me that if you're going to  
6 dig up the road, why not lay the conduit, you know,  
7 the big pipes that would allow anybody, incumbents  
8 and competitors alike, to have a fair chance to  
9 include their fiber through that conduit?

10 That would be a very simple thing to do  
11 that would encourage competition so that if you're  
12 an upstart like Southern Light or RG Fiber in my  
13 home state of Kansas, you don't have to negotiate  
14 with the city to have a permit for you to dig up  
15 the road. You don't have to expend the cost to hire  
16 a crew to dig up that road and to put it back  
17 together. You could simply use the conduit that's  
18 already there for any federally funded  
19 transportation project.

20 So I know that I've blathered on far too  
21 long about this agenda, but I really do encourage  
22 you, if you have a chance, to look at it. It's on

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1 the website under September 13, 2016.

2 I proposed them precisely because I  
3 think that it delivers on what I hear anyway from  
4 consumers the most when it goes across the country  
5 is that, "We don't have enough options or  
6 affordable options for broadband." My goal is for  
7 this digital empowerment agenda to deliver on that  
8 need, and in a bipartisan way.

9 I'm hopeful that we can move forward and  
10 really make a difference for the American consumer,  
11 so that's pretty much all I had. I want to thank  
12 you for your attention. I apologize for diverting  
13 you to more important topics, but I really am  
14 excited to work with you in the time to come, and  
15 yeah, please do stay in touch. Thanks.

16 CHAIR BARTHOLME: Thank you for  
17 joining us.

18 CHAIRMAN PAI: Thanks.

19 CHAIR BARTHOLME: Have a good day.

20 CHAIRMAN PAI: You too. I'm sorry I  
21 have to run, but it's a busy day.

22 CHAIR BARTHOLME: Yeah, I can imagine.

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1       Okay, so next up we have a familiar face to the CAC  
2       for those of you who are returning, Mark Stone, the  
3       deputy bureau chief for the Consumer Governmental  
4       Affairs Bureau will be joining us. He brought his  
5       own name card. You brought your own name plaque.

6               MR. STONE: I did. I didn't make the  
7       tent card, but I did bring it.

8               MR. MARSHALL: Did we spell it right,  
9       Mark? I hope.

10              MR. STONE: Yeah, if you can't get my  
11       name right -

12              MR. MARSHALL: Yes, I know. I was  
13       joking.

14              MR. STONE: Good morning, and welcome  
15       to the FCC. Thanks to all of you for being here,  
16       and a special welcome to those of you that are new  
17       to the committee. The committee's been an  
18       important partner and resource to the Commission  
19       in the past, and we're sure that with your addition,  
20       it will continue to serve consumers and advance  
21       Commission priorities.

22              We also welcome your new chair, Ed,

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1 representing Call for Action. Call for Action, of  
2 course, has been a long time CAC member, and Ed has  
3 been instrumental in many CAC projects to help  
4 consumers make smart purchasing decisions. Ed's  
5 common sense approach to tackling tough issues will  
6 no doubt aid your work greatly, plus he's just an  
7 all-around nice guy.

8 Now, I know you've already hit the  
9 ground running with two orientation sessions which  
10 focused on the operations of the CAC as a federal  
11 advisory committee and the rulemaking process here  
12 at the Commission. I hope both new and returning  
13 members found these sessions to be helpful.

14 And you've already started work on a  
15 couple of projects and have organized your  
16 subgroups. We're glad that you're now thinking  
17 about important priorities such as tech  
18 transitions, consumer transparency issues, and  
19 universal service.

20 As always, we thank you for your  
21 willingness to share your expertise with us. We  
22 understand this is an investment of time and

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1 effort, and we want you to know how valuable your  
2 work is.

3 Your agenda today includes items that  
4 we know are of interest to you. A frequent hot  
5 topic, as the Chairman mentioned, is robocalls.  
6 You'll hear from AT&T, the industry lead of the  
7 Robocall Strike Force, about that group's  
8 significant progress fighting to help consumers  
9 avoid unwanted calls, and you'll hear about an  
10 issue that is a big part of the unwanted robocalls  
11 problem, caller ID spoofing. You'll also get  
12 presentations on incentive auctions and several  
13 other subjects.

14 So to get you started, we in CGB wanted  
15 to get you up to speed on our recent work. I work  
16 on our general consumer policy portfolio which  
17 includes the Telephone Consumer Protection Act.  
18 The TCPA covers robocalls and robotexts.

19 We continue to review the significant number  
20 of TCPA petitions that are before us. I wanted to  
21 highlight two of those for you. Both concern  
22 robocalls from the federal government and its

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1 contractors. You heard Chairman Pai refer to a  
2 couple of those issues.

3 First, in last summer's Broadnet  
4 decision, the Commission interpreted the TCPA to  
5 exclude the federal government and its contractors  
6 from the robocalls protections in the law.  
7 Several parties have now sought reconsideration  
8 asking the FCC to find that contractors are in fact  
9 covered by the law.

10 These parties argued that the  
11 Commission misinterpreted the TCPA and incorrectly  
12 limited its coverage so that they will receive  
13 significant numbers of unwanted robocalls made by  
14 federal contractors, and that consumers would not  
15 have a right to revoke their consent to receive such  
16 calls. The Commission sought comment on those  
17 recon petitions last fall and is reviewing the  
18 record now.

19 Second, in a separate action last  
20 summer, the Commission released an order  
21 addressing a new section of the TCPA. That new  
22 section directed the Commission to adopt rules

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1 addressing debt owed to the federal government.

2 The Commission received a request to  
3 reconsider the rules, including a three-call limit  
4 and restrictions on calls to reassigned numbers.  
5 Oppositions to that petition are due February 1,  
6 and replies to any oppositions on February 13.

7 So those are just two of the hot topics  
8 in the robocalls arena, and they really address  
9 sort of the legal framework that addressed  
10 robocalls in TCPA.

11 You'll hear later, again, from AT&T on  
12 ways that consumers can arm themselves to protect  
13 themselves from unwanted robocalls, so the two sort  
14 of work in conjunction, the law and its liability,  
15 and then consumers being able to on their own block  
16 such robocalls.

17 So with that, I'll turn it over to my  
18 fellow CGB managers for updates in their areas.  
19 Thanks again.

20 CHAIR BARTHOLME: Thanks, Mark.

21 MR. STONE: You're welcome.

22 CHAIR BARTHOLME: Yeah, do you want to

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1 take some questions?

2 MR. STONE: I can take them now or take  
3 them later, whatever.

4 CHAIR BARTHOLME: Let's do them now and  
5 then we'll -

6 MR. STONE: Do you want to do it now?

7 CHAIR BARTHOLME: Sure, yeah. Does  
8 anybody have a question for Mark? Mitsuko?

9 MEMBER HERRERA: Hi, there, Mitsuko  
10 Herrera from Montgomery County and the National  
11 Association of Telecommunications Officers and  
12 Advisors. Do you have - is this - so along the  
13 lines of what Chairman Pai was talking about, do  
14 you have any statistics either showing on the  
15 robocalls, the complaints, or breakdown?

16 I mean, part of it really is a matter  
17 of there are some calls that are unwanted, but it's  
18 the only way really to reach a lot of people,  
19 particularly over their mobile phones, versus it's  
20 literally criminal activity. Is there anything  
21 that you have that can help kind of guide the  
22 discussion in terms of the prevalence of the

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1 problem, or how it breaks out, or how big a  
2 percentage the criminal activity is from other  
3 types of free speech?

4 MR. STONE: Yeah, so we do gather that  
5 information, as the Chairman mentioned. Writ  
6 large robocalls tend to be among the top consumer  
7 complaint categories, but you're right. There's  
8 another level of analysis that we try to look at  
9 which is to say, okay, what are robocalls that are  
10 not necessarily evil, that don't necessarily  
11 intend to defraud a consumer, but maybe are just  
12 simply unwanted and not evil? So we are looking  
13 at that.

14 I will say when I personally looked into  
15 our complaints database, there is a decent amount  
16 of each different type, and so we are working to  
17 sort of further refine it, and it will certainly  
18 inform our analysis going forward.  
19 Unfortunately, I don't have for you right at the  
20 moment that sort of break out, but we'll definitely  
21 be in touch with that.

22 CHAIR BARTHOLME: Debbie?

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1                   MEMBER BERLYN: Yeah, my question is  
2 right on top of that one. So the Chairman  
3 mentioned that he wanted to make it easier -

4                   MR. STONE: Let me say, I've got to get  
5 used to you not being right there.

6                   MEMBER BERLYN: Close enough. So the  
7 Chairman mentioned that he wanted to make it easier  
8 for consumers to report these calls, and I just want  
9 to - I know we're two or three days into this, but  
10 I just wanted to ask you what thoughts you might  
11 have on how we can, you know, do that for consumers,  
12 and what exactly we're talking about?

13                  MR. STONE: Yeah, that's a great  
14 question as well. I'd like to think that over  
15 time, the Commission has made it easier for  
16 consumers to file complaints generally as part of  
17 our efforts to improve the complaint intake  
18 process, and I think obviously the Chairman is  
19 exactly right.

20                  Robocalls is a particular area that  
21 seems to lend itself to the ease of reporting  
22 because my goodness, you usually get upset when

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1 you're right there on the phone. It would be great  
2 to make that as simple as possible. So I don't have  
3 a solution for you right now in my pocket, but I  
4 just want to assure you that we'll be working  
5 closely with the Chairman's office and other  
6 commissioners to make something happen on that, but  
7 I can't tell you right now at this moment what that  
8 -

9 MEMBER BERLYN: And can I ask one  
10 follow up to that?

11 MR. STONE: You sure can.

12 MEMBER BERLYN: Because now consumers  
13 complain to the FTC as well with robocalls, so, you  
14 know, is there thought on how we can clarify to  
15 consumers about the complaint process with  
16 robocalling?

17 MR. STONE: In terms of whether they  
18 should go to only one agency or the other or?

19 MEMBER BERLYN: Or, you know, because  
20 I think that consumers complain. I know when I got  
21 a robocall -

22 MR. STONE: Yeah.

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1                   MEMBER BERLYN: - there's, you know,  
2 the FTC is also a place where consumers complain.

3                   MR. STONE: Yeah, absolutely, so we  
4 always try to coordinate closely with the FTC to  
5 make sure we're on the same page with respect to  
6 our outreach and complaint filing, so we'll  
7 continue to do that so that - it's a good question.  
8 Consumers ought to know who to file with and which  
9 agency will do what with it, and that's a matter  
10 we'll continue to work on.

11                   CHAIR BARTHOLME: Thank you, Mark.

12                   MR. STONE: Sure.

13                   CHAIR BARTHOLME: So next up, we have  
14 another familiar face here to the CAC. Karen Peltz  
15 Strauss is the deputy bureau chief of the Consumer  
16 and Governmental Affairs Bureau.

17                   MS. PELTZ STRAUSS: Thank you, and it's  
18 great to see you, welcome, and I also have to get  
19 used to Debbie being over there. Thank you for  
20 having me. Welcome, everyone. It's nice to see  
21 familiar faces, and again, as Mark said, welcome  
22 new members of this committee. It's a fantastic

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1 committee, and I'm looking forward to seeing great  
2 work from you.

3 I'm here to present an overview of the  
4 disability actions that have taken place since the  
5 last CAC meeting in October. We've actually been  
6 pretty busy. Our most significant accomplishment  
7 was adoption by the Commission in the December  
8 agenda meeting of a report and order and further  
9 notice of proposed rulemaking on real-time texts.

10 I've reported on this before, but for  
11 those of you who are new, this is a way for wireless  
12 telecommunications providers and manufacturers to  
13 have an option of instead of supporting TTYs which  
14 are antiquated and were made for an analog  
15 environment, to support real-time text.

16 And the biggest difference between TTYs  
17 and real-time text, or actually I should say  
18 between TTYs and SMS in real-time text, is that  
19 real-time text is reliable and dependable in an IP  
20 environment.

21 Unlike SMS where you type and then press  
22 send, with real-time text, as you are typing, the

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1 characters or the words appear automatically on the  
2 screen or the device of the person receiving your  
3 call, so as you are either speaking or typing, the  
4 words are generated and received. This is  
5 particularly important in an emergency where  
6 seconds can be essential in terms of life-saving  
7 capabilities.

8 So what this item does - the other  
9 thing, actually there are a few other differences.  
10 Let me just mention those. With real-time text,  
11 you can use mainstream technology, so real-time  
12 text will be built into mobile devices.

13 You won't need a special TTY which is  
14 burdensome, heavy, and slow. Real-time text also  
15 allows use of far more characters, foreign  
16 language, other language characters, the at  
17 symbol. TTYs were very limited in their  
18 characters.

19 There is a plethora of reasons that are  
20 listed in the item, as well as the items that  
21 preceded it, that explain why real-time text is so  
22 much more preferable. And for that reason, the

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1 wireless industry has really stepped up and has  
2 actively been engaged in starting to already deploy  
3 and implement this technology.

4 And our schedule of implementation for  
5 those entities opting to support real-time text  
6 instead of TTYs is fairly soon. It starts at the  
7 end of this year actually, and goes to 2021. And  
8 I see somebody just coming in now who was  
9 instrumental in helping this move along from AT&T.

10 Over the last year or two, we've been  
11 granting waivers to entities, to wireless  
12 carriers, that are preferring to move to real-time  
13 text instead of supporting TTYs, and let me just  
14 add that our rules require support for TTY, so there  
15 is this now an option of moving to real-time text  
16 in lieu of support for TTY.

17 We had already granted waivers to AT&T,  
18 Verizon, and the Competitive Carriers Association  
19 at the time that this real-time text order was  
20 adopted. We have since, on January 13, adopted the  
21 last of the waivers requested of us. This one was  
22 to the Iowa rural carriers, various Iowa rural

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1 carriers.

2 So one of the - just very, very briefly.  
3 I don't want to go into too much detail. You can  
4 see the order for yourself, but one of the most  
5 important things about this order is that it  
6 establishes as a safe harbor, a particular  
7 interoperability standard, and the goal here is to  
8 make sure that people using real-time text can  
9 cross networks, and providers, and equipment.

10 So just the way you make a voice phone  
11 call and you don't know whether you're - if you're  
12 using one carrier like Verizon and you're calling  
13 Sprint, or T-Mobile, or AT&T, you don't know what  
14 other carrier that person is using because the  
15 system is completely interoperable. That's what  
16 we're going for here.

17 There are various other nuances to the  
18 order. Again, I'd be happy to explain these to  
19 anybody, but the order is pretty clear on most of  
20 them.

21 Another item that we took up over the  
22 last couple of months was ensuring that video relay

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1 service providers' services are interoperable with  
2 each other, and on January 17, we released a  
3 Bureau-level rulemaking actually, an order that  
4 the Bureau released with a notice of proposed  
5 rulemaking to make sure, again, interoperability  
6 is the goal, and this would apply to people using  
7 video relay service, which is a service that allows  
8 people who use sign language to call a call center  
9 or relay center. Typically, it's always  
10 done on broadband. You log into a website and you  
11 get a sign language interpreter, and that  
12 interpreter interprets for you with voice callers  
13 or other individuals, and then signs back to you  
14 what the voice party says.

15 Up until now, there have been lots of  
16 complaints about lack of interoperability and  
17 portability the way we have, again,  
18 interoperability and portability for voice across  
19 providers, and this document again incorporates a  
20 standard, and compliance with that standard will  
21 ensure interoperability for users of this service.

22 We also issued a waiver, a small waiver

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1 to a company called VTCSecure allowing VTCSecure  
2 to have access to our numbering database to obtain  
3 ten-digit numbers for call centers for video relay  
4 calls made to call centers.

5 This is part of our direct video calling  
6 project, a project that is designed to encourage  
7 the use of sign language, people who know sign  
8 language in call centers, so we actually have this  
9 here.

10 Individuals who use sign language do  
11 not have to go through a relay center to call here  
12 to get information or to file a complaint. They  
13 can call a direct video number and we have people  
14 that know sign language. We have deaf individuals  
15 who know sign language that can communicate with  
16 those individuals directly. So while we  
17 still have our video relay service program, we are  
18 encouraging businesses and government agencies to  
19 hire people who know sign language to take calls  
20 directly, something that couldn't be done in the  
21 past, but can be done easily now with broadband.

22 What this waiver does is it allows this

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1 particular company to have access to ten-digit  
2 numbers so that you would be able to use a ten-digit  
3 number to make these calls to call centers.

4 And generally, our direct video calling  
5 project, again, is designed to provide greater  
6 equivalency. It's not even really functional  
7 equivalency. It's really equal access for people  
8 who sign to call centers.

9 Something else that we've done is we  
10 released a public notice announcing the second term  
11 of our disability advisory committee, your  
12 counterpart in the disability world. We will now  
13 be having 37 members. It's actually the numbers  
14 are almost identical to our last group, and an  
15 additional 24 subcommittee members.

16 We have subcommittees on emergency  
17 access, relay services and equipment distribution,  
18 tech transition, and video programming. We also  
19 have three members, ex officio members, from the  
20 Access Board, the Department of Homeland Security,  
21 and the Small Business Administration.

22 I encourage you to keep abreast of the

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1 activities of that committee, many of their  
2 recommendations. They've made, I think,  
3 approximately 20 recommendations during their  
4 first term, many of which were adhered to or  
5 followed by the Commission, including two major  
6 recommendations on real-time text, so many of you  
7 may be affected as well by what they do, and our  
8 first meeting is in March, mid-March.

9 We also extended a waiver to the  
10 Entertainment Software Association on advanced  
11 communication services to not have to comply with  
12 our advanced communication services rule. That is  
13 an extension of a waiver that had been granted a  
14 couple of years ago in 2015, and this group now has  
15 until January 1, 2017 to come into compliance, and  
16 are required to submit a progress report to us on  
17 what they're doing to make individuals who use  
18 gaming software - I just want to make sure that  
19 that's the - yeah, video game software compliant  
20 with our rules during this period.

21 Next, we issued a public notice on  
22 January 10 seeking comment on a petition that was

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1 filed by the Alliance for Community Media for a  
2 waiver of certain of our closed captioning  
3 registration and certification rules. Comments  
4 are due on February 9 and February 24. And again,  
5 to be brief, anybody that wants more information,  
6 just let me know. I just wanted you to know about  
7 that.

8 We issued a public notice granting  
9 video relay certification to a company called  
10 Convo. Going back to direct video calling, we  
11 hosted a major showcase on that on November 4. The  
12 room was actually packed with companies and  
13 agencies interested in this technology.

14 And finally, the Media Bureau, actually  
15 we issued a public notice announcing the compliance  
16 dates for accessibility requirements pertaining to  
17 televisions, set-top boxes, and other video  
18 programming apparatus. These require that by  
19 December 20, they be capable of having user  
20 interfaces for people who are blind or visually  
21 impaired that are accessible.

22 Some of you may be familiar with this.

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1 If you have Comcast as your video cable provider,  
2 you know that two years ago, Comcast came into very  
3 early compliance and has a talking remote, but  
4 basically this allows people to have audio access  
5 to on-screen information so they can change  
6 channels and select programming, set their DVR,  
7 turn the television on and off, use volume control,  
8 etcetera.

9 These are long awaited rules by the  
10 blind community and the visually impaired  
11 community, and we're really excited about the fact  
12 that they're finally going into effect. So that's  
13 my review, and again, thank you, and welcome. I'm  
14 delighted to have you here and to have an  
15 opportunity to speak to you.

16 CHAIR BARTHOLME: Do you have a couple  
17 of minutes for questions?

18 MS. PELTZ STRAUSS: Yes, and any  
19 questions.

20 CHAIR BARTHOLME: Does anybody have  
21 any questions for Karen? Okay.

22 MS. PELTZ STRAUSS: Okay, thank you.

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1 CHAIR BARTHOLME: So next up, we have  
2 D'wana Terry joining us. She's the acting deputy  
3 bureau chief with CGB. Welcome.

4 MS. TERRY: Thank you. Good morning.  
5 I'm delighted to have the opportunity to speak with  
6 you this morning, and what I thought would be  
7 helpful is to just start with an overview of how  
8 we got to where we are now with respect to our  
9 informal complaint process.

10 So with that being said, several years  
11 ago, we initiated a complaint reform effort with  
12 three goals in mind, one, to simplify the consumer  
13 experience, to streamline the processing of  
14 informal complaints, and to make data more publicly  
15 available about the complaints.

16 To this end, through outreach with  
17 stakeholders, we engaged a path to see how we could  
18 accomplish those goals, and in addition, to see  
19 what necessary changes we would need to make to our  
20 process. As a result, in 2014, we launched what  
21 we now call the Consumer Help Center.

22 The Consumer Help Center has actually

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1 two phases. One part is the consumer complaint  
2 center where you will see that we streamlined our  
3 processing of complaints, and we also enhanced and  
4 simplified the user interface. We built our  
5 system based on an off-the-shelf platform where we  
6 modified that so that consumers could - it would  
7 be easier for consumers to file their complaints.

8 As opposed to having 18 individual  
9 forms, they now can navigate the platform with six  
10 categories where they then are led through the  
11 complaint process with questions. And in addition  
12 to that, they can now check the status of their  
13 complaints online as opposed to only having the  
14 option of calling into the call center to get that  
15 information.

16 We also are able to interface with  
17 providers in real-time. Actually, the providers  
18 who are served complaints can actually get those  
19 complaints served within two business days, and we  
20 can interface with consumers who file their  
21 complaints online in real-time as well.

22 In addition to those advantages with

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1 respect to streamlining the process for the  
2 consumers and for providers, we also have made data  
3 publicly available, both in terms of presentation  
4 through our consumer data center where you can get  
5 the raw data sets of our complaint data which is  
6 updated daily, and you can also see charts  
7 indicating breakouts of the various categories for  
8 consumer complaints, and through an API, our  
9 complaint data can be made available to third  
10 parties who are interested in extracting and  
11 manipulating data for call blocking technologies.

12 We have - while we have continued to  
13 work to further streamline and enhance the process  
14 for consumers, we look forward to working with this  
15 group as we have worked with the Consumer Advisory  
16 Committee in the past to figure out what changes  
17 we can make that would make it easier for consumers,  
18 that would also provide more information that is  
19 desired by consumers and providers.

20 And so the CAC previously has been very  
21 helpful with respect to recommendations, and we  
22 look forward to that dialogue continuing as we move

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1 forward. And so that's where we are at this time,  
2 and I'm available for questions should you have  
3 any.

4 CHAIR BARTHOLME: Thank you. Does  
5 anybody have any questions? Does anybody on the  
6 phone have any questions? Okay, thank you. And  
7 rounding out our CGB update, we have Anita Dey  
8 joining us. She is the assistant bureau chief with  
9 CGB, so thank you and welcome.

10 MS. DEY: Good morning, everyone.  
11 It's a pleasure to be here today with you. This  
12 is my first time addressing the group, so it's a  
13 real pleasure for me. I work on outreach for CGB,  
14 so that's what I'll be telling you about.

15 We've been quite busy this year with our  
16 outreach efforts, and we plan to continue to stay  
17 busy, but I'm not going to try to tell you about  
18 everything we do. I'll just highlight a couple of  
19 things, robocalls, because of course that's of  
20 great interest to everyone and to Chairman Pai, and  
21 also tech transitions.

22 So first, to discuss robocalls, we have

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1 issued three robocall alerts over the past few  
2 months. To do this, we drew from a variety of  
3 sources internal, including consumer complaints,  
4 and external, to determine what robocall scams were  
5 affecting consumers the most. So we issued  
6 consumer advisories and used social media to get  
7 the word out, and let me just go through the three  
8 topics that we covered. We started with  
9 gift cards. This was about callers who were  
10 pretending to be government or law enforcement  
11 officials, and they would call people demanding  
12 immediate payment, usually in the form of a gift  
13 card. So we also hosted a Twitter town hall to  
14 discuss the topic. This was in November.

15 Our next alert was about utility scams  
16 where callers would pretend to be utility employee  
17 companies, again demanding immediate payment  
18 either in the form of prepaid debit cards, credit  
19 cards, or again, gift cards.

20 Our third alert was about financial  
21 scams where callers were falsely offered lower  
22 credit card payments or interest rates, or credit

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1 card debt relief, or improved credit scores.

2 So generally speaking, our three alerts  
3 would explain the scam, and then tell consumers  
4 where to report it, and that would usually be us,  
5 the FTC, the gift card company if a gift card was  
6 involved, and also the police if it was - actually  
7 I think we used the police for all of these.

8 We also offered tips to help consumers  
9 protect themselves. Some of the tips were  
10 specific to the scam, but the general tips were  
11 consistent throughout the alerts. Those were do  
12 not answer calls from unknown numbers. Let them  
13 go to voicemail.

14 If you are unclear if a call is  
15 legitimate, hang up, look up the number either on  
16 the website or on your bill, and call them back on  
17 your own to verify, and by initiating the  
18 communication, you can tell if the request was  
19 legitimate.

20 If you answer a phone call and the  
21 caller, which could be a recording, asks you to hit  
22 a button to opt out of getting these phone calls,

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1 just hang up because scammers will often use these  
2 tricks to identify and then target live  
3 respondents.

4 And we also encouraged consumers to ask  
5 their phone service provider if it offers a  
6 robocall blocking service. We also directed  
7 people to our website. We have a section, web  
8 resources for blocking robocalls, for information  
9 and resources. And of course, we're constantly  
10 looking for other ways to reach consumers, and so  
11 one thing we've been working on is having webinars  
12 on important topics like this one, so we hope to  
13 plan something in the very near term.

14 And at this webinar, we would plan on  
15 explaining the FCC's role in addressing whatever  
16 hot topic we're looking at, and the steps that  
17 consumers can take to protect themselves. And of  
18 course, we would welcome the CAC's ideas on topics  
19 that would be of most interest to the consumers.

20 So moving onto tech transitions, I  
21 wanted to be sure to address this because of course,  
22 the last CAC had some recommendations for us which

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1 we really appreciated. So what we've been doing  
2 for consumers, we had an informational session on  
3 September 26 about tech transitions.

4 It was live here in the commission meeting  
5 room and we streamed it. So in plain language, we  
6 explained the issue and what consumers needed to  
7 know about the issue, and the video is still  
8 available on our website if you're interested to  
9 see what we did.

10 We improved our consumer guide, which  
11 of course is now also on the FCC website. It  
12 includes now a section on battery backup. We've  
13 also been talking to state utility commissions with  
14 the hopes of gathering some more on the ground  
15 experiences of what consumers are saying. We've  
16 been sharing our consumer info, the guide and this  
17 video that I mentioned, with the PUCs as well.

18 So that was for consumers, but for state  
19 and local governments and public safety entities,  
20 we've also been doing some work. Our Office of  
21 Intergovernmental Affairs has a guide on its  
22 website calls, "Modernizing Communication

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1 Networks: What Government Officials Need to Know."

2 Our Public Safety Bureau has made  
3 public a guide called, "Technology Transitions  
4 Impact Guide for State, Local, Tribal, and  
5 Territorial Authorities and Public Safety  
6 Entities." It's on their front page of their web  
7 page.

8 We've talked to NARUC about this issue.  
9 Public Safety has talked to the Association of  
10 Public Safety Communications Officials. We also  
11 raised this issue at the National Governors  
12 Association webinar. At a conference called IIT  
13 Real-Time Communications, the Public Safety Bureau  
14 discussed backup power and tech transitions in a  
15 keynote speech.

16 There was also a joint conference of the  
17 National Council of Statewide Operability  
18 Coordinators and SAFECOM, which is a Department of  
19 Homeland Security committee, and the Public Safety  
20 Bureau staff talked about tech transitions. They  
21 talked about their guide, and they encouraged  
22 attendees to look into the issue further.

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1                   So those are some of the highlights of  
2 what we've been working on, and we look forward to  
3 telling you about our upcoming work at your next  
4 meeting. Thank you.

5                   CHAIR BARTHOLME: Questions, Ken?

6                   MEMBER MCELLOWNEY: Yeah, I was really  
7 glad to see the outreach you're doing. A question  
8 I had is what you're doing in terms of outreach to  
9 consumers for whom English is not their primary  
10 language, in terms of media interviews and things  
11 like that, in terms of reaching those consumers?

12                   Certainly, I know that Consumer Action  
13 has been very effective in terms of reaching  
14 Spanish-speaking,                   Cantonese,                   and  
15 Mandarin-speaking consumers through the  
16 interviews that we do with our - with the in  
17 language media. I'm just wondering what the FCC  
18 is doing in that area?

19                   MEMBER GARTLAND: So we are working on  
20 expanding our collection of consumer guides in  
21 different languages. We have a great number of  
22 guides in Spanish. I can't give you the number off

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1 the top of my head, unfortunately. But we're  
2 working on expanding to other languages as well.

3 And we do have partners within the  
4 consumer community that represent different ethnic  
5 groups. So we've been working with them as well.  
6 But I'm fascinated to hear that you've had good luck  
7 doing outreach to different communities. So we'd  
8 love to talk you about that in the future. Thanks.

9 CHAIR BARTHOLME: Dallas?

10 MEMBER HARRIS: Hi. Can you hear me?

11 MEMBER GARTLAND: Yes.

12 MEMBER HARRIS: Okay, great. Has the  
13 Commission thought about any outreach with regards  
14 to the new privacy rights that were passed late last  
15 year? Does the Commission have any plans to inform  
16 consumers about what those new rights are and kind  
17 of how that works?

18 MEMBER GARTLAND: Thanks. As you can  
19 well imagine, we're still in the process of  
20 formulating our plans going forward. So we will  
21 definitely take that into consideration. Thanks.

22 CHAIR BARTHOLME: Mark?

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1                   MEMBER DEFALCO: In the last couple of  
2 weeks AT&T, I believe, cancelled their two ongoing  
3 trials in the tech transition, one in Alabama and  
4 the other one in Florida. And it was cancelled  
5 before it got to the final phase of trial which  
6 would have been the forced migration from land line  
7 phones to wireless in the more rural areas.

8                   Do you have any insight? We have asked  
9 AT&T to talk to our transition subcommittee at a  
10 future point in time, but did you have any insight  
11 as to, you know, why this was done and, you know,  
12 thoughts as to -- I mean, part of the trial was to  
13 determine the procedures and processes for  
14 migrating customers from land line to a substitute.  
15 That was one of the reasons for the trail to start  
16 with, and it was stopped before we got to that  
17 point.

18                   MEMBER GARTLAND: Yes. Thanks for  
19 that question. Unfortunately, I'm not the  
20 substantive expert on tech transitions. So I  
21 can't address the issue. But let me go back to the  
22 Wireline Bureau and ask them what they know about

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1 the situation. And I'll get back to you.

2 CHAIR BARTHOLME: Mitsy?

3 MEMBER HERRERA: Hi. Again, I just  
4 have the same question. Can you provide the  
5 summary and the statistics that you provided in  
6 your statement there about the robocalls? Can you  
7 share with the CAC what statistics you have about  
8 the robocalls that are being used for fraudulent  
9 -- the complaints that you have that are related  
10 to fraudulent or questionable activity?

11 MEMBER GARTLAND: I'll definitely work  
12 with D'wana and Mark, and we'll provide you what  
13 we can.

14 MEMBER HERRERA: Thank you.

15 CHAIR BARTHOLME: All right. Thank  
16 you very much for joining us.

17 MEMBER GARTLAND: Thank you.

18 CHAIR BARTHOLME: So next up we have  
19 Kurian Jacob. And I would really like to see how  
20 this fits on a business card. So I'm going to go  
21 through the entire title here, Electronics  
22 Engineer with the Cybersecurity and Communications

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1 Reliability Division of Public Safety and Homeland  
2 Security Bureau at the Federal Communications  
3 Commission. So Kurian's going to talk to us today  
4 about consumer device security. Welcome.

5 MR. JACOB: Thank you. I have some  
6 slides, if you could pull the slides up. Thank  
7 you.

8 So, good morning, everybody. Can  
9 everybody hear me? All right. So Scottie told me  
10 to talk to everybody about consumer device  
11 security.

12 So this is not very technical. This is  
13 something that I would tell my parents, my  
14 relatives. And I'm, you know, as a tech guy in the  
15 family, I'm, you know, the expert and the 24-hour  
16 tech support for my family and friends. So I will  
17 go --

18 So I'm going to discuss why consumers  
19 should secure the device, you know, more than ever  
20 now. And what can consumers do to secure the  
21 device? So that's the topic I'm going to cover  
22 today.

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1                   And so on the topic of why, we all know,  
2                   you know, the number of devices on the Internet has  
3                   increased, right? That means our homes also have  
4                   more devices. This is how it used to look like.  
5                   Every few years, because this is a -- it used to  
6                   look like a computer connected to your printer.  
7                   And everything is connected to the Internet through  
8                   a modem.

9                   And this is how it is now for most homes,  
10                  you know, your computer is upright, your printer  
11                  connects to the Internet directly through your  
12                  router. You have your smartphone, you have some  
13                  accessories connected to your smartphone, and  
14                  through your smartphone, it is connected to the  
15                  Internet. Sometimes your smartphone is connected  
16                  through your router to the Internet. So it's  
17                  getting complex.

18                 You have laptops, you have game  
19                 consoles at your house if you have teenagers or,  
20                 you know, guys like me at home, thermostats, you  
21                 know. It's increasing. And it's hard for  
22                 ordinary users to keep track of it. So that's why

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1 I'm going to see, you know, what can we do.

2 So more devices are being connected all  
3 the time. That means more entrances and exits from  
4 your home to the Internet. And it's hard to keep  
5 track of all of them.

6 And we're reaching a point where it's  
7 easier to ask what's not connected to the Internet,  
8 right. I think, you know, you have gardens,  
9 watering system, everything is connected to the  
10 Internet. And this is now, I mean, all these  
11 products are available now.

12 And if you have been following the  
13 consumer electronics show, which happened last  
14 night, I mean, earlier this month, then you would  
15 know it's more complex than ever.

16 So most devices, you know, we take it  
17 for granted, you know, many of our appliances work  
18 for long time, right, 10 years, 15 years. And many  
19 times the functional lifetime of the device will  
20 be much larger than the software support lifetime.

21 That means, I mean, software engineers  
22 are expensive, you know. Once you buy a device,

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1 you know, it's hard to keep track, you know, whether  
2 you have software, you know, whether the company  
3 is providing software support for your device.

4 So if the company -- when the company  
5 stops supporting your device, you know, there will  
6 be unpatched properties. And it's hard for  
7 ordinary consumers to know whether your device are  
8 having any unpatched properties. So it's up to the  
9 manufacturer. They will usually support standard  
10 software updates to a device.

11 So if you have unpatched device on your  
12 network, that makes it easier for the cyber  
13 criminals to exploit your devices. And, you know,  
14 people will ask me, like, when I tell my relatives  
15 and friends, hey, you need to, you know, put a  
16 password on it, this network. They're, like, oh,  
17 who cares about my device. I don't know. Who is  
18 interested in my toaster?

19 So, well, unfortunately, you know,  
20 cyber criminals have become more efficient. They  
21 are not targeting just we are -- mostly because we  
22 are not very important, you know, you are just --

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1 they're targeting everyone. It's easy to target  
2 everyone and select, you know, who is more, you  
3 know, who has more money. Or even if you don't have  
4 anything valuable, they can use your computing  
5 resources.

6 And even before you need to have the  
7 motive, you need to have the resources, you need  
8 to have skill sets to hack somebody, now you only  
9 need the motive and the, you know, the money, and  
10 you can pay somebody for the skill sets. So they  
11 are efficient, they are running things more  
12 efficiently than ever. So it's easy for them.

13 You know, if you have a wonderful device  
14 on the network, you know, one day or another  
15 somebody will hack into it. And usually, if it is  
16 a wonderful device, the stats are it takes only six  
17 minutes for somebody to hack on your device, you  
18 know, depending on the device. But if it is  
19 wonderful, you know, they are scanning your device,  
20 trying to scan your device and exploit your device  
21 every day.

22 So what can consumers do? The easier

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1 things, and I'm listing the very easy things that  
2 everybody should do. You know, some of the time,  
3 if it's not familiar with technical, and you can  
4 always look for it. But the key thing is to know  
5 that, you know, you are a target now. I mean, once  
6 you understand that, it's easier. You know, you  
7 can look for protection.

8 I mean, the resources are now available  
9 online. You know, there are sort of good website,  
10 you know, FCC consumer websites have, you know,  
11 excellent information about particular devices.

12 So the first step is to know which  
13 devices in your home are connected to the Internet.  
14 So this is just that, you know, I just wrote down  
15 what I can think of. And these are most of -- I  
16 have most of the things at home. From the  
17 left, you know, the usual device is the routers,  
18 desktop, laptop, printer, scanner. You know,  
19 these used to be connected to the Internet so you  
20 are familiar with it. But when you go to the right,  
21 you know, it's become the door locks, you know, your  
22 oven, thermostats, your watch, your dishwasher and

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1 dryer. So it's complex.

2 And before you connect, you know, make  
3 sure you know this is connected to the Internet.  
4 Keep track of your devices. You know, and when you  
5 connect -- when you buy a device, you know, try to  
6 understand what's a popular support site.

7 So many times, you know, you look for the  
8 features, you know, you look for the deals. And  
9 you're buying a device which might not be supported  
10 anymore. That will be okay if you're not  
11 connecting it to the Internet. But if you plan to  
12 connect it to the Internet for a long time, it's  
13 better to look for your software, you know,  
14 consumers are shown software and support life cycle  
15 when you're buying devices. You know, that's a  
16 safe bet. I mean, if everything is the same, I  
17 would buy a device that you have more software  
18 support life than a device that doesn't have that  
19 much support.

20 The next thing, when you get a device,  
21 you know, use strong and unique credentials on all  
22 interconnected device. Simple as everybody knows

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1 it, nobody does it, you know, still 1234 is the  
2 popular password. Or password is the popular  
3 password. So that, you know, they compete for one  
4 and two, but never really goes down.

5 So everybody, you know, use unique  
6 password. And change the default credentials.  
7 That's been an issue for a long time. And  
8 criminals have -- they have programmed in a -- if  
9 your default credential is same as every other  
10 device out there, you know, they can program  
11 computers to scan for devices, the default  
12 credential, and login, and lock you out.

13 So change your default credentials.  
14 And, you know, if it is unique -- if it is not unique  
15 and strong, you know, change it. That's one thing  
16 that everybody should be doing.

17 And more towards, you know, since we are  
18 going towards the cloud, I mean, many of the  
19 converting happens in the cloud, you know, if you  
20 are offered to do two-factor authentication, go for  
21 it and enable two-factor authentication.

22 And it's a consumer choice, you know,

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1 nobody will force you to do, you know, two-factor  
2 authentication. But if you are important, if you  
3 think your data is important, you know, you should  
4 enable two-factor authentication where it is  
5 available.

6 The next thing is patch all devices.  
7 That's, you know, if you look at any consumer  
8 advice, really the top ten, you know, the first will  
9 be patch all devices. You know, if -- I know this,  
10 it is annoying. I have to tell my wife, she's a  
11 software engineer, I have to tell my wife to patch  
12 everywhere.

13 But of course, you know, it is in the  
14 way, right, many times. But it's a minor  
15 inconvenience, you know, to restart your device.  
16 But in the long term, it will be -- it's better than  
17 getting locked out with a ransom or something. And  
18 you have to pay up the money later. So patch the  
19 device.

20 You know, most devices, the options are  
21 available, you know, in the settings. And, you  
22 know, as newer devices are coming online, it

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1 changes device by device. But, you know, you can  
2 find it if you know what to look for. You know,  
3 there is the sources available.

4 The next thing is staying off remote  
5 access. So this is hard to find, we know, in the  
6 settings. But, you know, if you don't want -- if  
7 you're not accessing your device at home, from your  
8 vacation home or, you know, somewhere from your  
9 work, and you don't really need this remote access  
10 feature. And not everybody needs it, you know.

11 So once you set up the device, you know,  
12 try to find a remote access option in your device  
13 and turn it off. And make sure, you know, if you  
14 are using it, you know, if you think you want to  
15 use that feature, and that's the reason you bought  
16 that device, well, you know, use unique and strong  
17 passwords for remote access. That's very  
18 important.

19 That's when, you know, if your password  
20 is weak or if your password is the default password,  
21 you know, it won't take much time for somebody to  
22 hack into your device.

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1           And not last but not least, don't  
2 connect and forget. You know, periodically, go  
3 back and check. You know, just search your device  
4 name on the Internet. You know, if there is a big  
5 vulnerability, you know, it will be -- it will  
6 pop-up. You know, you won't miss it. But you have  
7 to do that checking for you.

8           And, I mean, some manufacturers do  
9 provide, you know, prompting for updates. And not  
10 all of them does. So depending on your device, you  
11 know, be proactive and do, you know, do a periodical  
12 review on your device.

13           So to wind up, there are plenty of  
14 resources available online, you know. But make  
15 sure you know what to look for, the key things are  
16 you are now a target, unfortunately. You know,  
17 it's easier to hack everyone then decide, you know,  
18 who to go behind later.

19           So for specific instructions, you can  
20 always visit the device manufacturer's website.  
21 They will have the specific instruction on how to  
22 do the things that I mentioned before. But, you

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1 know, it is changing. More and more devices are  
2 coming online. So by that, you know, I can take  
3 some questions if anybody have it.

4 CHAIR BARTHOLME: Mitsy?

5 MEMBER HERRERA: Thank you for your  
6 presentation. And as someone who works in an IT  
7 department, we always appreciate someone getting  
8 out the message. But you said it in the beginning,  
9 that everybody knows this, and nobody does it. So  
10 what are your thoughts?

11 I mean, the things that you presented  
12 up there are things that people who follow this have  
13 seen. So do you have thoughts on how do you get  
14 the larger consumer public to comply with those,  
15 or to realize the importance of these few steps?

16 MR. JACOB: So I personally, you know,  
17 as a family tech support person, I try to scare  
18 them. But, you know, on the mass it doesn't work.  
19 You know, you don't want to drive consumers away.

20 But I think awareness is the key. You  
21 know, that's the main thing. Like, you know, I  
22 remember I asked my brother-in-law. He had his

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1 phone and doesn't have a password on it. And I'm,  
2 like, you should really have a password on that.

3 And he was, like, oh, it's hard, you  
4 know. So I have my kid in one hand and, you know,  
5 when I pick up my phone, you know, it's hard to  
6 handle a password. I'm, like, yeah, but that's not  
7 the, you know, convenience. You know, what if you  
8 lose it?

9 I mean, people won't realize the  
10 inconvenience they have to face when they lose it.  
11 So once they understand that, I think they will do  
12 it. But if it makes it easier for them, you know,  
13 now with some of this fingerprint scanners, it's  
14 easier. It's not the perfected art but, you know,  
15 it will help.

16 CHAIR BARTHOLME: Do you want to move  
17 to the mic and introduce yourself, please? Thank  
18 you.

19 MR. JOHNSON: Kais Johnson. Do you  
20 have -- the way that so many things are connected,  
21 do you have an opinion as to whether a VPN would  
22 be useful on mobile devices or at home to add an

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1 additional layer of security?

2 MR. JACOB: I mean, it's -- more  
3 security is good. But, as I say, it's hard for,  
4 you know, ordinary consumer, like, the people I  
5 talk to doesn't know what the VPN is, right? So  
6 even if I go enable a VPN at somebody's home, and  
7 if something goes wrong then, you know, I can't --  
8 they can't fix it. They have no idea what a VPN  
9 is. All they know is my computer is not working,  
10 right? So it's a good idea, but you need to have  
11 the resources to maintain it.

12 I think the easier way is to do the, you  
13 know, integrate them to do the basic stuff. Once  
14 you have that, you know, once everybody is good  
15 with, you know, updating the passwords, and having  
16 the passwords, you know, I think the next step will  
17 be, you know, securing them better.

18 CHAIR BARTHOLME: Irene?

19 MEMBER LEECH: With so many passwords  
20 that we need, and they need to be changed so often  
21 that it's overwhelming to most of us. There are  
22 some programs out there that will -- you can put

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1 all your passwords in. Is that a good solution?

2 MR. JACOB: So password managers, I use  
3 it. If I tell my parents, they won't understand.  
4 That's why I didn't have that in the list. But I  
5 think for -- so there are some things that is hard  
6 for people to understand.

7 So even if it is the best secure way to  
8 do it, and they won't -- it won't be easier for them  
9 to do it. And so if you have that many passwords,  
10 then you should know, you know, how these things  
11 work. And, you know, it's advisable for you to  
12 have a password manager. Easy schedule to have,  
13 you know. Nobody can remember all the passwords.

14 But, like, somebody like my parents,  
15 they don't have that many accounts. You know, they  
16 have two, three accounts. So they can write it  
17 down, you know. Nobody, I mean, you know, they can  
18 write it down in their original language. So  
19 that's what I tell them. You know, make an English  
20 password, write it down in your local language.  
21 And at least you have some kind of encryption.

22 CHAIR BARTHOLME: Steve?

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1                   MEMBER MORRIS: Have you talked at all  
2 with your colleagues in the consumer bureau who  
3 were just here about maybe doing some consumer  
4 outreach on this?

5                   MR. JACOB: Not for this but, you know,  
6 the Public Safety Bureau, we collaborate with the  
7 Consumer Bureau many times. There are a few  
8 consumer gates on our website, the smartphone  
9 checker, FCC smartphone security checker is one of  
10 them. I think we did that, like, three years ago,  
11 maybe. Well, yes, this is one thing that we  
12 continue to work with the Consumer Bureau.

13                  CHAIR BARTHOLME: Go ahead, Kenneth?

14                  MEMBER MALLORY: So you presented some  
15 really helpful information. My concern is that  
16 it's kind of complex, well, it's very complex. And  
17 to the average, everyday consumer it may be  
18 difficult to understand.

19                  And you also mentioned that there were  
20 some resources online that people can go to seek  
21 additional clarification. Is there a single,  
22 maybe comprehensive resource that you recommend

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1 that presents some of this information in a way  
2 that's easy to understand?

3 MR. JACOB: So, I mean, the top 10 or,  
4 you know, top 15 basic security, basic cyber site  
5 is the same. You know, depending upon who writes  
6 it, you know, on which subset it is, it's the same.  
7 You know, FCC website has some -- FCC's website has  
8 it, Department of Homeland Security's website has,  
9 and a lot of private and public websites have it.

10 I think the reason the -- I don't think  
11 that it's a -- I would recommend any single of them.  
12 But the key is what to -- you have to know, you know,  
13 your devices, you know, you have to look for it.  
14 So if you know what to look for, you can find it.  
15 It's not hard to find.

16 MEMBER MALLORY: Okay. I guess I  
17 should also ask, aside from your presentation, is  
18 there anything on the FCC's website that you think  
19 would be helpful for consumers?

20 MR. JACOB: Yes, of course. I mean, if  
21 you go, like I said, most information comes, like,  
22 one that I worked on is the FCC smartphone

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1 security checker. So that is, I think you can  
2 search it. It is easy to find. The URL is  
3 FCC.gov/smartphonechecker, I guess. But it is  
4 easy to find.

5 So that was to, you know, specific for  
6 the smartphones have your pin, you know, have it  
7 remote wipe ready, you know, if it is lost, those  
8 kind of stuff, and write down your IMEI number in  
9 case, you know, you had to share it with somebody  
10 when somebody -- if your device is stolen.

11 So those are -- and it has specific  
12 information on how to do it on different versions  
13 of the device, like, you know, Android, IOS,  
14 Windows, Blackberry. So that's a good resource  
15 for smartphones. But like I say, it's hard to be  
16 updated on that list. And things keep changing,  
17 you know. You can't have a list and you have to  
18 update it, like, literally month by month.  
19 Otherwise it will be outdated.

20 CHAIR BARTHOLME: So maybe Scott and I  
21 reach out to you following the meeting and get some  
22 links together to send around to the full CIC of

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1 stuff that's on the FCC's site. Claire?

2 MEMBER GARTLAND: Thank you. I have  
3 sort of a related question. So when a consumer is,  
4 you know, out shopping for one of these new, you  
5 know, smart coffee maker, smart fridge, or  
6 something like that, is there anything on the  
7 packaging that they should be looking for to sort  
8 of answer some of the questions that you felt they  
9 should be asking?

10 I mean, for example, I'm looking at a  
11 smart coffee maker right now. And I cannot find,  
12 in the terms of use or the privacy policy, any  
13 information that would answer these important  
14 questions that you raised.

15 So I guess I'm wondering, sort of what  
16 the FCC thinks, you know, we can do in terms of  
17 making it really clear and easy to find for  
18 consumers, particularly when they're shopping in  
19 store and would be able to, you know, do all of,  
20 you know, search online for this information.

21 MR. JACOB: So I agree, most new  
22 devices doesn't have an easy way to find these

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1 things. I mean, even big manufacturers or for,  
2 like, dedicated Internet devices are starting to  
3 come up with, you know, we will support this device  
4 for five years after we release it. So if you are  
5 buying it, like, at the four and a half years, you  
6 know, the life of the device is actually just, you  
7 know, six months.

8 So one thing is consumers are not  
9 demanding it, right. That's why they -- I believe  
10 that's why manufacturers doesn't have it on their  
11 websites. So once consumers like, you know, like  
12 you started looking for this information, you know,  
13 they would know, hey, this is something that people  
14 are interested in. And they would add that to  
15 their list.

16 So I think that's one key where  
17 consumers can try some of these changes. Or, you  
18 know, if you ask for security, you know, they will  
19 consumerize these things, right. You know, they  
20 will give it to you. But if you are not asking for  
21 it then it will come in a slower pace.

22 CHAIR BARTHOLME: Can you raise your

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1 hand?

2 MEMBER BARKET: Sorry about that. So  
3 first, I wanted to ask if the Commission is  
4 coordinating with NTIA. Because, as I understand  
5 it, they have a pretty robust initiative going  
6 right now regarding IOT, even down to having, you  
7 know, separate working groups on patchability.

8 And then second, I wanted to ask a bit more  
9 about the cybersecurity NOI, and the Public Safety  
10 Bureau's recent cybersecurity report, and just  
11 what the Commission has in mind this year for acting  
12 on cybersecurity and what your goals are.

13 MR. JACOB: So both of the questions,  
14 I'm not in a position to answer. I'm not directly  
15 related to those. So I would go back and try to  
16 get answer to, you know, from somebody else in the  
17 Bureau to those questions.

18 CHAIR BARTHOLME: I had a couple  
19 things. So kind of to Claire's point, one of the  
20 things that is very common on the boxes, and  
21 packaging, and information that comes with all of  
22 these devices is an FCC logo, proving that it passed

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1 some sort of FCC certification.

2 Are you using those interactions as an  
3 opportunity to either look for security features  
4 in devices or have conversations with  
5 manufacturers who are coming to you for that to pass  
6 these requirements about the importance of  
7 security life cycle support and other things like  
8 that?

9 MR. JACOB: So FCC logo on the device  
10 is connected to a specific law. You know, if the  
11 Commission requirements or if you have a FCC logo  
12 on your device that means you pass the initial  
13 requirements that's there in the law.

14 So that's not, as of now, it has nothing  
15 to do with the, you know, security. In the future,  
16 it might happen. I am not aware of any programs  
17 like that. But again, you know, most of these  
18 things should come from the consumer versus so  
19 that, you know, companies can derive it easier.

20 CHAIR BARTHOLME: I think that's an  
21 opportunity to consider. Because you are one of  
22 the few sort of universal players in that landscape

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1 right now.

2 And the other thought that I had, or  
3 question, is recently a number of IOT device  
4 attacks have involved infrastructure deployed in  
5 cities.

6 And as more and more cities become  
7 connected and have little toggles and switches all  
8 along their water systems, and power lines, and  
9 everywhere else, do you guys have a primer for  
10 cities that's focused on security, and education  
11 efforts geared towards cities, and their  
12 deployment in large scale of IOT devices so that  
13 they're not as vulnerable and susceptible to these  
14 things moving forward?

15 MR. JACOB: So as far as I know, we  
16 don't have any specific programs. But, you know,  
17 I don't know all the programs that FCC has, so  
18 pardon me.

19 But again, I think the key is, if, like,  
20 you know, the purchase of a -- when you write a  
21 contract if you know, hey, my water, or my door,  
22 or my window controller should warrant for ten

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1 years, and they should support it, and when you add  
2 that in the contract, you know, in the contract you  
3 know that, you know, you will get support for these  
4 four or five years, ten years.

5 But if the contract person knows to add  
6 the security part to the contract, you know, that  
7 will drive the companies to offer it for the masses.  
8 So I think, you know, again, that's one key aspect  
9 of it, the knowledge about these wonderful -- this  
10 is key.

11 CHAIR BARTHOLME: Right. Do you have  
12 any questions from the phone?

13 (No response.)

14 CHAIR BARTHOLME: All right. So we're  
15 on schedule now for our break. So thank you for  
16 joining us. We appreciate the information.  
17 We're going to take a ten minute break, and then  
18 we'll get going back again at 10:40.

19 (Whereupon, the above-entitled matter  
20 went off the record at 10:30 a.m. and resumed at  
21 10:42 a.m.)

22 CHAIR BARTHOLME: All right. So next

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1 up, we are pleased to be joined by Antonio Sweet.  
2 He is a technology policy advisor with the Office  
3 of Strategic Planning here at the FCC.

4 Before joining the Commission staff,  
5 Mr. Sweet was an engineer and developer of network  
6 devices in the private sector. He advises the  
7 agency's chief technology officer in various  
8 bureaus on technical issues, including security  
9 and robocall mitigation.

10 Antonio regularly engages standards  
11 bodies and industry groups to advance the progress  
12 of security and reliability of voice networks.  
13 We're pleased to be joined by Antonio Sweet.

14 MR. SWEET: All right. Well, thank  
15 you very much for the introduction. I kind of  
16 wanted to make the presentation walk through a very  
17 brief history of phone and voice network technology  
18 followed by how robocalls technically work, what's  
19 being done to mitigate them, and what consumers can  
20 do to help themselves alleviate this problem.

21 But I think, first and foremost, if I  
22 could speak on behalf of all engineers, I want to

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1 say I'm very sorry. You know, we often advance  
2 technology with the best of intentions but don't  
3 think about the worst consequences. And to that  
4 end, I do want to reassure everybody here that there  
5 are a lot of dedicated folks that are spending night  
6 and day addressing this very issue.

7 And the way that it kind of got started,  
8 if you think back to the very original telephone  
9 network where you had a single output, single input  
10 phone line. We essentially had people reachable  
11 through one path. And the phone number associated  
12 with that person or that phone was how you routed  
13 to that person.

14 That's why area codes no longer really  
15 mean area, but it got started based on how the  
16 public switches were navigating from one caller to  
17 another. And the numbering associated with that,  
18 and the connections between those networks relied  
19 on route of trust.

20 Essentially, you had different  
21 providers knowing that, on the other end, even  
22 though they personally didn't manage the network,

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1 the people they were connecting to were going to  
2 make sure that the right person was reached.

3 And so we look at that in conjunction  
4 with the evolution of the Internet and how email  
5 developed. So with the Internet, suddenly you  
6 have a multiple output, multiple input system for  
7 a single person or a single device.

8 And the email situation that we saw in  
9 the early 2000s is actually a very good analogy for  
10 what we're seeing now. So email essentially  
11 mirrored hard mail, paper copies, or envelopes and  
12 things where you would write the sender. You would  
13 write yourself as the return address, and you would  
14 write your recipient on an envelope.

15 And so when you have software that  
16 enabled that, and the email architecture where all  
17 you had to do was type in a person's address, and  
18 oftentimes you could type in your own return  
19 address, or tell the network what your identity  
20 was, suddenly you lost the route of trust that  
21 existed with the phone networks. And you could  
22 simply give off a sense of identity without ever

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1           having to authenticate who you were.

2                       So what we had in mass mailers evolved  
3           in the Internet side into email spam where you had  
4           software that was enabling the rapid delivery to  
5           a very large audience and using the economics of  
6           that as the case for the business.

7                       So you had maybe one in a million people  
8           who would actually open up that spam, and it would  
9           cost, you know, a millionth of penny to send that  
10          individual email, but aggregate that over, let's  
11          say, a quarter billion people, and suddenly, in a  
12          day, you could get a success rate then landed you  
13          about a quarter million dollars.   And so the  
14          economics of the email spam case has now translated  
15          into the robocall telemarketing space.

16                      Unfortunately,   on top of just  
17          telemarketing, there's malicious attacks that do  
18          more than just try to get you to buy a product.  
19          They will defraud you out of money or even use that  
20          rapid delivery system to flood networks and  
21          endanger the public.

22                      And so in the email world, we obviously

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1 saw the evolution of spam filters and, eventually,  
2 email verification technology. And that was  
3 enabled by an industry group known as the Internet  
4 Engineering Task Force. They are a standards body  
5 made up collectively of engineers from across  
6 multiple sectors, across multiple countries,  
7 typically working for businesses that provide these  
8 services for the public.

9 And so this task force shortly, or  
10 abbreviated to the IETF, are essentially the  
11 protocol architects of the Internet. And so they  
12 are the group that develops the spam filters, and  
13 identity authentication for the email case. And  
14 they're the ones who essentially developed the  
15 little green lock that you see on your browser or  
16 the green checkmark that you see on an email from,  
17 let's say, your financial institution or your email  
18 service provider directly.

19 So now, when we think about the email  
20 case, it isn't a perfect analogy, because email  
21 lives strictly on the Internet. Whereas, voice  
22 calls now can originate from a traditional landline

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1 phone, cross the Internet, come back onto a legacy  
2 network, or simply live entirely on the Internet,  
3 or start in the Internet and go to a legacy network.  
4 So we have these hybrid systems that complicate the  
5 matter.

6 And so what we do know from the data and  
7 simply the technical capability is that about 99  
8 percent of all robocalls or spoof calls, whether or  
9 not they're automated, are from IP voice networks,  
10 Internet voice networks.

11 And what they're doing is they're taking  
12 advantage of those same vulnerabilities that email  
13 had. And they're using a variety of tactics. So  
14 you obviously have the auto-dialed robocalls. You  
15 have artificial voices, you have a couple of  
16 different kinds of spoofing. They're actually  
17 multiple flavors of spoofing.

18 So you have anonymized spoofing which is  
19 hiding your identity either through a totally  
20 randomized number that you present to the call  
21 recipient, or you have something called the  
22 neighborhooding where you use software to pick out

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1 a target. And then you use, let's say, the first  
2 six digits of their number, change the last four,  
3 and then it seems like someone in your neighborhood  
4 is actually calling you. And you're more likely to  
5 pick-up.

6 In addition to that we have  
7 impersonation of spoofing. So that's someone  
8 pretending they're the IRS by actually presenting  
9 themselves with the IRS's main phone number. Or  
10 you have someone who, as we heard earlier about  
11 hacking personal devices, is able to get your  
12 contact list and use one of the numbers that they  
13 find in there to present themselves as a family or  
14 friend so that, again, you're more likely to pick  
15 up.

16 And those are actually really  
17 interesting, because we've seen a series of fraud  
18 cases where -- and particularly the elderly or  
19 residents of retirement homes will receive calls  
20 from a number that is one of their family's phone  
21 numbers.

22 And the fraudster will say, oh, this is

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1 your grandson, Johnny. I'm in a jail and I need  
2 bail. Can you wire this amount to this number so  
3 that I can get out. You know, I didn't want to call  
4 mom and dad, because I'm really embarrassed about  
5 this. I'd really appreciate it. And just like  
6 that, that person is out, you know, potentially  
7 several thousand dollars.

8 And so what we have trouble with in the  
9 phone network case, that we don't really have in the  
10 email sense, is that in email the content of the  
11 message is there. It's in the body, and you can  
12 pretty easily use software to detect if, for  
13 example, the same Nigerian prince is sending the  
14 same email to millions of people, right.

15 But in the phone context, you don't have  
16 that. Because the content of the message doesn't  
17 start until someone picks up. And so you don't have  
18 any way to detect on a content basis.

19 You also run into issues of traceability.  
20 Like I said before, your routing a call potentially  
21 over many interconnection points in a network.  
22 You're routing it from the Internet to a land line.

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1 And when it makes those hops over major networks,  
2 a lot of times the origination or the path of the  
3 call gets lost. And right now, there are  
4 industry groups and telecom service providers that  
5 are working to enhance the traceability. And we're  
6 also seeing that what they essentially want to do  
7 is include a path -- information headers so that the  
8 recipient, or at least the network that they  
9 subscribe to, knows every single hand that touched  
10 that call on the way from origination to delivery.

11 Another major issue along those same  
12 lines is simply the lack of interoperability among  
13 the Internet and traditional networks. The  
14 information that you get in the header of an email,  
15 for example, and that would exist on a strictly  
16 Internet-based voice call, is maintained. But as  
17 soon as it lands on the traditional network, that  
18 information is stripped out, it's gone. Because  
19 the legacy system doesn't support it.

20 So to that end, there is an incredible  
21 amount of work being done by the IETF and other  
22 industry groups, specifically, one is a protocol

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1 that enables the same kind of green lock that exists  
2 in the email case where you have the identity of the  
3 caller verified through an encrypted digital  
4 certificate, essentially, saying I am who I say I  
5 am, and if I were lying the call wouldn't be put  
6 through, just by a technical capability.

7 And that is one of the major tools that  
8 is going to enable third party developers of  
9 filtering services and apps to present more  
10 reliable information to people on their handsets  
11 and on their landline phones as well.

12 There is already an incredible amount of  
13 call pattern analysis done on voice networks. The  
14 major thing that does remain constant is that you  
15 can see massive floods of calls being made in the  
16 same way that massive floods of emails are sent.

17 And by having a skeptical eye or a  
18 suspicious eye of some of the subscribers of your  
19 service perhaps thinking, you know, I know that this  
20 is a residential line, but somehow they're calling  
21 1,000 people over the course of an hour, I should  
22 probably not be putting those through. Then you

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1 know that there is some mitigation going on behind  
2 the scenes and that maybe the recipients are only  
3 getting a very small fraction of the calls that are  
4 actually put forward.

5 Another really interesting development  
6 that we've seen is kind of a parallel case to do not  
7 call. And it's called do not originate. And it  
8 uses the path, the call path that I mentioned  
9 earlier, as a way to, again, kind of guess the  
10 probability that this is a fraudulent call.

11 So if you think about calls, again, over  
12 the Internet coming from all over the world,  
13 potentially, you might want to filter out calls that  
14 say they're from the IRS but came in through India,  
15 for example. That interconnection is probably not  
16 valid. And it's a pretty easy flag to put in and  
17 use to prevent people from getting attacked by  
18 fraudsters.

19 And the last thing that we're really  
20 interested in here as enforcers of our TCPA, and  
21 going after these fraudsters, is automatic  
22 traceback.

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1                   So traditionally our enforcement  
2 bureau, when we receive a complaint from a consumer,  
3 goes to their service provider with a subpoena and  
4 say, okay, who gave you this call? And then they  
5 say, all right, well this person, this network did.

6                   Then we go to that one and serve another.  
7 And we go up the chain through a legal process to  
8 eventually find who originated it or if it came from  
9 an international connection.

10                  Fortunately, there's a lot of good work being  
11 done in the industry to streamline that process.  
12 Again, it'll be helpful once the standards are in  
13 place for logging the actual call path so that we  
14 can go straight to the source as opposed to have to  
15 start from the beginning and work our way through  
16 the networks. And so we're very pleased to get  
17 updates regularly on industry groups who are  
18 working on that.

19                  When it comes to solutions that  
20 consumers can use, a lot of it is dependent on what  
21 kind of network they use. Traditional landlines,  
22 again, have fewer capabilities that Internet based

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1 voice services do.

2 But there are some really great things  
3 that will mitigate this. For example, when we see  
4 on websites, you know, when you're buying, let's say  
5 concert tickets, and you have to type in a captcha  
6 code to prove that you're not a robot.

7 There is similar technology where, if  
8 you enable a captcha system for your calls, a caller  
9 will have to dial your number. And then they'll  
10 receive back a challenge saying dial a random four  
11 digit code to prove that you're not a robot just  
12 massively sending out these calls and that you are  
13 a person who can dial.

14 Another really interesting thing that's  
15 been going on is phone-printing. Now, that's a  
16 voice version of fingerprinting where,  
17 unfortunately, this requires someone to actually  
18 answer the call.

19 But what it does is it analyzes, within  
20 a few seconds, if the audio coming through is the  
21 same, or very, very similar to, audio that has come  
22 in elsewhere on the network. And by making those

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1 matches, you can, with a really high probability,  
2 check that the audio is pre-recorded, for example,  
3 or artificially voiced.

4 In addition, you obviously have mobile  
5 apps that allow you to crowdsource the reliability  
6 of a number or the reputation of a caller, almost  
7 like a Yelp for phone numbers.

8 There are a lot of people that are  
9 developing that, and they require or, rather,  
10 they're enhanced by large pools of people who  
11 contribute to that database of reliability  
12 information.

13 Unfortunately, it does require active  
14 engagement by users, but as we all know, if people  
15 are willing to file complaints with the federal  
16 government, I'm sure they're willing to say  
17 something about robocallers on their apps.

18 And unfortunately, there are apps on  
19 major app stores and platforms that enable  
20 spoofing. And there are not as many that do what  
21 I just mentioned, which is detect spoofing. It is  
22 as easy as writing an address to write the phone

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1 number you want to present yourself as.

2 And so, that capability is only enabled  
3 by a lot of these technologies that are technically  
4 legal but are often abused. And so we are really  
5 encouraged to see a lot of the work being done by  
6 third party app developers to offer kind of the  
7 opposite solution and help people avoid being  
8 misled or become victims of fraud.

9 Lastly, I want to follow up with what one  
10 of my colleagues in CGB mentioned earlier, which is  
11 that our complaint database, we feel, is one of the  
12 better ones. Not because of the data that we  
13 collect but because of how often we update it.

14 So, a lot of these third party app  
15 developers are using our realtime pushes of  
16 complaint data to augment their algorithms for  
17 detection. So we have not just contributed to an  
18 enforcement effort, but we're also helping people  
19 -- we're helping prevent people from being victims  
20 of this as well. And we're really encouraged that  
21 many of the third party developers have come to us  
22 directly and said, "We have used your API in our

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1 system and we're actually seeing improved  
2 performance, and we're blocking even more than we  
3 were before."

4 And this is in contrast to some of the  
5 other complaint databases that publish, maybe, on  
6 a weekly or a monthly basis. Because what we've  
7 been told is that a lot of these fraud campaigns are  
8 in such realtime, in such quick pace, that by the  
9 time you have waited a month, that campaign's been  
10 over and that fraudster's already collected  
11 millions of dollars from the public.

12 And so I really just encourage all of you  
13 to make sure that consumers are filing complaints,  
14 that they are visiting [fcc.gov/robocalls](http://fcc.gov/robocalls) to learn  
15 about the solutions being offered by third parties  
16 and their service providers, and also learn about  
17 what we're doing to protect them. And with that,  
18 I open it up to any questions.

19 MEMBER GOODMAN: Thank you. Given  
20 that this is an issue of great concern to consumers,  
21 are there any engineering reasons that carriers  
22 have not responded to this issue in a more timely

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1 fashion?

2 MR. SWEET: So, one of the major issues  
3 is what we call a weak link system, where, if you  
4 implement a solution, it's only as good as it  
5 promises to be if everybody adopts it.

6 And so that's why standards bodies are  
7 trying to get not just national but international  
8 approval consensus in the architecture and adoption  
9 broadly. Because, simply put, if anybody doesn't  
10 adopt those standards, then it's as if no one did.

11 CHAIR BARTHOLME: Ken?

12 MEMBER MCELDFOWNEY: Yeah, I'm sort of  
13 curious about what you said in terms of that the apps  
14 that can spoof someone's phone number is not  
15 illegal. To me, I would think it would be a form  
16 of ID theft. And I just -- I cannot think of any  
17 legitimate reason for an app to do that. It would  
18 seem that you could go after those apps on that  
19 basis.

20 MR. SWEET: So our Truth in Caller ID  
21 Act of 2009 only makes the fraudulent or abusive  
22 cases of spoofing illegal. And the reason that is

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1 is because there are, in fact, use cases where you  
2 might want to present a different number.

3 A couple of the ones that we see all the  
4 time are doctors who want to spoof their office  
5 number on their mobile phone or people who are  
6 staying in domestic violence shelters who don't  
7 want to use the location or the phone number of their  
8 shelter and they want to use a random one to call  
9 people or use as a personal phone number.

10 CHAIR BARTHOLME: Steve, and then we'll  
11 go across the room.

12 MEMBER POCIASK: Yeah, thanks. I  
13 appreciate it. So, I'm kind of intrigued by a lot  
14 of the different approaches of this, the  
15 certification sort of approach, and I thought the  
16 phone-printing is sort of interesting.

17 I mean, even if you don't match sort of  
18 the voice coming over the originating and  
19 terminating, I just think just having the phone  
20 engaged is sort of a signal that the phone is, in  
21 fact, in use.

22 But I haven't -- just a sort of basic

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1 question that I can't figure out myself: at sort of  
2 the handout from or within a backbone provider, can  
3 we identify, or can the backbone provider identify,  
4 what's an IP-based phone call?

5 And if they can, can't they identify the  
6 subset of those calls that are presenting a domestic  
7 phone number? So then you have the situation where  
8 somebody, it's a foreign IP call with a domestic  
9 number. Shouldn't that send up a flag?

10 MR. SWEET: So, certainly they have  
11 that information in their routing servers. But,  
12 again, IP spoofing and number spoofing are pretty  
13 easy to do. So until those digital certificates  
14 are there to authenticate the information being  
15 presented, again, it's as easy as typing it in  
16 yourself.

17 So, fortunately, once you have the  
18 certificate architecture in place, then you're able  
19 to verify, with much more certainty, who's calling.

20 MR. POCIASK: I don't mean when the call  
21 is terminating at someone's residence. I meant at  
22 the backbone provider itself as the call comes into

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1 the US, or it's within the backbone provider. I  
2 meant up-front.

3 MR. SWEET: Sure. So that's the Do Not  
4 Originate case that I was talking about.

5 MR. POCIASK: Okay.

6 MR. SWEET: So they're filtering based  
7 on foreign IPs that are showing domestic phone  
8 numbers.

9 MEMBER LIEBERMAN: I just have a  
10 question that may be basic. I assume some people  
11 are more prone to become victims, but what about  
12 just being prone to receiving the calls themselves?  
13 I don't seem to receive that many robocalls, and I'm  
14 wondering if other people are sort of more targeted  
15 and why they would be.

16 MR. SWEET: So, there are a lot of cases  
17 where what started as a very benign, legal marketing  
18 effort, you know, enter your email address and phone  
19 number to be part of this contest for a free cruise,  
20 for example, a lot of people actively go through  
21 that. And those contact lists get shared  
22 everywhere. And very often, they land in the hands

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1 of people trying to commit fraud.

2 And so I guess I applaud you for staying  
3 from those. There are a lot of email lists -- or,  
4 rather, phone lists of people who answer calls,  
5 meaning, "Oh, even though they didn't fall for our  
6 trick, we know that this a live number with a person  
7 who picks up." And suddenly, those are the  
8 prioritized numbers to target. And again, we  
9 always encourage people not to pick up unknown  
10 numbers.

11 MR. ELLROD: Frederick Ellrod with  
12 NATOA. I'm curious whether those traceback  
13 methods you mentioned, whether implementing those  
14 would require a complete redesign of the telephone  
15 network or how extensive that move would have to be.

16 MR. SWEET: I'm sorry, could you repeat  
17 the question?

18 MR. ELLROD: Sorry, yes. To implement  
19 the kind of traceback methods you're mentioning,  
20 I'm wondering whether that would require a complete  
21 redesign of the telephone network, or the switches,  
22 or extensive rebuilding of what's already there in

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1 the public switch telephone network.

2 MR. SWEET: In the public switch  
3 telephone network case, it is very difficult to  
4 retrofit. As we heard earlier, a lot of device  
5 manufacturers do not support things after end of  
6 life, and a lot of those switches are decades old.  
7 And so it's very unlikely that, you know, you're  
8 able to find a new third party who has the knowledge  
9 base to go in and retrofit those systems. That's  
10 why a lot of the security that we rely on today in  
11 what's being developed is for strictly IP purposes.

12 CHAIR BARTHOLME: Thank you so much for  
13 joining us.

14 Staying on the robocall topic, our next  
15 speaker is Linda Vandeloop with AT&T. She's the  
16 assistant vice president of external affairs, and  
17 was their lead person on the task force that the FCC  
18 convened last fall. And she's here to give us sort  
19 of an overview of that task force and its activities  
20 and where we're headed next. So, welcome, Linda.

21 MS. VANDELOOP: Thank you. And thank  
22 you for inviting me to talk about this. It's a very

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1 interesting topic. I'll give you a little bit of  
2 background.

3 This was started in July of last year.  
4 It started with a letter from Chairman Wheeler to  
5 certain carriers and -- after asking us what we are  
6 doing to deal with the problem. And after really  
7 looking at it for a couple of days, AT&T agreed to  
8 chair an industry-wide Strike Force, because we  
9 have all been struggling. All of the companies  
10 have been struggling individually at trying to do  
11 something to stop this problem. And it really is  
12 an industry problem.

13 So we pulled together about 30 different  
14 companies and different types of companies. It was  
15 wholesale, wireless, cable, manufacturers, OS  
16 operators pulled together to tackle some of the big  
17 problems.

18 And Chairman Wheeler had said thank you  
19 and I will expect some short-term deliverables in  
20 60 days. So it was a big effort. It was a lot of  
21 work pulling people together.

22 We had our kickoff meeting August 19th.

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1 We had focused on four areas: the caller ID  
2 authentication, empowering consumer choice, the  
3 traceback effort, detection and mitigation. And  
4 then also regulatory support, because we figured  
5 that there would be some regulatory clarifications  
6 that we might need to implement some of the changes  
7 that we were going to propose.

8 So, you know, some people think, a lot  
9 of people think or thought the industry really  
10 didn't care and that is not true at all. We had four  
11 working groups and those working groups, by the way,  
12 even started before the kickoff meeting, because 60  
13 days is not a lot of time to make progress.

14 And each working group met at least two  
15 times a week and there were some people that were  
16 on more than one working group, so it was a big  
17 effort. And I was a little apprehensive. I  
18 thought, okay, well, this came from the Chairman  
19 and, you know, the Chairman of the company has asked  
20 them to participate, you know, will they go through  
21 the motions?

22 No. It was full participation. And

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1 they did a lot of homework in between the meetings.  
2 It was one of the most positive, cooperative and  
3 productive industry groups that-- efforts that I  
4 have been involved in. And believe it or not, you  
5 know, industry, different industry members don't  
6 always agree on issues, but this one people were  
7 willing to come together and really work.

8 Now, there were lots of ideas and  
9 constructive disagreements, but, in the end, we  
10 were always able to come to consensus and come up  
11 with a solution that everybody could at least live  
12 with.

13 So and I've gotten a lot of questions in  
14 the past on well, you know, there is laws in place  
15 already. There is rules in place. What about the  
16 Do Not Call List? Does that mean that is not  
17 working? It is working, but only legitimate  
18 companies honor the Do Not Call List.

19 These robocallers, their main goal,  
20 their only goal is to defraud people out of money.  
21 So if they are going to steal the money, they really  
22 don't care about a violation of the Do Not Call List.

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1 So that's why that helps with calls, but it doesn't  
2 help with the robocall problem.

3 You know, I think Antonio talked a lot  
4 about the challenges of coming up with a solution.  
5 One of the challenges, too, is that these  
6 robocallers are very flexible and very smart and as  
7 soon as we come up with something, they come up with  
8 a way around it. So we are, as an industry, working  
9 on coming up with a very comprehensive, flexible  
10 solutions to continually -- so that we can change  
11 as they change.

12 The working groups, the Authentication  
13 Working Group worked on the Caller ID  
14 Authentication standards and they actually were  
15 able to move up the approval of the standard from,  
16 it was targeted for, December. It was moved up to  
17 October, which also moved up the next steps in the  
18 whole process.

19 So there was some positive work there  
20 and they are continuing to do the work through the  
21 standards bodies.

22 The Empowering Consumer Choice had a

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1 huge job. I mean they were looking at how do you  
2 implement the caller ID authentication on the  
3 customer devices? What's the customer going to  
4 see? You know, what is the best way to communicate  
5 the information to the customer, customer  
6 education. And they really did a lot of work.

7 And by the way, the cooperation, I need  
8 to mention, wasn't just with the companies that were  
9 a part of the companies and organizations that were  
10 part of the Strike Force, but the FCC and the FTC  
11 worked very closely with us and really helped in  
12 developing some productive progress.

13 And so to that end, the FCC agreed to  
14 implement or launch a website that pulled together  
15 all of the consumer information that we could pull  
16 together because the FTC had websites, some of the  
17 consumer groups had websites, the individual  
18 companies had websites and so they pulled it  
19 together all in one place. And I actually have a  
20 few copies. I have printed out some links, if  
21 people are interested.

22 And so that grew out of the Strike Force.

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1 And also they reached out to the App Developers  
2 Association to take a look at how do we encourage  
3 app developers to develop some robocall blocking  
4 solutions that customers want and need to use. And  
5 they identified some key features for consumers  
6 with respect to the caller ID authentication and  
7 worked with that group.

8 The Detection, Assessment, Traceback,  
9 and Mitigation Working Group, they said the  
10 traceback -- Antonio talked a little bit about the  
11 traceback and this actually started with a small  
12 group of companies, well, AT&T, Verizon and  
13 CenturyLink, the large companies in the USTelecom  
14 Association, and started to work together to do  
15 traceback.

16 We have been working on the issue. I  
17 know AT&T does a lot of analysis and research and  
18 we try and identify the robocalling campaigns, like  
19 when we see a phone number that generally makes two  
20 or three calls a day and all of a sudden there is  
21 a hundred thousand calls going over it, we kind of  
22 think that there might be a problem, and try and

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1 identify and do the traceback.

2 And so we start working together and  
3 made a little bit of progress, but recognized  
4 quickly that we need to pull in more companies,  
5 because the more companies that are involved in the  
6 traceback and cooperating, the quicker we can get  
7 to the source of the robocalls and work with FTC and  
8 FCC to get it stopped.

9 So that group went a little bit further,  
10 went through the Strike Force and one of the  
11 outcomes, USTelecom decided to expand that group  
12 where by the time the Strike Force had started,  
13 there were 11 members and they agreed to at least  
14 double it by July of this year. They are already  
15 up to 19 members. So work is continuing there and  
16 there is more and more robocall incidents that they  
17 are doing tracebacks on and so that has been a  
18 positive development.

19 The Do Not Originate, there is some  
20 discussion within the industry whether Do Not  
21 Originate Database is the right way to go. And so  
22 through the Strike Force, they agreed to do a

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1 feasibility study. And one of the things they  
2 decided to do through that feasibility study or for  
3 that feasibility study was to do a trial.

4 So we worked with the IRS and got the  
5 number that was being typically spoofed and did a  
6 Do Not Originate. Well, we blocked all the calls  
7 going on that number, because it was a number that  
8 was in place just to receive calls. And it really  
9 had a big impact and it was very successful.

10 Now, we don't know how successful  
11 because, at the same time, there was a bust of some  
12 of the centers that were making those calls. So  
13 more work is going on and some additional trials are  
14 going on and the feasibility study will be done by  
15 the first quarter of 2017.

16 And the other -- oh, one thing to mention  
17 on the Do Not Originate, I mentioned that the  
18 Regulatory Support Group had to do some work to  
19 identify, you know, give advice on what rules they  
20 needed to follow, what rules needed to change. So  
21 we got the request hey, are we authorized to block  
22 calls that the IRS says they want us to block?

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1           And we looked through the rules and we  
2           couldn't find where there was that authorization.  
3           So I called up the FCC. I said can you help us with  
4           that? We can't identify the rules and people, you  
5           know, want to make sure that they are not stepping  
6           over the line. And they said, you know what, there  
7           isn't really a rule that allows companies to block  
8           a call at the request of the number owner or  
9           assignee.

10           We can block calls at the request of the  
11           subscriber. So if a customer says I don't want to  
12           get calls from this number, we have the authority  
13           to block those, but we did not have the authority  
14           to block a request of the number assignee. So the  
15           FCC very quickly issued a public notice clarifying  
16           and giving us the authorization to be able to block  
17           those numbers.

18           So it was, like I said, a very  
19           cooperative effort. It was a very positive effort.

20           And the other thing that this group  
21           focused on in conjunction with the Regulatory  
22           Support Group is shortening the cycle time, because

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1 it is one thing to be able to identify an illegal  
2 robocall campaign, but until we get all the  
3 information to be able to get it stopped, people are  
4 getting calls and people are getting defrauded. So  
5 we want to shorten the cycle time.

6 So going forward, a lot of work  
7 continues to be done both through the associations  
8 and the standards bodies and companies  
9 individually. I mentioned that the Traceback  
10 Group is continuing to grow and refine its process.  
11 CTIA is doing some really great work pulling members  
12 together.

13 I know the App Association is also  
14 involved in the ongoing work of the Strike Force.  
15 And then individual companies are also increasing  
16 their efforts. AT&T, for example, is increasing  
17 its data analysis to try and identify the  
18 robocalling campaigns quicker.

19 In addition, we have introduced an app  
20 to -- for customers to control their calls. It is  
21 called Call Protect and it works on HD wireless  
22 phones. Now, it doesn't work on all -- for all

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1 customers, but we are just trying to roll things out  
2 as quickly as possible and that we could roll out  
3 quicker than others.

4 There is also some other very effective  
5 third-party apps we advertise on our website.  
6 Nomorobo, which works on wireline IP phones and I  
7 can tell you it works really well, because I --  
8 before we put it on our website, I wanted to test  
9 it out and I did. And I only put it on my line as  
10 a test, but I'm not taking it off. It's great. It  
11 works with simultaneous ring. It rings once on my  
12 line, Nomorobo picks it up and I don't -- I haven't  
13 gotten any robocalls.

14 No, I take that back. Once in a while  
15 one slips through and then they catch on and put that  
16 in their blacklist database.

17 So that sums up the Strike Force. Does  
18 anybody have any questions?

19 CHAIR BARTHOLME: Steve?

20 MEMBER POCIASK: Yeah, this is Steve  
21 with ACI. I am not exactly sure that this is the  
22 right question for you. Maybe it should have gone

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1 earlier, but in regard to like the compensation  
2 between various phone companies and so on, I imagine  
3 phone calls coming in from Europe, for example, have  
4 a number of international fees and then, of course,  
5 there is probably access charges and those sorts of  
6 things, which generally fall on the originating  
7 party.

8 If we really don't know, because these  
9 phone numbers are being spoofed, how do we reconcile  
10 the access fees that are being charged and paid by  
11 the various parties? I just wonder.

12 MS. VANDELOOP: I'm not sure I  
13 understand the question.

14 MEMBER POCIASK: Okay. Well, let's  
15 just say I have a call that comes across and it says  
16 it's from Tennessee and it is coming to my number,  
17 so that might be say an AT&T call that is going to  
18 Verizon, as an example. But the reality is that  
19 call might be coming from Europe. So how do we  
20 figure out how the access charges work on a call like  
21 that?

22 MS. VANDELOOP: Yeah, I would -- you're

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1 right. I would just be guessing, so --

2 MEMBER POCIASK: Okay.

3 CHAIR BARTHOLME: Anyone else?  
4 Anybody? Okay.

5 MS. VANDELOOP: Oh, but I can try to  
6 find out.

7 MEMBER GOODMAN: On the phone, too?

8 CHAIR BARTHOLME: Yeah. Okay.  
9 Thanks. Paul?

10 MEMBER GOODMAN: Oh, thank you. I had  
11 a question about say that, you know, the  
12 hardware/software solutions you are using, I'll  
13 say, for authentication or detection. I'm  
14 wondering if the Strike Force has any rules about  
15 members of the Strike Force that own intellectual  
16 property interests in those software/hardware  
17 tools?

18 MS. VANDELOOP: No, there is no rules.  
19 What we have tried to do in the Strike Force is keep  
20 the members to carriers and like operating system  
21 operators and not actual vendors. When we started  
22 -- and there was a lot of requests to join the Strike

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1 Force and the vendors that are out there do -- I  
2 mean, they do a lot of good. There are some really  
3 good apps out there. There are some really good  
4 resources out there, but they already existed.

5 And so what -- the goal of the Strike  
6 Force was to identify and work on the gaps, you know,  
7 and we only had 60 days, so we had to really focus.

8 As far as whether any of the companies  
9 have an interest in any of the -- I don't know, yeah.

10 CHAIR BARTHOLME: Anybody on the phone  
11 have any questions? Okay. Great. Thanks for  
12 joining us.

13 MS. VANDELOOP: Thank you.

14 CHAIR BARTHOLME: The resources that  
15 Linda handed out, there is a table over behind the  
16 lunch table and I know that everybody is going to  
17 be able to find lunch, so you will be able to find  
18 this table behind it, there is a nice stack of these  
19 there. Feel free to grab them during lunch or as  
20 we head off to the working group meetings later  
21 today.

22 MS. VANDELOOP: Thanks.

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1 CHAIR BARTHOLME: So moving right  
2 along, up next we have Patrick McFadden from the  
3 National Association of Broadcasters. He is the  
4 Associate General Counsel there. And Patrick is  
5 going to talk to us today about introducing ATSC  
6 3.0, a new broadcasting standard. So welcome.

7 MR. MCFADDEN: Thank you very much.  
8 Thanks for having me. It's great to be here and  
9 have an opportunity to talk to you about one of the  
10 things that really excites me, which is the future  
11 of broadcast television.

12 The Next-Generation TV standard, which  
13 is what we like to call ATSC 3.0, because when I say  
14 ATSC 3.0, people's eyes tend to glaze over a little  
15 bit.

16 Next-Generation TV is a really exciting  
17 new development and I'm going to try to talk fairly  
18 quickly at a high level about three main points to  
19 save some time for questions, if there are any.

20 The three things that I would like to  
21 cover are: What is Next-Generation TV? What are we  
22 talking about when we use that term? What are some

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1 of the consumer benefits associated with Next-Gen?  
2 And what would a transition to Next-Gen look like  
3 and how do we protect consumers during that  
4 transition?

5 So first, what is Next-Generation TV?  
6 Next-Generation TV is a new broadcast transmission  
7 standard. The old analog standard was approved in  
8 1941, that standard did not provide for color.  
9 Color came along in 1953. And then in 1996, the  
10 current DTV standard was approved.

11 A lot has changed in the video  
12 marketplace since 1996. And for broadcasters to  
13 continue to offer a robustly competitive service  
14 offering, we feel that we need to upgrade our  
15 technology, so we can offer viewers a compelling  
16 product. So that's briefly what Next-Gen is.

17 Why is it important and what do we think  
18 some of the benefits for consumers are? There are  
19 several.

20 First, better picture quality. Some of  
21 our competitors in the video marketplace, both  
22 MVPDs and over-the-top service providers are

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1 beginning to offer 4K programming, so even better  
2 than digital television, even better than HD, Ultra  
3 HD programming.

4 Broadcasters cannot currently offer  
5 Ultra HD using their current transmission standard.  
6 So for us to be able to offer -- to continue to offer  
7 the best picture, we need to upgrade our technology.

8 There are other benefits as well,  
9 significantly more immersive and improved audio  
10 quality, wide-color gamut, so right now colors are  
11 sort of approximations. There are times when we  
12 may be in between a specific color, but with a wider  
13 color gamut, we can more accurately reflect  
14 real-life color, high dynamic range.

15 And some other really exciting features  
16 because Next-Gen integrates pretty seamlessly with  
17 Internet Protocol that will allow us to offer  
18 interactive features to viewers, but it would also  
19 allow for advanced emergency alerts. So a couple  
20 of examples of what I'm talking about there.

21 If, for example, you get an AMBER Alert  
22 while you are watching television, you could click

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1 through and get more information about that AMBER  
2 Alert. Maybe a picture of the victim, if one is  
3 available, you know, a picture of maybe the model  
4 of car that the victim was last seen in, a picture  
5 of the suspect, if one is available.

6 Other examples of advanced emergency  
7 alerts, when we are talking about storms, for  
8 example, rather than just having a region-wide  
9 alert to everybody in an area, you could have more  
10 targeted warnings to really address viewers who  
11 might be at-risk. You could provide further  
12 information, such as evacuation routes and things  
13 like that.

14 So those are some of the benefits that  
15 are associated with Next-Generation TV. Better  
16 picture, better sound, interactive features and  
17 advanced emergency alerts.

18 Another one that we are excited about is  
19 the potential for more robust mobile television  
20 reception. The possibility to be able to receive  
21 over-the-air broadcast television programming on  
22 your mobile device, which is challenging for us to

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1 do right now.

2 And so turning to the idea of a  
3 transition to Next-Generation Television and here  
4 we have to be very clear about something. As  
5 excited as we are about Next-Generation Television,  
6 it is not backwards compatible with current  
7 equipment. So your current TV at home is not able  
8 to receive the Next-Generation Television signal.  
9 Just like the DTV standard was not backwards  
10 compatible with analog era equipment.

11 So how do we handle that transition?  
12 How do we protect viewers and continue to innovate,  
13 which we feel we need to do? To address that, there  
14 is a couple of things that we are not doing that I  
15 want to knock off first.

16 First of all, we are not asking for  
17 federal subsidies. We are not asking for any money  
18 from the Federal Government. We are not asking the  
19 Federal Government to underwrite a converter box  
20 program as happened with the DTV transition. We  
21 are not asking for more spectrum.

22 In fact, with the conclusion of the

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1 Incentive Auction, we would be repacked into a  
2 smaller portion of our current band. So we are  
3 seeking to do this without Government subsidies and  
4 without expanding our spectrum footprint.

5 The way that we propose to protect  
6 consumers during this transition is by arranging  
7 for simulcasting arrangements. So what that would  
8 mean is, and I'll pick on Krista, because I'm  
9 looking at her right now, this is best understood  
10 if you use a two station example, but, obviously,  
11 in markets where there are a lot of television  
12 stations, it would be more complex.

13 But for example, let's say Krista and I  
14 both owned a television station in the same market.  
15 Krista and I are both innovative people and we are  
16 interested in moving forward with Next-Generation  
17 Television. We would engage in a voluntary  
18 arrangement where we would agree that, for example,  
19 I would continue to transmit both of our programming  
20 in the current standard on my facilities, so  
21 everybody in our service area would continue to  
22 receive an over-the-air signal in the current

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1 transmission standard.

2 Krista, the innovative one in this  
3 example, would transmit both of our programming  
4 using the new transmission standard on her  
5 facilities. So the idea is that we would both be  
6 transmitting, both in the current and in the new  
7 transmission standard, so that we can begin to  
8 roll-out this transmission standard and the  
9 features and the programming advantages that go  
10 along with it.

11 The theory, basically, for the  
12 transition is sort of an if you build it, they will  
13 come theory. We envision a wholly voluntary  
14 market-driven transition where broadcasters would  
15 begin offering Next-Generation transmissions and  
16 if consumers like it and begin to buy equipment that  
17 is capable of receiving it, then the transition will  
18 move forward.

19 But the pace of the transition, unlike  
20 previous transitions, will not have a firm cut-off  
21 date. It will rather be market-driven.

22 So just to put a pin in that for example

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1 would be DTV transition, there was a firm cut-off  
2 date for analog programming. Everybody knew what  
3 date the analog signals would stop. That's not  
4 going to be the case with the transition we envision  
5 here.

6 Rather, again, it would be a wholly  
7 market-driven, wholly voluntary transition.  
8 Broadcasters won't be mandated to do it. Consumer  
9 electronics manufacturers will not be mandated to  
10 include a tuner capable of receiving the new  
11 transmission standard in new television sets. And  
12 again, we are not asking for the Federal Government  
13 to do anything for us in terms of subsidies or more  
14 spectrum. We are simply asking them for permission  
15 to try to do this.

16 That is basically how we envision the  
17 transition unfolding. I should add that in  
18 addition to protecting consumers who receive  
19 over-the-air programming, we are also acutely aware  
20 that many consumers receive programming through  
21 MVPDs.

22 So one of the other things that our

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1 petition notes is that we are emphatically not  
2 asking the FCC to require MVPDs to carry this  
3 Next-Generation signal. If MVPDs want to do that,  
4 if they choose to, that would be great. We would  
5 be very excited about that. But our petition does  
6 not seek to mandate that carriage.

7 When we think about the Next-Generation  
8 TV signal and the transmission standard, I  
9 mentioned that we view it as sort of the future of  
10 broadcasting because the video marketplace has been  
11 evolving.

12 One of the interesting things about  
13 broadcasting is that unlike many other industries  
14 regulated by the FCC, the technology that we use is  
15 mandated. The FCC specifies the type of technology  
16 that we use. It specifies the transmission  
17 standard that we use.

18 So the vehicle for us seeking to  
19 roll-out this new transmission standard is a  
20 Petition for Rulemaking that we filed in April  
21 asking the FCC to allow broadcasters to make  
22 voluntary use of the Next-Generation transmission

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1 standard. We need the FCC's permission to do that.

2 So we view this as a pro-consumer,  
3 pro-innovation opportunity for the FCC. It's  
4 wholly voluntary. We are not seeking subsidies.  
5 We don't envision seeking subsidies and we don't  
6 seek mandates either on MVPDs or consumer  
7 electronics manufacturers or ultimately consumers.

8 The goal again is that this would be a  
9 transition where we would begin to offer a better  
10 -- better service offerings and we would hope that  
11 that would attract people.

12 Ultimately, the shortest way that I can  
13 describe why we are excited about Next-Generation  
14 TV is it just allows us to do more with our current  
15 spectrum. Wireless carriers are always pushing  
16 the envelope in terms of the technology they use to  
17 allow them to do more using their spectrum  
18 offerings. We want to do the same thing.

19 Broadcasters currently have a 6  
20 megahertz channel they transmit on. Next-Gen  
21 allows us to push more through that same 6 megahertz  
22 channel, that's the short version of it. That's

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1 why we can do things like offer Ultra High  
2 Definition signals using Next-Gen or offer more HD  
3 signals. The transmission standard is also highly  
4 flexible, so it allows broadcasters to make choices  
5 to best serve their market, to best serve the needs  
6 of their viewers.

7 So if you are in a market where rather  
8 than rolling out an Ultra High Def signal, you would  
9 like to roll-out several multi-cast streams using  
10 the current DTV standard, you could do that as well.  
11 And there are a variety of other trade-offs you can  
12 make in terms of the robustness of your signal and  
13 the throughput that you are able to achieve.

14 In short, we view Next-Generation TV as  
15 something that broadcasters have to do to remain  
16 competitive in an ever evolving video marketplace.  
17 We view it as something that has great potential to  
18 enhance service for viewers. It can enhance public  
19 safety. And all we are asking for from the Federal  
20 Government is permission to invest potentially  
21 hundreds of millions of dollars in our own facility  
22 to provide a better free over-the-air signal to our

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1 viewers.

2 The current status of this proceeding,  
3 I mentioned, we filed a Petition for Rulemaking in  
4 April. The next step would be for the FCC to issue  
5 a Notice of Proposed Rulemaking, which we hope to  
6 see in the near future.

7 I will pause for a second, because I know  
8 that was a lot of information. Are there any  
9 questions that I can answer?

10 CHAIR BARTHOLME: We will start with  
11 Mitsy, since she shot up.

12 MEMBER HERRERA: All right. So Mitsy  
13 Herrera. Speaking as a person who lived through a  
14 consumer agency addressing the DTV transition, the  
15 first question is -- there are two questions.

16 One is there is about 10 percent, 5 to  
17 10 percent of the market that is receiving broadcast  
18 television using some type of antenna. So do you  
19 see that for the new television, Next-Generation  
20 Television? Will the broadcast reach be more or  
21 less distance-wise than the current DTV reach?

22 And the second is for the other 90

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1 percent. Among the many things that -- in the last  
2 FCC Chairman's term, there were many things done,  
3 but one thing that did not get done is a new revision  
4 of the set-top box rules. And so right now,  
5 consumers cannot buy a separate set-top box. They  
6 cannot buy a device that would work with their  
7 current MVPD and allow this new thing. And you  
8 cannot buy a television which has those standards  
9 built in that doesn't require that box.

10 So for the Next-Generation Television,  
11 are you looking to mostly market it on mobile and  
12 non-traditional televisions or are you looking to  
13 sell televisions that carry both? And how do you  
14 address the gatekeeper of the set-top box?

15 MR. McFADDEN: So a couple of things.  
16 First, I will not get into an argument about the  
17 penetration of over-the-air signals. I'll note  
18 that we don't agree that it is 5 to 10 percent. We  
19 think it is closer to 15 and rising.

20 But to address the point about coverage,  
21 you know, the interesting thing is the -- at a pure  
22 interference level, the coverage is very comparable

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1 to the current DTV standard. So we think we can  
2 cover the same service area, but offer a much more  
3 robust service offering within that service area.

4 As far as devices, I guess I would say  
5 two things. One, broadcasters are interested in  
6 serving viewers wherever we can find them. That's  
7 at home and that's mobile and that's anywhere in  
8 between. So certainly, we are envisioning this as  
9 a service offering that will be attractive to people  
10 in-home who receive over-the-air television.

11 Candidly, if we are able to offer a  
12 compelling service product, we think that, again,  
13 while we are not requiring, we do not seek to require  
14 MVPDs to carry it. We think they will want to, so  
15 we think that this will allow us to reach viewers  
16 no matter how they receive their signal.

17 And as far as the set-top box question,  
18 one of the things that I should have mentioned is  
19 that in our Petition for Rulemaking, we were joined  
20 by the Consumer Technology Association. And  
21 consumer electronics manufacturers are very  
22 excited about the Next-Generation standard. And

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1 it is hard to ask them to start including tuners to  
2 receive that transmission standard before the FCC  
3 has adopted it, but we do think that once the FCC  
4 does approve use of it, consumer electronics  
5 manufacturers will be eager to begin incorporating  
6 it.

7 And I should add that the United States  
8 is not alone in pursuing Next-Generation TV. South  
9 Korea is doing it right now. They are marching  
10 firmly towards broadcasting the 2018 Olympics in  
11 Ultra High Def. And to achieve that, they are using  
12 ATSC 3.0.

13 MEMBER HERRERA: So just quick, the  
14 standard needs to get adopted by the FCC and there  
15 is industry agreement?

16 MR. McFADDEN: So I don't want to --  
17 when you say industry agreement, what exactly do you  
18 mean?

19 MEMBER HERRERA: I mean, is this a, what  
20 was it, Betamax versus VHS carrier?

21 MR. McFADDEN: No.

22 MEMBER HERRERA: Or is it sort of like

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1       there is a standard and it's just a matter of we need  
2       to formally adopt it, so you can use it?

3                   MEMBER HERRERA:       Correct.       The  
4       standard is being finalized as we speak.   We expect  
5       it will be finalized this year.   We are asking the  
6       FCC to approve sort of the physical layer of the  
7       standard just from an interference standpoint,  
8       which is really sort of what the FCC does at a very  
9       reductive level when it comes to regulated radio  
10      transmissions, they regulate interference, right?

11                   So we are presenting to the FCC a  
12      physical standard that the FCC could approve.   The  
13      remaining parts of the standard will be approved  
14      hopefully this year and so, no, there will not be  
15      competing.   This is not a Betamax/ VHS situation.

16                   CHAIR BARTHOLME:   Okay.   We will go to  
17      Mark and work our way around.

18                   MEMBER DEFALCO:   I have really two  
19      questions.   The example you gave, with you know,  
20      Krista and yourself in the same market, you would  
21      be competing based on your programming if you are  
22      covering the same geography.   So as you are doing

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1 this transition, if she decides to go, I'm going to  
2 call it, old TV and you decide to go new TV or  
3 actually you flipped them around, she was going to  
4 do the new stuff, because she was the entrepreneur,  
5 but in the process of doing that, half of the  
6 programming is going to be lost, right? So --

7 MR. McFADDEN: No.

8 MEMBER DEFALCO: No?

9 MR. McFADDEN: No.

10 MEMBER DEFALCO: Okay.

11 MR. McFADDEN: I don't mean to  
12 interrupt, but --

13 MEMBER DEFALCO: No, please, yeah.

14 MR. McFADDEN: Let me clarify that  
15 example, because that's a really important point.  
16 Now, so in that example, where I am using the current  
17 transmission, I will be transmitting both of our  
18 programming. So I would be transmitting Krista's  
19 current programming and my current programming  
20 using the current transmission standards.

21 MEMBER DEFALCO: Thank you for  
22 clarifying that.

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1                   MR. McFADDEN:       Actually, it's an  
2 important point.

3                   MEMBER DEFALCO:    Yes, it was.

4                   MR. McFADDEN:    Thanks for asking that  
5 question.

6                   MEMBER DEFALCO:    What happens in a  
7 rural area where there is only one broadcast,  
8 over-the-air broadcast that is reaching the, you  
9 know, very rural, the outskirts of the rural area,  
10 so to speak? I mean, if you convert it, then the  
11 people who have the old TVs are out of luck. And  
12 if you don't convert it, then you never get the  
13 benefits of the new.

14                  MR. McFADDEN:    Sure. So I think one of  
15 the issues with this being a -- one of the reasons  
16 that we envision this being a purely voluntary  
17 transition is one of the luxuries that broadcasters  
18 had with the DTV transition is they had extra  
19 spectrum, right? That broadcasters could begin  
20 operating on a channel using their DTV signal,  
21 continue to operate using their analog signal and  
22 when we got to the cut-over date, broadcasters could

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1 just turn off the analog signal, so it was a very,  
2 very easy and quick transition.

3 We are not going to have that this time,  
4 so to continue to protect viewers, broadcasters are  
5 going to need to cooperate and reach voluntary  
6 agreements to ensure that viewers are protected.

7 While our friends in the wireless  
8 industry, for example, when they seek to move from  
9 3G to 4G and reform spectrum, that is spectrum  
10 footprint that allows them to do that. No  
11 broadcaster has a spectrum footprint that covers  
12 the entire nation that would allow them to do that  
13 kind of reforming on their own. So they are going  
14 to have to reach cooperative agreements.

15 I think the reality is, to get more  
16 directly to your question, that this is a transition  
17 that is going to probably begin in more heavily  
18 congested areas first and we will see how the  
19 transition unfolds. If there are specific markets  
20 where there is only a single broadcaster, we will  
21 have to address that on a case-by-case basis.

22 MEMBER DEFALCO: Thank you.

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1 MR. McFADDEN: Absolutely.

2 MEMBER GOODMAN: I also had a question  
3 about the simulcasting arrangements. Like given  
4 your example, if I am an advertiser, currently I can  
5 go compete with Peter. You guys can compete for my  
6 dollars.

7 Now, if you are into simulcasting  
8 arrangement, how does that affect my ability as an  
9 advertiser to engage in that kind of behavior?

10 MR. McFADDEN: Totally unchanged,  
11 because the viewer will continue to receive the two  
12 separate streams of programming. So it will just  
13 be -- will be broadcasting from the viewer's  
14 perspective on entirely different channels.

15 MEMBER LIEBERMAN: So I also had a  
16 question about the simulcasting.

17 MR. McFADDEN: Okay.

18 MEMBER LIEBERMAN: So the 3.0 is going  
19 to be offering as well as the 1.0 for the consumers  
20 that have televisions that haven't been upgraded.  
21 Will the 1.0 version be of the same resolution and  
22 same that they are receiving prior to that sharing

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1 arrangement?

2 MR. McFADDEN: That's a great question  
3 and thank you for asking that. It is an important  
4 consideration. Obviously, broadcasters have  
5 every incentive and wants to maintain the highest  
6 quality signal that they can, because that is our  
7 business. Serving viewers and offering them the  
8 best picture, that's what we do.

9 We certainly envision doing that. Many  
10 stations are required to offer, for example, an HD  
11 signal under their network contracts, and so they  
12 will continue to do that. There may be cases during  
13 the transition where stations -- not every station  
14 will be able to continue to offer an HD signal. We  
15 think those will be extremely rare scenarios, but  
16 that is one reason that we are seeking to implement  
17 this transition under the Commission's current  
18 rules, which only require broadcasters to offer an  
19 SD signal.

20 There is an important caveat that I want  
21 to throw out there which is the Commission has  
22 already conceptually embraced this idea with

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1 respect to the hopefully soon to be concluded  
2 Incentive Auction under which stations can  
3 participate in channel-sharing arrangements.  
4 This -- these simulcasting arrangements would be  
5 conceptually virtually identical to  
6 channel-sharing arrangements.

7 So the Commission is not imposing an HD  
8 requirement or any kind of resolution requirement  
9 on stations participating in channel-sharing  
10 arrangements. Similarly, we think the same logic  
11 would apply here.

12 MEMBER LIEBERMAN: I just -- one  
13 follow-up.

14 MR. McFADDEN: Sure.

15 MEMBER LIEBERMAN: I want to also ask  
16 about multi-cast and whether or not that may  
17 disappear under people continuing to get the 1.0,  
18 but in terms of the end date of the transition, I  
19 understand it's voluntary, there is no end date, but  
20 there could come a time when some people just have  
21 not converted. And I understand that you are  
22 talking about you are not asking for any subsidy,

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1 but for low-income consumers who, you know, have not  
2 been able to purchase new television sets, what do  
3 we do at the end in order to ensure people aren't  
4 losing services?

5 MR. McFADDEN: So that's another great  
6 question, Ross, you are two for two. So one of the  
7 things that we have specifically agreed with some  
8 commenters on, such as NCTA and I believe AT&T said  
9 this as well, is that the issues around a sunset  
10 potentially of the current standard should be  
11 addressed in a separate proceeding. This is not a  
12 case where broadcasters would unilaterally decide  
13 on their own, you know what, that's it. We are done  
14 with the current standard.

15 Instead, the FCC would have to give  
16 people permission to stop.

17 To get to your question of what do we do  
18 with people who have been -- have not adopted new  
19 equipment whenever that time frame might arise,  
20 frankly, we are going to have to cross that bridge  
21 when we get to it.

22 One thing that I probably should have

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1 mentioned earlier is there are options for people  
2 to buy equipment that would allow them to receive  
3 the new signal without going to the full step of  
4 upgrading their whole television set. We are  
5 confident that there will be dongles, which is a  
6 terrible word, but I think you all know what I mean.

7 The idea that you could have a device  
8 that is capable of receiving the ATSC 3 data signal  
9 that you could just plug in to your current set to  
10 allow you to continue to receive programming. That  
11 would, obviously, be a much lower cost option than  
12 upgrading your entire set.

13 MEMBER LIEBERMAN: Okay.

14 CHAIR BARTHOLME: Ken? Ken, can you  
15 raise your --

16 MEMBER McELDOWNEY: Oh, I did. Better?

17 CHAIR BARTHOLME: Yes.

18 MEMBER McELDOWNEY: Okay. Yeah. I  
19 mean, I'm concerned -- I just don't see how you are  
20 going to reach a critical mass for the voluntary  
21 standard, because you are talking about a  
22 relatively small subset of people who watch TV and

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1        somehow you have to, one, convince the broadcasters  
2        to start doing the new Next-Generation at the same  
3        time. Then you have to convince the manufacturers  
4        that serve the customers out there. Plus, you have  
5        to convince the customers that it's going to be a  
6        significant enough upgrade that they've got to  
7        spend \$700 or \$800,000 -- \$700 or \$800 to get a new  
8        TV set. And I guess part of my concern is I know  
9        you are talking about it being voluntary. I just  
10       can't see how it is ever going to work without a  
11       sunset.

12                    MR. McFADDEN: I would like to address  
13        that in two ways. First, and I don't mean -- well,  
14        let me just say I think what broadcasters are asking  
15        for is permission to take that risk and let us worry  
16        about that risk. Let us absorb that risk. We  
17        acknowledge that there is a risk. We are just  
18        asking for permission to take it.

19                    Second, I just want to emphasize, you  
20        know, I work for the National Association of  
21        Broadcasters. We get direction from our board  
22        consisting of member stations telling us what to do.

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1 I'm here pushing for the adoption of  
2 Next-Generation Television precisely because  
3 broadcasters are excited about it.

4 Convincing broadcasters to be  
5 interested in the ability to do more with their  
6 current spectrum is not going to be a heavy lift.  
7 And I would also say that convincing the consumer  
8 electronics industry to begin to offer equipment  
9 with these tuners is also not going to be a heavy  
10 lift, because they are already on-board.

11 And again, the United States is not  
12 doing this alone. South Korea has already adopted  
13 the ATSC 3.0 standard and they will be beginning  
14 transmissions in it. In fact, I think they have  
15 already begun some transmissions in it.

16 And so I think the idea of seeding the  
17 marketplace with compatible equipment will happen  
18 not only domestically, but internationally.

19 CHAIR BARTHOLME: Debbie?

20 MEMBER BERLYN: Yeah, a very simple  
21 question. I was wondering if you have any fact  
22 sheets on this or information on your website that

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1 those of us who need to explain this to others could  
2 use that would be helpful?

3 MR. McFADDEN: Yes and yes. We do have  
4 information available on our website. I will also  
5 give you a card and anybody else who wants one and  
6 I will be happy to follow-up with you and send you  
7 more information.

8 MEMBER BERLYN: Great. Thank you.

9 CHAIR BARTHOLME: And we would be happy  
10 to funnel that. If you issued it our way, we can  
11 get it out to the Full Committee.

12 MR. McFADDEN: Terrific.

13 CHAIR BARTHOLME: One of the things  
14 that you mentioned when you were talking about this  
15 is the ability to more specifically locally target  
16 weather alerts and things like that. Is that going  
17 to come from consumer self-registering for those  
18 or will there be some sort of data location  
19 information that is being collected by this  
20 Next-Generation technology and then that makes a  
21 decision of how to send out those alerts to the  
22 consumers?

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1 MR. McFADDEN: Yeah, so the idea of  
2 being able to offer integrated services,  
3 interactive services, advanced emergency alerts,  
4 those are things that we can do for consumers who  
5 have a broadband connection. Our signal will be  
6 able to integrate the broadband connection, so we  
7 could offer those kind of integrated services. So  
8 location information would likely come from  
9 someone's broadband connection.

10 CHAIR BARTHOLME: Okay. Great.  
11 Thank you. Irene?

12 MEMBER LEECH: So what about the  
13 consumers who have limited broadband connection and  
14 who have caps? For example, right now, at my house  
15 we are paying \$225 a month for 50 gig, so that limits  
16 a lot of the choices that we could make. But that  
17 -- I keep comparison shopping and I can't seem to  
18 get it better.

19 MR. McFADDEN: I would like to commend  
20 to you the possibility of buying an over-the-air  
21 antenna, so that you could receive television  
22 programming for free over-the-air. The benefits

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1 to you, as that kind of consumer or to a consumer  
2 that doesn't have broadband at all, would be from  
3 an ATSC 3.0 transition, would be that the Next-Gen  
4 signal would still allow you to receive a much  
5 better picture or additional multi-cast streams  
6 that could offer more diverse programming  
7 opportunities and better sound.

8 Because the new standard allows us to  
9 adjust our signal in different parts of our service  
10 area, we would still likely be able to offer some  
11 degree of targeted emergency alerting based on  
12 where we know where you sit in a service area, but  
13 it wouldn't be as robust or interactive.

14 CHAIR BARTHOLME: Mark?

15 MEMBER DEFALCO: Just a real quick  
16 question. Oh, I'm sorry. Just a real quick one.  
17 Did South Korea roll the site the same way on a  
18 voluntary basis? And, you know, the way you have  
19 laid it out, is that what they did to it with their  
20 implementation?

21 MR. McFADDEN: So South Korea has a more  
22 ambitious goal. They have mandated that the 2018

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1       Olympics be shown in Ultra High Definition. So the  
2       way to get there was ATSC 3.0. So they are going  
3       about this a different way than we envision. I  
4       don't know if they have yet specified a flash cut.  
5       I'll look into that.

6               CHAIR BARTHOLME: Real quickly, are  
7       there any questions from the phone? Irene, last  
8       question.

9               MEMBER LEECH: I was just going to ask  
10       whether -- just South Korea is so much more densely  
11       populated and it's not nearly as big of an area, it's  
12       a different situation than we are facing, I believe.

13              MR. McFADDEN: Sure. Although we have  
14       been through television transitions before. We  
15       transitioned to color. We transitioned to DTV.  
16       And so we think we can survive another transition.  
17       And ultimately, we believe that viewers are  
18       compelled by programming. If we offer a better  
19       service, we think people will want it.

20              CHAIR BARTHOLME: All right. Thank  
21       you for joining us, Patrick.

22              MR. McFADDEN: Thanks so much for your

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1 time.

2 CHAIR BARTHOLME: Appreciate it. So  
3 up next on the agenda, we are going to have a  
4 presentation that will provide us with an update on  
5 the Incentive Auctions. Charles Meisch, Jr. is a  
6 senior advisor for the Communications and Policy  
7 Group related to Incentive Auctions Task Force at  
8 the FCC. So welcome, Charles.

9 MR. MEISCH: Hi.

10 CHAIR BARTHOLME: Thanks for making  
11 time.

12 MR. MEISCH: Absolutely.

13 CHAIR BARTHOLME: And do you have a  
14 deck?

15 MR. MEISCH: I do have a deck.

16 CHAIR BARTHOLME: Okay. Then if you  
17 sit there, you are queued-up and you can control it  
18 right from the laptop then.

19 MR. MEISCH: Perfect. Okay. Well,  
20 thank you all for inviting the Task Force to speak  
21 today and provide an update. Scott, thank you for  
22 your help this week getting it prepared.

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1           So to look back, it was just quite -- not  
2 quite a year ago that one of my colleagues from the  
3 Task Force came to brief you all on the status of  
4 the Incentive Auction and, at that point, we were  
5 still two months away from starting the auction.

6           As I sit here today, if you have been  
7 reading the news, you know that, you know, the  
8 auction now is nearing its end. So the timing of  
9 this meeting, this briefing really couldn't be  
10 better.

11           I have got four goals I'm hoping to  
12 achieve before taking your questions.

13           First, I want to quickly recap what has  
14 happened with the auction over the last year.

15           Second, I want to report to you on the  
16 Consumer and Taxpayer Benefits that we already know  
17 of as of today.

18           Third, we will take a look at what is  
19 happening next, what will happen with the rest of  
20 the bidding, when we will announce the results and  
21 when viewers will learn what is happening to  
22 stations and their markets.

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1           And finally, I want to update you on the  
2 Commission's plans for a smooth post-auction  
3 transition as stations move to new channels and  
4 Forward Auction winners deploy equipment with the  
5 spectrum that they will win this auction.

6           And most importantly, report on our  
7 plans to educate consumers about how to retain  
8 access to the channels on which they rely.

9           And I think everyone here knows the  
10 Incentive Auction is really the first attempt  
11 anywhere to repurpose spectrum for 21st Century  
12 uses, using a two-sided auction: A Reverse Auction  
13 among broadcasters bidding to relinquish their  
14 spectrum rights and a Forward Auction which bidders  
15 for wireless licenses could obtain that repurposed  
16 spectrum.

17           The Incentive Auction is unique among  
18 the FCC's previous spectrum auctions in that, one,  
19 we didn't determine the supply of spectrum to be  
20 sold. Rather, the broadcast industry would do so  
21 based on their participation level.

22           Second, there would be a cost to acquire

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1 that supply of spectrum.

2 And third, demand, measured in the  
3 revenues from the Forward Auction, would be to cover  
4 those costs. And if they did not, then we would  
5 need a mechanism for lowering the supply to meet  
6 that demand.

7 The system the Commission designed at  
8 Congress' direction and with its input would offer  
9 all three of those variables. So here is what  
10 happened. Here is what has happened since last we  
11 met:

12 On March 29, 2016, eligible  
13 broadcasters made their initial commitments to  
14 participate in the auction at the opening bid prices  
15 we had offered them back in the fall of 2015.

16 Based on that robust participation, we  
17 were able to begin the auction at a clearing target  
18 of 126 megahertz. This is the highest target among  
19 the nine possible band plans adopted by the  
20 Commission with a supply of 100 megahertz of  
21 licensed spectrum.

22 Bidding in Stage 1 of the Reverse

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1 Auction yielded a clearing cost of more than \$86  
2 billion. Bidders in the Forward Auction put forth  
3 about \$23 billion. Because the revenues did not  
4 cover that clearing cost, we moved on to Stage 2.

5 In Stage 2, we lowered the clearing  
6 target to 114 megahertz, 90 of which would be  
7 licensed, meaning that we would need to buy fewer  
8 station licenses in the Reverse Auction, which then  
9 lowered the clearing cost to \$54 billion against the  
10 Forward Auction revenues of \$21 billion.

11 Again, because the revenues did not meet  
12 or exceed that cost, we moved on to a third stage.  
13 In the third stage, we lowered the clearing target  
14 down one more level to 108 megahertz cleared with  
15 80 being available at license. The clearing costs  
16 for that stage were \$40.3 billion against just shy  
17 of \$20 billion in revenue for this, again, reduced  
18 supply.

19 So we are currently in Stage 4 of the  
20 auction and, as of January 18th, we know that Stage  
21 4 will be the final stage of the auction. At a  
22 clearing target of 84 megahertz, bidders

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1 established a clearing cost of just over \$10  
2 billion. Revenues coming in to this morning's  
3 bidding were a little over \$18.5 billion.

4 These revenues meet the two prongs of  
5 the Commission's Final Stage Rule. The clearing of  
6 the cost component that I described earlier, as well  
7 as a fair competitive price component of a \$1.25 per  
8 megahertz pop average in the top 40 markets.

9 So what does this mean for consumers and  
10 taxpayers? Knowing that the auction will end in  
11 Stage 4 tells us that we will have 70 megahertz of  
12 license low-band spectrum, which will be the  
13 bedrock of or part of the bedrock of America's  
14 continuing global leadership in wireless service,  
15 including 5G.

16 We know that we will have 14 megahertz  
17 of new unlicensed use spectrum for innovative new  
18 devices and services. We know as of right now that  
19 at least \$6 billion will go to the Treasury into the  
20 American taxpayer for deficit reduction.

21 And finally, we know that \$10 billion  
22 will go to the winning participating broadcasters

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1 who will actually receive part of the economic  
2 benefits of repurposing the spectrum for wireless  
3 use. And because they have the option of  
4 continuing to broadcast, if they bid to  
5 channel-share or move to a lower frequency, this is  
6 money that can go back to be reinvested into  
7 programming other community-focused activities.

8 So now that we know where the auction  
9 will end, I want to take a moment to discuss when  
10 it will end and what happens next.

11 As of this morning, bidding in the clock  
12 phase of the Forward Auction continues. By rule,  
13 the clock phase closes when there is no excess  
14 demand for any product in any market. In other  
15 words, if all 416 markets have settled, except for  
16 a bidding war in say Guam, we continue the rounds  
17 until that bidding concludes.

18 I have often used Guam as a hypothetical  
19 example, but sometimes reality kind of illustrates  
20 the point for you. As of around 10:00 yesterday  
21 morning, in the PA that covers Guam and the Northern  
22 Mariana Islands, you can see that there is actually

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1 excess demand in both of the categories of the  
2 licenses there.

3 So we use this as an illustrative  
4 example that when you see equilibrium against  
5 supply and demand in those -- in all of these  
6 markets, that's when bidding the clock phase would  
7 close.

8 So then what happens? At that point,  
9 bidding will be concluded and we will hold an  
10 assignment phase in which the winning Forward  
11 Auction bidders will have the opportunity to bid  
12 further for specific frequencies.

13 We will release training materials a few  
14 business days after the clock phase closes. We  
15 will give the bidders an opportunity to preview and  
16 practice with the bidding system and then begin the  
17 bidding. And we expect that process to take  
18 several weeks.

19 At that point, all bidding will be  
20 concluded. And the staff will prepare and release  
21 a public notice announcing the conclusion of the  
22 auction. That public will -- that public notice

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1 will contain three important bits of information.

2 First, a list of all the Reverse Auction  
3 winners, their incentive payments amounts and the  
4 bid option. Are they going off-air? Are they  
5 channel-sharing? Did they move to another  
6 frequency?

7 Secondly, a list of Forward Auction  
8 winners and by market, including the prices paid per  
9 license, number of licenses they won and the  
10 frequencies for which they will then later apply for  
11 licenses.

12 And third, a list of the new channel  
13 assignments for all auction-eligible stations  
14 staying on the air.

15 So at that point, the public will know  
16 which stations are moving to new channels and which  
17 are going off-air and their markets, if any.

18 The public notice will also signal the  
19 commencement of the 39-month post-auction  
20 transition period. The Task Force and the Media  
21 Bureau proposed a phased broadband -- Broadcast  
22 Transition Plan back in late September by which

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1 stations would be assigned to one of 10 phases, at  
2 the end of which they would have to cease operating  
3 on their pre-auction channel.

4 We proposed this to ease coordination  
5 issues among stations and limit the risk of harmful  
6 interference between stations during testing  
7 ensuring the viewers maintain clear reception.

8 We have received comments from the  
9 public and stakeholders and I expect that we will  
10 have the final plan actually out later today. But  
11 let me just highlight a couple of things we propose  
12 that particularly should ease the transition for  
13 consumers.

14 First and foremost, the plan proposed  
15 limiting the number of times that consumers in any  
16 market would have to rescan for Channel 2.

17 And secondly, we propose giving  
18 stations that are considered complicated, or I  
19 think the term actually is super complicated,  
20 additional time to make their transition by  
21 scheduling them in later phases of the 10. The idea  
22 here being to ease coordination, particularly on

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1 complicated tower sites.

2 If you are familiar with the  
3 arrangements at the Empire State Building or Mount  
4 Sutro in the Bay Area, you have got massive  
5 complexes with a number of different users. Some  
6 are stations who may be moving channels, some may  
7 not be moving channels, some may not be TV stations.

8 You have got AM/FM radio. You have got  
9 wireless, mobile wireless sites. The idea here is  
10 to make sure that we can very carefully, you know,  
11 give the time for those different uses to  
12 coordinate, so there is no disruption in anybody's  
13 service, not just TV.

14 It appears to me that I have gotten a  
15 little behind on my slide deck. Okay. So helping  
16 consumers understand all of this is a challenge that  
17 we feel can only really be met with a  
18 well-coordinated group effort, but we are taking  
19 the lead.

20 The Commission, Consumer and  
21 Governmental Affairs Bureau is preparing for an  
22 extensive consumer outreach effort geared toward

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1 reaching all affected Americans where they live and  
2 work. But we have already begun to do some work on  
3 this and the things that we can do.

4 For instance, we are recording a new  
5 PSA-style video reminding over-the-air viewers how  
6 to rescan their tuner for new or moved channels and  
7 will provide some basic instructions on how to do  
8 so.

9 We are preparing scripts and  
10 troubleshooting guides for our consumer call center  
11 staff. We are already providing and continue to  
12 update a Consumer Q&A on the auction, on the  
13 Incentive Auction webpage. We are preparing or  
14 updating our consumer guides, so that viewers  
15 understand the type of over-the-air antenna they  
16 may need in their market going forward.

17 And wherever possible, as I think most  
18 of you know, we want to make these materials  
19 available in multiple languages. We already do  
20 this first translate to Spanish. Our -- we are  
21 making arrangements right now to add our capacity  
22 to do this in other languages, particularly Asian

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1 and Pacific Islander dialects.

2 So we're hoping to have more to report  
3 on that by next we speak.

4 I recall that all the stations that are  
5 transitioning are obligated to comply with your  
6 notification requirements that were established in  
7 2014 in the Incentive Auction Report and Order.  
8 Those obligations include -- indicate the date that  
9 they are moving or going dark, where viewers will  
10 be able to watch that station after that date, if  
11 applicable, and how to get more information.

12 Once the auction concludes and the  
13 restrictions on certain prohibited communications  
14 among bidders is lifted, we will be able to convene  
15 broader meetings with stakeholders to coordinate  
16 efforts nationally, regionally and locally. And  
17 we will have sufficient time to do so.

18 If bidding in the clock phase ended  
19 today, hypothetically, here is what we look -- here  
20 is sort of a layout of the time line we have in front  
21 of us.

22 As I mentioned before, we have got

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1 several weeks to do the assignment phase, both the  
2 bidder education and training and then the actual  
3 bidding.

4 After that point, we anticipate we would  
5 need a few weeks to finalize the channel assignment  
6 plan and the rest of the information that will go  
7 into the public notice closing the auction.

8 From that point, you typically, we  
9 haven't put a schedule out on this yet, but if you  
10 look at past auctions as prologue, it takes about  
11 three months to start getting payments in for the  
12 Forward Auction license winners. That is the first  
13 point at which we would be able to then begin paying  
14 the winning broadcasters.

15 Their obligations require 30-days  
16 public notice if they are going off the air as a  
17 result of the auction and they must be -- but they  
18 must be off by 90-days after they get paid. So, you  
19 know, this easily puts us if -- again, if the auction  
20 -- if the clock phase ended today, that puts us, you  
21 know, well close to the fall before any station  
22 would go dark. We are not there yet, obviously.

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1 So but just to give you a rough idea of the time line  
2 we may be looking at.

3 As we coordinate consumer outreach, I  
4 expect that this group will hear much more from us  
5 and we appreciate any guidance that you have to make  
6 this transition successful beginning right now.  
7 So with that, I am happy to take your questions.

8 CHAIR BARTHOLME: Krista?

9 MEMBER WITANOWSKI: Hey Charles, how  
10 are you?

11 MR. MEISCH: Good. How are you?

12 MEMBER WITANOWSKI: I have two  
13 questions.

14 CHAIR BARTHOLME: Krista, your mike is  
15 not on.

16 MEMBER WITANOWSKI: Oh, it's not on? I  
17 should know better. I have two questions. Can you  
18 let us know if the FCC has sent out the confidential  
19 letters to the individual broadcasters yet after  
20 this last statement to let them know where they are  
21 going to end up?

22 MR. MEISCH: Right. Sure. Am I on?

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1 I can say not yet. I think what we propose doing  
2 or at least what we expect to do is it would take  
3 about 2 to 4 weeks from the Final Stage Rule.

4 MEMBER WITANOWSKI: Okay.

5 MR. MEISCH: Which was just a week ago.  
6 So it -- but yeah, it will be coming.

7 MEMBER WITANOWSKI: Great. And my  
8 second question is, in your opinion, when do you  
9 think the quiet period is going to end, in your  
10 opinion, based on how things are going?

11 MR. MEISCH: So rather than give you my  
12 opinion, let me tell you, let me tell everyone what  
13 is happening. So as you know, the rules are, you  
14 know, as it applies broadcasters, the closing PN is  
15 that date and then I think for the winning bidders  
16 on the -- were all affected entities or covered  
17 entities on the Forward Auction side, as evidenced  
18 by either the long form or -- yeah, but certainly  
19 I know on the broadcaster's side when we put out the  
20 transition plan proposal, the commenters asked us  
21 to consider, you know, releasing that a little bit  
22 earlier or making some modifications to it, so that

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1 is as recently, I think, as this week we have also  
2 received comments asking us to consider that.

3 So that's before us, that's as much as  
4 I can say about it now, so that's kind of weird,  
5 that's where things stand.

6 MEMBER WITANOWSKI: Okay. Thanks.

7 CHAIR BARTHOLME: Any other questions  
8 in the room or on the phone? I was wondering if  
9 there had been any analysis done about the number  
10 of markets across the country that might be losing  
11 sort of unique in-language programming as a result  
12 of the auction or might have the competition in  
13 local content being greatly reduced from say maybe  
14 two or three stations down to a single remaining  
15 station?

16 MR. MEISCH: So in press reports, I  
17 think, I have seen other entities doing that. I  
18 think our position has been it is really hard to  
19 handicap that until we have the auction. And we  
20 will know very soon, as I indicated, you know, the  
21 release of the information of actually who has won,  
22 who is moving and who is going off-the-air will be

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1 out soon.

2 And then I think, you know, more  
3 particular to your point, then we will be able to  
4 tell and there will be windows for any low-power or  
5 ineligible class A station who may meet some of  
6 those, you know, contents you are talking about.  
7 We will have an opportunity, if they are displaced,  
8 to come in and have us help them finding a new  
9 channel.

10 CHAIR BARTHOLME: Great. All right.  
11 Well, I think we will break early for lunch then if  
12 nobody else has any other questions.

13 MR. MEISCH: All right. My pleasure.

14 CHAIR BARTHOLME: Scott, do you have  
15 some lunch announcements?

16 MR. MARSHALL: I do. We will be  
17 convening in our breakout sessions at 1:15. There  
18 will be a bridge for each room. The USF -- I sent  
19 you all this information last night, though but to  
20 recap, the USF, Digital Inclusion Group will remain  
21 here in the CMR. Please, speak into the  
22 microphones there and identify yourself, so that we

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1 can get good capturing here in the room. It will  
2 not be broadcast.

3 The Tech Transitions Group will be just  
4 down the hall to my right in TWA 402445. It's on  
5 the left hand side of the corridor right after the  
6 intersecting corridor that leads out to the lobby.  
7 And Steve and Mark will set up the call there for  
8 those wishing to dial in.

9 The Privacy Working Group will be up the  
10 stairs behind me and around the corner to the right,  
11 448468. And we will be there, of course, at 1:15.

12 We will be coming back here at 1:4 --  
13 2:45 for report backs to the Full Committee. If  
14 people follow the proceedings on the Internet, you  
15 might want to check the videostream to see if we are  
16 actually back in session, but we are not quite sure  
17 how long these working groups might require. So we  
18 may, in fact, be a little earlier than 2:45.

19 So that's the story. Any questions?

20 CHAIR BARTHOLME: So really quickly, if  
21 we could have people interested in going to either  
22 the Tech Transitions or the Privacy Group ready in

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1 the room here at 1:10.

2 MR. MARSHALL: Perfect.

3 CHAIR BARTHOLME: Debbie can lead the  
4 Privacy Group up to that room and Steve can lead the  
5 Tech Transitions Group down the hall to that room.

6 MR. MARSHALL: That will work.

7 CHAIR BARTHOLME: And then everybody  
8 should be where they need to be.

9 MR. MARSHALL: All right.

10 CHAIR BARTHOLME: And able to locate  
11 it.

12 MR. MARSHALL: Anything else?  
13 Otherwise enjoy lunch. Thanks, everybody.

14 (Whereupon, the above-entitled matter  
15 went off the record at 12:22 p.m. and resumed at 2:46  
16 p.m.)

17 CHAIR BARTHOLME: All right. So we are  
18 back at 2:45 and we should get started back up. I'm  
19 sure some people have planes to catch and other  
20 things they need to do on a Friday afternoon, so we  
21 will try to stay on time and on task here.

22 Hopefully everybody had some productive

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1 working group sessions. Thank you for everybody  
2 who stuck around and participated in those. I sat  
3 in on a couple and I felt like there was a lot of  
4 good activity going on and I'm glad that we are well  
5 under way and making progress.

6 On the topic of working groups very  
7 briefly, if you do have suggestions for other  
8 possible working group areas, we welcome those. We  
9 would be happy to add a fourth or fifth working group  
10 if it seems appropriate and it is timely.

11 You will remember from the beginning one  
12 of the things that we brought up was that in this  
13 CAC our goal is going to be to have working groups  
14 that were tied to things that were happening at the  
15 Commission and being timely rather than just having  
16 blanket broad-topic working groups that existed in  
17 perpetuity.

18 So if you feel like there is an issue  
19 that we are not covering that makes sense to cover,  
20 let Scott or I know and we will be happy to start  
21 a conversation about getting one up and going.

22 Typically, after the working group

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1 sessions, we have sort of updates from the working  
2 group chairs, so we are going to get rolling with  
3 that. And I'm going to start with Amina and Olivia  
4 from the USF and Digital Inclusion Working Group to  
5 let us know how they are going.

6 MEMBER FAZLULLAH: Thank you. So my  
7 update is, first, we are just going to do a lot of  
8 information sharing. The National Verifier Plan  
9 that just came out from USAC, I'm going to take a  
10 look at the Boulder Valley petition and the  
11 Microsoft petition on E-Rate.

12 We are passing around some outside  
13 reports. Free Press put together, I think it is  
14 called, Digital Deny. And of course, we are taking  
15 a look at Chairman Pai's Digital Empowerment  
16 Agenda.

17 The most recent CAF II decision for New  
18 York and then the FCC's recent release of the  
19 Digital Inclusion Plan. And then also some of the  
20 Digital Inclusion definitions, both from the FCC's  
21 Digital Inclusion Plan and also from the NTIA.

22 We are planning to put together a

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1 recommendation building off of the Digital  
2 Empowerment Agenda and also referencing the FCC's  
3 Digital Inclusion Plan. So we hope that will be  
4 available for the next CAC as a recommendation to  
5 vote out, but, you know, I won't put too hard of a  
6 time line on it, because it's a pretty ambitious  
7 piece of work so far.

8 We also suggested potentially doing a  
9 workshop before one of the CAC meetings on Digital  
10 Divide/Digital Inclusion issues. And this might  
11 be a way to allow the FCC to sort of dive into the  
12 issue that they have identified in the Digital  
13 Empowerment Plan as one of their premier issues, but  
14 would also give folks at the CAC the ability to, you  
15 know, extend a trip around their next CAC meeting  
16 and actually participate within a Digital Inclusion  
17 Workshop. So that was sort of one of our  
18 suggestions.

19 And then we also wanted to request  
20 updates going forward, so for the next CAC meeting,  
21 we are hopeful to get updates on USF programs from  
22 WCB and the Digital Inclusion Plan from CGB.

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1           And last, we had a question on the  
2 Lifeline Awareness Week just, you know, when it will  
3 be rescheduled. Our understanding was that it  
4 might be rescheduled for some time in the spring,  
5 so we just wanted to get some feedback on that as  
6 well.

7           CHAIR BARTHOLME:     And if we get  
8 feedback on any of that prior to the next meeting,  
9 we will be sure to push that along to make sure that  
10 everybody has got that information.

11           MEMBER FAZLULLAH:   Great. Thank you.

12           CHAIR BARTHOLME:   So next we will move  
13 to the Technology Transitions Working Group.  
14 Steve and Mark, you guys are up.

15           MEMBER POCIASK:     Okay. This is Steve.  
16 Yeah, Mark and I, I think we had a pretty successful  
17 discussion today. We have nine action items coming  
18 out, to are presentations and seven are ideas that  
19 are still under development. I'll just list  
20 through them quickly.

21                                 In terms of the presentations, Mark, my  
22 co-chair, is going to be looking into getting AT&T

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1 as a speaker on one of our sessions to talk about  
2 the IT transition and the abrupt ending of the  
3 trials, a discussion of questions regarding  
4 Wireless Local-Loop, CAF money for rural areas and  
5 other issues such as caps on local wireless loops  
6 that might be used to replace DSL.

7 In addition, we are going to have -- we  
8 are going to try to get an FCC expert to present on  
9 the IP transition. Among other things, we are  
10 going to explore this concept called "unannounced  
11 forced implementation," where it may be that a  
12 particular segment of the network is converted to  
13 fiber without necessarily going IP and there is no  
14 214 filed.

15 So what we are looking to do is find out  
16 if there are any issues related to that.

17 In terms of ideas for potential  
18 recommendations, we are just going to explore the  
19 following ideas.

20 One is regarding a general notion of  
21 regarding the transitions. Like including copper  
22 to fiber, the impact on unrepresented elderly rural

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1 consumers/people where English is not a second  
2 language and so on. We may even consider other  
3 aspects of it regarding people who don't connect and  
4 training.

5 Paul Goodman is going to take a shot at  
6 developing that. Regarding some subsidy issue on  
7 the IP transition, Ellrod is going to look a little  
8 bit into that and later, you know, we will share that  
9 with the USF Digital Inclusion Group, if it looks  
10 like it is something that will be going further.

11 We are also going to be looking at the  
12 potential for state and local impediments to the  
13 development of Next-Generation broadband and what  
14 we will have there is Paul, Ellrod, Irene, and  
15 possibly Kathryn might be looking into model code  
16 and guidelines.

17 The Next-Generation TV, the  
18 presentation we had today, I'll write up a paragraph  
19 for consideration and we have another-- I think  
20 Larry will be writing up something on spectrum and  
21 repacking.

22 And then so what we will do, let's see

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1 if -- I wonder if I missed anything here? Well, in  
2 any case, what we will do is when we get our  
3 presentations, the AT&T and the FCC presentations  
4 at our next call, we will probably go through these  
5 concepts and then we will go through the process of  
6 prioritizing them and seeing if there is a  
7 recommendation that we can flesh out.

8 So that's where we are right now. So  
9 still exploring ideas.

10 CHAIR BARTHOLME: Thank you, Steve.  
11 Debbie, Privacy?

12 MEMBER BERLYN: Thank you, Ed. So the  
13 Privacy Working Group has one action item, a fairly  
14 significant one. We have, by the Privacy Order, a  
15 task to come up with a standardized privacy notice  
16 and we are working hard on doing that.

17 We actually started that task back in  
18 2016. I can't remember the exact date, Ed, but it  
19 was --

20 MR. MARSHALL: December 5.

21 MEMBER BERLYN: It was December. I  
22 knew that Scott would remember the exact date that

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1 we started that task. We have been working hard to  
2 do that. And as part of that task, we invited in  
3 a couple of guest speakers a few weeks ago: Lorrie  
4 Cranor, who until about a week and a half ago was  
5 the Chief Technologist at the FTC, and Serge  
6 Egelman, who is a professor at the University of  
7 California, Berkeley, and both of them experts on  
8 privacy issues, came in and talked to us about  
9 privacy disclosures. So that was very helpful.

10 We have done our own research and now we  
11 are finally starting to put pen or magic marker to  
12 paper and we sat down today as a group and started  
13 to sketch out some thoughts and we will continue to  
14 do that and I think we are going to make great  
15 progress over the next couple of months.

16 We will be coming to you all with a  
17 draft, at some point, and we will look to all of you  
18 with some feedback as well to meet our deadline of  
19 June. So I look forward to showing you something  
20 soon.

21 CHAIR BARTHOLME: And we would add to  
22 that that notice for those meetings has been going

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1 out to the full CAC, because we know that this is  
2 a topic that a lot of people have concerns about,  
3 care about and want to provide input on.

4 Feel free to hop on one of the calls,  
5 listen in, reach out to people that you know are  
6 members of the group or reach out to Scott, myself,  
7 Debbie directly if you have input, feedback, things  
8 that you think aren't being covered that should be  
9 addressed or have, you know, a concern about the  
10 direction things are headed. We are eager to hear  
11 that. We are hoping to collect those as the process  
12 moves along, rather than getting bombarded with  
13 them at the end, because we are under an actual hard  
14 deadline of June 1st.

15 MEMBER BERLYN: Yeah. As Ed says, it's  
16 an open process, so we welcome everybody's  
17 participation. All the meetings, there is a  
18 conference call open line, so Scott always shares  
19 that phone number. We welcome everybody's  
20 participation as always. So, yes, thank you all.

21 CHAIR BARTHOLME: Now, you are going to  
22 get out of Doodle poll to set up the next meeting,

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1 correct, Debbie?

2 MEMBER BERLYN: Yes, we don't have a  
3 date yet for our next meeting, but it will be some  
4 time not next week, but the week after and Scott will  
5 notice that meeting for everybody.

6 CHAIR BARTHOLME: Okay. I think that  
7 wraps up the report backs, unless anybody else has  
8 any working group comments or thoughts?

9 MR. MARSHALL: Comments from the phone  
10 line?

11 CHAIR BARTHOLME: Any comments from the  
12 public? I don't see anyone in the room. You did  
13 not get any in advance?

14 MR. MARSHALL: No.

15 CHAIR BARTHOLME: Okay. So let's  
16 thank CTIA again for lunch and for breakfast,  
17 because that was much appreciated.

18 (Applause.)

19 CHAIR BARTHOLME: We are tentatively  
20 holding Friday, May 19th, as our next full CAC  
21 meeting date and that would be here in this room and  
22 Irene is already looking and saying grades are due.

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1                   MEMBER LEECH: No, they are due the week  
2 before, so I will be somewhere else.

3                   CHAIR BARTHOLME: Okay. If that is a  
4 conflict for you or you have already got some other  
5 stuff scheduled, please, reach out to us. One of  
6 the goals we were looking at in choosing that date  
7 was giving the Privacy Working Group as much time  
8 to finalize their work product as possible without  
9 running into the holiday weekend and then a June 1st  
10 deadline.

11                   Mondays and Fridays are typically the  
12 easiest days for us to be able to secure, and they  
13 might even be the only days when we are to secure,  
14 the Commission meeting room to have meetings. So  
15 your choices are normally limited to Monday or  
16 Friday and we thought that that was a good time line,  
17 given the task that we had in front of us.

18                   But again, if you -- if a lot of people  
19 have a conflict, we can look for another date.  
20 Please, reach out to Scott and myself, let us know  
21 and we will be happy to work with everybody.

22                   And then I think I need a Motion to

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1 Adjourn.

2 MEMBER BERLYN: Before a Motion to  
3 Adjourn, can I just say, Ed, great job for a first  
4 meeting.

5 CHAIR BARTHOLME: Thank you.

6 (Applause.)

7 CHAIR BARTHOLME: Now, do I get a motion  
8 to adjourn?

9 MEMBER BERLYN: And a motion to  
10 adjourn.

11 CHAIR BARTHOLME: Can I get a second?

12 MEMBER POCIASK: Second.

13 CHAIR BARTHOLME: All in favor?

14 (Chorus of ayes.)

15 CHAIR BARTHOLME: So moved. Thank  
16 you.

17 MR. MARSHALL: Take care, everybody.  
18 Thanks a lot.

19 (Whereupon, the above-entitled matter  
20 was concluded at 2:59 p.m.)

21

22

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