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

COMMISSIONERS PRESENT:
AJIT PAI, Chairman
MICHAEL O'RIELLY, Commissioner **

COMMITTEE MEMBERS PRESENT:
STEVE POCIASK, Committee Chairman
DEBRA R. BERLYN, National Consumers League
ZAINAB ALKEBSI, Deaf and Hard of Hearing Consumer Advocacy Network
SAM BRINTON, The Trevor Project
BARBARA BURTON, National Association of State Utility Consumer Advocates
FARHAN CHUGHTAI, USTelecom
JOSLYN DAY, Massachusetts Department of Telecommunications & Cable
B. LYNN FOLLANSBEE, USTelecom
MATTHEW GERST, CTIA
SUSAN GRANT, Consumer Federation of America *
JONATHON HAUENSCHILD, American Legislative Exchange Council
BRIAN HURLEY, America’s Communications Association - ACA Connects
JOHNNY KAMPIS, serving individually as a subject-matter expert, Special Government Employee
ERIC KOCH, serving individually as a subject-matter expert, Special Government Employee
SARAH LEGGIN, CTIA
VONDA LONG-DILLARD, AT&T
STEVEN MORRIS, NCTA - The Internet and Television Association
SHIRLEY ROOKER, Call for Action *
MICHAEL SANTORELLI, serving individually as a subject-matter expert, Special Government Employee
BARRY UMANSKY, Digital Policy Institute *
Welcome & Call to Order

Steve Pociask, CAC Chairperson, & Debra Berlyn, CAC Vice Chairperson

Steve Pociask, Chairperson of the Consumer Advisory Committee (CAC), called the meeting to order at 9:12 am. He welcomed CAC members and thanked them for their attendance.

Introductions & Meeting Logistics

Steve Pociask & Scott Marshall, CAC DFO

CAC members introduced themselves. Chair Pociask thanked CTIA for providing breakfast and lunch for today’s meeting. The CAC will have a hybrid teleconference and in-person meeting on February 13th from 2pm to 3pm to discuss the Robocall Working Group’s report. CAC’s next plenary meeting is tentatively scheduled for Friday, April 17th, and its September meeting is tentatively scheduled for the 23rd or 25th. Mr. Marshall asked members to confirm their availability on these dates.

Remarks of the Chairman & Commissioners

Remarks of Chairman Ajit Pai

Chairman Pai thanked members for their attendance and recognized Chair Pociask and Vice Chair Berlyn for their service. The FCC’s top consumer protection priority is the issue of unwanted robocalls. To address this issue, the FCC has enabled phone companies to block calls that are highly likely to be illegal, clarified that voice providers can immediately offer call blocking services by default, banned malicious caller ID spoofing of text messages and foreign calls, created a reassigned numbers database, taken aggressive enforcement action against bad actors, issued advisories, and conducted webinars and tele-town halls. The FCC cannot tackle this issue alone and relies on the assistance of consumer advocates.
Chairman Pai looks forward to the Caller ID Authentication Working Group’s recommendation that the CAC will be considering later today. He recently held the first official cross-border call authenticated by SHAKEN/STIR with Ian Scott, Chairman of the Canadian Radio-television and Telecommunications Commission. This call demonstrated their joint commitment in the fight against robocalls. Chairman Pai has made clear that he expects major voice providers to implement the SHAKEN/STIR framework by the end of this year. He thanked CAC for their February 2018 recommendation on the need for caller ID authentication, and for their September 2019 recommendation that service providers should 1) notify consumers if calls intended for them are blocked and 2) offer consumers a log of blocked calls. FCC staff is currently reviewing this recommendation. A multi-pronged and multi-stakeholder approach is needed to address robocalls.

Chairman Pai hopes that tomorrow, the FCC will adopt his proposal to establish 988 as the three digit number for suicide prevention and mental health assistance. He asked CAC to continue to give feedback on this and other consumer protection issues, and thanked them for their work.

Discussion
Member Brinton asked what proposals FCC has for public education on robocalls. Chairman Pai said it is important to conduct outreach and education efforts in the field and to be proactive when working with federal partners to conduct outreach. The FTC and state consumer protection agencies are helpful partners for conducting outreach. The FCC welcomes additional ideas. Chairman Pai thanked the Trevor Project and other organizations for their assistance on the 988 number designation.

Video Remarks of Commissioner Michael O’Rielly
Commissioner O’Rielly thanked CAC members for their time and service, and expressed his appreciation for the role CAC plays in channeling consumer input to FCC policy discussions. The FCC relies on public input to make the most informed decisions possible. Commissioner O’Rielly asked that, during today’s meeting, the CAC keep in mind their priority of acting on behalf of the paying public. It is important for consumers to have this representation, as there are lobbyists for industry but not the public. He added that every new burden imposed on the communications industry is passed on to the consumer in one form or another. The CAC should also consider the unintended consequences of government intervention.

Update on 5G and What It Means for Consumers
Presenter: Julius Knapp, Chief, Office of Engineering and Technology
The key lesson from past G roll-outs is to expect the unexpected. 5G will allow service to be faster and more reliable and will open up opportunities across sectors. It has reduced latency, which allows for real-time interactions. It is not a single frequency band; the combination of bands will create the power needed for 5G. FCC is working hard to ensure that it is providing the necessary spectrum and infrastructure access. 5G is critical for the U.S. economy and factories. One of FCC’s priorities is that the U.S. be a leader in this technology, which will take time to build out.

Discussion
Members thanked Mr. Knapp for his years of service. Member Koch asked Mr. Knapp to compare the U.S. with other countries in regards to 5G. Mr. Knapp said he thinks the U.S. is leading in 5G development, although others may disagree. The U.S.’s strengths are its innovation and creativity. Member Gerst asked about how to best overcome local level challenges by educating the public on the benefits of 5G. Mr. Knapp said the FCC needs to educate the public that the proper standards are in place to protect them from 5G’s potential dangers. Mr. Knapp described a number of products and services he anticipates will be developed in the near future. For these services, it is important to build in security measures and address privacy concerns from the start.

**Consumer and Governmental Affairs Bureau (CGB) Update**

*Patrick Webre, Chief, CGB*

Mr. Webre thanked members for their attendance. He is looking forward to CAC’s recommendation on consumer education around the implementation of SHAKEN/STIR caller ID authentication. He expressed appreciation for the work CAC has done and will do.

*Mark Stone, Deputy Chief, CGB*

In its action allowing voice providers to block calls that are highly likely to be illegal, the FCC asked if it should allow voice service providers (VSPs) to block calls on other grounds. This query received a high volume of responses, which staff is reviewing now. The FCC can administer the Telephone Consumer Protection Act (TCPA) to address cases in which the calls do reach consumers. In the past week, CGB has released two decisions on individual petitions. It is continuing its work on the reassigned numbers database. It will receive recommendations from the North American Numbering Council and work with other bureaus to put them out for public comment.

*Barbara Esbin, Deputy Chief, CGB*

The past quarter has been very busy for the Office of Intergovernmental Affairs (IGA) and the Office of Native Affairs and Policy (ONAP). ONAP, in conjunction with other bureaus, has continued FCC’s outreach to tribes and tribal organizations through workshops and presentations at external events. Recent and upcoming events primarily focus on the Rural Tribal Priority Window for new licenses in the 2.5 gigahertz band, which has the potential to increase the deployment and adoption of modern communication services on unserved and underserved tribal lands. ONAP and the Wireless Bureau have conducted numerous outreach events.

ONAP staff prepared and issued a public notice seeking comment on the effectiveness of FCC’s tribal engagement guidance. The guidance seeks to facilitate dialogue between tribes and carriers receiving high-cost Universal Service Fund (USF) support for service on tribal lands. FCC’s Native Nations Communications Task Force finalized and adopted its first report to the FCC in November. The report identifies obstacles to greater broadband deployment and adoption on tribal lands and offers potential solutions. The Task Force’s next task is to evaluate the effectiveness of FCC’s tribal engagement guidance, offering recommendations and best practices.

The IGA has participated in a variety of national, state, and local government organization meetings. The Intergovernmental Advisory Committee (IAC) adopted four reports in September.
The reports made recommendations on how to best identify state, local, and tribal barriers and incentives to telemedicine, ensure non-English speaking communities receive emergency alerts, fine-tune state, local, and tribal coordination for disaster preparation, response, and restoration efforts, and identified best practices for communications between state emergency managers and Emergency Alert System (EAS) state emergency communications committees to ensure EAS procedures are mutually understood. The FCC reauthorized the IAC for another two-year term. IGA is actively seeking IAC nominations from state, local, and tribal governments.

Diane Burstein, Deputy Chief, CGB
The Disability Rights Office (DRO) has worked to advance the foundation of the Telecommunications Relay Services (TRS). On September 18th, the FCC adopted an item to modernize the TRS rules by updating FCC’s definition of TRS to match that of the 21st Century Communications and Video Accessibility Act (CVAA). The FCC issued a further notice of proposed rulemaking to eliminate outdated equal access and multiple billing option requirements. In November, the FCC adopted a report and order to expand the TRS Fund contribution base to support Internet Protocol Captioned Telephone Service (IP CTS). The new funding approach will start with the 2020-21 TRS Fund year. FCC is examining previously filed comments on whether to grant applications from certain providers to offer IP CTS using only automatic speech recognition technology.

On October 30th, CGB released an order extending the video relay service (VRS) at-home call handling pilot program through April 30th, 2020 or the effective date of the FCC’s decision of whether to make the pilot program permanent. The program allows certified VRS providers to use ASL interpreters working from home work stations, given that certain rules are followed. In October, the FCC adopted a notice of proposed rulemaking (NPRM) to update its suspension and debarment rules, applying these rules to TRS programs and the National Deaf-Blind Equipment Distribution Program. It has not issued a date for comments. In October, it released its second report to Congress on video description, as required by the CVAA. The report highlights the need for additional described programming. The DRO is currently reviewing comments on a petition on caption quality issues. The Disability Advisory Committee is scheduled to meet in February 2020.

Eduard Bartholme, Associate Chief, CGB
Mr. Bartholme thanked members for their time and for the pace at which they have written recommendations. The FCC’s Complaints Division recently signed a new call center contract. The FCC will be celebrating the five year anniversary of the online Consumer Complaint Center later this month. The FCC appreciates James Brown’s work in maintaining the Complaint Center and the CAC’s input. The CGB is developing a consumer FAQ, tip card, and other outreach materials on 5G technology. The CGB recently issued a consumer alert on juice jacking. Juice jacking uses public charging ports to steal information from and load malware onto devices. Consumers are encouraged to use wall outlets to charge their phones instead. Another popular scam is open enrollment; CGB has consumer information on this issue. The CGB aims to use more data-driven content to highlight scam information in future posts.

The FCC recently released its second in-house animated video on emergency communications. It provided Spanish translation support for outage reports during recent natural disasters. Its
Consumer Guides webpage traffic has increased by five percent since June. The public is now able to download PDF versions of each of the FCC’s tip cards. The FCC now has Hmong versions of its public education materials. It is working with partners to make these versions available in supermarkets. The CGB launched monthly partner calls in September 2019; these have transitioned to a webinar format. The FCC is working with the Universal Service Administrative Company to do education and outreach around the National Verifier roll-out.

The FCC has participated in a variety of conferences, such as the Department of Housing and Urban Development’s (HUD) ConnectHome Summit. It is excited for future partnerships with HUD. In September, the CGB conducted rural tours in Kansas and Nebraska. Mr. Bartholme thanked AARP for their help in planning the CGB’s consumer-facing event in Fremont, Nebraska. Upcoming rural tours will take place in Arizona and New Mexico in January and in Arkansas and Louisiana in March. Mr. Bartholme encouraged CAC members to let him know if they have contacts in these states. Mr. Bartholme thanked everyone who provided comments in the recent 504 proceeding. The CGB hopes to launch public-facing outreach toolkits in the spring of 2020. These toolkits are intended for use by community-serving institutions such as libraries and senior centers. Mr. Bartholme encouraged members to contact him with education and outreach ideas or if they have events they want the FCC to support.

Discussion
Vice Chair Berlyn asked if the FCC coordinates with the FTC to address scams. Mr. Bartholme said the FCC and FTC have joint goals on this issue and coordinate with one another. Member Kampis asked what consumers are confused about in regards to 5G. Mr. Bartholme said many consumers don’t understand the timing of the roll-out; many think that new versions of products have 5G already built in. The FCC wants to ensure that consumers have relevant information in order to make informed purchasing decisions.

Update on Pending Legislation of Interest to Consumers
Presenter: Lori Maarbjerg, Chief of Staff and Senior Attorney Advisor, Office of Legislative Affairs
The House and Senate have reached a compromise on a robocall bill, the Telephone Robocall Abuse Criminal Enforcement and Deterrence (TRACED) Act. The Act passed 417 to 3 in the House last week. The Senate hopes to pass this bill as soon as possible.

The Act:
- Specifies that STIR/SHAKEN technology be used. It tasks the FCC with evaluating this technology every three years and reporting back to Congress, providing a mechanism for FCC to report any need for changes.
- Requires the FCC to create an interagency working group.
- Increases forfeitures for intentional violations and removes the statutory citation requirement.
- Retains the statute of limitations of one year for general violations and four years for intentional violations.
- Increases the statute of limitations for Truth in Caller ID violations to four years.
- Requires the FCC to submit an annual report to Congress on enforcement. The FCC is not allowed to collect additional information from providers when compiling this report.
• Requires the FCC to submit an annual robocall report to Congress on privately led efforts to trace back the origin of unlawful robocalls.
• Requires the FCC to establish a process to streamline voluntary information sharing with the FCC.
• Requires the FCC to take final action within one year of enactment on free robocall blocking services.
• Requires the FCC to start a proceeding on one-ring scams within 120 days of enactment and report to Congress within one year.
• Requires the FCC to create an advisory committee titled the Hospital Robocall Protection Group.

There are two competing privacy bills in the Senate: the Consumer Online Privacy Rights Act (COPRA), filed by Senator Cantwell, and a draft privacy bill, the text of which has been released by Senator Wicker. The bills are similar in that they require covered entities (CEs) to provide individuals with the right to transparency on privacy policies and the right to delete and correct individual information. CEs are not allowed to process or transfer covered data beyond what is reasonably necessary and after obtaining affirmative consent. Small businesses are exempt from these provisions. CEs are required to designate at least one officer for privacy and one for data security. FTC and state attorneys general are provided general enforcement powers. The bills have several key differences. COPRA provides individuals with the private right of action; Senator Wicker’s bill does not. Senator Wicker’s bill preempts all state laws and supersedes any other federal law; COPRA’s provisions supersede any state law in direct conflict, but are not construed to limit any standing state or federal law. COPRA requires the FTC to identify privacy protection requirements for biometric information; Senator Wicker’s bill allows but does not require the FTC to establish regulations regarding privacy standards for the transfer of sensitive biometric information.

Representatives Eshoo and Lofgren introduced the Online Privacy Act of 2019. The bill:
• Creates the Digital Privacy Agency (DPA) to enforce privacy rights.
• Provides individuals with the right to access, correct, delete, and transfer data, to be informed if a CE has collected information, and to choose how long the data can be kept.
• Requires CEs to establish the need for user data collection, and minimize the user data they collect, process, disclose, and maintain. CEs are not permitted to disclose or sell personal information without explicit consent, and are required to use objectively understandable privacy policies and consent processes. CEs are required to employ reasonable cybersecurity policies and consent processes. CEs are required to employ reasonable cybersecurity policies and consent processes. CEs are required to employ reasonable cybersecurity policies and consent processes.
• Provides the DPA authority to issue regulations to implement the bill’s provisions and to issue fines for violations.
• Allows state attorneys general to bring civil action and gives an individual right to sue for declaratory or injunctive relief. It does not allow for class action suits.

CAC members will be provided an electronic copy of the bills’ summaries, as requested.

**Update on Precision Ag Connectivity Task Force**
Presenter: Jesse Jachman, Designated Federal Officer and Attorney Advisor, Telecommunications Access Policy Division, Wireline Competition Bureau (WCB)

Precision agriculture (ag) uses technology to improve agricultural production by improving yields, reducing costs, improving labor efficiency, and increasing revenues through greater market access. Technology is applied to the different stages of agricultural management: planning, production, and market coordination. Connectivity is needed to obtain the benefits of precision ag.

The Task Force for Reviewing the Connectivity and Technology Needs of Precision Agriculture in the United States is charged with providing advice and recommendations to the FCC, USDA, and others on how to assess and advance the deployment of broadband internet access on unserved agricultural land in order to promote precision agriculture. The Task Force was mandated by the 2018 Farm Bill and will run to the end of 2025. The Task Force must assess the current state of broadband on agricultural lands and the broadband needs of precision agriculture. The Task Force is required to submit annual reports to the FCC Chairman and plans to produce additional reports in line with its duties. All reports will be made public.

The Task Force was established on December 4th, 2019. Membership is limited to 15 people, who comprise agricultural producers, small farmers, tribal agriculture representatives, internet service providers, fixed mobile and infrastructure providers, electric co-op industry representatives, satellite industry representatives, manufacturers, state and local government representatives, and representatives with expertise in data and broadband mapping. Working groups will include Mapping and Analyzing Connectivity on Agricultural Lands, Examining the Current and Future Connectivity Demand for Precision Agriculture, Encouraging Adoption of Precision Agriculture and Availability of High Quality Jobs on Connected Farms, and Accelerating Broadband Deployment on Unserved Agricultural Lands. The Task Force is in the process of standing up these working groups. Applications for the working groups were due December 3rd, but the FCC would be willing to entertain additional ones.

Discussion

Member Gerst asked how the Farm Bill differentiates agricultural versus non-agricultural rural lands. Mr. Jachman said the Bill does not define agricultural lands; that will be a job for the Task Force and working groups.

Update on FCC’s Connected Care Grant Pilot Program

Presenter: Rashann Duvall, Attorney Advisor, Telecommunications Access Policy Division, Wireline Communications Bureau (WCB)

Healthcare providers are increasingly using broadband to provide connected care services to patients. These services require that both providers and patients have connectivity. Connected care services lead to improved health outcomes and reduced healthcare costs. The FCC has supported healthcare providers’ access to communications technologies through the Rural Health Care Program (RHCP), which consists of the Telecommunications Program and Healthcare Connect Fund Program. In July, the FCC adopted an NPRM that proposed and sought comment on a pilot program that would help defray eligible health providers’ costs in providing connected healthcare technologies to low-income Americans and veterans. The Connected Care Grant Pilot Program (CCGPP) would be separate from the Telecommunications Program and the Healthcare
Connect Fund Program and would have a $100 million budget with a three-year funding period. Services and equipment that could be supported through the CCGPP include broadband internet access services to provide connected care services, network equipment to enable connectivity for the purposes of connected care, and packages or suites of information services used to provide connected care services. The NPRM did not propose funding end-user devices (unless part of a supported information service) or healthcare provider administrative expenses associated with participation in the pilot program.

The NPRM’s official comment cycle has closed; staff is still reviewing comments. The FCC’s next steps are to issue an order for the CCGPP. Ms. Duvall encouraged members to contact her at rashannduvall@fcc.gov with any questions. She can send CAC members a direct link to the NPRM if desired.

Update on Consumer Scams

**Presenter: Kristi Thompson, Chief, Telecommunications Consumers Division, Enforcement Bureau (EB)**

Currently, the biggest scam facing consumers is imposter scams, which are primarily conducted through illegal spoofed robocalls. Government imposter scams, in which a scammer poses as a government agency, attempt to scare or trick consumers into providing scammers with personal information and/or payments. In the past year, scammers have switched from spoofing the IRS to the Social Security Administration. The FCC expects that scammers will continue to switch to other government agencies as needed. It is putting structures in place to facilitate adapting to and addressing new scams. Another popular scam is the Chinese consulate scam, which targets Chinese expats and immigrants in the U.S., saying they owe unpaid taxes to the Chinese government. The FCC is especially concerned about this scam because it has a disproportionate effect on an already vulnerable population in the U.S. Most imposter scams originate outside of the U.S., which makes it difficult to take enforcement action. Another popular scam is telemarketing robocalls. There is significant variance in the quality of the offerings being pitched from scam to scam. Spoofing continues to be a problem.

Over the past year, there has been more government cooperation, especially between states and the federal government, and more industry cooperation towards combating consumer scams. Cooperation maximizes the funding and resources used to combat fraud. Industry has shown a greater willingness to innovate, both in interactions with the government and in offerings to consumers. The complexity of robocall scams means that there is no one solution to address the issue. The FCC will continue to emphasize enforcement action against scammers. It is working to change the economics of the scammer industry so it is no longer low-risk and high-reward.

**Discussion**

Member Koch spoke of the prevalence of grandparent scams and the possibility that scams are underreported due to victims’ shame. Ms. Thompson agreed that there is a significant underreporting problem. The FCC has partnered with organizations like AARP to conduct consumer education and spread the message that victims should not be ashamed for believing the scam. Member Koch asked if retailers can be enlisted to intervene if a consumer shows the signs of falling for a scam. Ms. Thompson said retailers such as CVS are training employees about the signs of a scam and how to intervene. Some are putting gift card limits in place and/or putting up
 flyers that detail popular scams. Member Long asked if the FCC is seeing an uptick in complaints about ringless voicemail scams. Ms. Thompson said yes, adding that ringless scams were an attempt to avoid liability under federal laws that state that entities cannot make telemarketing calls without consent.

Consideration of Caller ID Authentication Recommendation

Presenter: Michael Santorelli, Co-Chair of the Caller ID Authentication Working Group

The Caller ID Authentication Working Group was charged with developing a recommendation to address how the FCC and other stakeholders can best educate consumers about the meaning of the SHAKEN/STIR caller ID authentication framework and the most important factors providers should consider for displaying authentication and other information about the call. The Working Group began its process through information gathering from stakeholders such as AARP, AT&T, CenturyLink, the Secure Telephone Identity - Governance Authority, T-Mobile, and TNS. Member Santorelli thanked Members Leggin and Long for their work in facilitating these conversations.

The Working Group developed and unanimously adopted a draft recommendation. The recommendation defines SHAKEN/STIR as an industry-led standard to enhance call authentication. The Working Group found initial limitations of the implementation of the SHAKEN/STIR framework. SHAKEN/STIR will only work on IP-based communications; as a result, those on legacy networks may not benefit initially. The SHAKEN/STIR framework tends to be more effective when paired with other analytics. Carriers are exploring how to best present caller ID information to customers. There is a need for consumer education around SHAKEN/STIR implementation.

The Working Group developed the following recommendations:

- VSPs should clearly and proactively inform and educate consumers about the caller ID-related services they offer, including caller identification, call labeling and display practices, what information call labels may convey, what action consumers should take relative to each label, the capabilities and limitations of the SHAKEN/STIR framework, and whether providers offer SHAKEN/STIR to their customers.
- The FCC should develop web pages and educational campaigns that use simple language, visuals, and videos to provide consumers explanations of and resources on SHAKEN/STIR, the call authentication capabilities and limitations of various voice service networks, and links to VSPs’ websites.
- VSPs should maintain customer service and other resources to help consumers and call originators obtain answers to questions and resolve issues related to reports of call labeling, including potential mislabeling.
- The FCC should continue to evaluate how best to encourage VSPs to continue innovating and improving caller ID services that empower consumers with the relevant call information, which may include additional information, along with the combined results of SHAKEN/STIR and reasonable analytics.
- The FCC, consumer groups, industry, and other stakeholders should conduct studies and solicit input on what factors VSPs should consider for displaying caller ID information to consumers, including SHAKEN/STIR verification, caller ID information, and other
information about the call. These entities should evaluate how consumers respond to call labeling. Entities should share information as appropriate to promote best practices.

- The FCC should continue to collaborate with industry, consumer advocacy groups, federal, state, and local government agencies, and other stakeholders to educate consumers about how caller ID services, consumer display practices, and other measures can respond to involving legal and unwanted robocaller tactics, protect consumers, and restore trust in voice services.

A motion to approve the Working Group’s recommendation was made, seconded, and passed unanimously.

**CAC Member Discussion & Next Meeting**

Members discussed ways to restructure future meetings in order to allow members to stay longer. Ideas included having a working lunch, having a shorter lunch, moving lunch to the end of the presentations, and not having lunch when no working group meetings are scheduled. Mr. Marshall said a working lunch is not a good option because the interpreters need time to eat. Today is Ms. Clearwater’s last meeting as CAC Deputy DFO. Mr. Marshall thanked her for her service.

**Comments from the Public**

There were no public comments.

**Transition to All Electronic Filings for ULS, ASR and TCNS**

*Presenter: Jaclyn Rosen, Honors Attorney, Mobility Division, Wireless Telecommunications Bureau (WTB)*

The FCC is responsible for managing and licensing spectrum for commercial and non-commercial users. It promotes efficient and reliable access to spectrum for a variety of innovative uses as well as public safety and emergency response. There are four licensing systems: the Universal Licensing System (ULS), the Antenna Structure Registration (ASR), the Tower Construction Notification System (TCNS), and the E-106 system. The majority of applicants file through these systems electronically, either by requirement or by choice.

FCC’s September 2019 NPRM proposes to make the vast majority of filings electronic to modernize its filing and retention systems, improve public access to data, decrease consumer cost, improve transparency and accessibility for users, save paper, and improve administrative efficiency. Comments to the NPRM were due October 30th, reply comments were due November 14th.

Ms. Rosen encouraged CAC members to reach out to her or Jessica Greffenius, Assistant Chief of the Wireless Mobility Division, with any questions.

**Adjournment**

There being no other comments, a motion to adjourn the meeting was made, seconded, and passed unanimously. Chair Pociask adjourned the meeting at 1:40 pm.