American Enterprise Institute

FCC Commissioner Brendan Carr: A progress report on US leadership in next-generation networks

Opening remarks:
Shane Tews, Nonresident Senior Fellow, AEI

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Brendan Carr, Commissioner, Federal Communications Commission

Discussion:
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Shane Tews: Commissioner Carr, welcome back to AEI. It's been exactly six months since you were here last. I want you to know how much I appreciate you doing this. I don't have anybody at the Department of Treasury who calls and says, "How are my tax investments?" So, it's really great to have you back. Let me just give you a moment for anybody who missed six months ago.

Brendan Carr: Yeah.

Shane Tews: Commissioner Carr is the senior Republican at the Federal Communications Commission. He was confirmed unanimously by the Senate in 2017. And he has worked very hard to modernize infrastructure and the rules governing around 5G, which we're going to talk about quite a bit; next-generation networks; and ensuring that rural America has a fair shot at getting some of this money that we're going to discuss, that's going on. So, welcome back.

Brendan Carr: Well, thank you so much for having me. It has been about six months, in March, when I last joined you at AEI. And that was a period of time where I was moving towards the minority at the FCC. And, frankly, I would have thought I would have fully arrived in the minority at this point in time at the FCC. But the agency is still 2-2. But I will say that all the predictions of the deadlocked FCC have been pretty fairly overstated. We've gotten a tremendous amount done, not just in the six months since that event but, obviously, in the nine months since the beginning of the year. And, obviously, kudos, I think, to Acting Chair Rosenworcel. Frankly, it's never easy to run an agency. It's particularly not easy to run an agency when it's 2–2. But I think she's found a way to work together, move to the middle. And we've gotten a lot of, like, really positive, really commonsense things done and across the finish line, particularly on some of these low-income affordability programs. That's been great to see.

When I was with you six months ago, I tried to lay out sort of my positive, affirmative vision for where I thought the FCC should go — you know, not only that year, but over a longer period of time. I think as commissioners move towards the minority, there is a tendency sometimes to go into the opposition mode and basically focus on throwing trash cans and slowing things down. And right off the bat, I think as evidenced by that March event, I tried to run it a little bit differently. And so, I offered some positive ideas on spectrum and on infrastructure that I think would take the successes that we saw over the last couple of years and really extend those leads.

And so, for instance, on the spectrum side, I laid out a call for about five or six actions that we could get done this year. The first was to go forward with an auction of 2.5 gigahertz spectrum, which we left the option to do that based on some actions we took in early January of this year. Second, I talked about moving forward with an auction of 3.45 gigahertz spectrum. The good news there is that we're on track now to hold that auction, I believe, beginning next month. 2.5, on the other hand; it doesn't look like we're going to get that done this year, which is disappointing. The other spectrum bands that I called for action on was on 3.5 — what we call 3.55 or CBRS — was to start a proceeding to look at increasing the power in that band.

And that's really important, because I was just in Arkansas last week and was talking with a fixed wireless provider. And they told me a story about how there's a mom with five kids who is just outside the reach of one of their existing sites. And if they could increase the power on that existing site, that would, overnight, bridge the digital divide for that family. Because right now, if those kids have to, you know, work — go to school, "kid work," go to school remotely —

Shane Tews: It feels like work when you're a kid.

Brendan Carr: It feels like work, exactly. Go to school remotely — they don't have the connections that they need. But by increasing the power there, we could bridge the digital divide for them. So, we don't need, you know, complicated, reticulated additional funding to help that family. We just need to increase the power at the FCC. So, that was another action that I identified.

I also looked at UNII-2C, which is in the five gigahertz band, and talked about we should start a proceeding there: how to put that underutilized, unlicensed spectrum to greater use. That's six gigahertz. I said that we should move forward with authorizing very low power operations there, which could be really a significant step to powering a lot of virtual reality/augmented reality applications, as well as allowing client-to-client-to-device communications.

And now, we also have to move forward on 4.9, which is 50 megahertz of spectrum, that we did act on a year or so ago but we've now put back on the board by reversing the decision to allow public safety entities to move forward in that band.

So, those are five or six bands that I called for in March for us to move forward with this year. The good news is: We're not done with the year yet. So, there's a couple more FCC meetings that we can move on. But so far, of all those bands, really only one is lined up for getting done this year. And I think the reality is: Spectrum policy is tough. And if you look back at what we did the last three or four years, we really unleashed a mid-band spectrum tsunami. And it was not easy work.

I mean, we modernized the 2.5 gigahertz band — 200 megahertz of spectrum there. And again, we have 100 megahertz for auction. We held the first auction of mid-band spectrum at CBRS. We got 50 megahertz of 4.9 gigahertz freed up. We got 45 megahertz in 5.9. We got 1,200 megahertz in six gigahertz. I feel like, you know, I'm doing an infomercial for ShamWow at this point — "but wait, there's more!" And we did the big kahuna at 280 megahertz of C-band spectrum. So, all told, we had about six gigahertz of licensed spectrum that we moved in the last couple of years, in addition to thousands of megahertz of licensed spectrum.

So, we can ride that wave for a certain period of time, but at some point, we got to start putting up some new spectrum wins on the board. That's why I think getting some more progress done on those additional bands is going to be key to extend America's leadership in wireless.

Shane Tews: The reimagination of the use of spectrum was really fascinating to watch. And you guys definitely helped clear the path on it and let, you know, the engineers go in and talk

about what works and how we can redesign this as well as the technology, you know, just getting amazingly more innovative and smart. So, do you think the momentum is going to continue? Because you guys — you're right, you put a pretty big wave out there.

Brendan Carr: I hope so. It's difficult because, unfortunately, you can like it or not like it, but there's a reality when it comes to spectrum policy these days, which is, you know, getting the experts — you get the engineering right — isn't all that it takes. Whether you like it or not, it takes the accumulation and the expenditure of political capital to get spectrum freed up out of the various Washington, DC, bureaucracies and out there to connect families like the one in McGehee, Arkansas, that needs spectrum and high power spectrum to get connected.

And so, look, we can continue to coordinate; we can continue to deepen relationships across agencies. Of course, we should always strive for that. But at the end of the day, we're the FCC, and we are charged and called upon to make the right decision, the tough decisions, and push through when the public interest is served by freeing up spectrums. So, that's the standard. Obviously, I think Chairman Pai is an example of someone that accumulated and expended political capital to free up spectrum. And we're going to have to continue to do that going forward.

Shane Tews: How are the other agencies? I know I get an occasional call from DOD telling me that they're angry with some of what I've written. But I'm like, "Guys, you can't just keep blocking all this stuff because you used to have it." You know? Like, we need to rethink how to use that as well in a lot of these agencies. Is that going better?

Brendan Carr: Yeah. You know, look: DOD has an incredibly important mission — like, literally saving lives, securing the country. And so, that's very, very important. We got to make sure they have the resources they need to do that. At the same time, we always got to look at the engineering, you know. Can we do more with this spectrum? Can we continue to ensure that America's war fighters have the capabilities they need while at the same time ensuring that the country has the economic capabilities that it needs from the commercial application of these spectrums? So, you know, I think we got to keep making progress on that.

Shane Tews: OK. Let's go to the big money questions. Between COVID spending, trying to get money into broadband, new administration throwing money out there — it seems like there's a lot of talk about the money. Where is the money?

Brendan Carr: That's a great question. So, right now, this week, there's talk about this next $3.5 trillion infrastructure bill, and there's talk about putting some additional broadband funding into that. And I think this is a good time to step back to your point and take stock of where we are. The reality is: We have enough money that has been either appropriated by Congress or budgeted by various agencies to bridge the digital divide multiple times over.

I talked earlier this year about how the FCC had $40 billion that was still in the pipeline that hadn't been spent yet, whether it was the $10 billion combined of ECF or EBB, the $20 billion between RDOF 1 and RDOF 2, the $9 billion for 5G fund. But if you broaden out from that, if you look at some of the main agencies that are out there — treasury, commerce, agriculture, education, and FCC — if you look at the money that they have right now that

can be used for infrastructure generally but including broadband infrastructure — so not just earmarked for broadband but could be used for broadband infrastructure — it's $800 billion. That's in addition to money that has gone directly to states.

And so, I understand the instinct in Washington to say, "Hey. We want to close a digital divide. And so, we're going to spend an additional *x* billions of dollars." But the reality to where we are right now is the money has been allocated. We have to actually do the hard work of rolling up our sleeves — getting that money that's already been allocated out the door. And we got to take other steps as well. Workforce is going to be a challenge as we look to build out this infrastructure. So, if your infrastructure agenda doesn't include a plan for making sure we have the work force, then it's not much of a plan. Similarly, supply chain. We're going to run the issues with supply chain. I don't expect it on the fiber side, per se. But on the electronics that it takes to make these networks work, you know, chips and other shortages aren't just hitting cars. They're hitting internet builds as well. And I've heard that in my travels outside of DC — that companies are worried about some of the supply chain challenges.

So, we actually need to do the hard work. I mean, it's amazing to me that, you know, we talk about this one study that said that we needed $80 billion to bridge the digital divide. If you think about that, maybe the analogy is a tank of water. So, you need 80 gallons of water to go into this tank. Well, sitting right next to it, we've got that $40 billion that the FCC has. You've got that $800 billion that all the agencies have. You've got the $65 billion that Congress is likely to do soon, from the $1.5 trillion package. We've got all of this money that has been allocated and budgeted, and yet we're not actually spending it to bridge the digital divide. Instead, we continue to point to that empty 80-gallon water tank and say, "I guess we've got to spend more money." No, we have to implement all of these spending programs that are already out there.

Just look at RDOF. So, we have an auction at the FCC for about $9 billion worth of funds to bridge the digital divide in rural America. That auction closed, I believe, sometime in November or so of last year. We'll flash forward to today, and we still haven't gotten any single dollar of that $9 billion out the door. Now, we've said that we're going to move forward with an initial tranche of, I think, 3 percent of the total funds that were won. Three percent. So, if you look back historically and compare it to how we got money out the door in probably the most recent similar auction, CAF II, we're behind the pace of where we were then, in terms of the percentage of funds that we've either said we're going to get out the door or actually get out the door.

So, again, bridging the divide doesn't require some tactical procedure to get another $3 trillion passed through Congress. It takes the hard work of all of these agencies to roll up their sleeves and to actually get this money going in an efficient way. And I'm worried. And I'm worried because we have all this money; there's $800 billion, depending on how you slice it. And I don't have high confidence at the moment that that effort is going to be done in a coordinated way that is going to avoid really significant waste, fraud, and abuse.

So, earlier this summer, I think beginning of July, I sent letters to those four agencies that I mentioned — ag, treasury, commerce, education — and just put forward some basic questions. You know, how much of this $800 billion, your agency's portion, is going

exclusively to broadband? What buildup metrics are you using? And I'll say, the responses that I've gotten so far — to the extent I've gotten responses, some haven't — has not been comforting. So, education, for instance, said — I think they've got something like $270 billion — their letter to me said that they did not know, or couldn't say, how much money they've spent has gone exclusively to broadband. So, think about that.

Shane Tews: And that's for schools? It would be used for remote education?

Brendan Carr: Right. It could be used for remote learning initiatives, a whole range of sort of connectivity programs it could be used for. It's not "we don't know, you know, what the buildup metrics are." Not "we don't know what speeds are going to be done." Not "we don't know that there's not going to be overbuilding." We don't even know the fundamental question of how much of this money is going towards broadband. That's a problem.

Now, they also said in the response that they're looking at doing a broader sort of data inquiry, and maybe that can solve some of those problems. But to not know right now how much money is even going to broadband, that's just such a fundamental problem. And we've seen this before. Back in 2009, after the financial crisis, we spent a relatively small amount of money compared to $800 billion — about $7 billion — on these BTOP and other grant programs. And they were just plagued by waste, fraud, and abuse. I mean, just google "EAGLE-Net major overbuilding." Some of the money ended up going to produce online soap operas based on some Rube Goldberg theory under which that online soap opera would lead to greater adoption. If you showed that —

Shane Tews: More people will be watching in the middle of the day, where we need to — you know —

Brendan Carr: That's right. And if you showed that theory to Rube Goldberg, he'd say, "You know, that's too far for me. I can't even envision the connection between spending money on soap operas and connectivity."

So, we had hearings. We had inquiries. People pounded the table and said, "Never again are we going to let that much money, $7 billion, go out the door with that little control and check." And yet, we've got $800 billion. So, I really, really don't want to be in a situation three or four years from now, when we look back and say, "You know what? We had $800 billion. We don't know how much went to broadband. We don't know who was overbuilding. We don't know where it went. Some of it was wasted." We can't be in that situation. And then — rather than focusing on that — to say, "We need more money, that's the problem." It's not the problem.

Again, very easy in DC to say, "There's a problem. Let's cut a check." But that's not where we are when it comes to bridging the digital divide. We've got to implement these programs. We've got to get going on the maps. That's going to drive all these funding decisions — or at least should — so that we actually put these where it's needed. Not that I feel passionate about this issue right now. I'll stop there.

Shane Tews: So, let's live in a positive world of, "We are planning on building out." And, you know, there seems to be a strong interest in this particular administration in fiber-only, which I don't understand when there are so many cool things on the horizon. Starlink is

rocking out there. I've been talking to people that are using it. They seem pretty happy. We've got — Amazon's doing Project Kuiper which is right on their tail. We got more people coming into the space dish. Charlie Ergen, you know — changing plans, going very O-RAN, wants to put a lot more opportunity out there. You know, that mid-mile has got some opportunities for some changes as well as, like, how we're getting it to the user at the end. So, what are your thoughts on that?

Brendan Carr: I think you're right. We have a lot of tools in the toolkit to bridge the digital divide. And we need an all-of-the-above strategy — to pick one particular technology out of all the ones you just mentioned and say, "This is the only one we're going to fund, and we need 100 percent of the people to be online through this one technology" doesn't make sense. At the end of the day, fiber is going to be the massive, massive component of our internet infrastructure. It is today; it's going to be in the future. The only question in my mind is: Should it be 100 percent of connections right now? Should we only fund that right now? And I think the answer to that is, pretty clearly, no.

A couple weeks ago, I was in North Idaho — a small town called Rathdrum. It's about 100 miles from the border with Canada. And I was with a tower crew. Jared was climbing up this tower, and they were adjusting some of the fixed wireless antennas that they had just put up. And it took a small grant, and they put a fixed wireless antenna on this site on top of Lone Mountain. And it beamed high-speed internet to 5,000 homes and business in this remote part of Idaho. That build cost about $275 per household. If you were to build fiber to those same households, it would have been about $3,500. So, it's something like 10 times the cost to get fiber in that community compared to fixed wireless.

But to me, it's less than the dollar amount, although the dollar amount matters — less so in Washington these days, but maybe some people think it does. But put the dollar amount to the side. Think about the time. Right? So, you go up that tower. You turn the switch on the antenna. Those 5,000 people are connected virtually overnight. In contrast: Building fiber to those 5,000 people takes years upon years to complete.

So, if you're saying that you only want fiber to be funded, what you're saying is, to those 5,000 in Rathdrum, Idaho, "You need to stay on the other side of the digital divide, unconnected, for years to come. Because, trust me, when it finally gets to you, it's going to be amazing." And fiber is amazing. There's no question about it. But this is why we need every tool in the toolkit. Let's get those people connected now with fixed wireless while we continue to do internet build. So, that's why I think we need everything out there, including these new generation of low-Earth orbit satellites, you know, which we're hopeful are going to make a real difference, at least around the edges of these hardest-to-serve areas.

Shane Tews: So going back, I'm kind of fascinated with the idea of the water tank. You're talking about, you know, not only isn't the money going in but the expertise. And you're right about the supply chain, in making sure that everything — once you fill the water tank, you know — goes to where it needs to be going. Because the point of the water tank isn't just to fill it up.

Brendan Carr: Yeah.

Shane Tews: So, let's talk about supply chain. How are the control mechanisms on that going?

Brendan Carr: It's a concern that I've heard. Look, I just, as I mentioned, completed a rural broadband trip through Arkansas, Oklahoma, Kansas, and Missouri. One of the things that I continue to hear from providers is, you know — work force shortages. You get all this money allocated. We don't have the crews right now, necessarily, to complete these builds as quickly as we'd like. And supply chain. Again, less of a concern on fiber, per se. We got a lot of fiber-manufacturing capacity in this country. But the electronic components are a challenge. Some smaller providers are having to look out over a year with a lot of this ordering that they're doing. So, supply chain is going to be an issue. So, again, if you care about infrastructure build, if you care about bridging the digital divide, you got to care more than just about dollars. The dollars are absolutely important to bridge the digital divide. But you got to have a workforce plan. You got to have a supply chain plan.

When I was on this trip, I was in State Tech — did a visit to State Tech in Missouri, where they're training this next generation of linemen and the telecom crews that can build this infrastructure. So, I put out a jobs agenda that looks to building on community college programs just like this to try to fill that pipeline of skilled workers.

Shane Tews: It seems like a great idea, even though I'm still worried about you every time you're doing those tower climbs. So, supply chain as far as security. I know we went through rip and replace in the last couple of years and concern about some of the equipment that actually the government had encouraged people to use out in some of the lesser populated areas. I know you've got a Notice of Proposed Rulemaking coming up to, kind of, review the way that the FCC is looking at the equipment manufacturers that are — you guys actually, "license" isn't the correct word, but you basically say, "Yes. We're going to let you go ahead and move forward." Are we taking a serious look at this with our concerns with China, since we just spent a lot of money to take out things that China had helped put into process?

Brendan Carr: I hope so. And, really, kudos to the Acting Chair Rosenworcel for pushing forward with an inquiry along these lines. Stepping back, as you know, we were very focused on Huawei ZTE equipment threats. And we're pretty far down the path right now of looking to get that equipment ripped out and replaced. In the process of doing that, I said we needed to look at every single entity that has an authorization to connect to our network's carriers — we call them 214 authorizations — and do a top-to-bottom review. And any entity that is sort of unduly controlled or influenced by the Communist regime, we should revoke their authorization. We've now gone down the path of doing that.

The next step we have to do is look at our equipment authorization process. If we've decided that Huawei ZTE or any other entity is a sufficient security threat that we're not going to allow federal dollars to fund that build, well then I'm not really sure I see a reason why we should let private dollars fund those builds either. So, Rosenworcel has opened up a proceeding that would look at updating our equipment authorization rules to do just that. And if we get that to completion, I think that'd be another significant step to showing the strength and resolve needed to address the threat posed by Communist China.

Shane Tews: Yeah. In cyber, it's not always — I mean you definitely worry about who the prime is, but there's the subs. You know, it's the people that are actually putting the equipment together. I feel like taking a very hard look at that from a cybersecurity perspective is very important.

Brendan Carr: Yup.

Shane Tews: Another thing that you worked a lot on, which I'm hoping stays a thing, is telehealth. Because it just seems like the numbers that we've heard after, you know, going through COVID or continuing to go through COVID, is that, you know, it works as effective — there are times when you do need to go see your doctor, but there's a lot of times where you're looking for guidance or advice that you don't have to be physically present. So, how is that program running?

Brendan Carr: I'm really excited about the future of telehealth and the FCC's work to support it. A lot of stuff that I talk about in tech and in telecom gets more interest and attention than the telehealth stuff that I talk about. But it's very, very meaningful to me. And you got it exactly right. We now have the technology, so that rather than always having to go to a brick-and-mortar facility to receive care, you can pull up your smartphone, your iPad. You get a video visit right there. And the way I've described it to people is: It's the health care equivalent of shifting from Blockbuster video to Netflix.

I was just in a small town in Kansas that maybe some people in telecom have heard of: Parsons, Kansas. And there was a health care provider there —

Shane Tews: Did you pick Parsons for a particular reason?

Brendan Carr: Just, you know, random city. And Labette Health there won about $100,000 worth of FCC telehealth funding. When I met with them, they said that they've gone from essentially doing zero telehealth visits a month to 1,200 a month with COVID. And they're only able to meet that demand because of the FCC's telehealth funding. We have two programs going. We got a COVID-19 program. We've got this connected care pilot program that I've been working on. And we still have more money to get out the door, at least on the connected care side. So, I hope we do that. But, yeah, I'm really excited about it.

Think about — you're in a small town, you know — let's just take a kid. Right? You can get, like, the world's best mental behavior health specialist, but they're 200 or 300 miles away. But now, right on your phone, you can have a video visit with them. And it's great for kids because, you know, they can stay in the comfort of their own home and have this video visit. You know, we've seen a lot less people canceling appointments, obviously, because you don't have to worry about transportation or babysitting. So, I think it's a really great thing. And I hope the FCC continues the efforts it's doing. And obviously, under the new leadership, it looks like we're continuing to do that. So, I think it's great.

Shane Tews: That was a good point. I was actually talking to a psychiatrist who said that her clients are much more — they're having better sessions because the whole idea of going to the office actually stresses them out.

Brendan Carr: Yeah.

Shane Tews: She's like, "I have these sessions. And at the hour, they don't want to stop talking, where before they were just, like, thinking about having to get home, and it was just a real challenge for them."

Brendan Carr: Well, it's interesting: When you're on a video visit as well, the doctor or psychologist, like, they get a better sense because you actually see a little bit of the environment, the physical environment, that the person lives in. And that can sort of give you some insights as well as to, you know, what you need to do.

Shane Tews: So, I used to think you need more economists and maybe some more engineering thought. There's a lot of lawyers over there. I know you were one of them — still continue to be one of them. But now I'm thinking you need accountants.

Brendan Carr: Right.

Shane Tews: It's got a lot of money floating on around there.

Brendan Carr: A lot of beans. Yup.

Shane Tews: So, kind of last-thought question before I'm going to look to see who our Q&A is: Are we done with net neutrality? Can we stop talking about that?

Brendan Carr: You know, look. If I was — I don't know what I'd be. If I was a skeptic, I guess I would say it's all over but the yelling and the fundraising. But I'm not a skeptic. So, we'll see. I do think that, look, COVID-19 should have put that entire debate in the rearview mirror. That was the ultimate stress test of not just America's but of global telecom policy. If you look at the policies that were in place in different countries, the results, in terms of how their networks performed, that should tell you all you need to know about the right regulatory framework.

Because, basically, every country saw the same thing, which was a virtual overnight spike of 20 percent to 30 percent in internet traffic. And that may not sound like a lot in the abstract. But if you think about it, network engineers plan for 5 percent to 10 percent increase in traffic over a year. So, we took maybe two or three years of expected traffic growth and loaded it onto the network overnight. And America's networks performed. We saw slowdowns in other countries, in Europe. China saw a lot of slowdowns as well. And so, the framework we put in place that incentivized this massive investment in our internet infrastructure was the right approach. We shouldn't, you know, turn back to that.

Again, if you look at just, you know, the investment that was incentivized from infrastructure reforms but also the regulatory framework, we went from something like 708 new cell sites getting built in this country in 2016 to over 46,000 that went up in 2019. Think about all of the families that got a connection because of those investments in the accelerated builds. And so I don't know why we want to make it harder to invest in the build-out.

I also think it's different today than it was in 2014–2015, for a few reasons. In 2014, you can kind of spin this narrative, and some interest groups did, that the greatest threat to a free and open internet — to uncensored, unfiltered discussion — is the mom-and-pop ISP. And that argument maybe had some purchase in 2014, apparently, for some people. But if you look today, if you ask me what's the greatest threat to a free and open internet, it's not at the ISP

layer. It's at all of the layers above that. You've got social media companies blocking URLs to articles about the New York Post article about Hunter Biden right up to the election. You've got discussions about the potential source of the coronavirus — you know, global pandemic — being shut down. Can't talk about it. You've got Microsoft on the eve of Tiananmen Square anniversary censoring search results for "Tank Man."

So, if you want to talk about where is the threat to a free and open internet, to the free flow of that data, that piece of data isn't getting blocked or jammed or censored at the ISP layer. It is getting blocked and censored and jammed at other portions of the stack. So, if the Democrat theory is we need new rules in order to ensure that these pieces of data aren't blocked, then their theory doesn't take them to the ISP. It takes them further up the stack.

And so, if people want to go down this path, I'm happy to have a conversation about "how do we have some basic rules of the road that ensure that across this stack, we have neutral antidiscrimination rules?" Because if we just go at the ISP layer, you know, it's almost arbitrary and capricious from an AP perspective, because of all the other actors that don't just have the incentive — as some people like to say, when they pass FCC rules — but the actual demonstrated conduct of blocking access to information or data.

Shane Tews: And you've had a little more to say about that, going back to money. So, the idea of maybe using a Universal Service Fund, which is completely outdated. I haven't had a landline in 10 years. So, the way that we fund things seems to be a little out of whack. So, thoughts on that?

Brendan Carr: Yeah. I mean, this is an issue. I did an op-ed back in May on this issue that basically looks at universal service. Most people don't know that this $9 billion pot of money that we use to bridge the digital divide, the Universal Service Fund, comes from a line item charge that shows up on your traditional bill for telecom voice service, both mobile and landline. And that percentage charge has just been moving up like a hockey stick. It's been hovering around 30 percent recently. And there's a new study that just came out — I think last week or the week before — from the economist Hal Singer that said that number at 30 percent could jump to 75 percent in the not-too-distant future if revenues continue to climb and even if expenditures just stay flat. So, it's not sustainable. So, the question is, what are we going to do about it?

This economic study by Hal Singer looked at two different options. One would be to shift that percentage charge just to the other side of the consumer's monthly bill. So, rather than putting a percentage charge on your traditional voice service, put that percentage charge on your broadband internet access service — putting the assessment on broadband. And the percentage might change because the base is different.

The other idea that he looked at was moving it over to a fee model, so that large tech companies would pay a fee based on their digital ad services revenues. And what he found in his economic analysis was that digital ad services — getting Big Tech to start to pay — was the best policy outcome for a couple reasons.

One, if you simply shift the fee from the telephone service to the data portion, you are burdening the target of the subsidy. We want people to be buying broadband — adopting broadband. And he cited studies that say, if you shift the charge to broadband, it makes it too

expensive for some set of people. I think he cited a study that showed that. But if you move it over to digital ads services, it's, one, sustainable because this is a multiple — over $100 billion a year in digital ads services revenue. That revenue is increasing. So, it's a sustainable revenue model in terms of putting that fee.

If you shifted the fee, obviously, it would go from 30 percent to 0 percent, first of all, from the consumer's bill. And in terms of the large companies — principally Google, Facebook — it'll be something like 7 percent of their digital ads services revenue — again, decreasing from there. And his study talked about how that 7 percent will be very difficult to actually pass through the consumers, unlike a charge on broadband, which would just appear directly on a consumer's bill.

So, I think that's the right model going forward. It's a look to Big Tech. Whether it's digital ads services per se or other sources of Big Tech revenue, I haven't, you know, picked one to the exclusion of others. But this one, digital ads services revenues, I think has a lot of merit to it because it's sustainable. It's difficult to pass through to consumers. And as his study showed, it makes a lot of sense from a policy perspective, because these Big Tech companies generate a lot of internet traffic, so they're causing costs. They also benefit from greater connectivity because that's more eyeballs for their business model. So, it aligns all the incentives correctly. And so, I think that's one that we should pretty much look at.

Shane Tews: So, I need to read another Hal Singer study. I'm very excited about that. OK. Couple questions from those who are watching the show. Still a lot of interest in 12 gigahertz. So, you know, we've got a lot of people that seem to find that to be a very special space. I have learned to have a love for it, but I don't completely understand. Are we getting any better at it? I know there were some — you and I talked in March. I feel like there was concern about engineering.

Brendan Carr: Yeah, this really comes down to engineering for me. So, in a nutshell, 12 gigahertz is: We have incumbent terrestrial providers that have 12 gigahertz license that want to do more with those licenses — that want to get into the 5G game with that 12 gigahertz spectrum. On the other side of the equation, we have this spectrum that's currently being used for a lot of these low-Earth-orbit satellite operations, including the ones that SpaceX do. And there's going to be an engineering battle of experts as to: Can we do all of it? Which is obviously the preferred policy outcome. If we can get greater terrestrial use out of 12 gigahertz while not causing harmful interference or interfering with these low-Earth-orbit satellite connections, that's great. And we'll simply have the proceeding, and we'll see where the engineering comes down. Yeah.

Shane Tews: As we talked about earlier, I just don't want it to be a really crowded space and people are, like, trying to jam their cars and all that stuff to work. Yeah. OK, so I'll read this one: Emergency Broadband Benefit Program — do you think Congress should have allocated funds specifically for nonprofits and other organizations to build trust in local communities and to get people to sign up? Sorry. That's just a raw question there.

Brendan Carr: It sounds like it came from a nonprofit entity —

Shane Tews: OK.

Brendan Carr: — that's not happy they didn't get funds. So look, you know, this is an issue that we've looked at from time to time. The way the FCC has traditionally set up a lot of these funding mechanisms, it goes to these nonprofit entities. And there's, you know, concerns — which I'm sensitive to — that you should be looking at: What is it that we're doing as an entity? Is it an efficient use of the funds? And the particular status of the entity should be less important. I'm always open to sort of hearing that debate, having this question that's not something that, so far at least, has carried the day.

Shane Tews: I don't know what the final outcome was. The Ways and Means Committee did have some language about reimbursing the government-owned networks (GONS) for their investing, which gets to the point that we always have a challenge with, which is the overinvestment. And then now you have my federal dollars — I always like to remind people: We put the money — we give it to the government. So, I've just given the government federal money, which they turn around and give a state or local entity for more or less probably not making a great decision. But we're going to give them a percentage back on that. So, there's a lot of challenges.

Brendan Carr: Well, if we step back, ECF in general — this was the $7 billion program that Congress passed to get schoolkids connected. This is one, again, where I got to give the Chair Rosenworcel a lot of credit. You know, this was a document that, when initially drafted, would have directed the majority, if not all, of that $7 billion backwards, looking to reimburse entities that had funded an effort to close the digital divide in the past. We were able to work together and find common ground around putting that money on a forward-looking basis, so that the kids that are unconnected today get some of that $7 billion. That's what we ended up doing. I think that's a great example of where we all worked together — worked to the middle. And I think the policy outcome benefited a lot from that.

Shane Tews: Can we use E-Rate information around that? Does that help? I mean, I feel like there's a reason why E-Rate exists, and there's probably a whole trove of data there. But we need some data scientists around in the government too.

Brendan Carr: Right. Yeah. That's fair.

Shane Tews: It seems like E-Rate would be an indicator on some of these things. But from what you're telling me, education is not doing a good job of tracking their money anyway. So, can't wait to look — I hope you make those —

Brendan Carr: Education Department, I should say.

Shane Tews: Yeah, right. OK, yeah. Not the — OK. So, let's see. Do you think the FCC should engage in issues on online speech moderation regulations? This is our 230 question.

Brendan Carr: You know, look. I've been very reticent to talk about Section 230 and online content moderation over the year.

Shane Tews: Me too. But I have a podcast coming out on Tuesday.

Brendan Carr: I do think this is very, very important. I mean, look: If you flip back to the modern day op-ed in this country, launched on the pages of The New York Times, in 1970 actually. The editor at the time was a person named John Oakes, I believe. And the line that

he said was — as to why he was doing that — "Diversity of opinion is the lifeblood of democracy. The moment we insist that everyone must think the way we do, then…" And I can't remember the end of the quote, but then something bad happens, right? So, if you wanted the op-eds to be —

Shane Tews: We should all be able to talk to each other about our opinions, yeah.

Brendan Carr: Right. We want the op-ed to represent views very different than the editors and reporters would otherwise have presented in The New York Times. That was the 1970s, this embrace of a diversity of views. I think we have obviously moved pretty far away from that in this country. And I think there is a role to be played here in terms of 230 reform. And I've walked through this before, so I don't need to sort of go through the details of it. But I do think the FCC has a role and we should do it.

I don't characterize it as "speech police." Obviously, I wouldn't — it sounds pejorative, and I'm for it. But I do think we have a role to interpret the words that are in Section 230. I think courts have just over-read the statute — basically said, you know, these large digital social media companies have carte blanche to censor and have 230 protections. I don't think that's what Section 230 says. But I also think it's time to go beyond 230 reform. We could look at some affirmative antidiscrimination obligations that we can apply to large tech companies.

There's been a lot of talk about classifying those common carriers or public accommodations for purpose of public accommodation law. That's not necessarily my view. My view is not that we need to classify social media as a common carrier. My view is: We need to look at some of the antidiscrimination principles that we've applied in the common carrier context, that we've applied in the public accommodation law context, and bring those antidiscrimination ideas forward, and apply those to large tech companies. So, I do think that's something that we need to be working on.

But it's also more than just social media, per se. Look at the financial services market, which is increasingly a digital financial services market. I think we're going to — there's a lot of risk that we're going to see financial services deplatforming, financial services censorship. Jack Dorsey, obviously, he's very active in the digital financial services space as well. And there's going to be a lot of questions about: Are we going to be importing or exporting Twitter's blocked list into all these Square and digital services platforms that he's also in charge of?

And so, yeah, I think online speech is an issue. I think there's a role to play to creating a framework that's going to promote more speech. But I also think we need to look forward into the digital financial services markets as well as —

Shane Tews: That's a really good point.

Brendan Carr: — censorship and deplatforming, which I think we're going to see increase.

Shane Tews: And just the whole idea of the digital medium has created a digital economy that doesn't mean just because it runs on a particular type of platform means that all these other rules do or don't apply. We have a lot to work through on that.

Brendan Carr: Yeah. I think Square is acquiring — I haven't got the name, maybe it's Coinbase — Square is acquiring an Australia-based financial services company. As regulators look at that transaction, I think that's an appropriate time to ask, you know, "Are you going to import your Twitter block list into Square?" I think those are questions that should be asked.

Shane Tews: Well, I think he keeps those separate, but, yeah. I think it's Afterpay. It's Afterpay, which — that whole thing is an interesting dynamic.

Brendan Carr: Afterpay.

Shane Tews: Yeah. Uh-huh.

Brendan Carr: I said Coinbase when I meant to say Afterpay.

Shane Tews: So, since you last spoke at AEI six months ago, what items from your spectrum calendar 5G leadership plan have you made most progress on? I feel like this is like your kindergarten question here.

Brendan Carr: Well, good news and bad news. That's an easy question to answer: 3.45. I laid out five or six spectrum bands we should make progress on. That's the only one of the five or six that I laid out in March that we look like we're on track to do this year. So, I guess that's good news — it's easy to identify the one that we're making the most progress on. But I do think there's more low-hanging fruit. Again, just starting an NPRM on boosting the power in CBRS, just starting an inquiry on UNII-2C band. I think there's some low-hanging fruit that we could do and, hopefully, can still get done this year. And then I can give it a good green check mark by December 31.

Shane Tews: Awesome. Good health report there. There seems to be a bipartisan support of the FCC for keeping gear from certain Chinese telecom providers out of American networks. How satisfied are you with the commission's progress on that? And where is there more attention needed? This goes back to our NPRM question.

Brendan Carr: Yeah. I'm really happy. I think, you know, we've moved forward on the rip and replace process. We are underway on looking at these 214 ratifications. We've started a proceeding to look at whether we should deny equipment authorization to anything on that covered list. So, we're making progress. I mean, anything can always be faster, but I'm glad directionally — that we're moving in the right direction on all of that stuff. So, no real complaints in terms of the pace that we're moving there.

Shane Tews: So, anything coming up on your September meeting that you can give us a preview of?

Brendan Carr: Well, it's out, thankfully. So, everyone can see it. I mean, look —

Shane Tews: We love — that's so much easier to follow along.

Brendan Carr: Yeah. So, 4.9 is on there. This is one that I voted to — in favor of moving forward with the 50 megahertz at 4.9 gigahertz a year or so ago. And we had seen some public safety entities, I think particularly in Louisiana, that were interested in moving

forward. The agency put a pause on that. And now, we're looking at potentially other options to get it back in the market. So, it's sort of two steps back, one step forward. But I'll say: I'm open to being in favor of more options. Of course, again, I voted for the prior approach to 4.9, but there's no — it's not necessarily that it's the only way to do it. And so, I'm certainly open to the ideas that the chair has put forward. And, frankly, I commend her for moving back to getting 4.9 on the board again in a relatively quick fashion.

Shane Tews: I was going to the open meetings — it seems to me, as an observer of just governance in general, that you guys have had more participation and more understanding about what's going on at the commission. Does it feel that way inside the building?

Brendan Carr: Well, inside the building, there are almost nobody in there. So, it doesn't feel like anything in the building.

Shane Tews: I meant that euphemistically.

Brendan Carr: I do go in from time to time. But beyond that, it's a pretty vacant building at the moment. I'll say this: If you look at the shift of the FCC's work force — again, almost overnight going to almost 100 percent remote work and not really seeing much of a hiccup or a slowdown in the agency's productivity either at the end of Pai's term or here at the beginning of Rosenworcel's term — hats off to the staff. It's difficult. It's not just a typical work-from-home. A lot of times, it was — you know, kids weren't in school, taking care of family or friends. So, there's a lot going on in that home environment. I mean, as someone who spent most of it in a two-bedroom English basement not far from here with a seven-year-old, four-year-old, and two-year-old, I know there's a lot that goes on in that home environment. So, I've been really happy with how hard the staff has been working and what they've been getting done under some difficult circumstances.

Shane Tews: Again, we love the fact that we know what you guys are going to do ahead of time so you can really focus on it. Probably our last question here: How crucial will the OEA be to applying both new and existing funding? What other infrastructure reforms from the Pai FCC are crucial to this process?

Brendan Carr: Well, the first thing this brings to mind, obviously, is the maps. And in March at this event with you, I said that we should get these maps done by this fall. And it is now fall, although I guess definitionally, fall extends for a period of time. So, there's still time to get them done this fall. But it's not trending in that direction. Then, after I gave that speech, there was an indication from Senate Commerce leadership that the FCC would have the maps done in July. And I was like, "That's great." I put out a statement. I welcomed the FCC's release of the July maps. Obviously, July came and went, and there was no, sort of, final targeted maps that came out of July. So, we'll see.

But we got to continue to put a lot of efforts into getting those maps done because, again, that's going to drive so much of this funding. And if we start moving this funding out as we're doing — this $800 billion, portions of it going out all over the place without it filtering into the map or people knowing where to target — that's a real problem. So, hopefully, OEA and others can continue what I'm sure they're doing — which is long hours, lots of weekends, I'm sure — to try to get those maps done as quickly as possible.

Shane Tews: Is putting the maps out a challenge when you're still dealing with the legislation, trying to decide if they're doing state block grants or is just the facts, the facts? It's interesting as you try to watch as they figure out where the money is going to flow — from a more free-market perspective and investment versus — I don't believe that the Treasury's investing the money.

Brendan Carr: Yeah. I mean, stepping back in, like, as Congress looks at this new $3.5 trillion, what I'd say is: Let's step back, and let's take stock of where we are. Because to say, using a study — and let's just stipulate for the purpose of this conversation that it's right — that says we have $80 billion. Well, to continue to say we need $80 billion while ignoring the hundreds and hundreds of billions of dollars that have been allocated just doesn't make any sense. It's not helping the people that are unconnected. What would help the people who are unconnected would be: Let's get the RDOF money out the door. There are providers that are ready to build, to connect people without money, while still upping the power in CBRS. That's literally potentially able to connect people overnight.

So, if you want to bridge the digital divide, we don't need some reticulated way of passing another $3.5 trillion. We just got to do the hard work that doesn't get the headlines of implementing all these billions of dollars that have already been allocated. So, I'd say, let's step back. Let's look at the money before we end up just wasting those dollars.

Shane Tews: So, going with the water container, go back to that —

Brendan Carr: We've got the 80-gallon tank of water —

Shane Tews: All right. So, we got that. So, you were telling me —

Brendan Carr: We've got $800 billion ready to go into it, and it's going to just slosh out onto the floor if we don't get going.

Shane Tews: But are the maps, then, where the water will head? That's what I want to know.

Brendan Carr: I'm going to lose myself on this analogy soon enough. But, yeah.

Shane Tews: Well, eventually, the water has to go somewhere. It's like, OK, let's go with agriculture. It's going to go into an irrigation system. So, you're using pipes. Right? So, we have a little bit of ode to Ted Stevens there. So, the idea is, like, the maps are telling us where to put the irrigation systems?

Brendan Carr: That's right, yeah. I mean, look: We got to identify the pockets that have zero megabits per second first. Let's drive the funding there. And, obviously, let's look at other places that have megabits per second, but not as fast as we want. Let's drive it there. But priority-wise, let's find the places that have zero. Let's drive the money there. That's got to be our top priority. And if we don't have the maps that accurately identify those, then we're not getting the job done.

Shane Tews: OK. All right. Thank you so much for coming back. Hopefully, in six months, we'll get a better progress report, and everything will be going swimmingly.

Brendan Carr: Absolutely. Thanks for having me. Appreciate it.

Shane Tews: Absolutely.