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COMMEMORATING THE COMMUNICATIONS ACTS OF 1934

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P R O C E E D I N G S

MR. BROTMAN: I'm Stuart Brotman. I'm a nonresident senior fellow here at The Brookings Institution and the Center for Technology Innovation. It's a pleasure to welcome everyone here.

We're here for an unusual event. We're actually here for a birthday party and it's not often that people gather at places like Brookings to celebrate a piece of legislation. And more than celebrate, to take a pretty broad and deep look at where we've been and perhaps where we may be going with a piece of legislation known as the Communications Act of 1934. For those of you who do a little math, 1934 plus 80 equals 2014, so we're talking about an 80-year-old piece of legislation.

Let me just do a few quick ground rules for our discussion today. First of all, we're not going to have any formal presentations. We're going to have a good, spirited conversation and then there will be ample time for Q&A afterwards. When we have Q&A, if everyone will just identify who you are, and if you're associated with an organization that will be helpful. We'll have people with microphones, as well, and if you'll just wait until a microphone is at your side, it'll be a lot easier.

Many of you know that we're live now on CSPAN-3 and so welcome to that audience, as well.

In addition, because we're in the age of social media, we do have the hashtag, which is #commact, C-O-M-M-A-C-T. And for those of you who are here or elsewhere, tweeting this out would be great. For those of you who will not be Tweeting it out, we would appreciate if you would silence or turn off your cell phones or other devices.

So let me set the stage a little bit, and probably the easiest way is also to

begin to introduce our very esteemed panel today. On my far right here is Bob Litan. Bob has a very long and distinguished history as an economist and lawyer here in Washington, including a very long and distinguished history here at Brookings, where he was vice president and director of Economic Studies. Bob also has served in the Justice Department as principal deputy assistant attorney general in the Antitrust Division and the Office of Management and Budget where he was associate director.

And I should mention because I've just seen the announcement, Bob is the author of a terrific new book which is called *Trillion Dollar Economists*, which is published by Bloomberg Press and is available online and presumably in bookstores right now.

Rob McDowell, in the middle, has a long and distinguished history, as well. Most recently, seven-year service as commissioner and the senior commissioner of the Federal Communications Commission. Rob is now a partner at Wiley Rein, which is one of the great law firms in Washington, and particularly one of the great communications law firms. And it's a pleasure for Rob to be here.

Rob also has the distinction of having been nominated and confirmed on a bipartisan basis under two different presidents: George W. Bush and Barack Obama. So I think he has a very interesting perspective, clearly as a Republican appointee, but also with an appointment of a Democratic President.

And then Larry Irving. Larry was formerly, under the Clinton administration, the administrator of the National Telecommunications and Information Administration, my old agency. He also had many other titles attached to that, including assistant secretary of commerce for ~~communications~~ Communications and ~~information~~ Information.

Larry also has an extensive portfolio on the Hill. Prior to NTIA, Larry was the senior counsel at the House Telecommunications and Finance Subcommittee.

And so with these three panelists and a little bit of myself, I think we span Executive Branch, Legislative Branch, we don't span the courts, obviously, and obviously the FCC, as well.

It's very interesting looking back a little bit at the history of the Communications Act. I went back and consulted with one of the most distinguished chairmen in the history of the FCC, Newton Minow, who many people remember from that famous phrase, "the vast wasteland." Newton Minow was the chairman of the FCC for a relatively short period of time, only 27 months, beginning with the Kennedy administration, but many things happened, including the first major amendment to the Communications Act of 1934, which we'll talk a little bit about afterwards, which is the Communications Satellite Act of 1962.

Newt reminded me that even though today we look at the Communications Act as a major piece of legislation that's attached to the New Deal, at the time that it was formulated, it was really considered a relatively minor piece of legislation. And here are some of the major pieces of legislation that were being formulated at the same time.

We had, in 1934, we had the Farm Mortgage Foreclosure Act, the Civil Works Emergency Relief Act, and the Gold Reserve Act, and, of course, the Securities and Exchange Act. So, as you know, the New Deal brought us out of the Depression, and really what was on America's mind at that point was how to revive the economy. And communications was not really a central part of our economy at that point and so it was an act, as we'll talk about, that essentially was built upon the foundation of prior

legislation, legislation that really started in the 1800s with the Interstate Commerce Act in the late 1800s, and then later on an amendment to that called the Mann-Elkins Act in 1910.

That's a little history. It sounds quite ancient, but why don't we at least fast-forward to 1934 and begin to talk a little bit about the original intent of the act. What was the act trying to do when it was formulated?

MR. IRVING: I guess I'll take a shot.

MR. BROTMAN: Do you remember?

MR. IRVING: Yeah, I do remember. I was right there.

MR. BROTMAN: Just like it was yesterday.

MR. IRVING: Because I was right there. Franklin and I -- no, it was a housekeeping act. You had telecommunications -- I mean, I'm a Commerce Department guy, so we always have a little bit -- you noticed he said long and distinguished about these guys, but not about me. We always have a little bit of an inferiority complex at the Commerce Department. And most folks don't realize that most of the radio spectrum work was done at the Commerce Department. It was a small agency called the Federal Radio Commission. And what this act basically did was take some of the responsibility that resided in the Commerce Department, some of the responsibility that resided in the Federal Radio Commission, and pulled them together.

And one of the interesting things is that, you know, there was an assumption in the '30s that this was going to be a natural monopoly. You know, we were dealing then with a scarce resource. It was a monopolistic resource. And it was seen that there needed to be somebody to make sure that these big players who really didn't face competition played fair. That was really all it was about. Let's take some of

these responsibilities, put them in one place and make sure that this thing continues to grow. But there was no TVA, there was -- you know, the radio industry was nascent.

An interesting fact was that at one point there was a conversation about taking 25 percent of the broadcast spectrum. I'm on PBS's board, and so I look at this and say 25 percent of the broadcast spectrum was, at one point, earmarked for educational purposes. The commercial broadcasting industry fought that off and instead got a public interest responsibility instead of having 25 percent go to nonprofit, educational purposes. But nobody in 1934 looked at communications the way we look at it now, and certainly had no thought that it would be one-sixth of our economy.

MR. LITAN: I'll take off on the word "monopoly." I think there are two words to keep in mind when you think about 1934. Monopoly's one of them and actually Larry knows, of course, there were two monopolies then. There was AT&T and then -- well, when we talk about monopoly, "monopoly" implies scarcity. We had radio. We didn't have TV yet. All right. I'll get to that in a minute. But so we thought in terms of monopoly and scarcity, which are sort of, as I said, two sides of one coin.

And the other thing, of course, that was fundamental in 1934 is the word "analog." All right. Because we want to set this up for how the world has changed since 1934. But if you think about the predicate in 1934 and then what happened afterwards, when we get to satellites, et cetera, essentially Larry's right that the Federal Radio Commission became the FCC. And then the FCC morphed into taking on more and more responsibility as we had other forms of communication. So we got TV. We got satellites. We got mobile telephony. And as each of these new technologies came along, the FCC, as I view it, developed departments for each one of them, and they were all separate silos. And it was all useful to think of them as separate silos because in a

world of analog, the waves aren't sort of interchangeable. They're all sort of separate, so it made sense to have separate things.

And I don't want to preempt the discussion because we're going to talk about what changed since then, but you can see how different that world was then than it is now. And we'll talk about what's changed since.

MR. McDOWELL: And so building on that, absolutely right, it was very, very different. And back to the monopoly point, you did have the old AT&T agreeing to - actually a protection for its monopoly in exchange for what we a universal service, and that is to make telephone service available at reasonable rates upon request and also to build out to unserved areas. The telephone was still a relatively new technology in mainly the affluent and urban and suburban areas, in that there were any suburban areas then, mainly were the main subscribers of that. So how do you have that technology proliferate? And there were some competition issues and excluding competitors. And in exchange for being able to have a monopoly and not be subject to the trust busters, you could take shelter in being a regulated monopoly. And so that was part of the impetus and the political compromise for the 1934 Act.

And then there's what I think is sort of a fiction of spectrum scarcity, but back then it was only AM radio. And, you know, my father, who grew up on the Tex-Mex border in Del Rio, Texas, I used to tell stories of just across the border in Villa Acuña, Mexico, there was a 1-million-watt radio station, again all AM, Dr. Brinkley, the notorious Dr. Brinkley. So his signal could reach over a huge swath of the U.S. and that was his audience, but there wasn't any regulation of that. And the screen doors across the river in Del Rio, Texas, would vibrate with the energy from that radio station. And so there were some legitimate spectrum management issues.

A question which we could delve into, you know, going forward, what is the role of the FCC going forward? Did you need an independent agency to manage that or could that have been managed by the Executive Branch for spectrum allocation? So that's a topic to tee up.

But those were a couple of the motivations behind the 1934 Act and things have changed completely. And those silos that you just pointed out still exist in terms of the regulatory landscape, but for technology and the market and especially, most importantly, consumers, those silos don't exist and the law should be updated to reflect that.

MR. IRVING: One other thing about how much the world has changed, Franklin Roosevelt suggested the Federal Communications Commission in February of 1934. By June of 1934, it was out of both Houses. And by July 11th, the act took effect completely across the nation. We can't get a hearing in six months now in Washington and they passed an entire bill, which gives you a sense of, one, relatively how important it seemed; and two, how much more gridlock there is today in Washington than there was when they were looking at this legislation.

MR. McDOWELL: And you had one party rule.

MR. IRVING: And one party rule, which if it's the Democrats, I'm not opposed to it. (Laughter) I miss those days.

MR. BROTMAN: Well, it's also interesting about this old Mann-Elkins Act of 1910, which, again, Google it or look it up. The Mann-Elkins Act essentially gave, for the first time, authority of the Interstate Commerce Commission to regulate telephony and telegraph. And from 1910 until 1934, that authority was not at the Federal Radio Commission. It was now part of the Federal Radio Act. But telephony and telegraph

were considered separate media which were regulated by an entirely different agency, the ICC, which essentially regulated rail carriage and rail transportation.

And so a lot of our notions of common carriage essentially were rooted in this notion of the ICC. And part of what the Communications Act of 1934 did was to bring together the notions of telephony and telegraph at that point and to marry them with notions of mass media, principally with radio. And so we essentially had two different acts which were combined, put together, and we had the Federal Radio Commission then morph into the Federal Communications Commission. And the FCC was then given the authority to regulate telephony, as well as broadcast and spectrum-related media.

Part of it, looking back at the history, is that the ICC had very little competence and was quite frustrated because they wanted to really focus on the railroads and, all of a sudden, they had cases dealing with telephony and telegraphs and the staff and the commissioners really felt uncomfortable. This was not their zone of expertise. And so they were very supportive of taking that function and moving it out, and that's essentially how those two functions got combined into these silos that we're talking about in the Communications Act.

MR. LITAN: One footnote, so the ICC, just to tee up a later of discussion, probably none of you people will remember, the ICC's gone. Okay? I mean, we're going to be talking about the future of the FCC. It doesn't exist anymore, alright. All right. And I worked in the Clinton administration and two cheers for the Clinton -- this is all in my book, by the way, *Trillion Dollar Economists*. I talk all about what happened to the ICC, how it grew up and then its demise. And people don't realize that it was the Carter administration that killed it. They all think that, you know, the Reagan administration came along and killed off a lot of regulation. Carter was

responsible for airline deregulation and trucking regulation.

MR. McDOWELL: And rail.

MR. LITAN: And rail. And rail. And --

MR. McDOWELL: It worked.

MR. LITAN: And it all worked. All right? And the ICC, in between the time -- or right after the time that it got ahold of telecommunications, along come trucks, you know, in the 1930s and they ended up with trucks. And, you know, in retrospect, they shouldn't have had anything, and we finally got rid of it all. So, I mean, that just -- that will sort of give you an indication of where I'm going to be talking about the future of the FCC a little later on.

MR. McDOWELL: You had a speech on that in Rome, actually.

MR. LITAN: Yes.

MR. IRVING: They don't fly as much as I do, so they think ALD regulation worked. We can talk about that at another Brookings event, but any regulation, not so much, not quite as much.

MR. LITAN: Well, I just --

MR. McDOWELL: Safer and more people can fly now.

MR. LITAN: Yeah, if you adjust for consumer prices, airline deregulation has worked. But I agree with you, a lot of airlines suck, but that is not because -- flying sucks. No, look, I mean, I just was on an airplane yesterday and I hate it.

MR. BROTMAN: I know this is going to be tweeted now. (Laughter)

MR. LITAN: Yeah, right.

MR. BROTMAN: They caught that line.

MR. LITAN: No, a lot of people don't like airlines and it's important to talk about this because people will say, oh, my god, if you do this for communications, look what happened to the airlines. I think a lot of what happened to the airlines since, first, people misperceived that I said rates have come down.

SPEAKER: They have come down.

MR. LITAN: All right. But the planes are all full because they're like buses, okay? But people don't remember that back in the old days, planes were 60 percent full, all right, and it was a tremendous economic waste.

SPEAKER: It was.

MR. LITAN: All right. Alright, and it was a disaster. And I think the Justice Department probably has allowed too many mergers. And so, as a result, we have too much consolidation, but that is not deregulation's fault. Okay. I just wanted to get that in.

MR. BROTMAN: And remember the name of the book is?

MR. LITAN: *Trillion Dollar Economists*.

MR. McDOWELL: *Trillion Dollar Economists*.

MR. LITAN: And you can read all about this in chapter 9 and communications, I think it's in chapter 11.

MR. McDOWELL: Shameless plug.

MR. LITAN: Shameless plug.

MR. BROTMAN: So Rob McDowell shows up at the FCC, having been confirmed, and presumably has in his breast pocket a copy of the Communications Act. And he sees in there --

MR. LITAN: Tattooed on his chest.

MR. McDOWELL: Yeah, I couldn't fit it. It's too big to put that in my pocket.

MR. BROTMAN: He sees in there this phrase, which is called, "public interest, convenience, or necessity." Quite interestingly, in the Communications Act itself there are different formulations. Sometimes it's done in the conjunctive, "public interest, convenience, *and* necessity," and sometimes done in the alternative, "public interest, convenience, *or* necessity." But most legislative historians say that that basically really didn't make much of a difference. The key aspect here is public interest, convenience, and then the word "necessity."

When you came to the FCC and looked at those words and realized you and your fellow commissioners now had the authority to implement the act, what did that mean to you?

MR. McDOWELL: Yeah, so, and this is a point of philosophical debate, which is probably why you're asking the question, so there are those who think that because "public interest" appears 112 times, or whatever the number is, in the act --and my dear friend and former colleague Commissioner Michael Copps knows the exact number; he has it memorized -- but that doesn't mean that there aren't other words in the Communications Act, as well. So it doesn't mean unbridled authority for the FCC just to regulate that space willy-nilly as it sees fit.

But all too often, "public interest," what does it mean? It means whatever a majority of the commission says it means, and then that goes to court and then the courts decide what it means. So, you know, there's the Communications Act, then there are volumes and volumes of the FCC record where there's decisions, and then there are even more volumes and volumes of court decisions trying to interpret what the

FCC said.

But there are a lot of other words there in the Communications Act of '34 and the 1996 act and, you know, the cable acts and all the rest, so there's a lot more to it than that. But it literally does mean, essentially, whatever majority of the commission says it means unless it's restricted by the courts or other explicit language in the act. And that's where it becomes dicey, and that doesn't necessarily serve the public interest well when it's so expansive because you can have a lot of unintended consequences by broadly applied and broadly written rules. And you can squelch innovation, which it's very hard to measure what innovations are not coming to market, what are not going to end up in the hands of consumers based on the unintended consequences of regulation.

So public interest can be certainly used as a good. I would rather see a rewrite, turn the telescope around, look at all this through the consumer's perspective. Is there consumer harm? Is that caused by a concentration and abuse of market power, rather than the legacy of the technology you used, which we can talk about in a minute, and other things that are woven into that act?

MR. IRVING: So I had the great good fortune of being involved either as a legislative staffer or as part of the Clinton administration in four different versions of the Communications Act. I was involved in the '84 Cable Act; I was involved in the 1990 Children's Television Act. I was involved in the 1992 Cable Act as a principal drafter for the House on that and as a point person for the administration '96 Communications Act.

MR. McDOWELL: Other than that, you haven't done much.

MR. IRVING: I haven't done much. I haven't done anything since then.

MR. LITAN: Well, not since then, you haven't done anything.

MR. BROTMAN: Let me just interject here, Larry has a long and distinguished career. He now has achieved what everyone else has.

MR. IRVING: Basically, I'm old. But one of the things about being old and having watched that is, on every one of those occasions, we looked at other permutations, other ways of going at going at public interest, convenience, and necessity. And the problem is there really -- if you go to a straight economic test or a consumer harm test, you'll leave out lots of things.

One of the things I'm proudest of is we wrote the EEO rules for the cable television industry. The cable television industry was one of the least diverse industries until the 1984 act. And in 1984, we put in EEO regulations; it became one of the most diverse communications industries. And the peg on which we hung it was public interest, convenience, and necessity. I don't know how you would have done it otherwise or how it would have withstood court analysis if we didn't have the public interest.

MR. McDOWELL: But that came from Congress.

MR. IRVING: But that came from Congress, absolutely.

MR. McDOWELL: Yeah, a clear directive from Congress.

MR. IRVING: But we looked at the public interest standard, you know, referring back to other court cases, looking back at what the courts had said, and we pegged it on to the public interest standard. If we pulled out the public interest standard, we'd have had a lot fewer hooks on which to hang the kind of EEO regulations. There are lots of times when having the flexibility -- you want to find ways to make the public interest standard clearer and less subject -- I mean, Mark Fowler, who was chairman of the FCC under President Reagan, said the public interest is whatever interests the public,

so we don't need to regulate. I mean, that was pretty much his theory.

You don't want to have these huge swings, but we haven't found a formulation that works well, that gives the commission the ability to look at new technologies and new innovations and say, okay, we want to steer the ship this way while not going so far, to Rob's point, that we strangle innovation. And trying to find that balance is hard. The public interest standards work pretty well. A straight economic test would frighten me that we would be hamstringing the commission too much if we didn't give them some flexibility beyond a strict consumer harm test, because a lot of time you don't do consumer harm until they've already been harmed. Then you've got an after-effect rather than trying to be in front of some of these innovations and opening up some ways for companies to do things they'd like to do.

MR. BROTMAN: This language, by the way, is probably the first example of cut-and-paste in history, because it was in the Interstate Commerce Act of 1887, and Senator Dill, who was the principal author of the Communications Act in 1934, was actually asked why did you put "public interest, convenience, and necessity" in there? There's no legislative history, so as Rob and Larry and I know Bob agrees with this, it is a phrase that basically you divine meaning out of on a continual basis and, to some extent, you do that as a prophylactic in terms of judicial review.

But there, in fact, was no underlying meaning. It was basically a phrase that was taken from an 1887 act of Congress, Interstate Commerce Act, and it was exported and then pasted into the Communications Act.

MR. McDOWELL: And actually, even going back further, you can go back to 17th century canal regulation, and the regulation of innkeepers and other common carriers in that regard, too, for public convenience and necessity language.

MR. BROTMAN: Absolutely.

MR. McDOWELL: It goes way back into European regulation.

MR. BROTMAN: Now, Bob Litan, you sat in the Justice Department for a number of years. Did this all seem sort of peculiar or strange to you given your perspective, looking at this through a little different lens, principally through the lens of the Sherman Antitrust Act, and to some extent the Clayton Act. And these are separate pieces of legislation which also have had a major impact on the structure and the implementation of communications.

MR. LITAN: So just to demonstrate how ancient I am, so I was there in Clinton '93-'96. That's who-how Larry and I became good friends. We were meeting with each other almost every week about what became the 1996 Telecom Act. And, at the same time, we at Justice were responsible for administering something that none of you will recall: the AT&T Consent Decree. This governed the breakup of AT&T and AT&T's children, the Regional Bell Operating Companies, which have since merged and there are only several of them left. But they all had to go to court, basically if they wanted to do something new they had to get the District Court to sign off and we at the Justice Department had to weigh in.

And so the big debate at the time, in the '90s, there were two big things that concerned us at Justice. One is the local companies, Regional Bell Operating, one in the long distance. And Ameritech was the most ambitious of these companies and we were negotiating with them about the conditions under which they could do this. Eventually, that was all made irrelevant by the Telecom Act.

And then the second thing that was emerging and we had no idea -- in fact, we were talking about this before coming up here. The one thing in retrospect that

I don't think any of us anticipated is the extent to which cable and the telephone companies would go at each other's throats. At the time, one of the purposes of getting the '96 act was to allow them to compete in each other's business, but I don't think a lot of us felt that they would really be as aggressive as they were going to be.

This was nice in theory, and I think the Vice President plugged it when he talked about it in his speeches or whatever. But, in retrospect, after the telephone companies were freed of the obligation of sharing their lines with the local upstarts, what happened after that in the 1980s is that cable and telcos just went at each other hammer and tong, and they started building out what became the broadband networks that you all now have today. And I think if you had asked me in 1995 would they have been as aggressive competitors, I would have said no. And it turns out they were.

MR. IRVING: But what's interesting about that, one of the things that's interesting is Rob has spent a lot of time with the competitive carriers, I was on the board of a competitive carrier. The fight in the '90s was really about -- more about than anything else about long distance. Nobody thinks about long distance anymore. I mean, long distance had this huge revenue opportunity and that's why you have to have a bit of flexibility.

You know, as smart as we were, and people have said this a million times, the '96 act contains the word "Internet" exactly one time and that's in the Communications Decency portion of the act. Now, we tried to think about the Internet and we tried to create a Title 7. Somebody will one day write a book about the late lamented Title 7. What the Clinton administration was trying to figure out a way to come up with a regulatory method of looking at the Internet that wasn't going to be Title 2 or Title 3 or Title 6. It wasn't cable. It wasn't broadcasting, clearly. It wasn't old

telephony.

And the Antitrust Department and the Commerce Department and some smart folks in the FCC and various parts of CEA, the White House, all sat down and said what's the right way to regulate this new thing coming on? And then we took it up to the Hill and people on the Hill were like, the Internet, that's that thing with tubes, right? I mean, in 1995/96, try and have a coherent conversation with a member of Congress -- other than my former boss, Ed Markey -- about the Internet, you know, you might as well have been whistling in the wind.

And the point I'm trying to make is just three years later, all of the investment that was being made was being made by companies because of their encouraged into Internet and data and an entirely new way of looking at things. And yet we spent untold thousands of hours and untold millions of dollars talking about that issue here in Washington. And three years later, almost everything we did was almost unimportant because nobody even thinks about a long-distance call. When you pick up your phone today, you know, when I was the age of the people sitting in the front room, I thought, oh, what time is it and where am I calling and what day of the week it is. You pick up your phone, you make a phone call, you don't even think about that. Twenty years ago, we were making decisions based upon the economic consequences of long-distance telephones.

MR. McDOWELL: I think that's an excellent point, by the way, for just people looking at public policy objectively is that the best and the brightest in 1996 thought it was all about voice --

MR. IRVING: Well, maybe.

MR. McDOWELL: -- yes, I put you in that category -- all about voice

and long distance was the big fruit, the incentive for the local phone companies at the time, the Baby Bells. And what would they give up for that? And then there became the issues of unbundling. And, you know, just 10, 10-1/2 years ago, not that long ago, that was still the fight of what's going to happen with residential voice. And we needed to unbundle something called the bundle network element platform. And for my father-in-law Jack Griffin, who's watching, that is basically an economic regulation of the last mile of wire to the home. And would there be competition in residential voice? All with a wire-line mentality, not thinking about cable telephony, which was actually on the rise at that point, a cable modem being sort of the first real sort of broadband to the home, and then cable telephony not far behind, and then voice-over Internet over the top, like a Vonage-type service. All that was coming, but the best and the brightest didn't see that or how it would affect public policy and the market and benefit consumers.

And then, something I hope we can talk about some more here in a minute, which is the rise of wireless. So now most homes, or quickly most homes, will be wireless only. Wireless broadband is the fastest-growing segment of the broadband market, with actually low-income and minority users being the fastest-growing segment and being better early adopters than white affluent suburbs. It's a wonderful story to tell.

Nobody in the public policy arena predicted this or nobody that I talked to anyway, you know, even 10 years ago. And so these are all positive stories when we talk about the need for ex ante or before the fact regulation, it's very difficult for regulators to get it right. Frequently, they don't. I've been on both sides of being a regulator and an advocate. Frequently, they don't and people can't see what's coming next. And even industry bets wrong, right? So there's some bright people and smart investors who bet wrong every day in industry and some who get lucky or good and bet right.

So keep in that in mind when we're talking about public policy what you just can't envision. Ten years ago, it was a completely different debate which is now -- it seems like ancient history. It seems like we're talking about stone tablets and chisels when you talk about long distance. And, you know, you're right, calling your grandmother on her birthday, it better be on a Sunday, and you pass the phone around quickly, which was wired into your wall; if anyone's watched, you know, *Mad Men* or other shows of that era. And it was very, very expensive, and now it's a giveaway, it's free.

MR. LITAN: Can I just add two quick things about difficulty. Not only in Washington we can't see things, there are also really smart rich people that miss things. So one example is Bill Gates wrote a famous memo in the '90s.

MR. McDOWELL: 1995.

MR. LITAN: Yes, where basically he says, hey, we've missed the Internet, you know. And they quickly tried to catch up and then Internet Explorer and that, of course, led to the antitrust case against Microsoft. They caught on quick. But last night I was watching an interview with Steve Ballmer on *Charlie Rose* and Steve Ballmer openly admitted that his biggest mistake at Microsoft was not going into hardware. All right? He said we're Microsoft. We're operating -- you know, a software company. And it was Bill Gates' religion that we are only a software company. Paul Allen wanted him from the early 1980s to be in hardware; he never did it. And then Ballmer basically said we missed the boat on hardware. And so as rich as Microsoft is, here's a big company, big guy, rich people, famous people, smart people -- they missed it, too.

MR. McDOWELL: The mystery of capitalism

MR. LITAN: Yeah.

MR. IRVING: I'll give you one of the really great example of missing Robert E. Lee, who was a commissioner at the FCC, I think in the '80s when I was on the Hill, said with regard to cellular telephony -- actually it was 1978/79, with regard to cellular telephony, what a frivolous waste of spectrum. Let people use it for telephone calls. And this is a sitting commissioner of the FCC not even 40 years ago.

So, I mean, we all miss it. And, you know, Commissioner Lee, I'm not trying to disparage him, he's a pretty bright guy, but, you know, you had folks at AT&T saying -- and I think the '60s, they'll never go over 100,000 cellular phones. Yeah, if a cellular phone is this size and is going to cost you 20 bucks a minute, yeah, you're going to get 100,000 of them. If they're this size and, you know, there's 700 million and it's basically, you know, \$60 a month unlimited, you're going to get 7 billion of them. I mean, that's the way it works.

MR. McDOWELL: And nobody predicted that, even the inventor of the cell phone, Marty Cooper. He admits very frequently, because he's such a wonderful fellow, that he had no idea what was coming when he invented the software.

MR. BROTMAN: Let's wind this back to 1934. In 1934, they didn't really worry about are we predicting the future? Are we going to get the market right in the future? Are these technologies? What they basically said is, we are going to create an agency, and the agency is going to have expertise and build expertise and be reviewable by courts so that there will be checks and balances.

And so Congress really did not take a very active role in the way that we're talking now in the '90s and certainly going forward, that there's much more of this idea of whether or not legislation should have a predictive value. What if you don't get it right? Obviously we've had a number of examples about that.

But back in 1934 that wasn't the name of the game at all. The name of the game was, let us basically import some aspects of other pieces of legislation. Let's combine radio and telephony and put them under the aegis of a single agency. Let's appoint originally seven commissioners who will be nominated by the President on a bipartisan basis. One will be designated the chairman, and those people, and obviously the bureaus and the staff, will essentially be in charge of developing that inbred expertise about predicting the future, operating in the environment.

So Rob, I wanted to just get a sense, since you obviously sat in that position for a number of years. From sort of an operational standpoint, I mean, do you think the FCC or an agency like that has fulfilled the function of developing that level of expertise, or is it sort of an impossible task because no one sitting in Washington essentially can understand all those parameters?

MR. McDOWELL: Yes, to your question, which is there's a lot of expertise at the FCC, so I do want to give a shout-out to my former colleagues there. There are 1,600 of them: engineers, economists, lawyers -- plenty of those -- and other professionals, and who are very dedicated public servants and do their job very well. That doesn't mean the policy calls are always right, but it is a tremendous agency.

And by the way, for those of you wondering, the FCC actually makes money for the American taxpayer through spectrum auctions and administrative fees and such. There's actually a net gain.

But it's impossible, as we've just kind of been discussing, to guess where the market is going. And I know the term "net neutrality" is going to come up, so let me be the first to use that term, in that debate. And we don't have to get sidetracked on it because I know we're not talking about that as much today. But in that debate that is

going to be a problem. You know, if the FCC is the dog that catches the bus and wants to have jurisdiction over that space it is going to find that to be very difficult in terms of ex ante or before the fact regulation, which, in effect, becomes "Mother, May I," permission seeking. And in the dynamic Internet space, when there are amazing success stories and then another success story to snuff out their competitors very quickly, it's going to be very, very difficult for the FCC to ahead no should it, in my view.

But, you know, going forward, I think if we have a Telecom Act rewrite and certainly, you know, I was there with Chairman Upton and Chairman Waldon about 10 months ago when they launched that effort to examine it, to solicit whitepapers and ideas, and some people in this room I think submitted a few. It's a very good exercise to have. The act is 18, almost 19, years old now and a lot has changed just since then, let alone since 1934. And there have been only some very minor amendments to it, like the Spectrum Act of 2012 and some others. A good bill, a big bipartisan bill, by the way.

But we're going to have to reexamine it for the silos -- oops, as I throw my pen at you -- the silos that were just -- thank you -- that were just discussed in terms of what we didn't talk about in 1934 is -- about 1934 is how the different titles regulate based on the type of technology used at the time and your legacy as a company. So Title 2 is primarily copper-based analog. You know, this is back in the day when the telephone operators had the manual switchboard and the headphones, right, and it was voice only.

You have Title 3 with now a number of components to it. You have over-the-air broadcast, you have satellite, you've got mobile, you know, wireless services, as well. And you have Title 6, which is coaxial cable or video services.

And now, you know, the consumers are demanding a convergence, you

know. If we all -- the number one screen as I watch my kids, ages 7-seven through 15, you know, is their mobile screen. This is changing everything. It's wireless. And as we have huge leaps in developments in wireless -- well, spectral efficiency and developments in wireless, you're going to see so much more disruption between licensed and unlicensed uses of wireless. And it's a phenomenal time to be a consumer of not just content, but of information and also a generator, consumers as being generators of content and information. The barriers to enter at the lowest in human history, and it's literally changing the world and improving the human condition all over the world.

None of this was envisioned in 1934 and very little of it was envisioned in 1996. And that wasn't that long ago, back when my hair was black.

So it's time to rethink this and also to talk about federal spectrum, the federal government occupying maybe 80 percent, by some estimates of the best spectrum. And what can we do to get the federal government to relinquish some more of that spectrum, which is something that Secretary Irving knows a lot about.

MR. IRVING: You know a bit about it from your days back in Commerce.

MR. McDOWELL: Yeah.

MR. BROTMAN: So, Larry, you were there, obviously. I mean, we were all there in '96, but Larry was one of the principal architects of the Telecom Act. And clearly come also from the Hill, so had a real sensitivity in terms of Congress. So maybe talk a little bit about the early days of thinking about revising the Communications Act of 1934 in probably the most dramatic way that it's been done since, which is the Telecom Act of '96. So coming from the Hill, what were some of the things that the Hill was concerned about and how did you begin to think about that in terms of being in an

administration and obviously developing policy which then could be implemented by an independent agency?

MR. IRVING: You know, if you look at the Hill and you're an historian at all and you look at how things work, from 1934 to 1954, '56, UR television and radio changed a little bit, but there's relatively little change of the Communications Act. And then court cases and technology started accelerating.

Basically what the FCC, in my opinion, was really doing right in the '40s and '50s was universal service, which was kind of a core principal. But what do we have to do to make sure that as many people have telephones and that it was a true monopoly in those days that rates were fair. Starting about the '60s and '70s, cases we won't get into: Computer 1 and Computer 2, all these -- you know, there were lots of things going on in terms of new technologies, how it would connect to the network. What we were trying to do in '96 was stay in front of technological change.

And what we were also trying to do is make sure that we understood the important role of the Justice Department and we wanted it to be a role in the Justice Department, but we also wanted to make sure that innovators and entrepreneurs and companies were driving innovation, not government fiat. So we were trying to find ways to open up the system to more competition.

We believed that the days of natural monopoly were over. We believed that innovation was going to rise, not recede. And what I think most members of the Hill wanted were to protect consumers, promote competition, direct investment, and get a lot more innovation into things we thought were going to move to the American people. We were right on most of those instances. We were wrong as to how it would happen.

But what we wanted to do -- you know, if you think about the '96 act in

this one way, from 1996 till today, we've seen between 1.2- and \$1.5 trillion of investment in our infrastructure and we're seeing that between 60- to \$100 million -- billion every year going to our infrastructure. Most of that was unleashed because we did do some things with deregulatory and we did believe that competition and dual or trimodal competition was going to be more beneficial.

That was not where we were when I got on the Hill in 1982/83. We kind of saw there'd be this silo of broadcasting, there'd be this silo of cable, there'd be this silo of telephony. And no one realized that, you know, as many people would receive telephone service at home over their cable system as they do over the telephone system or the telephone companies would be wireless competitors as much as they were wire-line competitors or the television systems would have the spectrum that all of a sudden we were going to try to sell and do other things with and make maybe more efficient use because 90 percent of Americans receive television from something other than an over-the-air broadcast signal. And trust me, when I was the age of most of the people in this room, when I got a television, it was over rabbit ears attached to my television set. That's turned its head.

And even if you look at cable, just look at the last three weeks with the announcement -- you know, what's happened with Netflix and they've started going up. Then you saw HBO saying we're going to, you know, go extra cable and go over the top. And then CBS, a traditional broadcasting network, saying we're going over the top again, completely transforming.

And in five years, I will bet you that the media landscape will be markedly different than it is now. How, I can't tell you, but I know I watch more television on my iPad than I do on my television at home, mostly because I'm on the road. But if I want

to catch up with *Downton Abbey* and I'm on PBS -- I'll give you a plug, it starts again in January -- if I want to watch *Downton Abbey* and check what's happening, I'm more likely to see it here when I want to. And nobody in this room believes they're going to be home at Thursday at 8:00 to turn on *Cosby*. You know, like we were racing home to see *Friends*.

SPEAKER: Appointment TV.

MR. IRVING: Appointment television is completely dead, changing the economics. And I saw *Jane the Virgin*, another great show starring a young Latina, is a hit with 1.8 million -- 1.8 million -- viewers and that's a hit. 1.8 million would not have kept you on for -- on television --

SPEAKER: Online.

MR. IRVING: Online and television was 1.8 million. But across -- you know, 1.8 wouldn't have gotten you -- you would have been cancelled the day after you got a 1.8 million share, but now that's enough. The economics are changing and regulators have got to figure out ways to not stifle that change, but give consumers what they want, which is more of that change.

MR. LITAN: Can I be brief and just radical. I want to be radical just to get the conversation going. If you want to ask how if I were king for a day and rewrite the Communications Act, I would have what I call a very skinny FCC. And I realize that once it gets to Congress that they're going to Christmas tree and add things to it. But I would start with a very minimalist role for the FCC, recognizing that scarcity's gone, that we have digital now instead of analog. I'd have two roles for the FCC.

One is they can finish and expand their spectrum options and they run that. Okay? Because competition, the more competition, that's a good thing.

The second thing is I would have them adjudicate disputes over discrimination by network owners in favor of certain content providers. Now, they do this right now for video and I would extend this to broadband. So, for example, I'll give you an example. Comcast owns NBC. If Comcast is favoring some of NBC's rivals, all right, because they own NBC, that's not right. All right? That's an abuse of their --

MR. McDOWELL: Discriminating against their competition.

MR. LITAN: That's unlawful discrimination and the FCC now has power to stop that. You could stop the same kind of thing in the Internet world, all right, where you have, you know, take one of the broadband providers and they're discriminating in favor of certain content. And let's say, for example, they offer a 15-megabit package, you know, and they're discriminating against certain sites based on a certain speed. I would have them administratively stop discrimination, end of statement. That's it.

So basically, in my FCC, they have something like 1,700 that work for them now, I think borderline. All right? I think -- by the way, I can give them sort of a report-writing function to sort of, you know, tell us about the future of communications and all that. I mean, we're talking about several hundred people and I don't think we need a big FCC anymore.

MR. McDOWELL: Thirty-six hundred lawyers there.

MR. LITAN: Whatever. We don't need these people. And I know Larry's going to pile on and going to add some more things, whatever, but I'm going to start there. I'm going to start there and that's who-how I'd rewrite the act.

MR. McDOWELL: Can I dovetail into that real quick, which is so

actually, you know, with discrimination, as you say, and anti-competitive discrimination, discrimination is a loaded term. It means different things in different contexts. To a network engineer it's actually necessary. If you want that movie you're downloading to be uninterrupted and un-artifacted and unfrozen --

MR. LITAN: That'd be fine, yeah.

MR. McDOWELL: -- your voice bits and email bits aren't interfering with it, that's discrimination and you like that. Right? So that's a good thing.

But the Federal Trade Commission, let me put a plug in for them. First of all, I like to point people to some of the speeches and writings of Commissioners Ohlhausen and Wright. Very substantive, intelligent, rational, even-keeled speeches and articles and such that they've written on this topic. But Section 5, for instance, the Federal Trade Commission actually would prevent that type of discrimination from happening if a cable provider in an anti-competitive way discriminated in favor of its own content and against the content of others. There are -- you know, the mantra is there are laws already on the books that exist that deter that behavior and would cure it if it actually ever happened, and it's not happening. It hasn't happened in any kind of systemic market failure way.

So in addition to the trial lawyers would have a field day, tortious interference with a contract, all sorts of state consumer protection laws, state attorneys general. There's a whole arsenal, a huge quiver of legal arrows that would be launched against Internet service providers if they wanted to go in that direction. So keep that in mind that you can't do it under Section 5 of the Federal Trade Commission Act.

The Federal Trade Commission, by the way, back to the point, is ex post or after the fact regulation too slow. The Federal Trade Commission operates and

pretty much almost all the rest of the economy, not quite all the rest, but certainly complex areas, dynamic areas, whether it's software, Internet surge, things of that nature, it's there, and, you know, operating systems and all the rest, and manages to do fine. That actually -- those sectors of our economy are the best in the world and have been for a generation and will be so for years to come.

MR. LITAN: But can I just interject one quick thing and then I'd like to get back? I'm going to be very clear and I'll respond to Section 5 in a minute.

The only reason I would keep the FCC involved in this is they have expertise about it. The FTC's got broad jurisdiction. They do a lot of different industries. Telecom's not one of them. The Justice Department and the FTC split jurisdiction and telecom is largely a Justice Department function. And the only reason I would give it an administrative role at the FCC is it'd be quicker, I think, to do it than having a bigger investigation. But I just wanted to get that point in there.

But I can see this, you could do it under Section 5.

MR. McDOWELL: But when you're talking about --

MR. LITAN: Okay, I concede that.

MR. McDOWELL: I like that concession.

MR. LITAN: No, no, I concede --

MR. McDOWELL: Could someone Tweet that out, please?

MR. LITAN: No, no, I can concede that, but still my first pass preference would be to keep it in the FCC.

And one final thing and I'll shut up is that is I want to make clear that I get FCC out of merger review. All right. Back to the public interest standard, all right. I give that to the Justice Department. There is no reason why, in my

opinion, we single out the telecom industry for special antitrust review and have joint jurisdiction between the Justice Department and the FCC.

Now, I recognize there's joint jurisdiction in the banking industry. I'd get rid of that, too. There's joint jurisdiction in the transportation industry. I'd get rid of that, too. ~~All right~~ ~~Alright?~~ But you take every other industry of the economy, either the FTC or the Justice Department reviews; they review the antitrust implications of mergers. Let's just follow that principle and let's try to streamline our government.

MR. McDOWELL: And real quick on the substantive expertise, which is FTC learns a lot of complicated industries very quickly and as they evolve over time, so I think they could learn.

And the definition of what is telecom and what is communications, especially with the marriage of connectivity and content, is becoming -- the lines are blurring. From the consumer's perspective the lines are already blurred. So that doesn't necessarily take any network engineering, some of it, but it's easily understandable. It's competition. It's consumer harm and all that sort of (inaudible).

MR. LITAN: And they could take the engineers and hire them from the FTC if they wanted to.

MR. McDOWELL: Yeah, we could detail them over.

MR. IRVING: Okay, so I'm going to be the contrarian on this one. I don't believe that we necessarily need all of the functions that the FCC has. Now we'll have a conversation probably going forward about what is needed and what isn't.

Communications has always been seen as different. And I'm a communications lawyer and started out as a communications lawyer, spent most of my life as a communications lawyer, and I don't want it to be just a straight economic test. I

don't know that all of the things we need to do, but a straight economic test, communications is, as ever, it is the lifeblood of a democracy. And there are many instances that policy has been made by the FCC during merger review that has had beneficial impact on the nation. And the commission's been able to do things that on a straight economic analysis would not have been done by the FTC or the Department of Justice, and we've got to weigh those things.

But when you get that skinny FCC and all you have is --

MR. LITAN: Spectrum and discrimination.

MR. IRVING: With respect for Spectrum management, it's still got to be done. Universal service, are we going to leave universal service? You know, redlining is, you know, when you are born poor, black, and in the projects of Brooklyn and you spend your life as maybe not so poor, but still black and running around this country and seeing what's happening with regard to African Americans, Native Americans, Latinos with regard to service, redlining is still very real. We have a sister situation right now in terms of our universal service program of who pays into them? You have to really think about that hard.

You have major companies that are talking about all the beneficial benefits impact of getting big networks that have yet to serve a community that has more than 10 percent black people. How does that happen? Everybody runs around applauding Google Fiber. I have some issues because I'm waiting for the first time Google -- I was in Harlem last week. They'd love for Google Fiber to come there. I was born in Brownsville. Brownsville, New York, or Brownsville, Texas, come there. I mean, you know, any Brownsville you want to, pick a Brownsville, we'll be happy to see you come.

And we have to have these kinds of robust conversations about who serves, who pays, how do we make sure that the system is equitable. And we do need to make sure that we're looking at communications as different than widgets. That was the conversation we had in the '80s, the conversation we had in the '90s. Communications and widgets are very different things.

I want a strict antitrust with regard to what widgets are being manufactured. When you're talking about ideas, when you're talking about currency, when you're talking about how do we make sure that as many people are involved in this as possible, innovation is as free-flowing as possible, you need a little bit more.

Do we have too much regulation now? I could make some arguments because I see some things that are done that I think are a little bit unnecessary. I had a huge problem, a minute ago we were talking about the FCC brings money back to the Treasury. Back in the '90s, I was the lone voice saying, hey, look, we should never have budget-drive policy. And I was a little concerned we were so worried about the auctions driving revenue that we weren't looking at the auctions in terms of what policy were we trying to (inaudible) inflict and were we doing the right things in terms of how we were getting the spectrum out into the marketplace and making sure that policy implications were also involved in those discussions.

I think we're at about the right place right now, but when we had a huge budget deficit, the only thing people worried about was can we get that spectrum out? And OMB was like just get it out there as fast as possible. And as a steward of the federal government's spectrum who had handed it to the FCC so they could sell it, I wanted to make sure that national security, that aviation, that other things were met. Now, the federal government has way too much spectrum, but let's have a balanced

conversation about it.

Now we're going to spectrum sharing. The FCC certainly has to have a role in spectrum sharing. And what's that going to look like?

So there are lots of piece to this FCC puzzle. The Communications Act gets most of them right. We need some tweaking, but let's go back to kind of first principles: national security, universal service, diversity of voices, competition. If we start from our first principles, we can come up with a skinny FCC that works pretty well for all of us. I'm a little concerned that just an antitrust analysis would be too -- would take some of the, what's the word I'm looking for, some of the discretion of the FCC out of their hands. And I think that we'd be a little bit policy poorer for that.

MR. McDOWELL: Just a real quick point in support of a skinny FCC idea, which is if you look at the innovation let's say the past 10 years or so, where is it coming from? It's coming from the least regulated parts of the industry, so, again, you know, let's look at smartphones, let's look at the app industry. Those are the least regulated, right? And that's where the most innovation and investment has been and where the most consumer benefit has been and where consumers are stampeding to enjoy it.

So the world is different from how it was 10 years ago, 20 years, or 80 years ago with the 1934 act. It's much more dynamic. Wireless is changing that equation dramatically. And so I think we need to take a step back from the social engineering or the industrial policy, public interest type standard here and kind of let the market go. You've had more democratization not because of any industrial policy or government plan other than getting more spectrum in the marketplace, but in 2005, people weren't talking about the app economy. People didn't know what apps were

really then— So it is post-2007 in a deregulated sector of the economy that has done more to help low-income areas get Internet access at a high speed and really revolutionize their lives with new apps and access to information.

MR. IRVING:— But if you look at the structure of our wireless industry, the FCC made some very important calls and very important choices in terms of level of competition we were going to have, that being an expert agency only it could make— And we would not have the level of competition, we would not have the level of innovation, we would not have had the level of investment but for some calls the FCC made with regard to the structure of the wireless industry.

MR. McDOWELL:— Well, DOJ had a role in that.

MR. IRVING:— I don't disagree they had a role, but I don't think the DOJ would have had the expertise to drive the level of competition and the pace of innovation that the FCC has— I mean, you know, we all talk about Cooper's Law, and most of you have heard about Moore's Law, but very few people have heard about Cooper's Law.

MR. McDOWELL:— Google "Martin Cooper" right now.

MR. IRVING:— Martin Cooper, who was a genius and somebody we should all know— Moore's Law is that every 18 months we double the processing power at about the same cost— Every 24 months we see a doubling of the spectrum efficiency in our networks— Every 24 months we get a doubling of spectrum efficiency— If you think about what that means and how important that is, what that means is that the cell phone you used two years ago was half as efficient as the cell phone you use today— That doesn't just happen magically— Somebody does have to make investments to make that happen— And some of that investment, you know, folks want to make investment when they know what the rules of the road are.

My point is that there is a role of the FCC to make sure that the rules of the road are consistent and to make sure that it's a competitive marketplace. Because, you know, Cooper's Law is important, but so is competition. And I'm not sure that just the Department of Justice in an industry this fast-paced would be able to do it.

Now, on the other hand, I don't want the FCC to be regulatory Carl Lewises, you know, trying to race with the industry. You want them to, as my old boss Ron Brown said, you want an FCC that's steering, not rowing. You know, you want to make sure that the runners are running and somebody else is just making sure that, you know, when the gun goes off, nobody's cheating and somebody with a stopwatch at the end of the race. Those are the kinds of rules I see government should play, but no rules for the FCC. No role for the FCC. I'd have to cast a (inaudible) on that.

SPEAKER: Unacceptable. Now here's the thing --

MR. IRVING: Well, those very skinny -- you know, Tom Wheeler's a pretty skinny guy, but we want to give him enough to do to justify that salary.

MR. McDOWELL: You said skinny, not emaciated, right?

MR. IRVING: Oh, okay.

MR. BROTMAN: Well, I wanted to pick up what Larry said, which is communications is special and different and part of it is because it promotes the exchange of ideas and conversation. We've had a spirited conversation here, but we would now like you to join. So for anyone who has a question, if you'd just identify yourself and also indicate if you have an affiliation. The other aspect is I really want to try to get as many questions as is possible, so please frame whatever you're going to say as a question rather than a speech or commentary or anything else.

And we have a couple of people from Brookings who will have

microphones--. And I will identify the people who will be called on and then we'll proceed from there.

MR. McDOWELL--: So it's like *Jeopardy*, it has to be in the form of a question.

MR. BROTMAN--: You bet, exactly.

MR. McDOWELL--: What is in the form of a question, Stuart?--? Okay.

MR. BROTMAN--: Okay, first question.

MR. IRVING--: We've answered every -- oh, there we go.

MR. BROTMAN--: Okay, right over here.

MS. LALINA--: Thank you very much for this program and thank you for the comments so far--. My question is --

MR. BROTMAN--: And you are?

MS. LALINA--: Sorry, thank you, Anne Lalina, no affiliation to any particular group, except I have been cybersecurity and telecommunications for all of my professional life--. What are your thoughts on the role the Federal Communications Commission should be playing in cybersecurity for the general consumer?--? As you know, DHS has that role for critical infrastructure, the 16 sectors, but I don't know of any agency that really has the responsibility of cybersecurity for the general consumer.

MR. McDOWELL--: Excellent question.

MR. LITAN--: That's a great question.

MR. McDOWELL--: That is a great question and I'll be brief--. So, first of all, the FCC does have actually the creation of a new bureau which I voted for, Chairman Kevin Martin, the Public Safety and Homeland Security Bureau--. It consolidated a lot of functions, but after 9/-11 and also Hurricane Katrina, it became very apparent that FCC

needed at least a formalized coordinating body between other government agencies, federal, state, and local, as well as industry and consumers to help facilitate with all sorts of public safety and homeland security issues.

By the way, the FCC also manages the spectrum for public safety. That's governmental, but not what the Department of Commerce does.

So my personal view is that while the FCC can provide sort of a backup singer role to cybersecurity to advise agencies on how things work, et cetera, that there are a lot of government agencies already in the cybersecurity space and it's not -- still, in my view, not very well coordinated and we have some big holes. And some day, I think there will be a cybersecurity Pearl Harbor, whether it's from a nation state or just a lone wolf.

So I'm not sure the FCC is really equipped. It's not big enough, doesn't have that sort of expertise. Probably DHS, in my view, would be the best place for that. That was part of its job when it was chartered after 9-11. But I don't think that the FCC should have the lead dog role in that, but certainly should be part of the broader chorus to help with it.

MR. IRVING: Well, I'll just add, I mean, I think there is a portion of cybersecurity that has to be at the FCC because they do have subject matter expertise. But I serve on some energy boards, I look at -- I have some friends in the water industry. We do need a coordinated effort across government on cybersecurity because we get millions of pings a day folks trying to come into our network and our most critical infrastructure, whether it's water or bridges or transportation or telecommunications or the Internet as the Internet, and no one agency can handle that, not even for consumers.

But to Rob's point, we need to be vigilant. Because if you know as

much as he knows and I know about what's happening in terms of pings, you don't sleep well at night wondering what will happen if somebody really decides to make a concerted effort to take down one of our networks.

MR. LITAN:-: So can I ask you a question? To use the four-letter word now that everybody's using in Washington, do we need a czar in this area?

MR. McDOWELL:-: Are you asking him or me?

MR. LITAN:-: Yeah, both of you.

MR. McDOWELL:-: Well, you know, I'll shy away from the term "czar." You do need someone who's got the accountability and the responsibility, and that's the coordination of a lot of different agencies and DOD and DHS and the Intelligence Agency. There's a lot of government agencies involved. So who is in charge? Who has accountability?

MR. LITAN:-: No one is now.

MR. McDOWELL:-: Right, exactly. I wouldn't call it a czar, though.

MR. IRVING:-: Yeah, I mean, in 2000, we had Dick Clarke for the Y2K issues and Dick Clarke, if you know him, he's an interesting personality. He did a hell of a job making sure that -- knocking heads and making sure that everybody was focused every day, 24 hours a day, on keeping us up if --

MR. McDOWELL:-: That's while producing *American Bandstand*. Doing that was pretty phenomenal. (Laughter)

MR. IRVING:-: And New Year's Eve, right? But, I mean, I don't know if we need a Dick Clarke, but I don't know that it would be a bad idea either. I mean, I know a little bit too much and it does -- you know, it's scary.

MR. LITAN:-: It's scary.

MR. IRVING: It doesn't -- because you're only as strong as your weakest point and there are a lot of places in this country that just haven't made the investment they need to make, some because they can't make the investment they need to make to steal up against hundreds of thousands of pings.

And what we have to understand the people that are pinging into our networks, they're pinging into our networks to figure out how to get in and how to get out. They're not trying to do an instant reconnaissance and they know a lot more about our networks than we want them to know and we need to be vigilant.

MR. BROTMAN: Yes, right over here.

MR. FUNG: Hi. I'm Brian Fung with *The Washington Post*. Thanks for doing the panel. This is really interesting. I've got a couple of questions actually, very short.

I was talking to someone yesterday who was telling me that one of the big reasons why the Telecom Act rewrite happened in '96 was because, you know, there were some concerns about with the conditions attached to the AT&T Consent Decree back in the '80s. Can you tell me if that's -- you know, if you read it the same way?

And the second question for Commissioner McDowell. You know, are there things -- we talked a lot about how there was a failure to predict a lot of things that, you know, technologically took place. Were there things during your tenure at the FCC that you feel like you missed or failed to predict?

MR. LITAN: I'll take the first part of your question on AT&T. No question that was one force among many because when we were -- Larry and I were, meeting, this cable telco thing was also a big deal. All right. Alright? That was a big driver and that was independent of the desire for AT&T for clarity, all right, and also

the Regional Bell Operating Companies-- But it's clear that the telephone industry, as Larry said, the biggest driver in the '96 act was trying to make a long-distance market competitive, which now today, of course, seems antiquated-- All right?-- But that clearly was a major force, but cable telco was also big.

MR. McDOWELL:-- And see, it was a perfect storm because everybody needed something-- You had the cable telco, you had cable wanting -- the long distance on the telco side, you had cable telco on the cable side, you had broadcasters that wanted to make sure that must carry new transmissions and some other things that had happened in the '92 Cable Act were incorporated into this thing-- You had consumers that were worried about was-whether it was going to be anarchy or how were we going to be protected?-- Everybody wanted something and it was really the perfect time to try to get legislation.

But even in the perfect time to try to do legislation, Bob and I met with our colleagues from 1993 till 1996 every Tuesday morning for 90 minutes for 40 weeks a year-- It took us three years to get that bill through and there were 90 minutes of the Vice President of the United States' time every Tuesday morning-- And that's what it took to get that kind of a build-through even with everybody kind of wanting it-- So there were lots of pieces, but there was no player who didn't get something that they thought would be of their benefit.

Now, at the end of the day, they all benefited some and some folks benefited in ways they never assumed they would-- None of us saw the reconsolidation of the Bells-- None of us saw how important wireless would be-- None of us saw that the Internet would go from I think it was probably when we started the process 2 million people online when we started to 100 --

MR. LITAN: Dial up.

MR. McDOWELL: And at 56K to, you know, by the time we got finished, 100 -- there were 2 million people on the Internet in 1993, all right, when we started this. By 1996, about 100 million globally, not just in the United States. We couldn't see all of that. And so there was a lot of cut-and-paste for people's own economic benefit. And at the end of the day, the American people benefited because we got most of it right.

MR. BROTMAN: And just to do a little historical prequel, the '96 act actually started in 1978. And so there was really an 18-year process that began at the point where Larry and Bob and a number of their colleagues began to meet every day about this. In 1978, Congressman Lionel Van Deerlin from the San Diego District in California announced that he wanted to do an attic-to-basement rewrite of the 1934 act. And so as Congressman Van Deerlin was the chairman of the subcommittee and he announced this as a top legislative priority, he then got the Carter administration to agree to support and work with him. And what started was a series of what were called "option papers." So these are large books now you could access online, which essentially laid out a variety of different options for rewriting the act. But the main goal there was to do a really top-to-bottom rewrite.

As we've talked about today, most of what's been done since 1934 has been relatively piecemeal. Certainly 1996 is the most comprehensive rewrite of the act, but it clearly doesn't still qualify as this attic-to-basement type of legislation. So one of the questions going forward is whether or not a new Telecom Act or a new Communications Act, would it be an attic-to-basement approach? Would it be more of a tweaking approach? Would it have some of the elements and the principles that we

talked about that were in the Telecom Act of 1996?

MR. LITAN: Yeah, the second part.

MR. McDOWELL: And so real quick, so I think the commission -- well, I was there for seven years and so functionally under three chairs, right, and two presidents and all sorts of iterations of Congress, so it was a very interesting time and different dynamics to see. You know, I think the commission in general didn't see the need for more spectrum or what the need would actually be. I think that was something. And also the virtues of someone licensed to use the spectrum. I favor exclusive-use licenses overall, but unlicensed, you know, wireless carriers can find that the can offload congestion there, and I think that's helpful.

Also, though, is spectrum policy in general. I think the commission failed to see at first the virtues of what we call flexible use policies of spectrum, which is basically to say users of spectrum, go ahead and use it for whatever you want provided there's no harmful interference, and that's the prime directive for you *Star Trek* fans in spectrum policy, which is no harmful interference to others unless it's an unlicensed user, but licensees.

So, you know, the government over time tried to prescribe what types of uses certain frequencies were best for, and sometimes you do need that. Some is going to be better for satellite, but now, over the past few years, we've found that some satellite spectrum is actually pretty darn good for terrestrial broadband. Some should be used for TV, but, heck, that could also be used for terrestrial broadband. So allowing for more flexible use, I think that was an oversight early on, but, you know, in my seven years I saw some corrections to that.

But, you know, overprescribing in general in trying to engineer markets

as a general matter happens a lot at the FCC and then markets work around that or

sometimes, like I said earlier, we don't know what innovations don't come to market.

That's something that's almost impossible to measure due to a government policy.

So there's a lot there. I'd be happy to talk to you more about it offline, if you'd like.

MR. IRVING: And I already said the one thing that's making me a little crazy at the FCC right now is spectrum sharing. I think spectrum sharing is something we need to do and something we should do eventually, but there's this assumption that spectrum sharing works today and it's difficult to make it work. You know, you have this vaunted innovation band that everybody talks about and yet 60 percent of the markets can't use innovation band because they can't get the government out and the spectrum sharing is not working.

We don't have -- the technology's not ready yet. The markets aren't ready yet. And I think it's actually holding back innovation. If we could get -- we need to get more focused on what the federal government -- you know, I've been saying for six years that we need a real inventory of spectrum users. And even if you have to make some of it black box that only folks of a certain clearance know --

MR. McDOWELL: Amen.

MR. IRVING: -- we need to know who's using it, when they use, how much they use it, and have a sense of whether or not there are higher and better uses that could be used for the American people. We have had an abysmal effort at clearing spectrum at the federal level and we've had an abysmal process in terms of making folks really focused.

And what's interesting is, from what I hear in the street, the Defense

Department is better than most of the other federal agencies. But there's also State Department, the Transportation Department, the FAA, a whole bunch of folks in there. Getting that information from them is a very, very difficult process. And, you know, as a guy who used to run that office, I know where some of the bodies are buried. I keep trying to tell folks you need to get the spectrum inventory and no one will force that spectrum inventory. Congress hasn't force it. The White House hasn't forced it. And industry hasn't been able to get them to do it. And I can't, for the life of me, when you're talking about a trillion-dollar-plus opportunity why we can't figure this out.

MR. McDOWELL: Do you know where Jimmy Hoffa's buried?

(Laughter)

MR. IRVING: Don't know that body.

MR. McDOWELL: Jersey, you said, right? Or was it Brooklyn?

MR. IRVING: Meadowlands.

MR. McDOWELL: Meadowlands.

MR. IRVING: Every time Cruz does his dance.

MR. BROTMAN: Yes, right here.

SPEAKER: Hi. This is Ben HebrumHuber, an intern here actually. I just wanted to thank you all for coming. I just had a couple questions about the app economy, which Commissioner McDowell noted was extremely unregulated at this point.

A recent *New York Times* article said that nearly 40 percent of those working in Silicon Valley thought there was a large bubble in that part of the economy. And with apps like Uber and Airbnb revolutionizing their respective industries of transit and hotels, it seems like there's a large area that needs some sort of regulation or least some sort of action. I wondered what role the FCC might have in that or other agencies.

Thanks.

MR. McDOWELL: I'll be real quick because I heard whether there was regulation on the market and I want to differ to an economist, too. So, you know, the great thing about the app economy is the barriers to entry are so low. You know, there are kids in grade school writing apps and so the next great idea is being formulated right now. I mean, there's going to be some brand here, I'll guarantee you, in the next four to six months that will become ubiquitous that none of us have ever heard of now. Right? And that's the fascinating -- so when you say people are predicting there's a bubble, there might be certain companies that have a limited lifespan based on their business plan, and I'm not going to comment specifically on those, but I think that will continue to be a very dynamic part of the worldwide economy that brings untold consumer benefits. And there are all sorts of things we can't even imagine right now and I'm very, very excited and very bullish and optimistic.

MR. LITAN: And I would agree with that and I don't see a role for regulation.

MR. McDOWELL: I should have said that part.

MR. IRVING: And we can all say the same thing. The concept of the FCC regulating Uber or Airbnb --

MR. McDOWELL: Bad idea.

MR. IRVING: -- that keeps me up even more maybe than cybersecurity does. (Laughter) That is a profoundly bad idea.

MR. McDOWELL: And no legal authority to do so, by the way.

MR. IRVING: Exactly.

MR. McDOWELL: But bad idea.

MR. BROTMAN: I want to just talk a little bit about the courts because they've been sort of lurking in all of this, but usually legislation and particularly what the FCC does gets reviewed by the courts. And so I'd be interested in some of your viewpoints whether or not that balance needs to be changed. Obviously what we've seen in recent years, and I know Rob can tell us from the inside, is, you know, a great sensitivity in terms of whether or not a major commission decision will essentially be appealed, what happens after the appeal.

And so, you know, one question is, in new legislation should there be a different balance that's struck both in terms of how courts review this right now? In fact, the courts review under a different act, which is called the Administrative Procedure Act, 1946, which essentially applies to the FCC, but it applies to all independent regulatory agencies and essentially says that the agency needs to act in a way that is not arbitrary, capricious, or not otherwise in accordance with law. That's the appellate standard that's applied now, but it is applied across the board through this other piece of legislation.

There's no magic. You could have a new Communications Act which essentially says we will have a new standard for appellate review in this particular area. So I'd be interested to know a little bit about the balance between the courts and the particular sensitivity, obviously, that the commission has to courts potentially overturning what the commission does.

MR. McDOWELL: And I'll try to be brief. Excellent question, by the way.

So it's part of our democratic system. You know, we have three branches of government. One can argue the independent administrative agencies are a fourth branch and we could argue the constitutionality of that, but that's for the next

Brookings event. So you have the legislation-regulation-litigation cycle, and it seems all lawyered up.

By the way, this is an argument against ex-ante or before the fact regulation, as well, because of the time that takes, but it is all part of due process. If you have to distill the APA down to two words, it's "due process." Was there due process given? And abuse of discretion, of course, by whatever administrative agency, and that's very, very important because these administrative agencies -- look, I was an unelected Washington bureaucrat. I'm a recovering unelected Washington bureaucrat. But appointed by the President, confirmed by the Senate. I can't be removed unless it was through impeachment by the Senate and, thankfully, that's never happened at the FCC.

So you can be called before Congress and yelled at. Congress can limit your funding. But it is easy, in a way, for the FCC to go off its congressional tether, for it to be unbounded, for there to be no fence around the FCC's authority, and that become oligarchical. That's an SAT word there, oligarchical. So, you know, do you really want that? Is that really democratic, small D? And so you need court review occasionally, or all the time maybe, to put the FCC or other agencies, Executive Branch, back in their boxes. And because the authority really lies, should lie, under our Constitution, in the hands of the directly elected representatives of the American people, and that's Congress and the President. And that's why when we make new law, Congress passes a bill, the President signs it or vetoes it, or Congress overrides that veto.

So it's a very important part. It can be very frustrating. As a commissioner, when I was writing either concurrences or dissents, I was very mindful that

somebody's going to appeal this no matter what we do. And so let's help the appellate's law clerks understand what's going on here. So it's part of the process.

MR. BROTMAN: And I know Bob Litan has to leave in a couple of minutes. I wanted to at least pose a question we could all talk about before Bob departs, which is picking up on what Larry's talking about, the perfect storm that helped create the '96 act.

In the future, if we do have a new rewrite of the act or some major legislative revision of the Communications Act, what do you think the elements of that perfect storm might look like? What forces might drive legislation in this area?

MR. LITAN: Well, I know we don't want to utter this magic word "net neutrality," but I've got to. I mean, there's one scenario in which, for example, the people who are now advocating net neutrality don't get satisfied in one way, shape, or form. All right? I'm not predicting anything about what the FCC is going to say, but, I mean, even if the FCC, for example, agrees with the net neutrality crowd that there ought to be a special title and that the Internet ought to be regulated, that's going to be challenged in court, all right, and/or the FCC's going to have to decide whether or not to allow what's called paid prioritization or payment for faster service. Because even as a common carrier, for example, you can still have reasonable discrimination. And you can imagine the broadband companies that could be on the losing side of this decision going to the FCC and petitioning them and saying, hey, wait a minute, it's reasonable for us to charge a higher rate to Netflix, which has 30 percent of the traffic on the Internet than anybody else.

I just want to say one scenario is we don't have satisfaction over net neutrality. All right? And then that becomes a political movement and the

people then go to Congress and they saw we've got to fix the act somehow just to put this into the act. And then once there is at least one train moving in that direction, other people can then jump on and add their own things and you get a rewrite of the act. That's one scenario.

Another scenario, suppose Republicans take over Congress.

MR. McDOWELL: Yeah, the House --

MR. BROTMAN: The Senate.

MR. McDOWELL: -- the Senate.

MR. LITAN: Well, yeah, the other one. All right, so they get the Senate and they obviously they don't have the presidency, but imagine a scenario in which they win the presidency in 2016 and they've got both Houses of Congress. And by the way, I'm not a Republican, all right, even though I've advocated a skinny FCC, but I think a lot of Republicans would advocate a skinny FCC. And in a sort of one-party rule kind of government 2016, maybe that becomes something that the Republicans push because there's no one to beat on it.

So you imagine some scenarios that could do this and I'm just teeing it up for my colleagues here and they can probably give you some more scenarios.

MR. IRVING: So I'll start and I think we're pretty close to a place where people -- you know, I'm not necessarily, as far along the skinny FCC line, but I certainly think the processes need to be sped up. I mean, you have mergers that sit there for, you know, years and that's uneconomic. It's wasteful to have this amount of time. Folks are a little tired of that. We've got to figure out what is the right regulatory model for the Internet. And I hope it'll be as minimal as possible because I think what we do in the United States has a huge impact on how the rest of the world looks at how they do

the Internet. And there are some people out there with really bad intentions that go on the Internet that will look at an overly regulatory model here and look at it as a way to leapfrog into or to bootstrap themselves into Internet policy that we don't want them getting into. I think you've got some real issues with regard to spectrum.

All of those issues are trillion-dollar issues. We have a massive issue with regard to universal service because our universal service, the system we have now, has to be rethought and reconfigured. And we want to make sure that everybody in this country has access.

Think about a gigabyte network. Think about 5G telecommunications. What are the right ways to get investment there? We went from 56K to the average person's getting 10, 12, in the United States I'm getting 100 at home. That's a pretty big leap. Going from 10 to a gig, that's even a bigger leap. And one of the kinds of things we need to see in terms of getting the investment to those markets, there are lots of players who have lots of interest in seeing us get this right. We want a faster FCC and we want a smoother FCC. We want an FCC that is -- the silos that we looked at before in an analog world, you tell me who's a broadcaster, you tell me who's a cable caster, you tell me who's a telco, and then add wireless on top of that and tell me who has what roles. And does it really make sense to have each of them siloed into a different regulatory model and a different bureau at the FCC? All of those things need to be re-thunk.

I hope when we do do this, and I think over the next two to three to four years we will start thinking about reforming the FCC, and we're thinking about it with regard to silos, but also keeping first principles. What's the FCC there for? It's there to promote competition, not competitors, but competition for the benefit of consumers.

And people sometimes get competition and competitors get confused. It's competition, not competitors. Neither incumbents nor the new guys should we be trying to advocate for. Be advocating for competition that'll benefit consumers.

Universal service, make sure all of us have access and the benefits of these great networks. Security, making these networks as secure as they can and redundant as they possibly can. Those are the kinds of the benchmarks. Diversity, having as many diverse voices having access to this network and that's what the net neutrality debate really should be all about.

If we have those kinds of discussions and we start with first principles, I say take the whole act -- you know, what would we do -- what would the act look like if we were starting fresh is how we should start the process. I'm a hack as much as a wonk, so I know we'll never get a complete, you know, rethinking of it. But I think from the wonk part of me, what do we want this to look like? And then the hack part of me says, okay, and let's figure out the political process to get us closer to that nirvana as possible.

MR. BROTMAN: Bob, thank you.

MR. LITAN: Thank you.

MR. BROTMAN: Rob, I'll (inaudible) next to the last word and then I'll reserve the last work for myself.

MR. McDOWELL: Sure. So I think the original question was what has to happen in order for there to be a rewrite?

MR. BROTMAN: What would the elements of what Larry calls the perfect storm, what might that look like?

MR. McDOWELL: I think for the interested parties there has to be at a minimum nothing to lose as they enter that process for them to support legislation; and a

maximum, something for them to gain. And that's going to be very, very difficult. As you pointed out, it was a multiyear, maybe multi-decade, '78's the longest I've heard, for the record, you know. I always marked it from 1984 from (inaudible) with the breakup of AT&T as the beginning of the '96 act, but we can go back to 1978 certainly. So it took years for that and it was highly complex, and that was not a fundamental rewrite of the '34 act.

The '34 act is this foundation, this bedrock foundation for which all the subsequent acts that Larry has mentioned and you've mentioned were built upon: cable acts, satellite acts, you know, everything. It's all been built on top of the 1934 act. So if you want to dig up that foundation, that's going to take a lot of work. There's a lot for different industries and parties to lose by doing that. There's the devil you know and the devil you don't know. So if you're an industry player, in a way it's better to have the certainty of the law even if you don't like it so you know how to kind of build around it or live with it somehow rather than a new law, which then goes through that legislation-regulation-litigation cycle I talked about.

So, you know, A, you've got to pass the bill and it has to be signed into law, and that can take years. B, it's going to be litigated no matter what's in there because FCC or NTIA or somebody's going to, you know, start implementing parts of it. And so then what happens? That's uncertainty, as well.

But, you know, if you can think in terms of consumers, I always like to start thinking about consumers, what are they benefiting from today? You know, where that hockey puck, where the future's going to be going, nobody can predict is what I think we've all agreed. But so what's going on today? And then how do you address a systemic market failure if that occurs? I would hope that would be part of the

conversation. Then there are going to be resources like spectrum.

I think the fuel for a rewrite would be federal spectrum. There's a lot of agreement in terms of the federal government needs to relinquish its spectrum. You can have carrots and sticks for federal users to do that, incentives and disincentives and deadlines and such. And that can be the fuel and the glue for an act, but, at the same time, that idea could just spin off on its own as we saw with the Spectrum Act of 2012, big bipartisan support for that, as well as the DTV Act, you know.

So it's all possible, but very, very difficult and an uphill battle.

MR. BROTMAN: Well, as we blow out the candles on the 80th birthday cake, my wish in blowing out the candles is that the conversation continues. And obviously, I think as we've illustrated today, this will be a continuing conversation. Hopefully, a good part of that conversation will take place here at Brookings.

I'd like to thank our wonderful, wonderful panelists: Bob Litan, who left, Rob McDowell, Larry Irving, everyone who's been here today. Thank you so much.
(Applause)

MR. IRVING: Can I have one point? I just one to make sure you all know that any comments I made were purely mine. They were personal comments and do not reflected any organization I belong to, any boards I sit on, or any clients that I've had, previously have, or I've lost over the last 90 minutes. So thank you.

MR. McDOWELL: Ditto. Ditto.

MR. BROTMAN: And that would apply to everyone else. Thank you so much.

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