



THE FREE STATE FOUNDATION

A Free Market Think Tank for Maryland.....Because Ideas Matter

Fifth Anniversary Celebration Lunch

*Communications Law and Policy in the Digital Age:
The Next Five Years*

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* This transcript has been edited for purposes of correcting obvious syntax, grammar, and punctuation errors, and eliminating redundancy. None of the meaning was changed in doing so.

PROCEEDINGS

MR. MAY: I think we're going to get started and resume our program, if I can have everyone's attention. Thank you very much.

I hope you enjoyed lunch, and please continue to eat your dessert. When we ordered this ice cream cake, it was on one of those days it was about 85 and I thought it might continue forever. But hopefully it's good.

Okay. So this is for me a special part of the program, which is obviously different than the keynoters from the Hill. I also appreciate it because now we've got five of the Free State Foundation's distinguished members of the Foundation's Board of Academic Advisors. There are 19 in all. I'm not going to read their names. They're up on the website. And I'm really pleased that we have these five with us.

I'm going to limit their remarks to five minutes so then hopefully we'll have time for some comments in our exchange again.

I want to say now before I forget that they've all agreed to do papers that we're going to publish in a little book. Some of you remember a book we did a couple years ago that had some of these same scholars but not all. We're going to do another book. In addition to those you see here, Jim Speta and Bruce Owen, two other members of the Foundation's Board of Academic Advisors, have also agreed that they're going to contribute papers. So look for that next year.

Now, before we get to the really serious part, I was told earlier that it is

Christopher Yoo's birthday. Now, some of you I know were at the last FSF program in July. It was on universal service, USF. It's not the liveliest subject but one that is timely, right? Because that was in the morning, I was trying to wake people up. So I said, "When you saw that USF sign down at the bottom of the National Press Club, you might have thought that was for unfulfilled sexual fantasies." Or something like that.

But anyway, at that program, Jerry Ellig was a panelist, and we were talking about all the money involved in the USF program. He's a great singer. So I had him sing from "Evita," "When the Money Keeps Rolling In," and he did a couple bars. I don't know whether anyone can sing here, but why don't we sing? And I don't know the tune to "Happy Anniversary," so we're going to forego that. Let's just sing "Happy Birthday" to Christopher Yoo really quick, and then we'll get on.

(Singing.)

MR. MAY: I wasn't really even thinking about it before, but we could have done "happy birthday to you, Yoo."

Okay. So we're going to take five minutes. I'm just going to call up the scholars in the order that they're printed in your agenda book. As I said before, I'm not going to do long introductions -- you've got their bios here. I'm not going to spend time doing that other than just identifying their schools.

You can see the topics, but I'll announce those. And what I've asked them to do, by the way, is try and look ahead over the next five years. I know you can't do that outside of the context of understanding where we are and some of the past, but I'm hoping we'll look ahead.

So first, we're going to hear from Michelle Connolly from Duke University. We're going alphabetically, not because she's from Duke, my school. And she's going to speak about spectrum policy. Michelle.

MS. CONNOLLY: I'm here to talk a little bit about spectrum policy and what I'm hoping the FCC and Congress will allow the FCC to do going forward. Of course, this is an audience that's very well educated on this topic. But I want to bring a little bit of perspective from an economist's point of view.

One of the important things to mention is how important information communications technology has been to productivity growth in the United States for the last 15 years. Over 50 percent -- estimates are between 56 to 67 percent -- of U.S. labor productivity growth in the late 1990s is attributable to information communications technology. And from 2000 to 2006, 38 percent of labor productivity growth is attributable to information communications technologies. So it's very important to our economy.

Since we are speaking at the Free State Foundation, I want to make a caveat that when we go to disaggregated studies, it is not the case that you impose broadband in any community in the U.S. and get the same labor productivity gains. The productivity gains that we are observing at the aggregate level are driven by specific types of industries and specific communities that essentially have traits which make them able to take advantage of the opportunities that broadband gives to them. So it's not a panacea for all problems in all regions of the country. But on the aggregate, it has played a very important role. And I foresee it continuing to play a very important role.

We know that there's exploding demand for spectrum use. In large part, it's a combination. One is we're having more advanced devices, and these devices use more spectrum. So as an example, your smartphone uses 24 more times spectrum than an old cell phone would have. A tablet would use 122 times more spectrum, and a laptop, 515 times more spectrum than on old cell phone.

So everything that each individual is using is using up more and more spectrum or has more traffic on the spectrum. And more and more people are purchasing these devices. In terms of wireless subscribers, in '95, we had only 33.8 million subscribers. In 2010, it's 302.9 million, so over a tenfold increase. We have more people using it, using higher devices, so there's a great explosion in the demand for spectrum.

One thing to also point out is it's amazing how quickly the number of wireless only households is increasing. Only a few years ago, 2005, only 8.4 percent of households were wireless only. In 2010, over 26 percent were. And this is important also when you consider low income and minority households because these are households who are more likely than other households to be using wireless to gain access to the Internet, in part because sometimes they're using smart devices instead of a computer to access the Internet. So that's an important component to put forward.

Now, the proposal that's been put forth by Congress is to try and have a reverse auction or two-sided auction. The first side involves asking the TV broadcasters in markets to bid on their willingness to vacate from certain spectrum. And they are asked to bid on the choice of doing one of three things. One choice is to channel share

within the same market. A second is to move to a different part of the spectrum. And a third is to discontinue over-the-air broadcasting.

So a reverse auction, the first side of the auction plan, would request broadcasters to ask how much money would the FCC need to give them to be willing to do one of these three auctions. They can bid on all three of these different values, or they can bid on only one of these, if they want. And how much they should bid should be based on the expected impact on their profits.

One point to make out in terms of direct profits is that over-the-air households are currently less than 10 percent of all television households in the United States. So that's becoming a much, much smaller segment of the TV audience. And I think that's important to point out in terms of the impacts on broadcaster profits.

Then if there is sufficient competition in those auctions and the auction is properly designed, we can expect what I call true valuations by the broadcasters who are making these bids. In order to have sufficient competition in the spectrum auctions, though, it's important that there be a requirement that the FCC be allowed to repackage the spectrum after the auction process occurs.

This is true for two reasons, and it's actually quite intuitive. The FCC is trying to get 120 megahertz of contiguous spectrum. So if there's a line of channels, and we get this channel here, 21 and then 35 and 52, we might have 122 megahertz going on but not next to each other. And then it's not going to be useful for re-auctioning.

There must be the ability to repackage spectrum into a continuous band. If there's one channel right in the middle that at no price would be willing to move, the

FCC has to be able to move them and compensate them for the cost of the move. By doing that in the auction process, you avoid having one channel that knows it's in the band that the FCC is trying to vacate acting as a holdout and demanding extraordinary sums to move.

Secondly, let's suppose this is the band that the FCC is trying to move out of the whole range. If we can't relocate someone who's in this spectrum, then another channel, say, Channel 14, becomes irrelevant to the auction mechanism. But if there's repackaging possible and relocation possible, then Channel 14 can bid to be willing to move or, say, vacate. And then a channel here that's in the band that might not choose to terminate broadcasting or might not wish to channel share could be moved to the Channel 14 area.

And so that means that now all of the broadcasters within the same market become relevant competitors in the bid process. This helps to get true valuations on the bids and helps to lower the bid values within a market. Once the FCC is able to clear the spectrum, the winning bids will get it.

The current administration is talking about it likely going to wireless broadband. But it's an auction. Anyone can buy it. Whoever has greatest value for that usage can bid and win.

The last point I wanted to make is a point that I made before Congress when they were considering this. It is important that Congress not try to micromanage the auction by imposing conditions, particularly conditions on what type of person can win the auction or things like that. The beauty of the auction and the reason why this is

such an important mechanism is that the auction is market driven, and it will help decide who will be able to make best use of the spectrum. Any conditions of the type that have been imposed before on who might be the right person to win are going to greatly hinder the effectiveness of the process.

MR. MAY: Okay. Well, thank you, Michelle.

Now, if we get through all of them, I think we may have some time for questions or comments, or they may have questions for their co-panelists. So I'm going to continue to watch that five-minute clock, and you can think of questions you might have.

Our next speaker is Ellen Goodman. Ellen is at Rutgers School of Law in Camden, and she's going to speak about public media. And I'm really happy all of our scholars are here, of course, but I'm especially happy that Ellen is here because she may surprise me. Knowing some of her views, I probably agree with them less than anyone up here. But nevertheless, that's why I value her being here. One of the things we value is being able to listen and learn and discuss.

And so, Ellen, I'm glad you're here. You've got five minutes.

MS. GOODMAN: Good afternoon. When Randy asked me to join this advisory board, I told him, "But, Randy, you know I'm pretty liberal, right?"

And he said, "Yes, I know. That's why I called you. We want multiple perspectives."

I thought that was a wonderful and increasingly rare exhibit of intellectual openness. But it didn't surprise me. Free State's contributions to the

telecom and media policy discussions, whether they come from Randy or Seth Cooper, from Debbie Tate or from Donna Gregg, have been uniformly well reasoned and thoughtful. And though I sometimes reach different policy conclusions, I'm always enlightened by their analysis.

So it's in the spirit of this intellectual openness that Randy asked me to say a few words about the need to rethink and remake public service media policy. By public service media, I refer generally to nonprofit media infrastructure and content networks that receive some kind of public subsidy, whether that's in the form of tax relief, a federal appropriation, a spectrum set aside or some other regulatory intervention.

In short, what I propose that we need are two things: first, a better and more refined framework for what kinds of services are needed in the digital age; and second, an overhaul of the Public Broadcasting Act that frees the services both from legacy broadcast distribution platforms and from legacy entitlement holders.

The historical justification for public service media is rooted in the concept of market failure, a concept that the Commission has worked hard to define. Long before the Public Broadcasting Act was passed in 1967, the FCC had set aside TV and radio channels for noncommercial use. And the idea was that commercial broadcasters were never going to produce certain kinds of public goods. Educational programming was the paradigmatic example.

On the infrastructure side, policymakers recognized that the market would not provide all communities, especially rural ones, with homegrown broadcast

services. So the noncommercial set-asides encouraged land grant universities and other community institutions to provide that service.

With advances in technology in the decades since the Public Broadcasting Act was passed, we've lost sight of where the market failures are on both the content and infrastructure sides and what kinds of policy interventions are necessary to supplement what is, for the most part, a robust information market.

Public media, especially public broadcasting, have been beset by their own market dynamics and market failures. They've come to produce for the relatively small population segments that provide most of their financial support. Sometimes this results in filling market gaps, but not always and not all of them. In some cases, the current structure has produced unique service to rural areas, but it's also produced duplicative service in the big metropolitan areas.

The assaults on and defenses of "All Things Considered" and Big Bird as representative of public media, although they make for good political drama, really miss the point. There is some urgency to the need to rethink public media. We've just talked about spectrum policy. As we look forward to the television spectrum going up for auction sometime this decade, it's important to remember that 20 percent of this spectrum is in the hands of noncommercial licensees. This spectrum was set aside like parkland for a public purpose. Whether those spectrum assets produce windfalls for lucky nonprofits or are redeployed for other public purposes should be of interest to both liberals and conservatives.

My second point is that the structure of public media that we have,

including public broadcasting, cable PEG channels, the satellite set-aside for noncommercial channels, *et cetera*, is all badly out of date. We can focus just on the Public Broadcasting Act to see that the law privileges the transmission technology -- broadcasting -- that is moving to the margins. And it privileges a set of institutions, legacy broadcasters, that may not be in the best position to supplement market goods and services. The law needs a redo.

You've heard this before in communications policy discussions: Laws constructed around legacy services simply cannot reflect digital realities. That's certainly true in the public service media arena. What usually follows from these kinds of observations is a radical proposal for reform, and I do have my own ideas about radical reform in this space.

But I want to close a fundamentally conservative point with a nod to the father of Anglo-American conservatism, Edmund Burke. In the late 18th Century, Burke feared that progressive politics would undermine the respected social and political institutions that foster peace and prosperity. In other words, he valued the cultural capital that took generations of people living in civilized societies to develop through stable institutions.

Whatever one thinks about particular public service media initiatives, there can be no doubt that public media institutions, some local, some national, embody a great deal of cultural capital in a space that lies outside of both the state and the market. Polls consistently show that Americans across all demographics respect certain of these institutions more, sometimes by a factor of two or three, than other institutions,

including courts, legislatures, businesses, and so on.

Any Burkean would respect and want to preserve this kind of cultural capital. At the same time, any responsible 21st Century policy maker should want it invested more wisely. Thank you.

MR. MAY: Ellen, thank you very much for that very thoughtful presentation. The audience can see why I value having Ellen on our board and her contributions. And I look forward to your paper in the book. Also, I'm glad you mentioned Edmund Burke because we now have invoked Hayek, Schumpeter, and Burke. I don't know that there are too many icons left to hit, but I appreciate that.

Okay. Now we're going to move right on to Daniel Lyons. Daniel's our newest advisory board member, along with Michelle. He's at Boston College Law School, and he's already contributed several pieces to FSF that we've published. Those have tended to be in the net neutrality area and talking about new types of paradigms for common carriage.

But today, he's going to be speaking about USF reform, a timely topic, of course. Daniel.

MR. LYONS: Thank you. First of all, I want to say congratulations on my own to the Free State Foundation for reaching the five-year mark and more importantly, for the amazingly high level of success you've achieved in that five years. The Foundation has quickly risen to be one of the premier voices for market-driven policies in the telecom industry at a time when the industry is itself becoming increasingly competitive. Demand for that kind of voice is really important. So it's an

institution with which I'm proud to be affiliated.

I want to talk today about federal universal service reform. It's an issue that's been on and off the FCC's agenda for about a decade now, but one that the agency has seen a lot of increasing interest in over the past year. Since 2001, the USF surcharge on your bill, to fund the federal USF program, has gone from 6 percent to just over 15 percent. It's a charge that costs consumers about \$8 billion annually.

So far, consumers don't seem to be paying a lot of attention to this rise, and perhaps part of the reason is that the public has always seen the value of programs like Lifeline and Link Up that are making sure that impoverished people have access to basic telecommunication service. They'd be shocked, I think, to learn that less than half of your USF dollars actually go to that noteworthy program. In fact, the single largest destination for USF dollars, \$4.3 billion last year, or just about half of all the money they took in, goes to a High Cost Fund, which gives money directly to carriers to defray the costs of -- or some say to pad the bottom line of -- phone companies in rural markets and other high-cost markets.

The High Cost Fund is precisely the sort of corporate welfare program that President Obama has railed against at times in more general language. And I think it would drive those Occupy Wall Street guys nuts if they knew the truth.

HCF is largely a legacy of the cost subsidies that the Bell system had set up when it was a monopoly. The goal was, two generations ago, to keep the cost of residential telephone service artificially low by drawing in money from other services, especially in rural areas where there are fewer customers on each line and therefore, the

cost per customer is a lot higher.

So when Bell broke up, the local carriers succeeded in creating the High Cost Fund as one of many ways to try to maintain these cost subsidies. It's as if, to steal a line, we're still in the Great Depression and Ma and Pa on the farm would lose their phones unless the government chipped in and helped out.

This ongoing bailout of sorts -- an annual bailout is one way to phrase it -- has predictably inefficient results. First of all, it's very overbroad. Certainly, there is some High Cost Fund aid that is going to impoverished rural communities. But a lot of it is going to areas that are high cost, but not at any particular risk of falling off the network if they had to pay full freight.

I'm talking about places like Sun Valley, Idaho; Vail, Colorado; Ted Turner's ranch up in Montana. These are places that shouldn't be receiving High Cost Fund money. In those situations, the High Cost Fund is merely facilitating a lifestyle choice. It's making it easier for people to get away from the big city by forcing consumers to pick up part of the cost of doing so.

Secondly, the High Cost Fund tends to be a very inefficient investment. The FCC has admitted itself that the fund produces very poor incentives to invest or operate efficiently. For example, rate-of-return carriers receive funding based largely on the amount by which their costs exceed national benchmarks, which creates an obvious incentive to over-invest or to drive up those costs and get a greater handout.

And then finally, it's marked by wasteful spending. A 2006 government audit showed that almost a billion dollars, a quarter of the entire High Cost Fund, went

to impermissible services. Another study has shown that about 60 percent of the high-cost money that's going to local exchange carriers is covering general administrative costs, not line build out and line maintenance. The idea behind the universal service program is getting the lines out to people.

And that doesn't even get into the administrative issues with a taxing scheme where the rate is being set and the money is being spent not by Congress or even by an agency, but by USAC, the delegate of the agency.

None of this is really news to the industry or to Congress or to the FCC. To the FCC's credit, it promulgated rules last February to start to fix the problem. And that's part of what we were talking about at the last conference, by my understanding. But the agency's goal so far has been to take the High Cost Fund and transition it to a Connect America Fund, something that's dedicated to achieving universal broadband penetration.

Now, there's much to like in the proposed rules. It's pretty clear that broadband universal service is coming. If done right, that's a good thing. But as any student of the FCC knows, the devil is in the details. And the details of the long-term plan are yet to be determined.

So what I'm really concerned with is that simply transitioning the High Cost Fund from a telephone fund to a broadband fund risks replicating many of these old problems and carrying them forward another generation to the next technology.

With that concern in mind, I'd offer a couple of guiding principles that should be relatively uncontroversial when mandating the transition. First of all, the

primary, indeed the overarching, goal should be to target aid to those consumers who generally cannot afford broadband and to give these consumers assistance directly rather than through carriers as proxies, something like a telecom food stamp program that gives consumers choice so they can take it from carrier to carrier and minimize the distortions that come with USAC picking winners and losers.

And second, that means gradually but firmly shuttering the High Cost Fund. The first step has to be stopping the bleeding, putting a hard cap on the \$4.3 billion that we're already spending and then lowering that cap over time so we can phase out aid to carriers and redeploy that money where it's most useful, either to consumers who need it or back to the general public from whom it's being taken.

MR. MAY: Thank you, Daniel.

I'll just say in my own 30 seconds that this issue is before the Commission now. I've done a lot of writing about it, Debbie Tate, former Commissioner Tate, and others at the Free State Foundation as well. To be really clear about it, I agree that the USF program needs to be radically overhauled. The fund needs to be capped. There ought to be a sunset in the future. I don't think we need the new entitlement. But that doesn't mean there shouldn't be a robust Lifeline program to address those people that need it, and that's really the way to make sure that we have universal service in an efficient way. We all speak individually, but I think Commissioner Tate feels this way as well. Okay, enough said about that.

Now, our last two speakers are original members of the Advisory Board. And next we're going to hear from Steven Wildman. He, of course, is at Michigan

State, and he's going to speak about media policy. Just five minutes, Steve.

MR. WILDMAN: I'll follow Michelle and sit. The pattern so far has been that the lawyers stand and the economists sit. We'll see whether Christopher upholds that.

And I want to thank Randy for having me here and for the opportunity to talk to an interesting crowd and meet some interesting people, but also for pointing out the dirty little secret of academics earlier on, that those who find it comfortable to adhere to high ethical strictures go into politics and those who don't find safe haven in universities.

So now you know where I'm coming from. And what I want to talk about is the technological underpinnings of media industry, where they're changing, what that means for law and regulation, and policy in general that governs the media. Today, most of us are still watching television. A few of us, maybe 10 percent, are getting it over the air. Or we are getting it through cable or are getting it through satellite providers. That's certainly what I had last night in my hotel room.

But all of these carriers and all the content providers that are providing programming are actually putting the same stuff on servers, and it's available on the Internet. A year ago there was a lot of discussion about over-the-top video, streaming stuff directly from the Internet into your television set. That's already passé. And it's certainly coming. But if you have an iPad or an iPhone or a Droid or so forth, you're carrying around a receiver with you.

The real future is moving towards server-based distribution. This is

happening faster than most people realize. The current term for that is cloud computing. And what that means is that physical infrastructure, which has always been the basis for identifying regulated entities in the U.S. -- the broadcasters, the cable companies, the people that have satellites and download programming -- no longer identifies the gatekeepers for the critical content, or it won't soon.

It's people that reside in the cloud. It's your Netflix. It's your Hulu. It's your Facebook, YouTube, entities we don't even know yet, and so forth. These become critical gatekeepers, but because they now exist in cyberspace we don't have either the law or the regulatory structure for actually imposing regulations that mean anything. And we don't even know what it would mean to do so because they can vanish in an instant. You put restrictions on one person, and somebody else crops up to do the same thing. How do you define the service when it's changing so rapidly?

It's important to realize that the old technology was based on sending stuff down costly spectrum-using channels, whether enclosed in fiber or whether over-the-air. And so it's the marginal cost of adding spectrum capacity really in one way or the other that limited the amount you have.

The cost of the server capacity is extremely cheap, and so the incentive there is to proliferate content rather than to cull and restrict. Notions of scarcity, in terms of getting voices out there and so forth, no longer exist in the same way that it used to. It's something that's an underpinning of the current policy, but it's going to go away.

The second point is that the receivers are all smart devices. Your

television set will soon be smart, your iPad, your iPhone, your personal computer. And so now you're an active participant in the process of receiving content. You can create content. So the means of content production have been democratized in a way that was just totally unimaginable when our current regulatory system first evolved.

Now that means that nobody is literally denied anymore, in the sense of having access to the means of communication. It's a different question as to whether everybody can be heard. But we no longer have the old vehicles for ensuring that people can be heard. And how we would force people to be heard in this endless sea of billions of different messages becomes another question.

So what do I draw from this? First, the underpinnings of the system are rapidly fading or disappearing. We're left with legacy regulations and laws for legacy technology that will be irrelevant fairly shortly.

Second, we're too early into this to have a good sense of what it's going to look like. We're just starting to see the outlines, and maybe those outlines will be different five years from now, too. It's not a good time to start issuing prophylactic regulations, trying to constrain and channel things in a direction we want when we don't understand the forces well enough. We probably can't control them if we did, and we have no idea whether things will be in a better direction than in a worse direction.

One thing that will be clear is that regulatory policy will no longer be prescriptive in the sense of imposing service obligations on people. If we impose it on Facebook, whatever we impose, content is going to be lost in the billions of bits that are out there anyway. It doesn't mean anything, and you can't keep people off regardless.

Anybody can put something, anything they want, on YouTube, for example.

What we'll end up with are more rules of the road. We have issues that didn't used to be part of media policy, like privacy, access to personal data, surveillance and so forth. Those now are inextricably linked together with media policy, and it's going to be a really interesting time for people who like to study this in the years going forward.

MR. MAY: Thank you very much, Steve. We appreciate those remarks.

When we started, you didn't know the protocol or whether it would be polite to applaud after each one of these, which you can see it is. But when Michelle finished speaking, we didn't applaud. And we certainly should have. So let's give Michelle a round of applause.

(Applause.)

MR. MAY: Okay. Now, last but not least, we have our birthday celebrant, Professor Christopher Yoo from the University of Pennsylvania Law School. When Christopher told me what he was going to speak about, I knew it wasn't USF and it probably wasn't media policy. I wasn't sure exactly what it was. So I just said Internet regulatory policy on the program.

Christopher.

MR. YOO: Thank you, Randy.

It's a pleasure to be back here at the Free State Foundation again. I've been here, seeing so many familiar faces from previous events. It's a privilege to be here. It's a testament of what I think of Randy that even on my birthday and somewhat

against my wife's best wishes, I'm here.

Anyway, I do have one bone to pick with Randy, and it was prompted by a comment that Steve made to me just before it began. He said, "He's delighted to have me here because he's not last."

I made the point in front of the last Free State Foundation audience that no prioritization regime is unbiased, even first come, first serve. And I can guarantee when I read the last transcript, Randy did promise that I'd go first, that we'd do reverse alphabetical next time we spoke, and it just hasn't happened. But it gives me a chance to make this point once again. I actually kind of like going last so it suits me just fine.

So I am talking about Internet policy, and I'm going to use as a starting point my book coming out in the AEI press in January. One of the core points of the book is that Internet policy debates are largely framed by the way the Internet existed in 1995 when the Internet first became a mass market phenomenon. At the time, it was a fairly narrow group of users using it, sending e-mail and web browsing through a PC connected to a telephone line. And the network was governed by a fairly narrow set of business relationships in terms of topology and in terms of pricing.

All those things are now false. We have a huge explosion of the total number of users. But more importantly, the heterogeneity of users sending streaming media and other applications that are much more demanding in terms of what they ask for. The network and end user devices are much more varied and much more different in the way they operate in terms of operating systems and technologies that are radically different, and through a much, much richer set of business relationships, both in terms

of the players but also how they're priced and how they connect to one another.

In many ways, the natural assumption would be, from someone who looks at it as if everyone wanted the same thing from the network, we could use one network optimized for everyone's wants. As what people want differs and as what the cost of delivering it in different ways differs, we expect the network to change in response. The natural thing the companies should do to meet varied demand is to start making more varied offerings. And we should start to see heterogeneity in the network. The shorthand version I have for saying this is that the days of the one-size-fits-all Internet are probably over.

Now, that's the focus of the book. But what's the primary counter-argument? You see it is in the FCC's Open Internet Order. We talked about this in February. We had a topic of what comes after network neutrality, and the answer is more network neutrality. But that's a different matter.

They say there is one Internet, that there is a value to all this being connected to one Internet, and the bigger the better. As Steve and I were chatting over lunch, if you look at the economic models, they posit these infinite returns to scale and market size. Bigger is better.

That struck me as powerfully wrong. There's some discussion in the press now about people getting frustrated with Facebook because it's too big. It's become unmanageable. There's congestion and information cost aspects where people are seeking smaller, more targeted networks.

But also, it strikes me that there's a value side to this in terms of the end

users. There are actually a huge number of websites that have no value to me whatsoever. I speak a number of languages, but it is finite. And there's a vast number of these things, Google translator notwithstanding, that aren't particularly valuable to me.

But more to the point, it's not just things that are of no value. Things have differential value to me. If you look at the way I use the Internet, I connect to two places more than anything else: my e-mail server and my remote desktop access to my office. I would willingly pay, sacrifice worst connections to the rest of the Internet, for a lot better connections to those. In fact, I'd probably, beyond that, go disproportionately to a half dozen other websites.

We see this in phone calling. The number of people the average phone caller calls more than once a month is apparently six. And in fact, we have radical heterogeneity in value of the different locations.

What people want is to have a network that allows us to do different things with it, that's customized to what we want, not just in terms of services but where we can go.

There are a lot of consequences. One solution is private networking, if you really want a rocket connection. That's an exit option that's rarely talked about in the debate because we assume it's this one big public network. There are people who exit.

But it raises some scale economies. It's much better if I can share the connection and share the capacity with other things. It lowers the cost dramatically.

The analysis I'm spinning out suggests that we should see a world in which we see these kinds of connections, where you can get prioritized services to the place you want by reserving part of the bandwidth for doing that or being able to set up unique relationships that will allow me to connect to my e-mail server in my office better.

The concern I have -- and this can be fleshed out in the contribution I'll make to the book -- is that some of the terms of the debate where we say there's one Internet and we must be able to connect to all locations equally, are motivated by a very laudable vision but are actually threatening real value to consumers and end users because that doesn't reflect the way we really use the Internet. In fact, we use it in very different ways. And as they become more and more different, we should expect more and more customized offerings.

MR. MAY: Okay. Thank you, Christopher.

You can see why I value the contribution of Christopher and all of our academic scholars so much. So I've got time for a couple of questions.

Kathee, I'm going to need you to make sure someone is looking out for Congressman Stearns.

That just reminded me when I mentioned Kathee's name. Kathee Baker is our events coordinator at the Free State Foundation. Could you give her a round of applause?

(Applause.)

MR. MAY: Finally and just quickly, my wife Laurie is here. I don't

think we have ever ordered a salad dressing or picked out a variety of chicken without Laurie's input. I'm being silly, but she does a lot of other things for the Free State Foundation as well, every day, day in and day out and the weekends, too. So Laurie, thank you for that as well.

(Applause.)

MR. MAY: Go ahead.

MR. LIOPIROS: Question for Ms. Connolly on the incentive auctions.

MR. MAY: Just announce for the record, we're getting everyone's name.

MR. LIOPIROS: Kostas Liopiros from the Sun Fire Group in Alexandria. In your discussion of the incentive auctions, you didn't really deal with the price that the broadcasters would get for auctioning the spectrum. And the price obviously is key for determining the supply of spectrum available. It's also key in determining the amount of income the government would get from the auction since the overall revenue in terms of the intersection of the demand-supply curve. If you raise the price that the broadcasters get, you'll increase the supply but decrease the revenue to the government and vice versa. So it's an interesting optimization problem.

How is that going to be dealt with in the auctions? Have they figured out a way to do that within a price range to maximize benefits to both sides?

MS. CONNOLLY: Yes, the final auction design still needs to be created. Basically, the broadcasters put in a bid, and the winning bid will be determined through the auction process. But it will not be where supply intersects demand. Where supply exactly intersects demand there would be no revenue.

And the goal is not to get all the broadcasters out. The goal is to achieve a certain amount of contiguous spectrum. They're shooting for about 120 megahertz in each market. So when they see the bids that are submitted by the broadcasters, they can map out a supply curve. Simultaneously, they have bids on the buy side that can map out the demand curve. From that they can determine essentially what the winning bid should be on the broadcaster's side and what the winning bid should be on the purchasing side in order to get just the right amount of spectrum that they're trying to get. And that also leads to positive revenues for the government.

So everything you're saying is exactly right, and its a question of having a well-designed auction where the FCC is able to actually map these things out before the winning bids are determined. This could happen instantaneously if it's well enough done, but there's a process for doing that.

MR. MAY: I think Congressman Stearns is here, I saw him poke his head in. But while she's getting him in, Dan, you ask a quick question --

MR. BRENNER: Quick question for Steve and maybe Ellen. I think everybody agrees that the media landscape is changing a lot. We're coming into an election season. This afternoon, we've heard even some fairly partisan items, perhaps.

Do you think that the Section 315 laws that still apply to commercial and noncommercial broadcasters, particularly commercial broadcasters, should be enforced in the year 2012, or does the dissipation of their power mean that we should just forget about it because we're not capturing enough of the speech in the community to matter?

MR. WILDMAN: You're referring to the laws that govern the pricing of

advertising time?

MR. BRENNER: Right, not only the pricing, the lowest unit charged, but also the right to buy time if you sell it to one party.

MR. WILDMAN: If you look at a game theoretic analysis of that design, it turns out that politicians probably pay more for access to airwaves given the restrictions than they would otherwise. If I'm being told that if I lower the price to one person I have to lower it to everybody, I'm going to raise it for everybody and keep it up, right?

So it was a bad design to begin with. It was good for broadcasters. It was good for everybody that sold time to politicians. And it's something that should have been eliminated in any case.

Now, if we're going to be fair about this stuff then we have to start looking at the power of Internet-based media as well. The argument could be made that the use of the Internet to generate donations and fundraising and so forth had a much bigger impact on the last presidential election than anything that was done in commercial broadcast media.

So if we're going to retain these kinds of things, it should be comprehensive and encompass all media. Frankly, I don't know how you're going to do it because the media have such very, very different characteristics.

MR. MAY: Apparently the person that opened the door wasn't Chairman Stearns. That's what happens when you don't have your glasses on. So if we have another question or comment, we can take that. Also, if any of you guys have any

questions or comments of the others or just want to say something else, you can do that because we're going to wait until he comes and then start right in.

Does anyone else have a question, or, sir, you could even follow up?

MR. LIOPIROS: (Inaudible.)

MR. MAY: I do see Congressman Stearns even without my glasses, but, Michelle, you just answer quickly, and then we'll get Congressman Stearns up.

MS. CONNOLLY: In 1993 when the FCC was first given authority to do auctions, they spent a year developing auction design and they hired academics and they ran experiments in order to come up with a simultaneous multi-round package bidding that we have now and things like that. There's full anticipation that the same thing will be done here. So once the FCC receives authority it's going to go forward with the analysis of how to structure the auction properly.

So you're correct, it's not a done deal yet. But it can't really start until it has the authority to do so. I think it would take at least a year, potentially.

MR. MAY: Okay. We're going to have it leave it there. I want you to all join me once again in thanking these academic scholars.

(Applause.)