

***The End of Regulation? Reforming Telecom Policy and Regulators' Roles
to Meet New Market Realities***

Can Washington, D.C. & the States Keep Pace With Tomorrow's Technologies?



EDITED TRANSCRIPT

**NEW MILLENNIUM RESEARCH COUNCIL EVENT
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NOTE: The audio quality of the original tape recording provided by the National Press Club of this NMRC event was of very poor quality. The NMRC has attempted to reconstruct and transcribe as accurately as possible the entire day's proceeding.

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The End of Regulation? Reforming Telecom Policy and Regulators' Roles to Meet New Market Realities

Can Washington, D.C. and the States Keep Pace With Tomorrow's Technologies?

**National Press Club
Wednesday, October 27, 2004
8:00 AM – 11:00 AM**

AGENDA

- 8:00 AM¹ Registration and Breakfast
- 8:30 AM **Allen Hepner** – NMRC Welcome and Introduction
- John Rutledge** – Opening Keynote Speaker
- James Gattuso** – Moderator Welcome and Overview of Day
- 9:00 AM **Panel 1 – ‘A Fresh Look at Regulatory Models for the IP- Enabled Future’**
Rob Atkinson, Vice President and Director of the Progressive Policy Institute's Technology & New Economy Project
Matt Brill, Senior Legal Advisor to FCC Commissioner Abernathy
Jeffrey Carlisle, Chief of FCC Wireline Bureau
Susan Kennedy, Commissioner, California Public Utilities Commission
Randy May, Senior Fellow and Director of Communications Policy Studies, Progress and Freedom Foundation
David Peyton, Director of Technology Policy, National Association of Manufacturers
Bob Rowe, Chairman, Montana Public Service Commission
- Moderated Question and Answer Session
- Audience Question and Answer Session
- 10:00 AM **Panel 2 – ‘New Roles for Agencies and Regulators in Changing Times’**
Braden Cox, Technology Counsel with the Competitive Enterprise Institute's Project on Technology and Innovation
Charles M. Davidson, Commissioner, Florida Public Service Commission
Christopher Libertelli, Senior Legal Advisor to FCC Chairman Powell
Connie Murray, Missouri Public Service Commission
Harold Furchtgott-Roth, President, Furchtgott-Roth Economic Enterprises and Former FCC Commissioner
Adam Thierer, Director of Telecommunications Studies, Cato Institute
Paul Vasington, Vice President, Analysis Group
- Moderated Question and Answer Session
- Audience Question and Answer Session
- 11:05 AM Closing Remarks
-

SUMMARY

TELECOM EXPERTS CALL FOR LESS REGULATION AND REDUCED STATE INTERVENTION IN THE INTERNET PROTOCOL WORLD

Federal Preemption and Clear Demarcation of State Roles Would Spark Broadband Diffusion

On October 27, 2004, the New Millennium Research Council convened two panels with 14 leading telecom scholars and policymakers from the Federal Communications Commission (FCC) and state Public Utility Commissioners, who agreed that the pace of technological change in the industry has made many existing telecom regulations passé and the cross-border aspect of many new technologies reinforced the idea of regulating from a unified national perspective. Most panelists agreed that a new paradigm for Internet Protocol (IP)-based networks and applications providers was best left to market forces with minimal regulation at the federal and state levels. Important social policies such as E-911, universal service, and access for law enforcement and people with disabilities, needed to be included in the roles for regulators.

Panelists examined whether the current machinery of regulation was working and how best to improve the federal and state roles of regulation. Experts acknowledged that traditional telecom services are rapidly migrating to Internet protocol-based technologies over broadband platforms and that this change requires policymakers to reconsider the worth of existing 'rules of engagement' for the telecom industry. While there was disagreement as to the extent that regulation was imposed, most panelists recommended doing away with economic regulation of broadband networks and allowing competitors to fight it out in the consumer arena. Most also agreed that states still could play an important role for consumer protection and industry disputes. However, other aspects of competition policy should be left to the FCC and Congress.

Panelists at the October 27, 2004 NMRC event presented their visions of an ideal 'regulatory future,' one that encourages the expansion of an Internet Protocol (IP) enabled services and networks, reigns in 'bad' industry players, and protects consumers. **James Gattuso**, Research Fellow in Regulatory Policy, Roe Institute for Economic Policy Studies at The Heritage Foundation, served as moderator. A complete list of participants can be found at the end of this transcript.

The first panel, ***A Fresh Look at Regulatory Models for the IP-Enabled Future***, featured a discussion of governing principles that could be applied to manage new Internet Protocol networks and services (e.g., High Tech Broadband Coalition principles, 'Layers' Models, FTC enforcement models, etc.).

The second panel, ***New Roles for Agencies and Regulators in Changing Times***, focused on revising roles for federal and state regulators to keep pace with the changing telecommunications landscape. Key questions asked were: What are the optimal roles for state and federal regulators? What new skill sets will be necessary for regulators to keep up with changes in the market?

Dr. John Rutledge, Chairman, Rutledge Institute for Capital & Growth, delivered the morning's keynote speech which focused on ***the movement of capital***, especially in setting the right regulatory model for telecommunications because it needs capital ***in order to grow and fuel "a tremendous push in the productivity generated from the U.S."*** And the U.S. is going to be productivity driven, as it has been," he said. "To do all of this we need to have the right regulatory and legal environment. We need a new telecom law to encapsulate what is needed." ***If we can do that I think you're going to get a quite a bit of capital spending in telecom***, he added.

The following quotes are some of the highlights of the day's proceedings:

"New networks deserve new thinking," said **Christopher Libertelli**, Senior Legal Advisor to FCC Chairman Powell. He said the FCC under Chairman Powell has accepted the changes brought about by IP technologies and the FCC has worked to limit government intrusion at both the state and federal levels.

He said state and federal regulators needed to “share a common vision” for telecommunications and “why it is good to get there as soon as possible.”

While the telephone industry has been historically viewed as a monopoly power, **there is a far greater degree of competition in the IP world**, said **Matt Brill**, Senior Legal Advisor to FCC Commissioner Abernathy. **“The goal of regulators should be to focus on social issues instead of economic regulation,”** said Mr. Brill. Among those social issues is consumer protection, access to 911, access for people with disabilities, universal service, and assistance to law enforcement, he said.

Many of the panelists agreed that the current rules don’t work. **“We should start with the notion that there is a national interest in promoting broadband,”** said **Susan Kennedy**, a Commissioner with the California Public Utilities Commission. She outlined four areas where regulators could play a role: 1.) establishing the “rules of engagement” for the telecom sector; 2.) public safety issues; 3.) network rules such as interconnection requirements, interoperability; and 4.) consumer rights. “We also need a bright line [clear guidance] to determine what not to regulate,” she added.

“Continuing regulation will negatively affect the networks,” said **Connie Murray**, a Commissioner with the Missouri Public Service Commission. She recommended that there be complete federal preemption of all broadband services. **Bob Rowe**, Chairman of the Montana Public Service Commission, cautioned that there should be “practical federalism,” and that states should be facilitating competition in telecom markets. He suggested that **a good approach would be to nationalize state “successes” but be careful not to nationalize the errors.**

Randy May, Senior Fellow and Director of Communications Policy Studies at the Progress and Freedom Foundation said that **the role of regulators should be to protect consumers only if the market was inadequate.** He rejected out of hand any idea of replacing the current “stovepipe” categorization of communications services based on function with a new “horizontal stovepipe” approach such as the MCI Layers model. “The problems would be the same ones of definition,” he said. “Don’t replace [stovepipes] with another set of techno-functional pipes,” he said.

Speakers on the second panel held divergent views about the role of the FCC and state regulators in the new IP world. Overall, most agreed that there needed to be changes at both levels and in many cases state preemption. **Braden Cox**, technology counsel with the Competitive Enterprise Institute, called for **complete state preemption of regulation and taxation of broadband services as well as preventing the FCC from regulating all IP-based services.** He said that many of the FCC’s functions could be carried out under other agencies such as the Federal Trade Commission for consumer protection or the Department of Justice for disabilities and law enforcement issues. **“By diminishing the role of the FCC, you would get a long-term benefit for consumers,”** said Mr. Cox.

Charles M. Davidson, a member of the Florida Public Service Commission, said **regulators should address monopolies and market competition issues, which would require state regulators to acquire more skills in economics, finance, and antitrust regulation.**

“States will continue to play a role as public service regulators for essential services” such as E911 and universal service, said **Paul Vasington**, Vice President of the Analysis Group and former Chairman of the Massachusetts Department of Telecommunications and Energy. **“Economic regulation at the retail level should disappear into the ether,”** he said. **“There is no market power in retail pricing.”**

Adam Thierer, Director of Telecommunications Studies at the Cato Institute, drawing on previous examples from the Reagan Administration in the 1980s, said that some issues should be dealt with at the federal level while others should be given back to the states. He said **there should be clear distinctions on who is responsible for what. For example, price regulation of rates should be handled at the federal level while universal service issues could be entirely handled by the states.**

KEYNOTE PRESENTATION BY DR. JOHN RUTLEDGE

John Rutledge is Chairman of Rutledge Research, an economic advisory firm in Williamsburg, VA. He also chairs the Advisory Boards of B.V. Group, a venture capital, hedge fund, and real estate investment firm, and Saugatuck Capital, a private equity firm. Dr. Rutledge was an advisor to the Bush White House on both the dividend tax cut and rebuilding Iraq. Dr. Rutledge has an active lecture practice, giving talks on global economics, financial markets, investment strategies, the impact of technology on the economy, and strategies for owning and growing the value of a business. Dr. Rutledge began his career on the faculty of Tulane University and Claremont McKenna College, where he taught monetary economics, international finance, and econometrics. Dr. Rutledge holds a BA from Lake Forest College, and a PhD from the University of Virginia.

DR. JOHN RUTLEDGE: Thank you. Allen, it's great to be with you this morning.

What I'm interested in speaking about is ***the movement of capital...because you need it.*** Also ***concepts like taxing capital*** -- what's involved then, things like ***property rights issues, like line sharing***, etc. And ***the impact of price controls like TELRIC*** which I was describing yesterday and today. TELRIC is a complete abomination of a concept. ***It is a concept invented to allow people to fight over money in a political process. It has nothing to do with economics.***

You never find it in economics 101, or even in 131. It's a terrible idea. You will find it in spectrum policies. It limits you on spectrum available commercially, which means a higher price, which means higher cost to businesses. And in the way we organize the subsidies that we finally call Universal Service but which actually subsidizes my house in Maui and my other house in Greenwich, Connecticut. Because we're a high service area you know, we have four acre minimum lots and it costs a lot of money, so we need those subsidies.

So if you live in Washington, or New York, I'm grateful for your contribution to the Universal Service plan, but it's not helping America grow. Where does this get me? ***I think you're going to see in the next few years, you're going to see a tremendous push in the productivity generated from the U.S. And the U.S. is going to be productivity driven, as it has been. This type of growth only happens by bringing IP telecom to large businesses in large cities.***

Small businesses, if the fiber roll out happens, ***will be able to get significant increases, as the next three out of four jobs come from small businesses and half of GDP comes from small businesses.*** The credit markets for small businesses are opening up too, after a three-year dry spell. So small business will flourish. And another opinion, in my stock portfolio I am over weighted in small cap and under weighted in large cap stock. Because that's I think where's the action's going to be. ***If you were to do the reforms to Telecom*** that we describe in a report that we did for the U.S. Chamber of Commerce, ***[the economic results would yield] a couple hundred billion dollars from the GDP*** from the textbooks; ***another couple of hundred [million] from the productivity effect of bringing people the ability to have higher quality service in the rural areas. All that adds up to more than 100,000 more bodies working than before.***

So again for productivity growth, driving output up, costs down, and profits up, is the way you grow the economy with low inflation, and interest rates and rising living standards. Productivity growth is what Telecom's all about.

So this idea, this central nervous system idea basically says, I'm sorry if it's offensive to certain people in this city. But ***Telecom is just too important to be looked at as a regulated industry. Telecom needs to be the core of a national economic policy for growth. And you have to look at it in terms of its productivity effect on all the other businesses to understand how to treat it...***

China's growing at twice to three times the growth rate of the U.S. China's productivity will be larger than ours in the next 20 years, and China is becoming very aggressive...if you watch the small print in the papers. China produced 300 million cell phones last year. Most of those derived one way or another from Samsung. So if you want a bite out of this for your portfolio, buy some Samsung. But they're building huge capacities for equipment.

That equipment is about ready now to come back to the U.S. in a major way. It will drive the cost of capital spending in telecom down very sharply over the next five years. It's going to obviously affect import issues as well. ***But you're going to end up doing a lot more units of telecom investments at a lot lower price because of this, than we would have before. Which tells me more growth, more productivity growth.***

To do all of this ***we need to have the right regulatory and legal environment. We need a new telecom law to encapsulate what is***

needed. Because frankly, five guys voting on Friday that they won't screw me out of my money next year doesn't give me a lot of comfort as a director of a company to appropriate 20 to 30-year capital. You need at least to codify it in the law. And ***if we can do that I think you're going to get a quite a bit of capital spending in telecom.***

In other words, I am also over weighted in telecom, in the index. So I think all and all it is a pretty exciting environment. I bet you next year this town fights like hell with each other because all these rules are going to change. A lot of money in the trough will need to be accounted for, and ***at the end of the day, I'm hoping we have a set of rules in place that encourage capital funding.***

Thank you very much. You have a fascinating morning ahead of you with the people who really do know what they're talking about in telecom. Thank you very much.

(Applause)

ROLE OF REGULATION IN AN INTERNET PROTOCOL WORLD

Panelists discussed the role of regulation in the fast-approaching Internet protocol (IP) world. Most panelists agreed that the old circuit-switched telephony rules would be hard to apply to new broadband and IP networks and applications. Several panelists noted that the role of regulation now is to promote “big broadband,” far greater than the current cable modem and DSL offerings available. *“I think the purpose of regulation is pretty simple and that is to promote big broadband,”* said **Rob Atkinson** of the Progressive Policy Institute. Achieving big broadband could be done without greater regulation because there needs to be a balance between competition and investment, he added. **Randy May** of the Progress and Freedom Foundation said that the principal role of regulation was to protect consumers if the marketplace didn’t. *“I think we are now in an environment where the free marketplace can do that,”* he said.

As IP networks grow, regulators will need to address discrete social policy goals and not impose economic regulation on these nascent markets. *“I think that the FCC is going in the right direction, moving toward a framework that recognizes that a lot of the principles have changed and also recognize that there is no need for economic regulations but rather focuses on discreet social policy objectives,”* said **Matt Brill** of the FCC. If U.S. regulators fail to adopt policies encouraging greater network investment for IP services, the U.S. would be at a comparative disadvantage with other countries, added **Jeffrey Carlisle**, chief of the FCC’s Wireline Bureau.

Panelists also recognized that currently unresolved issues such as universal service and intercarrier compensation needed to be addressed immediately. **Bob Rowe**, of the Montana Public Service Commission, warned that universal service *“should be done with a very clear understanding of the financials and try to reach a situation where all carriers, particularly in the rural areas, can pursue a stable business case that allows investment upon a going-forward basis.”* **Randy May** of PFF added, *“you also want to cut back the state regulations essentially in the new paradigm, and with more Universal Service limited, not eliminated, but make it much more narrowly focused to those that really need it.”*

JAMES GATTUSO: Well good morning...Instead of having two candidates debate on a vast number of issues we have a vast number of speakers today for two issues. First, what do we do about regulations? And, secondly, what do we do about the regulators...The rest of the time will be for discussion among the panel, and questions from the audience, which may be the most valuable part of today’s panel...

Today’s proceeding will take place in two parts. One, what is the purpose of regulation in a hyper-competitive Internet protocol world? Encouraging greater competition, promoting industry expansion, protecting consumers? Are these goals different than those for the circuit-switched world? The second part of the discussion for Panel 1 asks, Does the existing regulatory model still work? If not, what should replace it? A layers model, self-policing industry principles, an enforcement-type model like the FTC? New regulations at the State level and Federal level? Anything else, any other ideas?

What we’re trying to get out of today’s event is expert opinion on what regulation should look like in

an IP world. How should we change? Should there be regulation?

ROB ATKINSON: Good morning. I’m going to jump right in because I’ve only got two minutes. What’s the purpose of regulation? ***I think the purpose of regulation is pretty simple and that is to promote big broadband. Any competition is the means [to that end] and not an end [in itself] of promoting competition.*** Competition -- I don’t care about competition, competition is the way you get to something. And ***that something in this case is super-fast broadband to every American house or business.*** So I think the other way to think of it is, What is the purpose of regulation?

I think we can also examine and differentiate between three different levels of telecom infrastructure, including the application levels. ***I think we can talk about the existence of pretty robust competition, or at least the potential of robust competition as we move toward a VoIP world.***

I would suggest in that world when were talking

about VoIP as meaning the telephony application, what we're really talking about is regulation having three roles. One is to **ensure that there is some level of competition so that VoIP providers have access to platforms**, and that there is no discrimination against them by incumbent players. I think that's one rule for the telecom future and **this doesn't mean we have to have regulation to make that happen**. But we have to be wary that it doesn't...that discrimination doesn't happen.

Second, we have to look at transitional issues. It is one thing to talk pie-in-the-sky, about how we are in this ubiquitous network, digital world. But we're not. We're at the very beginning stages of that world, and **we still have transitional issues to deal with when it comes to telecom, including inter-carrier compensation and universal service**, to name a few. So we can't just assume those issues away, we have to deal with them as we move into this different world that we're moving into.

I think **when you talk about VOIP generally these roles [of regulation] are pretty limited other than access**. But certainly consumers [want] fairness, things like that. I think when it comes to the pipe level, I think we have to look at the issues totally differently. There are people, including Chairman Powell, who would argue that the more pipes the better, and three is better than two, and four is better than three. I'm not sure that's true. **I think every pipe you have, you reduce the -- you increase the denominator and you reduce the number of potential customers for people who want to spend billions of dollars laying pipe, and you potentially reduce the incentives for investment**.

I'm not saying that we ought to be reducing pipes to limit competition. **I think you need to recognize competition versus investment, can be a tradeoff. And not just blindly assume that the more competitors we have the better**. One of the reasons Japan I think has done so well with the deployment of high-speed broadband is there is really only one provider, and one provider can afford to spend billions and billions of dollars, and they have 90 percent of the market share.

MATT BRILL: Thank you very much. Good morning. In the IP world, we lack a lot of the fundamental characteristics that telecom, the telephone industry, has been characterized by in the last 100 years or so...

As discrete social policy goals, I think it represents the emerging consensus many in the policy community and the industry providers seem to

agree that in the IP world it should be access to services, there should be access for people with disabilities. We should preserve some system that ensures Universal Service throughout the country, the rural and urban areas. In addition there should be the ability of law enforcement to conduct lawful surveillance requests whether pursuant to the CALEA statutes or through other means. So **these are discreet governmental purposes that can be achieved without conducting the traditional forms of regulation, into regulation of rates and service quality regulation**.

The question of whether the existing model still works, I think is going to remain to be seen. **The existing model for traditional circuit-switched telephone service is one that the FCC or Congress doesn't want to apply. I think that the FCC is going in the right direction, moving toward a framework that recognizes that a lot of the principles have changed and also recognize that there is no need for economic regulations but rather focuses on discreet social policy objectives**.

But there is the question of whether the FCC will have the leeway to adopt such a regime, because there are the very rigid categories of information services and telecom services. **Information services are presumptively unregulated and telecom services are subject to heavy regulations. There are tools the FCC has for forbearance of telecom regulation and perhaps ancillary authority over information services**. But it will be subject to some uncertainty and to quite a degree of litigation before we find out if the FCC has that authority.

JEFFREY CARLISLE: The question of whether this [telecom] regulation works has a number of different answers. **I think regulation does work if you're talking about a traditional environment** where you have a rate-of-return regulated price cap.

Many of the issues that we're talking about today in terms of high state and local taxation of communication services, economic common carrier regulation, all of these sorts of policy issues that are used today in the telecommunications world are basically our test of the fact that they're basic telecommunications that used to be provided by a few companies who knew where they could go to get their money.

The thing is that regulation doesn't particularly work well outside of that environment, as in specific types of regulation don't work particularly well outside of that environment. **A lot of the sort of economic**

regulation, certification, tariffing, and so on and forth, the sort of things that were enacted in order to protect consumers from the power of rate-of-return regulated entities with monopoly and power over bottleneck facilities don't work very well when your service provider, when your voice provider, could be located in Ukraine, or Bangalor, or Singapore or South Africa.

But nevertheless you have people arguing and arguing very strenuously that you should try to apply that regime to this new environment of voice. So I think we could answer the question of does regulation work well and who does regulation work for?

Regulation as a general matter does work for incumbent providers. I'm not saying that incumbent providers have argued necessarily in favor of heavily regulated VoIP. **There have been some incumbents who've said don't regulate it heavily. We would like the same opportunity to provide services in a deregulated state as everybody else.** But as a general matter, a heavily regulated environment does work in favor of the incumbent who's been playing the game for 80 years, who has plenty of regulatory attorneys with money to hire them and the money to lobby the process.

It works for telecommunication attorneys, and we sort of throw that around politically at conferences, but don't underestimate the fact that people who are heavily invested in the process, people who are making the policy legal arguments are the ones that actually benefit from regulation.

What does that leave us with? That leaves us with the likelihood -- not the likelihood, but the possibility that perhaps there will be regulatory overhang on some of these new services which would be inefficient and unenforceable. That would put VoIP services within the United States at a comparative disadvantage with VoIP services and applications provided elsewhere in the world. And that is when regulation doesn't work.

SUSAN KENNEDY: A simpler question for regulators today is, Are we there yet? Because if we believe we're in a competitive market, it leads down one fork in the road. If we believe that the market is not competitive, it leads down an entirely different road, and every decision we make -- that's the question for me, what road am I on?

I think there is a national interest in promoting the expansion of broadband innovation and telecommunication technology. There are basically four areas for regulation. Rules of engagement, every industry has rules for fair competition, or against fraud and deception, discrimination, price fixing, predatory practices, and the exercise of market power.

Second, public safety. The telecommunications network will never be seen as just a commodity. **There are elements of public safety, so there will need to be rules of the road for how you operate an emergency network, maintain an emergency network, E-911, and CALEA.** Who -- the question is who in the telecommunications industry has to submit those standards.

Third, is network rules. **Every network industry has rules for interoperability and interconnection, some standards and protocols to be established by the industry. Others will need to be established by regulation, interconnection agreements and arbitration.** And the fourth is consumer rights. **There are certain non-negotiable customer rights that simply won't be addressed by the market.** Local number portability is the most obvious one that requires the regulators to step in.

RANDY MAY: Thank you Jim-- **I think the principal role of regulation is to protect consumers if the market place is inadequate to do the job.**

I also think what the *Wall Street Journal* said last month in a special report is the truth. The *Journal* said it's a mad, mad telecommunication world out there, and then discussed all the competitor activity that's going on. So **I think on the principal focus of regulation is to protect consumers.**

I think we are now in an environment where the free marketplace can do that. Therefore, I think we need to obviously change our regulatory paradigm. The current stove pipe model where we have these **vertical stove pipes based on the various technological and functional characteristics needs to be eliminated. They obviously don't make sense in the digital world** to distinguish between video, information services, and telecom based on those distinctions...

Then you couple that with some set of pipes of reviews going forward to re-look periodically at any remaining regulations. **You also want to cut back the state regulations...in the new paradigm, with Universal Service limited, not eliminated, but**

make it much more narrowly focused to those that really need it.

I think those are the key elements that a new paradigm should look like. I, myself, have thought a lot about the need to reform the FCC, and I will be very interested in the next panel discussion.

BOB ROWE: You've heard some very good presentations on broadband access, economic development, network externalities. ***“Do No Harm” is a good place to start.*** Let me give you some headlines. If the light goes off, I bet I won't be finished talking about all of those, so I hope the jury in the Q&A can come back...

Headline one, ***define regulation down.*** Headline two, ***practical federalism.*** Headline three, ***procedural reform of the FCC and you would agree that as more decisions get federalized, real reform of the FCC becomes much more critical.*** Number four, ***move from regulation to facilitation*** or since this is an election year, let's drop our Gs, less regulatin' and more facilitatin'.

Headline number five, very importantly, ***the tough substantive nut in telecom policy is figuring out what to do with inter-carrier compensation and Universal Service.*** That can be done. It's terribly important, and it's very important in my part of the country, but ***it should be done with a very clear understanding of the financials and try to reach a situation where all carriers, particularly in the rural areas, can pursue a stable business case that allows investment upon a going-forward basis...***

I don't know anybody who wants to rate-regulate VoIP applications...

One lesson from countries that are privatizing, is that if you don't have that base layer of commercial law, contract law in place, privatization is not going to go very well. You do need that. When I talk about regulation I talk about that as a phase...

We looked at provisional experimental approaches, developed at the state and national level. Some of them worked well, some of them did not work well.

Third, ***institute a clear showing of cost benefits.*** I will come back to this -- but ***I do want to be very careful about nationalizing the errors.*** When we federalize, make sure that we've got a solution in place. Soon we can come back and talk about the two other headlines. Thank you.

JAMES GATTUSO: Thank you, we actually had all of our speakers run on time and now we can all take a deep breath, and relax a little bit. The sprint is over and we'll be able to discuss the issues... Let me first start by turning to Rob, he raised an important issue. I think it's a continuation of the discussion we had at the previous conference too. Everyone agrees that competition is increasing, 'competition is coming' as Rob said.

I'm looking at Rob, but this question is as much as for anyone. ***If we are heading toward a world of competition, presumably a world where regulation is not needed, how do we know when we are there?*** Is there some sort of a test to tell us when we are there, or is it something that will remain ambiguous?

JEFFREY CARLISLE: I guess the concern that is ultimately reflected here, is more of a fundamental shift in what the purpose of regulation is. ***For 30 years, the focus of common carrier regulation has been to open networks that were designed as closed dedicated networks.***

In this environment, where you have networks that are agnostic to the applications that are running over them, your focus does shift to say, “Okay the network was designed as an open network, the Internet was designed as an open network. How do you maintain it as an open network, notwithstanding the fact that there will be last-mile providers who effectively -- who may have a monopoly or who are providing the services in a very concentrated environment at least for some time?”

Now, if we have 12 or 13 different platforms providers, your assumptions change rather dramatically. Until we get there I think there is that concern. ***It may be that the government has no role, ultimately saying, “Okay the Internet can stay open, but right now we're sort of in the middle of that policy stage.”***

JAMES GATTUSO: Most network industries, especially nationally, are regulated by antitrust - airline networks, trucking, railroads - and for consumer protection. So one of the things that take place is will we have state regulators at all? Will there even be State PUCs or will their functions and positions be redundant?

CONNIE MURRAY: Well first ***since there's no way to isolate services in the new IP model, I [would support] federal preemption of all the economic regulations of broadband services and forbearance by the FCC.***

Further, ***there's no longer a rationale, in my opinion, for economic regulation of most of the legacy telephone network by either jurisdiction. The continued regulation of that network is destructive to its very existence.*** Some services are doomed (laughter), I mean, deemed to be essential and are not likely to be provided by the market. ***We must move away from market distorting methods to market neutral methods***

Under the current decentralized system, IXCs have to average the high cost of servicing some of their areas nationwide. ***Prevention of that kind of bad competition is a valid reason for federal preemption. The states should continue to have a role when reviewing the underlying costs upon which USF distributions are based.***

As to the question of restructuring, ***I see the industry regulated primarily by anti-trust laws that protect competition but without being prophylactic. When competition is operating effectively there isn't any reason for government intrusion.***

ADAM THIERER: I think on the issue of how to structure it on the state level, I think that really should be up to the state, within certain parameters. Yes, ***we need a national policy framework. We don't need economic regulation of these competitive industries.*** It's unfortunate, for example, that certain firms like Vonage are being subjected to this patchwork of regulations across the country. Well intentioned, but very disruptive to consumer welfare...

CHARLES DAVIDSON: What is the purpose of regulation? ***In a capital economy the purpose is, in my mind, to address anti-competitive conduct of monopolies or near monopolies, however you want to define that in the anti-trust sense.***

[A second purpose is] To ***address those externalities that might not be addressed by firms in the market.*** And I know that how you define those externalities, you know, Universal Service may be an externality, public safety may be an externality, pollution may be an externality, interference of platforms with one another may be an externality. But that's a second core function.

Thirdly, ***the regulator needs to step in and protect consumers where firms may not do that.*** I think that this is really a core function that will occur in the states. Most states have Attorneys General that pursue consumer problems, consumer protection claims. Most states have accepted trade practices that can apply here.

HAROLD FURCHTGOTT-ROTH: ***The issue that we're facing here is not a new issue, it goes on every couple of years, as new technology combines with old.*** There's always lots of talk about changes in telecommunications and once every 60 years or so, Washington acts. It doesn't mean that laws shouldn't be changed. But ***laws should always make sense.*** And if anyone actually read the 34 Act or the 96 Act, it's difficult to understand how we can operate with one. But in fact, for better or worse, the FCC acts without an awful lot of reliance on what the law actually says. (Laughter).

The FCC tries to fill in the gaps for things that don't make sense. Look at the Act. Read what a telecom service is, read what an information service is. They're not mutually exclusive of all possibilities and yet we have a range of thorny issues. ***We've got companies coming in, and begging to be classified as information service.*** It makes no difference to me. But I can understand why companies do this. ***The more rational approach would be the government saying they don't really fit in here any place.***

NEW ROLES FOR REGULATORS

Panelists offered a range of views on the role of federal and state regulators, varying from “very much in between no state involvement and lots of state involvement.” Most panelists agreed there needs to be a national policy for IP-based networks and services to encourage investment, expansion, and innovation. “*Telecom has been a tremendous competitive advantage in the United States and many would like to keep it that way,*” said **David Peyton** of the National Association of Manufacturers. “*I think it's very important that the Feds step in and preempt things like VoIP, whatever that is, so that we don't try to define it ourselves,*” added **Susan Kennedy**, of the California Public Utilities Commission. “*Congress should prevent the states from regulating and taxing all communications services such as VOIP including consumer protection laws,*” suggested **Braden Cox** of the Competitive Enterprise Institute.

State regulators would still have some roles, several panelists noted, such as consumer protection, universal service oversight, and public safety. **Adam Thierer** of the Cato Institute recommended that state and federal regulators “*find some ways to trade off some power, and take some things back to the States and keep some at the Federal level.*” For example, he said, “*controls over price, need to come to the Federal level. And that debate we need to end it now.*” Meanwhile, states would have responsibilities over rights-of-way, safety issues, “*those are things that federal regulations shouldn't be touching at all,*” he added.

Some panelists offered more extreme proposals such as eliminating the FCC. “*The FCC should be prevented from regulating the new IP services...A more extensive deregulatory approach would be to abolish or seriously curtail the FCC's role,*” said **Braden Cox**. “*The FCC, I believe, should be restructured to resemble the Federal Trade Commission or the FTC should replace most of the functions of the FCC,*” added **Connie Murray** of the Missouri Public Service Commission.

Panelists also discussed what new skill sets regulators would need in a hyper-competitive broadband world. **Charles Davidson** of the Florida Public Service Commission noted that “*regulators have to have a clear understanding of Economics 101 and 201. Regulators have to understand what does consumer welfare mean and how do we get there.*” He also suggested that regulators understand finance and project finance basic principles, especially when “*private capital was funding innovation and investment that result in all of us having these great choices.*” **Paul Vasington** of the Analysis Group and a former Massachusetts regulator added, “*the role for the state regulator should be focused only on their role in public service regulation. Public service in the sense of essential public service, the requirements such as E-911, billing and termination regulations, disability access, -- but not certification.*”

JAMES GATTUSO: The subject: ***What to do about the regulators for regulation in the new IP world.*** Do state regulators have a role? How should the lines be drawn and by whom? Should the FCC and PUCs be restructured, or maybe eliminated? What functions should they focus on? Dispute resolution? Consumer complaints? Should any or all functions be consumed by consumer protection agencies, attorney general or anti-trust authorities? Should there be a specific regulation, in other words, or more general regulations...

MATT BRILL: Economic regulations referring to, regulation of price, and regulation of service quality. Regulations that are designed, again, to constrain

market power. ***So in the absence of market power, the regulator's job is to protect consumers in a very discreet and limited way and to avoid getting in the way of investment, and avoid getting in the way of market forces...***

SUSAN KENNEDY: So what we need in terms of regulatory structures -- ***regulators need to have a line that tells us what not to regulate.*** That's why there are a lot of things that we should no longer regulate. ***I think it's very important that the Feds step in and preempt things like VoIP, whatever that is, so that we don't try to define it ourselves.***

DAVID PEYTON: Thank you, James. Let me tell you why the National Association of Manufacturers (NAM) has concentrated its efforts on the complicated endeavor of the future of telecommunication policy in the High Tech Broadband Coalition.

The FCC's unbundling policies were discouraging phone companies from making expensive discretionary investment in last-mile broadband facilities. Too many small business customers, for example, had to purchase special access, an expensive telecom service. The high performance of the latest broadband product offerings is much better. NAM supports the FCC's efforts to reverse the existing policies with respect to new investments...

On customer service, telco-based broadband services and cable-based services each has a strength and a weakness. Telco investment is too low, but at least long-standing *Carterphone* policies [A 1968 ruling by the FCC that established the right of telephone company customers to connect their own equipment to the public phone network, as long as it did no harm to the network] were in place and no telco-based ISP could place arbitrary restrictions on competitors. In cable it is just the reverse. With slight investment some cable ISPs were indeed placing arbitrary restrictions as to the uses and equipment that could be attached to the network. Other cable companies have pulled back and adopted a set of principles for customer service...

Telecom has been a tremendous competitive advantage in the United States and many would like to keep it that way. The coalition supported the Vonage petition to put VoIP beyond traditional State and Federal regulations. At the same time, a couple of major questions arise in this huge transition.

BRADEN COX: Three reform principles - ***preemption, prevention, and non-duplication.*** Preemption. The demarcation line. ***Congress should prevent the states from regulating and taxing all communications services such as VOIP including consumer protection laws.***

Prevention. ***The FCC should be prevented from regulating the new IP services.*** We should aim to be eliminating FCC functions, which could be done by other agencies on a case-by-case basis, instead of a *pro forma* approach. ***Congress should eliminate TELRIC price controls and forced***

open access or provide a transition period over a few years.

A more extensive deregulatory approach would be to abolish or seriously curtail the FCC's role. Economic regulations should include the antitrust merger review guidelines and public interest social regulations would go to other agencies.

Law enforcement act decisions should be left in the hands of a privacy and civil liberties oversight board like the one proposed by Senators McCain and Lieberman.

Now, non-duplication. ***This is where we go to different agencies. Consumer protection to the FTC. Diversity goes to EEOC. Now Universal Service funding would be a role for the state PUCs, but this would come out of general funds for consumers who need it.*** Another role for PUCs would be to oversee the rules that they have and the rules they deemed to be important. ***Now a smaller FCC would be left with auctioning spectrum and operation of the all-important do-not-call registry.***

I think the second issue is actually most important. ***I think wireless is the network of the future and we need to get the FCC away from micromanaging. Get it towards spectrum policy.*** Actually Congress is going to have to step in here and deal with the whole public interest mandate of the FCC, because then the FCC will be allowed to let licensees transfer their licenses in a market way that's currently only allowed in a kind of leasing concept right now. In short you just can't perpetuate new rationalizations for FCC oversight. As I say here, ***an ounce of preemption, prevention, and non-duplication equals a pound of regulatory cure.***

CHARLES DAVIDSON: Thanks James and I'd like to thank the New Millennium Research Council for convening this discussion and inviting me here.

Under the leadership of Governor Bush and the Florida legislature, Florida, I think, leads the nation in promoting the development of these new technologies for the benefit of all its consumers. ***We have draft legislation on the books that provides VoIP shall be free from unnecessary regulation regardless of its provider. We have legislation on the books that provides that broadband shall be free of local government control, trying to free up these technologies from the patchwork of 67 county rules*** in the State of Florida that might affect broadband. So

certainly leadership is key at the federal and state level.

One of the questions James asked – or let me address some of the questions on the two topics. **One of the first things that we have to articulate is what the purpose of the regulation is, before we can delineate what might be think are the proper roles for federal and state regulators.**

Second, I'll talk just a little bit about what I personally think are the skill sets that regulators need to have in order to do the job...The second topic, the skill sets that regulators will need in this new market. I think, one, **regulators have to have a clear understanding of economics 101 and 201. Regulators have to understand what does consumer welfare mean and how do we get there.** What is the wild-card of demand-side economics? Economics is defined as to maximize consumer welfare, and we need to understand what we're doing as we do it.

Two, I think **regulators need to have an understanding of finance and project finance basic principles, in a market where private capital is funding innovation and investment that result in all of us having these great choices. We need to understand the basic concepts before we purport to just regulate blindly.**

Third, **we need to have a very strong grasp of anti-trust laws.** I've just seen the red light go off, so I will stop now.

CHRISTOPHER LIBERTELLI: Good morning, it's nice to be here this morning to talk with you about Chairman Powell's dialogue with Howard Stern. If you haven't heard about it, fire up your laptops and take a look. It's certainly worth a look.

I have a few framing comments and three suggestions for institutional reform of the FCC. First, we need to understand that **we as regulators have to embrace the reality that change in technology has arrived, is unstoppable, and will accelerate over the next few years.**

We are tasked to pursue regulatory policies that invite [new technologies], nurture them, and promote innovation activity in the digital age. We can do that. **We should take non-regulation of the Internet as a regulatory imperative and absent some clear evidence of real harm, we should limit government intrusion both at the Federal and at the State levels, which will**

maximize innovation and increase the opportunities for the nation as a whole.

We need to do more than simply cooperate and coordinate. In the end, **federal and state regulators have to share a common vision of where the telecommunication industry is going and why it's a good thing that industry gets there as quickly as possible.** In our view, a world of digital IP networks is a place where consumers are empowered against (inaudible – away from microphone) institutions and our cherished social qualities such as universal service, E-911, CALEA, etc. are preserved.

Three specific suggestions for reform. First, **regulators should adopt a principle of regulatory humility. There is an inevitable regulatory lag that regulators introduce into the market, particularly when innovators are rolling out new applications and network operators themselves are relying on an increasing number of new innovations,** et cetera, and networks are getting smarter at the edge to roll out these services.

The Commission will never be able to keep up with the torrid rate of change-of technological change-that's happening out there in the market. We need to make sure that we don't get into an organizational structure where there is a "mother, may I introduce this new service" and a permission-based approach to roll out these new services...

When I come to conferences like this, it always bothers me that it's presented as a binary choice between no state involvement and lots of state involvement. The truth is it's very complicated. Very much in between no state involvement and lots of state involvement.

Finally, **if innovation is the desired outcome, Congress must be begin to recalibrate the balance of the federal jurisdiction and then the Commission will act, such as in the area of VOIP, and get Congress to respond.** Thank you.

CONNIE MURRAY: **The FCC, I believe, should be restructured to resemble the Federal Trade Commission or the FTC should replace most of the functions of the FCC. The FTC is a consumer protection agency, designed to guard the marketplace from unfair methods of competition, and to prevent unfair or deceptive practices upon consumers.**

I think this is certainly what we need in the communications industry. The **issues of consumer protection like slamming, cramming, and other fraudulent activities I think can remain at the state level.** The state offices of the Attorneys General handle consumer protection and anti-trust violations in other industries and some of the consumer protection issues in the communication industry can be handled in the same manner.

This would no doubt reduce the size of State commissions and the offices of consumer advocates. **State PUCs would continue to play a significant role in the regulation of other utility industries. They will continue to have a role in the collection and distribution of the Universal Service funding mechanism and they will have a continuing role in at least some consumer protection issues.** Thank you.

HAROLD FURCHTGOTT-ROTH: The second point is that **the structure of regulation doesn't work, and it has nothing to do with IP technology. It didn't work before, it didn't work five years ago, it didn't work 10 years ago, it didn't work 50 years ago. And there's no reason to think it's going to work five years from now, ten years from now...**

But we've have to live with it. It isn't going to change. The role between federal and state governments has always been an issue and it hasn't changed, and it isn't going to change.

I think you each have to decide for yourself, the idea that the Federal government can simply say, we have the authority to states that you're out of here is not something that the state's will necessarily take to heart. They each will have to make their case and ultimately the court will have to decide. And that's probably a good place to stop. (Laughter).

ADAM THIERER: I want to start with a very simple proposal...When Ronald Reagan was campaigning he advocated the idea of a regulatory grand swap or a federal grand swap. He said one of the ways to get back to a Constitutional government was to basically **find some ways to trade off some power, and take some things back to the States and keep some at the Federal level.** His specific proposal involved education for healthcare kind of a swap...

I basically endorse that general concept and I also said it should be applied and can be applied to the field of telecommunications. Because those of us that are tired of all this arguing and bickering about

what the bounds of power should be, for how we share power, **I think there's a better case to made for not sharing and drawing some bright lines.**

Maybe taking some things to the states and taking some things and making them federal. Specifically, in telecommunications, I think this is about all regulatory power and control, especially **controls over price, need to come to the Federal level. And that debate we need to end it now.** The new technology has brought this to the fore. I think in a world where you have things like Skype, the marriage of peer-to-peer, and VoIP, I don't think these decisions need to be made at the state level. They really have to be federal.

Of course, we live in a practical world and practical politics dictates we're going to have to throw something back to the states and I think we should. **There are some responsibilities that they should have, certainly rights-of-way, safety issues those are things that federal regulations shouldn't be touching at all** in my opinion.

But how about Universal Service. I think that's probably the easiest thing to throw back. And I think there are questions, legitimate questions, about how the system is administered and reform it before we devolve it back down to the states.

So we might be able to figure that one out before we kick it back down and just say, so long as you're not messing around with the prices in the name of universal service, that's fine. Personally, **I'd like to see universal service very targeted to those who need it.**

But I think that idea of a regulatory grand swap is what we need to get to, because I think that new technologies are forcing it on us. Having said that, and being a political realist, and knowing that the new Chairman of the Senate Commerce Committee will be Ted Stevens, there's no chance in hell that will ever happen.

PAUL VASINGTON: Following up on what Adam just said, I think **the first thing you have to think about when you draw a new balance between state and federal regulators is not looking at it from a blank slate.** How you would create the regulatory environment today if there weren't one that previously existed for the IP world? **You have to deal with the art of the possible.**

There are current institutions and there are current consumer expectations that have to be dealt with. That being the case, **the role for the state**

regulator should be focused only on their role in public service regulation. Public service in the sense of essential public service, the requirements such as E-911, billing and termination regulations, disability access, -- but not certification.

We did away with certification in Massachusetts in 1994 and we think that the Republic is still standing today, shockingly enough. Most other states still continue with certification requirements...

In terms of drawing the lines of where state regulators apply their essential public service functions, **I think a good place to start and maybe end would be the FCC definition of Universal Service.** It is derived from what Congress says is the service that every customer in the United States should have. Why not focus state regulation on potential public services on those very services that Congress delegated to the FCC and deem to be essential for our economy?

In terms of institutional restructuring at the PUC level, I don't think it's necessary in order to accomplish the changes that we need. **State PUCs already have the resources to handle essential service regulations and relying on institutions such and antitrust, bankruptcy law, and AG's, I don't think is deficient from consumer expectations and also from the reality of the service.**

As an example, when we were dealing with some of the bankruptcies a few years ago in Massachusetts, we had a network provider that had filed for bankruptcy and the creditors wanted to shut the network down immediately. This network served Children's Hospital Dana Farber Cancer Institute and couldn't shut down immediately. More importantly, it also served the New England Patriots and being the libertarian that I am, I saw there was a clear government role there to make sure the network stayed up so Coach Bill Belichick could talk to his scouts...(Laughter)

So I think that reforming economic regulation is important and States can take essential public service regulations which will go along way towards making sure that the regulatory environment is consistent with the new market framework.

ADAM THIERER: And getting back to your question, it should be up to the states to structure how these public service levels would be met. It may be very well that in some states the AG is the place to pursue some of these issues. It may be that in another state the PUC is the best place to do it. I think that's something that cannot be decided at the Federal level because that's a state issue.

CONNIE MURRAY: I must remind people that PUCs do more than regulate just telecommunications because I'm not in favor of abolishing PUCs.

COMPETITION IN THE NEW BROADBAND WORLD

New IP-based services and technologies offer the possibility of greater competition and innovation, according to most panelists. The main question asked here was whether enough competition currently exists in these new markets. *"We have far greater degree of competition in the IP arena,"* said **Matt Brill** of the FCC. *"I think the answer is yes, we're in a competitive market even though people would disagree on that point...In looking at the industry as a whole, there's no question it is highly competitive,"* said **Susan Kennedy** of the California PUC.

Rob Atkinson of PPI cautioned that real competition depended on whether consumers *"continue to have legitimate choices...and these choices seem to be enough to pressure competitors into having to respond to consumers' needs."* **Susan Kennedy** also said, *"We need a bright line. And we don't have that test. That's the problem...we need to have something that is a lot more scientific...Otherwise, you're never going to get past the question of whether you have competition."*

The Antitrust merger guidelines are a good place to start, said **Bob Rowe** of the Montana PSC, including the existence of intermodal competition between platforms to measure competition. *"I think there needs to be presumptions that there is competition that will be difficult – that, you know, will need to be rebutted,"* he said. There is enormous potential on other platforms – broadband over power lines, wireless, including licensed and unlicensed, satellite, noted **Matt Brill** of the FCC. *"As the broadband market develops and it becomes more and more competitive, regulation will actually be observed as an impediment,"* he added.

Panelists were at odds over competition for voice services. **Jeffrey Carlisle** of the FCC noted that it was *"premature to say for certain, but I think there is a presumption that there is at least a concentrated market."* But **Matt Brill** said, *"I think the key is voice will continue to be an essential service, it's just we're not going to need regulations to the same degree because it will be ubiquitous and available through many places."* Finally, **Susan Kennedy** noted that *"we have to realize [competition is] not a means to an end, it is a road map. That is, after this point, we have to cut back on the traditional regulation and allow the market to work."*

MATT BRILL: The legacy of traditional regulations is based on market power - the history of monopoly providers. And the regulator's job is to constrain monopoly power, ensure different service qualities, or things of that nature. And really to move to an environment that poses the important questions we must answer.

We have far greater degree of competition in the IP arena. We have active VoIP services provided by cable operators, by telephone companies, traditional telephone companies, by independent local providers who are upstarts in this arena. And the goal of regulators now is fundamentally different. I think it focuses far more on discrete social policies rather than what has traditionally been economic regulations.

ROB ATKINSON: I think you know [competition] when you see it. It's kind of like pornography. ***If you continue to have legitimate choices, from our view you can continue to have choices and***

these choices seem to be enough to pressure competitors into having to respond to consumers' needs and not their own needs.

I would argue we have that in some areas, and we don't have it other areas. Certainly we don't have it currently in some geographic areas. I think that's the other piece of this. We certainly have it in some localities and we might not have it other localities.

SUSAN KENNEDY: ***I think the answer is yes, we're in a competitive market even though people would disagree on that point,*** how do you slice the market in order to measure competition. ***In looking at the industry as a whole, there's no question it is highly competitive. Does the existing model still work? Mostly, no. ...***

As a regulator, we can't have a Rosarch test, as to whether or not we really have competition. ***We need a bright line. And we don't have that test. That's the problem.*** Because if you go to

California, you measure competition by how many access lines are controlled by the RBOCs.

There's not a single wire center in the State of California that's competitive, according to the way we measure competition. So ***we need to have something that is a lot more scientific***. You know, how do measure on another's price, price impact on the competition or something to that effect. ***Otherwise, you're never going to get past the question of whether you have competition.***

BOB ROWE: Montana has obviously heard by rural carriers that ***the [antitrust] merger guidelines are the logical place to start***. Now there's a lot of modesty and a lot of subtlety built into those guidelines. There's also some tremendous opportunities for gauging how do you define the geographic market; where do you define the product market, how do you factor in substitutability, how do you factor in potential competition, and it's a tough analysis to go through.

Susan's point, that we need a bright line has some merit and maybe we'll take it, because it's going to be terribly tough to know when to say when.

You're currently structured not to let go. But we have to accept the point that anti-trust has, at the very least, an awful lot to say about what we do, and we need to pay attention to that. Some of these questions that I think, you know, there's just enough to know what to consider but I think when you look at what anti-trust does it's just a concept of substitutability.

And as for whether inter-modal competition should count, wireless... You know I think that a new regime, and some of this will require, legislation to get, to get where we I think it might be that that's what we need. ***I think you write into that legislation that number one, that inter-modal competition does count***. For example, go back to the Staggers Rail Act that deregulated the railroads to a large extent but not completely. When you look at the Staggers findings, it talks about the fact that inter-modal competition does count, you know. And I think that was a departure from the way the regulators had approached the regulation of railroads.

So I think we need to make those types of findings. ***I think there needs to be presumptions that there is competition that will be difficult – that, you know, will need to be rebutted***. But you start with that presumption because we know it's -- we

know what's happening around us. That ***there is essentially a presumption of competition...***

SUSAN KENNEDY: I think we all agree on that point. But you can't even find three Republicans on the Commission to agree on what is inter-modal competition. That's how hard it is. You can't get three votes on the Commission to agree whether or not wireless substitution is an example of competition.

MATT BRILL: I promised myself that I wouldn't get into discussions about the Triennial Review Order [TRO]. But I do think that there is one lesson that we should draw from the Triennial review. It is ***when the FCC gets in the most trouble is when we take too static a view of competition***, and we look at the interconnection of market and barriers to entry. The importance of that proceeding is that ***you can't just look at market shares now and act like the world's never going to change. You have to recognize that it's an ever changing marketplace we're in.***

And the Court rightly recognized that the Commission can't come up with an approach or framework that builds in factors that look at the development of inter-modal competition. Even within the wireless space, we looked at the ability of the competitors to adapt to enter and to overcome normal business obstacles. Things that aren't natural monopoly issues, but things that all competitors have to contend with. Those are the kinds of issues that the Commission needs to focus on.

So it really is about -- ***if you look at the broadband market, the Commission got it right. Currently, we've got a marketplace that often has no more than two providers in any single market, cable and DSL. There the Commission has recognized two things. First, there is enormous potential on other platforms – broadband over power lines, wireless, including licensed and unlicensed, satellite.***

And perhaps even more importantly ***the Commission has tried to look at what good will regulation do as competition emerges? Is it going to help consumers and bring along competition or is it going to impede it?*** The judgment of the Commission is ***as the broadband market develops and it becomes more and more competitive, regulation will actually be observed as an impediment***, not as a beneficial.

JAMES GATTUSO: Let me follow up on that. The Chairman last week spoke of the four freedoms that

would be guaranteed to consumers and obligations imposed on network providers. It does seem to be assumed that there is market power on the part of the networks. But are there other aspects of networks, such as IM networks, where obligations have not been imposed? Or in cable. And certainly you can imagine situations where you have 12 or 13 competing networks. What do you do to the obligations? Are the Chairman's four freedoms something that will be applied regardless of the competitive situation? That will be applied universally?

JEFFREY CARLISLE: You know I think there's still some sort of...operational line. *I think it's premature to say for certain, but I think there is a presumption that there is at least a concentrated market*, common monopoly market concept there. The reason being is that if you have multiple competing platforms, then one platform provider is going to decide, "Okay, I'm not going to provide access to the entirety of the Internet." Then the provider's existing customers will migrate rather quickly to the other network, one would imagine...

I believe that it is rather bizarre actually that we're in this situation -- if you think about it. *We're used to thinking about voice as being a regulated service, and therefore anybody providing voice raises the question as to whether or not they should be a regulated service or not - regardless of what the profile of that service looks like.*

Just because someone is hooking up a server up to the Internet, is it a full facilities-based carrier? You know, wherever you are on that line, there's some threshold question that you should be regulated. I don't particularly think so and maybe I'm crazy, but I think in about 15 years you'll see that [today's children]; you're not going to see a magic about voice because they will largely getting their communications through text messaging over the Internet in ways that we cannot even imagine, slightly different from the single line Princess phones that we used to have...

Most of my important conversations, today, they are actually in person. I would say that in terms of the hierarchy, the importance of conversations on an average day, it's in person, it's by email, it's by text on Blackberry, and then it's by voice.

So what's the magic of voice? *I would submit to you that the only magic is that it's our perception that it's a magical regulatable service. I think that when we expand our concept of what services that people are*

actually using. I don't think it needs to be an expanded regulatory regime by any means.

ROB ATKINSON: I still have to think voice is special. If there's a fire at my house, I'm not going to text message the fire department. I'm still going to pick up the phone and say "Help." I believe that it is possible at some point in the future that maybe this will change. I'll have sensors in my house that will notice the fire and they'll automatically call the fire department. But right now that's not the case. *In terms of the number of consumers using voice it may be getting smaller, but I don't think it's getting less important in the sense of it still being a critical service.*

When you've got to call the fire department, an emergency or whatever, you're going to use voice. I think that's still the reality and I see it that way for at least a while longer.

JEFFREY CARLISLE: Does that mean that voice is being relegated to something that's a little more than a backup sort of alarm. You know like I pay \$29.99 a month to have my house alarmed, and you know, don't spread that around. But I pay that. I mean are we in a position where maybe in another 10 years or so that is essentially what voice service is? It's like an alarm monitoring function and that's pretty much all.

ROB ATKINSON: But I think being able to call the police when somebody's breaking into your house is a little more than an alarm. I guess I would be somewhat disturbed if we said well, 10 percent of the population doesn't get to have that. *I still think that voice is a critical thing that everybody has to have.*

JAMES GATTUSO: It seems like an alarm service would be the perfect application for non-voice service. I would rather just press a button on the alarm system and have the message sent to contact the police.

ROB ATKINSON: I'm not saying that it couldn't evolve that way, and it might evolve that way. I'm just saying that we're not there right now. *Voice is still a critical thing that everybody needs to do and have to survive.*

MATT BRILL: I guess there's a lot of common ground, because I think relatively *we all agree voice is going to continue to be a feature of many applications*, communications or video games.

I think ***the key is we're no longer going to be in a world where there's a dedicated connection, provided only by one type of provider that's hard-wired from the home to the central office. But rather, there are going to be many types of providers, whether it's wireless or over a broadband connection and ultimately, hopefully, people will have a choice.***

Many use a broadband connection, each of which – BPL [broadband over powerlines], over cable, over DSL, or over wireless. So ***I think the key is voice will continue to be an essential service, it's just we're not going to need regulations to the same degree because it will be ubiquitous and available through many places.***

JEFFREY CARLISLE: I think we need additional commentary on the simple and direct question that Rob addressed and others haven't, which is ***whether telecommunications is still a natural monopoly.***

I guess I had an inkling of a 'Yes' from Rob. You know, exposure to more choices and since everything is moving in that direction, really does beg a question. ***Is there any ground at all for treating this [VoIP] as a natural monopoly or is that concept simply dated?***

SUSAN KENNEDY: I think the answer is no. ***It is not a natural monopoly and it should be treated differently.***

ROB ATKINSON: Well let me be a little controversial, if I haven't been already. ***It's not an actual monopoly, but its close enough, to say, in producing desktop computers.*** If you have 25 or 50 desktop computer makers in the country, you don't reach economies of scale probably in the factories and so you're not really hurting efficiency or productivity, because you can make desktop computers pretty efficiently in small factories.

The reality is -- and I'm not advocating this one way or another – but I think we just have to face reality. Reality is, and I'm looking the Universal Service numbers recently, and I think we're at \$250 million, \$500 million for competitive providers in rural areas. You know, where's that money coming from?

When you see this money and what we're doing is building two networks in rural areas, and saying we'll just keep pouring money into building those two networks and we have to face the reality, essentially that we're making a choice. We're saying, well we could be building one really good network in rural areas. Or we

could be building two mediocre networks in rural areas and just keep pouring money in.

I think the reality is that when you build four networks across the country, you're adding four times the capital it takes to build that. Not 20 percent more, not 50 percent more. Double. And you know sometimes the market will do that. ***My only point is that there are tradeoffs. That's my only point, and in some ways the most efficient – purely efficient from an economic point of view in the short term – would be one provider with a 100 megabit fiber to every home in America.*** That's the most efficient model. ***There are downsides to that in terms of choice, competition, and innovation.*** I don't ever hear in the debate that there are downsides to competition that policymakers have to grapple with.

JAMES GATTUSO: Competition could just the means to an end. Susan Kennedy, who wants that bright line to know when something is competitive. I just think it's very confused about whether that is in fact the minority position. Do the rest of you feel that competition is, or can be, just a means to an end?

JEFFREY CARLISLE: The question is, competition as a means to an end as opposed to – I assume the implication is - competition in and of itself. I, personally, do not believe that competition should be an end to itself.

As a regulator, I believe competition is an end to itself. ***I believe that competition is a means to an end of consumer benefit and welfare.*** I think if you are in a situation, there are different ways to get to the end. You could say, in the public interest, that it is for consumer benefit to have ubiquitous access to E911 and other functions within the health communication network. You can achieve that through rate-of-return regulations. Just throw it in the rate base.

You can achieve it through having certain minimum standards on all competitors. Theoretically, you can also have it in terms of having that be a functionality that competitors actually incorporate and say, "Listen we want this, and it's the only way we can get into the marketplace"...

So is competition an end in and of itself? No, it's a means to that end. And I think the Telecommunications Act and the FCC have been pretty specific about that.

SUSAN KENNEDY: I mean its yes and no. ***Yes it's a means to an end in that we have a national***

policy that we're all following that says we're going to use private capital to build a network throughout our nation. Does that mean that we have to achieve competition in order to create that atmosphere? No, it's not a means to an end, in that it's more of a demarcation line. Our authority to regulate comes from the fact that there's not competition. Where there is competition, we lose that authority to regulate. That's the compact we have. And so ***we have to realize it's not a means to an end, it is a road map. That is, after this point, we have to cut back on the traditional regulation and allow the market to work.***

BOB ROWE: I'd like to follow, if I could. What that means, but not always, is that a ***monopoly is to some extent a transitory concept. To some extent, technology [can resolve some***

competition issues], but in terms of the characteristics of a particular market there are some areas that will not by themselves support competition.

When competing for the Universal Service market in my mind, the market is defined by the product and the geography it is not defined by the means the competitor uses to enter that market.

PAUL VASINGTON: ***I would go a step farther in terms of economic regulation as an additive, there's clearly this question of competition policy has to be dealt with at the federal level. But in terms of the economic regulations at the retail market, that should dissolve into the ether. It should not exist anymore whether it is state or federal, international, whatever. There's no market power in the retail market today.***

WHY REGULATING 'LAYERS' WON'T WORK

Panelists also discussed alternative regulatory models that could be applied to the new IP world. While many panelists offered concepts and principles for regulation, there was no consensus on one best approach. Most panelists agreed that a market-based paradigm would be the best course for a competitive new market.

Panelists also focused on a specific proposal offered by MCI Corp. known as the "Layers Model" of regulation that would follow the technical layers of Internet architecture such as the logical, applications, network, and physical layers. Panelists disagreed on the utility of the model for different reasons.

"Using the layers model is a good metaphor for five or six years," said Jeffrey Carlisle of the FCC. "But it's only a model, and it certainly isn't something that has to be legislated for a number of reasons." The MCI layers model was also rejected because technology is always changing, added Mr. Carlisle. "From an engineering perspective how that model gets applied changes significantly. The trouble with using the model as it's offered by MCI is where you stand depends on which layer you sit on," he said.

Most agreed that the model was useful in helping to understand how IP-based networks functioned. But the majority of panelists rejected the model as the basis for regulation or legislation. *"Having something that is somehow analytical would be helpful, but nevertheless it's not a good public policy framework. To me it really just confuses the issue," said Randy May of PFF. "Is [the layers model] helpful in terms of then deciding how and when to regulate something? I don't think so. I think it replaces essentially the same problems," he added.*

But other panelists thought the model might be useful in defining parameters for regulation or deregulation. The critique of layers *"often assumes that with that there is heavy regulation of the physical layer, and I don't think that's necessarily the case," said Matt Brill of the FCC. "I think layers does have value in the legislative debate and the regulatory debate because it helps us identify what kinds of things network owners have to build and what kinds of things application providers must do," he added.*

Susan Kennedy from the California PUC also saw the utility of the model for defining parameters but not as a model for regulation. She said, *"Looking at the layers model, it is not so much that I see it as alternative regulatory structure, but it seems to me the fact that it defines multiple layers and it's important for us to be able to differentiate between voice as an application and voice as a function that's a part of a platform."*

"I think there is some violent agreement to the facility of the metaphor [layers model] and the danger of legislating that metaphor," said Bob Rowe from the Montana PSC. Enacting a layers model might limit investment and innovation as networks develop. "One of the goals, again, is to create an environment where, whether you are a rural co-op or national footprint carrier, you invest in your network and you get a return," he added.

SUSAN KENNEDY: The current framework was designed for monopoly industries and although there are some elements that I think can be modified and made applicable such as the – standard, most of them I think could be eliminated, or radically changed. What should replace the existing regulatory model? I like the layers approach, self-policing enforcement, deregulation,

all of the above.

I think for the State to assume that the current regulatory regime can be imported into a layered model, some layers should be completely deregulated, and others involve things like interconnection, interoperability, consumer access, the content of services that will require some rules

of engagement, some sort of regulatory involvement. But I think we should start with a self-policing approach, along the lines of the four freedoms that Chairman Powell has proposed before we impose some kind of enforcement mechanism or heavy-handed regulation.

RANDY MAY: *I don't think we want to replace the vertical stove pipes with horizontal layers because I think those horizontal layers, the type of approach MCI has been pushing based on the typical functional characteristics of the Internet architecture, would basically be the wrong idea.* We would be inviting just another set of techno-functional characteristics. *In place of the vertical stove pipes we would just have essentially horizontal stove pipes.*

What we really need is to replace the current model with an essentially market-oriented paradigm that is anti-trust like. This would be in the sense of looking at the market for communications services - you divide the communication services the same way that antitrust jurisprudence does. *It creates strong presumptions and a framework against the need for regulation. But it could possibly be overcome by clear and convincing evidence.*

JAMES GATTUSO: Does everyone here agree that competition should be the test, however you define it? Economic regulation, inter-modal competition, or what is that? That's the measure that everybody uses, economic regulations – as far as rate regulations. Does anyone disagree with that?

BOB ROWE: As a general principle absolutely. Start with that principle, look at externalities.

JAMES GATTUSO: Does that conflict with the layers model? We've had people mentioning the layers model.

JEFFREY CARLISLE: I'm actually a fan of the layers model. I give Richard [Whitt of MCI] a bad time, fumbling around with his Powerpoint slides. *Using the layers model is a good metaphor for five or six years.* That model – and it tracks pretty well with anti-trust in terms of horizontal issues. *But it's only a model, and it certainly isn't something that has to be legislated for a number of reasons.*

One, I believe *from an engineering perspective, is how that model gets applied changes significantly. The trouble with using the model as it's offered by MCI is where you stand depends on which layer you sit on.* If you're an applications-based provider you want to shift the

obligations down low. If you're providing the network, you say well wait a minute maybe the application people need to contribute to this. **But as an analytical tool and a metaphor, it's certainly useful.**

RANDY MAY: I love Rick Whitt and he knows that. But I want to drive a final nail into the coffin of the layers model as a public policy paradigm. What we are talking about, folks, is what would be a new regulatory paradigm to replace the current heavy-handed model.

And *having something that is somehow analytical would be helpful, but nevertheless it's not a good public policy framework. To me it really just confuses the issue.* What would – I understand that this layers model is a description, a functional description of how the Internet looks. They are all very similar, a physical layer, a logical layer, and there are a few others. That's interesting and it helps us understand. But *is [the layers model] helpful in terms of then deciding how and when to regulate something?* I don't think so. *I think it replaces essentially the same problems* that we have now with titles that are definition-based, really, the functionality; what's the technology used and that's the way a lot of the current regulations are faced.

And the second thing, *what we ought to look at is the market, and how does the consumer perceive the service?* And what happens if you transgress these layers in delivering service? It seems to me that *the relevant issue is not whether you happen to violate a layer, but what is it like it 'out there' in the market – are there similarities for the consumer?* How does that relate? To answer those questions, I don't think the layers model is sufficient...

MATT BRILL: I think that *Randy's critique of layers often assumes that with that there is heavy regulation of the physical layer, and I don't think that's necessarily the case.*

I think the concept is an acknowledgement about the degree of regulation at every layer. What's useful in that to me - while I don't understand what all the different models are, some have seven layers, MCI has four – what's useful is to separate into groups the two most basic layers, the applications and the physical network.

What is useful about that is, as Susan said, is network owners have competition... (inaudible - away from microphone), may not be far ahead (inaudible - away from microphone). But network

owners are going to have to be subject to some rules about interconnection, about their time on the telephone, about certain basic rights and responsibilities that the cable industry has talked about.

Those ought not to be viewed as traditional regulations but rather 'rules of the road' which apply more naturally to network owners than application providers.

And I think 90% of the applications layer would have a total absence of regulation. ***I think layers does have value in the legislative debate and the regulatory debate because it helps us identify what kinds of things network owners have to build and what kinds of things application providers must do.***

SUSAN KENNEDY: *Looking at the layers model, it is not so much that I see it as alternative regulatory structure, but it seems to me the fact that it defines multiple layers and it's important for us to be able to differentiate between voice as an application and voice as a function that's a part of a platform.* Right now, if somebody offers voice it automatically triggers very similar obligations to a facilities-based carrier simply because they offer voice.

We ought to be able to separate out the (inaudible - away from microphone) voice application from the obligations that would be triggered by being a platform provider.

RANDY MAY: You know *I would make it clear that the MCI paper is specifically offered not for the purpose of understanding the Internet but it's offered for the purpose of a new regulatory framework.* MCI calls on policymakers, and I'm quoting from the paper, "to adopt this comprehensive legal and regulatory framework, founded on the Internet's horizontal network layers."

I don't think it would be appropriate to use and embody in legislation or in regulation...these technological, functional concepts that we know are going to change. But we know that they are going to change and so there's a danger.

BOB ROWE: *I think there is some violent agreement to the facility of the metaphor [layers model] and the danger of legislating that metaphor,* hopefully it's an agreement too that networks are terribly expensive to build. When networks are deployed, services are relatively less expensive to deploy on top of those networks. ***One of the goals, again, is to create an environment where, whether you are a rural co-op or national footprint carrier, you invest in your network and you get a return.***

On top of that there are a tremendous number of services deployed by whomever. It may be by the network provider, it may be someone else. ***We also must realize that there are externalities that society values very, very heavily, that the individual might not value.*** For example, 911 access, the ability to call the fire department, and we all need to recognize that.

***The End of Regulation? Reforming Telecom Policy and Regulators' Roles
to Meet New Market Realities***

Can Washington, D.C. and the States Keep Pace With Tomorrow's Technologies?

**NMRC Panel Discussion
National Press Club
October 27, 2004**

SPEAKER BIOGRAPHIES

Keynote Speaker

John Rutledge is Chairman of Rutledge Research, an economic advisory firm in Williamsburg, VA. He also chairs the Advisory Boards of B.V. Group, a venture capital, hedge fund, and real estate investment firm, and Saugatuck Capital, a private equity firm. Dr. Rutledge was an advisor to the Bush White House on both the dividend tax cut and rebuilding Iraq. Dr. Rutledge has an active lecture practice, giving talks on global economics, financial markets, investment strategies, the impact of technology on the economy, and strategies for owning and growing the value of a business. Dr. Rutledge began his career on the faculty of Tulane University and Claremont McKenna College, where he taught monetary economics, international finance, and econometrics. Dr. Rutledge holds a BA from Lake Forest College, and a PhD from the University of Virginia.

Moderator

James Gattuso is a Research Fellow in Regulatory Policy, Roe Institute for Economic Policy Studies, The Heritage Foundation, where he handles regulatory and telecommunications issues. Prior to joining Heritage, he was Vice President for Policy at the Competitive Enterprise Institute. In that position, he oversaw CEI's policy work and supervised the overall management of the organization. Before joining CEI in 1997, Mr. Gattuso served as Vice President for Policy Development with Citizens for a Sound Economy (CSE) from 1993 to 1997, where he directed research activities. From 1990 to 1993, he was Deputy Chief of the Office of Plans and Policy at the Federal Communications Commission. Mr. Gattuso graduated Magna Cum Laude from the University of Southern California in 1979. He received his J.D. degree from the University of California at Los Angeles in 1983, where he was a member of the UCLA Law Review.

Panelists

Rob Atkinson is vice president of the Progressive Policy Institute and director of PPI's Technology & New Economy Project. He is the author of the New Economy Index series which looks at the impact of the New Economy on the U.S., state and metropolitan economies. While at PPI he has written groundbreaking reports on a wide range of technology issues, including the role of IT in homeland defense; Internet taxation, privacy, and spam; global e-commerce; digital government; and middleman opposition to e-commerce. Previously Dr. Atkinson served as executive director of the Rhode Island Economic Policy Council, a public private partnership including as members the Governor, legislative leaders, and corporate and labor leaders. Prior to that, he was project director at the former Congressional Office of Technology Assessment. He received his Ph.D. in City and Regional Planning from the University of North Carolina at Chapel Hill in 1989.

Matthew Brill is Senior Legal Advisor to FCC Commissioner Kathleen Q. Abernathy. Mr. Brill focuses primarily on wireline competition and broadband issues. Prior to joining the FCC, Mr. Brill was an attorney in the Communications Group at the law firm of Wilmer, Cutler & Pickering, representing wireline and wireless carriers and Internet service providers before the FCC and in the courts. Before that, Mr. Brill clerked for the Honorable Thomas Penfield Jackson of the United States District Court for the District of Columbia. Mr. Brill is a graduate of Harvard Law School, *magna cum laude*, and Dartmouth College, *summa cum laude*.

Jeffrey Carlisle was named Chief of the FCC's Wireline Competition Bureau August 4, 2004. Prior to that, he was Senior Deputy Chief of the Bureau since June 2001, and the Co-Director of Chairman Powell's Internet Policy Working Group since December 2003. Mr. Carlisle is also a member of the Homeland Security Policy Council. During his tenure at the Commission, Mr. Carlisle developed the Commission's approach to Voice over Internet Protocol, managed review of applications by Bell Operating Companies for authority to provide interLATA service, and was responsible for the FCC's policies regarding broadband services, competitive entry into the local exchange market, payphones, and bankruptcies. From 1995 to 2000, Mr. Carlisle was an associate with the Washington, D.C., office of O'Melveny & Myers. Mr. Carlisle

received a B.A. in History from the University of California, Los Angeles, and a J.D. from Boalt Hall, University of California, Berkeley. Mr. Carlisle also received an M.A. from The Fletcher School of Law and Diplomacy, where he focused on international law and the law and policy of international telecommunications.

Braden Cox is technology counsel with the Competitive Enterprise Institute's Project on Technology and Innovation. He analyzes current and proposed government regulation of e-commerce, intellectual property, and telecommunications for its effect on consumers and technological innovation. Mr. Cox is the former counsel at a technology start-up based in Atlanta. His law practice has included technology transactional, insurance investment products and civil litigation. Before law school, he was a network administrator providing technical support for business and university local area networks. Mr. Cox obtained both his undergraduate finance degree and law degree from the University of Georgia. He is a member of the District of Columbia, Georgia and Virginia state bars. He is a regular contributor to the Technology Liberation Front, a blog dedicated to writing about the over-regulation of communications, media and high-technology, available at <http://www.techliberation.com/>.

Charles M. Davidson was appointed by Governor Jeb Bush to the Florida Public Service Commission for a four-year term ending January 2007. Mr. Davidson relocated from New York to Florida in 2000 to serve as the Executive Director of the Governor's Information Technology Taskforce. In 2001, Mr. Davidson was recruited by the Florida House of Representatives to launch the state's first Committee on Information Technology. Prior to joining the Bush team, Davidson was resident in the New York offices of Baker & McKenzie and, subsequently, Duane Morris. In his practice, Davidson was responsible for an array of regulatory, commercial, international, and technology matters in the U.S. and abroad, including international commercial claims against the Government of Iran and the Government of Iraq. A Phi Beta Kappa graduate, Mr. Davidson holds a Masters of Law in Trade Regulation from New York University and a Masters in International Business from Columbia University. He received his baccalaureate and juris doctorate degrees from the University of Florida, where he served as a College of Law fellowship instructor.

Susan P. Kennedy was confirmed by the California Senate to serve as a California Public Utilities Commissioner April 14, 2003. As a CPUC Commissioner, Ms. Kennedy has been a leading voice for regulatory consistency, infrastructure investment and promoting economic development. She is a strong advocate for competition and regulatory restraint, particularly as it relates to emerging technologies in the area of telecommunications. Prior to joining the CPUC, Kennedy served as Cabinet Secretary and Deputy Chief of Staff for Governor Gray Davis. Prior to joining the Davis Administration, Ms. Kennedy served as Communications Director for U.S. Senator Dianne Feinstein, where she assisted the Senator with the development of legislation and policy initiatives, media relations, and community outreach. Ms. Kennedy previously served as Executive Director of the California Democratic Party and as Executive Director of the California Abortion Rights Action League. A resident of Marin County, California, Kennedy attended San Francisco State University.

Christopher Libertelli is Senior Legal Advisor to FCC Chairman Michael Powell. Mr. Libertelli previously was the Chairman's Legal Advisor for wireline competition related matters, including unbundled network elements rules and broadband services issues. Before that, Mr. Libertelli was Special Counsel for Competition Policy in the Office of the Bureau Chief of the Wireline Competition Bureau, and was an attorney-advisor in the Policy Division of the Common Carrier Bureau, the predecessor to the Wireline Competition Bureau. Before joining the Commission in 1999, Mr. Libertelli served as an associate in the communications law firm of Dow, Lohnes & Albertson in Washington, D.C. Mr. Libertelli received a B.A. in International Relations from Boston University and a J.D. from the Boston University School of Law.

Randolph J. May is Senior Fellow & Director of Communications Policy Studies for The Progress & Freedom Foundation. The Communications Policy Studies program examines policies relating to deregulation of the competitive telecommunications industry and the implications of competition for reform of the Federal Communications Commission. From 1978 to 1981, Mr. May served as Assistant General Counsel and Associate General Counsel at the Federal Communication Commission. He also has held numerous leadership positions in bar associations, and he is presently chair of the ABA's Section of Administrative Law and Regulatory Practice. Mr. May writes a regular column on regulatory affairs for *Legal Times* entitled "Fourth Branch." In addition, he has published more than fifty articles and essays on communications, administrative and constitutional law topics. Mr. May is an adjunct professor of law at George Mason University School of Law. He received his A.B. from Duke University and his J.D. from Duke Law School, where he serves as a member of the Board of Visitors.

Connie Murray was appointed to a second term on the Missouri PSC on April 28, 2003 by Governor Bob Holden. Governor Mel Carnahan first appointed her in May 1997. Prior to that Commissioner Murray served in the Missouri House for three

terms. She has a law degree from the University of Maryland School of Law where she was Notes and Comments Editor of the Law Review. Her current term expires in 2009.

David Peyton is Director, Technology Policy at the National Association of Manufacturers (NAM), joining the association in May 1996. His assignments include issues in intellectual property, especially patents and counterfeiting; e-commerce, computer security, and homeland security; research and development; broadband deployment; and modern manufacturing generally. Mr. Peyton's previous work experience includes staff positions at two other trade associations, a consulting firm, and the U.S. Commerce Department. He began his career at the National Commission on New Technological Uses of Copyrighted Works. Mr. Peyton holds a bachelor's degree in government and foreign affairs, Phi Beta Kappa, from the University of Virginia and a master's in public policy from the University of California, Berkeley.

Harold Furchtgott-Roth is President of Furchtgott-Roth Economic Enterprises, an economic consulting firm he founded in 2003. He also is a columnist for the *New York Sun*. From 2001-2003, Mr. Furchtgott-Roth was a visiting fellow at the American Enterprise Institute. From 1997 through 2001, Mr. Furchtgott-Roth was a Commissioner of the Federal Communications Commission. He is one of the few economists to have served as a federal regulatory commissioner, and the only one to have served on the Federal Communications Commission. Before his appointment to the FCC, he was chief economist for the House Committee on Commerce and a principal staff member on the Telecommunications Act of 1996. Earlier in his career, he was a senior economist with Economists Incorporated and a research analyst with the Center for Naval Analyses. Mr. Furchtgott-Roth received a Ph.D. in economics from Stanford University and an S.B. in economics from the Massachusetts Institute of Technology.

Bob Rowe currently serves as the Chairman of Montana Public Service Commission. He was the past Chairman of the National Association of Public Utility Commissioners (NARUC), where he also served as Second Vice President. Mr. Rowe is also the former Chair of the Regional Oversight Committee for US West. Before being elected to the Montana PUC in November 1992, he practiced law in Missoula, Montana and represented customers in utility matters before the PSC, among others. Mr. Rowe has done extensive research and writing on utility matters, especially in electricity matters. Mr. Rowe received a B.A. from Lewis and Clark College; a J.D. from the University of Oregon; and attended the Harvard Kennedy School Executive Program; with additional graduate work in public administration and public policy. Before election to the Commission, Rowe practiced law, including representing parties in rate cases and other utility-related proceedings.

Adam D. Thierer is Director of Telecommunications Studies at The Cato Institute where he examines the constitutional, economic, and philosophical aspects of communications and high-technology public policy. Prior to joining Cato in 2000, Mr. Thierer spent nine years at The Heritage Foundation in Washington, D.C. where he was a Fellow in Economic Policy. He has also written extensively on antitrust issues, electricity and energy policy, the airline industry, and federalism policy. Mr. Thierer is the author or editor of five books on diverse topics such as intellectual property, mass media regulation, Internet governance and jurisdiction, open access regulation of network industries, and the role of federalism within high-tech markets. Before coming to Washington, he spent time in London, England at the Adam Smith Institute where he worked on reform of the British legal system. Mr. Thierer earned his B.A. in political science and journalism at Indiana University and received his M.A. in international business management and trade theory at the University of Maryland.

Paul Vasington is a Vice President with Analysis Group, Inc., a leading economic, financial, and strategy consulting firm. Mr. Vasington specializes in complex issues of market structure, competition, and regulation affecting the telecommunications and energy industries. His expertise includes competition policy, technology, pricing, incentive regulation, industry restructuring, service quality, plant divestiture, and mergers and acquisitions. Prior to joining Analysis Group, Mr. Vasington was Chairman of the Massachusetts Department of Telecommunications and Energy (DTE). He was appointed to the DTE in February 1998, and was designated as Chairman in May 2002. Prior to joining the DTE, Mr. Vasington was a Senior Analyst with National Economic Research Associates, Inc. (NERA). He was on the staff of the DTE from 1990 to 1996, serving as director of the telecommunications division from 1992 to 1996. Mr. Vasington received a master's degree in public policy from the Kennedy School of Government, Harvard University; and a B.A., magna cum laude, from Boston College.