

# **The Free State Foundation**

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## **Archaic Inter-carrier Compensation and Universal Service Regimes: Proposals for Reform**

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**Transcript of the Proceedings**

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**P R O C E E D I N G S\***

**MR. MAY:** I want to welcome everyone here. I am Randy May, President of The Free State Foundation. It is good to see all of you here.

As you know, there is going to be a very important vote on Tuesday, November 4th, and the entire nation is going to be watching. Everyone is going to be waiting to see how the vote affects "Joe the Caller" on that day, and millions of Joe the Callers. Today's seminar discusses the issues that are going to be the subject of that vote in early November. The program is entitled "Archaic Intercarrier Compensation and Universal Service Regimes: Proposals for Reform."

In a moment, I am going to introduce to you the distinguished group of speakers that we have today. First, I want to make a couple of really simple background points so everyone will know what we are talking about today.

When we say "intercarrier compensation," we are talking about the regulatory regime that governs the rates, terms, and conditions upon which interconnecting carriers originate and terminate traffic on each other's networks.

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

"Universal service" has to do with the regime of subsidies that is designed to make telephone service widely available and affordable.

Recently, the particular focus of universal service reform efforts has been the program that provides subsidies to the so-called high cost areas. That is where the explosion of growth in subsidies the last several years has been, and it has led to a situation now where Joe the Caller pays a tax of, I think, over 11 percent.

I understand technically it is not a tax. The economists in the room would agree that in a lot of ways, it is a tax and has that effect. That is now 11 percent on all interstate calls.

It is useful when we talk about the universal service regime to have that number in mind to appreciate the real world impacts of what we are talking about.

I know that there are various interests that are calling for the Commission to delay action in early November on the basis that the Commission is "rushing to judgment" or "acting precipitously." I have to say that in my view, having been around for a while, this just does not make any sense. It does not really square with reality.

I want to read a couple of quotes from a blog entry that I wrote a couple of days ago, in which I pointed

out that in 2001, the Commission said the following, "We believe it is essential to re-evaluate these existing intercarrier compensation regime in light of increasing competition and new technologies, such as the Internet and Internet based services and commercial mobile radio services. We are particularly interested in identifying an unified approach to intercarrier compensation, one that would apply to interconnection arrangements between all types of carriers interconnecting the local telephone network and all types of traffic passing over the local telephone network."

In another 2001 pronouncement, it said "The existing intercarrier compensation rules raise several pressing issues. First and probably most important are the opportunities for regulatory arbitrage created by the existing patchwork of intercarrier compensation rules."

These basic issues have not changed really since 2001. The numbers have changed some, but the basic issues have not.

There have been at least six rounds of comments in the intercarrier compensation proceeding. Do you ever look at the docket numbers on the Commission decisions? That is one of the first things I actually look at

sometimes. The docket numbers tell you when the proceeding was initiated.

The docket numbers for this particular set of issues that you see are 01-92. That was the intercarrier compensation proceeding initiated in 2001. There is another one, 99-68. Another one in the universal service regime is 96-45. That is when these proceedings were actually started.

I have just one further note before I introduce the speakers. This program is part of a series of programs for The Free State Foundation's *"New Directions and Communications Policy"* project. There was one program last month and there will likely be another one next month. We are trying to look at a whole range of issues on a forward looking basis to figure out the right way to move forward and develop sound policy.

I am going to introduce our three speakers in the order in which they are going to speak. First, we are very pleased to have with us Commissioner Deborah Taylor Tate. She was nominated to the FCC by President Bush on November 9, 2005, and unanimously confirmed by the U.S. Senate in December.

Commissioner Tate was the chair or co-chair of the Federal/State Joint Board on Universal Service and the

Federal/State Joint Board on Jurisdictional Separations, that worked very hard to develop some of the proposals that are still before the Commission.

Prior to her appointment at the FCC, Commissioner Tate was serving a term as the chairman and director of the Tennessee Regulatory Authority, the public utilities commission in that state. She has been an adjunct lecturer at the MBA, Nursing, and Law School level. She has also served as a policy advisor to two Tennessee governors. You ought to take a look at the bio on the Commission's website if you want to get the full picture.

Gerry Brock is going to be our next speaker. Professor Brock is Professor of Public Policy and Public Administration at the George Washington University, and Director of the Public Policy Program there. He has also served as Director of the Telecommunications Program.

He has written much on telecommunications and especially the subject that he's going to be talking about today. He was a chair of the FCC's Common Carrier Bureau back in the 1980s.

Next will be John Mayo. John is Professor of Economics, Business, and Public Policy at Georgetown University's McDonough School of Business. He previously served as Dean of the Business School. He also serves as

Executive Director of the Center on Business and Public Policy, which he founded at the University.

Professor Mayo served as chief economist of the United States Senate Small Business Committee. He has written widely on telecommunications topics, and especially universal service, which he is going to focus on today.

With that, we are going to get started and welcome Commissioner Tate.

**COMMISSIONER TATE:** Thank you. Thanks, Randy, so much. I am very pleased to see all of you here today, and as you all heard, the Commission has a lot on its schedule so I have already apologized to the esteemed speakers who are here, but I am going to be leaving after I make a couple of comments.

I want to applaud Randy and the Free State Foundation for advancing market based solutions to the many challenges before all of us, especially the Commission.

Our existing economic environment may actually call for even more regulatory humility than usual, as we await market readjustments, stabilization, and hopefully, the return to long term economic growth that we have witnessed for decades, especially in the telecommunications and information sectors.



The title of the seminar, "Archaic Inter-carrier Compensation and Universal Service Regimes," is certainly an apt descriptor of a system that has developed over decades based upon trying to effectuate extremely laudable social goals like affordable and ubiquitous telephone services for all of our citizens, no matter what their income and no matter where they live. This system has also allowed a complex array of inter-carrier compensation mechanisms based upon implicit subsidies to grow and multiply.

By ensuring competition into the long distance and then local markets, as well as the deployment of totally new technologies, the 1996 Act eroded the current inter-carrier compensation regimes.

Reform of both of these very complicated and also costly mechanisms certainly is not a new idea. In fact, one of the staff at the FCC said, "Commissioner Tate, I have been working on this issue for 15 years. Please do something about it." I am being lobbied by everybody, even our internal staff.

Since the 1996 Act, the Commission has recognized the importance of re-evaluating the existing inter-carrier compensation regime. I just wish they had decided to do it a long time before now. In light of increasing

competition, new IP technologies, and the significant advantages of an overall evaluation of mechanisms applicable to different types of traffic to ensure a more efficient symmetrical regime, the Commission needs to address the core ISP remand by November 5th. That has provided the FCC with the impetus to establish a road map toward uniform regulations that are economically efficient and sustainable in our increasingly competitive markets.

While we are moving forward to modernize these complicated regimes, we must ensure that we are also working hard to affect the public interest.

As you know, I am a former Chairman at the Tennessee State Commission, and with that experience, I learned why it is important to make sure that when implementing these rules we do not preempt state agencies which have expertise on the ground level.

Particularly in the current economic climate, we must examine closely how Government regulations may cause additional market disruptions or adversely impact both carriers and consumers. We must weigh carrier impact and we must remember that, ultimately, all of us pay the bill every month, as Randy noted, up to 11.4 percent.

In regards to intercarrier compensation, even with the various concerns that are being expressed

concerning some of the specific provisions in the proposed report and order, I have not met with anyone who does not believe that the current myriad of compensation schemes in existence today must give way to a more simplified, economically efficient, and cohesive plan.

In addition, everyone is also in agreement that we must address the arbitrage opportunities that termination monopolies and inflated intrastate rates have created. Phantom traffic, traffic pumping, and what the core case originally addressed, ISP bound traffic, are all examples of the arbitrage created by above-cost termination rates. Even if widely disparate rates were once rational, they are no longer, and they cannot be sustained.

Further, we must keep in mind that as more and more telephone traffic is evolving from POTS to IP (if not at the end user, at some point in the middle), we must determine how we are going to handle these new issues and new technologies. As carriers move from circuit switch telephone-only networks to a broadband world of packet switch networks, we need to incent new and exciting advance services and applications.

Rather than focusing on all the negatives, discrepancies, and discontent, I think we really need to

focus on the opportunity that is before us and on the issues that we can truly find some consensus on.

I think about those who developed the Missoula Plan and were able to agree upon and formulate some really good, sound core reform principles. I really believe that we can find some consensus. I want you all to know I am willing to work hard with my colleagues and other interested parties to try to find a starting place toward the reform that we all seem to agree is necessary.

The Commission must address and implement strict rules regarding identification of traffic as well as to minimize the arbitrage opportunities through creative traffic pumping schemes, and we can do that immediately.

You all know how hard I have worked as the Federal Chair of the Joint Board on USF and how much criticism I have withstood, because reform is not popular. Making hard decisions is not the popular thing to do, but it is the right thing to do.

We took an important first step, and I want to thank again all of my colleagues on the Joint Board for their courageous recommendation to stem the untenable growth by capping the CETC portion of the high cost fund, just as it is on the ILEC side. This recommendation, as you all know, was then adopted by the full Commission last

May, and has helped to curtail the growth of that side of the fund.

Coming from a rural state, ensuring that broadband is ubiquitous across this country has been a focus of mine really personally. However, is it best achieved by more regulation or better achieved by deregulatory policies? Connected Nation, and now in my own home state, Connected Tennessee, is one of those entities working to provide the business case scenario to attract providers and investment with creative public/private partnerships.

Ensuring broadband access to rural America is an important goal for this country, and as regulators, we must make sure that whatever reforms we do enact, we take into consideration the work that has been done in the private sector, and that we incent carriers to continue deploying broadband in an efficient, effective manner. Reverse auctions have been discussed for years, so maybe rather than just talking about them, we ought to pilot one and see how it goes.

I have also had the privilege of co-chairing the Federal/State Joint Conference on Advanced Services, also known as the 706 Board. I am looking forward to this meeting on November 6th, and I welcome your involvement and

feedback regarding the presentations and ideas that we hope will culminate there.

There are many bold proposals in Chairman Martin's order, from reform of high cost support and establishing a new methodology for assessing contributions on the USF side, to comprehensive intercarrier compensation reforms and a plan to sell off phantom traffic. A concept that I believe there is strong consensus on is the proposal to expand Lifeline and Link-Up programs, at least in a limited way. It would establish a very limited pilot program which would make broadband access more affordable for low income families who just cannot afford it otherwise.

Just as we did with telephone service, it is imperative that we work to make the Internet more accessible and more affordable for all Americans, no matter their economic background. I commend Chairman Martin for recognizing the importance of this Federal goal and for making it a priority, and I am inclined to support this measure. This would enable us to observe providers and services, analyze actual, real world results, and then draw evidence-based conclusions on whether this improves rates for our low income citizens.

All of our children need to have the vast opportunities being connected to the Internet can provide, whether it is distance learning opportunities, improved health care opportunities, or being prepared for the jobs of tomorrow.

These are just a few of the myriad of complex and challenging issues that we are about to face. As we move forward toward reform and realignment of both ICC and USF, I am really proud of this Commission, and I am very proud of the Chairman, we are on the precipice of taking strong action to truly address some of these issues, issues that you just heard have been discussed for a long period of time. I am confident that all of us can make progress toward truly meaningful reform while still adhering to the goals of widespread deployment of broadband through efficient incentives and uniform explicit intercarrier compensation reforms.

I know that both of my colleagues will provide you all enlightening, insightful observations, and I am going to plan to talk to both of them, so I do not want you all to think that I am not listening to what they have to say.

I welcome all of your input, and thank you all for helping us find consensus on these issues so we can move this country in that direction.

Thank you all. Thank you, Randy.

(Applause.)

**MR. MAY:** That was a wonderful introduction to get us off to a great start. We thank you again, Commissioner Tate.

I think Commissioner Tate is leaving her Free State Foundation hat here. I think she may have another one. So I am going give this Free State Foundation hat to the person who asks the best question during the question and answer period in my judgment alone. That is my way of telling you to think of questions because we are going to have a question and answer period.

I have asked Gerry and John to each take about 15 to 17 minutes to do their presentations. Gerry will speak on intercarrier compensation and John will discuss universal service. Then we will move into a question and answer period at that time.

Gerry, you are up.

**MR. BROCK:** Thanks, Randy.



I think there has been an adequate amount said about the old background. The point to emphasize is that we have been dealing with this for a long time.

In particular, going back to 1980, the beginning of the access charge plan, the justification for removing old plans and setting up something new, was there were too many different approaches that were inconsistent. Almost 30 years ago, reformers discussed the need for a much more unified kind of rate.

Randy has already recited some quotes from the 2001 intercarrier compensation NPRM that started the current proceeding, and that NPRM was done with the expectation that it was actually going to lead to some results in a reasonable amount of time.

It has turned out to be a very complex problem because of the many different kinds of concerns involved, so there has been no consensus or final order on that, despite a further notice in 2005 and innumerable filings and ex-partes.

The problems with the current system have been talked about a lot, but very simply, the problem is that the current system consists of a large number of different intercarrier compensation mechanisms, each one based on a

particular technology, service configuration, jurisdictional structure, and an assumed charging pattern.

I might just note the last one isn't usually mentioned in the list of problems. However, whether your long distance company bills individuals directly and separately from the local company or bundles its charges with the local company charges makes a difference in how you think about intercarrier compensation.

Historically, each of these systems was developed to meet a particular need at a particular time. But all together, we have created extensive opportunities for arbitrage and incentives to route and classify traffic to take advantage of particular intercarrier arrangements.

A further issue is that the access charge plan was explicitly designed to provide subsidies. That is not just an accident. That design was based on the assumption that one could extract subsidies from the long distance carriers to pay to the local carriers who were then assumed to have a monopoly.

Those situations simply are not true anymore. We do not have the kind of arrangements that we had at the time each of these systems were implemented, and many problems arose because of the conflicts among them.

With that introduction, we should next think about the components involved when we look toward a long term arrangement. This presentation was prepared in terms of long-term reform. I did not even know there was as an FCC order to be voted on soon. I am not tightly tied into that kind of connection, as I am not working for any of the parties or doing those kinds of things.

I have been trying to develop some long-term approaches by looking at the components of the system. The first potential component to consider is access charges. That has been a major part of the intercarrier compensation. Those charges were developed for the post-divestiture world to accommodate separate long distance and local companies using circuit switch voice communication with an assumed pricing structure of high per minute prices. They were designed to ensure that some long distance revenue flowed to local companies.

I personally spent vast numbers of wonderful hours dealing with the fine details of access charges many years ago, but it is time to give it up. The access charges are completely out-of-date. In the past, we could do wonderful things with them. For example, the local companies would file access charges to start on January 1. It became a regular ritual that on December 24th, the

Commission always released an order cutting the amounts by about \$500 million. It worked every year. Just a good routine kind of thing, good publicity for the Commission, on Christmas Eve, cutting all your telephone rates, but really, that just does not amount to very much going forward.

I do not think that building on the access charges component is useful. My preference is that we eliminate the entire structure.

The second big component to intercarrier compensation systems is reciprocal compensation. I believe this component does provide a solid foundation going forward. The reciprocal compensation structure was set up by the Telecommunications Act of 1996. It was designed for interconnection of local telephone companies, and took the perspective that companies have an obligation to interconnect, and that they are providing mutual benefits to each other. It is not that one company pays everything to the other, but that we do it mutually. That system encourages privately negotiated agreements between the interconnecting parties with state regulatory commission arbitration when private bargaining fails.

When access charges were set up, it was expensive to transmit things long distance, which is why we had the

sharp distinction between long distance and local. Now, it is not expensive. I want to emphasize that technological progress has continued to reduce the significance of distance in communications. Transmitting bulk communications long distance is now trivially cheap and therefore, we can broadly think of many things as local.

I think the reciprocal compensation approach is a reasonable foundation for any comprehensive kind of intercarrier compensation reform. I would expand it because distance does not matter.

Let's think about what that might mean. When I suggest abolishing access charges, the people who have been heavily involved respond that I do not understand the problems of the rural telephone companies. They say that access charges are a critical part of what those telephone companies do.

I have two answers to that. One is that we need to separate the subsidy aspect from the intercarrier compensation aspect. Insofar as it is necessary to provide subsidies, that should be done through the universal service fund. When we embed subsidies within intercarrier compensation, we have problems of arbitrage.

We had arbitrage long ago, even at the beginning of the access charges. One of the things I worked on at

the Commission back in the early 1980s was the problem of so-called bypass, which was effectively a case of arbitraging.

It is not a new issue. Any time you provide explicit subsidies, somebody else is trying to get in on those subsidies or avoid paying them.

Second, suppose we did reciprocal compensation in long distance. Think about a rural ILEC connecting with a large integrated company such as AT&T or Verizon. Currently, the integrated company, say AT&T, would collect the long distance revenue, and they would pay both originating and terminating access to that rural ILEC. If there are multiple long distance carriers, each of them would be in the same situation.

With the reciprocal compensation approach, the ILEC would terminate inbound traffic in exchange for the right to send traffic over the AT&T network. I am a little ILEC here, a little rural ILEC, and here is big AT&T that wants to interconnect with me.

At a starting point, there is no reason to think that traffic will be unbalanced. I, the small rural ILEC, have a small number of carriers and customers, but I am calling a large number, the whole world. Similarly, AT&T

has a whole bunch of carriers, but there are only a few terminating people in my area.

If we think of that as reciprocal compensation, then we are effectively saying the entire long distance network is available to the ILEC as their payment for terminating the traffic. The rural ILEC gives up the access revenue but it then gets the right to provide long distance service to its customer, to collect the money from them, whether by an integrated arrangement or not.

A third component that is relevant to this discussion is the so-called bill-and-keep approach. That is also known as peering. It is reciprocal compensation with a rate of zero. It says we have two people, two carriers, that find it worthwhile to connect with each other and they do so on a basis where neither one pays the other for the right.

That has been very useful. It is something that has come out in many private agreements. There was a proposal by the FCC to make it mandatory. I am a big fan of bill-and-keep, but I do not think it should be prescribed. I think that is too rigid to have a single prescribed rate of any kind, whether bill-and-keep or otherwise.

A fourth component of any reform plan is private bargaining. It should be the foundation of a market oriented system. I would like to be able to stand up here and say, "Ah, it is easy, let's just abolish all the current things and let people bargain privately."

I really do not think that would work very well. The basic problems of terminating monopoly and the strategic use of interconnection to create or maintain monopoly power make it unlikely that we can rely entirely on private bargaining. However, from my perspective, we want to rely on private bargaining as much as possible. That becomes an important component.

The final component is arbitration. Again, we have had some experience with it at state regulatory commissions under the reciprocal compensation system, and have found that arbitration is a very useful backup to private bargaining.

On the other hand, we have found that arbitrations before state commissions create high transaction costs, and in some cases, they begin to look like old style regulatory hearings.

Now I would like to explicitly bring in the economic theory. Economic theory suggests that contracts can more accurately reflect the goals of the parties if



those contracts are enforced and helped along by expert arbitrators and court enforcement.

The idea goes to information theory and the kinds of information you can convey to someone. We can distinguish between the kind of information that we simply make available, that two parties know about each other and are willing to share with each other, and the kind of information that goes to whether or not you can convince a court or state regulator the significance of that information.

I know that industry people routinely feel like regulators do not understand the complexities of the industry. The idea is you can write much more precise contracts if you know there is an enforcement mechanism by experts.

How would we actually set up a reform using those components? As Commissioner Tate suggested, it must be broad in scope. The reform cannot just focus on current common carrier services, but must be able to take in the IP services in general. I have noted here that VoIP, the Apple I-Phone, the Google G1, and various things like that already cross those lines pretty thoroughly, and we need to have a system that can be applied to new services as we go along.

What does my preferred reform structure look like? First, I would abolish access charges and clearly separate universal service subsidies from intercarrier compensation. I would build on the existing reciprocal compensation structure by allowing private bargaining backed up by arbitration. However, I would change the arbitration forum from state regulatory commissions to panels of industry experts.

A critical aspect in making this work is determining how it affects transaction costs. Pure bargaining and arbitration can lead to high transaction costs as we develop/arbitrate similar issues multiple times. Therefore, I think it is important that the FCC specify a general framework of principles and default arrangements to guide the parties. Those principles should include the presumption that the exchange of traffic benefits both parties, that bill-and-keep often represents an efficient method of compensation, and that intercarrier compensation should not be used for strategic advantage.

I have an intermediate view: I think the best solution lies somewhere between saying private bargaining is the complete solution and prescribing detailed rates.

Prescribing principles and approaches gives private bargainers a good idea of how they can approach

contracting. The principles provide a "threat point" or the best alternative to litigation. To make bargaining work, people need to have a pretty good idea of what will happen if one party declares this a failure and goes to the next step.

Prescribing some principles is important, but I believe the best regime is one that is flexible and the structure can be adjusted to meet the great variety of special considerations. For example, I might note, the ISP/CLEC topic that is the focus of the court remand, is one that could have been solved if you had a little more flexibility in designing the structures.

The final point I want to address is the concern in the industry that their competitors will be the experts on the arbitration panel. We have a tradeoff between the benefits of detailed experience and expertise and conflict of interest. I might note that is a very general kind of tradeoff.

Experts are experts because they worked in some area and they know it in detail, and that gives them a certain kind of perspective. But the conflict of interest cannot be entirely overcome, and even when the arbitrators are regulators, I do not think you can entirely avoid it.

We have lots of studies about so-called regulatory capture, but we do have an economic theory that gives us some guidance in structuring arrangements. The basic approach is known as enlarging the shadow of the future or reputational capital. I will not go into the details of it here, but there are structures that make a person think about their long-term self-interest, rather than short-term opportunism. By careful structuring, you can reduce the role of conflict of interest. You cannot get away from it altogether.

**MR. MAY:** Thank you, Gerry. While John is coming up, I will just say Gerry's reference to enlarging the shadow of the future possibly could be the basis of a prize winning question during the question and answer period.

**MR. MAYO:** Thank you, Randy. It is a pleasure to be here. If I could, I think this is a marvelous and, as it turns out, very timely forum. The goal of this exercise is to think about universal service policy. Unless you have been living in a cave for the last several weeks, you know that we have had a tremendous amount of debate and discussion about the financial sector.

There are a number of things to say, and there is a temptation to draw linkages between the financial sector and the telecommunications sector. Some of you will

remember that in the second presidential debate, there was a lot of discussion about the financial sector and regulation of the financial sector. Senator Obama said something that caught my ear. He said, referring to the financial sector, the problem is we are trying to fix a 21st Century problem with 20th Century regulations.

For the most part, as a student of the telecommunications industry, I will tell you that I think the applicability of that phrase to the "telecommunications sector" is inapt. It does not fit so well.

If you look at the telecommunications sector over the last 15 years, you have seen a series of success stories. You have seen prices fall dramatically. Gerry mentioned long distance telecommunications. They have fallen from 50 cents a minute to five cents a minute or zero, if you use IP.

In the wireless arena, only a decade ago, we had prices of 55 cents a minute for wireless calls. Today, the cost is about seven cents a minute for a consumer, and again the margin may be zero as a marginal minute of use on the wireless system.

We have lots of success stories in telecommunications. Over on the financial side, we do not have much in terms of success. The challenge in finance is

not that regulation did not change, but that over the last 15 to 20 years there was an explosion in the number of complex financial instruments. There was a huge information asymmetry problem; all the players had different amounts of information.

I would like to talk about one area of the telecommunications sector where I think the phrase may be apt. In this area, can we solve the 21st Century problem by having 21st Century regulation?

This country spends about \$7 billion a year on universal service. On this chart I show you that we deal with tradeoffs all the time. Where else do we spend our money? Where are we putting our priorities, and does this square with your reality, my reality, and society's reality of where we can and ought to spend money?

On my chart, the tallest bar is universal service, where we spend almost \$7 billion a year. The left-hand bar shows we spend about \$880 million to adjust our labor force to the forces of globalization. By some people's thinking, that is the preeminent economic challenge of the day, to adjust our economy to a world that is globalizing. We spend one-ninth on the challenge of globalization that we spend providing subsidies for

telephone service every year in the United States of America.

That may strike you as peculiar. Many people are in the industry and we have grown up in this world where it is sort of like: how do you boil a frog? You raise the temperature very slowly, and the frog never jumps. We now have a boiling pot of water from the universal service perspective.

I am an educator, so I have to mention student loans. Again, investing in the future, we spend about \$1.2 billion on student loans. We spend \$7 billion on providing subsidies for telephone services. The FBI is swamped by the bigger bureaucracy of universal service. We spend more on universal service than we do the entire FBI. We spend significantly more on universal service than on the entire judicial system in the United States of America.

The bar that is so small that you cannot see it is right in our backyard, the National Institute of Health, which is the preeminent research institute to fight health and disease in the United States. For me, that strikes me as a prima facie case. The numbers make a very pragmatic case for saying maybe we could do something new.

Maybe we can ask the question: Can we do more with less? Can we be soft hearted but hard headed about moving forward with the universal service policy?

When we were asked to do this forum, I was not aware there was going to be an agenda item on the FCC's docket to deal with this. It turns out to be really fortuitous because we would like to put in everybody's mind a framework for considering, 1) whether we need reform, and, if so, 2) how should we do it, and 3) what are the relevant economic principles and benchmarks that we might adopt.

Hopefully, we will all walk away from here in a better position to judge the specific proposals that come down the pike. To do that, we need to back up and ask ourselves a very basic question. Do we need a universal service policy at all, and if so, for what? I know it is sacrilege to offer that question.

We have to observe that for most goods and services bought and sold in the United States, we do not have a universal service policy. Nobody subsidizes automobiles for all of you. Nobody subsidizes your shirts.

The Free State Foundation did subsidize your services here today, but it is not a universal service policy. It only subsidized people who came in the door.



Not everybody. So, there is that question. Why telecommunications? Why might we have a universal service policy in telecommunications?

To start, with narrowband telephony, there is an argument known as network externalities. The basic argument is that, when I make a subscription decision of whether to subscribe to basic telephone service, I make that decision based on my private benefits relative to the costs that are being imposed on me and the price that is imposed on me. So I consider the private cost price and the private benefits, yet society as a whole benefits by having more people signed up on the telephone network.

Some people argue that there are larger benefits to society associated with having additional people subscribe. The argument is that if you do not do something like universal service, the private network, provided by private companies, will be just simply too small.

This may provide a public policy rationale for saying, yes, we would like to have a network that is larger. Never mind the politics of it. We have an economic rationale for it.

One can also argue that politics might really be driving the boat. There was a decision made long ago that it is politically unacceptable to not provide service to

certain groups of people in certain areas. That is another rationale for this service.

Now, I want to talk about the evolution of universal service policy, just so we all know where we have been and where we are today. I think it winds up being very important for judging the merits of any reform proposal.

First, in 1907, Theodore Vail, the then-president of AT&T, called for universal service under a phrase that has become very famous. Gerry writes about it in his very fine writings. This quote is "One system, one policy, universal service." Notice that it was offered by the CEO of a private corporation. A private corporation was calling for universal service.

In 1934, we had the Communications Act which stated the goal "to make available so far as possible to all the people of the United States, a rapid, efficient, nationwide, and worldwide wire and radio communications service..."

The 1996 Telecommunications Act said that the FCC and the state shall "encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans."

Finally, I want to mention one that happened two weeks ago. Congress passed, and President Bush signed, the Broadband Data Improvement Act that says: "Continued progress in the deployment and adoption of broadband technology is vital to ensuring that our nation remains competitive and continues to create business and job growth."

I went through those simply because that is the evolution of the policy statements coming from the Hill and being signed into law. What are our take-aways from that? They are at least threefold.

Number one, that first statement I mentioned suggests to me, and I hope to others, that corporate and governmental goals in the area of universal service may be complementary, not substitutes. If appropriately fashioned, universal service policy can complement the interests of the private sector and vice versa.

Private sector firms have an incentive to create value for their networks that will drive those networks out farther and farther into unserved groups, whether those are low income groups or rural groups, wherever.

Number two, you saw in each of the progressions a movement of emphasis from narrowband telephony to broadband.

Third, there is a nationwide goal that we have added to the earlier language. The first two statutes I mentioned talked about availability and deployment. Now, with the Broadband Data Improvement Act, our policy says deployment and adoption.

Deployment and adoption is quite different from deployment. That is the goal. Congress passed it. President Bush signed it. That is the law of the land.

What have we accomplished in the area of universal service policy? In the narrow band area, 95 percent of the households, by official statistics, have a phone, and we have 270 million or so wireless handsets.

Where does that leave us? In terms of the current law, the Broadband Data Improvement Act calls for the deployment and adoption of broadband. As I mentioned, narrowband has been quite successful, but at great cost.

I think that after a century since Theodore Vail offered those words, we can declare victory. There are some disadvantaged consumers who are very low income and for other reasons may not be subscribing to a telephone service, but by and large, everybody who wants a telephone has one in the United States of America.

What we might do is move on to broadband, and that's where the country seems to be headed with the

Broadband Data Improvement Act. If we move to broadband, how are we doing?

The first thing, if we are going to have this goal of universal service of broadband, both deployment and adoption, you want to take an inventory.

There has been a dramatic growth in the United States in broadband deployment from four million lines at the turn of the century to 100 million lines through wireless and wire link, cable and telephony. The number of broadband lines in the country grew by over 55 percent in the last year alone. It has been a dramatic growth. In honor of Commissioner Tate, I am showing the State of Tennessee and its broadband deployment. Tennessee is a pretty rural state and it has pretty wide broadband availability. There are some pockets that are not covered, but by and large, it is covered.

What are the lessons that we have learned over the last century from narrowband that we can take forward if we are going to have a universal service policy on broadband? Let me just mention each of these if I could.

First, if we are going to have a universal service policy, we absolutely have to be clear on what the goal is. If you look back at the universal service goal in the narrowband telephony, it moved from availability to

affordability to the lowest price possible consistent with extracting funds from everybody else. We have a bit of a shifting target in the area of universal service.

I rather like the idea of having a goal for broadband deployment, say, a specific speed to the American population. I think any reform needs to be explicit and clear about the goal.

Second, as Gerry suggested, if you are going to subsidize, you need to make the subsidies explicit and transparent. Not to belabor Gerry's point, but for at least 30 or 40 years we have used implicit subsidy flows going between carriers as a vehicle to promote universal service. From an economic perspective, it is rather insane. That is the best I can say about that.

Let me mention the next two points together. By way of principles, what I call "Principles of Subsidization 101," if you want to distort economic activity the least and accomplish the most, it is critical that we fund the subsidy as broadly as possible. That is to say let's have that subsidy draw from as wide an audience as is possible because by doing so, you tap the wider audience less and distort their consumption patterns the least; and conversely, to accomplish the most, we should target that

goal very narrowly. You want to fund a subsidy broadly and target it narrowly.

We did exactly the opposite in narrowband. In narrowband universal service policy, we funded it by taxing just long distance users. We targeted the world.

While I, John Mayo, very much might appreciate a subsidy on my local telephone bill, it had zero economic consequence. I was going to subscribe to the telephone network whether I got that subsidy or not. It is pure economic waste. In summary, if we move forward with broadband, I believe we should fund broadly and target narrowly.

Next, we need to design any subsidy mechanism to minimize the amount of subsidies that are necessary to accomplish the objective, and here, I will offer a couple of words: competition and auctions. They will wind up being quite critical.

Competition has a way of driving down costs. Whenever we can enable competition, it is going to drive a carrier's cost down and new entrant's cost down. We need to be vigilant about promoting competition. Auctions are a way to create *ex ante* competition. That is very important.

My final point is that we need to design programs that actually alleviate relevant constraints. In the

narrowband world, we have told people that we offer Lifeline and Link-Up. It turns out that Lifeline/Link-Up subscription rates for low income households are low but quite variable. Many consumers who are eligible for Lifeline service simply do not take it.

In a paper, some co-authors and I looked into and investigated econometrically why that is the case. We found that one of the biggest deterrents to people taking the Lifeline rate is the state applying that rate only to the most basic services possible. You cannot have three way calling. You cannot have call forwarding. You cannot have any complementary service to the basic service. That is a turn-off to people. They do not take it, they walk away.

Think of the world of broadband and its complementary services. What is the most complementary product to broadband? It's the computer. It does not matter if you have broadband service if you do not have a computer to complement that broadband availability.

It is very important that we think and design programs to implement the lessons. We need to reorient the funds away from narrowband and move them to broadband. I think that is going to happen. We need to be smart about moving those funds.



We need to hold the telecommunications companies accountable for clear deployment goals. We need to create incentives to minimize the costs of providing universal service, whether that is through competition-enabling policies or reverse auctions. We also need incentives for the adoption of broadband technology, not necessarily deployment, but for the adoption. We need to think about those targeted assistance programs and address relevant constraints.

In conclusion, I think we do sit at a very important moment after 100 years of trying to pursue a universal service policy in this country. We must begin the process of moving our universal service regulatory regime from the 20th Century to the 21st Century.

Thank you.

(Applause.)

**MR. MAY:** Thank you, John and Gerry both. I should have mentioned this before, and after listening to those presentations, I am even more proud to say it now: Both John and Gerry are members of The Free State Foundation's Board of Academic Advisors. It is a terrific group of academics. These are two fine examples.

I want to turn to the question and answer period. Who wants to ask the first question? I see Chris. I know

there are some reporters here. If any reporters want to ask a question, I can recognize you as well. In the meantime, Chris?

**CHRISTOPHER WRIGHT:** I appreciate the sentiment of not wanting to mandate bill-and-keep, but I wonder if mandating it would save a lot of resources. Some fees for arbitrators might not be all bad.

To use your example, an ILEC is negotiating with AT&T. AT&T will always want bill-and-keep. The ILEC will always want as much as it can possibly get away with, given what you called its mini-monopoly. Why not just mandate bill-and-keep and save everybody the grief?

**MR. BROCK:** That is a very good question. It is one I have actually struggled with over time. As I said, I have been a strong advocate of bill-and-keep. I have two answers. First, I think we need some structure. For example, let's just think about what happened historically. When we started with the reciprocal compensation, generally speaking, the flows were unbalanced and the incumbent carriers asked for relatively high rates.

A control on those negotiations was the fact that rates had to be mutual. Whatever rate the parties agreed on, they both paid the same amount. In fact, when I first started talking about bill-and-keep, there were a lot of

incumbents that said it was extremely stupid; they said they would obviously want relatively high rates.

It turned out that the CLECs found ways, sometimes to an extreme, like the ISP case, of reversing that flow of traffic. Because there was mutual compensation, the ILEC would then negotiate to get rates down. So you saw a change to more ILECs supporting very low rates or bill-and-keep.

If the world was simple, I would definitely recommend mandated bill-and-keep. Let's just prescribe it and be done with it. I do not want to intrude on the lawyers' turf here, but I do think one would have a hard time finding appropriate legal justifications for that kind of a prescription. In addition, if we want to have a system that will work for future innovation, there must be some soft edges, at least in my view.

What was happening in the ISP case was, in my view, fundamentally a confusion between customer and carrier. You had the customer rights to buy service, but then you put a carrier front-end on it that turns the system into payments for the person receiving the income. If everything is specified rigidly, you do get the lowest transactions costs, but then you have a hard time making adjustments.

There is some tradeoff. As you can tell, I do not have a fundamental answer to that question. Bill-and-keep is a great idea for reasonably balanced traffic. Maybe it will work okay for not so balanced traffic, but it is unclear whether it will work if the traffic is really all one way. That is why I think you need some way to adjust to special situations.

**CHUCK KELLER:** I am Chuck Keller. Professor Brock, one of the things you suggested was removing subsidies from the intercarrier compensation rates, particularly from access rates, and Professor Mayo, you talked about minimizing subsidies. How do you determine the part of an access rate that is a subsidy?

Professor Mayo, you talked about using competition and auctions to get there. There is a fundamental tension between competition and auctions because in an auction, you have one winner, and you do not have competition anymore. You do not have consumers getting the benefits of competition once you determine the auction winner.

I think those are great theories. How do we put this into practice? How do we actually figure out the subsidy amount in access charges and also get consumers the benefit of competition in the process?

**MR. BROCK:** On the subsidy question, my answer would be that you can eliminate the subsidy when you do not have to make it explicit. That is when you can do pure negotiation. Because of bargaining power, somebody may well end up making more money than the other side on any particular arrangement, but it is one thing to say I got a good deal on my bargain and I am very pleased with it, and another to say the Government structured this in a subsidy way where you are not allowed to bypass it and do something else.

**MR. MAYO:** I have a couple of things to add. The telecommunications industry is a little unusual in one respect, and that is because it has been highly regulated for a long, long time. People have a pretty good idea of what the economic costs of providing service are. I understand there are still fights over that, but we know pretty well the marginal or incremental costs associated with traffic. You can shake your head, but we have a better sense in this industry than in other industries, let me put it that way.

The consequence is that if you have seen rates, in the case of access charges, that have been 5, 10, 20, 100 times those relevant economic rates, you begin to say it is unnecessary. It is unnecessary and it is actually

counterproductive to a goal of making subsidy flows explicit rather than creating a situation where one carrier taxes another carrier not knowing the amount of subsidy flow. There are issues of sustainability as well because technology is changing. I think it is not quite as difficult to get implicit subsidies out by using an incremental cost benchmark.

With respect to the issue of competition-enabling policies, I think you are quite right that an auction, once it is over, has a winner. The idea, and this goes back all the way to some work by a professor named Harold Demsetz, suggests that you might have situations where you are going to have all the benefits of competition by having competition for a market, not competition within a market.

This idea has been around for a good long time, and that is the whole idea of a bidding process, that you can get the competition *ex ante*, from a bidding process.

Over time, you would want to re-visit market and if somebody else can come in and provide that service at a lower cost later, then policy should allow that.

**MR. KELLER:** Is that feasible in a market with high cost structures like telecommunications?

**MR. MAYO:** I think that was precisely Professor Demsetz' point, that this was argued, whether it was cable

at the time, very much thought to be a natural monopoly, or telecom or electricity distribution, that the competition *ex ante* before someone has sunk those costs is imminently viable.

Once the incumbent is established, you are quite right that the new entrant facing the prospect of sinking those sunk costs *ex ante* is more troubling, unless you have what is happening today in telecom. If you were going to provide service in the old days to everybody, you had to do it with a pair of twisted copper wires that could go miles and miles out into the rural back woods. Today, with satellite and wireless technology, the sunk costs associated with providing service have gone down and that technology shift may allow for a more efficient provision of universal service than in the past.

**MR. MAY:** Let's get another question.

**TED GOTSCH:** Ted Gotsch with *Telecommunications Reports*. Both of you addressed different aspects of Chairman Martin's proposal. I was just wondering generally what your feelings were about that proposal and if there are any specific areas you do not like.

**MR. BROCK:** I'm sorry. I am going to have to pass on that one because although I have read some news reports about the plan, as far as I know, the plan is not

public. I do not want to comment on somebody's theory on it.

**MR. MAY:** Gerry, when you and I were at the Commission in the 1980s, and I was there in the late 1970s, those draft orders actually were not public. It was very rare. Now, you read these reports and it almost seems like people have the orders. It is a bit different. That is just one thing that is different.

**MR. MAYO:** I guess my comment would be I, too, have not read the report. I have seen press accounts of it. I would applaud the Commission wholeheartedly for taking this issue on now, especially in light of the comment with which I opened.

This is an area that unequivocally involves, let's call it 20th or maybe even 19th Century regulation, and you are trying to have that apply in the 21st Century. It is time to bring that regulatory policy into the 21st Century.

The only endorsement I will offer to the plan specifically is to the extent it agrees with my comments here today.

(Laughter.)

**MR. MAY:** Ted, you did not ask me, but I am going to give you my two cents, too. I have been critical of



Chairman Martin for other policies, but in this case, I give him credit for putting together a comprehensive proposal. I know there are a whole bunch of conflicting pressures. These same arguments and issues have been around forever; only the technology and marketplace have changed.

I give him credit for putting it on the table. I hope the Commission has the fortitude to get something really meaningful done, not just at the margin. I know there will be certain compromises and there will be a transition period, but the transition period should be shorter rather than longer. The action should be bolder rather than less bold. I hope they do it. That is why Congress set up an independent regulatory commission. In part, I think, to do some of these things that require expert judgment, but also to make decisions removed from the immediate politics that come into play if it was Congress itself.

**ADAM BENDER:** I'm Adam Bender from *Communications Daily*. You both mentioned that you needed to see the plan before you can evaluate it. There are several groups that are saying the plan should be put out for public comment.

Do you agree that it should be put out for comment or is this something about which the Commission already has enough information?

**MR. BROCK:** I am not an attorney so I will not comment on the APA issues potentially relevant to your question; but as an economic matter, substantively, these things have been heavily discussed. As I mentioned earlier, these issues have been discussed for a very long time. I think insofar as the plan is in some way reasonably related to the previous NPRM and other public documents, I would not see any reason for it necessarily to be extended any further.

Simply repeating continued further notices of proposed rulemaking is often a tactical action for those who want to delay a plan. Assuming it relates reasonably well, the ideas have been put out on the table for a long time.

**MR. MAYO:** I would only echo what Gerry suggested and that is that the economic benchmarks are relatively clear and well known. I think it does provide an adequate basis for transition policy from a narrowband system that has been archaic to a forward-looking 21st Century policy. The benchmarks are well known.

**MR. MAY:** I think, speaking for the nation's trees, there have been enough comments. There can be a point at which the comments are stale, but not in this case. As I recited, this has been going on since 2001, every year or so there has been a refreshing of comments. The delay is not because the issues have really fundamentally changed. It has been a difficulty in grappling with the issues, in my view.

**RUSSELL HANSER:** Russ Hanser from Wilkinson Barker. With the hat at stake, I'm tempted to ask how can we just get the government off our backs? In fact, much of the debate in the last ten to twenty years on intercarrier compensation and USF has been driven at least as much by politics as by economic theory and policy.

I want to ask you as an economist to take off your industrial policy hat and throw on the public choice theory hat. This seems like a classic collective action problem where many, many people would benefit in a very, very shallow way from efficient reform, and a much smaller group of concentrated interests would be hurt potentially substantially, and that always seems to be the road block.

Again, I am not asking you to be political as much as economists looking at politics, what are the ways

to design the reform to sort of puncture those interests and their influence?

**MR. MAY:** This is the "Joe the Caller" problem.

**MR. BROCK:** I will take the first shot on that because I fully agree with that comment. These issues have been driven by the politics and specifically the income distribution issues, and a substantial amount of telecommunications policy has been greatly affected by the old choice in 1914 to preserve separate rural telephone companies and all the things that have flowed from that. In my comments, I was looking at a long-term plan rather than the transition. As a political matter, one would need a transition.

The way I would look at it is, ideally, you set up a goal. Then you determine how we can reach it. Determining how to reach it is difficult. In my time in the government I tried various reforms that got beaten back by forces that received the subsidies. The general approach that I would recommend is once you identify a long run goal, then you effectively have to buy off anybody who has blocking power.

There are better and worse ways to do that. The way it has been done over the years is to just maintain the previous system. Subsidies that existed under "separations

and settlements" pre-divestiture were incorporated into access charges. You need to be able to put some structure and limit on it and then see how one can work out the politics. That occurs at a detailed level and really is a matter of bargaining.

Again, from an economic theory perspective, rural companies, regardless of the formal justifications and network effects, currently have a property right in receiving subsidies. That property right is protected through the political process, just as if it was a formal, legal property right. One approach is to make that property right explicit and then talk about trying to buy it out.

There are a lot of long term dynamic effects in how explicit you make implicit property rights that flow out of a regulatory system. But that is the kind of structure we are talking about, and that is the general approach I would take. Although I have actually tried this with small telephone companies and have been told "we do not want to do it," I would recommend that we make their current rights explicit, and then talk about ways to pay them off for that.

**MR. MAYO:** I think the point you raise is a very, very good one. Obviously, the system we have is the result

of a political struggle between various interest groups and is not from an attempt to maximize economic efficiency.

If we do have a way out, I would say it comes from not buying too quickly into the proposition that this is a zero sum game. Reform has always been positioned as a zero sum game. That is only true in an economic sense if you are on what we would call an efficiency frontier, but nobody would say that telecommunications pricing is absolutely efficient right now.

There are, I think, ample ways in which we can fashion programs that are smarter. I think I called it soft hearts and hard heads. You can be smarter to reduce the subsidy flows and yet be more generous to people who really need a subsidy. There is the potential for everybody to come out of this reform system in reasonably good shape in the long run.

**MR. MAY:** Ian?

**IAN DILLNER:** Ian Dillner with the Energy and Commerce Committee. This is more a question for Professor Mayo, but if Professor Brock wants to weigh in that would be appreciated, too. As you think about universal service reform, the current high cost system ends up subsidizing the maintenance of an existing network, but would you

contrast that to the idea of subsidizing the capital cost of building a network instead?

**MR. MAYO:** Sure. Allow me to go backwards before I go forward. We have had the high-cost fund and it has been principally targeted at narrowband telephony in the past. There is some significant economic research to suggest that simply throwing money at companies has not done anything to promote subscribership to the public switched network. It simply fails to accomplish the goal that you would like to accomplish.

I am not a big fan of throwing money at companies, absent some degree of accountability. This is what I tried to get at in my talk. We must set broadband deployment targets and hold companies accountable to meeting those goals as opposed to simply handing people money. I think that is actually a quite important distinction on a going forward basis.

**MR. MAY:** Let's do two more questions and these will be it.

**STEVE MORRIS:** Steve Morris with NCTA. Dr. Brock, in your proposal to move to a reciprocal model, how would you deal with the question of interconnection points, how to decide how many places, and where they should be? In theory, AT&T and Comcast could be connected in one point

in the middle of the country or connect at 100 different places.

**MR. BROCK:** I would leave that to negotiation between the parties as a starting point. We have already got a lot of evidence from the various agreements that people have made which shows parties find it worthwhile to interconnect. Because it is technical and will vary from company to company, it is best left to private negotiation among the companies.

I would not specify that there has to be one interconnection point in every certain area or anything specific like that.

**MR. MORRIS:** Would that generally favor companies who serve everywhere as compared to competitors who have less in their networks?

**MR. BROCK:** Not in my mind. Think of it this way, to use the Internet analogy, we have some people with backbones that cover everything and they may interconnect at multiple places. Other people will interconnect only at one or two.

A big company that covers a lot of places may well only choose a single point of interconnection, although that is unlikely because of reliability reasons. But if they want to connect with a small company, then



appropriate interconnections must be available in that area.

I have not tried to design a detailed plan of specifying interconnection points and I will not try to. I do not really think any government body should specify it at that much detail because it will vary so much with the situation.

**MR. MAY:** Let's take the last question.

**MR. SALMON:** My name is Matt Salmon and I am from Comptel.

As the FCC designs a plan that reforms the intercarrier compensation, do you believe the plan should be competitively neutral, one that does not necessarily redistribute the wealth, so to speak?

Further, one of the phrases I have gotten hooked on is that sunlight is the best disinfectant, that openness and transparency is a really good thing, especially when we are creating new rules and regulations that possibly move around billions of dollars. I am just curious on your take on that.

**MR. MAY:** On the last question, I think we all agree sunlight is good. But if that is another way of asking whether we should have another round of comments on this, I think we have already answered that.

**MR. MAYO:** Matt, I would not favor something that was competitively neutral in the sense that the policy would protect any individual competitor. There is a phrase often used in guiding antitrust policy, competition policy. What we ought to protect is competition not competitors.

I like very much the idea of protecting competition, moving us to a more efficient system. Competitors, as individual participants in that world, ought not individually or collectively be protected or supported, but rather policymakers must protect competition.

In this case, I think you are protecting both competition and efficiency. Those ought to be our guide posts.

**MR. BROCK:** If I can add to that, I think that any plan ought to be competitively neutral in the sense that the design of a plan does not favor one kind of company over another insofar as that is possible.

What I am saying is if you actually adopt competitive neutrality as a principle, it is always easy to try to block a plan that says, no, this does not quite fit me. It should be of concern, but as a broad concept as opposed to saying any individual plan must not change the previous kinds of competitiveness. You may well have a

plan that is not competitively neutral and you do not necessarily want to incorporate all those historical problems into a new plan.

**MR. MAY:** I want to thank our speakers very much and I hope you will join me in thanking them for that terrific presentation. Thank you.

(Applause.)

**MR. MAY:** On the matter of the cap, it was very, very close. I think Russ Hanser deserves it, since he mentioned public choice theory which I thought that was important to bring in. (Applause.)

**MR. MAY:** Thank you.

(Whereupon, at 2:00 p.m., the meeting was adjourned.)