FEDERAL COMMUNICATIONS COMMISSION

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REPORT TO CONGRESS ON	)
UNIVERSAL SERVICE EN BANC	)

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THE UNITED STATES FEDERAL COMMUNICATIONS COMMISSION

In the Matter of:	)
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REPORT TO CONGRESS ON	)
UNIVERSAL SERVICE EN BANC	)

Thursday,
February 19, 1998

Federal Communications
Commission
1919 M Street, N.W.
Room 856
Washington, D.C.

The conference commenced, pursuant to Notice, at 2:00 p.m

APPEARANCES:
On Behalf of the FCC Commission:

WILLIAM E. KENNARD, CHAIRMAN
MICHAEL K. POWELLL, COMMISSIONER
SUSAN NESS, COMMISSIONER
HAROLD FURCHTGOTT-ROTH, COMMISSIONER
GLORIA TRISTANI, COMMISSIONER

Witnesses:

THOMAS E. HYLAND
Coopers & Lybrand L.L.P.

JEFF PULVER
Pulver.com

EARL COMSTOCK, ESQ.
Sher & Blackwell

ESTHER DYSON
EDventure Holdings

JILL A. LESSER, ESQ.
America Online, Inc.

DAVID HOSTETTER
SBC Communications, Inc.

APPEARANCES CONTINUED:

Witnesses:

IAN DIX
LCI, International

TOM EVSLIN
ITXC Corporation

HOWARD J. SYMONS, ESQ.
Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

JOHN JAMES, PRINCIPAL/SUPERINTENDENT
Central Catholic High School
West Point, Nebraska

P R O C E E D I N G S

2:00 p.m.

CHAIRMAN KENNARD: Welcome, everyone. Welcome to the Commission's en banc hearing on universal service. We have a very, very tight agenda today. And I see from the schedule here that the Commissioners' introductory marks are limited to five minutes, that's five minutes for all five Commissioners. So in the approximately 45 seconds that I have left, I will just outline for you today what the game plan is.

We are going to hear presentations from two presenters, 10 minutes each, which will give sort of an overview of the Internet service provider and Internet telephony industries and sort of to frame the discussion for today. Then we will hear presentations from a number of panelists, each of which will have about three to four minutes to make a presentation.

And I will warn everyone that are going to have to be very, very strict about keeping everyone to their three or four minute time limit. We have a timekeeper here, Ms. LaVera Marshall. And please, don't think I'm being rude if I cut you off in mid-sentence because we're really going to have to keep this moving.

After the presentations, we will have approximately an hour, actually 55 minutes of Q&A by the Commissioners. So we will -- we are going to have to keep to a tight schedule.

Thank you very much for coming. This is going to be a very exciting and enlightening day today. And it's very important to the Commission. This is what -- the first of what I hope will be two en banc presentations to help this Commission gather evidence and information for a report to Congress on universal service which is due April 10th. Congress has asked us to consider some very, very important questions and our ability to do that is directly dependent on the quality of input and information that we get from you. So, again, thank you very much for being here and I'll now ask my colleagues to make introductory remarks. Commissioner Ness.

COMMISSIONER NESS: Thank you, Mr. Chairman. And I want to thank all of the panelists for joining us today. I'm somewhat differently positioned in that my colleagues and I have are -- from my colleagues in that I have already voted to approve Commission orders sort of addressed to the issues that we're going to be discussing today.

But Congress asked us that we take a fresh look at

the -- both the construction of the terms, documentation services and information service. And I'm very happy to do so. It's an important area. And while I don't exactly bring a clean slate to today's forum, I do have an open mind. And I very much look forward to the discussions. So thank you, Mr. Chairman, and I hope I stayed within my time.

CHAIRMAN KENNARD: You did. Commissioner Furchtgott-Roth.

COMMISSIONER FURCHTGOTT-ROTH: Thank you, Mr. Chairman. And thank you for holding these hearings. I would first like to thank the staff, particularly Melissa Waxman and the others who have worked so very hard to put this hearing together. This is a very important matter. Congress is very concerned about universal service. They want to see it implemented correctly. And this -- this hearing and the entire proceeding is going to be looked at very carefully by Congress. And I look forward to the remainder of the hearing.

CHAIRMAN KENNARD: Thank you. Commissioner Powell.

COMMISSIONER POWELL: Thank you. It's my pleasure -- I guess I don't really have to go that fast. The report of Congress on universal service is going to touch on issues

that go to the heart. And one of the central questions that the Commission must answer, how are we going to regulate or abstain from regulating new services and technologies.

More and more companies are going to offer wider and wider varieties of services over multiple distribution media, or pipes. Ultimately, I hope that companies will be able to think of themselves not as cable, telephone or cellular companies, but as communications companies and sellers of bandwidth.

On many occasions, I have said that we regulators must be careful as providers of traditional telecommunications services begin to compete in new arenas, that we not allow these carriers to drag with them the regulatory mountain that they have called home for the last several decades. I urge the commentators in this proceeding to help the Commission think through how we may promote competition and the provision of new and existing services without imposing existing regulatory regimes on new products and providers unnecessarily.

I wish to reaffirm my support for the universal service programs that this Commission is dutied to implement under the Act, and I wholeheartedly endorse the overall goals of these statutory provisions. And I know the public

interest will be well served if we remain faithful to their intent. Thank you, Mr. Chairman.

CHAIRMAN KENNARD: Thank you, Commissioner. Commissioner Tristani.

COMMISSIONER TRISTANI: Thank you, Mr. Chairman. I want to thank you and our staff for the opportunity to hear from panelists today from a diverse group of panelists on these issues that we as Commissioners must address, must answer and -- and although they're aimed at a report that we will be soon answering to Congress, the questions and answer won't end there.

I look forward to hearing from you and I hope that this will be just one of the starts in helping us better answer to Congress and the specific questions that Congress and Senator Stevens have brought to our attention.

CHAIRMAN KENNARD: Thank you, Commissioner. We will now hear from an Internet service provider and an Internet telephony provider, Mr. Hyland.

MR. HYLAND: Good afternoon. Thank you for inviting me here today to share a brief overview of the Internet industry. As you requested, my comments will focus on the following points: The Internet service provider, ISP market overview; the Internet service provider, economics by

type; and market trends. I have prepared some charts and slides which I will refer to during my remarks, copies of which have been provided.

To begin, I thought it would be useful to consider the media industry supply chain as a basis for our discussion. The chart on page 4 presents the various stages of the supply chain as content makes its way to the consumer. At the beginning are the content providers, the individuals, companies and organizations that create the content.

In a broad sense, this content includes information providers -- publishers and databases; financial services -- banks and other financial institutions; transactions merchants -- ticketing, reservations; entertainment -- music, sports; communications and gaming.

And since this is a two-way pipe, the consumer also gets the create content: e-mail, chatrooms and other information that users find of some value.

The next stage is the content packages and aggragators. These companies take content and assemble it into channels, packages, formats to make it more readily available for the users of the content. Here we see online service -- services such as America Online, CompuServe,

Prodigy, the Microsoft Network; also companies that aggregate web sites for access and search and directors such as Alta Vista and Yahoo.

Next the content is made available for access by the users. These are known as the conduit providers; the Internet access providers, the ISPs, that provide access to the Internet for the individuals and business to use; other data networking services provided by long distance and local carriers, and networking equipment providers.

Finishing the chain to the consumers, we need end-user technology, the PCs and the related software, to make the content easier to access and to use the browsers and other software.

So that is a brief overview of how the content makes its way to the ultimate consumer. Now, if we could just take a brief look in depth. The chart on page 5 takes this value chain to consider in more detail the activities of what we refer to as online service providers -- that is, America Online, CompuServe, Prodigy, the Microsoft Network -- and then to the Internet service providers.

Online service providers create value by delivering to customers access to proprietary and originally produced content packaged in context with the web and

interactive communities. Online service providers are involved in the following functions as are depicted on the chart: Content creation which is the external acquisition and internal development of proprietary content and application. Activities surrounding that would be developing a relationship with content providers, negotiating content fees, conceptualizing scope and budget of original productions.

The content packaging, aggregating the content, applications and services, creating publishing channels of related content, linking or enhancing proprietary content and service with like content on the Internet and television and integrating content with multimedia applications.

Next is transmission and access infrastructure. That's managing the network, providing the dial-up and the dedicated access. To do this, the functions will include leasing and acquiring access lines, building out the local points of presence, monitoring and managing network activities and operations.

Next is sales and marketing: establishing service rates; developing and executing subscriber acquisition programs; signing advertisers, merchants; creating commerce opportunities.

In the distribution channels is executing distribution programs, partnering with software browser companies, staffing telemarketing and direct sales forces, establishing a relationship with other equipment manufacturers and value-added resellers, and developing co-marketing agreements.

And finally, the support and billing: customer and vendor account management, field and troubleshooting service support requests, process customer billing inquiries, pay the content providers and collect the fees from the advertisers, merchants and the end-users.

The Internet service provider activities are displayed -- are depicted on page 6. ISP creates customer value by maximizing the effectiveness of their network infrastructure to deliver optimized access to an interaction with the Internet. The ISPs basically begin with the transmission and access infrastructure and then carry it through the sales and marketing distribution and support and billing.

The most significant differentiator in these two types of companies, online service providers and ISPs, relates to the content creation and aggregation functions performed by the online companies. However, ISPs are

expanding their offerings into content to be more competitive. The online service and ISP via chains are converging around a common set of value drivers that are depicted on the chart on page 7.

Most of these revenues and costs are common to both. Again, online service providers develop an aggregate content and they have revenues and costs relating to the activities, whereas -- whereas ISPs are now moving into that activity.

Let's now turn to the financial model. Service providers are generating substantial year-over-year revenue growth, anywhere from 50 percent to several hundred percent increase. Revenues are principally being driven by subscriber growth for access services. Access has generated well over two-thirds of provider revenues. Value-added services, commerce and advertising are being targeted for future growth.

On the expense side, service providers are out-spending revenues resulting in negative financial operating margins. Costs of revenue and sales and marketing account for the largest share of operating expenses reflecting operator investment in market share and data communications and network operations. The charts on pages 10 through 15

provide more details of the make-up of the revenues and cost structures.

I would now like to turn to market trends and take a moment to consider some -- some of the market trends. The chart on page 17 shows the total market revenue opportunity is projected to reach 18 billion by the year 2000 from about five billion in 1997. Access for business and consumers is projected at about 10 billion of that total whereas value-added services, which is narrowly defined for this purpose as web hosting and securities service purchased by corporate customers, is projected to grow to seven billion.

Wholesale internet provider services represent managed IP capacity sold to ISPs in the support of their access in value-added services, and that's projected to about a billion in the year 2000.

The chart on page 18 shows that value-added services will experience the largest rate of growth -- that is, about 173 percent -- while corporate and individual access will constitute the largest share of total market revenues.

Convergence of the online service provider and ISP segments is occurring as participants expand their core businesses into new revenue-producing activities in the

industry value chain. The commoditization of Internet access has given impetus to ISP expansion into upstream-via-chain activities such as publishing, programming and deal-making.

The ISPs entry into these areas has forced online service providers to adjust their business models. Online service providers are addressing the ISP challenge in three ways: Increasing internal content production activities, developing advertising revenues within the context of content and service features, and creating transactions and fee-based revenues.

As it relates to consolidation, significant consolidation occurred in 1997 and is expected to continue at the high end of the market with continued proliferation of small providers at the low end. ISPs will face increased competition from established conduit segments such as cable, local tel. co. and long distance. ISPs will continue to diversify with new service offerings.

I appreciate your attention and the opportunity to join you this afternoon.

CHAIRMAN KENNARD: Thank you very much. Mr. Pulver.

MR. PULVER: Thank you. Good afternoon and I

would very much like to thank the Chairman and the Commissioners for having me here today. I would also like to thank Bob Pepper and Kevin Werbach for everything they've done, particularly for their assistance in helping nurture the internet telephony marketplace.

I've prepared a handout which I've presented which I will be going fastly through since I want to manage my time constraints. I might add that for those watching, a copy will be available on my web site later today.

So what I wanted to cover briefly is the technology for internet telephony and talk about the trends, the issues, and how the market is being driven. To define it -- I know there were demonstrations earlier today. What we were looking at is packetized voice being delivered over IP networks. These include intranets, extranets and the internet. It requires technology known as Codex (phonetic). These are things which compress and decompress voice. And a slang term you'll hear is -- internet telephony is also being phrased as IP telephony, but it's really voice-over IP networks.

This innovation is moving forward very fast. You can look at internet telephony as PC-to-phone, PC-to-PC, internet telephony appliances -- there are call centers;

there are distributed PBXs. And it's possible that PC-to-PC telephony may become the most popular form of communication.

The requirements for the PC side are a multi-media computer, typically a 486 or Pentium with a sound card, handset, microphone, and access to an internet connection. There are many benefits from shared collaboration and white-boarding, data-sharing for presentations, conference calling and video phones.

Internet telephony has been a great innovation for people involved in long distance relationships. I got into this industry as a hobbyist. I used to work on Wall Street. I used to be the VP of information technology. Until June '96, that's what I did for a living.

And I left it -- Wall Street completely and I focused all my energies here. And I started out by working from the internet side. I run mailing lists and I find out about these people who are involved in long-distance romance. Literally, someone meets someone from Stockholm -- someone from Stockholm spends a summer in Los Angeles; they become friends; and now they somehow involve me in their e-mails because they look for technology to keep in touch with each other. And this happens around the world all the time.

I now have kids which will be four years old next

month, and I'm using the computer when I -- when I travel around the world to talk to my kids from wherever I am to the home. And it's -- it's a technology that brings families together. And it's certainly a lot of fun.

This technology is moving from PCs. We hear references to gateways. For definition purposes, a gateway is a device which connects the PSTN and IP network and has a technology needed to make things work. But just understand that despite the hype and hyperbole of some people in the industry, the gateways that you can buy today, they range in ports from one port to 24 ports. That means 24 phone lines. Your typical switch, you know, can -- it can do 10,000 lines at the same time. So the technology is getting there, but we're not there quite yet.

In many, the earlier users of this technology were hobbyists, me included. And today, the majority of people using this technology on the open internet are hobbyists. It's -- you know, intertelephony is sort of the hymn radio (phonetic) for the PC. There have been some businesses starting to use it, import, exporters and others. But it's -- the pick-up on the open internet is strictly -- it has been a lot of the hobbyists side.

There are a lot of issues facing our industry.

And I've taken a leadership role in trying to bring people together and to be up front about these things. It's uses such as adoption of standards and interoperability; you know, not only to people want to say they support standards, but how do you get the vendors to actually do it.

Directory services, you know, how do you find the person you want to talk to on the internet. It's the nice thing with a phone service. You call 411, or information, you get the phone number for the location you want to reach. But on the internet, you're really calling a person, not a location. It's kind of hard to actually track that.

We have accounting, billing and settlement systems. Last April I was at a meeting in Geneva with the ITU with the chairman of the PTTs. And we were discussing about how are we going to get high quality, internet telephony or -- for services over the open internet. And it was the collective understanding of everybody that until the PTTs from across the nation's boundaries can actually get payment so that they -- if they didn't -- you know, if you didn't have a phone call from Bejing to Paris through the United States. Almost everybody in the food chain somehow gets paid for it. Well, that's rough.

And the quality of service on the open internet

will continue to be predictably unpredictable because there's no incentive that's compared to the traditional telephony where if somebody goes through a switch, there's an accounting. So that's a major issue. You have network management. How do you maintain quality of service. With the gateways, right now they're two-stage dialing. It's not like a transparent type of service.

This -- the quality of service, latency, management. You know, I'm a hand-radio operator, so I used to spend my late-nights growing up in the '70s on my hand-radio listening to people with my ear to the radio tweaking out a signal report. But that's not what I would think most people would want to do to talk PC-to-PC or any other form of communication. So we have a long way to go to improve our quality of service.

There are also issues on global accounting rate reform and WTO agreements and what that affects may be. The trends is also popping up and we're all aware of these companies -- these next-generation tel. cos. coming up. But keep in mind that right now, most of these companies are rolling out their own networks, not using the public internet, and they're using a mixture of frame relay and leased lines.

And, you know, with this unpredictable nature of the internet -- I mean, I confess; you know, my kids, they're -- for their third birthday, I bought them a multi-media PC, 200 megahertz machine, 64 -- 48 megs of RAM, 6.5 gig hard drive. Big debate in my house, but I put them on the internet because I have T-1 in my house. And my kids love to surf and these are three-year-olds. You're talking about the next generation of kids. These are three-year-olds browsing the internet. They had trouble communicating. But they know how to add web sites. And I set them with Disney and PBS.

And one of the most amazing things to me is they started getting upset when they wake up in the morning and they can't go to disney.com. They actually add .com now to everything they say, but that's another story completely.

(Laughter.)

But, you know, I wake up and my kids are upset because my ISP is down. So what did I do? I have a multi-home house now. I have two -- I have two T-1s in my house running a multi-home because my kid doesn't understand when a service is down. So now they -- I've been accused of -- you know, one of the things they say spoiling your kids in the '90s is giving them their own T-1. I -- I confess,

okay.

(Laughter.)

But it's this unpredictable nature. And then you look back and you look under business. And we're saying, gee, people are running phone services over this today. I would like to know who is going to be doing customer support for those companies because of this unpredictable nature. We have a long way to go. In my mind, you know, the Internet is clearly predictably unpredictable.

No one is going to argue that a future IP network -- the future networks won't be IP-based. My -- and -- and we're going to be putting voice-over-data as compared to data-over-voice, what's happening now. But when this really happens? I don't know. I don't think anyone really knows when that transition -- we can say it's starting now. What with legacy, it could be, you know, a long time out. The real value for internet telephony comes from our ability to deliver services which take advantage of telephony, the PC, and all the benefits of work groups. You know, we can go over our IP-based services.

There are people today taking advantage of these opportunities. They're doing absolutely what I call digital bodegas. You know, they're operating in certain immigrant

-- certain cities around the United States. They're going to the low district -- they're going to the immigrant neighborhoods. They set up a gateway. And they go into a -- maybe they terminate in South America. And it's -- you know, you go there with a cowboy vest and you go in and you make your minutes.

But it's a digital bodega and they're purely taking advantage of the arbitrage opportunities. But I think those are shortly businesses that go away when we have our WTO agreement because, you know, sooner rather than later, most of the major routes are going to be very little margins and differences between PSTNs and alternatives.

I was asked to do a sales forecast, where the market is. I really -- I can focus on equipment sales. I could tell you that in '95 when the industry was born, it was about a 2.5 million dollar business; that in '96, it was about 10 million; '97, around 100 or 150 million dollars. And my projections were for '98, around -- this is equipment.

This is people selling equipment and this is not -- this is not a substitute for PST and infrastructure, but these are people selling all sorts of devices like call centers -- you know, IP-based call centers, phone systems

that run over your LAN which is pretty neat, as well as, you know, routers and all sorts of next generation technologies that are IP-enabled.

And we're going to see -- we could see a market from 225 million today to 1.5 billion in 2001, but it's kind of hard because my crystal ball is a little foggy. And there are a lot of things that could happen which would upset that balance.

And if you look out at what the service revenue projection is going to be, I leave question marks up because I don't know. And I know these people. I'm in daily contact sometimes with companies who want, you know, the insight on what's happening in the industry, what should we do, what vendors should we talk to. And I'm very positive about what we can do. But we're in a position right now where there are a lot of things going on. So it's a good market but, you know, other things going on.

As far as looking in the near-term future, we have great opportunities for U.S. (inaudible) innovations, from data networking companies, telecom. equipment vendors, nontraditional start-ups who drive the market forward, and specifically this is going to be a great opportunity to provide cheaper communication service to everybody. This

technology has a promise for open -- to open up a new era of low cost, highly functional communications which is distance and sensitive. Thank you.

CHAIRMAN KENNARD: Thank you very much, Mr. Pulver and Mr. Hyland, also. I invite our other panelists to come up now. Now, as a concession to the shortness of time that we have today, I'm not going to introduce all of our panelists at the outset. But I will ask you to briefly introduce yourselves as an introduction to your presentations.

And I will remind you all that what you say today will go in the record of our proceeding for the universal service report that we'll do to Congress. So don't be surprised if you see it cited back to you sometime in a brief or a pleading. I hope that happens, actually.

Mr. Comstock, you are the first batter up.

MR. COMSTOCK: Thank you, Mr. Chairman and Commissioners. I appreciate you inviting me to testify today. My name is Earl Comstock and I am presently an attorney at the D.C. based law firm of Sher & Blackwell. I'm here to testify in favor of the views expressed by Senators Stevens and Burns in their letter to the Commission on January 26th.

Prior to joining Sher & Blackwell, I served for five years as chief counsel and legislative director for Senator Stevens and also served as a special counsel for telecommunications for the Senate Commerce Committee during the negotiations and drafting of the Telecommunications Act of 1996.

Since I do not represent any particular industry interest, it is my hope that I can shed some light on the statutory provisions and (inaudible) of the universal service provision of the Communications Act, and perhaps speak to the rural consumers who otherwise stand to be left behind if the Commission's present policies remain unchanged.

There are a number of issues related to the Stevens/Burns letter in the Section 623 report that I would like to highlight briefly with respect to the definitions and their interpretations. Congress did intend telecommunications service to describe a broader class of services in the Commission's pre-1996 Act definition of basic transmission service. The Commission has already recognized that to some degree, we would just urge that you go further.

The Commission should interpret the definitions of

telecommunications service and information service as overlapping or at least, at a minimum, move the demarcation point between them. To do otherwise would make a mockery of many provisions added by the 1996 Act.

The legislative history supports overlapping definitions. Many commentators' point to language in the Senate report regarding the term, telecommunications, to support their argument that the definitions are mutually exclusive. Had the conference adopted the Senate definitions unchanged, this approach would be correct. However, the conference did not do so. Instead the conference deleted the specific statutory language that appeared in both the Senate and House bills that made the definition of the telecommunications service and information serve mutually exclusive.

In addition, the conference adopted the house definition of information service thereby eliminating the phrase, "computer applications that act on the format, content, code, protocol or similar aspects of the subscribers transmuted information," from the test for information services. In making this choice, Congress recognized that the future, which in most cases means today, any communication that would involve computer applications -

- any communication would involve computer applications acting on at least the protocol or code of the transmitted message.

By continuing to apply the Commission's computer III contamination theory where the bundling of an enhanced service with transmission results in the whole package being deemed enhanced, the Commission is creating a favorite class of communications called information services. This favoritism threatens to undermine not only the universal service provisions of the Act, but also the local competition and regulatory parity provisions that Congress worked to so hard to include.

The exemption of autolyzed (phonetic) pay transactions from universal service, charges and access charges creates a multi-billion dollar incentive for industry to restructure their telecommunications services to make them enhanced under the Commission's rules is already happening today and I think some of the other presenters will talk to that.

AT&T recently announced they will begin providing voice telephony over the Internet thereby avoiding access charges. John Sidgemore, CEO of UnionNet (phonetic), was recently quoted as predicting that by the year 2008,

traditional voice transmissions will represent less than one percent of total communications traffic. And under the Commission's present policies, that one percent is expected to bear the entire cost of the universal service.

Let me be clear. The Stevens report is not asking merely about the direct universal service fund. It is also inquiring about the Commission's exemption of ISPs from access charges. Including schools and libraries, the direct USF contribution is roughly five billion dollars per year. This pales beside the roughly 20 to 25 billion dollars in access charges that are collected from ISPs each year to support the cost of operating the local network at an affordable rate.

Some portion of that 20 to 25 billion dollars goes to support universal service. The rest supposedly goes to pay for the use of the local network to reach individual homes and businesses. It is that network from the central office to the house that I think is often overlooked.

ISPs continue to be exempt from both costs, costs which the Commission has imposed on long distance callers to use the network in exactly the same way. The Commission has explicitly recognized the ISP has used the local network in the same way as long distance callers do since 1983. The

Stevens/Burns letter lays out the financial impact of this exemption in some detail. The Commission must address this issue of universal service if the affordable local rates is to be preserved.

This is not to say that ISP should pay per minute access charges. Rather it is to say that some portion of the ISP traffic, that which also meets the definition of telecommunications, should be included in the pot when the FCC restructures access charges. We already collect enough money today, but that will not be the case in the future if traffic is removed from the pot by a technological slight of hand.

Moving to the Commission's interpretation of Section 254 itself, first, the Commission's current interpretation definitions make a mockery of Section 254(c)(1)'s requirement that universal service constitute an evolving definition of telecommunications service. What is there to evolve to if something as simple as internet access is not a telecommunications service.

In addition, the 254(c)(1) distinguishes between essentially basic and enhanced. If you haven't met the four criteria spelled out there, you're not an advanced telecommunications service. So there is a distinction

already in the statute and one that I think should be given more attention.

Second, the Commission seems to overlook the historic compromise that was struck between the House and the Senate on universal service; namely, that universal service would be limited to access to advanced telecommunications and information services.

To keep universal costs manageable, it was agreed that universal service, even for schools and libraries, could only be used to provide access. It could not be used to pay for the information service itself. In this light, as the Stevens/Burns letter makes clear, the Commission cannot have it both ways. If internet access is in fact an information service and not a telecommunications service, then universal service funds cannot be used to pay for it.

On the other hand, if the Commission were to allow the definitions to overlap so that internet access is in fact also a telecommunications service, then the problem would be solved. Reviewing the Commission's own definition of conduit service as the letter points out, this would be a much more defensible result.

Much of the Commission's defense of its interpretation of Section 254(h)(2) relies on the argument

that Section 4(i) gives it the power to expand this section and that -- and that Section 254(c)(3) only refers to services and not telecommunications services.

I would like to point out that Section 254(c)(2) also uses the term, services, precisely because both (c)(2) and (c)(3) are referring back to the definition of universal service which is an evolving definition of telecommunication service. I think other matters have taken place on the issue of 4(i), so I won't go into that.

It should be noted that the statutory language in the statement of managers regarding Section 254(h)(2) both refer to access to advanced telecommunications and information services.

In closing, let me just say that I think some people here on behalf of the cable industry are going to advance the argument that they should be allowed to provide Internet access as a cable service and that they should not be a telecommunications service. I would be happy to go into that in more detail, but I think that clearly goes beyond the scope of what Congress envisioned. We preserve their cable monopoly in the bill. And if you allow them to provide essentially telecommunications services under the guise of information services, you'll be doing a lot to

upset regulatory parity.

I've got a longer statement which I ask be included in the record. Thank you.

CHAIRMAN KENNARD: Thank you very much. Ms. Dyson.

MS. DYSON: Good afternoon. I would like to thank all of the usual suspects and explain briefly what I'm trying to do here which is honestly more to learn and to present the point of view of someone who comes out of the internet community, but is not necessarily biased in its favor. And I am genuinely going to be brief and I hope to answer questions or provoke questions, whatever.

First of all, I listened -- and so I have five points here to make. I listened to Mr. Hyland's very interesting presentation, but with some skepticism because the arrows all go in one direction and the challenge you face is that this industry is not a single, simple food chain, but a much more complex web. You have content providers to buy services from other people.

These things go around several times before they finally go to the consumers. The consumers in fact provide substantial amounts of content. And so what you're looking at here is not at a simple food chain where you can easily

take out one segment and decide to tax it, but a very complex web.

And so my basic suggestions would be that you not try to do that because any definition you make that tries to distinguish between one kind of operation or entity is going to end up both being breached and arbitrary on the one side, and distorting the marketplace on the other. I think you really need to focus more on the end game which is going to be a competitive marketplace where the various providers pay one another in order to get the services they want rather than design their businesses in order to accommodate regulatory definitions.

To me, internet telephony is simply one more technology like fiber optic or satellite. And it -- trying to treat it differently in any way just, again, ends you up in complications. If someone wants to provide IP direct to the consumer -- IP telephony direct to the consumer, that's different to providing an IP telephony backbone. And it seems to me those different players should have peering arrangements (phonetic) and pricing agreements rather than getting tied up in a regulatory tangle.

So the net of this is that I don't really -- I know I come from the internet community. I don't really see

the purpose -- or I see the purpose, but I don't see any further purpose to the ISP exemption. It just, again, seems to try to create market definitions and rigidities that don't make a whole lot of sense.

When you talk now about universal service funds and stuff like that, my short form version is that these are worthy goals, but I'm not sure how -- it seems to me this stuff should be paid for by general taxes rather than out of some arbitrarily defined telecom pot. That may not be politically realistic, but I do think it's a goal we should look for as a society. This stuff is worthwhile for children and schools and rural communities. It's worthwhile to the entire country, not as something that comes out of a narrowly defined telecom provider's pot.

So let me leave it at that except to say that if we do have a truly competitive environment, I believe prices will drop so low that many of these questions will have much less relevance. Thank you very much.

CHAIRMAN KENNARD: Thank you very much. Ms. Lesser.

MS. LESSER: Thank you, Chairman Kennard, Commissioners. My name is Jill Lesser. I am the deputy director of law and public policy at America Online. Let me

state at the onset that America Online supports the goal of universal service, that all Americans should have access to basic telecommunications services as affordable prices. Indeed, those basic telecommunications -- those basic telecommunications services provide the infrastructure for access to advanced services such as the Internet. And we in the ISP community depend on basic services as retail users.

As we enter the next millennium, we believe universal access to the internet at affordable prices will be seen as just as critical as was universal access to voice telephony in this century. The Internet has emerged over the past three years as perhaps the most important driver of our nation's economic growth.

Not only has the industry grown at an unprecedented pace, it has contributed significantly to innovation and growth in other industry's that rely on information technology and the internet for delivery of information, goods and services. Many recent studies which we reference in our written submissions highlight the extraordinary impact that the explosive growth of advanced services has had on the American economy.

As the Commission recognized last year, this contribution to economic growth clearly would not have

occurred had the Internet industry been hampered by burdens of telephone-like regulation or access charges. Indeed, competition has kept innovation moving at lightening speed and has brought prices for Internet access down to levels that affordable to middle class Americans.

It is critical, therefore, that as the Commission examines the regulatory structure of universal service, that it not heath suggestions to burden the internet with regulations. Indeed, the '96 Act was intended to diminish Government intervention in all communication sectors, not to bring new and innovative industry into the falls of an out-loaded regulatory regime designed for monopoly environments.

The Act makes clear that the universal service provisions must be implemented on a competitively neutral basis and that only telecommunications carriers are subject to common carrier regulations and can be required to contribute directly to the universal service fund. The Commission's implementation of the Act took both of these commands into account.

First, the Act requires competitive neutrality. The FCC could have approached this in two ways, either by excluding internet access from the bundle of services available to our nation's children through schools and

libraries or by including Internet access and permitting all providers to participate.

What the Commission was not able to do under the Act was to include internet access but permit only telecommunications carriers to provide that access. The Commission chose wisely understanding that for our nation's schools and libraries to have access to the vast resources of the internet, they must be able to receive discounted services for both Internet access and telecommunications services.

Second, the Commission correctly recognized that the plain language of the Act does not contemplate that providers of enhanced or information services would contribute to the fund directly. However, those providers, like other businesses, use telecommunications services to reach their customers. As such, enhanced service providers already support universal service through the rates we pay to telecommunications carriers.

For example, a significant percentage of America Online's costs are related to the purchase and lease of telecommunications capabilities we need to enable our customers to take advantage of the information services we offer. All of the charges we pay include universal service

contributions. Such is also the case with businesses like United Airlines, for example, which now provides software for customers to dial into a network for airline schedules and reservations. And in fact, the Commission should do more to make these charges explicit to illustrate just how significant the contribution of online businesses already is to universal service framework.

Congress in an effort to codify the market-driven policies that the Commission had been putting into place over the last decade specifically defined telecom. services and information services in the Act. Each of these terms -- each of these terms has a specific meaning. And while they bear a close relationship, they are clearly distinct.

It is critical to note that the definition of information service refers to telecommunications, and I emphasize, as the medium by which information services are offered. Telecommunications services are regulated; information services are not reflecting the historic distinction between basic and enhanced services.

While we believe that these distinctions are clearly settled, there has been some debate about the classifications of ISPs due in part to the media attention being paid to internet telephony.

As with the advent of many new technologies over the years, there are powerful statements by entrenched incumbent service providers that these new services will threaten to sell their businesses. Yet as television did not kill movie theaters, as cable did not kill broadcasting, and the movie industry has thrived in the face of home video, it is more likely that internet telephony will simply drive innovation and competition in the telephony marketplace and grow that market in a manner where incumbents and newcomers alike can prosper.

Again, we believe that the Commission's 1997 decision on universal service was consistent with both the language and the purpose of the '96 Act. Any attempt to modify the decision in a manner which would subject the internet to regulation would be both inconsistent with Congressional intent we believe, and have potential far-reaching implications for the future of this important medium. I thank you for the opportunity to be here today.

CHAIRMAN KENNARD: Thank you. Mr. Hostetter.

MR. HOSTETTER: Thank you. My name is David Hostetter. I work for SPC Communications. There are three universal service issues that I'll talk about today. The first one is the internet telephony issue and the

requirements to contribute to universal service funding; the ESP exemption issue, which I consider it to be a companion issue; and who should support -- or who should receive universal service support.

The initial appeal of internet telephony has been it's potential for providing lower long distance prices. On its face, it doesn't seem like a bad idea. In fact, a lot of consumers would probably like that. But the challenge is to ensure that universal service is not harmed by policies designed to promote internet telephony.

As a starting point, in general, consumers are going to access internet telephony primarily through the local exchange segment of the public switch telephone network while internet is going to provide for the interstate or international transport vehicle for the calls.

The internet service providers will probably argue that internet telephony is an information service, probably to avoid contributing to federal universal service support mechanisms. Acceptance of this argument jeopardizes competitive neutrality because the way our current funding mechanisms work, interstate and international services provided through traditional technologies are exactly the mechanisms that are funding universal service.

The ESP exemption further compounds the competitive neutrality problem because internet service providers generally incur lower costs than inter-exchange carriers because they're paying local business line rates for the interstate access. And those access charges that the LEX are recovering from inter-exchange carriers for access to the premises are being used as the LEX funding mechanism for universal service.

I think, as we mentioned a little earlier, the marketplace is responding. Inter-exchange carriers are formulating their business plans to try to take advantage of the same ground rules internet service providers are attempting to finesse. It doesn't seem that the FCC should establish a competitive advantage for internet service providers to the detriment of affordable universal service.

The way to solve it, we think, the FCC's orders and the Act's definitions provide for a solution. There is a definition of telecommunications in the Act that provides that any transmission of information without change in format or content is considered telecommunications and it drives all the way up to the point of a telecommunications carrier definition that -- that basically says telecommunications for a fee is what makes your

telecommunications carrier.

Internet telephony should constitute a telecommunications service because there is no change in format. It's voice in and voice out. Therefore, internet telephony doesn't meet the Act's definition of an information service.

With certain exemptions, any provider of telecommunications to the public for a fee is a telecommunications carrier. So internet service providers that offer telephony on an interstate basis over the internet for a fee should be considered telecommunications carriers and should have to contribute to the federal universal service funding mechanisms that are provided for in Section 254(d).

An internet service providers that offers telephony as a telecommunications carrier is not necessarily always a telecommunications carrier when it offers services that meet the information services definition. The public interest doesn't justify discriminatory interstate access price structure for ESPs. We think the ESP exemption should be replaced with interstate access price structure that encourages carriers to deploy data network alternatives to the circuit-switch network, and most importantly,

financially motivates ESPs to make the most efficient use of service selections.

Finally, who is eligible to receive universal service support? We think the Act is clear. It's telecommunications carriers, in the one case that meets the 214(e) obligations; in the other case, under 254(h), it's any telecommunications carrier that provides its services to qualified schools and libraries.

Information -- information service providers and providers of other types of non-telecommunications services by definition do not qualify for universal service support under 254(e) or 254(h), just as they aren't required to contribute.

Internet service providers that offer telecommunications services, however, may also receive support when they are designated eligible telecommunications carriers under 214(e) or if they act as a telecommunications carrier providing -- okay --

CHAIRMAN KENNARD: You can finish your sentence.

MR. HOSTETTER: Okay. Thank you. -- providing universal service to qualifying schools and libraries under 254(h). Thank you.

CHAIRMAN KENNARD: Thank you. Mr. Dix.

MR. DIX: Thank you, Chairman, and I would like to thank the Commissioners for the opportunity to present our views and to reaffirm my colleague from AOL's point, that universal service is a worthwhile societal goal and one that we support and one that my company directly contributes to.

Now, I -- I am vice president of large account marketing for LCI. And as such, I am a marketing type, therefore, given to hyperbole and emotional exaggeration. I'm talking about a legal point, so I hope you will indulge me because it makes our lawyers very nervous when marketing types do that.

(Laughter.)

However, we think the Commission has to consider down to a regulatory issue -- back to Commissioner Ness' point about what is the definition of a telecommunications service provider. If you go to Section 254(d) of the '96 Act, it says the people who contribute to universal service are "every telecommunications carrier that provides interstate telecommunications. That's who shall contribute."

Now, the question before you I believe is are internet service providers interstate telecommunications providers. Well, if you believe in the projections for the

voice-over-IP or voice-over-the internet/telephony market, I heard a lot -- I heard it's a hobby and it's a hobbyist tool. The fact is IDC, who is the leading research firm in our business, projects that by the year 2002, one-third, roughly 25 billion of the 77 billion dollars in UST/US long distance calls will be carried over IP packets. This is not, ladies and gentlemen, a hobby. This is in fact a very strategic line of business to the internet service providers.

Now, being a marketing guy, I will add some anecdotal proof. Today, PSI Net who is the largest independent internet service provider, a tier one service provider, based in Herndon, Virginia released this press announcement. I would like to read an excerpt from it. I think it would be illustrative.

"John Maleta joins PSI Net as vice president in the newly-formed PSI Net Telecom Limited subsidiary announced February 11th, 1998. Maleta comes to PSI Net after a distinguished tenure with the Federal Communications Commission working most" -- "and most recently served as deputy chief of the Common Carrier Bureau." Interesting.

"Maleta's major responsibilities at PSI Net will include managing the planning, operational and legal issues

associated with the establishment of PSI Net Telecom Limited." Ladies and gentlemen, the ISPs are calling themselves telecoms. That's the reality. They are saying they are telecommunications providers. And as such, I do not understand under which legal or technological construct they can claim any exemption from their contribution to the universal service fund.

Now, that being the case, if this is allowed to stand -- the technological definition of telecom goes back to a 20-plus-year-old Section 153, Sub 43 of the Act which defines telecommunications as "the transmission between or among points specified by the user of information of the user's choosing," and I emphasize, "without change in the form of content in the information as sent and received."

Now, the packetization of voice in an IP packet, whether it's carried via frame relay or ATM or circuit switching, all of the layer II technologies, is nonetheless not changed in any substantive form relative to the transmission of a voice over a circuit. In other words, we purport and believe we can argue technologically that there is by stricture of this definition no difference between a voice that is carried over the LCI circuit-switch network and the internet service providers' packet network.

In fact, if the voice sounds the same on both ends or if the picture looks the same, then there is no measurable difference in basic service. And if they meet the basic service requirement, then we refer back to the fact that they meet the telecommunications definition as specified in the Act of 1996.

So we sit here and are making business decisions based on some very clear advantages given to our stated competitors. And that is we are paying into the universal service fund which we accept our responsibility for, but we are paying to my colleague from Southwestern Bell's point 25 billion dollars a year in access charges which our friends are exempt from.

So when you look at both of these, we believe from a business, legal and technological construct, we are asking only for an equal playing field in this. We are being forced into making decisions around -- oh, time is up? Thank you very much.

CHAIRMAN KENNARD: You can sum up if you like.

MR. DIX: Yes, I would. There is -- oh, okay. There is no distinction, ladies and gentlemen, any more between the internet service provider and a common carrier. We are both the same type of carrier and therefore should be

subjected to exactly the same type of regulation. Thank you very much.

CHAIRMAN KENNARD: Thank you, Mr. Dix. Mr. Evslin.

MR. EVSLIN: Thank you. Thank you, Mr. Chairman and Commissioners. My name is Tom Evslin. I'm the chairman and CEO of ITXC Corp. We're carriers -- a carrier of IP telephony, so we're clearly in the IP telephony business. Before I founded ITXC, I worked for AT&T. I hope you don't find anything suspicious in that.

CHAIRMAN KENNARD: I do not.

MR. EVSLIN: Good.

(Laughter.)

MR. EVSLIN: Before that, I worked for Microsoft, but that didn't make AT&T a software company.

(Laughter.)

MR. EVSLIN: And I was responsible for AT&Ts Well Net Service (phonetic) which is of course an internet service provider. I am not speaking in any way for AT&T however. I'm speaking for ITXC.

I think Commissioner Powell framed the question very well. The question is how do we fund universal service; how do we meet those very good public policy

objectives without dropping a regulatory mountain on top of new and innovative industries and crushing those industries under that regulatory mountain?

It would be very ironic if the result of collection for the universal service fund was to frustrate the public policy goals which led to formation of the fund in the first place. It would be very ironic if in collecting for the universal service fund, we assured that telecommunications remained so expensive that lots of people needed a subsidy in order to be able to take advantage of it.

So far, the ISP industry and the related industries have vastly improved communications and improved communications everywhere. A web site is equally accessible from Nebraska and from New York City. E-mail gets around the world instantly and it's cheaper than snail mail. It knits the world together. And these improvements in communications -- actually, we've even seen that in households that are fortunate enough to have internet access, there's less TV watching. And all of a sudden, people choose to be more interactive, to communicate more.

These good developments are largely the result of the benign non-regulation from the FCC in years past. This

innovation, which has occurred largely in the United States, is because the United States has taken such an enlightened position towards not dropping a mountain of regulation on new and innovative industries. So it's important now that we don't erect a regulatory mountain in the way of these new industries.

There are those in the regulated industries -- or the regulated industries really haven't been so innovative. We haven't -- in 20 years, the regulated telecommunications industry hasn't even managed to get ISDN widely disbursed. When Americans want faster internet access, they're frustrated in that by the last mile which hasn't improved in years despite huge subsidies from access -- from access charges.

And so the -- and you can -- that's because the people in those regulated industries are any worse are any worse than the people in the non-regulated industries that argue it's because of the regulation and it's because of the monopolies that have flourished and still continue to flourish as a result of that regulation.

The regulated industries have managed to frustrate the intent of the Telecommunications Reform Act of 1996. So we still haven't gotten the competition that Act envisions.

It is true that de-regulation has let a genie out of the bottle. But it's a very good genie. It's a genie that's resulted in creating a lot of jobs, some of those jobs through people who have been laid off by the downsizing regulated industries. It's a genie that's resulted in better communications. It's a genie that's resulted in lower price communications.

And yet there are those who would like you to put that genie back in the bottle again and make sure that this pesky innovation stops and doesn't continue to upset the status quo. That would be a terrible mistake. The issue is not four percent. And didn't found my company so that the ten cent phone call could become a 9.6 cent phone call. That isn't of interest to anybody. It's not to escape paying four percent fair share to the universal service fund.

Internet telephony is to a large part about price, but not completely; but not taking four percent off the price, 50 percent off the price, 75 percent off the price of international communication. Not by not paying our fair share, but because the technology is better; because the investment that's being made in that technology reduces the price for everyone.

It's also about enhanced service, as Jeff said; the taking of the power, the graphic power, the written power of the worldwide web and combining that with the power of the human voice.

So I would urge the Commission, quickly, to do two things: To finish the de-regulation of the traditional industry so they can compete and be as innovative as the new industries. They shouldn't have to labor under the handicap of continuing regulation and monopoly domination. Don't confuse access charges with universal service funding. Don't impose non-economic access charges on new industries. Take them off of the old industries. And finally, after that de-regulation has occurred, after we've cleared up what truly is funding for universal service, then by all means impose it equally on all industries which benefit from the universal service fund. Thank you very much.

CHAIRMAN KENNARD: Thank you. Mr. Symons.

MR. SYMONS: Thank you, Mr. Chairman, Commissions. My name is Howard Symons. I'm an attorney with the Washington D.C. law firm of Mintz, Levin. I'm here to represent the National Cable Television Association. And on behalf of NCTA, I would like to thank you for including the cable industry in today's en banc session.

Cable companies pioneered distance learning services and more recently have begun to provide schools and libraries with high speed access to the internet. As of September 1997, cable operators large and small had connected more than one thousand schools to the internet with high speed connections.

Congress has asked the Commission to review its implementation of the universal service provisions added by the 1996 Telecommunications Act. Congress did not, however, direct the Commission to revise its policies and rules regarding universal service or to extend its current system for regulating telecommunications to internet access or other online services.

Congress explicitly distinguished between information services and telecommunication services to reflect the distinction between the offering of pure transmission capacity and the enhancement of that transmission capacity even where there is no addition of content or change in the information being transmitted.

While information service providers may use telecommunications to deliver service to end-users, that in and of itself does not transform an information service into a telecommunication service. The statutory distinction

adopted from the modification of final judgement is also a logical extension of the dichotomy between basic and enhanced services that this Commission articulated in its Computer II orders.

Reclassifying internet access and other online services as telecommunications in order to bring them within the universal service contribution requirement could unnecessarily subject these services to regulation as common carriers, a development that could devastate the growth of internet services and prove to be highly unenforceable with no corresponding consumer benefit.

Congress has also asked the Commission to review its decisions on who must contribute to the universal service fund and who is eligible to receive money from the fund. In NCTA's view, the Commission correctly determined that all providers of advanced telecommunications and information services for schools and libraries are eligible to receive funds. Section 254 explicitly requires the Commission to establish competitively neutral rules to enhance access to these advanced services for schools and libraries.

The statutory requirement for competition neutrality prevents the Commission from limiting eligibility

for universal service support to common carriers and their affiliates. The limitation on eligibility for basic service support contained in a different provision of the law simply does not apply to the provision of access to advanced services.

Competitive neutrality is also sound policy. The broad eligibility that follows from competitive neutrality enables schools and libraries to choose from the widest array of providers of advanced services. For example, cable modems can provide internet access at speeds up to 50 times greater than conventional phones lines or ISDM. In one case in Nebraska, Galaxy Cable was able to provide high-speed distance learning capabilities for 30 percent less than the price quoted by the local telephone company.

The 1996 Act does not say that only those who pay into universal service may take out. Not even telecommunications carriers are required to contribute to universal service on the basis of their internet access revenues, for instance, even though their Internet services are eligible for universal service support.

In fact, the cost of universal service had historically been borne by customers and carriers who do not receive commensurate universal service funds. Long distance

carriers have long subsidized local telephone companies. Subscribers in low cost areas have always subsidized high -- high-cost service areas.

I would hasten to add though that an increasing number of cable companies and their affiliates engaged in providing telecommunications services are already contributing to universal service, and in some cases, substantial sums to the universal service fund. These contributions will only increase as cable's telecommunications offerings grow.

In sum, the universal service order got it right. The Commission's interpretations of the law and its decisions in that order are consistent with the plain language of the Act and will further the goals for universal service. Thank you again for the opportunity to appear. I look forward to questions.

CHAIRMAN KENNARD: Thank you. Mr. James.

MR. JAMES: Thank you, Mr. Chairman and Commissioners. My name is John James and I am in my second year as the principal and superintendent of Central Catholic High School in West Point, Nebraska. Unlike the others on this panel, I am not a lawyer; I am not a telecommunications regulation expert; and it would be inappropriate for me to

offer opinions on legal definitions or technical views on the intricacies of certain technology.

I am here to speak about the students who will be directly affected by the historic action taken by Congress and the communication regarding the E-rate and internet access. I care deeply about this proceeding because I know how important the internet and education technology are to my students and to my rural community.

Central Catholic is located in Cumming County, Nebraska, a county that leads the state of Nebraska in cattle-on-feed and non-irrigated corn production. It is second in the state of Nebraska in hog inventory, sows burrowed and pig crops saved. I'm sure that means a lot to you people out here.

(Laughter.)

CHAIRMAN KENNARD: That's what we eat.

(Laughter.)

MR. JAMES: The county has 1,090 farms and a population of 10,117 people. West Point is the largest town in Cumming County with a whopping population of 3,250 people. 25.9 percent of the K through 12 student population of Cumming County attend private schools. In my school, 40 of our 156 students are recipients of the Federal

Government's free and reduced lunch program.

Central Catholic is a private school that charges a nominal tuition and runs on a very tight budget.

While the internet has been around in larger cities for several years, it just entered rural Cumming County in 1996 through the enterprising efforts of a local service provider. Central Catholic quickly added a phone line and purchased the software necessary to access the internet. Since then, my teachers and students have made continual use of our internet connection.

Using the Internet, my Spanish teacher has been able to access newspapers and magazine articles written in Mexico and Spain which provide her students with the experience in translation as well as the international perspective on world events. My chemistry teacher has students visiting periodic table web sites to access substantial amounts of information on the various elements. They are also learning about the chemistry of consumer products by accessing the web pages of various household cleaners and medicines.

My rural geography teacher has said that the web has provided his students with more information on the various country studies than can be found in any high school

textbook. My American history teacher was able to show her students how The Wizard of Oz, written in 1900 was really a fable of the populous movement alliance between mid-western farmers, the scarecrow, the urban industrial workers, the tinman, and William Jennings Bryan, the cowardly lion, who challenged the large industrial corporations and eastern finance organizations, the wicked witch of the East.

(Laughter.)

We are at the point where we know we much provide our students with more access to the web but are at a loss as to how to pay for this access. We must operate our school without the benefit of state aid or even state lottery money that has been designated for educational use. The only state assistance we receive is the minimal allotment of textbooks valued at approximately $2,000.00 per year.

It doesn't seem to matter that we educate 25.9 percent of the K-12 student population in Cumming County or that 25.6 percent of these students come from low income families that qualify for free and reduced lunch. I am embarrassed to report that in Cumming County, Nebraska, the educational needs of low income students are being ignored by the state because their parents have exercised their

First Amendment right to educate their students in a Catholic or Lutheran school.

We have considered the purchase of router, hubs, infrastructures necessary to have multiple access to the Internet from several rooms. But such a solution would cost us nearly $20,000.00. Since we are a rural school with a significant free and reduced lunch population, we would get a 60 percent discount on our phone service, the router hubs and all of our infrastructure according to the discount grid promulgated by the schools and libraries corporation. Such a discount has provided us with the incentive to move forward with our technology plans.

To me, the E-rate is about local choice for schools and competition for the service providers. Choice is fundamental to this program. Central Catholic High School and Guardian Angels Grade School have filed jointly a 470 form for the discount on our phone lines and our existing contract with NAVIX (phonetic), our internet service provider. We have also filed jointly with the Southeast Nebraska Distance Learning Consortium for the purchase of routers, hubs and infrastructure necessary to wire our school.

Other schools want and need different services.

The beauty of this program is that the local school may choose what it needs. Nothing is mandated. Nothing is imposed.

I read in the February 17th edition of "USA Today" that the number of businesses are balking at the fee used to fund E-rate. Oh, how history repeats itself. Nearly one hundred years ago, the large industrial corporations and eastern finance organizations were embodied by Limon Frank Bonn (phonetic) as the now familiar wicked witch of the East in the children's fable, The Wizard of Oz. What diabolic caricature must we now invent in the twentieth century to depict those businesses that wish to shirk their responsibility to the children of this nation by pulling a plug on the E-rate discount. Thank you.

CHAIRMAN KENNARD: Thank you very much, Mr. James. And thank you for traveling here from so far to be with us today. We now have about 45 minutes for questioning from the Commissioners. I would like to start off by asking a question. And I'll just pose it to anyone who cares to answer it.

The definitions in the statute are obviously very, very important. And without diminishing their importance, I just want to put them aside for a second and ask a question

of policy. I'm wondering why this agency as a matter of policy should draw any regulatory distinctions between technologies when the consumers are -- of that technology are receiving essentially the functionally equivalent technology.

For example, why should we make any regulatory distinctions between a regular analog telephone call and an internet call whether it's -- particularly if it's phone-to-phone, but whether it's phone-to-phone or phone-to-PC or PC-to-PC? From the consumer's point-of-view, the consumer is getting essentially the same functional service. Would anyone care to take a stab at that one? Mr. Evslin?

MR. EVSLIN: Thank you. I would debate part of that question. I think when the call is computer-to-computer or computer-to-phone, the consumer is often receiving a very different service than they would receive on the phone alone. If somebody is surfing the web and in conjunction with what they see on their computer, wants to talk to a human attendant in a call center, have the attendant in the call center say, see, look at this page and look at that page, that's something that is impossible to do on the telephone.

And so although a component of that service is the

human voice, it's a service that's very different for what is delivered or can be delivered on the plain old voice network. I think though when you ask the question about phone-to-phone, then it's more germane and deserves a clear answer. And I think that the phone-to-phone service is just the beginning -- the phone-to-phone service when it's provided by IP -- of a much better service than circuit switching can ever deliver.

It may be that today, particularly when it's limited by the miserable circuit-switch last mile that's available, that it can't deliver its full potential. But its promise is for conference calling, for example, that doesn't require one of the six people in the world who knows how to set up a conference call. It has a promise for enhanced applications where a phone call can start as two people talking to each other, but where a computer or a digital camera or any other relevant device can be added.

In other words, although this service may initially look something like a low-cost version of current telephony, it's really the beginning of something much, much better. And if the regulation -- if the Commission allows it to be swept up in outmoded regulations or allows it to be smothered by those who would prefer not to be challenged

that way, then from a public policy point-of-view, we won't get the benefit of the wonderful new applications that can be developed.

And I think that's what justifies the Commission assuring that regulations that were meant for traditional phone service don't end up dropping a regulatory mountain, in Commissioner Powell's words, on top of new and innovative services just as they begin to develop.

MR. DIX: May I answer, Mr. Chairman?

CHAIRMAN KENNARD: Mr. Dix, yes.

MR. DIX: Thank you. With all due respect to my colleague, the reality is -- is that the internet access medium is simply a transmission medium no different from the switched telephone medium. In your example, which again with all due respect is wrong, the fact is if you had a modem attached to a web server -- and as we know, the web which is commonly thought of as the internet, is really 27,000 mostly private computers attached to the internet. It's a distinction.

It could be dialed into with a regular telephone line and accessed in the same way it is over the internet. The fact is that the internet is a more efficient way of reaching that machine. It is not a technologically enhanced

way to reach that machine. And that is a very important distinction because what it means is we're both providing the same type of service, i.e., we're providing interconnection into that web machine. One is being through the circuit-switch network. One is being through the web service -- I mean one is being through the internet.

But the fact is the web server communicates with my machine as a client/server type of arrangement regardless of the transmission medium. So it really has nothing to do with the internet providing some type of enhanced service. It does not because the Internet is not the worldwide web. The worldwide web is 27,000 mostly private machines.

It is not the three million machines that are attached to it. It is in effect most strictly, I believe, in my interpretation, the 40 percent National Science Foundation Network and 60 percent ARPA network of switches and transmission lines that facilitate IP packets to the 27,000 web servers or three million machines that are attached to the internet.

So my point is, is that claiming that the internet is an enhanced service is I think technologically incorrect.

MR. EVSLIN: Mr. Chairman, may I reply for a second?

CHAIRMAN KENNARD: All right. Go ahead.

MR. EVSLIN: I'm afraid that response is technically incorrect. First of all, the ARPA net doesn't exist anymore. And the internet is provided by private providers. But much more important than that, the internet is a vastly enhanced service over circuit-switch telephony. It's not just a cheaper way to deliver communication.

The important difference, in circuit switching, a dedicated connection is established between two points. That connection uses up line space for the entire duration of a telephone call. Excuse the engineering explanation. But what's important about it is that because of the technology of IP, because there is no dedicated connection, then great advances like the worldwide web are possible. It's possible to click on one site in New York and suddenly be looking at a site in Asia. That kind of thing can happen on the circuit-switch network.

And so the internet, the internet which is mainly a private network in the United States but publicly accessible, is the basis for a whole set of rich and enhanced applications that circuit-switching is simply incapable of providing. Not only is it cheaper -- which it is -- but the whole mechanics, the whole engineering of IP

make possible these services that are not possible on circuit switching. And that's why it's so important that these new services not be crushed as they develop.

CHAIRMAN KENNARD: Mr. Comstock.

MR. COMSTOCK: Thank you, Mr. Chairman. As a policy matter, I just would like to point out there seems to be a lot of concern that if you do something to bring internet into -- or internet access, more specifically, into a telecommunications service, you're suddenly going to impose massive amounts of regulation. I think that's only the result if the Commission fails to exercise its Section 10 forbearance authority.

That section was added specifically in the 1996 Act in recognition of the fact that we were going to sweep in more people, and it allows you to craft a regime that's appropriate for the technology involved. The reason that it says that anybody who is providing a telecommunications service shall also be treated as a common carrier was to prevent large operators, like the ARBOCs, from simply saying, "I'm not a telecommunications carrier and not a common carrier," and suddenly getting out from all the existing rules and regulations. You were given the flexibility to do this.

Let me speak briefly to two other points that were raised. There's obviously a lot of confusion about what the Internet is. I think as many of us have been involved in the debate over Internet taxation know, the internet is really simply a set of protocols. It is a means of transmitting information. That is used to interconnect a large number of machines, as has been pointed out.

The Defense Department pays for some of that. There is federal money going to pay for some of the rest of it even though these nets are being phased out.

But I think the most important point for everybody here including the schools and libraries people is how do you reach that last mile. And the bottom line is packet switching is not more efficient for getting to the home. You've got a single circuit that's going there. And in most cases, nobody else is trying to use it. So the fact that you have packet switching is irrelevant. That's only important if you've got multiple pathways to the same location.

So this efficiency argument that the internet advances is really a misnomer. The expensive piece of the network, the part that nobody is able to duplicate -- hence we have no competition today -- is that last mile. It's

from the central office to the house. That's what universal service is supposed to support.

And for the schools and libraries, I mean, that was an excellent presentation. We all support it. But how do your students get the internet to the home and where are we going to be five years from now if they continue to only get plain old voice service and can't get internet access at the home? You can't do much learning at home once -- you know, if all you can do is get it at school.

CHAIRMAN KENNARD: Ms. Dyson.

MS. DYSON: Okay. I just want to make a couple of points. First, it's not strictly true in the end, the advantage of internet telephony is that you can use that single line to the home and get both voice and data simultaneously. That -- that's a great advantage.

But what I really wanted -- I wanted to ask a question to which I'm not expecting a straight answer. But nonetheless --

(Laughter.)

-- internet telephony basically has two benefits. One, it is in fact a more effective use of capacity because that's what packet switching is all about. But it also benefits from being out from under various regulatory

requirements and access charges. It obviously -- the difference is much greater when you're talking about international telephony when the prices are much greater.

But can you give us some sense of what the -- how much is due to the one and how much is due to the other? When we have a truly efficient market-based pricing scheme for regular telephony, what will be the advantages of IP telephony?

MR. EVSLIN: Yes, let me answer that. Today if both were on purely a market-based basis, the cost of IP telephony, the true engineering costs, might -- for similar services -- let's ignore the fact that it can be used for much better services that can't be provided -- might be as little as 25 percent better than for traditional circuit switching.

But that's today because the technology with IP telephony is about is substituting computer power for bandwidth. And by Moore's law, we know that the price of computer power keeps getting cut in half every year and a half. So today's economics that favor IP telephony become much more favorable as we move forward.

Also, as much more of the communications broadly (inaudible) is data communications, then the data network,

even without this whole discussion, just gets bigger than the voice network. And so the economic advantage of piggy-backing on the data network as opposed to having a separate voice network is much, much greater. And then of course there's this enormous potential for developing applications because voice and data are now in the same format and on the same network as each other instead of being on separate networks.

To use -- to give you a straight answer to the first part of your question, there is a huge arbitrage advantage in international IP telephony that most of the savings comes from arbitrage. And that's not surprising because most of the costs of international telephony come from the arbitrary accounting rate structure.

That's not true in domestic telephony. And I would argue that it suits the U.S. public policy and FCC policy to take advantage of that arbitrage to drive the fat out of the accounting rate structure, both in traditional telephony and in IP telephony so the people can make cheaper international calls and so the balance of payment stops getting damages by the funny accounting that goes on around call-back services.

CHAIRMAN KENNARD: Do we have any other questions

from the bench?

COMMISSIONER POWELL: I would like to go back to the boring legal question for a second. To what extent -- and I guess this is really for you, Earl, I'm sorry -- but are we just quibbling over this definition because to what extent is it true that Congress has conferred to the Commission a fair amount of discretion in -- even if they are telecommunications carriers as to who contributes and who gets support?

As you note yourself, the provisions speak of an evolving -- it's not very clear. It sometimes says evolving level. But if you go on to read, it really does suggest that there is an evolving definitional exercise in determining what services are eligible for support and that the Commission in combination with the joint board is given the discretion to make those determinations and evolve them over time.

So that even if we did as you suggested and then said that an internet service provider was in fact providing a telecommunication service, we would still have legal freedom to make a policy determination as to whether the maturity of those services have reached a point where we either want them to contribute or we want them to gain

support.

You, yourself, suggest some discretion by pointing to Section 10 forbearance. But I would potentially argue I don't even need that provision. You know, and even in one spot, you know, in 254(f), we're specifically given the power to decide who else can be required to contribute if we determine the public interest.

MR. COMSTOCK: Well, as long as that person is a provider of telecommunications -- and I think -- I would argue that it's not a quibble because you -- the statutory definitions are specific. And as I said, some of this was the compromise that was reached between the house and the Senate as to how we were going to keep universal service within a contained amount of money.

What concerns I think many people is if you decide that these enhanced service can never by definition be a telecommunications service, then you're deciding something sort of so far down at the root of a tree that you never have those options that you just outlined later down the road.

If they are in fact providing telecommunications service -- and I think some internet services are primarily the transmission of the user's information without changing

the form or content -- those are telecommunications and therefore should be telecommunications services.

If you -- if you allow them to overlap and be in there, then you do have some of that discretion. Under Section 10, you have the clear authority to forebear from applying any provision of the Act to a telecommunications carrier, class or class of services. But I think when it came to, for example, the contribution requirement, the hurdle for you would be a little bit higher because the statute specifically says you're supposed to contribute.

Now, you could still find in the public interest and because of these other factors that are outlined in Section 10, you don't need to do that. But I think that you would have to make that exercise.

As to some of the other decisions, for example, the common carrier regulations that people keep referring to, I don't think the hurdle is very high at all because while Congress has said, yes, they shall be treated as a common carrier to the extent that they provide a telecommunications service, you can point back to the entire range of computer decisions and other things where you've already decided that these really are not common carrier services though they may in fact be telecommunications

services under the Act.

So I think the Act is structured in a way that gives you a little bit more flexibility. I don't think you have the flexibility under the evolving definition to decide that a service that you've announced today as an information service is later a telecommunications service.

I think that's where you get yourself into real trouble. It's -- where as if you said, for example, on internet access, you said, yes, it's a telecommunications service, then you go through the four hoops that are in -- in (c)(1) -- 254(c)(1), you say, well, it's not available -- it's not subscribed to by a majority of residential subscribers.

So therefore, it's out. We're not providing internet access as a basic supported service today. We may be tomorrow. And then when you jump down to the advanced services issue for schools and libraries, it's a no-brainer. You say, well, this is a service that is needed for schools and libraries and we're going to provide it because we don't have to jump through the same hoops as we do in (c)(4).

But I will disagree with Howard. I don't think your interpretation of (c)(3) is correct. It says, services referring back to universal service which is an evolving

level of telecommunications service. It doesn't give you the authority to jump out and say you can provide information services. Even (h)(2) is specific. It says, "access to advanced information services and telecommunication services."

So I mean I think you are bound by the statute and that's why it's important that you go all the way back to the definitions at the root and look carefully at where you draw the line there.

CHAIRMAN KENNARD: Let me follow up on the forbearance argument that you advanced. Assuming for the sake of argument that this agency, the federal jurisdiction were to deem internet services as telecommunications services and then forebear from this mountain of regulation on the theory that this is a evolving technology and we want to foster its growth.

What assurances would we have though that state jurisdictions would not -- having seen that the federal jurisdiction has deemed these telecommunication services, then impose their own mountain of regulation thereby defeating the whole theory of the forbearance argument?

MR. COMSTOCK: I would refer you to Section 10(e) which specifically says, "State enforcement after Commission

forbearance: A State Commission may not continue to imply or enforce any provision of this Act that the Commission has determined to forebear from applying under Subsection (a)." I think that covers it.

And also I would point out that today you have it both ways with respect to information services. On one hand, in 1983, you said these were all interstate services; states can't touch them. And then on the other hand, you say they're a local service and therefore they don't have to pay access charges. So clearly that's survived various challenge and has existed. But I think more specifically, 10(e) protects you from exactly that possibility.

COMMISSIONER POWELL: Should I be troubled though by Section 232(b)(2) which says the Act generally affirms the Commission's policy by noting that -- well, "The United State's policy to 'preserve the vibrant and competitive free market that presently exists for the Internet unfettered by federal or state regulation' "? I don't know any area that is more laden with regulation than being a common carrier subject to those provisions. It seems that's an utterly inconsistent statement.

MR. COMSTOCK: I don't think it's inconsistent at all because, first of all, a policy statement does not trump

the statutory requirements of the Act. I would point out that earlier the House had specific language -- statutory language forbidding the Commission from regulating the internet. The Congress did not adopt that and never will adopt such a statement because blanket exemptions like that always get us into trouble.

So you have that general policy statement out there. And that to me then gives you even more authority under Section 10 to point back and say here's the reason Congress has said we don't want lots of regulation. So we're frankly going to decide that these internet services are telecommunications services. But the only provisions of the Act that may apply may be the universal service contribution.

Maybe it's the provision that protects customer privacy. It says you can't sell information that AOL or anybody else picks up. I mean, why shouldn't that apply?

Maybe the provisions regarding disability access should apply. But, I mean, you can go through the Act and decide what you want. And frankly, 230(b)(2) gives you plenty of authority then to say in addition to all of the other reasons we may have cited, here's the policy statement by Congress saying we should minimize any regulation of the

internet.

But it doesn't trump the statutory language that says certain things are telecommunications. We knew about the internet when we did the statute. And frankly, if you continue the basic and enhanced distinctions as you have them today, five or 10 years out there's going to be nothing that's telecommunications. So I fail to see how you would give any effect to the Act.

And frankly, it has a huge impact on local competition. The statute is very specific. You get access for the provision of a telecommunications service, not a telecommunications service and an information service. So I think at some point, the Commission runs a grave risk of hurting the other provisions of the Act that were carefully structured if you go down this path of saying only this very narrow class of services is in fact telecommunications service.

COMMISSIONER POWELL: But in the context of the provision that talks about evolving services, it does speak separately of telecommunications services and information services. I mean, in (c) -- I don't want to get hyper-technical -- but it says, "Evolving level of telecommunications services and the Commission shall

establish periodically under this section taking into account advances in telecommunications and information technologies and services."

MR. COMSTOCK: That's right, because again it's prefaced with the words "access to". And you want to have access to. You may need -- for advanced information services, you may need large bandwidth capacity. That's where the statement in the report is completely consistent. It may include dedicated data links. You may need a huge pipe. And if that's what the Commission decides you need, that's fine.

But again, it's -- it's -- there's a line drawn there. It's "access to". And as I said, to the extent the Commission decides that Internet access is a telecommunications service, you don't have any problem.

Your only problem when the thing has got you tied in knots is that you've drawn this old line, this pre-1996 line, and tried to carry that forward and still get -- get -- as people I think rightly pointed out, you want competitors to be able to provide access to the internet. You don't want to limit that. But you do that by bringing more people into the definition of telecommunications carrier and then crafting the appropriate regime under

Section 10, not by trying to hide them in a definitional line down in Section 3.

CHAIRMAN KENNARD: Commissioner Ness.

COMMISSIONER NESS: Mr. Comstock, you point to the -- you point to the decisions in conference not to adopt specific language of -- on the House side. Can you point to specific language in the conference report that would clearly show that Congress intended to really restructure a regime that has been in place for an extended period of time, expressly so?

In other words, we had for -- for years and years made the distinction between basic and enhanced services. The MFJ had a similar distinction between common carrier communication services and information services. One would think that if this was going to be a major change in -- in the regime, that Congress would have expressly so stated and not done so via definitions that can be interpreted one way or another. Can you point to some specific affirmative language apart from what they did not adopt?

MR. COMSTOCK: I think the short answer is you have to take it in totality. I mean, the reality is, well, yes, many people are immersed in the nuts and bolts of the MFJ decision and the basic and enhanced distinction. You'll

notice that Congress did not adopt any of those things directly.

I know there were many attorneys that tried to say that we did this, we did that. The reality was Congress tried to craft a scheme that made sense to it. And frankly, as you well know from a brief that was filed in support of the FCC's position before the 8th Circuit, there were things Congress did in that Act and thought it may have accomplished that didn't -- didn't totally work. And so I can't say I can point to anything definitive that says in black and white, we intended not to adopt the basic enhanced distinction. I think that would be a misnomer anyway.

What we clearly intended was you have the flexibility to go forward. And what we did not adopt which was in earlier drafts was specific statutory language that said these two may not overlap. We gave you that flexibility. And I think when you look at the other provisions of the Act, for example, the statement, "There should be an evolving definition of universal service or evolving level of telecommunications services;" how do you get there if you continue down this path of very narrowly crafted transmission services when everything is increasingly being packaged together.

As you're finding out yourself here in this panel, we can barely figure out where to draw the line. So that's -- that's why I'm saying the definitions don't force you to draw that line. There's nothing in the statute that says that must be the case. And to give effect to all of these other provisions and the many other objectives, regulatory parity and local competition, universal service, you're tying yourself in a knot by continuing that pre-1996 definition which put together at a time when you had no forbearance authority. That's the reason the forbearance authority is there, to take care of that problem.

COMMISSIONER NESS: You talked a little bit earlier about the contamination theory in Computer III. Where would you draw the line? How would you distinguish the transmission from the other services such that it is no longer an enhanced service, rather to distinguishable, measurable services?

MR. COMSTOCK: Well, I would suggest that there are some services that are both an information service and a telecommunications service. And what you need to do is look at what is the user getting out of that service. When I sign up for an e-mail, the fact that it may be stored on some server is really irrelevant. The fact that there is a

header ad is completely irrelevant. I mean, if I get a fax today, it's -- it's printed out oftentimes with all kinds of information that wasn't on the original page.

So that doesn't change it.

When it comes into my office today, it goes into a server. I get the choice of reading it online or downloading it. Again, that shouldn't change it because the transmission from the user is the same. You have an option -- you can either draw the line or make them overlap and say that some services that are both. If you draw the line, I would suggest that you move it from the basic transmission and focus on what is it that the user is primarily interested in. IP telephony -- I'm interested in talking to somebody. When I send an e-mail, I'm interested in sending a specific message. I don't want it changed. I mean, if it ends up wrapped someone place else, that's really a problem in the transmission. So that's what I would suggest you look at.

COMMISSIONER NESS: I don't know whether you want to hear this but another thing that's going to happen is the payment arrangements from the consumer side are going to change dramatically. You're already seeing people offering no just free e-mail but free internet access in exchange for

subjecting the consumer to advertisements. I think you're going to see sender pays e-mail where the ISP is in the collection business and hands out commissions and so forth. And I don't know what that means but it certainly makes this whole thing even more complicated and much harder to decide what it is you're going to levy any fees or access charges against.

CHAIRMAN KENNARD: Does that lead you conclude -- where I think you're going is that you can't look at this problem from a sort of service offering-by-service offering approach. You would have to draw a -- a rather sweeping line and then look to see whether various services should be required to pay or not as opposed to doing it sort of technology-by-technology, service-by-service.

MS. DYSON: Yes. I guess I'm saying I think it is so complicated that you don't want to mess with it for two reasons: 1) you don't want to mess with it; 2) if you do, they will immediately figure out clever ways to get around it. And so, again, if you lead it to the providers of capacity to figure out what it is that they're selling to other people and to assess charges among themselves, this includes access fees, without -- and I know it's hard to withdraw from a monopoly market and there are local

monopolies and so forth.

But in the end, what you really want is to let the various players decide for themselves and allocate the costs maybe even to advertisers.

MR. DIX: May I comment on that, Ester? For the market reality of not doing anything, to Commissioner Powell's point of if there is not interpretation, is that we carriers under whom these obligations currently exist be forced into making some perhaps unwise business decisions around trying to avoid for competitive reasons these very requirements.

And what I mean by that is it would be very easy for us, very expensive, but we could begin to deploy IP services, Internet-type services inside a circuit-switch environment. And certainly if you look at some of our larger competitors in our business in MCI, they run the former NSF net, the backbone of 40 percent of the Internet, and they are also a common carrier.

And the question I have to you is if you don't change the definition of a telecommunications carrier, then I assure you that MCI will consider a strategy wherein they will begin to move their circuit services in an accelerated fashion to that Internet service to avoid paying these

access charges in this common carrier status.

To that point, I have another piece of anecdotal evidence. Today's Washington Post, a story by Stephanie Mata (phonetic) says, "Bell's advanced data networks has entry into the long distance business." And what it says, if I could just briefly read, "Some Bell's are planning sophisticated data networks based on Internet protocol, IP technology that would haul computer data at high speeds over long distances."

Now, if I can read ahead a little bit, "The Bells insist" -- and they're seeking, as you know, with the FCC to be able to carry this on an interstate basis. And they're contending that it is a data service. "The Bells insist that they aren't trying to surreptitiously get into the voice long distance business. 'It is conceivable that there will be incidental voice usage', concedes Edward Young, Bell Atlantic's associate general counsel."

I'm not here to impugn his reputation, but nobody in this industry believes that he intends to carry just data. What he was trying to do is what the rest of us are going to be forced to do which is try to skirt this policy issue by the deployment of this technology and avoid the regulations. So I put it to you, if -- if an MCI is both an

Internet service provider and a common carrier, what traffic is subject to this and what traffic isn't? If there's no re-definition of telecommunications, then I assure you that all of us will look to avoid these access charges and other things by shifting our business to IP, i.e., non-regulated types of technologies.

CHAIRMAN KENNARD: Ms. Dyson, would you like to respond?

MS. DYSON: Yes, just very briefly. And the irony of it is of course that this is probably a good technological and business decision because according to Tom Evslin, you're going to get approximately 25 percent more efficient use of whatever capacity you have. And so this is something devotedly to be wished. The only challenge is the unequal application of the access charges.

MR. DIX: That is correct. Thank you. That is correct.

COMMISSIONER POWELL: Why -- why are we -- isn't an error being made assuming that universal service automatically must be synonymous with access charges? I mean, one of the potential advantages is things moving to a more efficient, more cost efficient network is that price goes down. And if one of the notions of universal service

is affordability, there is at least theoretically the possibility by moving traffic to more efficient networks, you will indeed lower price. And people who we're worried about making sure are subsidized are actually being subsidized by the market and technology rather than by the United States Government.

MR. DIX: But, Commissioner, the definition of a telecommunications provider goes back to this basic carrier definition. And we're contending that there is no difference in -- in this specific phrase, that -- that transmission between or among points specified by the user of the information he's choosing without the change in the form or content of the information as sent and received -- which is the definition for a telecommunications carrier -- is no different from an information service provider than it is for a common carrier. We are doing exactly the same thing; delivering exactly the same piece of information in a different medium.

Therefore, there seems to be a link, at least in my mind, between the universal service fund and access charges because they're both predicated on the same definition.

COMMISSIONER POWELL: You're a lawyer when you

want to be.

(Laughter.)

CHAIRMAN KENNARD: Mr. Comstock.

MR. COMSTOCK: Yes, if I could just respond briefly on the issue of access charges. I don't disagree that you need to find a way to do things without access charges. And as I said before, I'm certainly not advocating that you take the current regime and apply it to the ISPs. We're collecting enough money today. The problem is as traffic shifts, that then increased the costs that have to be paid by the voice users which just increases the cycle and makes it more rapid.

The real issue is the Commission in the states have been setting access charges at least since 1983 supposedly because they paid for the use of the network and because it goes to support universal service. As is illustrated in the Stevens letter, there is a problem. Even businesses in some cases are not paying the full cost of the line as -- as determined by the regulators. Now, I'm not saying that's correct. But I mean, the Commission has to step forward at some point and say either we made the right decisions in the past or we didn't.

But assuming that the rates the Commission and the

state commissions set are accurate or close to, then you have this 25 billion dollars in payments from long distance players to the local players supposedly to support the cost of the most expensive piece. And -- and you're seeing evidence of that. That's part of the reason we're not getting local competition. If you want the more efficient packets which is going to the home, then you better pay the local exchange carrier for packet switching. If you tell them they're only getting universal service for circuit switching, then they're not going to install packet switches. So you don't get the better band width to the home.

But, I mean, somewhere in there, there's this mushy pot of 25 billion dollars. And you can't just say by exempting out an ever-increasing class, we're somehow going to get rid of it. You have to decide and delve in what it is. And all I'm saying is that when you do that, you should throw everybody into the pot. And then that gives the ISP the exact same incentive as the IXC to reach the customer directly, through a more efficient network. There aren't any ISPs today building networks to people's homes. They're not interested, you know.

CHAIRMAN KENNARD: Ms. Lesser.

MS. LESSER: I am afraid that what's happening here is that Internet telephony is really becoming a bogeyman. And what I'm hearing, with all due respect to Mr. Evslin and Mr. Pulver, little more than a -- really at this point a theoretical service. I mean, we saw some demonstrations earlier today. There certainly is development in the Internet telephony area. But we have no market data. We have no idea how consumers are going to respond.

And I think when we talk about the ISP question, we need to look at the other services that ISPs are providing and for AOL, really the only services. We are not providing an Internet telephony service right now and yet you're talking about, you know, whether or not we're providing a comparable voice service. We don't have a voice service. And so what I think we need to emphasize is our services operate what is essentially on top of the telecommunications infrastructure.

And frankly, my business people would be shocked to hear that we have telecommunications revenues because they see it as a huge cost center for America Online. I am paying for telecommunications service because I certainly need those services and they certainly -- the transmission

element is critical. But I basically take those services as a retail customer and I then bundle those services with the services I'm providing and pass them on to consumer.

So if I were essentially -- just in looking at universal service, I realize that access charges is a different question and I can address that, as well. But I would essentially be paying twice because right now, I'm spending hundreds of millions of dollars a year for telecommunication services on which -- through which I am -- I am making a universal service contribution. And if I were required on top of that to look at my information services revenues and make another contribution, then I would indeed be paying twice.

So I think it's important to not let Internet telephony -- which, again, there certainly is going to be a market for and I think the Commission has to pay close attention to the development of that marketplace. I don't -- my personal opinion is that I don't think you'll opt -- you should or will opt to regulate since what we've seen is a lot of innovation in a market-driven -- in a market-driven environment. But I do think that we need to make sure that it isn't the bogeyman for complete reclassification of ISPs at this particular time.

CHAIRMAN KENNARD: Mr. Comstock.

MR. COMSTOCK: If I could just address the issue of double payment briefly. The point is you pay for lines from the central office to the ISP center just like an IXC does. Yet an IXC does pay access charges. And the end user who is buying the long distance service also pays to the IXC charges that they don't pay if they use the Internet.

For example, if I get online and talk to my brother in Cleveland for two hours, whether it's by voice or video or in a chatline e-mail, I pay 70 cents a day to the ISP. That's basically what it costs me, plus I pay from my local phone service. If I picked up the phone and made the same conversation, I would pay what I paid for my local phone service and I would pay -- at 12 cents a minute, I would pay $14.40.

Now, maybe -- maybe there's something wrong with that and it needs to be readjusted. But the point is why should I be able to communicate, have the same conversation one way and I pay 70 cents; the other way I pay, well, 20 times as much. So I mean, you're not double paying. You are contributing to universal service to the extent that the business lines are above cost and some of that money gets transferred. But you're not paying as much as a similarly

situated IXC is paying to support the local network.

I'm not saying what the IXC is paying is right. I'm just saying you're not paying as much.

And the second point I would make is if AOL is not providing voice telephony, it may be only your e-mail services that we need to worry about or your Internet fax services.

(Laughter.)

But the point is you are providing some telecommunications service. There are lots of other services you're providing that I wouldn't include.

COMMISSIONER NESS: If I could follow up on that. Isn't the carriage of an e-mail message essentially the transmission between or among points specified by the user of information of the user's choosing?

MS. LESSER: Well, in some ways -- certainly if you just look at the text of the message -- I mean, if I send a message to my mother that says, hi, mom, and she receives it, she receives that text. But what she also receives are additional capabilities which is the service that we're providing whether they are storage capabilities, whether they are reply capabilities, the entire browser that goes with the e-mail.

So that -- while that -- an element of the message that is received on the other end certainly looks to the user from a textual standpoint as the same message from a substantive standpoint. What is wrapped around it, the service that we are providing which is -- you know, which is reply, which is forward, which is storage capabilities is much more than -- I mean, I think it's really wrong to just look at the text of that message.

There's much more on the screen. If you look down a little bit more, you'll see -- at least on AOL, if you look down, you'll see the footers. And if you look on most e-mail systems, you'll see the headers. But there is a lot more information that goes along with that to enable that message to travel and to get to the recipient.

CHAIRMAN KENNARD: But what difference does that make? I mean, if -- if the message being communicated is -- is -- to your mother is basically the e-mail transmission, what difference does it make if there are other capabilities that may or may not be used? If -- if what we're talking about is whether we have a regulatory regime that in effect creates distortions, the fact that you have other capabilities seems, as least preliminarily, sort of irrelevant.

MS. LESSER: Well, I know, but the other capabilities are not -- perhaps I misspoke. They're not severable. I mean, we're not -- I'm not talking about one capability versus another capability. I'm talking about the e-mail service itself has to be looked at holistically. And that entire service is not just the transmission of the text. It is all the other capabilities that I spoke about. So I don't think it is right to say aren't we talking about several different services.

COMMISSIONER NESS: Is that more a function of reformatting rather than changing the content?

MS. LESSER: I suppose it depends on your version of content. I mean, when we look at the historical definition of enhanced services and the definition of information services in the Act, all of the things that we "do to that test" or wrap around it in order to make it go to the recipient are included in those information services. We're not simply providing just the transmission -- I mean, it's -- if you look at it very literally, obviously you say sent and received and perhaps focus on what the user is seeing. But I think if you look at the entire service, the answer is no.

CHAIRMAN KENNARD: Mr. Symons.

MR. SYMONS: Mr. Chairman, thanks. What I would like to do is maybe go back and try to answer your question from 45 minutes ago: Why shouldn't the Commission extend the existing regulatory structure to services that look to the end user to be the same? And I think there's a short answer that might sound flippant, but maybe isn't upon further reflection. And I think the answer is because you don't have to.

And, in fact, if you attempted to take the regulatory structure that was designed over 64 plus years to address monopoly concerns that arose when the telephone network was constructed and even, I think more appropriately, monopoly concerns when the railroads were built because that's where Title II comes from, there doesn't seem to be a real need at this juncture to take that regulatory structure and apply it to a set of nascent services.

And in this regard, I think both the point that Mr. Evslin made and that Jill Lesser I think are worth -- worth repeating. That I think there's a -- there may be a distinction between IP telephony which turns out to be the poster technology of what a difficult problem this is for the Commission, not to take anything away from the

difficulty, and other information services that are provided over the telecommunications network.

Let's put aside Internet telephony for a moment. That's clearly the most difficult issue. It's one that's going to come back long after April 10th has come and gone. If you look at the other services, e-mail, voice mail, even Internet access, I think there's an alternate history of the 1996 Act from the one that's been presented here this afternoon that suggests that in fact when Congress adopted the definitions of telecommunications and information services, it was in fact borrowing heavily and overtly from the MFJ and from Computer II.

The definition of information service, which would largely be read out of the statute by much of the conversation here today, means the capability of generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications. That definition was drawn largely from the MFJ. And going to Commissioner Ness' question, there is an expressed reference in the House report that says we are taking this definition from the MFJ.

If you go back to the MFJ, it turns out e-mail, voice mail, even Internet access -- it used to be called the

gateway service -- all of those things were present and brought before the Court and the Justice Department. And it turned out, as between telecommunications and information, each one of those things was an information service even though in the MFJ, nearly the same definition telecommunications also existed.

The fact is that those capabilities, e-mail, voice mail, access to some sort of information gateway, were deemed capabilities for acquiring, storing and retrieving and making available information; not telecommunications; not the provisioning of a pure pipe because each of those services, whether it's e-mail or voice mail, involved some sort of enhancement to the pipe if I could use that term here.

My fear is that by trying to address every single problem, every single very thorny issue that you doubtless, you and your successors will confront here in advance of this April 10th report, what you'll end up doing is doing what no one can do, is taking a snapshot, engaging in a static analysis of a very dynamic set of questions, and inevitably, as all of us would under the same set of difficult circumstances, making the wrong prediction about how things will roll out after April 10th.

There's no need to do that, certainly not for this report. And it may not even be advisable to try and do it as a matter of policy right now. There are -- these questions unfortunately are probably best attacked incrementally. I suggest -- I would also suggest that -- that there's not that much of a difference between the post-1996 regulatory structure and the pre-1996 regulatory structure.

Internet telephony is clearly a very difficult issue. I would suggest that you don't need right now to deal with that because it is not any more than some press releases and some -- and some tinkering, LCI's -- LCI's concerns, which are legitimate -- will be legitimate to the contrary not withstanding.

If you take it perhaps a little bit at a time rather than trying to bite it all off and trying to decide essentially what's undecidable, I think you'll be faithful to the statute, I think you will address the legitimate concerns about universal service that will arise, and I think you'll do it without having to essentially back into regulation only to have to turn around and de-regulate under your forbearance authority which would seem to be a very cumbersome way essentially to leave us all in the same place

we are right now.

CHAIRMAN KENNARD: Ms. Lesser.

MS. LESSER: What I was going to add was I think that -- I mean, I actually agree with a lot of what Howard just very articulately said. And I think that I would like to comment just for a moment on the forbearance issue. It seems to me that as we -- and as Earl pointed out -- there are -- there are a lot of inefficiencies that have historically been included in the access charge system and the universal service system.

And, you know, as we look at whether or not a long distance call on the telephone should actually cost as much as it does, it seems somewhat backwards to me to say, okay, well, we admitted that that is an inefficient service that needs to be looked at again; but why don't we bring other people into it and then try to essentially then figure out what to do.

It seems to me the way to do it is to look at the Internet as an unregulated industry and the innovation that has essentially incurred because of how unregulated -- well, how market-driven the Internet has been and basically say why don't we take from -- why don't we learn lessons from the Internet rather than simply trying to bring a new -- an

entirely new industry under old regulation.

I mean, I think one of the most important aspects of this is certainly the position that the United States Government has taken overseas. We have made a historic telecommunications agreement just several months ago essentially -- or really more than a year ago now -- time flies -- has essentially said to the world, you know, do not regulate the Internet and please, essentially, make sure that telecommunications regulation is stripped away as we go forward as technologies converge.

If we in this country all of a sudden say, well, actually we're going to change our minds and now call the Internet a regulated entity but we're going to pick and choose as to what we at any given time think is important to regulate, I think what we end up with is big confusion and certainly a lot of inconsistency from a policy standpoint around the world.

CHAIRMAN KENNARD: Mr. Evslin.

MR. EVSLIN: Mr. Chairman, just to add to that, the rest of the world has taken the United States' advise and the European Community has decided not to do this type of regulation until at least the year 2000, recognizing that the industries are both in their infancy and are no

substantive threat to the more regulated industries today. And I think that's true. And I -- I have to -- there is a lot of hype about Internet telephony.

But the most wild projections of what it can be, having it be less than a billion dollars next year in an industry that's worldwide 200 billion dollars and growing by ten percent a year -- and again, the most optimistic projections don't have Internet telephony, this poster boy, with a market share equal to one year's growth in traditional telephony until seven to ten years from now. So part of the answer to why shouldn't we regulate this is there isn't any threat now.

On the other hand, access charges certainly do cause distortion. Access charges cause distortion in economic decisions even if there were no such thing as IP. And so there is real damage being done by the current access charge regime.

And so it would seem that regulatory time is much better spent unencumbering the traditional telecommunications industry from the uneconomic aspects of access charges so that their decisions are not distorted, so that they do have an incentive to deploy the more effective and more cost efficient IP networks, so that they do have an

incentive to replace the circuit-switch last mile with an IP last mile, not to get around regulation, but because the economics are simply better absent access charges.

So it would seem that the best course for the Commission would be to concentrate on undoing the distortions caused by access charges by getting rid of the access charges, not by applying the distortions to everyone.

CHAIRMAN KENNARD: Thank you. Please.

COMMISSIONER TRISTANI: This goes back to something we were -- you were talking about was the e-mail unenhanced service. And I'm having a lot of difficulty with all of this because I love the Internet. I have a Disney.com kid. I just visited schools in San Juan, Puerto Rico where they have one provider per 450 students and -- and a basic line, so it takes forever. They love it.

At the same time, we look at these things and -- and is as fax telecommunications service?

MS. LESSER: A fax?

COMMISSIONER TRISTANI: A fax.

MS. LESSER: Yes.

COMMISSIONER TRISTANI: Yes, right. And I know that a lot of people between Europe and the U.S. are sending their faxes through e-mail to avoid the high price, the

exorbitant price that they pay for a fax. And I know you say, well, it's different; we have all these other capabilities. But -- but --

MS. LESSER: They're not exactly --

COMMISSIONER TRISTANI: -- I'm having trouble with that.

MS. LESSER: They're not exactly sending their faxes through e-mail. What they're doing perhaps -- I don't know who you're referring to --

COMMISSIONER TRISTANI: Well --

MS. LESSER: But what you are doing is attaching files to e-mail --

COMMISSIONER TRISTANI: Yes, well, yes, I know.

MS. LESSER: -- which -- which to me the user --

COMMISSIONER TRISTANI: Part of -- it's the same thing.

MS. LESSER: Well -- Well, I --

COMMISSIONER TRISTANI: And it's much cheaper.

MS. LESSER: Well, it's -- it's -- it is the same thing and it's not the same thing. You either, you know, get the paper off your fax machine or you download. You basically look at your e-mail screen and the browser that the e-mail provides and essentially use that functionality

to download.

And if you -- again, if you look at the information services definition which is only two years old, you see it says generating, acquiring, storing, transforming, processing, retrieving, utilizing or making available information via telecommunications. I am absolutely not disputing that the telecommunications infrastructure and the services, you know, are critical to the provision of e-mail. But they are not definitionally the same. In fact, they are definitionally distinct.

COMMISSIONER TRISTANI: But to me the user -- it's the same thing. Anyway --

MS. DYSON: The fact is sending it by e-mail is a much more efficient use of the capacity because one ties up a voice line and the other doesn't. And so there is a reality there that the -- the data service is in fact much cheaper to provide.

MR. DIX: But Esther, if I could jump into your point, both pieces of information can be transmitted and are transmitted in that form to the user who sees them in the same way whether they come from AOL or from us. Is this true? All right. So if we go back to the definition that says you're transmitting information without form or content

change, which is exactly what's happening, then you are in effect -- in effect by the definition transmitting information without form or content in the same way that we are which is a definition of a telecommunications provider.

MS. LESSER: But we just fundamentally disagree as to whether or not we are changing the form or content of the message.

MR. DIX: Well, here's my point. Private IP networks are being built by large corporations today. This is Internet protocol-based networks that run on the same technologies that the Internet uses. CISCO is the leader in providing these technologies. It never touches the Internet, the piece of information, the IP packet. It resides in what we call Intranets or private IP networks. You can use e-mail in the same way that you can send it via AOL via one of these networks, and that is no more or less enhanced than via -- transmitting it via AOL. What AOL does is they facilitate the access to the user in the same way that we facilitate a phone call to a user.

AOL is not the Internet nor is ITXC. They are access providers to the Internet. It is a difference.

CHAIRMAN KENNARD: I would like to give Commissioner Furchtgott-Roth an opportunity.

COMMISSIONER FURCHTGOTT-ROTH: Thank you, Mr. Chairman. I would like to thank all the witnesses for coming today. I would particularly like to thank Mr. James for making the trip all the way from Nebraska; a very -- very inspirational story you told us. And I would also like to thank Mr. Comstock for providing us with an insight into conference. And I really appreciate all the comments about how the House just made the Senate do certain things.

(Laughter.)

I -- I have actually a long list of questions. And in the interest of time, I think it might be more efficient for me to try to catch some of the witnesses at a later date. I don't want to hold up the proceeding longer than it is. Thank you though.

CHAIRMAN KENNARD: Thank you. Earl, I think you'll have the last word today. We're out of time.

MR. COMSTOCK: All right. I'll be brief. I think the point was made with respect to the e-mail. The fact that there are additional things added, that's why the definition focuses on the user's information. It's really not relevant how the service provider packages it. I think fax is important. It's 40 percent of the traffic and it does provide 40 percent of the revenues.

Lastly, let me take on Howard's point about the MFJ. Members on the floor of the Senate and the House both characterize the 1996 Act as a major overhaul of the '34 Act. I -- well, as I said before, I can't point to specific things that say, yes, we intended to get rid of basic and enhanced. I can tell you most members didn't get down to that level. They did intend this to be a major overhaul. They spent a lot of time on universal service. They spent a lot of time on local competition.

And both of those would be gutted frankly if you went with what Howard suggested of keeping the old definitions. You would not have the ability for people to get on to the local network to provide services that we all consider telecommunications today. It's a very narrow definition, the basic and enhanced distinction.

And the last thing I would say is keep in mind, when you did basic and enhanced, you did it under your regulatory authority. If you apply that to a statutory definition, the Court is not going to give you the same deference. Computer I to Computer II to Computer III, you went back and kept changing what was a basic service and you kept moving things that had been enhanced into the basic category.

Well, if you do that now, the Court is going to say, well, what changed with respect to that service. And the answer is going to be nothing. You changed because the industry changed. But that doesn't change the definition in the statute. So I would just advise a lot of caution on that. And I don't think that Howard is correct that the Congress clearly considered this issue. What they did what was an evolving definition of telecommunications service for universal service and that can't happen if you simply carry forward the pre-'96 Act regime as if nothing ever happened.

CHAIRMAN KENNARD: Thank you, Earl. Unless we have other questions from the bench, I think we should adjourn because we are over time. Commissioner Tristani, did you have something?

COMMISSIONER TRISTANI: I would like to make some closing comments.

CHAIRMAN KENNARD: Okay, sure.

COMMISSIONER TRISTANI: I want to thank all the panelists and thank you in particular, Earl, for an inside history of the Act. And I want to thank Mr. James, too, for coming from Nebraska. I'm from Albuquerque, New Mexico, so I'm closer to your part of the world. I also have -- my dearest older brother is a school teacher in Catholic high

school in Albuquerque. And I think I know a little bit about the needs of Catholic and -- and all schools. And so I do appreciate your perspective and we do care about that.

But we have some very difficult issues here: policy and Congressional mandate and definitions. And we all are going to study this very hard. But I don't think -- someone said April 10th will be the end of it. It may be the beginning. So thank you.

CHAIRMAN KENNARD: Commissioner Ness or Commissioner Powell, closing comments? Well, with that, then I would like to thank all of our panelists for a terrific and very lively discussion of some very, very difficult issues. You've brought a tremendous amount of expertise here to us today. And I -- I deeply appreciate your participation. I would also like to thank the people here at the FCC who made this possible; in particular, Kevin Werbach and Melissa Waxman, Dr. Bob Pepper, Marcelino Ford-Levine, and Pam Gallant, not to be confused with Paul Gallant. Thank you all for coming. Thank you.

(Whereupon, at 4:11 p.m. on Thursday, February 19, 1998, the meeting was adjourned.)

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