

Policy Implications for
Citizen Information Services

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POLICY IMPLICATIONS FOR CITIZEN INFORMATION SERVICES

BY ELI M. NOAM, CHARLES D. FERRIS,
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Some would argue that if we were to have as major a policy initiative as a nationwide citizen information service, this would require a Federal policy that would encourage standards, interconnection of regional, state and local information services, definition of a balance between public service and commercial services, and a means for financing the initial development of the service. In this chapter, three policy experts discuss their views of national policy-making. Their remarks were edited from presentations delivered at the October 27 national conference, Media, Democracy and The Information Highway. Eli M. Noam, a professor of finance and economics, directs the Columbia Institute for Tele-Information at Columbia University; he has also served a 3-year term of the New York Public Service Commission. Charles D. Ferris, an attorney with the firm of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, served as chairman of the Federal Communications Commission during the Carter administration. The Rev. Everett C. Parker is in residence as a senior researcher at The Donald McGannon Research Center, Fordham University.

ELI M. NOAM: THE POLICY CONTEXT

What can you say about policy and a national information service? In one respect, it is a term of enchanting vagueness and trendiness. It is also a Rorschach test for a world full of people who say we should do something in the communica-

tions infrastructure. But now there is a smell of real opportunity in the air and this brings the best out of people as well as the worst. Yet, we are astonishingly unprepared, which is why this gathering is very useful.

The beltway community—never of a particularly contemplative nature—is occupied with playing musical chairs, as the major law firms exchange their offense and defense teams to play government for the next 4 years. Much hype surrounds new services and obscures rather than enlightens. One has to be realistic; can any new administration truly overcome the accumulated unsolved problems of the past before they add their own?

We are dealing with a structural problem: We have gone from the old telecommunications regime, based on monopoly, to a new regime, based on competition. This inevitably creates all sorts of new problems. In the old days, AT&T basically took care of national planning for telecommunications, got an assured rate of return, and determined the technology. Today we do not have that environment anymore. Competitors and other industries, especially cable television, have established a rival wire line network system. Yet in some ways we have the worst of both worlds. We have competition but it has become more one of a political competition before government bodies rather than competition in the marketplace.

Now, we also have NREN (National Research and Education Network), whatever that is. Lots of people have been persuaded by the interstate highway analogy. But NREN is not a construction program. It is not about investing in fiber; it is a logical software-defined network. It's not an Apollo program.

NREN is aimed at the leading edge user such as university computer centers. As far as regular users, such as schools, and the like, are concerned, it's strictly a trickle-down technology. To address this, then, Senator Gore sponsored in the last Congress a legislative initiative that deals with broader applications and uses.

But for all of its vagueness, NREN is a good model. Let's look at its close relative, Internet, which integrates numerous sub networks, private sector firms like MCI and IBM, and nonprofit institutions like universities and lots of government agencies. Internet holds them together with some government money; not much, but enough to serve as a catalyst. Now, who is not involved? Lo and behold, the traditional government regulatory agencies, like the FCC and the state commissions. They hardly know what this is all about. I served for three years on the Public Service Commission in Albany and the word "Internet" was not uttered once.

Nor have the traditional carriers been much involved, and certainly not the cable television industry. All of these have been enmeshed in the traditional battles, whereas Internet and NREN have been somewhat of an end-run around the traditional system by the computer industry—which seems to be much better at working things out, perhaps because their ratio of technologists to lawyers is high.

Given these circumstances, what is likely to happen? First, there will probably be less ideology than in recent years.

Second, there will be more use of the government's procurement function. Government is running a huge communications network called FTS 2000. Yet, FTS-2000 was never contemplated in terms of economic and technology development. Therefore, I want to propose an "FTS 3000," which would involve government as a user of leading edge, and applications will involve national laboratory and the defense industry. It will also help government decentralize its functions closer to the grass roots. Samuel Morse's telegraph was supported by federal government money. In recent years, government was behind the important technology of packet switching.

A national communications grid is not so much a construction program but an interconnection arrangement to overcome the barriers between the separate network systems. It is clear that one needs to bring cable television networks into the communications infrastructure, and similarly also

involve the other alternative local exchange companies. This is critical because right now, whenever Washington talks about upgrading the infrastructure, it is in terms of doing something for the telephone industry. Automatically, competitor industries oppose it. Therefore, a policy of inclusion, of establishing cable television as well as other rival networks, as part of a national network of networks is essential.

To do this, we need a historic "grand bargain" that would get some of the endless and mindless regulatory problems off the table. The various industries all want something. We have seen this in the context of the recent Cable Act, and it is possible now to fashion arrangements that could well move the agenda.

This will include, in the long term, a reform of the system of subsidies. The traditional system has been based essentially on a monopoly supplier where some customers would support other customers. In a network of networks environment one cannot do that anymore. A different system might be based on a universal service fund as the source for subsidizing certain functions and users. The money might come from a general communications value-added tax as a substitute for the existing hidden tax system.

Lastly, improve the administrative process. Right now, much of the process works in the context of an adversary model which takes you only so far. Chairman Sikes did a good job in moving the agenda along, but there is the problem of the FCC being used for dilatory purposes.

To conclude, the issues in the 1980s were those of opening and liberalization. It's important to recognize how successful that policy has been and Charles D. Ferris, in fact, was one who started it. But the 1990s will be marked by a different form of orientation, still continuing the policy of opening, but also assuring forces of integration to deal with the centrifugal forces that we have unleashed. Those directions will be characterized by "inter" words like interconnection, international, integration, and intermedia—to provide some glue to hold the system together.

CHARLES D. FERRIS: TOWARD A POLICY OF DIVERSITY

If I remember correctly, the question of this discussion is: Should there be a national telecommunications policy? Keep in mind that when the Communications Act of 1934 was enacted, there was a very strong bias in that Act to insulate the executive branch of government from communication policy. Congress felt that communication policy was too sensitive to the country and to the individual citizens to have potential abuses by the executive branch.

That is why Congress set up an independent regulatory agency, the FCC, which is really a creature of the legislative branch. They are not part of the executive branch: it is beholden to the Congress and those biases still exist to a great extent today. Bear in mind, too, that if we turn to government for policy about a national information service, there are questions some raise about rights of privacy, the problems inherent in the assembly of information, and the access to that information. Some people feel, I think rightly so, that probably the greatest potential abuser is government itself. These are biases that are a part of our culture, but also I think, are probably a very healthy part of our culture.

That being said, the very fact that 55 % of the American workforce is in information intensive industries—and the percent is growing—is a reason for information policymaking. Because the productivity of our economy will be determined in great part by the efficiency that information is collected, moved and processed is a reason that the government should be involved. This is the basic structure of our economy now.

But the bias is still there. I can remember my last year as chairman of the FCC, back in 1980, I was meeting in Europe with representatives of 14 countries. We were planning facilities across the North Atlantic, which turned out to be the first major undersea fiber optic pathway. We had many, many meetings to try to come to a common understanding on the project, then eventually we had to decide when to meet again

to put the final bow on what was going to be a decision to approve the project. The chairman of the European delegation, a Swedish telecommunications expert, kept insisting that the meeting be the last week in October. This was October of 1980, and it was seen to be inconvenient to most people. I had expressed total indifference as to when we would meet. As it turned out, I found out afterwards he wanted that date because it would come prior to the elections in the United States. He felt that this was going to be a very positive telecommunications announcement and that it would be perceived as something very, very favorable to me and to the administration.

It really made no difference to me since telecommunications policy was unimportant at that time in the United States. No one cared about telecommunications policy. The *New York Times* would probably not even care that we made this particular announcement because telecommunication policies were so invisible at that time. I think that this was really because the telecommunications infrastructure that we had in the United States was so good.

We assumed good telecommunications here; in Europe they did not. They had terrible telecommunications; it was controversial; it was a political issue. Whether you would have good facilities or not was something that mattered politically in Europe. I was politically so naive that when the chairman of the cable delegation came up to me afterward and said, "I was trying to help," I said, "I did not even realize it, you know, thank you very much, but I don't think it would be a blip on anyone's screen in the United States."

That was back in 1980. Things have happened since then, and many things happen for the wrong reasons. What happened is that the United States Congress and the United States government have gotten interested in telecommunications policy over this past 12 years. To a great extent, they got interested in it for reasons of perception. The Congress has perceived that the FCC for the past 12 years has been ideologically driven. FCC Chairman Mark Fowler used to admit that he

felt there was no difference between a toaster and a television set, and government should be interested in each about equally as much.

This upset some members of Congress because they felt that telecommunications policy, and certainly broadcast policy, was something that was more critical than a toaster. And so, they started getting interested in telecommunications policy because they did not trust their creature, the FCC, for ideological reasons. Congress has spent the past 12 years involving themselves in the details of telecommunications policy, and of course, the fruition of that interest was the Cable Act that was passed over the President's veto just a month ago. That was the first piece of telecommunications policy that has been enacted by the Congress since 1934 over the objections of an industry. Now Congress has an interest in telecommunications and a lot of people have been educated about it. They have found out that this is pretty exciting stuff to deal with.

How will this new interest by Congress manifest itself? I think we are at a very critical stage in telecommunications policy; the FCC over the next four years is going to have some very significant opportunities to determine really what is going to happen. To a great extent all of this is technology-driven. When I was at the Commission, they thought that we were doing all sorts of marvelous things in freeing industries from the shackles of regulation. But it really was the technology that was driving it. We were sitting on top of this tremendous kettle, and all we did was let it vent itself to some degree. You can try to contain all the steam in the kettle for just so long, but we just sort of let it ease out, and let the technology free itself. This removed some of the burdens that had been imposed primarily by lawyers in the prior 30 years, mainly to protect particular vested industries.

As a guiding principle of telecommunications policy over the coming decade, I don't think that government should pick winners, but maybe it should permit losers.

If anything, there should be a bias toward diversity in both conduit and content.

There is much dialogue going on now, as people interest themselves in telecommunications policy, about a "pathway to the home." I hate a pathway to the home because that means there is going to be only one provider of the conduit. We have a structure now that doesn't have a bias that way, yet people say it would be wasteful to have duplication of facilities. Different experts are talking about \$500 billion over the next 20 years to build the telecommunications highways of the future—all of which seems like an awful lot of money. But if you recognize the fact that telephone companies and cable companies spend \$20 billion each year on infrastructure improvement, then over 20 years, there is not much new money that has to be added to rebuilding the national telecommunications infrastructure.

If there continues to be the diversity of conduit that we have now, then you are going to see much more. Coming on stream now is about 300 megahertz of spectrum that is going to be made available for radio telecommunications at the local level. There is about 220 set aside for the new technologies; there's already about 70 megahertz for cellular telephone. There is about another 30 for paging and SMR, and there's talk about 200 megahertz from the government side that ultimately can be freed up. You are going to have more radio spectrum being able to make that last drop into the home, or directly to the consumer. We talk about one wire, but it is not going to be one wire. It's going to be either one wire or one radio link. It can be wireless cable. It can be cable by wire. It could be cellular; it could be PCS (Personal Communication Services). There are all sorts of options and when that happens, the last mile, or the last drop, will truly be competitive. By the fact that you have competitive pathways, then we are going to have a very healthy structure in the United States.

There is going to be multiple access for all the information providers, and it is very fascinating. There are about 12,000 information providers. I thought it was nine, but I was cor-

rected. Still, I don't know what they provide. I mean, I know what LEXIS or NEXIS provides, but there are people who provide surfing news. Entrepreneurs are providing all sorts of things and it is a multibillion-dollar industry still in its infancy. The thing is, if there is a market, maybe these folks were running a Baskin-Robbins five years ago, but if they think they've got an idea, we'll see them in the information business. Good luck to them. Some might fail, but there will be others that come along and do it, just as long as they are not prevented from having access to consumers through multiple gateways. I think that is the most critical thing. If you have only one provider, and that provider provides both content and the conduit, we will be in deep trouble. We will retard significantly the development of a telecommunications infrastructure in the United States.

Let me say one more thing about the notion of a competitive environment. You have all heard that when they broke up AT&T in all the confusion, people hated it. I liked it when I got just one bill. Now I get this mess of bills—I can have MCI or Sprint or anything. It was so nice when I got only one. Even with the breakup, we have the best telecommunications infrastructure in the world. The best proof of that, in my mind, was when AT&T was divested by their own consent, back in 1984. One year later, Japan—a country that is very comfortable with hierarchical forms of organizations, very comfortable with monopolies—what did they do? They mirror imaged, by legislation, what we did here in breaking up AT&T. They legislated competition to NTT in Japan. The reason is that they knew the system that we have created here was going to be so much more responsive to emerging markets. They knew that with the U.S. telecommunications infrastructure open to competition, we were going to move far and away ahead of anyone in the world.

The Japanese were not going to let that happen. They were going to try it themselves although it went against their culture, really, to a great extent, because they have tremendous comfort with monopolies. But they did it. I think that is

the best argument that what we have here is by far the best telecommunications system, and as long as we maintain a diversity of conduit and a diversity of content, I think no one will catch us.

EVERETT C. PARKER:
REINFORCING THE CONSUMER VIEW

I am a member of the only group—I don't say I represent it—but it is the only group that really has an interest in free, open and robust competition: consumers. They may get upset at their bills, but they don't know how to protest. Consumers certainly need a communications policy and they need a certain amount of protection.

Now, the policy issues are not just speed of transmission and the ease of access to sophisticated equipment that those of us in this room, most of us, have. However, I would certainly support Senator Gore's effort to hitch up all of those super-computers.

But our policy should be basically a three-fold thing. The first is to promote the underlying premise of the First Amendment, which is diversity of sources of information and guaranteed access to all sources. The second element in it should be privacy. And the third should be universal service.

If we are going to have this broadband communication highway, then every household and every small business should have open access to it. I am talking about universal service in a little different way than Eli did, because, in theory we have universal service now. It's in the Communications Act, but it's something of a myth.

In Watts, on the west side of Chicago, in Crown Heights, in Washington Heights (the latter, which you can walk to from Columbia University), there are no faxes, no voice mail or data processing, or even telephone service. If you try to use a pay phone, someone is liable to shoot at you because all the pay phones are taken over for drug dealing.

So, we have a very difficult problem. The way in which we are deploying and using electronic technologies makes it absolutely necessary that we face up to the moral and political aspects that a large segment of Americans are going to be kept from communications services that are available to all the rest of us. I think, to a very great extent, that is the most important policy issue that we face. Not the economic one. I certainly agree with Mr. Ferris, that the economic one can be phased out over the years.

Now, what do people really want? I did a study that encompassed the leadership of over 400 public organizations and religious organizations, trying to find out.

We tried to explain to them what fiber optics was and what broadband communication was, and then, tried to find out how they might react with respect to their use. It was very interesting.

When they did, most wanted universal service.

Most of them had not thought about telecommunications policy. Most also wanted some form of government regulation and controls that would assure adequate service. Of course, everybody wanted reasonable costs and the vast majority of them mentioned privacy. They were getting very much worried about that.

They were aware, also, of the competition between telephone companies and cable. They thought it would be a good idea to increase that competition, to let telephone companies into the game, but of course, this study was done at the time when the price gouging and the poor service from cable were at their apex, so they think a little differently now.

But what did they think they would get that was most important to them from a universal information network? First of all, they wanted interactive video in emergencies. That was the thing they wanted most. Then they wanted information, educational opportunities and health services.

They were less interested in entertainment, because they felt they had enough. Neither were they interested in home shopping or in financial services. About the lowest thing on

the list was movies by demand. Now, it is significant that opinion leaders like this opted for self-protection. I think that is something that we should take into account. They opted for telephone companies, if they were going to be let into the house on a broader basis, that they should continue to be common carriers, even if they were allowed to provide programming. They felt that cable should be forbidden to exclude services or programs that they do not originate or own.

That is just one study, but it does show the way people are thinking, that they are learning something about telecommunication policies. I think the policies that we develop should be a three-fold combination, and I'm talking always for the public interest.

The technology providers, the program providers, the broadcasters, and the cable systems, they can take care of themselves. But I think it is incumbent upon the whole country to re-establish the public interest element of the Communications Act to care for consumers.

The first thing that we need to do is to provide the broadest technical bandwidth possible to the home, and probably, basically through fiber. Second, we need to apply the First Amendment print policy to all content and couple that with common carrier control of the signal originator, whoever that originator may be. Third, we should have guaranteed, open access to the network for all comers. Only at that point, where we have that kind of access, do we let market forces prevail. No matter what they may tell you, market forces do not prevail now, because there is too much ability to keep certain factors and certain elements out, as NBC was kept out of putting on a 24-hour news service because of Ted Turner's leverage with cable owners.

There are two added policy needs that are essential in our society. One is adequate funding of a public communications service that is broader than the Public Broadcasting Service of today, that will use other means of communication than broadcasting. This will go into cable, will go into perhaps records and cassettes and other things that are coming along,

and that will provide new educational services. A second social need that we have is to protect the needs and interests of children in this whole communications system. I do not mean phoney protection, the kinds of rules that first were adopted by the Federal Communications Commission as a result of the Children's Television Act, which did not protect children at all. Those of you who follow this, I think, know that stations were coming in and saying that they were doing the right kind of programming for children under the Act, because they were continuing to do all the cartoons that they have done before.

Now, what about needed action? I think that we should have accelerated deployment of a fiber optic network. We should not be held back by telephone company demands that they have the right to do programming, so that after laying fiber, they are assured of a quick profit. And as others have said, I think that there should be other players with these new services, so that there are a good number of possibilities for anybody to get a diversity of sources. The telephone companies should not be allowed to block competition in the local exchange areas where they have a monopoly. They should not be allowed to buy and operate cable systems.

We will have a much healthier system, especially for protection of First Amendment rights, if we have these many highways former Chairman Ferris spoke of—DBS, radio, MMDS, cable—whatever. A thousand flowers is what we need. But I do think, from all that I can see, fiber is going to be the method of choice. It certainly is for trans-Atlantic cables. It certainly is for trunk lines already. We ought to make sure that we get fiber to the curb. The drop may be anything, just so it does not degrade the signal. It should not be so narrow in bandwidth that the everyday consumer can't get the highest quality service that he or she is able to afford.

It worries me that telephone companies are proposing ISDN as a stopgap on the way to high definition television. Subscribers will pay once for a low quality signal, than pay again to upgrade to HDTV. I think we have to look at things

like this to make sure that we do not have much less quality than we could have.

We may have less quality for HDTV than we could have because of the FCC policy to protect over-the-air broadcasting. On the other hand, that certainly is good policy in a way, if we can have sets that will take both systems. But we should see that we don't let any technology come in and give us a degraded product.

There are certain things that Congress ought to be doing, and that we ought to try and make them do. If the American people are determined enough, they really can move the Congress, even in this field. Congress should require the FCC to develop a realistic estimate of the cost of deploying the communication highway that we are talking about. Not that the estimate is going to be definitive, but so that we get out of this argument where the telephone company says it is going to cost us a thousand billion dollars, and unless we let them buy out Hollywood and give you all the service, you can't have it. Congress, if they use the FCC properly, can make an informed judgment of the needed roles of the federal government and private interests in developing a universal, open information system. It can make a judgment on how to maintain the pluralism of our present communications system, if fiber is the dominant technology.

We do have to be careful that one industry may own the dominant technology and it may try to keep other technologies from moving content. The President has an important role. I hope we have one who understands the importance of telecommunications, and who will appoint people to the Federal Communications Commission who are competent to do the jobs that they need to do.

The President also has the means for developing a national communication policy through the National Telecommunications and Information Administration, which is his agency to use. He can't force policy, but he can be a pretty good advocate and maybe even get Congress to act. The important thing is to have an FCC where the commissioners

are willing to use the broad authority that they have to shape our communications system under Section One of the Communications Act.

We need men and women who are willing to focus on basic policy. A determined Commission through hearings and rule-making can develop concrete policies that would serve the best interest both of the industries involved and the general public. Unfortunately, in my experience, except in very few instances, the FCC from top to bottom, is not much interested in the public interest.

I think we need to change that in our new presidential administration. A strong FCC willing to make policy is desperately needed, especially if Congress continues to muddle along on communication policies the way they have in the past. This holds right up through the latest cable act where they did not make carefully thought-out new policy, but responded to the pressures of powerful interests that tear them back and forth. This keeps them from really thinking through the problems to solutions that will benefit us as consumers.

QUESTION: WHAT ABOUT GOVERNMENT PICKING WINNERS?

From the audience: I have a couple of questions. The first, directed to Charles D. Ferris who said government should not pick winners, but rather should promote variety. I would note the case of AM radio where the government promoted variety and didn't pick a winner and we have a severe market failure. We don't have AM stereo. On the other hand, the FCC is currently involved in trying to pick a winner in HDTV and if they instead do what you suggest and promote variety, no one would ever invest in HDTV with multiple standards. Also, we're involved in global competition where we look to Japan as our primary competitor and to what they're doing in terms of industrial policies and state planning. The Japanese did ini-

tially deregulate the telephone company, got intricately involved in trying to develop an information grid, providing services, broadband interactive services to each household and each business by the year 2010 or 2015. I'd like to hear your comments on that, and also, to Eli, who suggested a value-added tax from all, I guess, information providers? I'd like to know what would be taxed, whether it would be revenues or the value of the spectrum used or profits or what? What exactly would it be used for?

Charles D. Ferris: Let me just address the winners and losers issue. I think when it comes to standards setting, you can make a case for the government stepping in at the right time, although government can step in prematurely and pick a standard which really is technologically inferior. But that's a matter of timing. I was talking much more in terms of service providers. Who's going to win or lose? I just don't think that the government should say that the telephone company is going to be the primary provider of telecommunications services, and then, the other alternate providers are going to lose.

If they are going to permit people to lose, it would be that they lose in the marketplace by the fact that the rules were played fairly. There was no use of monopoly power to drive someone out of business with predatory pricing. But if your product didn't compete and you failed for that reason, I think government should tolerate losers in that situation.

Audience question: If government should not be in the business of picking winners, should it ever choose itself to become a winner? For example, should the government upgrade FTS 2000 or 3000 to become a service provider of last resort for, say, the information poor who cannot otherwise afford these new services?

Eli Noam: I don't think government is the actual information provider, as opposed to assurer that information services will be offered, which is a good idea. I don't think there is any

particular experience; even FTS 2000, provided the technology. The government contracts for technical facilities offered by private carriers. I would not want to see government becoming some kind of, like the Library of Congress, literally, a kind of information provider. I think it could be an information library that people could access, but not as, in this instance that you've described.

To get to your other question on the value-added tax—this is not something that will happen in the next 10 years or so. But eventually the logic of competition will make it impossible to overcharge some customers in order to undercharge others; it is that kind of logic. We are able to muddle through because there is still a significant amount of monopoly, regulated monopoly, and you can play that through, but it will not last. We are trying to do this through the access charges, but the access charges that are above cost are still predicated on some kind of philosophy like: there's the network, and if you access into the network, you pay. But if you have a network-of-networks arrangement, you don't have the one network, and therefore, access charges will not work. Also, they distort the industry structure because if you're vertically integrated, you don't access and therefore you don't have to pay charges.

It would be some kind of a value-added tax system which will probably be on carriers, mostly. It could be like the value-added tax system that exists in Europe in which you just pay the tax on the incremental value that you add to that particular service or product. This, it seems to me, is a likely kind of future scenario.

But as I said, this is not something that is likely to emerge in this particular political environment for a while.

QUESTION: ARE CONCERNS ABOUT
PUBLIC BROADCASTING RELEVANT HERE?

Audience question: I've heard each of you gentlemen today, or on earlier occasions, refer to public broadcasting as an area where there should be additional investment. Currently, there's an annual appropriation of over \$300 million in community service grants for public television stations around the country. Virtually none of this goes into educational, instructional, or what we would agree in this room is public service programming. If you were to go, as I think a few of you did, to the public television conferences this year, last year and the year before, the only programming discussion centered around questions like: How do we get something else like "Mystery" and "Masterpiece Theatre" that will pledge well, that will get a big audience? My question is, why do you feel that additional public investment in this current system, where there is very little discussion of public interest or instructional programming, be in the public good?

Everett Parker: Don't get me wrong, I was not calling for more investment in the mess that we have, that we call public broadcasting. The use of the money is a scandal. We all know the difficulties too, of the way that it's run. We need to rethink public broadcasting. I was part of a group that John Wicklein put together, that made pretty good recommendations. But at that particular point, Representative Dingle was sick and tired of public broadcasting and washed his hands of doing anything about reforming the system.

We do need to reform it, but we need public broadcasting as an alternate system, and we need it also to bring things to people, not just to the upper middle class that can afford to make contributions to the stations, but programming to the people who really need services from public broadcasting.

Much more needs to be done for children. It does not look as if we're going to force commercial broadcasting or cable to do any better. We need to have an alternative system.

QUESTION: WHAT ABOUT OTHER NATIONS'
TELECOM INFRASTRUCTURES?

Audience question: Charles D. Ferris referred to the superiority of America's telecommunications infrastructure. Is that a historical comment or a projection into the future? For example, the telecommunications and information age report that the NTIA¹ did, suggested that France was way ahead or will be way ahead in the implementation of digital switches and national ISDN. FCC Chairman Al Sikes has commented about Tokyo, for example, being wired with optical fiber by the year 2000. Such comments imply that others are well ahead of the United States. Are we now talking historically about America's superiority or are we assuming America is currently superior and will continue to be superior over the next five years, including in digital technologies?

Charles D. Ferris: I think, objectively, the U.S. has the most efficient, most effective telecommunications infrastructure in the world. France can have their toys. What they did was to put video screens in every home. But we could do that too, if we wanted to put the cost of that screen in the rate base, as they did. Now, do you want to put \$75 on everyone's telephone bill? I don't think it's a very efficient use and allocation of resources to do that. Why did they do it in France? They did it in France because their Yellow PagesTM lost money.

As for digital technology, I think that we have available in our network, the most advanced telecommunications systems, switches and technology and transmission facilities that are needed for the foreseeable future, for what we have to provide in this country. Now, you can gold plate any telecommunications facility. That was somewhat the history when AT&T was the sole provider. I was sort of was fascinated when AT&T came before the FCC wanting to build a microwave tower—it's a little facetious—which could withstand, it seemed to me, a nuclear ground-zero blast.

Audience question: Is fiber to the home another example of gold plating the network?

Charles D. Ferris: I don't know if fiber in the home, which Dr. Parker talks about, can be justified. Can you really justify the capital cost of putting fiber into the home—to every home—when a twisted pair can do the job with the services that the home presently desires? I don't know if you can. I think that adds unnecessary capital costs. It throws things in the rate base which increases, probably only a small amount, but it does raise rates. Is that efficient use of capital expenditures for your telecommunications infrastructure? I don't think it is, at this point. At some point it will be, if we do need another broadband into the home. But now it seems that the Bell operating companies, as the example that Dr. Parker used, are now being able to provide broadband-like services over a twisted pair, with the compression technology that they have—specifically, a video picture over the twisted pair.

If we can have these services with the twisted pair, should we spend your money on more broadband? Sure, you can gold plate anything. I think that we already have the most efficient and effective use of capital resources for the telecommunications infrastructure here in the United States, of any country in the world, bar none.

QUESTION: WHAT ABOUT POLICY MAKING ENTITIES OTHER THAN THE FCC?

Audience question: Most of the discussion in this session has been directed toward what the Federal Communications Commission can or cannot do. With all do respect to a very distinguished and effective chairman of the Commission, who is present, should that be the case? There are limitations on what a regulatory commission can do. We seem to have forgotten that there once was an Office of Telecommunications Policy in the White House. There have been some suggestions

of a national commission to look at questions about an *information infrastructure* (the term may imply something broader than the telecommunications infrastructure). Do the issues that have been raised today, and the question of the transformation of our democracy, deserve the attention of the White House? Should there be a national effort to examine these issues of equity in access to information and how we achieve, as Everett Parker has said, the purposes of the First Amendment, which is the diversity of an information marketplace available to all citizens?

Everett Parker: We cannot get anywhere unless the White House takes the lead. You are not going to get an educational program for the country from the FCC. You are certainly not going to get it from the industry. You're not going to get it from the press, which puts these things which are vital to our lives, only on the business pages.

So, to have the White House take the lead is the way to go in trying to develop a sensible, long-range policy. This requires an educational program that will make people understand what they can and can't do when we put in these advance systems, including who would need to use them.

I can't help but sit here and think about the book, *The Wired Nation* (Smith, 1972), whenever I make a plea for equal opportunity for the homes. But if we're going to have broadband communication, eventually, I want to have it for everybody.

Charles D. Ferris: I think there is the likelihood of something happening. Governor Clinton and Senator Gore certainly are much more comfortable with these issues, and address these issues, than any President or administration that I've been familiar with in my 30 years in Washington. They think telecommunications is important and I'm sure that there will be an interest at the top levels of government in these issues. This will be reflected in the people that they put in the key positions, making telecommunications policy during the next

administration.²

¹Several parties repeated the oft-stated analogy that telecommunications facilities and services will be as important to the future performance of the U.S. economy as transportation systems have been in the past. See the National Telecommunications Information Administration (NTIA) report on Telecommunications in the Age of Information, Department of Commerce, (1991), p. 21.

²The suggestion was made that Stuart Brotman's (1987) paper would be excellent reading on the topic of a new national communications policy.