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RURAL SATELLITE AND CABLE SYSTEMS LOAN GUARANTEE PROPOSAL AND THE DIGITAL DIVIDE IN RURAL AMERICA

HEARING

BEFORE THE

COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY UNITED STATES SENATE

ONE HUNDRED SIXTH CONGRESS

SECOND SESSION

ON

RURAL SATELLITE AND CABLE SYSTEMS LOAN GUARANTEE PROPOSAL AND THE DIGITAL DIVIDE IN RURAL AMERICA

FEBRUARY 3, 2000

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RURAL SATELLITE AND CABLE SYSTEMS LOAN GUARANTEE PROPOSAL AND THE DIGITAL DIVIDE IN RURAL AMERICA

THURSDAY, FEBRUARY 3, 2000

U.S. SENATE,
COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY,
Washington, DC.

The Committee met, pursuant to notice, at 9:02 a.m., in room SR–328A, Russell Senate Office Building, Hon. Richard G. Lugar, (Chairman of the Committee), presiding.

Present or submitting a statement: Senators Lugar, Fitzgerald, Grassley, Craig, Harkin, Leahy, Conrad, Baucus, and Lincoln.

STATEMENT OF HON. RICHARD LUGAR, A U.S. SENATOR FROM INDIANA, CHAIRMAN, COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY

The CHAIRMAN. This hearing of the Senate Agriculture Committee is called to order. Let me just mention for the benefit of all members, and staff may want to inform them, we probably will have a roll call vote on the nomination of Alan Greenspan at about 10:30. At that point, we will interrupt the hearing so that all Senators can cast that vote. I believe it will be the only vote, so it should not be a significant interruption, but we appreciate the patience of witnesses and all who have come to join us in the hearing room today in sort of understanding our predicament.

But we will proceed now on time. We have the distinguished ranking member, the former chairman, indicating the importance of the hearing. I want to make a short opening statement and then I will call upon the ranking member for his opening comments.

Today, the Senate Agriculture Committee is holding a hearing on two related issues. The first is an examination of a proposal that would create a loan guarantee program to provide low-cost money to satellite and cable systems to help them deliver local broadcast stations to viewers in rural America.

The second issue is the looming presence of the digital divide in rural America. Rural communities face a number of unique barriers in the realm of telecommunications. Small-scale low-density settlement patterns make it costly to deliver these types of services, and even when the technology is available, as in the case of satellite television, issues of access still arise due to the cost constraints inherent in serving a population that is often remote from the economic centers of urban America.

Just as the disparity in access to local television signals for rural Americans is problematic, the disparity in access to telephones, personal computers, and Internet access between rural and urban areas is likewise very troubling. A recent United States Department of Commerce report shows that regardless of income level, Americans living in rural areas are lagging behind in Internet access, and even when holding income constant, Americans living in rural areas are less likely to be connected by personal computers. Low-income, young, and certain minority households in rural America are the least connected to the information highway.

This digital divide contributes to the problems facing development in rural America. Rural America is an important source of income, wealth, and well-being for our Nation. The rural regions of the United States contain 83-percent of the Nation's land and are home to 21-percent of Americans. Rural America can gain access to some opportunities only by connecting to the information highway. By creating necessary linkages to manufacturers, other businesses in the region, small towns and cities will be more able to attract entrepreneurs.

Therefore, telecommunication infrastructure is an important foundation for job creation. The information highway offers rural America an unprecedented opportunity to compete on an equal footing with big cities and with other countries. Access to information network is already bringing jobs, education, and health care services. Yet, there is also a danger that some parts of rural America which already have lower incomes and lower education levels than the rest of America lack access to these online resources and could fall further behind.

This hearing will look at the reasons for this disparity as well as hear testimony on ways of solving the problem. Our first panel will focus on the rural satellite television issue. We will hear testimony from two administration witnesses, Mr. Chris McLean, the Acting Administrator of the Department of Agriculture's Rural Utilities Service, and Mr. Greg Rhode, Assistant Secretary for Communications and Information at the Department of Commerce's National Telecommunications and Information Administration.

Next, we will hear from Mr. James May, the Executive Vice President for Government Relations at the National Association of Broadcasters, and we will hear from Dave Parkhill, the General Manager of the Hamilton County Telephone Cooperative located in Dahlgren, Illinois, and from John Hutchinson, Executive Vice President and Chief Operating Officer of LTVS, Incorporated, from Raleigh, North Carolina.

[The prepared statement of Senator Lugar can be found in the appendix on page 58.]

Our second panel will focus on the more general issue of the digital divide in rural America. Dr. Stephen Jay, Chairman of the Department of Public Health and Assistant Dean for Continuing Medical Education at Indiana University School of Medicine will join Mr. McLean, Mr. Rhode, and Mr. Parkhill for that discussion.

I welcome all the witnesses to the Committee. Obviously, I welcome all my colleagues and I call upon one of them now, the distinguished ranking member, Senator Harkin.

STATEMENT OF HON. TOM HARKIN, A U.S. SENATOR FROM IOWA, RANKING MEMBER, COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY

Senator HARKIN. Thank you very much, Mr. Chairman, and thank you for holding this very important hearing. I want to associate myself with everything that you have said this morning and I might just make a couple of additional comments to add to it, perhaps.

We are very proud of the technical progress we have made in America, but even though we have made this progress in technology, rural America is being left behind. I joined the Senate Rural Telecommunications Task Force last year in order to address these issues and work as part of a group to pass legislation to help rural communities catch up.

Just as cable and telephone companies say that it does not make good business sense to provide service to a few customers in sparsely populated areas, we know that without this access, rural America will, indeed, be left behind. We are not just talking about high-speed broadband Internet access or reliable telephone lines. We are talking about just the basic TV services, local weather, local news for rural residents and farmers.

You would think it would be easy. You would think that if you lived on a farm in Iowa, you could just attach an antenna to your house and get the local weather or local news from the closest TV station, but it does not work that way and it is not that easy. An antenna a lot of times does not reach that far. Cable, they will not extend the lines outside of metropolitan areas because they say it costs too much.

The satellite dish came along and provided some relief and access, but satellite companies say they have revenue problems. They say they cannot afford to include what's called local-into-local programming into small and rural TV markets. They can sure do it in a lot of other places, but they say it's not profitable to do it in rural areas.

Last year, we fought hard to keep our rural loan guarantee program in the satellite bill, one that would make it easier for companies or nonprofit cooperatives to provide local TV to rural customers at no cost to taxpayers. Unfortunately, it was taken out at the last minute before the bill was passed and signed into law.

Senator Baucus has introduced a bill, which I cosponsor, that contains much of the same language that was taken out of the satellite bill. I believe this bill is a good start in giving rural customers local TV and I hope we can all work from there to put together a bipartisan bill that will give rural America the access that it deserves.

I think we have an obligation to move ahead here in the Congress to make sure that rural America is not left behind. It is wrong that residents in DC and other big cities can receive local programming while customers in Cumming, Iowa and the rest of rural America cannot.

Thank you very much, Mr. Chairman.

The CHAIRMAN. Thank you very much, Senator Harkin.

Senator Grassley, do you have an opening comment?

STATEMENT OF HON. CHARLES GRASSLEY, A U.S. SENATOR FROM IOWA

Senator GRASSLEY. Yes. First of all, my two colleagues who have just preceded me have probably said it as well as can be said and said everything that needs to be said.

Iowa, of course, is one of 15-States that does not have markets big enough to make it economically attractive for the satellite companies to provide local TV services, and I guess maybe I do not understand that any more than my colleague from Iowa, who just said that he understands the technology and does not understand why we cannot get it. But even if you assume that, that is right, it seems to me as a matter of fairness we ought to make sure that we serve all the 15-States and the 25-percent of the people in this country that do not have it and I am here to help see that that gets done.

I want to thank Senator Burns on our side of the aisle for working so hard on this issue in the past. I do not think anybody has worked harder than he has and I appreciate his and your attention to this to get it to the top of the agenda.

The CHAIRMAN. Thank you very much, Senator Grassley.

Senator Leahy?

STATEMENT OF HON. PATRICK LEAHY, A U.S. SENATOR FROM VERMONT

Senator LEAHY. Thank you, Mr. Chairman. I am delighted you are having this hearing and I agree with what you have said and what Senator Harkin has said, the importance of it to us in rural America.

Last year, I worked on the satellite home viewer conference because part of it was in the Judiciary Committee and I worked with those around this table and with Senator Lott and Chairman Hatch and Senators Stevens and McCain, Thurmond, and Chairman Bliley and Hyde and Kohl and Hollings and Representatives Dingell, Markey, Conyers, Berman, and others. I think we ironed out a great satellite bill, and the fact that we got it through at the very end of the session was an amazing, amazing thing. But we had one big gaping hole in there and that was the loan guarantee program.

The rural areas encompass 75-percent of the U.S. landscape, but it is only 25-percent of the population, but for those of us who live in there, in that 25-percent, we consider it a pretty important part of the country, and we might not receive local-into-local satellite TV until 10- to 20-years after the urban areas do. I think that is something that will add to this digital divide that will leave much of rural America behind the computer revolution, something we do not want to do. We like to advertise our quality of living, but we also want to make sure we have jobs and access to the same technology the rest of America does.

The law we passed last year sets forth the real head-to-head competition between cable and satellite TV, and I think, ultimately, that is something that is going to help both satellite and cable TV. But it will also help in States like mine. A lot of other States have access to local stations for the first time over satellite. Potentially, they can have high-speed Internet access to boot, and in the next

four or 5-years, you will either have high-speed Internet access or you really do not have Internet access. You will be cut off from most of the things that the Internet will have, especially in a digital world, whether it is the downloading of movies, music, software, or anything else.

Now, in a lot of these rural areas, those that are using satellites today, many of them have never seen their local network channels over the air or over satellite. A lot of them cannot receive some of the local emergency things—there is a flood, there is a tornado, there is weather or any other type of thing. They cannot receive it.

So I think a loan guarantee program could assure both access to local network stations and broadband Internet access. We could solve two major challenges facing rural America, access to the Internet and access to local programming. With a single action, we could help rural America leapfrog over the wired era directly into the satellite-driven wireless era.

I was convinced when we were meeting last year in the conference that the USDA should handle this loan guarantee program because of their 50-years of experience in financing rural telephone, rural electric, and all these other areas. They have the largest loan portfolios in this area that there is.

I still remember my grandparents talking about the first time they had electric lights in Vermont. My grandfather used to turn the light on, turn the light off, turn the light on and off, not having to get out the matches and light up an oil light. I realize when I start telling these stories, Mr. Chairman, my children start referring to the geezer attitude, but———

[Laughter.]

Senator LEAHY. But I am not yet sixty, and I remember talking about that. It was not all that long ago, and to get telephones into rural areas, the things that you take for granted in urban areas. Well, this is the same thing, and so I hope USDA can do it.

I will put my whole statement in the record, Mr. Chairman.

The CHAIRMAN. It will be published in full.

Senator LEAHY. Thank you.

The CHAIRMAN. Thank you very much, Senator Leahy.

The CHAIRMAN. Senator Conrad?

STATEMENT OF HON. KENT CONRAD, A U.S. SENATOR FROM NORTH DAKOTA

Senator CONRAD. Thank you, Mr. Chairman. Before I talk about the subject at hand, I am just wondering as a matter of committee business, will there be an opportunity to vote on the portraits that are hanging in the Committee hearing room?

[Laughter.]

Senator LEAHY. Mr. Chairman, does that not require unanimous consent, to have any revotes on this?

The CHAIRMAN. I think that is a good point.

Senator LEAHY. Yes.

The CHAIRMAN. Well, the chair does not contemplate any such action.

Senator CONRAD. I regret that, Mr. Chairman.

The CHAIRMAN. I understand.

Senator CONRAD. I think we do have some votes to make some changes.

[Laughter.]

Senator LEAHY. Mr. Chairman, you still have my proxy for the rest of the year, as long as you do not put this on the agenda.

[Laughter.]

Senator CONRAD. Thank you, Mr. Chairman. I very much appreciate your holding this hearing because it is a matter of real importance in my State.

I hope the number one priority today is to address this question of areas that are being left out, because being left out in this area is to be left behind. We have got to, I believe, ensure that all Americans have access to the information they need to participate in this remarkable transformation that is occurring in the world today.

As we all know, when we had the legislation before us last year, the rural satellite loan program was left out, and in part, I opposed the appropriations bill for that reason. This is simply too important to be left out.

In my State, 140,000 of our population, about 23-percent of the households in North Dakota gets their television from satellite, and they are, I can tell you, complaining each and every day about the lack of service. As I think everybody knows, no city in North Dakota is large enough to qualify as one of the top markets in the United States. I wish that were not the case, but it is. Therefore, not one citizen in North Dakota will benefit from the local-into-local provision that was included in the recently passed legislation.

I hope very much that we can make certain that the rural parts of the country are included. It is absolutely essential that they be included.

That deals with the question of television. Also, Internet access is critically important. I just held my annual marketplace conference in North Dakota that attracts about 4,500 people in a day that come to talk about economic opportunity in the State of North Dakota, how we can diversify farming operations, how we can attract new jobs, how we can take advantage of technology.

Admiral Bill Owens came and was the keynoter this year, the former Vice Chairman of the Joint Chiefs of Staff, who is now the co-executive of Teledesec. Teledesec is the company founded by Craig McCaw and Bill Gates and Boeing and Motorola to put satellites in low-earth orbit all around the world to provide broadband access, to provide that technology. He painted a picture of what is going to happen in terms of the availability of this extraordinary technology, the difference it is going to make in people's lives, and the absolute need to be included or to be left out and what that will mean.

So, Mr. Chairman, I believe this is one of the most critical issues facing rural America and I am grateful to you for holding this hearing.

The CHAIRMAN. Thank you very much, Senator Conrad.

Senator Baucus?

STATEMENT OF HON. MAX BAUCUS, A U.S. SENATOR FROM MONTANA

Senator BAUCUS. Mr. Chairman, I just wanted to be another member of the choir here. I think all of us are singing from the same page, the same sheet of music.

I might say that in our State of Montana, we have the highest per capita use of satellite in the Nation. We have more satellite dishes per capita than any State in the Nation. Our State flower is the satellite dish.

[Laughter.]

Senator BAUCUS. It used to be the bitterroot, but no more.

We have a few TV stations in Montana. None of them begin to qualify to receive local-to-local service under the scheme that the satellite companies say that they will help utilize. We have heard the figures. There are about 210-markets in the country. The current satellite companies say they will be able to service about 67 of those markets, not the others. That is a conservative estimate. A lot of people tell me that it will probably not be more than 40.

Let me tell you about number 210 on that list, down at the bottom is Glendive, Montana, and I might say that all the others, of course, are not in the top 60, just as none in North Dakota are. I do not know how many in your State, Senator, are on that, but I know there are 16-States—I think there are 16-State capitals that will not be served in the Nation. If you get down to 40, it is going to be obviously fewer. There are a huge number of Americans just unable to get local-to-local service.

I do not need to go over all the reasons why local-to-local is so important, but just to say things like local high school scores, the weather and charity fundraisers. There is local news, maybe a shooting, who knows.

Senator LEAHY. A lost child.

Senator BAUCUS. It is a sense of community which is dissipating and slipping away in some areas.

Let me just give one example. I asked General Barry McCaffrey to come to Montana last week. He came to Billings, Montana. Why did I invite him? Because we have a significant methamphetamine problem in Montana, and in other rural States, too. It is not just our State. But the whole point of all this is to get the community to work together. You know, the treatment providers, the prevention folks, the public and private prevention people, the Public Health Service, the doctors, school boards, law enforcement, the sheriff's office, the police chief, just every facet of that community has to work together on a holistic zero-sum basis if we are going to stomp on and basically extinguish—never entirely—methamphetamine. It is wicked stuff, worse than heroin, worse than cocaine.

I must say, Mr. Chairman, astoundingly and sadly, the use of all drugs in America today is about roughly 30-percent higher in rural America than it is in urban America, and cocaine, heroin, methamphetamine is utilized twice as much in rural America compared with urban America.

The communities need to, on a local basis, start to solve problems and have a sense of community, and I tell you, in this age of TV, it is not going to happen until we solve this problem, particularly

in rural America. It is not going to happen, because people watch television and they watch a lot, we think around this table probably too much. But at least they should be able to get local-to-local programming so they can tell their own local community what is going on.

Just think of all the weather warnings, for example, you know, tornadoes, blizzards, floods. If you cannot get local-to-local, somebody in Glendive, Montana, gets great programming out of New York or out of L.A. does not make much difference, but you need it locally.

In addition, Mr. Chairman, I might add that there are a couple, three issues here. One is, which entity is best qualified to administer the program? I think the answer to that is clearly the Rural Utilities Service [RUS] of the USDA. That is clear. They have provided such great service in telephone service, power service. They have the biggest loan portfolio. It is not just satellite companies or other line companies, it is cable companies, too. They are qualified to do this.

I also think that you could write in this legislation some provisions to make it clear that the RUS, obviously the best qualified, will be fair to everybody, fair to all who want to compete to provide the service, whether it is wireless or it is cable or whether it is with satellite. There is a way to get that in there to make that fair. It makes no sense to set up a new bureaucracy, a whole new bureaucracy, as is contemplated by some Senators, to administer a program. They have no idea of how it works. They would be subject to Senate confirmation. I mean, there are all kinds of problems that are going to slow up needed service to people.

So it is very clear, Mr. Chairman, we have got to move very aggressively on this legislation in this committee and I have a bill that I have introduced attempting to solve this problem. I know people amend it and they can improve on it, obviously, but at least to get the ball rolling in this committee, because this is the Committee of jurisdiction on this issue. This is the Committee of experience on generally this issue and it makes no sense to start a new bureaucracy, but we have to move aggressively if we are going to make that happen.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much, Senator Baucus.

Let me just take the comments that you made as a point of departure before the panel commences. As the distinguished Senator from Montana has pointed out, he has proposed legislation and it has been assigned by the chair to this committee. Very clearly, the Senator's activities here have already generated considerable support. There are at least 13 cosponsors of his bill, and maybe more.

In tracing fairly recent history, just to the conference between the Senate and the House that came, unfortunately, after the failure of Congress to pass all the appropriation bills, as you recall, there were five bills and this led, as it had the year before, to a significant deliberation by Senators.

In the midst of all this, Senator Burns of Montana, a colleague of Senator Baucus, noted a severe deficiency here. Senator Gramm of Texas objected very much to Senator Burns's approach. Senator Baucus and other colleagues who joined him drafted legislation and

asserted that the Agriculture Committee ought to be the major committee of jurisdiction. Senator Gramm, who was chairman of the Banking Committee, disputes that, not that we do not have an interest in it, but that he believes that his committee, the Banking Committee, likewise has the major interest.

So I will try to be diplomatic in weaving my way through the competing proposals, but suffice it to say that we have a significant piece of legislation offered by Senator Baucus and referred to this committee. Senator Gramm has advised me, and by that I mean he has approached me, talked to me about this, that he is drafting with Senator Burns a bill that will be heard again. He has had one hearing, and they will be working in the Banking Committee on legislation.

Now, in the midst of this, we have seen that this is a high priority. This is just the second hearing in the Committee this year. We are having a lot of them. But it is important for this issue, the basic facts that are going to be presented by our witnesses this morning, to come forward at this stage because this is a crucial issue for rural America. That was finally observed by the Congress with some stop-gap legislation so that signals would not go out all over America on January 1 for many people, quite apart from those who are unserved, for some who are served. But that, everyone realized, was a temporary fix and something more permanent and stable in terms of policy needs to happen.

So I pledge to the Senator from Montana and to all who have come to this hearing and already testified in our way as Senators of our interest that we will try to move ahead. Now, how we do this, I will ask the cooperation of all Senators so that this jurisdictional problem does not lead us down the path to inactivity throughout this Congress. I think that we all recognize that. We want action. Senator Baucus has been very gracious in saying the last word in his bill may not be the last word. He is subject to amendment and suggestion, but he has asserted with regard to the rural agency that now he has designated RUS for this, that he thinks that is the best idea.

Obviously, Senator Gramm and maybe Senator Burns, I will have to determine really how they want to do it and we will have to make some decisions in the Committees as well as, ultimately, this is amendable on the floor, as anything is in the Senate, so decisions will finally be made by our colleagues. But we will try to enlighten them in these hearings and in other colloquy as to the basic issues that are involved here.

Senator BAUCUS. Mr. Chairman?

The CHAIRMAN. Yes?

Senator BAUCUS. I appreciate your comments, and I am glad you referenced the efforts of Senator Burns, my colleague from Montana, because he has worked very hard on this, and the reason he has and the reason I have, because as I mentioned in my comments, we have the highest per capita satellite use and we are in desperate straits for serving our people.

Second, it is clear here we just need to help the people in our country as quickly as possible. Even if we were able to pass legislation today, it is still going to take some time before these people get service. It will take time to put the financing together, get the

satellites up if that is the primary technology, or if it is cable that they use maybe in some places. I mean, it just takes time, so it is critical that we move right away.

All I am saying is, we have got to move, and in my humble opinion, this committee is the logical committee of jurisdiction. On something like this, every committee wants jurisdiction, but you have got to be fair and honest. Which committee logically has jurisdiction? I think it is clear, this committee logically has jurisdiction, and I think that some Senators are pretty assertive around here, but that does not mean that they are right. But we have to be both assertive because we have got to serve our people and because it is right.

Thank you, Mr. Chairman.

The CHAIRMAN. I agree with the Senator. Obviously, we have been assertive, as the Senator knows, as he approached me and Senator Kerrey, Senator Leahy, and Senator Harkin last year. I had concluded that we would try to assert jurisdiction, we would have a hearing, put a stake in the situation.

I hope the Senator understands that I also want to see legislation, so even while we are asserting this and we will be very active, we will try to keep an eye out for other activities, namely the Banking Committee.

Senator LEAHY. Mr. Chairman, even though it is almost unheard of for parochialism to come into debates around this table, I would note that Vermont has the second highest per capita use of satellites, and I loved what the Senator from Montana said.

The CHAIRMAN. I am glad you made that point.

[Laughter.]

Senator LEAHY. I was counting all this time.

The CHAIRMAN. Let me complete the record. Senator Burns had asked for an opportunity to testify this morning. He withdrew that request because he needed to be in Montana and has asked me to announce that, so he will not be appearing at the hearing this morning.

Senator BAUCUS. It is a problem in Montana, Mr. Chairman, Libby, Montana, northwest Montana. Lots of people are suffering from asbestosis, mesothelioma, and other asbestos-related diseases.

The CHAIRMAN. That is my understanding.

Senator Fitzgerald, while all this was going on, you have arrived. Do you have a comment before I call upon our panel?

Senator FITZGERALD. No. I will just have questions. Thank you, Mr. Chairman.

The CHAIRMAN. Very well. Thank you.

Without objection, I would like to include a statement from Senator Craig in the record.

[The prepared statement of Senator Craig can be found in the appendix on page 60.]

The CHAIRMAN. I will ask each of you to testify in the order that I introduce you, which you may have forgotten, but it will be in the order that you are, really, from left to right as you are seated there. We will ask that you try to summarize your testimony in 5-minutes. If you cannot, we understand, and there may be overwhelming circumstances. But to the extent that you can, this will allow more dialogue with the Senators and their questions.

Mr. McLean?

STATEMENT OF CHRISTOPHER MCLEAN, ACTING ADMINISTRATOR, RURAL UTILITIES SERVICE, U.S. DEPARTMENT OF AGRICULTURE, WASHINGTON, DC.

Mr. MCLEAN. Thank you very much, Mr. Chairman. If I may add a personal note, as a former Senate staffer to Senator Jim Exon and Senator Bob Kerrey, who have worked so closely with and on this Committee, it is a distinct personal privilege and honor to appear before the Committee today.

I am Christopher McLean, the Acting Administrator of the Rural Utilities Service, the successor to the Rural Electrification Administration. The RUS administers a $42 billion loan portfolio of more than 9,000 loans for telecommunications, electric, water, and wastewater infrastructure projects throughout rural America. Our agency also administers a program which was introduced by, as I recall, Senator Leahy, the Distance Learning and Telemedicine Loan and Grant Program, which is a tremendous success and has been very, very helpful in closing the digital divide in rural America. The RUS is also a leading advocate for rural consumers before Federal and State regulatory authorities.

For nearly 65-years, with the sound and continuing oversight of this Committee, the Rural Electrification Administration [REA] and the RUS have been empowering rural America. Just this last October, the RUS telecommunications program celebrated its 50th anniversary. In those 50-years, RUS has helped close the digital divide. The telecommunications program has maintained an unprecedented level of loan security over the whole history of the program. RUS is also very fortunate to have an accomplished core of engineers, accountants, financial specialists, and rural infrastructure experts. I am confident that the RUS has the necessary skills to administer new initiatives that bring the benefits of the information revolution to all Americans.

For America's rural residents, access to television signals has long been a challenge. Distance and geography have been significant impediments to the reception of consistently viewable broadcast signals. While cable television is available in many rural towns, it does not reach America's most rural citizens.

Since its inception, satellite-delivered television and now direct broadcast satellite services have provided increased access for all communications services to rural residents. Satellite television gave America's many rural residents first-time access to vital sources of news, information, educational programming, entertainment, and sports. But as good as these services were, satellite services did not connect rural residents to their rural communities.

Once the amendments to the Satellite Home Viewers Act are fully implemented, many rural residents will likely lose their ability to purchase distant network signals. Many still will be unable to receive a suitable signal via antenna from their local broadcaster. Given the capacity limitations of current satellite providers, the costs of nationwide local-to-local service, it is doubtful that the current carriers will provide local signals to many of America's smaller television markets.

The availability of local programming will become more problematic as the television industry converts to a digital system of signal delivery. The propagation of digital signals is different from analog. Analog signals fade out gracefully from the distance of the transmitter. You are able to see the signal, it gets a little bit snowy, you can get the audio, and then the signal fades out and disappears. Digital signals drop off more suddenly, and the likely result is that some current rural viewers of broadcast television may lose their ability even to receive a viewable signal once the conversion to digital is complete.

Without the ability to retain and perhaps expand their viewer base, rural broadcasters may not have the financial ability to upgrade their systems. Once digital conversion is complete, the technology will make it likely that rural viewers will be able to receive fewer channels than they receive over conventional TV antennas.

Access to a full range of news, weather, sports, entertainment, and information is certainly important to maintaining and enhancing the rural quality of life, but maintaining and expanding access to most local sources of news and weather is critical to public safety. The 1999 violent tornado season and the recent back-to-back winter storms we have experienced here in the East and the South highlight the importance of local television as a means of disseminating life-saving information.

Linking local residents to their communities of interest is also important to maintaining and enhancing the viability of local rural economies and local rural civic life. From both an educational standpoint and one of public safety, it is in the public interest that rural citizens have access to local network programming.

The delivery of local signals to rural viewers will require significant infrastructure investment regardless of the technology utilized. RUS loans, loan guarantees, and grants have helped to bring modern electric, telecommunications, and water infrastructure to the 80-percent of America that is rural. This public/private partnership has been the hallmark of rural infrastructure investment, and the work of the RUS is not done. The work of the RUS is never done because it is simply more expensive to provide service to rural areas.

So RUS is capable of helping rural America meet the new infrastructure challenge. We look forward to working with the Committee and offer our full expertise to solving the problem of local-into-local for satellite viewers in rural America. Thank you very much.

The CHAIRMAN. Thank you very much, Mr. McLean, for your testimony.

[The prepared statement of Mr. McLean can be found in the appendix on page 67.]

The chair notes the presence of Senator Lincoln. Welcome.

Senator LINCOLN. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Conrad, do you have a comment before we have our next witness?

Senator CONRAD. Thank you, Mr. Chairman. I would just like to introduce our next witness, Greg Rhode. Greg is from North Dakota. He was the top aide to Senator Dorgan for many years in the Senate on Commerce Department issues and he is now the Assistant Secretary for Communications and Information.

I just want my colleagues to know, I think Greg has a deeper understanding and a broader background in these issues than anybody that I have dealt with. So we are very proud of him, and I just wanted to make that comment before he had a chance to testify, and I thank the chair.

The CHAIRMAN. We are especially grateful you are here. Senator Baucus?

Senator BAUCUS. I just want to add my experience, too. I have known Greg for several months. The last several months, he has attended many meetings and I have reached the same conclusion.

The CHAIRMAN. The threshold of expectation rises.

[Laughter.]

Mr. RHODE. It is nice to come to a friendly audience.

The CHAIRMAN. Please proceed.

STATEMENT OF GREGORY L. RHODE, ASSISTANT SECRETARY FOR COMMUNICATIONS AND INFORMATION, NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION, U.S. DEPARTMENT OF COMMERCE, WASHINGTON, DC

Mr. RHODE. Thank you very much, and thank you very much, Senator Conrad and Senator Baucus, for your kind words, and thank you, Mr. Chairman, for inviting me here to testify.

I appreciated your recitation of the recent legislative history of this legislation. In fact, I recall it very well. As the Senate was embroiled in debating the provision that came back in the Satellite Home Viewer Act dealing with the rural loan guarantee provision, I was in the process of cleaning out my desk in the Hart Building and making my way down to the Commerce Department. In fact, the very night that the Senate was here voting on the omnibus appropriations bill, I was being sworn in my new post, and that is why Senator Conrad missed my swearing in ceremony but was here for a good reason.

The irony of that evening, actually, was not lost on me, because when my predecessor was sworn into the very same job in 1993, there was no operational DBS system providing any service to any viewer in America. Today, there are 11-million DBS subscribers in our country. That tells us a lot. It tells us a lot about what is happening with technology and how fast it is growing, but it also tells us that one of the blessings of new technology is it creates new policy challenges.

In 1993, the Congress never would have been having this debate about how do you get local-to-local over satellite because people were not imagining that that was possible. So, because of the changes in technology, it creates new opportunities, but it also creates very significant new policy challenges.

The administration was very supportive of the provisions in the Satellite Home Viewer Improvement Act, which provided for the first time authorization for satellite systems to carry local-into-local programming. As a result, today, there are 24-markets in the country that have local-into-local over satellite and satellite providers are negotiating for another 20-markets. But the question that still remains is, what about the remaining 200-or so markets? Are they going to get local-to-local, and how are they going to get local-to-local?

We also need to remain mindful of the many Americans, rural Americans especially, who are not passed by cable, who do not get local-into-local over cable, and who do not get a clear broadcast signal.

I had the great privilege one summer about 12-years ago of spending a summer in a very small community in North Dakota called Foxholm, North Dakota. It has a population of about a couple dozen people. It actually has more goats than it has people in that location. It is a small community about 30-miles outside of Minot, North Dakota. It is a community that grows a lot of flax, grows a little bit of wheat, but more importantly, it had a lot of dairy cattle in the area.

I know that in that part of the country, as Senator Conrad knows from being around it quite a bit, that this part of the country relies very heavily on the weather. It determines their lives. When I lived there, there was no cable. We could not get a clear broadcast signal. I can imagine what a tremendous benefit it would be to the farmers of that area if they were to get local-into-local over satellite or some other means, what it would mean for them.

I know that Senator Conrad and Senator Baucus know from being in ranch country that at this time of the year people are watching their television sets to see for livestock warnings, and in North Dakota, it is not explained. Everybody knows what it means. It means the weather is getting bad. They need to go out and protect the cattle. What a benefit it would be to people who currently cannot get those livestock warnings because they cannot get a clear local broadcast signal, nor can they get it over a cable system or a satellite system. So this is a tremendous issue to address.

NTIA believes that this discussion over how to enhance the capability of getting local-into-local into small rural markets should not be limited to a loan guarantee approach. For this reason, I recently announced that NTIA is going to issue a FEDERAL REGISTER notice where we are going to seek public comment and suggestion as to how small rural markets can get local-into-local programming. All the comments we receive are going to be posted on our Website, which is at www.ntia.doc.gov. So these comments will be available for your information as well as anybody else in the public.

In addition, as part of this process, I intend to host a roundtable discussion in early March that would invite various stakeholders, including policy makers and consumers, industry representatives, as well as technical experts to really examine this issue as to what are the possibilities out there. What are all the approaches? What are the things that we can do, whether it be a rural loan guarantee approach, or maybe there are other approaches, as well, that can compliment that approach to try to address this issue.

I want to make it very clear that my intent with this inquiry is to compliment the debate here in the Congress as well as the discussions that are occurring at the FCC, as required under the Satellite Home Viewer Improvement Act. So my intent is to try to enhance the public debate and participate and improve upon it.

The administration believes that this question of how consumers in small rural markets are going to get local-into-local over satellite systems or other technologies is a very, very important question and I really commend you for having these hearings and for look-

ing at this issue and really wrestling with it. The administration is very eager and willing to work closely with you on a loan guarantee approach, as well as any other approach that might be considered as you debate this issue.

Should the Congress proceed to push legislation on a rural loan guarantee, I would just offer up three basic principles which I would ask you to consider in this approach.

First is that any loan guarantee program that you would establish should be technologically neutral. This is very important. It is important for innovation, that this program be part of fostering innovation in the private sector. But it is also very important to be mindful of the fact that different technologies might work best in different types of circumstances.

A second principle that I would urge you to consider is that any loan guarantee approach should really foster competition and encourage competition. The authorization of satellite providers to carry local-into-local programming is going to allow satellite providers to become a more forceful competitor to the cable industry. This is a good thing. This is going to be good for consumers. Any loan guarantee approach that would be constructed by Congress really should have in mind how this approach could actually foster competition in the multi-channel video market.

Third and finally, any loan guarantee program really should demonstrate fiscal responsibility, and by that I mean it needs to conform with the existing Federal credit program policies. The administration has had a range of experiences with other loan guarantee programs. There are a lot of basic principles which these programs have operated under and I urge you to consider those as you consider this legislation.

With that, I would be happy to take any questions you may have.

The CHAIRMAN. Thank you very much, Mr. Rhode.

[The prepared statement of Mr. Rhode can be found in the appendix on page 70.]

The CHAIRMAN. Mr. May.

STATEMENT OF JAMES C. MAY, EXECUTIVE VICE PRESIDENT, GOVERNMENT RELATIONS, NATIONAL ASSOCIATION OF BROADCASTERS, WASHINGTON, DC.

Mr. MAY. Thank you, Mr. Chairman. In addition to handling government relations responsibilities at NAB, I also am sort of a project director looking into how broadcasters can take their own future into their hands in developing a local-to-local system.

I will not try and repeat today all of the history and background. We obviously all are very well aware of what happened with SHVIA and I think what happens in local markets. We are very concerned that unless an appropriate economic mechanism can be developed, that there are stations all over this great land of ours that are not going to see local-to-local and I think that the benefits of localism that you have talked about so eloquently this morning and the other members of this committee are critical and your commitment to localism, our commitment to localism can only be solved in these small and rural markets when we have a functioning, working system.

Let us think about for a minute what is at play here. There are 210-television markets. DirecTV and EchoStar, the two principal platform providers, are likely to be serving somewhere between 35 and 40 of those markets with local-to-local signals. They are in roughly 20-some-odd markets each today.

My good friend, John Hutchinson, who will testify a little bit later this morning, is likely to be picking up a number of additional markets across the country, maybe as high as 68 to 75. That then leaves from market-75 to market-210, a huge number of citizens of this country, 25-percent of the population of this country, unserved by local-to-local signals.

Let me further put that into context and tell you there are 17-States without a top-50 market, representing 34 of your colleagues. There are 800-television stations in those markets that will not enjoy the benefits of local-to-local as we go forward unless a system can be developed.

Now, there are clearly a number of economic and technical hurdles that face anyone trying to create a viable business plan to develop these local signals in the medium and small rural markets.

The first, obviously, is the limited number of people that live in these individual 150 or so markets. In order to make the service consumer friendly and to hold down costs, we think that the plan is ultimately going to be to have a company be developed that wholesales these local stations to the existing platform providers, an EchoStar or DirecTV. Likely partners in the relationship could well be EchoStar and DirecTV. Other partners could easily be satellite manufacturers, and certainly broadcasters want to partner with people so that we can take our own destiny into our hands.

But they are going to have a number of other technical problems. In partnering with a DirecTV, for example, or an EchoStar, we have any of a series of issues that relate to the technology of actually delivering those local signals. What orbital slot might we be in? The large number of stations that have to be covered, I have said 800-plus stations, are going to mean that we are probably going to have to have unique orbital slots, as many as 60-different uplink facilities around this country, maybe more. We are going to have to use spot beam technology for the satellites that are going to be able to deliver this system.

At the end of the day, depending upon the number of markets that are going to be covered and the level of redundancy that will be required to protect these markets, either by the lenders or anyone else, the cost of covering those rural markets that we are all concerned about is going to range somewhere between $600 million and $1 billion, not chump change by anyone's imagination. Now, as I said, that is going to be a function of redundancy, the number of markets covered.

Now, we certainly are willing to accept this challenge. We support the concept of having the Government provide economic incentive. But I think that, Mr. Chairman, there are some key issues that have to be addressed in providing that economic incentive.

First, let me suggest that there a lot of people who are trying to bring the issue of "must carry" into this process. Must carry is a complete red herring. There is an absolute, easy, simple way to assure that every station will be carried under a functioning local-to-

local plan. Capacity is not the issue. If we are wholesaling to the retailers, it will not be an issue at all. We want to follow a policy of inclusion, not a policy of exclusion. That is the principle on which this committee is meeting today, to include everyone, and that includes all stations. The last thing we want to do is give satellite providers the opportunity to pick and choose who is going to be carried.

Now, last year, we are all aware there was a loan guarantee program. Let me give you very quickly some suggestions we have to improve that.

First, do not put limits on the numbers. Last year's program, I think, limited the top end at $625 million. We have told you this is a $600 million to $1 billion program. Anyone else coming into the business would have been limited to $100 million. I think you want to let the marketplace and whoever is going to administer this program make a determination.

Do not make it cumbersome. Keep it as simple as possible in terms of its administration. We think you need to be careful about the issue of subordination. The history of loan programs is that the Government does not have to have lenders be subordinate to the Government. It can be the other way around. We think that will make access to capital easier. We do not anticipate you are going to fund 100-percent of the plan. We need to go out for senior debt. That means senior debt is going to be more achievable if we do not have the Government be subordinate.

Finally, we think that you cannot limit this to a nonprofit environment. You have got to be able to include for-profit operations, including a DirecTV or an EchoStar. At the end of the day, this is likely to be a consortium of companies that are coming together to provide these local signals into small and rural markets.

We certainly praise your efforts, Mr. Chairman, those of Secretary Rhode, a great and good friend of ours for many years when he was up here on the Hill, and we look forward to working with you to accomplish this goal which we all share. Thanks so much.

The CHAIRMAN. Thank you very much, Mr. May.

[The prepared statement of Mr. May can be found in the appendix on page 75.]

The CHAIRMAN. Senator Fitzgerald.

Senator FITZGERALD. I just wanted to introduce the next witness.

The CHAIRMAN. Yes. Please proceed.

Senator FITZGERALD. Thank you, Mr. Chairman. I just wanted to interject at this point and introduce one of my constituents, the next gentleman on the panel, Dave Parkhill, General Manager of the Hamilton County Telephone Cooperative in Dahlgren, Illinois. Mr. Parkhill is from Southern Illinois, a rural part of my State.

Mr. Parkhill, thank you very much for coming and welcome to the Committee.

Mr. PARKHILL. Thank you, Senator.

The CHAIRMAN. Please proceed.

STATEMENT OF DAVID E. PARKHILL, GENERAL MANAGER, HAMILTON COUNTY TELEPHONE COOPERATIVE, DAHLGREN, ILLINOIS

Mr. PARKHILL. Chairman Lugar, my name is Dave Parkhill and I am the General Manager of the Hamilton County Telephone Co-op in Dahlgren, Illinois. Hamilton County Telephone Co-op is a member of the National Rural Telecommunications Cooperative. NRTC is a not-for-profit cooperative association with a membership of nearly 1,000-rural-utilities located throughout 48-States. Hamilton County Co-op and NRTC's other members provide electric or telephone service to underserved low population density areas of the country. NRTC's mission is to meet the advanced telecommunication needs of American consumers living in underserved areas.

NRTC, its members, and affiliates currently market and distribute C-band and direct TV programming to more than 1.4-million subscribers. Hamilton County Telephone Co-op and its subsidiary provide these services to a customer base in Southern Illinois. However, our biggest request is for the networks, because our location is distant enough from the local broadcasting stations that we are not able to receive the networks without the investment of a tall tower, good antenna, rotator, and an amplifier. In fact, most all of our so-called local programming is from out of State. Some homes get no over-air picture at all.

In my testimony today, I intend to address two problems not addressed by last year's Satellite Home Viewer Improvement Act, first, the unavailability of local television services in rural America, and second, the lack of competition to cable. I am going to propose a satellite solution to both of those problems and it will require assistance in the form of a loan guarantee that should be administered through the United States Department of Agriculture and Rural Utilities Service.

The Department of Agriculture through the Rural Utilities Service is intimately familiar with the challenges facing rural and underserved markets. By authorizing the retransmission of local broadcast signals by satellite, last year's satellite bill paved the way for the satellite industry to become a meaningful competitor to cable in some of the Nation's top markets. But the bill did nothing to close the digital divide throughout rural America where there is no profit to be made in delivering local service by satellite.

The big for-profit satellite companies have announced their intention to provide local digital satellite service only to the top 33-markets out of a total of 210-markets. That means that more than half of the Nation's households will not have access to local digital satellite service. At least 20 States will be left out entirely, including many of the States represented by members of this committee.

I have brought a map, and it is sitting over here, that shows the television markets that will be served with local channels via satellite. As you can see, many will be left out. That is unfair and it is contrary to the public interest. These people will be disenfranchised from the modern information age simply as a result of where they live.

It is no coincidence that satellite penetration rates in rural America are 6-times higher than in urban parts of the country. Satellite is an ideal distribution technology for less-populated

areas. At a fraction of the investment, satellites can reach where cable and other broadband technologies will never go. Satellite is ubiquitous. It can cover wide remote spaces that ground-based technologies will never reach. In fact, any technology other than satellite will be ineffective and piecemeal as a tool to bring local service to the unserved areas.

More than 90-percent of NRTC's 1.4-million satellite subscribers do not even have access to cable. Why? Because it costs too much to serve those homes with cable. The cable industry has little or no economic incentive to build new plants to serve homes located in more remote, less densely populated areas. For any given large number of subscribers, satellite is by far a cheaper deliver technology per household than cable.

The Department of Agriculture knows that members of NRTC have a history of serving remote, rural, and underserved areas. Unlike the cable industry, their motivation and mission is to bring service to the underserved areas, not to cream-skim the lucrative markets.

Mr. Chairman, NRTC and its members fought the cable industry for nearly 10-years here in Congress to obtain the access to programming so we could help build a digital satellite industry to serve rural America. Throughout that debate, the cable industry argued in favor of the digital divide. They testified that rural and underserved consumers should pay more for their programming because of where they lived. We disagreed then and we disagree now.

With the support of Congress, we can construct, launch, and operate a satellite system to provide local digital service to all areas not served by the for-profit satellite companies. Through a common industry platform, we can solve the problems not addressed by last year's satellite bill. We can make local service a reality for consumers across the country and provide meaningful competition to cable. Getting this job done will require a loan guarantee of at least $1.25 billion to be supplemented by the satellite industry, as needed.

We also strongly recommend that the loan guarantee program be implemented on a not-for-profit cooperative basis. A not-for-profit approach would ensure that the Federal loan guarantee is not used to enrich large private or corporate interests. Not-for-profit cooperative utilities have used loan guarantees to bring utility services to unserved areas since the 1930s. Rural utilities operating under the RUS program have an excellent record of Federal loan guarantee repayment. In fact, as part of the telecom program, I am proud to say that there has never been a default in its history.

We urge you to establish strong criteria to ensure not only that any loan guarantee will be repaid, but that preferences will be given to plans which will provide the most comprehensive solution and utilize the Federal guarantee in the most efficient manner possible. It is imperative that all Americans, not just a few, receive service.

Mr. Chairman, I recognize that some of these communications issues are beyond the purview of this committee. To accomplish our goals, we will need the assistance of other committees as well as the FCC. However, left to its own devices, the FCC will handle this problem the same way it handled countless others, by relying solely

on the competition to fix it, but competition will never fix this problem simply because providing this service is not profitable.

So we will be working with Congress and, hopefully, the FCC to obtain the necessary spectrum and orbital locations for this project. Mr. Chairman, if we can get Congress's help and approval soon, we can use satellite technology to bring service to the last mile and to provide meaningful competition to cable. It is a big job and we need to get started. Thank you.

The CHAIRMAN. Thank you very much, Mr. Parkhill.

[The prepared statement of Mr. Parkhill can be found in the appendix on page 94.]

The CHAIRMAN. Mr. Hutchinson

STATEMENT OF JOHN HUTCHINSON, EXECUTIVE VICE PRESIDENT AND CHIEF OPERATING OFFICER, LOCAL TV ON SATELLITE, RALEIGH, NORTH CAROLINA

Mr. HUTCHINSON. Thank you. I am John Hutchinson, Executive Vice President and Chief Operating Officer for Local TV on Satellite, LLC—I will call it LTVS—which was founded by Capital Broadcasting Company in Raleigh in 1997, so we have been at this for a little while, also founded by Capital's subsidiary, Microspace, Incorporated, so we are one of those unique companies that has had a foot both in the broadcasting and satellite worlds.

Mr. Chairman, I heard your request to try to conserve our time and I am going to do that by leaving out some of the background that will be a matter of record from my text.

The CHAIRMAN. It will be included in full in the record.

Mr. HUTCHINSON. Fine. I would just like to talk to you for a minute about why the loan guarantee, we think, is necessary and how this thing might get done, because we have been studying it probably as long as anybody, and I kind of like this backdrop over here because we saw this coming, and so we set out to say, how can we get this to more than 30 or so markets in the United States? How far can we press it?

So we devised this technical plan with different kind of spot beams, a new kind of satellite, and we totally used up all of the capacity in an orbital slot and the biggest two satellites that could be made today and all the power and everything else, and it turned out that we got to about 800-TV stations retransmitted. That translates into 66 of the largest DMAs, if you start large and go down in a logical way, which is 75-percent of U.S. households.

Then we said, well, what about the rest? It is interesting that the rest are mirrored in another 800-TV stations serving the last 25-percent of America. So you have got 800 over here, 75-percent, 800 over here serving 25-percent, but the satellite ran out after the first 800. So that is what we set about to try to find a solution to.

Let me go back to my numbers here for a moment, and that is we have been studying this plan and running business models and have determined that it just cannot be done without government assistance for the so-called rural markets, and that is because private investors, of course, are seeking to maximize their short-or near-term returns, and so a local-to-local solution for rural America just cannot be funded purely on a commercial basis. I say purely,

because it can be partly and it can eventually be profitable. Let me explain.

The capital cost to serve the smaller 144-markets is at least as great for another satellite as the first 66-markets I have just talked about. But in the first 66, you have three times the subscriber potential, three times the revenue to work with. So that means it pushes out the time period for going positive, and frankly, the last 144-markets may even cost a little bit more because there are more uplinks involved to get from all of those markets, the way they are spread out.

So under these circumstances, the private investment community would refuse to finance the disproportionately expensive technical program necessary to serve the smaller markets. A Federal loan guarantee, therefore, is desirable and it will enable the capital to be raised to finance satellite systems for the delivery of local TV signals to rural areas.

Based on our rather conservatively constructed business model that we have run over and over, we believe that a loan would be fully repaid, and our business model shows that in just the first 2-years, a satellite provider of local TV stations should cover its costs. In year-3, it should generate enough income to cover its interest costs, and by year-5, there would be a sufficient positive cash flow to begin amortizing that loan. In addition, by this date, the enterprise would have reached a critical mass of subscribers in rural areas that could then make a more attractive investment opportunity out there for private investors to come in in a second round. This additional private capital would be used to further service the debt. Finally, our business plan does show that the loan would be fully repaid by year-15 or sooner.

In short, we believe the private marketplace will not do this alone, will not provide the majority of the initial funds to construct, launch, and operate this satellite system, so we do support the Federal loan guarantee.

LTVS believes that a common industry platform can be developed to ensure that small and rural markets across the United States can receive this service. In order for the rural satellite system to work today and in the near future, the enabling legislation should establish some strong eligibility criteria. In order to qualify for this loan, a satellite provider should be able to demonstrate that it can develop a common industry platform to be efficient to be used by all the DBS providers, not just one, to design the satellite to carry the entire 19.4-megabit digital signal that the Government has mandated we transition to, and to provide full "must carry." I will address each of these.

First, the common industry platform is essential to minimize unnecessary duplication of the use of government funds and government allocated spectrum. It is the efficient, right way to do it. By a common industry platform, I am referring to a local-to-local satellite system that is technically compatible with both DirecTV and EchoStar. That is what we have designed here, the two main providers. The satellite system would permit, therefore, all subscribers, whether they are with DirecTV or EchoStar, to receive both their national DBS channels and all of their local TV stations appropriate for that market.

The satellite would retransmit all of these stations to the small markets and deliver the signals right into the subscribers using the same small dish,just one of them, same box on the set, and the subscriber receiving one bill, keeping it simple. Using the common platform approach, both DirecTV and Echo receivers would be designed to enable their subscribers to receive and unscramble these local television signals.

To gain the necessary number of subscribers to make this plan financially viable, both DirecTV and EchoStar should include these stations in their packages and the capability in their receivers. By marketing a single unified service similar to cable, each of them will encourage the purchase of the local station packages along with other program offerings. In this way, the consumers will finally have a genuine choice in selecting a multi-channel video program distributor.

Second, satellite carriers must be required to carry every station's full digital signal. You see, a satellite is expected to have a life of 15-years, and you cannot get up there to fix it or change it once it is in orbit. The issue is that the Government has mandated by mid-2002 that all the commercial stations go to this new digital standard, and so it is really important, in order to be practical, not to build and construct a satellite that will be obsolete in the early term of its life.

Finally, in order to ensure parity with cable in terms of availability of all the local broadcast stations, the legislation must, of course, require full must-carry. So through the Satellite Home Viewer Improvement Act, Congress has allowed consumers to receive their signals of all stations and that is to happen by January 1, 2002. If no single DBS provider carried all of the available broadcast programming in the local market, then the very purpose of SHVIA would be eviscerated. AS a result, the small and rural market viewers would enjoy the full benefits of the Satellite Home Viewer Act if it is done this way.

So, in conclusion, a loan guarantee program to ensure that the rural viewer can receive local television signals via satellite would serve an important public interest purpose and LTVS supports such a loan program. The enabling legislation should establish strong criteria to ensure that rural viewers receive the full benefits of a local-to-local service, and accordingly, the loan guarantee should be available only to satellite providers that will carry all of the local stations and all of their full digital signal.

I thank you for this opportunity and I would be happy to answer any questions. Thank you.

The CHAIRMAN. Thank you very much.

[The prepared statement of Mr. Hutchinson can be found in the appendix on page 63.]

The CHAIRMAN. I appreciate, and I am sure all of our colleagues do, the specifics that each of you have given in terms of the criteria of public policy as well as the practical economics of how this ought to be constructed. For my own information, and hopefully that of other Senators, let me try to move through the basics that I understand.

Mr. Hutchinson, you outlined some criteria which are reasonably consistent with other panelists, but I am not certain that this is so

and this is why I want to make certain. As I understood the idea that you present, and I think Mr. May touched upon this in his testimony, you envision a satellite, a common platform, as you are talking about it, that really is the basis for all these signals that will come to all of rural America, all the areas to be filled in. Obviously, this is an expensive project to begin with, the common platform, the satellite, leaving aside whatever happens after that.

I make that point because as this was discussed anecdotally by Senators last year during the imbroglio that went on, there was a view on the part of many that we are talking about hundreds of small businesses, maybe local television stations, requiring loans. In other words, the map is filled in by people who are in these various localities who have to provide signals to their local subscribers and needed money to do so. Now, that may not have been the view of all of you who are here who are sophisticated about this to solve the satellite's common platform, but the whole loan guarantee situation was not clear and I just want to make certain I am clear in my own mind.

I am trying to think of who puts up the satellite. Is this a company? Is it a consortium of companies? For instance, Mr. May makes a very good point that if you have a limit of $100 million and we are talking about a $625 million to $1 billion project or what have you, that is obviated to begin with. The $100 million may work with these small television stations, and that is what some people thought we were trying to do, but what I gather you are trying to do is put up a satellite that costs hundreds of millions of dollars.

Just for the sake of argument, would one company do this? Who does it? Who makes the application for this money?

Mr. HUTCHINSON. Well, first of all, Sir, you are correct in that our plan shows that, after looking at this, that the common platform is the most efficient means to limit the Government's risk here, to conserve resources, and to have the best use of spectrum, not to duplicate or waste that spectrum by putting 1,600-TV stations up on satellites twice.

In terms of who might do that, one thought would be a hybrid of a purely commercial enterprise, funded accordingly, for the largest markets that do pay back soon enough to get private investors and not put that burden on government, and then for the Government loan guarantee to come in on that second 800-stations for some sort of another entity to compliment the first, but with the same technical architecture. That would work.

The CHAIRMAN. So you have two companies in this case———

Mr. HUTCHINSON. Cooperating with the same technology, and we have———

The CHAIRMAN. They are still to be formed. In other words, if there is an idea that this is going to happen, your thought is that out in private enterprise America, there will be two groups of people that will form and that will each have a percentage of this, of the stock or the equity of this or what have you. They become the applicants.

Mr. HUTCHINSON. The offer by LTVS, because we want to see this happen, is that we will give, we will share with any other qualified entity the entire technical plan and all of the specs to

make the systems compatible. That would save millions of dollars because that is what we spent over 3-years to develop it to date. So we want to cooperate fully with an entity that has the Government loan guarantee to complement that system.

Mr. MAY. Mr. Chairman?

The CHAIRMAN. Yes, Mr. May?

Mr. MAY. As we have looked at this, first, let me confirm for you that we think probably the most effective way to do this, and I know that Hutch feels the same way, is to, in fact, launch another satellite. It is going, in all likelihood—almost assuredly, it will be a spot beam satellite. It will have to cover 800 different stations. It will have roughly 60-plus uplink facilities, 60- to 70-different uplink facilities. The technology is something that is developing.

There are issues of compression as to how many megabits are provided for each station. There are issues of compatibility. I think when Hutch talks about a common platform, it is an issue that is slightly separate, actually, from the actual idea of the satellite itself. It refers more to issues like conditional access and transmission standards and a variety of other technical issues that bring together an EchoStar or DirecTV or whatever.

I think at the end of the day, this entity that does this is likely to be some sort of a consortium. It could arguably involve an equity investment by small market broadcasters. It could arguably involve companies like LTVS. It could certainly involve satellite companies themselves, a Loral, a Hughes, who build the satellites that would be necessary for this project. It certainly could involve EchoStar and/or DirecTV as the basic platform providers because I think the economic model that we all recognize would be most effective is one that wholesales this company, this consortium, this whatever, wholesales those stations, that service to these folks in a way that makes it compatible with their existing DBS service.

So it is not an easy project. It does work only with a longer-term horizon. I would disagree with my friend that I think you have to be able to have a for-profit motive here at the end of the day. I do not think it ought to be a not-for-profit kind of business.

I would finally acknowledge that there may be other technologies out there that could work. I know the satellite industry———

The CHAIRMAN. Other than the satellite———

Mr. MAY. Other than the satellite. So I would think from a policy perspective, being technology neutral is something that the Congress is likely to want to incorporate because we are not the be-all, end-all. There may be a lot of people out there that are a lot smarter than we are that can figure out other ways to compliment this service.

The CHAIRMAN. Obviously, what all of you are saying is that as we are trying to form this legislation, we have to sort of stay out of the way of knocking down possibilities. In other words, you made the interesting point that given the digital requirements, you can send up this satellite but much of it is obsolete in a couple of years, given other requirements, so that if it is to have a 15-year duration, you have to make some sort of a blue-sky judgment of what happens during that period of time in which you are amortizing this loan.

I have no idea precisely how the Baucus legislation, the Gramm bill, or so forth address this problem, so in sort of an a priori way, we are trying to come to grips that we are looking probably at one big loan to maybe two entities or one entity that is made up of a number of stakeholders who are involved in this problem.

Your suggestion, Mr. May, is that it be not necessarily not-for-profit but for-profit, it could be either one, and that has been a big issue, whether we go both of those ways. But if we exclude one, we then have some problems maybe in putting together this consortium, or the risk-takers that are required, but that is a matter of judgment for members as they get into policy.

Likewise, there is a real question that is being raised by Senator Gramm and his committee over how much of this guarantee the Federal Government ought to have. Now, if we are talking about a $1 billion loan, let us say, in a rough situation, should the Federal Government guarantee 70-percent of this and then go to banks or other lending agencies in the private sector to take the risk for the other 30? That is clearly a viable issue that some Senators are thinking, not necessarily 70–30, but I throw out those figures because some have actually used those figures. In other words, are the risk-takers in America in banks, other people, given the fact that the Federal Government is going to pick up 70-percent of $1 billion, are prepared to see a satellite go up hopefully without too many restrictions so the technologies happen so that we can get this service?

We cannot really write the legislation here today nor you figure out the business plan, but I think these are relevant questions that we are going to have to come to grips with before we get a bill that passes the Senate. There are so many ways to block this thing, and I do not start negatively. I start positively as to how we can try to forge some consensus.

But can any of you make a comment to sort of help me along, if you were thinking through the parameters of where we start with this?

Mr. HUTCHINSON. I can speak to the business model that we have run, and it is only one, but it does work, and that is if the capitalization is fully funded, if it is fully funded by the Government loan guarantee, it is all dead, it comes in just under about $1.1 billion.

The CHAIRMAN. One-point-one billion to do this idea of a common platform———

Mr. HUTCHINSON. To service the debt for this long-extended term until it turns positive. However, our investment banking consultants have advised me that, knowing the market as they do, there is a strong possibility that private investors or equity investors might very well be interested in a five-to ten-percent stake right from day one and that they will definitely have an interest in more than that, putting in more equity than that after year five, when it turns cash positive.

So it looks to us like the maximum liability on a government loan guarantee is on the order of about $1.1 to, let us say, $1.2 billion.

The CHAIRMAN. The government's part of it?

Mr. HUTCHINSON. Yes.

The CHAIRMAN. Well, now where does the private money come into this? In other words———

Mr. HUTCHINSON. That would be the maximum liability, and depending on the ability to raise the private equity, that could be reduced perhaps by 5-percent.

The CHAIRMAN. By only 5, but not by thirty?

Mr. HUTCHINSON. Probably not by thirty because of the long payout.

Mr. MCLEAN. Mr. Chairman?

The CHAIRMAN. Yes?

Mr. MCLEAN. I think it is important to be able to preserve as much flexibility to meet the plans that would come forward, presumably a year or 2-years from now, and there may be combinations or technologies that at this moment in time we are unable to anticipate. I think it is also important to consider the entire project cost as opposed to a pure ratio onto a particular loan guarantee. You maybe want to look at whether private capital is at risk in the entire project.

At the Rural Utilities Service, we have both direct loans and loan guarantees. The loan guarantees that we administer are 100-percent loan guarantees. Yet, that 100-percent loan guarantee leverages very significant private capital investments. So if you look at the entire project cost, the U.S. Government is not bearing 100-percent of the risk, but the portion of the guaranteed loan that we are supervising is 100-percent guaranteed.

So I would just urge the Congress that if they could leave flexibility so that we could work and find the most efficient, the most feasible project, because there are two things we look at. We look at loan security as well as Act purpose. So if the Act binds the administering agency in a way that rules out workable solutions, several years down the road, that could be a problem.

The CHAIRMAN. I will cease fire for a moment and we may want to come back on this situation. But I would just comment that I think the flexibility thing, we all are gaining that idea.

What I think many Senators who objected last, whenever we were talking about it, in October or November or so forth, they were not certain that the Government and the taxpayers are going to get paid back. In other words, there was real feeling that this was a speculative venture. So, if we are going to get into this, we have to construct something in which the taxpayer is not left holding the sack.

There are many people who would say, well, after all, we have subsidized all sorts of things in America. Why not television in rural areas? But still, this is a point of controversy. So, the question is how you can construct something that is a pretty big project here, and with a single platform and the complex business of putting together these entities, but with some fairly good incentives that several parties have a reason to want to repay, and in the regular way at the end of the day.

Mr. MCLEAN. And Senator———

The CHAIRMAN. Yes?

Mr. MCLEAN.—the legislation introduced by Senator Baucus, as well as Senator Burns and Congressman Boucher, had several very good protections for the taxpayers in there. There was the ability

to have a credit risk premium, where a third party could bear risk. There were insurance requirements. There were auditing and review provisions. So you can construct the soundness and security provisions without hampering the technology or the business plan.

The CHAIRMAN. Senator Fitzgerald?

Senator FITZGERALD. I have some questions. I find this fascinating. I think it is very important that we provide satellite TV opportunities to our people in rural communities, and I have a large rural population in Illinois, but I want to ask some questions.

Mr. Hutchinson, from your testimony, you said that LTVS has a very conservatively constructed business plan, and you felt that based on that model, that such a loan could be fully repaid, is that correct?

Mr. HUTCHINSON. Oh, yes, certainly by the end of the life of the satellite, the business. But we see a scenario by which it might be sooner.

Senator FITZGERALD. So it could even be sooner than under your conservative model———

Mr. HUTCHINSON. Yes.

Senator FITZGERALD.—and your business model shows that in the first 2-years, a satellite provider of local television stations should cover its costs?

Mr. HUTCHINSON. Yes.

Senator FITZGERALD. In year three, it should generate enough income to cover its interest costs?

Mr. HUTCHINSON. Yes.

Senator FITZGERALD. And by year five, there would be sufficient positive cash flow to begin amortizing the loan?

Mr. HUTCHINSON. That is correct.

Senator FITZGERALD. With that in mind, that sounds to me just like anybody else starting a business in this country. That is a pretty positive business plan. Why do you need the Federal Government to come in and guarantee so that it puts all that risk on the taxpayers?

Mr. HUTCHINSON. Well, I do not have direct experience in starting a lot of those businesses, but our investment banking consultants, who are in the room from Babcock and Brown, could supply that. Leonard Schavel is here, if you would like to hear from him.

Senator FITZGERALD. But a business that can make a profit after 5-years, I know I come from a banking background. You could start a new bank. If you can be making a profit in 5-years, that is excellent.

Mr. HUTCHINSON. The point that we have been advised by the people who raise this money is that the Federal loan guarantee not only reduces the interest rate, because there is less risk———

Senator FITZGERALD. Well, there is no question it would make it even better for you, but, I mean, why should the Federal Government be coming in and making it even better for you and take the risk off you?

Mr. HUTCHINSON. Because our analysis shows it cannot happen otherwise. I do not see anyone———

Senator FITZGERALD. You are of the position that the private sector would never step up to this plate, never ever provide satellite

television around the country unless the taxpayers come in and guarantee their loans?

Mr. HUTCHINSON. Excuse me, Leonard———

Senator FITZGERALD. Will you promise that your company will never do that if there is no loan guarantee from the Federal Government?

Mr. HUTCHINSON. Yes.

Senator FITZGERALD. You will make that promise?

Mr. HUTCHINSON. Yes, because we tried to.

Senator FITZGERALD. Well, you have only been in business since 1997.

Mr. HUTCHINSON. Yes.

Senator FITZGERALD. But you have a business plan to do that. Did you have that business plan before there was talk of a loan guarantee?

Mr. HUTCHINSON. We have a business plan to cover the top 75-percent of the population where there is three times the revenue, so the payout is much sooner and the risk is much less.

Senator FITZGERALD. If these loans are going to be repaid, I mean, according to your business plan, why do you need a government guarantee to such an extent? Are you saying the loans would not be repaid if there is no government guarantee?

Mr. HUTCHINSON. We have, based on looking at the markets, the concern is, would the loans be available with that much risk at stake, with such a long payout in the market, and would they be at a favorable interest rate such that———

Senator FITZGERALD. You do not have to raise money from loans. You can raise private equity, too, so you have no interest costs.

Mr. HUTCHINSON. It is a question of the risk over the long period of pay-out.

Senator FITZGERALD. There are big companies that have the money to go put up that satellite right now and provide that without borrowing, that have the cash available to do that. There are big companies like General Motors or Microsoft that have a billion or two sitting in their treasury and could put up a satellite right away and have zero interest costs. I mean, should these government loans be available to companies like that?

Mr. HUTCHINSON. These companies do have that capital, but the question is, would they do it?

Senator FITZGERALD. You are saying no one will ever provide this?

Mr. HUTCHINSON. I cannot say no one, but I say all of our experience to date in the investment community is that it cannot happen.

Senator FITZGERALD. Do you think the loan guarantee should be 100-percent?

Mr. HUTCHINSON. No. We believe that private capital can fund some of it, even from day one, and that private capital can supplement it and accelerate the pay-out after year year.

Senator FITZGERALD. The bill that has been drafted, I guess Senator Baucus's bill, the way I read it, and I have a background as a banking lawyer, there is no requirement that the loan documents be such that the Federal Government would have access or recourse against the borrower. In other words, there could be a loan, a set of loan documents that could be written in a non-recourse

way to the borrower and the Federal Government could come in and guarantee the loan, and under the bill, as I read it, there would be no requirement that the loan documents be such that the Federal Government could have a right to even come after the borrower to recoup any part of that loan.

Mr. HUTCHINSON. We have not been a part of the structure in that particular loan.

Senator FITZGERALD. So you would have no problem if in the bill it said that the Federal Government, if we had to pay on a guarantee, we could go and pursue the borrower to collect the money that the taxpayers forked over?

Mr. HUTCHINSON. There would be substantial assets in the entity itself that could be guaranteed.

Senator FITZGERALD. And pledged.

Mr. HUTCHINSON. Yes.

Senator FITZGERALD. They could be pledged to secure the guarantee, and your company would be willing, if you were a participant, to pledge all its assets?

Mr. HUTCHINSON. Yes, we would—among other things, you are talking about the hard assets of over a half-billion dollars in the satellites themselves, which are fungible, which do have other uses.

Senator FITZGERALD. So the Government could take the satellite back?

Mr. HUTCHINSON. Yes.

Senator FITZGERALD. You would have no problem with that?

Mr. HUTCHINSON. No.

Senator FITZGERALD. You would have no objection? Would anybody have an objection if the bill provided full recourse for the taxpayers to go after the borrowers?

Mr. MCLEAN. Mr. Chairman, the Rural Utilities Service would not consider a loan that did not have adequate security to be feasible.

Senator FITZGERALD. So there is no problem putting it in the bill?

Mr. MCLEAN. In fact, Senator Baucus's legislation requires that the administrator and the lender shall have perfected security interest in those assets of the borrower fully sufficient to protect the administrator and the lender.

Senator FITZGERALD. I did not see that.

Mr. MCLEAN. That is on page 17 of S. 1980, at least the copy that I have.

Senator FITZGERALD. I saw that they should have reasonable———

Mr. MCLEAN. It says Section (I), and as well as there is also the insurance requirements in Section (J).

Senator FITZGERALD. Section———

Mr. MCLEAN. But Senator, the most important thing is that adequate security for the taxpayers is absolutely crucial. The Rural Utilities Service, if we were entrusted with this responsibility, would not make an asset-deficient loan. It would not be sound banking principles.

The CHAIRMAN. Let me interject just at this moment, and I am sorry to stop the Senator. We have a vote and Senator Leahy cannot return, so I have pledged that he can ask a couple of questions

at this point. But we will all return and the panel will stay here and we will do some more questioning.

Senator LEAHY. Thank you. First off, I should add to what my friend from Illinois has said. It was always the intent there would be security on such loans. Our conference report last year said this. Our discussions on the floor always said this.

There has been some discussion in here about if you can talk regarding strategic partnerships without an antitrust exemption. I am advised by our attorneys that you do not need an antitrust exemption to have such a strategic partnership discussion.

But this is a lot more than just TV. It is about a high-speed Internet access. Mr. Hutchinson, you talk about how you are moving into this. Frankly, the time might come 20-years from now or 10-years from now or 15-years from now for totally private, nonsecured, non-government-secured loans that might get into the area for rural areas. But by that time, the Internet divide would be so substantial. This is not a time where the country moves forward incrementally by decades. This is more than just when you get a telephone and whether you have a private line at home or you have a two-party line in the rural areas. I mean, this is something where each month, each quarter makes a major difference in whether rural America is left way behind from urban America.

Mr. McLean, you were quite right in pointing out that the legislation and all of us would require USDA to have securities. We always do. But you have been doing 65-years of making—not you personally, but USDA has been doing 65-years of making rural electric loans, 50-years of making rural telephone loans, and much of rural America would not have had phones or electricity until they were so far behind they would not have caught up if you had not done that.

Can you administer this loan guarantee program without creating a new bureaucracy? Can you do it within your current staffing levels and with the expertise you have at USDA?

Mr. MCLEAN. Absolutely, Senator, assuming that the Rural Utilities Service is able to replace recently retired staff members and recently detailed staff members, I assume them back, or we can get them back. I think that, absolutely, we will be able to administer a program of this size. Again, we have a tremendous, tremendous talent base of telecommunications engineers, financial analysts, accountants, and I believe that we are capable of handling such a program.

Senator LEAHY. Because of time constraints, I will submit a question on the different ways you can do security, but I know the briefings I have had, I will just note, Mr. Chairman, I am satisfied that USDA can handle the security of the loan issue well.

Mr. May, some of the satellite providers want to reopen the issue of the must carry deadline for local-into-local satellite TV. Would that have a good or a bad impact, he says as he leads the witness———

[Laughter.]

Senator LEAHY.—on local affiliates and local independent broadcasters?

Mr. MAY. Senator, you do not have to lead me very far on this particular issue. Let me make a generic comment and then a comment specific to must carry.

Our concern is, as much as we would like to see this loan guarantee program go forward and recognizing that it is on a fast track in the Senate because of a unanimous consent agreement, and recognizing also the problems that can be caused when it gets to the floor, the chairman talked about the kinds of amendments that can be made, as strongly as we support this program, we would be very reluctant to continue our support if people try and use this vehicle as a means of rewriting SHVIA, and I think that is a very real concern that we have. Must carry is one of the principal examples of that.

Let us recognize that at least one of the major satellite platform providers has already announced plans to launch a spot beam satellite to accommodate their must carry requirements in those markets in which they choose to operate, principally the 40-top large markets in the country. Let us recognize also that Mr. Hutchinson's company is prepared to go from market one to market 75 with full must carry. Let us recognize that if we can put a consortium together to cover the remainder of those markets, that that is going to be done with broadcaster participation with full must carry.

People who suggest that you need to change the must carry rules to accomplish this business of providing local signals in rural markets are raising a complete red herring. They are doing it for self-interest purposes only so that they can generate the kind of additional capacity to have pay services and simply earn more revenue. There is no relationship whatsoever to the idea of relief on must carry and a greater opportunity to do local signals in small markets.

Senator LEAHY. I appreciate that, because having gone through all the battle to get a must carry and everything else, it would be a real mistake to hold back or to let that deadline slip. I think the companies that have shown a lot of foresight and innovation, Mr. Hutchinson, yours and others, to say, let us go forward, are then put at a heck of a disadvantage. I think let us keep this playing field the way it is.

But also, this is not something, again, as I said, that you sit around and wait 10-years or 20-years, so like you could at the beginning of the last century, the 20th century, where you could say, well, we can go slowly on telephones, slowly on electricity because it does not make that much difference. Now, just pick up the paper any day or talk to your 12-year-old neighbor who probably is far more Internet-adept than most of us are and just see the innovations going on.

I talked to my son who lives in an urban area who has a DSL line and he is downloading movies and albums in a matter of seconds and doing———

Mr. MCLEAN. With appropriate copyright protections.

Senator LEAHY.—with appropriate copyright protections.

[Laughter.]

Senator LEAHY. In fact, that is the first thing he said to me. He said, Dad, before you say anything, this is well registered and everything else.

But Mr. May, you go into another point. In a very short time because of the digital era, you are at home and you say, well, I would like to rent such and such a movie. Most places where you have all of these facilities, you can say, okay, well, it will be ready in five or 6 minutes because you put the order in and then you download it. I mean, they do the appropriate things for how many times it can be replayed or something like that, but that is what will be done, unless you are out in an area where you have none of this access.

I am thinking of the commercial implications, but I am also thinking of the business implications. I want the opportunities for jobs, for high-tech jobs in rural areas, as there are in urban areas. Now, if the rural areas do not take advantage of that, that is one thing. But at least it should be available, whether it is in my State of Vermont, whether it is in rural Indiana, or anywhere else. I think this is important. I think that Mr. Hutchinson has said the low-interest loan program is an important one for the USDA. It can be done at no risk to taxpayers, but it can be done at great advantage to rural America.

That is not parochialism. I have the happy opportunity of living in both urban America and rural America, urban America in the Washington area, rural America where I live in Vermont. There are advantages to both. I will freely admit that. I do not sit here like I am looking at some kind of a Currier and Ives print. But we have to have the ability in rural America to make the same choices you can in urban America on jobs, especially the IT-type jobs that we face today.

Mr. Chairman, I realize that I have done a little preaching, but I will submit other questions for the record. I think this hearing you are having could well turn out to be one of the most important hearings for rural America for years.

The CHAIRMAN. Thank you very much, Senator.

Let me just say to you, as well as to everyone else, I was misinformed earlier. The vote has not happened. We are in a quorum call, but I am told the vote is imminent. So I am hopeful our two colleagues who are waiting over there expectantly will not———

[Laughter.]

Senator LEAHY. There are somewhere out in virtual space.

The CHAIRMAN. That is right, and I hope that they will not return angry that they have been misinformed.

Let me just take advantage of this quorum call to ask a question. What happens, Mr. Hutchinson, if despite the prospects of success of this project with the loan guarantee, in fact, the project fails. By the third year, things do not work out so well. By the fifth year, the revenues just are deficient. Is there something else for this satellite to do? In other words, is security for the loan, the satellite out there, merchantable in some way, or———

Mr. HUTCHINSON. Yes, Sir. It could be a very valuable satellite because unlike the ones that are up there now that have a footprint of the entire United States, this satellite by design would

have to have specific discreet spot beams with different content going to individual television markets or individual cities.

If the satellite were reallocated, for example, to the delivery of high-speed Internet data, the user who wishes to see a movie or a Web page in Philadelphia would not be in competition with the server and the lines with the user who wants to see something else in New York. You are only in competition with the others in your own market. So it would be an extremely efficient very high-speed data delivery system, and, in fact, that is one of the ancillary opportunities that exists in this system even with the pretty television pictures.

The CHAIRMAN. Are these specifications we should write into the bill to begin with, so the security that we have for the taxpayers has all these features that you are suggesting, or is it axiomatic that they will all occur, I mean, anyone putting up a satellite would do all the things that you are suggesting?

Mr. HUTCHINSON. Well, there are certainly different designs in satellites and I can only speak to the one that we have studied. We think it is the best way to do it. Perhaps in reviewing applications for this loan, the entity reviewing it would want to take that into consideration, the fungibility of the satellite should something happen to the basic local-to-local business.

The CHAIRMAN. Do you have a comment on that, Mr. McLean?

Mr. MCLEAN. Yes, Senator. That would be key to the loan feasibility, the value of the assets, under any circumstance.

Mr. MAY. Senator, I might observe that in the abstract, we would hope that the Committee and that the Congress would not place artificial restrictions on the use of the spectrum available through that satellite and that those that are investors be permitted the opportunity to expand their horizons to the extent possible in delivering digital-quality information, data, video, etc. via this satellite. I think that would be key to the ultimate success of the project.

The CHAIRMAN. Is there an argument about that? Mr. Rhode, do you have a comment about that?

Mr. RHODE. No, I do not.

The CHAIRMAN. Mr. McLean?

Mr. MCLEAN. I do think it is important to ensure, though, that the fundamental purpose is met so that local-into-local is the first priority.

The CHAIRMAN. Yes. You do the fundamental and then the additional which makes the assets more valuable———

Mr. MCLEAN. Yes, Sir.

The CHAIRMAN.—which undergirds, then, the collateral for this loan, whoever it is to be made to.

Clearly, Senator Gramm is drafting his bill, so I am not either mind reading or trying to help him along here, but as I understand, one concept that he has in mind is that the governing body would be a panel of three people designated by such entities as, and the Senator has not made a decision, but nevertheless, generally broached have been people like the Chairman of the Federal Reserve Board and the Secretary of the Treasury and the Secretary of Agriculture, for example, as three.

If that was the case, I suspect still these three ladies or gentlemen would not be administering the program, but they are sort of

a super board of directors, and as I understand from the Banking Committee's focus, they are still worried about the taxpayers and getting paid. In other words, to have Alan Greenspan or his designee or Larry Summers or so forth in addition to our own Secretary of Agriculture and the department for which we are responsible is to make certain that there is some public confidence that the budget is not going to be unbalanced in this deal.

What is your general comment, any of you, about that idea, without knowing, I suppose, who these three finally are, whether it is the RUS and it is you, Mr. McLean, or I am not certain who else in the Government can handle this kind of thing, but this is being sketched over in that committee, as I understand it. It clearly is a different concept than the Baucus bill or the Burns bill that we started out with, although Senator Burns probably is working with Senator Gramm in some way, largely because he wants to see a bill passed, as I do, as Senator Leahy does and Senator Baucus. So this is all sort of out-of-school work, but can you help contribute while you are here today as to how any of this might be fleshed out satisfactorily? Does anyone have an idea on that? Mr. McLean?

Mr. MCLEAN. Two days ago, we did testify before the Banking Committee and offered our assistance and expertise to Senator Gramm. There is a model that this committee is responsible for that might be worth considering. In 1972, Congress created the Rural Telephone Bank. The Rural Utilities Service provides all of the staff work, provides all of the due diligence. It staffs, in fact, the board members of the Rural Telephone Bank, which are both Presidential appointees and industry-elected members. So you do have a model or a precedent of the Rural Utilities Service working with a board.

I think the most important thing is that the loan guarantees are available in a timely manner. You certainly do not want to create a new bureaucracy. You do not want to have to have excruciating levels of review that take away all of the market benefits from having a loan guarantee by replacing it with costs involved in that review.

The CHAIRMAN. Did you offer that testimony to the Banking Committee in your appearance there, or give them these ideas?

Mr. MCLEAN. We told Senator Gramm that we would work with him and work with all members of Congress to make the system work.

The CHAIRMAN. Tactfully stated. Let me at this point indicate that the vote finally has begun, so I will recess the Committee. Mr. Rhode, I understand that you need to be excused because another committee wants to see you, so you are excused and we really appreciate your appearance and your testimony. If the others of you can stay, I would gather imminently, Senator Fitzgerald, who was in mid-flight when I stopped him and he went to vote, may well have some more questions, and Senator Lincoln has not had an opportunity at all. If either of those should return, I might ask staff simply to indicate that they may commence chairing the Committee and start asking questions and I will return as soon as possible to conclude with this panel, and then we look forward to another panel right after you.

So for the moment, we are recessed until a Senator appears and begins the questioning.

[Recess.]

STATEMENT OF HON. BLANCHE L. LINCOLN, A U.S. SENATOR FROM ARKANSAS

Senator LINCOLN. [Presiding.] I think I am supposed to reconvene this hearing. I very much appreciate the chairman allowing me to do that, because we all do have other things to move to.

In his absence, I would certainly like to compliment the chairman for holding this hearing, scheduling the hearing here today, but also for his attention to issues that affect rural America, and I think this is definitely one. I have mentioned to some of you all before that I am the ultimate consumer to testify on this issue. I live in the middle of nowhere and have had some unbelievable lack of opportunities in many of what I have been able to get, whether it is through my phone service or whether it is through my television outlets or whatever that may be.

I will indulge myself and request that my entire statement, since I was a little bit tardy this morning, be included in the record.

Senator LINCOLN. I have said many times in floor statements in Arkansas that this is an extremely important issue. It is a very important issue to us in Arkansas and to my constituents.

My colleagues and I sometimes jokingly refer to one another as sharing a State flower, a flower that is up in the front yards of many of our constituents, and that is a satellite dish. We tease about that sometimes, but it is an important issue for many of us that do live in rural America, to be able to have access to local information. Oftentimes, we have to go to a portable radio in order to get farm information, local weather information, disaster, a school closing, whatever it may be, and it is going to be very critical, I think, for us to make sure that we look at this issue closely and recognize what it means to all Americans.

I would also like to thank my colleagues on this committee, Senator Baucus and Senator Johnson, and especially Senator Leahy who was on the conference committee here, who I think stood firm and worked very hard. Their leadership on this issue has certainly been very important, and also Senator Burns, who is the chairman of the Telecom Subcommittee in the Senate. He is not here, obviously, today, but he has also done a great deal of work on that and I have enjoyed working with my colleagues and want to continue to.

I mentioned out in the hallway how pleased I am to see such a very diverse and very well-versed panel that we have here today. Chris and Greg, from your experience here on the Hill, I not only want to thank you on this issue, but also in the way that you worked with me and my staff. You were very helpful during the conference committee on the 1996 Telecom Act, and I really appreciate that and am proud that you all have achieved what you have and that you are here again to help us work through some of these issues.

Mr. MCLEAN. Thank you, Senator.

Senator LINCOLN. Without a doubt, I think Jim May has got history here beyond bounds that he brings to this today.

This issue is critical because 20-percent of all of the homes in Arkansas were left without access to in-State television broadcasts through their satellite service last November when the Senate adjourned without adopting the rural loan provision in the satellite bill. We are here today to talk about what is the best way to achieve access and certainly visibility to individuals in rural areas. I am pleased with some of the ideas, also some of the questions, that have been brought up that point out to all of us that we are looking for a solution that is going to benefit everybody, not just consumers. Obviously, I say to the industries that could be serving these consumers, we want to be able to work with you to come up with something that is going to be beneficial to everybody.

I do believe, though, that there is a solution out there, and I hope that as we work to get to that, that everybody is going to be willing to come to the table and realize that we all have to give a little bit to get something out in return.

Since January of 1999, my office has received more letters and phone calls on this issue, the satellite legislation, than almost any other issue, and that is one of the reasons I have been very passionate and involved in this issue. I can identify with them because I live out in the rural areas and I understand what they are up against.

It was never more obvious to me than when, some of you all will remember, when I was in the House, having twins. After those twins were born, I was stuck out in the middle of nowhere, pretty much isolated with small children. Being able to get local news was very important to me. But also in terms of the schedule and the life that I led, I could not get local news, and at feeding time and at bath time, I missed any kind of local news that there may have been, which was really not even Arkansas news, it was Tennessee news. Then after feeding time, I would wait for the nightly news, which was usually Seattle, Atlanta, or Boston, which was completely irrelevant in rural Arkansas.

But this is an important issue and one that I definitely intend to play a role in. The frustration level has increased, obviously, for the constituents that we serve, and they want to know why their next-door neighbor, after what has happened in November and what has transpired since then, why their neighbor who has a satellite dish and has had one for years can now get FOX and CBS but they cannot as the next-door neighbor with a new satellite.

My staff assistants who are answering the calls that are coming in from these constituents really deserve combat pay in trying to explain this legislation. They first explain the disparity in the service between the next-door neighbor's and theirs, and then they also have to explain why folks in Washington, DC., can get local-to-local while folks in Arkansas cannot. That really smacks right dab in the middle of inside-the-beltway favoritism to them in Arkansas. So I have had to put hazardous duty pay on that front office when they take those calls.

But it is truly, I think, somewhat a lack of understanding in terms of what rural America is up against and I want to compliment the chairman, as I did earlier, Mr. Chairman, on the way that you have taken the initiative to really focus on the issues of quality of life in rural America.

I would like to ask just a couple of questions. Mr. McLean, one point of contention seems to be determining which group is best equipped to administer the rural loan fund. In terms of your views of who is going to be the best to do that, if you could express to us, and others may have some point of view there.

Mr. MCLEAN. Well, very humbly, Senator, I certainly believe that the Rural Utilities Service is very capable of performing that service. We have some of the Federal Government's very best telecommunications engineers. We have a top core of accountants. We have excellent financial analysts. I think most importantly, the Rural Utilities Service understands rural America and understands the challenges of both distance and density.

So I think that we have the skills and I think that we also have, given the size of the program we are talking about; very large loans, but we are talking about, I think, a manageable volume of loans that I believe we would be able to accommodate under current FTE ceilings.

Senator LINCOLN. If you thought there were any drawbacks in your capability, would it be the size of the loan?

Mr. MCLEAN. I do not think that that—if there were———

Senator LINCOLN. Or weaknesses, if you felt like there were any weaknesses where we needed to shore up in order for your capabilities to be there.

Mr. MCLEAN. Right. I think the wonderful thing about the Baucus legislation as well as the Burns and Boucher legislation is that it does give the administrator the ability to seek outside advisors, either financial analysts or technology analysts, if it were necessary, to analyze a particular loan. So I think that there is sufficient flexibility to be able to manage any shortcomings that might exist in staff at the current time.

Senator LINCOLN. Mr. Hutchinson, you mentioned that the Government loan guarantee made this a desirable approach, or a desirable project. I mean, do you think that was an understatement? Later on, you did mention to Senator Fitzgerald that you felt like the only way that you could accomplish it, was if that incentive were there. Do you strongly believe that?

Mr. HUTCHINSON. Yes. I believe if the incentive is there, that there are several entities I know about that will be applying. We might be among them. I am not making a commitment right now. But I do make the commitment that whatever the entity, we think we are in the best position with what we have done technologically to date to sort of be the back room, economies of scale, and that we have the conditional access system, we have the architecture, and I think it is really important, just as we talk about the common platform for efficiency, that the system be built to be fully compatible with the other markets so that, for example, if someone moves from one market to the other, the box still works. You do not have two sets of boxes or standards across the land.

Senator LINCOLN. Continuity is important, and the long-term technology that is going to be out there, I agree, we need to be prepared for.

I have been out there with a lot of small Arkansas telecommunications companies who know what it costs. They know what it takes to lay the line to reach Ms. Irene that is living out on a grav-

el road and recognizing what it costs to service those customers out there. The universal service fund is a way that really helps those companies and some of those really, rural customers to be served.

Do you think that there is any merit in some type of a cost sharing or investment from the industry side in terms of what investment we make? Obviously, the loan guarantee is important, but do you see any responsibility from the industry? I know Senator Fitzgerald touched a little bit on the fact that if it seems to be a good business investment, if these are places where the industry wants to play and these are good marketplaces for them, does it not make sense for them to at least share in some of that?

Mr. HUTCHINSON. In what we call the phase one plan for the larger markets, which is mirrored for the smaller markets, our preference is for strategic partners who have more than just an economic stake in it, who it really fits their business, the satellite providers, the satellite builders, those sorts of entities. So the answer is yes.

Now, with regard to the technical platform, I do favor satellite because we have talked about the last mile there and it just seems to us that the one special attribute of satellite is that it is like rain. It falls on everyone. There is really no added cost for that last mile. So, when you are talking about these geographically disperse areas, we think satellite technology does an especially good job of assuring that every last citizen is served.

Senator LINCOLN. Mr. May, I met with other Senators with some of the major network anchors the other day and they were talking about the importance of dovetailing and how important the telecommunications industry, the computer, the Web, and all of that infrastructure has become to network television and what it is going to mean for them. I, myself, am amazed at how we have progressed even much further than my wildest dreams from the 1996 Telecom Act. We have come a lot further a lot quicker than I thought we would.

Do you think that it stands to benefit those networks in terms of increasing their visibility in markets that are going to be enhanced by the information highway? When you start talking about the increase in telecommuting, you start talking about the advantages that it provides to rural America, I am just seeing in my constituency those that have been able to build their businesses on a Website like eBAY, for instance, and have been able to build an industry in rural America. Does it not really stand to truly benefit those networks to be able to access that market?

Mr. MAY. Senator, certainly the networks themselves could benefit and therein the business, if you will, of convergence with these different technologies. But I think the more important benefit to what we are talking about here today is not the networks but the local stations. It gives the local stations greater incentive and opportunity to engage in convergence. It gives them—you and the Congress have mandated, for example, that these stations be up and running in digital technology by 2006.

Senator LINCOLN. I know. I am hearing from them.

Mr. MAY. That is a huge investment on the part of stations. Yet this gives stations an opportunity to be broadcasting, if you will, from satellite in digital throughout their entire market overnight,

if they can be carried, and I think that gives them the opportunity to engage in other lines of business, again, a matter of convergence.

So we are very high on the positive opportunities that local-to-local in all size markets, but in particular rural markets, provides. We discussed that with Senator Leahy just a minute ago.

I would make one other observation, Senator, if you would permit me, and that is that it is a good thing when you are at home with your new babies and you did not have access to local television, that you did have access to local radio.

[Laughter.]

Senator LINCOLN. Point well taken. I appreciate that and am glad to know that it is a good prospect in terms of a market. I do think, without a doubt, that local network affiliate is a good conduit for the networks, because I know for my own sake, it is hard to run a campaign in a State where you do not even get the State affiliate station's local news, so———

Mr. MAY. At the end of the day, Senator, we are very sensitive to the kind of combat pay that your front office staff require because we hear from those consumers, too, because they are our consumers. They are our viewers, as well. I think the beauty of local-to-local being provided in all markets, 210 across the country, is that, that really does wipe out any of the real concerns about access to entertainment and news and programming for anyone who chooses to have access to a satellite.

Senator LINCOLN. Well, I appreciate it, and thank you, Mr. Chairman. I have taken more than my time, but would like to encourage all of the panel that we can work together to come up with a plausible solution in terms of how we actually make this happen. Knowing that technology-neutral is something that people are interested in, let us make sure that we are doing it fair. Thank you again, Mr. Chairman, for your leadership on this issue. I appreciate it.

The CHAIRMAN. [Presiding.] Thank you, Senator Lincoln, for attending the hearing and raising some very important questions.

I just wanted to conclude. Mr. May, in your testimony, I just do this for clarification, you mentioned that the bill appears to exclude two existing DBS operators. The bill you are referring to is the Baucus bill?

Mr. MAY. No, Sir. I was referring to last year's conference bill, where it sort of excluded, if I recall correctly, both DirecTV and EchoStar's platform———

The CHAIRMAN. You are suggesting that if we do this again, we should not exclude them because of the reasons that you———

Mr. MAY. That is correct.

The CHAIRMAN. I appreciate very much all of you coming and your staying with us throughout this period. I think this testimony is very helpful to Senators who attended and certainly through the record to all the rest as we really try to work our way through a very important project and try to do so in a timely way.

As I mentioned in our first hearing on another subject on Tuesday, we have a fairly small window of opportunity this year, largely imposed by the fact that the leadership is intent upon passing the appropriation bills this year and having them signed at an early time. So this backs up into the discretionary period for those sub-

jects that are not appropriation bills or not the budget, and essentially a time frame of this month, next month, and maybe April. This is why I am intent in trying to push this thing and accelerate it. We have the support of our members in doing that, as was evident today.

We thank you all for your testimony. We look forward, if we may, to calling upon you for additional information. As Senator Leahy has indicated, he will have some additional questions, and so may other Senators. If you could respond to those promptly, we would appreciate it. Thank you very much.

The CHAIRMAN. I now call upon a second panel. Some of you will be participating in that, but we will also have Dr. Stephen Jay, Chair of the Department of Public Health and Professor of Medicine at Indiana University of Medicine, joining Mr. McLean, Mr. Rhode, and Mr. Parkhill.

Dr. Jay, we welcome you to the hearing to join your colleagues who are already tested by this morning's question and answer as well as their own testimony. As perhaps you heard from the last time, we are asking that initial testimony be summarized, preferably in 5-minutes or a little bit more, and we will not be rigorous, because for the moment I am not joined by other Senators, so the pressing issue of hoards of questions is not upon us, but we really want to explore this subject carefully.

If you would proceed with your testimony, and then I will ask that you be followed by Mr. McLean, Mr. Rhode, and Mr. Parkhill. Dr. Jay?

STATEMENT OF STEPHEN J. JAY, M.D., ASSISTANT DEAN, CONTINUING MEDICAL EDUCATION, INDIANA UNIVERSITY SCHOOL OF MEDICINE, INDIANAPOLIS, INDIANA

Dr. JAY. Mr. Chairman, thank you for the privilege of testifying on this critically important issue. I am Stephen Jay. I am a practicing internist from Indiana. I am on the faculty of the Indiana University School of Medicine and Chair of the Department of Public Health and have been involved in one way or another in telecommunications, telemedicine, to support patient care and the education of health professionals for about 25-years.

In his State of the Union address just recently, the President spoke of the digital divide which separates technology haves from have-nots and Secretary Shalala and Surgeon General Satcher issued a related call last week in announcing the goals of Healthy People 2010, those to improve quality and duration of life and to eliminate disparities in health care. This digital divide, specifically the issue of telemedicine, threatens the ability of our Nation and of particular rural States like Indiana to meet these challenges of Healthy People 2010.

Among our most vulnerable citizens are the medically underserved populations of rural communities, and telemedicine, in particular, the application of telecommunications technologies to health care, is one of those strategies that Indiana and other States have used to address rural health care challenges.

Telemedicine offers three key advantages to rural communities. First, it can provide clinical care benefits, including greater access and reduced disparity in health care. Indiana, for example, has

compelling needs in these areas. Sixty-percent of Indiana's 92-counties are Federally designated non-metropolitan counties. Thirty-percent of our population, too, of the 6-million people in Indiana live in these areas. The rural populus is disproportionately poor and older than average and only about 13-percent of Indiana's active patient care physicians serve in these rural areas.

Experience nationally and in Indiana indicates that telemedicine can improve care for these populations, benefits through less time to travel and the cost of such for health care, less delays in treatment, increased access to specialty care, and importantly, as was alluded to earlier, improved capacity for community-based care.

In Indiana, for example, the Department of Agriculture's distance learning and telemedicine grant program supports an innovative partnership project of Union Hospital in Terre Haute, Indiana, the Midwest Center for Rural Health, the Clarian Health Partners, and this comprehensive telemedicine project provides benefits for patients in rural Western Indiana that include electronic medical records networks among multiple care sites, which ensures continuity of care, obstetric consultation services that eliminate dangerous and costly travel for high-risk obstetric patients, and interactive multi-site distance learning activities for health professions.

A second benefit of telemedicine is its role in strengthening community-based health professions education and training, and here, we have had about 30-years of experience in Indiana through the Statewide system of medical education that was embarked on in the late 1960s. Recently, in fact, last month, Indiana has begun to build on that platform through the HRSA area Health Education Centers Program. Indiana has just submitted the AHEC proposal, and a key element of bridging between academic medical centers and small communities, particularly rural communities in Indiana, is the telemedicine technology.

A third benefit of telemedicine is the ability to expand system-wide capacity for data collection, research, and so on, and here, the EPICS program in Southern Indiana is particularly innovative in bringing and linking together hospitals, clinics, and other providers in a very innovative way.

There are barriers, and I will list just a few before closing. The barriers to implementing telemedicine are several-fold. Licensure is an issue which needs to be addressed at various levels. Reimbursement continues to be somewhat limited and complex. The operating and start-up costs for small institutions, particularly in hub-and-spoke sort of arrangements, continues to be a barrier. Infrastructure, communities lack the needed infrastructure to support telemedicine.

Liability is also an issue in that there is uncertainty among telemedicine practitioners as to what their legal exposure is, and also, recently, the OIG advisory opinion concerning the anti-kickback violation issues has raised concern and questions among those who are participating in collaborative telemedicine ventures.

We have learned through our experience in Indiana, these pilot programs and others, that success, critical success, involves involvement of community leaders in all levels of planning and implementation and evaluation of these programs and partnerships, which was mentioned earlier, among State and Federal Govern-

ments, State and local health departments, academic health science centers, and private sector and NGOs.

While significant barriers remain to rapid development of telemedicine, we believe that progress is being made, and by building on these successes, we can hopefully accomplish the goals that were set out in Healthy People 2010.

Mr. Chairman, we applaud your holding these important hearings on this critical issue to rural America. Thank you.

The CHAIRMAN. Thank you very much, Dr. Jay, for coming today and offering that testimony and very specific instances of telecommunications and telemedicine in our State. We appreciate it.

[The prepared statement of Dr. Jay can be found in the appendix on page 90.]

The CHAIRMAN. Mr. McLean, would you proceed with your testimony? We are on the digital divide panel now, as you and the audience know.

Mr. Mclean.

Mr. MCLEAN. Yes, thank you, and it is a great pleasure to serve on a double-header here. This is terrific.

Yesterday, President Clinton announced initiatives to close the digital divide and gave a little preview of the budget and I would ask the chairman if I could have a statement related to that included into the record.

The CHAIRMAN. Yes. It will be placed in the record in full.

Mr. MCLEAN. This Committee has not only been responsible for closing the digital divide, but also creating digital opportunity throughout rural America. If I could just use a few moments to highlight some of the accomplishments of the Rural Utilities Service, again, under the oversight of this Committee.

Since 1993, the deployment of fiber optic cable in Rural Utilities Service-financed plant has doubled, representing one in every ten miles of cable in rural local loops. That is a tremendous fiber-rich diet for telecommunications. Since 1993 through 1999, RUS has financed $1.2 billion in fiber optic facilities and $790 million in digital switching systems and enhanced feature softwares. Today, RUS-financed borrowers provide 99-percent digital switching. It is unparalleled compared to rural exchanges outside of the RUS family. Since 1993, 306-distance learning and telemedicine projects totaling $83 million have been funded in 44-States and two territories.

The Rural Utilities Service is absolutely committed to closing the digital divide. We are bringing, in many cases, new service, first-time phone service to folks right now in the year 2000. Last year, I had the great privilege of presiding over a ribbon-cutting ceremony in Bylas, Arizona, where the San Carlos Apache tribe connected 450-families to phone service for the very first time. This had a profound effect on the community. One of the first things that happened is the police department hired more police because now they could have people to call in for 911 service and have a rapid response. So just by the addition of that technology, the safety and security of that community increased. There are new opportunities for jobs. There are new opportunities to participate in the digital economy.

We are so fortunate to have your longstanding and strong support for our program. Rural America is benefitting very much. So thank you for the support of the Rural Utilities Service and the distance learning/telemedicine program.

The CHAIRMAN. Thank you very much for that historical outline. It is a fairly short history, but an intense period of discovery and application. We appreciate that.

Mr. Rhode?

Mr. RHODE. Yes. Thank you. First, I should explain my reappearance, as you were kind enough to excuse me———

[Laughter.]

The CHAIRMAN. We are grateful.

Mr. RHODE.—but the hearing in which I was supposed to appear is delayed, so if you will have me back, I thought I would return and I may have to go a little later.

The CHAIRMAN. Yes, indeed. We are grateful you are here.

Mr. RHODE. I am glad to be here again to talk about this subject.

I grew up in Rural America, and I grew up in what was the second-largest city in North Dakota, which is a town of about 50,000-people. So to a lot of people, that is considered a pretty small town. To us, it was a big town. But I grew up in a State where all but just a couple of counties have experienced out-migration over the last two censuses that have been conducted.

So I fully understand the unique challenges that small communities face, particularly those communities that are in economically distressed areas, such as the communities that I have grown up in the farm belt. But I also understand the tremendous potential that information technologies offer many of these rural residents to improve the way they live, work, the way they learn and obtain health care, and getting good access to advanced telecommunications and information services.

Last summer, many people are aware that the Commerce Department released a report called "Falling Through the Net: Defining the Digital Divide" which was a combination of efforts from NTIA, the Agency which I now administer, as well as the Census Bureau, using census data. That report highlighted a number of positive things. For example, computer ownership has doubled in the last 4-years in the United States. Internet access has increased by more than 40-percent, just in the last year alone. Also, more than a quarter of American households now have access to the Internet.

However, that same report had some rather disturbing news. It also found that at almost every income level, households that are in rural areas are less likely to own computers than households that are in urban areas. The report also found that at almost every income level, households in rural areas are half as likely to have Internet access at the home than households in urban areas. The report also found that black, Hispanic, and Native American households are much less likely to have computers and access to the Internet than white households are.

The point of this is that while there is tremendous growth and a lot of wonderful things occurring in our economy with respect to access to information technologies, what this report found is that

the gap between urban and rural, between poor and affluent, and between minority and white is growing.

For example, in 1997, 8.7-percent of Hispanic households had access to the Internet while 21.2-percent of white American households had access to the Internet. We found that within 1-year, the increase for Hispanic households went to 12.6-percent, while in white households increased to 29.8-percent.

With respect to African American households, we found a similar pattern, that in 1997, only 7.7-percent of black households had access to the Internet while 21.2-white households had access. The white household access increased to 29.8-percent in 1-year, while the black households only increased to 11.2-percent. The point is, the trend lines are showing an increasing chasm between minorities, between low-income and affluent, and between rural and urban America.

Now, yesterday, as my colleague Mr. McLean just announced, President Clinton at Ballou High School in Southeast Washington, DC., unveiled his budget package for his initiative to close the digital divide, and yesterday, the President said, "We must make access to computers and the Internet as universal as the telephone is today." To help achieve this goal, the President announced the following initiatives that I would just like to briefly run through for you.

First, the President is proposing to triple the funding for the Technology Opportunity Program which is administered by NTIA. Currently, that program is funded at $15 million. The President is proposing to increase that funding to $45 million. Since 1994, the TOP program has been working to close the digital divide, providing over $118 million worth of Federal grants to nonprofit community-based organizations who provide for innovative telecommunications and information technology applications to address a range of issues, such as public safety, health care, education, community-wide networking, and business development. That funding has leveraged over $184 million in non–Federal dollars.

Another initiative of the President is to create a new program to expand home access to the Internet and computers, which will be funded at $50 million.

There are other programs, as well, such as a $25 million program at the EDA, as well as the RUS, to accelerate broadband deployment in rural communities and inner-city areas.

The President is also proposing to triple the funding for the community technology centers, which is currently administered by the Department of Education. That funding would increase from $32 million to $100 million. Also, to double the funding that we currently provide at the Department of Education to train teachers, new teachers. The President also is proposing a $10 million program at the National Science Foundation to help prepare Native Americans for careers in information technology fields, and also a $2 billion package over 10-years for tax incentives to encourage private sector donation of computers, technology training for workers, and sponsorship for community technology centers.

This package of proposals is part of the administration's effort to close the digital divide. In addition to this, the administration will continue to promote policies that are faithful to the Telecommuni-

cations Act of 1996, policies that foster competition and policies that preserve and advance universal service in a manner that is consistent with the Act to ensure that access to advanced telecommunications and information services are available to consumers in all regions of the Nation.

Finally, the one last comment I would make is that as part of NTIA's role and working on the administration's efforts to close the digital divide, we have created a new Website called digitaldivide.gov, and the purpose of this Website is to provide for a clearinghouse for those that are interested in following the administration's activities to close the digital divide, as well as to find additional information about private sector initiatives. There is an enormous amount of activity in the private sector by private companies that are providing for grants, providing donation of workers for training, donation of equipment, and we are trying to provide a means for the public to easily access a number of these programs, and so I would encourage people who are interested to check our Website. Thank you.

The CHAIRMAN. Thank you very much, Mr. Rhode.

Mr. Parkhill.

Mr. PARKHILL. I appreciate the opportunity to come before you today to talk about the digital divide in rural America. As I introduced myself a while ago, I am Dave Parkhill. I am from rural America. I am the General Manager of Hamilton County Telephone Co-op in Dahlgren, Illinois.

Hamilton County Telephone Co-op is a member of the National Rural Telecommunications Cooperative. NRTC is a not-for-profit cooperative association with a membership of nearly 1,000 rural utilities located throughout 48-States. Like Hamilton County Telephone Co-op, NRTC's other members provide electric or telephone service to underserved low population density areas of the country.

Mr. Chairman, Dahlgren, Illinois, is the second-largest town in Hamilton County, Illinois, and we have a population of about 500-people. In our telephone service, we provide services to approximately 2,400-subscribers and we cover approximately 463-square miles in parts of seven counties. That is a lot of land and not a whole lot of people there.

Our area of Illinois is agricultural. We grow corn, soybeans, wheat, and other crops, raise cattle, hogs, and other livestock. The average family income in our service territory is well below the national average. I do not have the figures here, but I believe the average income in those seven counties is just a little bit over $17,000 per year.

About 4-years ago, Hamilton County Telephone Co-op partnered with Midwest Internet to bring the first local Internet service to our community. Four-years later, we are still the only local dial-up Internet service in our area. We have about 525-subscribers and each pay about $20 a month for Internet access.

Most of our subscribers are farmers using the Internet to get the vital information they need to conduct their businesses. They use it for pricing and ordering supplies and checking the weather. They use it to buy and sell products, keep an eye on the grain market and other commodities. We have school kids that use the Internet

access to study and do their homework and to learn, and their parents use it for a host of the other services that the Internet offers.

Without the Internet access service, Mr. Chairman, Dahlgren and surrounding areas would have no local dial-up service, none at all. As far as high-speed access goes, it is simply cost prohibitive. We do not have enough people to justify the expense of providing it. If we were to offer ISDN service, we would have to charge maybe $200 a month more to provide it. The DSL service would more than likely be in the $100 per month range. Our subscribers do not have the incomes necessary to support these kinds of charges.

I had a chance recently to review the report issued last year by the National Telecommunications and Information Administration entitled, "Falling Through the Net: Defining the Digital Divide." Mr. Chairman, there is shocking information in that report, and based on my experience as the only Internet service provider in Hamilton County, Illinois, it is true.

NTIA says that at almost every income level, households in rural areas are less likely to own computers than households in urban or central city areas. At every income level, households in rural areas are significantly less likely, sometimes half as likely to have home Internet access than those in urban or central city areas. Black households in rural areas, in particular, are one-third less likely to own a computer than the average U.S. black household and are two-fifths less likely to access the Internet than the average U.S. black household.

According to the NTIA report, a digital divide exists among different geographic areas of the country. Even though the number of Americans accessing the Internet has grown rapidly in the past year, NTIA says that the digital divide between information haves and have-nots continues to widen.

Mr. Chairman, NTIA is right. There is a digital divide and Hamilton County and the rest of rural America is on the wrong side of it. That is a problem and it has got to be fixed.

I am sure there are many other home towns that view this problem just as seriously as I do, and I am sure that anything your committee could do to help fix it would be deeply appreciated in Hamilton County and throughout rural America. Thank you very much.

The CHAIRMAN. Thank you very much, Mr. Parkhill.

Let me just make some general comments before commencing questions of you, because all of you have touched upon something that is very important not only to our committee but to the country, the digital divide issue the President has addressed. Both you, Mr. McLean and Rhode, have cited specific programs that the President has advanced.

But the reason we have coupled these two hearings is obvious, one of which is, in the first half of our hearing, we discussed a bold proposal for technology, for this common platform, that has all sorts of possibilities. I think as you, Mr. Rhode, or Mr. McLean pointed out, if you have this satellite there, the least-accessible American in terms of what used to be the stringing of telephone lines or rural electrical lines or what have you really becomes ac-

cessible in a way that we could not have envisioned at the beginning of rural electrification or the telephone service.

These have been basic quests for us, because philosophically, we have said although these individual persons may be more expensive on a unit cost basis to service, we were simply all one country and we wanted to have that sense of indivisibility, unlike countries that have tried to repopulate their areas, often at great expense and often of human liberty of people who simply did not want to go to Siberia or wherever else.

In rural America, people have wanted to live. They have liked the quality of lifestyle. The dilemma that puts this together with our previous hearing when we were talking about rural income, the safety net, these sorts of problems, you discover rapidly there are great divides among farmers in terms of their sophistication to market their grain.

I have a computer and I can at night, when I have nothing else on my mind but the price of corn, go to the, say, the CBOT Website and get a chart for corn, daily, weekly, historically, and get a pretty good idea, and even note what other people are saying about the price of corn. I may get sort of a twitch to get into the market the next day to make a sale, perhaps. That, I have the opportunity to do.

As you pointed out today, if a farmer does not have a computer, and in many counties of our country, a majority of farmers do not have computers, quite afar from people who are not farmers in rural America, why, they have got a problem. You could probably get the Wall Street Journal, but maybe that is not altogether accessible. In fact, the degree of sophistication that comes through learning courses that come from our universities, from all the people who are available if you can get them on the Net are likewise not available.

So although we are asking farmers to become more sophisticated and more market-oriented, and they really must, there is no way out of this problem. Their return on investment will continue to decline unless they are just very lucky. Until there really is something, we are trying to come to grips today just with basic income of producers.

Now, in terms of the quality of life, and Dr. Jay has addressed this, we all want to be healthy Americans and the problems there are manifest, but so are the possibilities. It is sort of an exciting idea as to why as a national project we ought to undergird getting the satellite up and getting the signals there so that we not only have entertainment and news, but we have all the benefits of education and even of medical service that can come. Granted, the problems of licensure and reimbursement and other aspects cannot be forgotten.

I just make these points to try to buttress why this committee, or most of us, believe we have some responsibility in this and how we meld together the market forces. I am not oblivious to the fact that the ingenuity of Americans making investments and seeing these needs is clearly there, but the problem that we saw earlier with the electrification and telephone issues and so forth impelled a broader strategy and that has created a lot of opportunities.

Sort of commingled with this is the fact that, as we talked about demographics in agriculture, there is not a one-way flow from people from the country to the city. I cited in a press conference on Monday, I think it was, the fact that the largest-growing farm population in the country are those who are on farms of one to 50-acres. In other words, sort of the broadcast treatment of this journalistically that farms are decreasing almost inevitably in America has been true for most of our century, but not necessarily very much true of the last 5-years.

One reason is there were a lot of farm families who left, say, in a group of people from 51-acres to 500. This seems to be a more vulnerable group of people, but not so of those who are, say, in the 18-percent of Americans who produce 85-percent of all that is produced. These are, by and large, people with 500-acres, usually 600-acres or more, and these folks are moving ahead. They are capitalized to be superior marketers and competitors.

But then at the level of one to 50, this must mean a lot of Americans are choosing a more rural lifestyle. They may just want to get away and have a little space. This leads to a whole new group of people who are interested in what we are talking about today. Many of these people may have lived in the middle of New York City or Indianapolis and they now, by choice, find themselves in a situation that may still pick up the metropolitan market signals or what have you, may not have gone that far, but some do, reach the point where the signal becomes fuzzy, as you were describing today, or may stop altogether.

So this is a new, not lobbying group, but an advocacy group that say, we want the benefits of our 50-acres out here and we are classified as farmers because we sell at least $1,000 off of that, so that qualifies your farm. There are a lot more people on the 50-acre farms that do not sell $1,000, but there are many that do. Hundreds of thousands of people start showing up in these new farm situations. But they are often doctors, they are lawyers, they are business people, and given transportation possibilities, they can do that sort of thing. So they want to have all these things, so that has probably been helpful. As opposed to simply a one-way tour to the city, we have got a little spreading out in America, maybe some potential for revival of some county seats.

I do not want to overdo it, but Mr. Rhode, in your State of North Dakota, we have had testimony for several years of people trying to do things that could otherwise be done on the New York Stock Exchange or through commercial clearinghouses or so forth, but you can do it in North Dakota or South Dakota if you have the electronic and communications mechanisms to do that, employ people in sophisticated ways. This still requires very sizeable leadership at the local level and the State level and the imagination of business people to do that.

Having said all that, the fact is, as you point out, the divide is very great. Because this seems to be racing along at a very fast pace, that is the whole telecommunications age or computers or bandwidth or so forth, without there being some thoughtfulness about this, there is every prediction that the gap will get wider still. Eventually, something may happen at the lower end of the

band, but then the other folks may be off somewhere else by this time. So the need to compress this time frame is at hand.

I am curious, Dr. Jay to begin with, granted that a lot of good things can happen in telemedicine. Describe the infrastructure of what is required to make this work. There has to be somebody back at the hospital or at the medical school or at the headquarters, I suppose, so that even though you are extending your empire in terms of information, advice, can you fill in the gaps of how you have tried to organize that or how you would suggest that we improve that situation?

Dr. JAY. Briefly, we have used virtually all of the communications technologies that have been discussed here today. I guess I see some strengths in having several arrows in the quiver, so to speak, in terms of adapting and approaching the need of a particular community in linking the technology required to that particular need, and probably one will need several arrows as opposed to one.

We use satellite technology for medical education programs. We use two-way V-tel type of communication technologies for two-way video, two-way audio conferencing with patients in the prison systems and other formats. We use Internet with technology that includes compress and store forward for things like teleradiology, teledermetology, telepathology, where the microscopic findings can be transmitted.

So the short answer is, we use multiple technologies and, I think, probably will need to continue to explore and use and adapt multiple technologies in the future. I am not sure there is one single answer to your question in terms of the technology, specific technology.

The CHAIRMAN. Do you do surgery, not over the Net, of course, but do you have a master surgeon at some point who guides the surgeon at the local level via some network?

Dr. JAY. Yes, and again, the simplest technology could be a phone. It could be your computer, your PC. Or it could be the kind of video interactive sorts of technologies that we are talking about.

The CHAIRMAN. On which you could show the surgeon how to go?

Dr. JAY. Yes.

The CHAIRMAN. He can actually see something there that is helpful.

Dr. JAY. Exactly. So you can basically send and forward the clinical information of a particular patient. You can send the data, the information, the laboratory information. You can send the images, the radiology images, and the ultimate image, the image of the patient themselves, to the consultant at a distance.

The CHAIRMAN. Mr. McLean, at RUS, obviously, you are involved in all these issues broadly because your portfolio covers people doing lots of things, but can you give some overall comment as to all we are discussing here and how your agency specifically is being helpful or could be more helpful if we were to do the right things?

Mr. MCLEAN. Well, Senator, first of all, I do not think you overstate the case at all in your comments. In my heart, I believe we really are on the verge of a rural renaissance. Because of the technologies of telecommunications, it makes it possible to do anything anywhere and we can bring the very best medical minds to a rural patient in a rural clinic. Surprisingly to many people, the digital

technologies that are utilized to examine a patient via telemedicine will provide in many cases a superior diagnostic tool than a visual examination of a doctor coming into your office, because if the scope is in your ear and it is projecting a digital picture, it has a much more accurate resolution than the naked eye would have. So we see where telemedicine is not a second choice for rural communities, but in many cases, telemedicine can enhance the quality of health care.

Then in education, it is just tremendous, the power of this technology. Rural schools can combine together and share teachers which any one of those schools would not otherwise be able to afford. Kids in distance learning classrooms develop an etiquette that is relevant to having a camera in the classroom, and in some ways have kids being more polite to each other because they know they can only talk one at a time, kids have to raise their hand, because you have the technology in the room, and in a sense, they are on television. So there are all kinds of tremendous fringe benefits that relate to this.

We found in our distance learning/telemedicine projects that once you establish a facility, it becomes a community asset. During the week, on Monday through Friday, on school days, it is used by kids for education. In the evenings, the facility is used by the fire department or for the nursing homes to do continuing education. On the weekend, it might be used for a community club.

We were not too long ago, Greg and I, together in Montana and we visited a hospital where they said they used their community telemedicine room, when it is not utilized for medical purposes, for community groups, and they had the Girl Scouts in, and because there was a few second delay in the transmission, they were singing songs together, but it turns out they were singing in round, so it worked out pretty nicely to be able to use the technology for the kids to sing together.

So we can, by bringing these technologies to rural America, have a profound effect on the economy, on the community, and the quality of life, and the brilliance of both the distance learning/telemedicine program and to e-rate and as well as what you are contemplating in bringing modes of transmission for local-to-local, these applications become magnets for infrastructure upon which businesses can grow and you can have new economic activity that just was not possible before.

The CHAIRMAN. This is much like when I was mayor of Indianapolis some 25- or 30-years ago. The extension of the sewer lines made all the difference in terms of the economic activity and the vitality. Hopefully, it will be easier to do the communication lines than it was that.

Certainly, this whole idea of the satellite, that it happens all at once, everybody is accessible, it is a very, very exciting idea. That could never have occurred when you are laying it a pipe at a time or what have you.

I had an experience, and I think one other Senator has had this more, but in our television studios here, we now have the opportunity to teach classes in our home States, wherever they are. So last week, two classes, one in South Bend, one in Evansville, wanted to discuss the whole State of the Union process, what happens,

who does what and so forth, and so I was the teacher. Now, the point, too, we are making about the courtesy situation, in order to speak or to be heard out there, I had to guide my mouse to click on the right button and keep it there or I fade from the picture altogether. Likewise, the student questioning me—I can see the classroom out there and the students, whether they are restless or whether they are not, but the person questioning me has to likewise manipulate the mouse and I have to be quiet. But nevertheless, it is a fascinating idea.

The thing that came to my mind, though, is this really requires very creative teachers. Let us say all of us get our work done today and all these lines get laid down and all these things could happen in medicine or education or with farmers becoming more sophisticated, but the will to do so, the organization of this, the optimization of the opportunity is really something else, too. But, nevertheless, our work right now is the block-and-tackle work of infrastructure which hopefully the creative Americans will have the ingenuity to fill in.

Mr. Rhode, you have already been commended by Senators, and rightly so because you have been active in this in the legislative process, now administrative, but give us your overall views to try to fill out this hearing.

Mr. RHODE. I think I would start by quoting Steve Case, who is the CEO of AOL. He said yesterday, the Internet is big enough to matter but still small enough to shape. The fact is, we are in the midst of a tremendous communications revolution in this country and in this world. New technologies are providing incredibly new, wonderful services for distance learning, health care, and a whole range of things, and we are seeing the tremendous benefits of all that.

But as this industry is growing enormously, and it is growing very, very fast, as there is nothing like that. I mean, just compare the statistics for electronic commerce from this last Christmas shopping season to the previous one. They went from about $3 billion to well over exceeding $12 billion. It is just a phenomenal amount of activity that is occurring. Our economy is quickly becoming an electronic economy and we are becoming an information society.

But the fact is that because of all this growth and because of all this excitement of what is going on, now is really the time to establish the policies and establish the programs and to make sure that all Americans can benefit from this wonderful revolution.

Congress had this vision in 1996 when it passed the Telecommunications Act. There are provisions in that Act that did not exist before in the statute. For decades, we have had a universal service system, and it is in large part because of the programs that the Rural Utilities Service has provided loan financing to small companies, but also because of a universal service system, what we had as a value in this country, that everybody was going to have a telephone.

We have largely succeeded in that venture. Now, over 94-percent of American homes have telephones. We still have segments of our population, as Chris pointed out, turning on basic phone service for some people for the first time. But for the most part, we have real-

ly succeeded in having basic telephone service. We are now moving into the next generation of communications services, such as broadband capability and advanced telecommunications and information services.

So in the 1996 Act, Congress was very specific in establishing a vision that all Americans were going to have access. The words that access to advanced telecommunications and information service should be available to consumers in all regions of the Nation is right from Section-254 of the Telecommunications Act. That did not exist in statute before. So Congress has already laid the groundwork and established the objective of which we need to implement the policies now and we also need to establish the other programs, such as programs that the President has articulated and is going to propose in his budget next week, which really help connect more and more Americans to that infrastructure.

I believe if we are faithful to the design of the Telecommunications Act, we are going to see the kind of construction that occurs in the streets of Washington, DC., now that Mayor Williams has to wrestle with, with all these telecommunications companies tearing up the street to lay down fiber. That is exciting. It is exciting for the people of Washington.

The question is, is this going to get to the smaller communities across America, and if we are faithful to the principles of promoting competition, which is what is driving the investment in a city like Washington, DC., if we can promote competition, extend that competitive dynamic to more and more communities, we are going to see more and more investment and this great infrastructure that can be laid out, and then that needs to be complimented with the faithful implementation of a universal service program so we can have the infrastructure so that residents who live in very small communities can access the kind of health care that Dr. Jay talked about, access the kind of educational opportunities that Chris just described.

The CHAIRMAN. Apropos what you are saying, Mr. Rhode, a week from today, our committee will be hearing again from Alan Greenspan and Mr. Summers and the Secretary and what have you, but this time on the Commodity Futures Trading Corporation's reauthorization. This is, as you know, the oversight for the Chicago Mercantile and the Board of Trade and others who are involved in agricultural commodities, but now increasingly Treasury securities, energy, all this sort of thing.

We had a hearing last year in which a commodity trader brought in a computer and he brought in a screen so we could all see this, and he executed a trade selling 10,000-bushels of corn or whatever the unit was on a market in London. This is right from our committee room. There was confirmation of the trade and this was a real trade, not just simply an exhibit for the Committee.

The point he was making is, our CFTC, we reauthorize this all the time. We try to construct guidelines so that markets have confidence in this country. But since we did this the last time, there has been an electronic market worldwide that covers a lot of volume that was beyond our purview. The New York Stock Exchange is wrestling with this, as is the SEC, and quite apart from people out in Chicago with open outcry, the normal way of doing this sort

of thing as opposed to people who are trading electronically all over the world.

My point is that as we try to get into the subject that we are dealing with today, we really need all of you sort of looking over our shoulder because each of you have made points, as did the panel before. If we put restrictions and limits of various sorts, we can thwart this situation in ways that really make the kind of idealism we are discussing possible.

On the other hand, there is a public responsibility to keep this thing within bounds if there are public funds and responsibilities available. I think there is a desire, which you have heard several, that if we have guarantees and we have loans, there is the full thought of repayment and the security has to be whole, even as we are trying to think of an infrastructure that has unlimited possibility. These are not incompatible, but they are not altogether easy.

I have no critique of the Burns bill last year or the Baucus bill this year or whatever Senator Gramm is doing, but our responsibility in this committee is to do the best that we can, working with all of these colleagues and whatever jurisdictions and interests that they have. I think that we start with a good bipartisan basis here of doing that, as well as you, Mr. Rhode and Mr. McLean, representing responsible agencies in the administration, speaking for the President and others, working with the leadership of the other party in this Congress. All of these folks will have to come in harness.

So if there is impatience with any of these people, I am going to try to ignore that. We are not getting into editorial comments, we are just trying to steer things along if we can.

Mr. Parkhill, you are out there on the firing line, a practitioner, but what would be helpful to you as you have heard this? You have already testified a little bit about that in the previous session, as we discussed the satellites and this type of thing, but given all the services we have been talking about now, the medicine, the educational features and so forth, these are very important, as you are saying, to maybe 2,400 subscribers of the telephone operation there or others who might have other needs. Can you fill in any more of that terrain?

Mr. PARKHILL. Within Hamilton County, we have one hospital. It is a small hospital. They do not have the facilities that they would have in a larger area.

The CHAIRMAN. Yes.

Mr. PARKHILL. So telemedicine would be a great benefit to them.

The CHAIRMAN. Are they tied together? Dr. Jay has cited the Clarian Network in the State of Indiana. There is no reason why you would know about that, but I am just wondering, in Illinois, is there a comparable thing with larger hospitals sharing in some ways?

Mr. PARKHILL. I am not sure if they are tied in with any of the others, not on a network such as that. With the hospital being located within McLeansboro, it is served by GTE and so I do not know what services they are trying to offer them. I do know that the high school and the junior high are tied in with the junior college, which is several miles away, trying to bring them and several other high schools together on some T1 lines, which is very expen-

sive. Whenever you go to crossing LATA boundaries and everything, you start incurring some great costs. So with what is available out there today, it really gets into the taxpayers' pocket real heavily.

My feeling, and I believe that it is NRTC's feeling, as well, that by doing this through a satellite-type connection, this could be tied in with the local-to-local satellites that we talked about earlier. Going through the RUS for funding, we could get funding that way, and with the loan guarantees, it would drive the interest rate down to where it would be more affordable. Therefore, you would be able to pay it off, hopefully, within 15, 20-years, something like that. It might take a little bit longer. It depends upon how everything comes up, because models and everything, you try to project, but sometimes you goof a little bit.

The CHAIRMAN. Just on the interest rate problem alone, there is no way you could project this because interest rates, even as we speak, are in fluctuation, or at least they were yesterday. But we speak of lower than market and maybe double the market, but can you give some idea of what kind of rates that you think happen in those two scenarios, that is, market only or one in which you see something less than market occurring.

Mr. PARKHILL. With the loan guarantees from the Congress going through RUS, I think that we could look at loan rates possibly in the 7-percent, 6.5-percent area. Going out on the open market, I would say you are going to be looking at 12, 14-percent.

The CHAIRMAN. Would you agree with that, Mr. McLean, from your portfolio experience?

Mr. MCLEAN. Yes, Sir. I would say that if we had that authority today and we were looking at an application today, that is about the right spread. The common thing that runs through rural electrification, rural telecommunications, rural water is that, and the universal service program in the Telecommunications Act, is how do you get private sector people to do things that they would not otherwise do left to basic market forces.

That 75/25-percent ratio that we heard over and over today recurs in our work all the time. Seventy-five percent of the market is profitable. Twenty-five percent is difficult to serve. Seventy-five percent of the geography is rural. Twenty-five percent of the population is rural. It just recurs over and over again, even in individual businesses. I always hear, 25-percent of my customers provide me 75-percent of my revenues. So I think it is a very profound statistic that kind of guides our work.

So how can we fix that 25-percent? If we can bring down the cost of capital, then it is affordable for the private sector to move in and bring the service that we need, and I think it is going to be a multimodal solution to meeting the telecommunications needs. There is incredible hunger and demand for bandwidth, and we are going to need everything. We are going to need satellite. We are going to need wireless. We are going to need fiber optics. Even in data transmissions, we will have large amounts of bandwidth with data coming down from the satellite, but likely, at least initially, we are going to have to connect to the satellite through the telephone network. To ride the Internet, you need to be on the telephone network.

Again, this committee has been in the vanguard of that vision of one Nation indivisible, and when President Truman signed the telephone amendments to the Rural Electrification Act into law, 40-percent of American farmers had telephone service, and as Greg just mentioned, we are almost completely there. But the job does not stop, because it is three times more expensive to serve rural citizens than it is to serve urban citizens. There is always going to be a need to be able to help bring those costs down.

The CHAIRMAN. As you gentlemen and others have noticed, this committee has a bias toward rural America. A good number of our members come from there, and each one of the States that is around this table has a great sensitivity to constituencies that we are talking about today.

We sort of start, then, with a full head of enthusiasm coming out of the Committee and approach the Senate as a whole, and in fairness, there is a resonance, at least, of interest in rural America with people who have left rural America. They still want somebody to do something out there.

So I think there will be broad support, but we need to get it right. As I listened again and again carefully, the technical aspects of this are very important, the prohibitions and the stoppers and so forth. This is musing out loud, but it is a part of the hearing process, to perfect the situation, which you have all contributed to a great deal.

At this point, let me thank you and thank all who have attended our hearing. We look forward, if you will, to your responses to questions that other Senators that have not been able to attend this hearing in person may wish to ask so that we will have a complete hearing record.

Thank you very much. The hearing is adjourned.

[Whereupon, at 12:13 p.m., the Committee was adjourned.]

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APPENDIX

FEBRUARY 3, 2000

Opening Statement by
Chairman Richard G. Lugar
United States Senator for Indiana

Today the Senate Agriculture Committee is holding a hearing on two related issues. The first is an examination of a proposal that would create a loan guarantee program to provide low cost money to satellite and cable systems to help them deliver local broadcast stations to viewers in rural America. The second issue is the looming presence of the digital divide in rural America.

Rural communities face a number of unique barriers in the realm of telecommunications. Small-scale, low-density settlement patterns make it costly to deliver these types of services to rural Americans. Even when the technology is available, as in the case of satellite television, issues of access still arise due to the cost constraints inherent in serving a population that is so often remote from the economic centers of urban America.

Just as the disparity in access to local television signals for rural Americans is problematic, the disparity in access to telephones, personal computers and Internet access between rural and urban areas is likewise troubling.

A recent U.S. Department of Commerce report shows that regardless of income level, Americans living in rural areas are lagging behind in Internet access and even when holding income constant, Americans living in rural areas are less likely to be connected by personal computers. Low-income, young and certain minority households in rural America are the least connected to the information highway.

This digital divide contributes to the problems facing economic development in rural America. Rural America is an important source of income, wealth, and well-being for our nation. The rural regions of the United States contain 83 percent of the nation's land and are home to 21 percent of Americans.

Rural America can gain access to some opportunities only by connecting to the information highway. By creating necessary linkages to manufacturers and other businesses in a region, small towns and cities will be more able to attract entrepreneurs. Therefore, telecommunications infrastructure is an important foundation for job creation in rural America.

The information highway offers rural America an unprecedented opportunity to compete on an equal footing with big cities and with other countries. Access to the information network is already bringing jobs, education, and health care services to rural areas and bringing rural Americans more fully into the mainstream of the American economy and culture. Yet there is also a danger that some parts of rural America-- which already have lower incomes and lower education levels than the rest of America-- lack access to "on-line" resources and will fall even further behind the rest of the country.

This hearing will look at reasons for this disparity in rural America as well as hear testimony on the various ways to solve the problem.

Our first panel will focus on the rural satellite televison issue. We will hear testimony from two administration witnesses, Mr. Chris McLean, the Acting Administrator of the Department of Agriculture's Rural Utilities Service and Mr. Greg Rhode, Assistant Secretary for Communications and Information at the Department of Commerce's Nation Telecommunications and Information Administration. Next we will hear from James May, the Executive Vice President for Government Relations with the National Association of Broadcasters. We will hear from Dave Parkhill, the General Manager of the Hamilton County Telephone Cooperative located in Dahlgren, Illinois and from John Hutchison, LTVS, Inc. from Raleigh, North Carolina.

Our second panel will focus on the more general issue of the digital divide in rural America. Dr. Stephen J. Jay, M.D.,Chairman of the Department of Public Health and Associate Dean for Continuing Medical Education at the Indiana University School of of Medicine will join Mr. McLean, Mr. Rhode and Mr. Parkhill for that discussion.

I welcome each of you to the Committee and thank you for agreeing to testify. # # #

STATEMENT OF SENATOR LARRY CRAIG
COMMITTEE ON AGRICULTURE, NUTRITION AND FORESTRY
February 3, 2000

MR. CHAIRMAN, I WOULD LIKE TO THANK YOU FOR HOLDING THIS HEARING ON RURAL TELEVISION LOAN GUARANTEES AND THE DIGITAL DIVIDE IN RURAL AMERICA. I WOULD ESPECIALLY LIKE TO THANK MY COLLEAGUE, CONRAD BURNS, FOR WORKING SO DILIGENTLY TO BRING THIS TO THE FOREFRONT AND ALL OF OUR WITNESSES HERE TODAY FOR TAKING THE OPPORTUNITY TO ADDRESS THIS VERY COMPLEX ISSUE.

THIS PAST YEAR CONGRESS PASSED AND THE PRESIDENT SIGNED INTO LAW A MEASURE THAT WOULD LET SATELLITE COMPANIES CARRY LOCAL TELEVISION CHANNELS TO MILLIONS OF VIEWERS. HOWEVER, THE BILL DID NOTHING TO ALLEVIATE THE DIGITAL DIVIDE THAT IS SO APPARENT IN MANY PARTS OF RURAL AMERICA. AS PASSED, THIS LEGISLATION ONLY AFFECTS THE TOP MEDIA MARKETS, WHICH UNFORTUNATELY DOES NOT INCLUDE IDAHO. AS A MATTER OF FACT BOISE, THE LARGEST MEDIA MARKET IN IDAHO, IS RANKED

125TH IN THE COUNTRY.

AFTER HEARING FROM A NUMBER OF MY CONSTITUENTS REGARDING THIS ISSUE, IT HAS BECOME CLEAR TO ME HOW IMPORTANT ACCESS TO THIS TECHNOLOGICAL SERVICE IS BECAUSE SO MUCH OF THE STATE IS RURAL AND DEPENDS ON SATELLITES AS THE SOLE PROVIDER OF TELECOMMUNICATION SERVICES. IN FACT, AS ONE OF OUR WITNESSES WILL POINT OUT, SATELLITE PENETRATION RATES IN RURAL AMERICA ARE SIX TIMES HIGHER THAN IN URBAN PARTS OF THE COUNTRY.

IT IS IMPERATIVE THAT IN THE FUTURE ANY LEGISLATION PASSED BY CONGRESS MEET THE TELECOMMUNICATION NEEDS OF ALL CONSUMERS, NOT JUST THOSE IN MORE DENSELY POPULATED AREAS. THOUGH I AM NOT A STRONG PROPONENT OF FEDERAL LOAN GUARANTEES, BECAUSE OF THE PLIGHT OF MY CONSTITUENTS AND THE OBVIOUS UNEQUAL DISTRIBUTION OF TECHNOLOGY TO RURAL AREAS, THIS IS SOMETHING THAT I AM GLAD THE COMMITTEE IS STUDYING AND SOMETHING FOR WHICH I AM COMMITTED TO WORKING TOWARDS A SOLUTION.

AGAIN, I WOULD LIKE TO THANK THE CHAIRMAN AND OUR PANEL OF WITNESSES HERE TODAY FOR ADDRESSING THIS ISSUE. THE

INSIGHT YOU PROVIDE WILL BE OF GREAT ASSISTANCE TO US AS WE FOCUS ON CLOSING THE GAP OF THE DIGITAL DIVIDE.

Statement Of

LOCAL TV ON SATELLITE, LLC

Before The

Committee On Agriculture, Nutrition And Forestry

U.S. Senate

Hearing On

Rural Satellite And Cable Systems Loan Guarantees

February 3, 2000

Good morning, and thank you for inviting me to appear at today's hearing on federal loan guarantees to promote the satellite delivery of local television signals to rural areas. I am John Hutchison, Executive Vice President and Chief Operating Officer of Local TV on Satellite, LLC ("LTVS"). LTVS was founded in 1997 by Capitol Broadcasting Co., Inc., its subsidiary, Microspace Communications Corporation, and certain other shareholders.

LTVS was founded to develop a basic local television station satellite delivery service that will deliver via direct broadcast satellite ("DBS") systems all local television stations in a given market. LTVS has developed a business plan and the technology to distribute via satellite all over-the-air, full power, commercial and noncommercial television stations within a given station's Designated Market Area or DMA. LTVS will provide the signals of all stations in approximately the top 66 markets in the United States and reach approximately 75% of the U.S. television households.

Our intent is to deliver individual local station packages to all DBS providers, who will then retail these packages to their subscribers. LTVS will enable consumers to have the convenience of receiving their national DBS program service and local television signals with one dish, one box, and with one bill.

Last year Congress passed the Satellite Home Viewer Improvement Act. That important legislation will provide long-awaited benefits to consumers. Consumers who subscribe to DBS will now be able to receive local broadcast programming through their DBS provider. Consumers who were hesitant to consider subscribing to a DBS service because of the absence of local station signals can now choose among competing multichannel video programming distributors. The legislation removes a primary competitive obstacle for DBS in competition with cable.

The passage of the Satellite Home Viewer Improvement Act will enable LTVS to move forward with its plan for providing consumers with improved DBS service. We are pleased to report that since the passage of the Satellite Home Viewer Improvement Act, LTVS has made steady progress in implementing its business plan. LTVS is in the process of making the strategic alliances necessary to bring its ALL STATIONS IN A MARKET plan to fruition.

With that introduction and background, I turn now to the reason for this hearing -- to ensure that rural America is able to receive local television signals via satellite. LTVS strongly agrees with this committee and the Senate Banking Committee that local television coverage is vitally important for rural development efforts. Specifically, local television broadcasts of crop reports, local news, weather reports, public service announcements, and advertisements by local businesses are important to rural development. Accordingly, LTVS supports legislation that would provide loan guarantees for satellite carriers to deliver local television signals to small and rural markets.

LTVS has studied the plan of providing local-into-local broadcast service to these small and rural markets. Based on our business model, we have determined that it cannot be done without government assistance. Given that private investors seek to maximize their short or near-term returns, a local-into-local solution for rural America cannot be funded on a purely commercial basis. Let me explain. The capital costs to serve the smaller 144 markets will be at least as much as the capital costs to serve the larger 66 markets, both of which are served by 800 television stations. I say "at least as much" because the capital costs to serve the small and rural markets would likely be even greater given the need for the greater number of uplink sites and the likelihood of a longer period of operating losses.

Despite the potential of greater capital costs, the smaller 144 markets, served by 800 stations, represent only 25% of the population. The larger 66 markets, also served by 800 stations, provide three times that subscriber base. In addition, currently there is no market research to show that satellite providers could gain enough subscribers in the rural areas to secure an adequate and early return on their investments. Under these circumstances, the private investment community would simply refuse to finance the disproportionately expensive technical program necessary to serve a smaller subscriber base.

A federal loan guarantee, therefore, is desirable in that it will enable capital to be raised to finance satellite systems for the delivery of local television signals to rural viewers. Based on a conservatively constructed business model, LTVS believes that such a loan would be fully repaid. Our business model shows that in the first two years, a satellite provider of local television stations should cover its costs. In year three, it should generate enough income to cover its interest costs, and by year five there would be sufficient positive cash flow to begin amortizing the loan. In addition, by this date, the enterprise would have reached a critical mass of subscribers that could then make it a more attractive investment opportunity for private investors. This additional private capital would be used to further service the debt. Finally, our business model shows that the loan would be fully repaid by year 15.

In short, we believe the private marketplace will not provide the majority of the initial funds necessary to construct, launch and operate a satellite system to provide local-into-local television service to small and rural markets. With the support of a federal loan guarantee, however, LTVS believes that a common industry platform can be developed to ensure that small and rural markets across the United States can receive local television stations via satellite.

However, in order for a rural local-into-local satellite system to work today and in the future, the enabling legislation should establish strong eligibility criteria. In order to qualify for a loan, a satellite provider must demonstrate that it will (1) develop a common industry platform to be used by all DBS providers, (2) design the satellite to carry the entire 19.4 Mbps digital signal of a broadcast station, and (3) provide full must carry. I will address each of these criteria in turn.

First, a common industry platform is essential to minimize unnecessary duplication of the use of government funds and government allocated spectrum. By a common industry platform I am referring to a local-into-local satellite system that is technically compatible with DirecTV and Echostar, the two main DBS providers. In other words, the satellite system will permit all DBS subscribers, whether DirecTV's or Echostar's, to receive from their individual DBS provider the delivery of their national DBS program service as well

as their local television signals with one dish and one set-top box.

The satellite will retransmit all of the local television stations in the small and rural markets and deliver the appropriate signals directly to DBS subscribers. Using this common platform approach, both DirecTV's and Echostar's receivers will be designed to enable their subscribers to receive and unscramble the local television signals.

To gain the necessary number of subscribers to make the plan financially viable, both DirecTV and Echostar must include the local stations in their packages. By marketing a single, unified service, similar to cable, each of DirecTV and Echostar will encourage the purchase of the local station packages along with other program offerings. Only in this way will consumers have a genuine choice in selecting a multichannel video program distributor.

Second, satellite carriers must be required to carry every station's full digital signal of 19.4 Mbps. A satellite is expected to have a life of 15 years. Thus, a satellite system must be designed to be forward compatible in anticipation of the future digital environment. The satellite should be able to accommodate the government mandated digital television rollout. It would be financially impractical and commercially short-sighted to build a satellite that would be obsolete early in its life.

Finally, in order to ensure parity with cable in terms of the availability of all local broadcast programming, the legislation must require full must carry. Through the Satellite Home Viewer Improvement Act, Congress has now allowed consumers to receive their DBS signal and ALL of their local broadcast stations from their DBS provider with full must carry required as of January 1, 2002. If no single DBS provider carried all of the available broadcast programming in the local market, then the very purpose of the Satellite Home Viewer Improvement Act would be eviscerated. As a result, small and rural market viewers would never enjoy the full benefits of the Satellite Home Viewer Improvement Act.

In conclusion, a loan guarantee program to ensure that the rural viewer can receive local television signals via satellite would serve an important public interest purpose, and LTVS supports such a loan program. The enabling legislation should establish strong criteria to ensure that rural viewers receive the full benefits of a local-into-local satellite service. Accordingly, the loan guarantee should be available only to satellite providers that will carry ALL of the local television stations in a given market with every station's FULL digital signal of 19.4 Mbps.

I thank you for the opportunity to appear before you today. LTVS is ready to work with this committee to ensure improved access to local television signals in rural and underserved areas. I would be pleased to answer any questions.

TESTIMONY OF CHRISTOPHER MCLEAN
ACTING ADMINISTRATOR
U.S. DEPARTMENT OF AGRICULTURE – RURAL UTILITIES SERVICE
BEFORE THE
U.S. SENATE COMMITTEE
ON
AGRICULTURE, NUTRITION AND FORESTRY
FEBRUARY 3, 2000

Mr. Chairman, it is an honor to testify today on the idea of a new loan guarantee program to finance the delivery of local television programming to subscribers of satellite television in rural and small markets. United States Department of Agriculture (USDA) appreciates the Committee's concern, both in the existing coverage of rural access to local broadcasting and the possibility that developing technologies can broaden that problem.

The Rural Utilities Service (RUS) is a rural development agency of USDA. We administer a $42 billion loan portfolio of more than 9,000 loans for telecommunications, electric and water and wastewater infrastructure projects throughout rural America. Our agency also administers the Distance Learning and Telemedicine loan and grant program and is a leading advocate for rural consumers before federal and state regulatory bodies.

RUS RECORD OF SUCCESS

For nearly sixty-five years the REA and RUS have been empowering rural America. Just this last October, the RUS telecommunications program celebrated its 50th anniversary. In those fifty years, the RUS telecommunications program has helped close the digital divide in rural areas. The telecommunications program has maintained an unprecedented level of loan security over the history of the program.

Since 1993, the RUS has financed more than $1 billion in fiber optic facilities and more than $725 million in digital switching for telecommunications companies and cooperatives serving rural areas. In 1999 alone, RUS provided nearly half a billion dollars in financing for rural telecommunications infrastructure. In addition, since its inception in 1993, the RUS Distance Learning and Telemedicine (DLT) program has provided $83 million in funding to 306 projects in 44 states and two territories.

The RUS is fortunate to have an accomplished corps of engineers, accountants, financial specialists and rural infrastructure experts. I am confident that the RUS has the necessary skills to administer new initiatives that will bring the benefits of the information revolution to all America.

THE NEED FOR LOCAL ACCESS

For America's rural residents, access to television signals has long been a challenge. Distance and geography have been significant impediments to the reception of consistently viewable broadcast signals. While cable television is available in many rural towns, it does not reach America's most rural citizens.

Since its inception, satellite delivered television and now direct broadcast satellite services have provided increased access for all communications services to rural residents. Satellite television gave America's many rural residents first time access to vital sources of news, information, educational programming, entertainment and sports. As good as these services were, satellite services did not connect rural residents to their local communities.

The 1999 amendments to the Satellite Home Viewers Act (SHVA) dramatically changed the dimensions of satellite service by giving carriers the right to deliver local television signals to viewers via satellite. However, that legislation limited the ability of these carriers to deliver distant network programming to consumers.

Since the enactment of the SHVA amendments, satellite broadcasters have announced significant new initiatives to provide local signals to viewers. Current satellite carriers are offering "local into local" service primarily to larger urban markets. There is little evidence that under current conditions significant "local into local" offerings will be made in the markets below the 40th largest markets. The smaller the market, the more rural residents will be impacted.

Once the amendments to the SHVA are fully implemented, many rural residents will likely lose their ability to purchase distant network signals. Many will still be unable to receive a suitable signal via antennae from their local broadcaster. Given the capacity limitations of current satellite providers, and the cost of nationwide local to local service, it is doubtful that current carriers will provide local signals to many smaller markets.

The availability of local programming will become more problematic as the television industry converts to a digital system of signal delivery. The propagation of digital signals is different from analog signals. Analog signals fade out with distance from the transmitters. Digital signals drop off suddenly. The likely result is that some current rural viewers of broadcast television may lose their ability to receive a viewable signal once the conversion to digital is complete.

Without the ability to retain and perhaps expand their viewer base, rural broadcasters may not have the financial ability to upgrade their systems. Once digital conversion is complete, the technology will make it likely that rural viewers will be able to receive fewer channels over a conventional TV antenna than currently available in analog mode.

ENSURING PUBLIC SAFETY

Access to a full range of news, weather, sports, entertainment and information is certainly important to maintaining and enhancing rural quality of life. But maintaining expanding access to the most local sources of news, weather and information is critical to rural public safety. The 1999 violent tornado season, and recent weather events such as this month' back to back winter storms in the South and East, highlight the importance of local television as a means of disseminating life saving information.

Linking local residents to their communities of interest is also important to maintaining and enhancing the vitality of the local rural economy and civic life. From both an educational standpoint and one of public safety, it is in the public interest that rural citizens have access to local and network programming. Rural America should not fall into a new digital divide: either as a result of the amendments to the SHVA or the coming conversion to digital television.

LOAN GUARANTEES

The delivery of local signals to rural viewers will require significant infrastructure investment, regardless of the technology utilized. RUS loans, loan guarantees and grants have helped bring modern electric, telecommunications, and water infrastructure to the 80 percent of America that is rural. This public-private partnership has been the hallmark of rural infrastructure investment. RUS is capable of helping rural America meet this new infrastructure challenge.

We welcome the opportunity to comment on any specific legislative language and look forward to working with the Committee. We believe that legislation should be technologically neutral, expand consumer choice, and be consistent with Federal credit policies.

CONCLUSION

Preserving and enhancing access to local and network television signals is important not only for rural quality of life, but is vital to rural public safety and community. Linking rural viewers to more local signals will also enhance the economics of rural broadcasting and their rural advertisers. In addition, the infrastructure necessary to deliver "local into local" services, regardless of mode, can bring new broadband capacity to rural areas. Just as the Rural Electrification Administration helped rural America become part of the national economy, the Rural Utilities Service can help rural America thrive in the information age.

Thank you Mr. Chairman.

TESTIMONY OF GREGORY L. ROHDE
ASSISTANT SECRETARY FOR COMMUNICATIONS AND INFORMATION
NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE
ON THE "DIGITAL DIVIDE" IN RURAL AMERICA AND
LOAN GUARANTEES AND RURAL TELEVISION SERVICE
BEFORE THE COMMITTEE ON AGRICULTURE, NUTRITION, AND FORESTRY
U.S. SENATE
FEBRUARY 3, 2000

Thank you Mr. Chairman for inviting me to testify before this Committee regarding the "Digital Divide" that exists in rural America and efforts to ensure that viewers in small and rural markets have access to local broadcast programming. Both of these issues are deserving of Congressional attention to prevent rural Americans from becoming increasingly part of the "information have-nots."

The "Digital Divide"

With respect to the Digital Divide, the Administration recognizes that despite incredible growth in personal computer ownership and Internet access in this country, there remains distinct disparities in such access, especially in rural areas. Last July, President Clinton and Secretary of Commerce William M. Daley released *Falling Through the Net: Defining the Digital Divide*. This is the third report authored by the National Telecommunications and Information Administration (NTIA) documenting household access to telephones, computers, and the Internet. This *Falling through the Net* report, which expands upon the previous two reports, is a key component of the Department of Commerce's efforts to understand, measure, and explain how the information revolution is affecting this nation. This study provides valuable new information on how people are gaining access to the Internet, how Americans choose to spend their time online, and why some people are not connected.

Access to new technologies, such as the computer and the Internet, will be crucial to the economic success of American businesses, communities, and individuals. The Internet is becoming an invaluable tool for personal success and professional advancement. Increasingly, Americans are using it to find jobs, contact colleagues, locate public information or take courses online. Familiarity with new technologies will also prepare more Americans for the high-tech workplace of the 21st century.

In the *Falling through the Net* report, we present some good news, which is that more Americans are connected today than ever before. Computer ownership has nearly doubled in four years, and Internet access has increased more than 40 percent in the last year alone. More than one-quarter of American households have Internet access at home and approximately one-

third of Americans are going online from some point. Additionally, those traditionally less likely to have telephones, primarily young and minority households in rural areas, are now more likely to have phones at home.

Unfortunately, this report also presents some very troubling news. Data from this report reveals that Americans living in rural areas are lagging behind the national average in computer and Internet access, regardless of income level. This new data revealed growing disparities, including the following:

- At almost every income level, those households in rural areas are less likely to own computers than households in urban or central city areas.
- At almost every income level, households in rural areas are significantly less likely - sometimes half as likely - to have home Internet access than those in urban or central city areas.
- Black households in rural areas are more than 1/5th less likely to own a computer than the national average U.S. black household, and are almost 2/5ths less likely to access the Internet than the average U.S. Black household.
- Also for rural areas, the Kindergarten-12th grade school is a popular point of Internet access: 30 percent of rural persons use school for Internet access outside the home, as compared to the national average of 21.8 percent.

These statistics illustrate that a "digital divide" clearly exists among different demographic groups, and that rural areas are falling on the wrong side of this divide. The Administration is committed to working to closing this gap between the information "haves" and "have nots" and also recognizes that such an effort requires creative partnerships between government, industry, and non-profit organizations.

Government programs, such as NTIA's Technology Opportunities Program (TOP), (formerly known as the Telecommunications and Information Infrastructure Assistance Program (TIIAP)), are already working to expand access to technological resources in under served areas. TOP promotes the widespread use of advanced telecommunications and information technologies in the public and non-profit sectors. The program provides matching demonstration grants to state and local governments, health care providers, school districts, libraries, social service organizations, public safety services, and other non-profit entities to help them develop information infrastructures and services that are accessible to all citizens, in rural as well as urban areas. TOP has provided support to such programs as the Mountain Area Information Network in North Carolina, the Lincoln Trail TELEVILLAGE Project in Kentucky, the Telecommunications Solutions for Rural Revitalizations project in South Dakota, and the

Vermont Telecommunications Application Center, all of which promote the development and deployment of technology resources to address the needs of rural residents in those states.

The assistance of non-profit organizations and private industries is also a necessary component in expanding access to new technologies. Companies are supporting the creation of community technology centers, helping schools through "NetDays," and donating computers and software to schools and neighborhood centers. The private sector's contribution is essential because these companies know what kind of skills Americans will need in order to find jobs in the future.

Community-based organizations can also help provide access to computers and the Internet where communities need it most. Each community knows best how to reach and connect residents, whether through traditional community centers, churches, senior centers, fire and police stations, or other centers.

In addition, as the President's principle adviser on telecommunications and information policy matters, NTIA will continue to advocate policies that advance the goals of promoting competition and advancing universal service, consistent with the objectives of the Telecommunications Act of 1996. In particular, the Administration remains committed to the preservation and advancement of universal service reforms that will ensure that consumers living in rural and high cost areas can fully participate in the digital economy. To this end, we will work with the Federal Communications Commission and the states to implement universal service reforms that achieve the goals of the Telecommunications Act that "access to advanced telecommunications and information services should be provided in all regions of the Nation" and that rural consumers have comparable services at comparable rates.

All of these efforts are necessary if we hope to close the digital divide that exists between urban and rural America. I look forward, in my capacity as Administrator of NTIA, to promoting public and private programs designed to ensure that all Americans are able to fully participate and benefit from new technology.

Loan Guarantees and Rural Television Service

I also appreciate the opportunity to testify before this Committee on providing loan guarantees to providers to carry local broadcast signals to residents of small, rural local broadcast markets. The Administration believes that the question of how consumers in small and rural markets receive local news and information is very important and deserving of Congressional attention.

I can recall well the night that the Senate passed the Omnibus Appropriations Act and the Senate discussed a proposal to provide loan guarantees for carriers to provide local-into-local broadcast coverage to small and rural markets. I was struck by the fact that when this Administration took office in 1993, there were no operational direct broadcast satellites (DBS)

providing service to viewers. In 1993, there never could have been a debate like that which embroiled the Senate last November over the question as to how small and rural markets would get local-into-local service over satellite systems. Today, there are more than 11 million DBS subscribers. DBS companies are providing local-into-local service in 24 markets and are currently negotiating for the rights to deliver local-into-local broadcasting in 20 more. The question remains, however, as to how viewers in the remaining 200 or more television markets obtain access to local-into-local service.

The Administration strongly supported the provisions in the Satellite Home Viewer Improvement Act (SHVIA) that provided authorization to satellite providers to carry local-into-local broadcast programming. The Administration believes that authorizing local-into-local service not only promotes greater access to local television signals for all Americans, but also strengthens DBS providers' ability to provide meaningful competition to cable with comparable program offerings. Unfortunately, markets in which local-into-local broadcasting over satellite systems is not offered will be less likely to enjoy the same competitive benefits. Moreover, in some rural areas, there is no multichannel video programming supplier offering local broadcast signals and many of these communities lay outside of the signal coverage area of their local broadcast stations.

For these reasons, the Administration believes that it is important to find ways to ensure that consumers in rural and small markets have access to local broadcast programming. The Administration is prepared to work closely with the Congress on any proposal to address this issue, including a loan guarantee proposal. We believe that these three principles should guide such legislation. First, the Administration believes that any new program should be technology neutral in recognition of the fact that different technologies may best be suited to deliver local broadcasting services to unserved areas in different parts of the country. Technology neutrality can spur innovation and the application of new technologies to address this problem. Second, the program should be crafted to ensure that it promotes competition in the multichannel video programming market and encourages future private investment in infrastructure. Third, the program should demonstrate fiscal responsibility by conforming to Federal credit program policies, which minimize Federal exposure to loss and ensure the least expensive, most efficient financing of Federally guaranteed loans.

The Administration also believes that the discussion over ensuring local-into-local broadcast programming in the digital era should not be limited to the loan guarantee approach. Thus, NTIA recently announced that it will publish a Federal Register Notice to solicit public comments and suggestions as to how viewers in small and rural markets can receive local broadcast signals. All comments will be posted on NTIA's web site (http://www.ntia.doc.gov). As part of this effort, I intend to host a roundtable discussion in early March with various stakeholders: consumers, industry representatives, policy makers, and technology experts, to explore ways in which small and rural markets can have access to local programming via satellite and other technologies. Our efforts in this area are intended to complement the Congressional action and efforts by the Federal Communications Commission to examine this question as

required under SHVIA. Our intent is to help raise visibility on this issue and contribute to the debate.

Extending the reach of local broadcasting and its vital news and information has been a longstanding goal of NTIA. The agency administers the Public Telecommunications Facilities Program (PTFP), which provides grants to establish and extend the reach of local public television and radio stations into unserved areas. Since 1962, the program has been a major factor in the nation's success in bringing local public television stations to rural areas - - through the establishment of full power stations, as well as the construction of television translators and repeaters. PTFP estimates that approximately 94 percent of all Americans can receive at least one free, over-the-air public television signal from a local PBS member-station.

The preservation of local broadcasting in the digital era is vitally important and ensuring that viewers in small and rural markets are included in this new age is critical. The Administration pledges its support to advance the goal of extending the reach of local broadcasting to all Americans and looks forward to working with Congress on the loan guarantee proposal as well as exploring other approaches to this issue. We would appreciate the opportunity to provide comments on any specific legislative proposal.

Thank you for the opportunity to testify and I would be happy to respond to your questions.

Testimony of
James C. May
Executive Vice President, Government Relations
National Association of Broadcasters

Before the

Senate Agriculture, Nutrition and Forestry Committee

Rural Satellite and Cable Systems Loan Guarantee

February 3, 2000

INTRODUCTION

Thank you, Mr. Chairman, for the opportunity to appear before the Senate Agriculture Committee today. The National Association of Broadcasters (NAB) represents the owners and operators of America's radio and television stations. Our remarks today will address the loan guarantee program as proposed by the House and Senate conferees last year.

The satellite TV industry began as a service primarily targeting rural Americans who could not receive broadcast television signals over the air. The passage of the Satellite Home Viewer Act in 1988, which permitted delivery of network stations to unserved households, led to vigorous growth of the satellite industry. The recent enactment of the Satellite Home Viewer Improvement Act ("SHVIA") has further enhanced the competitiveness of the satellite industry vis-a-vis the cable industry by providing satellite carriers a statutory copyright license to deliver local television broadcast signals within a station's market.

NAB applauds the committee's interest in ensuring that all Americans, particularly those in rural and small markets, benefit from the recently passed Satellite Home Viewer Improvement Act. The House and Senate conferees

recognized that the current plans of satellite carriers did not include delivery of local signals in most smaller television markets. For example, more than one-half of all stations may not be available on satellite to local viewers. To address this concern, they drafted the loan guarantee program in an attempt to ensure that rural Americans could receive local television signals by way of satellite. Beginning in 2002, carriers will be obligated to carry all stations in any market where they elect to serve with local signals. Given the rapidly growing popularity of Direct Broadcast Satellite, NAB believes that the vitality of the local free over-the-air broadcast system that Congress has consistently worked to preserve may be threatened if half of the nation's television stations (a vital source of local information) are shut out from satellite carriage.

THE STATE OF THE SATELLITE MARKETPLACE

Current trends indicate that satellite companies will in fact provide local broadcast television signals via satellite only in the largest markets and not in rural areas. Despite huge capacity (up to 500 channels, many of which are devoted to pay-per-view and other premium services) and strong demand for local stations, satellite operators have stated that providing local signals to rural markets is not feasible at this time. NAB understands that both DirecTV and EchoStar currently

provide local signals to approximately 42% of the nation's television households in 19 and 20 markets, respectively. EchoStar plans to provide local signals to 60% of U.S. television households by the end of March 2000 (approximately the top 37 markets). DirecTV plans to add 4 more markets in the next few weeks. A market-by-market listing as of January 27, 2000 is set forth in Table A.

Table A

DMAs Served by DIRECTV and EchoStar
January 27, 2000[1]

Rank	Market	TV Households	% Of U.S.	DIRECTV	EchoStar
1	New York	6,812,540	6.854	Yes	yes
2	Los Angeles	5,135,140	5.167	Yes	yes
3	Chicago	3,164,50	3.184	Yes	yes
4	Philadelphia	2,667,520	2.684	Yes	yes

[1] *Source: Nielsen Media Research 1999 Estimates; DIRECTV and EchoStar Company Press Releases*

5	San Francisco-Oakland-San Jose	2.368.970	2.383	Yes	yes
6	Boston	2.186.100	2.199	Yes	yes
7	Dallas-Ft. Worth	1.959.680	1.972	Yes	yes
8	Washington, DC-Hagerstown	1.956.160	1.968	Yes	yes
9	Detroit	1.846.950	1.858	Yes	yes
10	Atlanta	1.722.130	1.733	Yes	yes
11	Houston	1.665.550	1.676	Yes	yes
12	Seattle-Tacoma	1.548.200	1.558		yes
13	Cleveland	1.475.820	1.485	Yes	
14	Tampa-St. Petersburg	1.463.090	1.472	Yes	
15	Minneapolis-St. Paul	1.457.820	1.466	Yes	yes
16	Miami-Ft. Lauderdale	1.418.940	1.428	Yes	yes
17	Phoenix	1.343.040	1.351	Yes	yes

18	Denver	1.230.440	1.238	Yes	yes
19	Pittsburgh	1.136.230	1.143		yes

29	Raleigh-Durham	834.260	0.839	Yes	
30	Nashville	811.870	0.817		yes
33	Kansas City	802.290	807		yes
35	Greenville-Spartanburg-Asheville-Anderson	739.850	0.744	Yes	
36	Salt Lake City	707.070	0.711		yes
	Total % of U.S. Served			**41.701%**	**42.197%**

For a time, it appeared that Local TV on Satellite, founded by Capitol Broadcasting and other investors, would provide local-into-local in all markets. That company, however, appears to have revised its business plan and now may only provide local stations in the top 68 markets.

In short, the business plans of satellite providers will leave many rural Americans without access to satellite delivery of the signals of their local stations, which provide viewers with local news, weather, sports and other informational programming.

NAB, therefore, strongly endorses the policy objective of the proposed loan guarantee program, which is to ensure that delivery of all local stations irrespective of market size by satellite is economically feasible. Without satellite delivery of rural television signals, access to 800 of the nation's television stations that serve America's smaller communities is at risk if viewers cannot watch local programming by way of satellite. We are concerned, however, that given the economic and technical hurdles of delivering local signals by satellite, the proposed program may be too limited in scope and too administratively cumbersome to provide the necessary jump start.

ECONOMIC AND TECHNICAL HURDLES TO RURAL DELIVERY OF LOCAL SIGNALS

The satellite industry historically has faced legal, technical and financial obstacles preventing the delivery of local signals. The passage of the SHVIA

eliminated a legal obstacle by creating a statutory compulsory copyright, but technical and financial hurdles remain:

A limited rural consumer marketplace. Even though one-half of America's television stations are located in the smallest 154 television markets, only 25% of the U.S. population resides in those markets. Seventy-five percent of the U.S. population (and the other half of the nation's television stations) is located in the largest 60 television markets. Current local-to-local retail packages marketed by EchoStar and DirecTV are $4.99 and $5.99 for four or five local stations. In order to compete with cable, any satellite local-to-local package must remain within this range. At those levels, we very much doubt that a rural provider could ever hope to break even.

The need for a spotbeam satellite design and an orbital slot. Delivering 800 local stations via a conventional satellite from a single orbital slot is not technically feasible for the following reasons:

1. Capacity—Typically, only 250 to 300 channels can be delivered due to frequency and power limitations.
2. Geographic Coverage—Current DBS satellites located within the 101° to 119° orbital arc can deliver the same channels to customers

> located anywhere in the continental U.S. Although this nationwide coverage is practical for channels such as CNN, ESPN, and HBO, it is an expensive and wasteful approach for delivering local television stations that can legally be viewed only in the station's local market.

Relatively new commercial technology—a spotbeam satellite—is the answer, but spotbeam satellites represent expensive design challenges. In addition, a company developing a rural plan must lease or acquire an orbital slot at a potentially high cost.

The need to be a wholesaler, not a retailer. NAB does not believe that it is practicable to develop a rural local plan without partnering with DirecTV or EchoStar. The two primary reasons are the need to create a consumer-friendly, sellable product and the need to limit marketing and backroom costs.

The technical challenges of partnering with DirecTV or EchoStar. A potential relationship between a third party local-to-local service wholesaler and DirecTV or EchoStar requires the resolution of many technical issues. Those issues relate to the location of the local-to-local orbital slot and the development of an affordable consumer receiver and dish. Challenges include:

- finding an orbital slot close enough to the current DBS slots to allow a one-dish solution;
- developing set top boxes that can receive signals from the Ku-Band, where the DBS providers are located, and the Ka-Band (used by small dishes), the likely location of a third party local-to-local provider;
- developing technology that will interface with differing transmission and conditional access systems used by DirecTV and EchoStar.

Locating, building and maintaining numerous uplink sites. If a spotbeam satellite is used, local television stations must be uplinked from a facility located within the footprint of that individual spotbeam. The number of spotbeams determines the number of uplinks. Additional uplinks may be required to comply with legislative restrictions and to reduce the cost of delivery of the local signals to the uplink site.

The overall expense—$600 million to $1 billion. NAB estimates that in order to develop and execute a feasible technical plan to provide all local stations to rural America it will cost from $600 million to $1 billion, depending on 1) whether the plan includes a spare satellite and 2) the number of markets planned to be covered. The cost of building, launching and insuring a spotbeam satellite is hundreds of

millions of dollars, even without the redundancy of a spare satellite that prudence might require. An orbital slot must be acquired or leased. Numerous local uplink facilities must be located, built and maintained costing several million dollars each. Other major costs include a master control center and conditional access to ensure that consumers are only receiving stations in the market in which they live.

IS THE LOAN GUARANTEE PROGRAM AN APPROPRIATE ECONOMIC INCENTIVE?

Given these challenges, NAB believes that an economic incentive of some kind is appropriate, but is unsure whether the loan program as proposed will meet its important objective. Understandably, the proposal contains numerous mechanisms to protect the government against the risk of default. While the government needs some security, the loan guarantee program should not dictate a borrower's business plan. Likewise, given the lead time necessary to undertake a satellite project (even if work were begun immediately, a satellite project of this scale has a lead time of at least two years), a borrower's qualification for the loan guarantee should not be unduly delayed by multiple layers of bureaucracy.

Cap on loan amounts. The conferees' bill contains caps on the amount of the loan guarantees that are too low to ensure success of the program. The government would guarantee one loan not to exceed $625 million, and any other loan could not exceed $100 million. These caps pose a potentially serious problem for borrowers and would benefit one borrower to the exclusion of others.

Cumbersome approval process. The proposal also contains several layers of approval, any one of which is susceptible to delays that could threaten the success of the program. Prospective borrowers may be unwilling to front the substantial development costs of planning and structuring a $600 million to $1 billion satellite project without assurance of approval of the various entities involved: Congress, the Secretary of Agriculture, OMB and NTIA.

Specifically, the conferees' bill would require Congress to authorize funds before the Secretary could approve any loan guarantees. The bill also imposes a broad panoply of consultation requirements on the Secretary of Agriculture, which will administer the program. The Secretary must consult with the OMB and an outside accounting firm within 180 days of enactment, and then must obtain NTIA certification for each loan application. The NTIA may take up to 90 days, a time period that does not even commence until after the Secretary submits the application

for review. In sum, the variegated layers of approval could unduly draw out the borrowing process, yet time is of the essence given the commencement of must-carry requirements under the SHVIA in 2002.

Priority lien. The conferees' bill would require the Secretary to take a priority lien on the borrower's assets. This lien would trump the liens of any other creditors. Under predecessor loan programs, such as the Rural Electrification Act, the law specifically allowed the government to take a subordinated interest. Subordination allows borrowers to secure senior loans, in addition to their federally guaranteed loans, and reduces equity requirements. In view of the high risks and speculative returns of a rural satellite project, subordination may be necessary to the success of the project. Alternatively, if the government is not permitted to take a subordinated lien, the cap on loan guarantees should be raised to reduce the risk to lenders.

Disqualification of existing DBS operators. While satellite carriers are critical to the delivery of local signals, the language in the bill appears to exclude the two existing DBS operators. The success of this program may well depend on the satellite carriers' cooperation since subscribers are likely to prefer hardware that is inexpensive and interoperable with their existing DBS equipment. Yet, under this proposal, satellite carriers with suitable unused spectrum may not participate in the loan program, and the NAB understands that both DirecTV and EchoStar, both likely

partners in this process, may have available spectrum. The broad language of the bill would appear to disqualify consortia even when EchoStar, DirecTV or their affiliates hold only a minority interest. Accordingly, this limit on eligibility may be counter-productive in achieving the ultimate goal of delivering local signals to unserved areas.

THE NEED FOR STUDY AND CAREFUL CONSIDERATION

Given the technical and economic hurdles that satellite carriers would have to overcome in order to provide local television signals to rural Americans, and given the complexity of designing an efficient and effective loan guarantee program, NAB thanks the Senate Agriculture Committee for conducting this hearing, which we assume is the beginning of a thorough inquiry into alternative incentives. We also applaud the NTIA for commencing a wide-ranging public inquiry into local-into-local technology. NTIA has requested public comment on how to ensure the provision of local programming by satellite and other technologies to viewers in smaller communities. Congress likewise should take a careful and thorough look at alternative approaches, such as tax credits or direct loan programs.

CONCLUSION

Mr. Chairman, the NAB applauds Congress' recent action in passing the Satellite Home Viewer Improvement Act and the efforts of Congress to sustain localism by ensuring that rural Americans will benefit from access to local signals by satellite. The future of the 800 television stations operating in smaller markets and access to their signals for millions of Americans will depend on the success of this effort. And it must be a joint effort. It cannot happen without the cooperation of the broadcast, satellite and banking industries.

NAB is concerned, however, for the reasons we have discussed, that the loan guarantee program in its present form will not achieve this important objective. We look forward to working with this committee to design an appropriate economic incentive. Once again we would like to express on behalf of NAB its appreciation for the opportunity to testify before the members of the Senate Agriculture Committee today.

Rural Health Care in Indiana: A Challenge for Telemedicine

Stephen J. Jay, M.D.
Indiana University School of Medicine

Prepared for
Senate Agriculture, Nutrition, and Forestry Committee
Feb. 3, 2000

Mr. Chairman and members of the committee, thank you for the opportunity to speak with you for a few minutes regarding telemedicine and its impact on rural health care. My name is Stephen Jay. I'm a practicing physician, a pulmonologist by training. I am on the faculty of Indiana University School of Medicine in Indianapolis, where I am also chairman of the department of public health and associate dean for continuing medical education.

The only school of medicine in Indiana and the second largest in the country, Indiana University School of Medicine is committed to rapid, effective deployment of telemedicine to benefit Indiana's rural population. We are fortunate to have at our disposal the significant telecommunications resources of Indiana University, one of the nation's most "wired" public universities and host of the operations center for Abilene, the world's most advanced high-performance network for research and education. The school of medicine also joins an array of partners statewide in Opportunity Indiana, a partnership plan with Indiana and Ameritech to build a fiber-optic telecommunications infrastructure that now supports the nation's largest publicly switched interactive video network.

In his State of the Union Address last week, the president outlined a vision to close the "digital divide," which separates the technology haves from the have-nots. Secretary Shalala and Surgeon General Satcher issued a related call last week, in announcing the two primary goals of Healthy People 2010: one, to improve the quality and duration of life, and two, to eliminate disparities in health care.

The "digital divide" threatens the ability of our nation and of rural states like Indiana to effectively meet the challenges of Healthy People 2010. Among our most vulnerable citizens are the medically underserved populations of rural communities. Telemedicine--the application of telecommunications technologies to health care--is one of the strategies Indiana and other states have used to address rural health care challenges. To the extent that we provide effective support for telemedicine, we equip rural communities to address the critical health care needs of their populations and to accomplish our mutual goals for national health.

Telemedicine offers three key benefits to rural communities:

1. Telemedicine can provide clinical care benefits, including greater access to and reduced disparity in health care.

Indiana has a compelling need to develop effective telemedicine applications:

- Sixty percent of Indiana's 92 counties are federally-designated non-metropolitan counties;
- 30% of our population--nearly two of six million people--live in these rural areas;
- The rural populace is disproportionately poor and older than average;
- Accessibility to quality health services is limited:
    - Rural hospitals face significant challenges in providing the health care services needed by these populations;
    - Eight-two percent of Indiana's 11 full-county Medically Underserved Areas (MUA) are rural.
    - Ninety-five percent of Indiana's 22 full-county Health Professional Shortage Areas (HPSA) are rural.
    - Only 13% of Indiana's active, patient-care physicians serve in rural areas.

Experience nationally and in Indiana indicates that telemedicine can significantly improve care for these vulnerable populations. Clinical benefits include:

- Reduced travel time and cost;
- Reduced delay in care;
- Increased access to specialty care and to a wider array of resources; and
- Improved capacity for community-based care.

In Indiana, the U.S. Department of Agriculture's Distance Learning and Telemedicine Grant Program, for example, supports a partnership project of Union Hospital, the Midwest Center for Rural Health, and Clarian Health Partners, one of the largest health care systems in the midwest. This comprehensive telemedicine project provides significant benefits to patients in rural western Indiana, including:

- an electronic medical records network among multiple rural health care sites that ensures consistency and continuity of care;
- obstetric tele-consultation services that eliminate dangerous and costly travel for high-risk obstetric patients;
- an interactive, multi-site distance learning system that supports community-based education of health professions students and continuing education for area practitioners.

2. A second benefit of telemedicine is its role in strengthening community-based health professions education and training. Thirty years of educational research has demonstrated that by supporting decentralized, community-based health professions education, we can improve the supply and distribution of health care professionals in underserved areas. Thus, in 1967, Indiana launched the Statewide System of Medical Education and a statewide telecommunications network for continuing education. Today, the statewide system trains medical and health professions students in eight community-based sites and provides continuing education activities using advanced

telecommunications technologies such as interactive videoconferencing and the Internet. Last month, Indiana University School of Medicine and its partners submitted a proposal to HRSA for an Indiana Area Health Education Centers program, which will build academic-community partnerships in rural, underserved communities. Telemedicine and telecommunications technologies will be critical for accomplishing the goals of this AHEC initiative.

3. The third benefit of telemedicine is its ability to expand system-wide capacity for data-collection, research, and prevention-based public health activities. In rural southern Indiana, a broad community partnership has developed a novel health and safety information network. The "EPICS" project provides a high-speed electronic network that

- links two hospitals, four primary care clinics, and nearly 20 public health and safety providers; and
- provides increased access to local and state public health data.

EPICS stands for Emergency Preparedness: Integrated Community Solutions, and the aim of this telemedicine pilot is to support emergency preparedness and advanced public health surveillance.

These pilot projects have demonstrated the benefits of telemedicine and telecommunications for improving rural health care. However, several important barriers continue to challenge the development of innovative telemedicine applications.

1. Licensure. Twenty-one states, including Indiana, have adopted legislation that limits telemedicine practice. State government and medical leadership is needed to continue constructive dialogue and develop creative solutions to licensure and certification challenges.

2. Reimbursement. At present, limited and inconsistent reimbursement practices discourage telemedicine program development. For example, under the Balanced Budget Act of 1997, Medicare reimburses only for a restrictive set of live teleconsultations in real-time, while other third-party payers tend to cover store-and-forward activities such as tele-radiology. Reimbursement in the private sector varies significantly. Clear, flexible, consistent reimbursement policies are needed.

3. Development and Operating Cost. The start-up and operating costs of telemedicine systems are significant. A 1997 national survey by the Office of Rural Health Policy found that fifty-six percent of the nation's telemedicine "hub" sites and 25% of "spoke" sites spent more than $100,000 in start-up costs. Operating costs run from $50 to $500 per telemedicine session. Rural hospitals in particular feel the hard pinch of expansion costs. The Telecommunications Act of 1996 provided Universal Service Fund telecommunications service discounts rural health providers. Recent rulemaking at the FCC to expand and streamline this program should ease the development of affordable

telemedicine services.

4. Infrastructure. Many rural communities lack the telecommunications infrastructure needed to support telemedicine. For example, Sen. Lugar's office organized a meeting in April 1999 in Greencastle, Indiana, where participants noted that some rural areas simply do not provide the advanced, high-bandwidth telecommunications services required to support telemedicine. In addition, the telecommunications infrastructure designed originally to support local phone calls is inadequate to support long-distance, high-bandwidth telemedicine in a cost-effective, administratively efficient way.

5. Liability: Telemedicine practitioners face unknown exposure to legal liability. Development of clinical standards for telemedicine interventions should allay concern and promote development of telemedicine applications. Telemedicine providers also face uncertainty. A recent OIG Advisory Opinion (99-14, published Dec. 28, 1999, Office of the Inspector General), explores potential anti-kickback violations associated with telemedicine programs. Clarification regarding acceptable collaborative relationships is needed in order to promote innovative partnerships in the development of telemedicine programs.

In closing, we have learned from the Midwest Center for Rural Health and the EPICS telemedicine projects, that critical success factors for telemedicine include:

- significant involvement of community leaders in all planning and implementation activities; and
- creative partnerships among:
    - state and federal governments;
    - state and local health departments;
    - academic health science centers; and
    - the private sector.

While significant barriers remain to rapid development of telemedicine, current projects in Indiana and elsewhere demonstrate success and impact on the health of rural communities. By building on these successes, we can expect to accomplish the goals of Healthy People 2010, and close the "digital divide" in rural health care. Thank you.

Testimony of

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David E. Parkhill
General Manager
Hamilton County Telephone Cooperative
Dahlgren, Illinois

Member of the
National Rural Telecommunications Cooperative

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"The Digital Divide in Rural America"

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Before the Senate Committee
on
Agriculture, Nutrition and Forestry

February 3, 2000

I appreciate this opportunity to talk with you today about the digital divide in Rural America. My name is Dave Parkhill, and I am from Rural America. I am General Manager of the Hamilton County Telephone Cooperative ("HCTC") in Dahlgren, Illinois. HCTC is a member of the National Rural Telecommunications Cooperative ("NRTC"). NRTC is a not-for-profit cooperative association with a membership of nearly 1000 rural utilities (550 rural electric cooperatives and 279 telephone systems) located throughout 48 States. Like HCTC, NRTC's other Members provide electric or telephone service to underserved, low population density areas of the country.

Mr. Chairman, Dahlgren, Illinois is the second largest town in Hamilton County (second only to the thriving metropolis of McLeansboro). There are 500 people that live in Dahlgren. We have 2,400 subscribers to our telephone service, and we cover about 100 square miles and parts of 7 counties. That's a lot of land, and not a whole lot of people.

Our area of Illinois is agricultural. We grow corn, soybeans, wheat and other crops, and we raise cattle and hogs and other livestock. The average family income in our service territory is below the national average.

About 4 years ago, HCTC partnered with Midwest Internet to bring the first local Internet service to our community. Four years later, we are <u>still</u> the only local dial-up Internet service in our area. We have about 525 subscribers, each paying about $20 a month for Internet access.

Most of our subscribers are farmers using the Internet to get the vital information they need to conduct their businesses. They use it for pricing and ordering supplies and checking the weather. They use it to buy and to sell products and to keep an eye on grain and other commodities.

We have school kids that use our Internet access to study and to do homework and to learn. And their parents use it for the host of services that the Internet offers.

Without our Internet access service, Mr. Chairman, Dahlgren and the surrounding areas would have no local dial-up service. None. Not at any speed.

And as far as high speed access goes, it's simply cost prohibitive. We don't have enough people to justify the expense of providing it. If we offered ISDN service, we would have to charge maybe $200 a month to provide it. DSL service would be more than $100 a month. Our subscribers do not have the incomes necessary to support those kinds of charges.

I had a chance recently to review the Report issued last year by the National Telecommunications and Information Administration, entitled "Falling Through the Net: Defining the Digital Divide." Mr. Chairman, there is shocking information in that Report. And based on my experience as the only Internet Service Provider in Hamilton County, Illinois, it's true.

NTIA says that at almost every income level, households in rural areas are less likely to own computers than households in urban or central city areas. At every income level, households in rural areas are significantly less likely—sometimes half as likely—to have home Internet access than those in urban or central city areas. Black households in rural areas in particular are 1/3 less likely to own a computer than the average U.S. Black household, and are 2/5 less likely to access the Internet than the average U.S. Black household.

According to the NTIA Report, a "digital divide" exists among different geographic areas of the country. Even though the number of Americans accessing the Internet has grown rapidly in the last year, NTIA says that the "digital divide" between information "haves" and "have nots" continues to widen.

Mr. Chairman, NTIA is right. There is a digital divide, and Hamilton County and the rest of rural America is on the wrong side of it. That's a problem, and it's got to be fixed.

I'm sure there are many other hometowns that view this problem just as seriously as I do. And I'm sure that anything your Committee could do to help fix it would be deeply appreciated in Hamilton County and throughout rural America.

Thank you very much.