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# FEDERAL TELECOMMUNICATIONS LAW:

A LEGISLATIVE HISTORY OF

# THE TELECOMMUNICATIONS ACT OF 1996

PUB. L. NO. 104-104, 110 STAT. 56 (1996)

INCLUDING

# THE COMMUNICATIONS DECENCY ACT

**Volume 15**
**Document Numbers**
**181 - 184**


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# INTRODUCTION

## AN OVERVIEW OF THE TELECOMMUNICATIONS ACT OF 1996

The "Telecommunications Act of 1996," signed into law on February 8, 1996, opens up competition between local telephone companies, long-distance providers, and cable companies; expands the reach of advanced telecommunications services to schools, libraries, and hospitals; and requires the use of the new V-chip technology to enable families to exercise greater control over the television programming that comes into their homes. This Act lays the foundation for the investment and development that will ultimately create a national information superhighway to serve both the private sector and the public interest.

President Clinton noted that the Act will continue the efforts of his administration in ensuring that the American public has access to many different sources of news and information in their communities. The Act increases, from 25 to 35 percent, the cap on the national audience that television stations owned by one person or entity can reach. This cap will prevent a single broadcast group owner from dominating the national media market.

Rates for cable programming services and equipment used solely to receive such services will, in general, be deregulated in about three years. Cable rates will be deregulated more quickly in communities where a phone company offers programming to a comparable number of households, providing effective competition to the cable operator. In such circumstances, consumers will be protected from price hikes because the cable system faces real competition.

This Act also makes it possible for the regional Bell companies to offer long-distance service, provided that, in the judgment of the Federal Communications Commission (FCC), they have opened up their local networks to competitors such as long-distance companies, cable operators, and others. In order to protect the public, the FCC must evaluate any application for entry into the long-distance business in light of its public interest test, which gives the FCC discretion to consider a broad range of issues, such as the adequacy of interconnection arrangements to permit vigorous competition. Furthermore, in deciding whether to grant the application of a regional Bell company to offer long-distance service, the FCC must accord "substantial



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weight" to the views of the Attorney General. This special legal standard ensures that the FCC and the courts will accord full weight to the special competition expertise of the Justice Department's Antitrust Division--especially its expertise in making predictive judgments about the effect that entry by a bell company into long-distance may have on competition in local and long-distance markets.

Title V of the Act is entitled the "Communications Decency Act of 1996." This section is specifically aimed at curtailing the communication of violent and indecent material. The Act requires new televisions to be outfitted with the V-chip, a measure which President Clinton said, "will empower families to choose the kind of programming suitable for their children." The V-chip provision relies on the broadcast networks to produce a rating system and to implement the system in a manner compatible with V-chip technology. By relying on the television industry to establish and implement the ratings, the Act serves the interest of the families without infringing upon the First Amendment rights of the television programmers and producers.

President Clinton signed this Act into law in an effort to strengthen the economy, society, families, and democracy. It promotes competition as the key to opening new markets and new opportunities. This Act will enable us to ride safely into the twenty-first century on the information superhighway.

We wish to acknowledge the contribution of Loris Zeppieri, a third year law student, who helped in gathering these materials.

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*Jamaica, New York*
*April 1997*



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S. HRG. 101-804

# TELECOMMUNICATIONS EQUIPMENT RESEARCH AND MANUFACTURING COMPETITION ACT

## HEARINGS

BEFORE THE

SUBCOMMITTEE ON COMMUNICATIONS

OF THE

## COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

## UNITED STATES SENATE

ONE HUNDRED FIRST CONGRESS

SECOND SESSION

ON

## S. 1981

TO PERMIT THE BELL TELEPHONE COMPANIES TO CONDUCT RESEARCH ON, DESIGN, AND MANUFACTURE TELECOMMUNICATIONS EQUIPMENT, AND FOR OTHER PURPOSES

APRIL 25 AND MAY 9, 1990

Printed for the use of the Committee on Commerce, Science, and Transportation

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# TELECOMMUNICATIONS EQUIPMENT RESEARCH AND MANUFACTURING COMPETITION ACT OF 1989

WEDNESDAY, APRIL 25, 1990

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
SUBCOMMITTEE ON COMMUNICATIONS,
*Washington, DC.*

The subcommittee met, pursuant to notice, at 2:07 p.m., in room SR-253, Russell Senate Office Building, Hon. Daniel K. Inouye (chairman of the subcommittee) presiding.

Staff members assigned to this hearing: Tom Cohen and John Windhausen, staff counsels; Gina Keeney and William Heyer, minority staff counsels.

## OPENING STATEMENT BY SENATOR DANIEL K. INOUYE

Senator INOUYE. The Communications Subcommittee meets this afternoon and again on May the 9th to receive testimony on S. 1981. This is a bill introduced by Chairman Hollings and which will alter the Modified Final Judgment by repealing the telecommunications manufacturing restriction on the Bell Operating Companies. The last time we addressed issues surrounding the Modified Final Judgment was about two years ago, and at that time it was evident that despite some concern, there was very little desire on the part of the members to move legislation.

The Chairman of our full committee now believes that the time has come to lift the telecommunications manufacturing restriction and institute a new series of administrative safeguards against anti-competitive acts. While I continue to believe that on balance the Modified Final Judgment is a great benefit to our telecommunications market and its businesses and users, I have known the Chairman long enough to listen closely when he makes a proposal. He is extremely knowledgeable about telecommunications and the nature of the international marketplace, and I believe that his proposal deserves our most serious attention.

The debate surrounding the Modified Final Judgment has been ongoing since its inception, and this subcommittee has regularly held hearings to review the state of affairs. In that time I have learned some basics about this issue. First, it is without a doubt one of the most complicated issues to come before us. While there may be easy questions, there are no simple answers. Second, the stakes are so great for businesses, for users and for our country that no agreement will be easily fashioned. Third, the debate at its



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most fundamental level is about substance, not about process. Finally, the judge must be commended for undertaking the awesome task of administering the Modified Final Judgment and for acting responsibly.

In Washington when we speak of history most people think of what was on last night's news. If we take an approach with this issue, we will almost certainly repeat past mistakes. The government of the United States has brought four antitrust suits against AT&T over the past 75 years, all as a result of AT&T's control of bottleneck facilities. In three of these suits, divestiture was required. In all of those suits AT&T or its progeny were foreclosed from entering certain markets. We certainly cannot ignore the incentives and the capabilities to engage in anti-competitive acts that stem from control of the bottleneck.

The question now before us is whether there are other effective safeguards that can be imposed and whether other policies should now take precedence.

I would like to call upon the Vice Chairman of this subcommittee, Senator Packwood.

Senator PACKWOOD. I have no statement, Mr. Chairman.

Senator INOUYE. Are there any other statements here before we proceed?

Senator PRESSLER. I have no statement, Mr. Chairman.

## OPENING STATEMENT BY SENATOR STEVENS

Senator STEVENS. Mr. Chairman, I would like to say I am pleased to be a co-sponsor of this bill with the Chairman. I think it is a subject that needs a thorough examination by this committee, and I am hopeful that we will have a bill ready to report this year.

It seems to me this is one of the subjects we have to be able to get some agreement on. There are many issues that come out of the total divestiture of AT&T yet to be resolved in my judgment. This is one of them.

I also want to state I am sure the committee knows that there is a conference going on on the spill bill, and I will not be able to be here. I think other members who would want to be here will not be here, and I hope those who follow this hearing will realize that there are several others pertaining to the committee going on at the same time. Thank you very much.

Senator INOUYE. Senator Lott.

## OPENING STATEMENT BY SENATOR LOTT

Senator LOTT. Thank you, Mr. Chairman for giving me the opportunity to voice my interest in this subcommittee heaing as a membe of the full committee. I want to commend Senator Hollings on his introduction of this legislation which is before the subcommittee today. This particular issue is one in which I have had a keen interest for many years.

Before coming to the Senate I sponsored legislation in the House to allow the seven bell operating companies to manufacture telecommunications equipment. I felt then that the United States balance of trade in telecommunication equipment and services was

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being severely damanged because of their restrictions, and I am even more convinced of this truth today.

Spending on telecommunications equipment and services will grow by an estimated 9 percent annually in Europe by the year 1992. This is double the rate of the U.S. forecast. The MFJ restrictions have contributed to mounting trade surpluses with the United States. The Japanese and other foreign manufacturers are using these dollars to invest in their own research and development spending, while our domestic producers continue to lose market share.

The Bell companies have no realistic opportunity to recover capital that they might otherwise invest because the companies are not allowed to develop new products. The decree broadly prohibits Bell companies from participating in any aspect of the manufacturing process, including the R&D functions related to product development.

This is brought about by virtue of their not being able to recover their R&D costs through sales of those products, and of course, therefore means they cannot use their tremendous financial resources on R&D projects which lead to new products and new manufacturing jobs.

I have received countless letters from constituents urging the Senate to act to remove the restrictions on the Bell operating companies. These folks recognize if you want to win the game, you've got to put your best players on the field.

The current telecommunications policy of this country doesn't even let the Bell companies draw plays on the blackboard, much less put on a uniform.

Chairman Hollings has urged this country to play hardball with our foreign competitors. I'm ready to play.

If we are going to win this game of global competition in telecommunications and information services, we must shape a new telecommunications policy which will let some of our best players into the game.

I join Chairman Hollings urging the manufacturing restricion be removed, and am pleased to be a cosponsor of this bill, S. 1981. I look forward to working with my colleagues on this and related issues in the coming weeks.

Senator INOUYE. Thank you very much. And now it is my pleasure to call upon the author of this measure, the Chairman of this committee.

## OPENING STATEMENT BY THE CHAIRMAN

The CHAIRMAN. Thank you, Mr. Chairman. Let me apologize for my tardiness, but we had the supplemental appropriations bill on the floor, and are in the Budget Committee and the mark-up, and it is hard to be everywhere at once as we all know.

I read, of course, the very erudite memo on this hearing and if there is ever any need for proof that I do not control these things, read this memo on this bill. It goes on for nine pages before it even begins to hint at the reason I introduced my bill on page 10. I can tell you right now, if the Bell Operating Companies would study this memo closely, you will see what our troubles are. If we can

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answer the first nine pages, of this memo then we will really get to the problem that Senator Lott has just been commenting upon, and that is that we are not controlling all of these misgivings or this cross-subsidization.

Well, Bell Canada is cross-subsidizing Northern Telecom, which has 20,000 employees in the U.S., and it is going like gangbusters. You have got Siemens in here, you have got Ericsson in here, you have got all the foreigners around here, and we sit right in a little ditty box. Hey, we are the Congress, we think we are in charge, but it's the foreigners who are in charge. And they are developing new technologies and they are cross-subsidizing into all of these things that the first nine pages says you better be sure does not happen. Now, that is the reason I introduced the bill. It is happening. It is happening. If we were king for a day and kept everybody out and really controlled the original intent of the Modified Final Judgment to the point where we did not have all these things occurring that this brief gives misgivings about for nine pages, that would be fine. But we live in the real world. It is happening around us, and it is labeled as healthy. Then why is it not healthy for our own American companies to get in?

There is an additional misgiving I have serving on the Budget Committee. We are suffering a shortage of American capital, but because of the restrictions in the MFJ Senator Packwood, I am forcing my capital overseas. I am telling the Bell companies to take these monies and show enough gold overseas, and that is what they are doing: in Ireland, in Hungary, trying to get a connection between Moscow and Tokyo. They are all over the world and, hey, I am sitting around sucking my thumb saying well, I am in charge. I am preventing antitrust activity, and I am going broke.

So I want this capital to be invested here if these restrictions are lifted, namely their manufacturing must be in the United States of America. And then, as is quite obvious to all the ratepayers of the Bell Operating Companies, when we lift the manufacturing restriction, they will then have an inducement to conduct research, and development. Then we will begin or continue—we are sort of vacillating now on that cutting edge, but we might get back in front and on the cutting edge of research and development and then have available the most modern of technology in communications. We are losing our advantage because what is happening is all taking place overseas. It does not pay for these folks to take their own experiences and put it into research because it is prohibited in a general sense. They have got BellCore, but since they cannot manufacture, there is no economic inducement whatever to really develop and produce new technologies and really compete. And thereby the ratepayers themselves, the public served by common carriers, are ultimately going to suffer.

So, no, I did not include information services in my bill. That is another debate. I did not go into the question of long distance, which is properly handled at the present time and there is enough competition. But the particular restriction on manufacturing has not worked at all because we've got the Public Service Commission of Sweden running this thing. We have got the Public Service Commission of Canada running this thing and everything else, and you folks are sitting up here on this big old Commerce Committee

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thinking you are in charge. You are not in charge at all. I want to get back in control of this thing through our Federal Communications Commission.

Good afternoon. I'm very pleased this afternoon to begin consideration of my bill, S. 1981, the Telecommunications Equipment Research and Manufacturing Competition Act of 1989. This bill is critical to the future of the Nation's telecommunications industry. The United States is in grave danger of losing its lead in telecommunications technology. For too long, we've been sitting on the front porch sniffing the roses while the Japanese, the Europeans, and the rest of the world's manufacturers have been investing in our own back yard.

It is high time we woke up to reality. The market for telecommunications equipment is global, and we are the only one not in the game. In trying to promote fair competition, we have shackled seven of our largest telecommunications firms so much that we are barely competing at all. This is an absurd policy.

Now I do not mean to suggest that Judge Greene is the problem. Judge Greene is a very smart man, and I deeply respect his abilities as a Federal court Judge. But this is not just a problem of antitrust law. This is a national problem of international proportions. The Bell companies together have annual revenues of over $77 billion. We cannot afford to keep these enormous capital resources on the sidelines any longer.

The future of telecommunications is in advanced electronics and computers. U.S. leadership in these high technology industries depends upon strong research and development activities. Today, the Bell companies spend only about 1.4 percent of their revenues on R&D activities. Most telecommunications firms spend 6 percent to 7 percent. This has got to be changed.

I realize that the MFJ permits the Bell companies to conduct some research activities today. The problem is that the BOC's today have no incentive to conduct the research that needs to be done. Unless they have a way to earn a profit off that research, they have no reason to do it. That is why my bill would let the BOC's into manufacturing. Whatever the BOC's develop in their labs, they can turn into a product for sale to the public. Only then will the BOC's have the incentive to put their enormous resources to use.

This is not to say that we do not need safeguards to ensure that there is fair competition. Clearly, the Bell companies continue to have a monopoly over their local telephone customers. We need to protect against self-dealing and cross-subsidization in that situation. But let's not listen to the "just say no" crowd. Lets's talk about how to craft those safeguards so that we can move forward.

Now I know that the Bell companies would like to be allowed into the other businesses of long distance and information services. Frankly, I do not know if anything is going to be happening in those areas in the near future. We need to be realistic and shoot for what we can get today. The Nation faces its most direct threat from foreign competition in the field of telecommunications manufacturing. We need to focus our energies on solving this problem today. We cannot afford to wait any longer.

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I am pleased that we are having these hearings today and again on May 9. I look forward to the testimony this afternoon and hope that we can move forward on my bill in the near future.

Senator INOUYE. Senator Breaux.

## OPENING STATEMENT BY SENATOR BREAUX

Senator BREAUX. Thank you very much, Mr. Chairman. I want to thank you, Mr. Chairman, for agreeing to have the hearing. I want to commend my colleague for his statement and also for introducing the legislation which is the subject matter of this hearing. I am looking forward to what the witnesses will have to say.

I have also introduced legislation which attempts to try and put the Congress back in charge of communications policy. I think it is not a good situation that we have one judge in one district court in one part of the country making communications policy for the entire United States based not on what is best for communications but what is essentially an antitrust determination. That should not be the basis for an aggressive telecommunications policy for the United States. But that, in fact, is what we are experiencing.

It is wrong for industries in this country who want to do certain things to have to go to a judge to get permission to do it based on an antitrust statute as opposed to a communications policy, and I think that this effort on behalf of Senator Hollings and others certainly reflects an effort to put the Congress back into formulating a communications policy for this country. There are some very legitimate questions that have to be addressed, and this hearing is the appropriate place to do it with regard to some of the concerns that will be brought up. Should we allow manufacturing by what is essentially a monopoly, can that be addressed? Can that be balanced? It must be. But this is the purpose of this hearing.

I would just commend the Chair and also the distinguished Chairman of the full committee for getting us to this point. Why should we be afraid to talk about this? Why should we be afraid to freely debate it. The competition that America is facing is not among our own people and within our own borders. It is worldwide, and we should be addressing a communications policy to compete against the world, not only limit competition among ourselves, and I thank you for having the hearing.

Senator INOUYE. Thank you. I think you have got the votes, but I think we should go through with the hearing.

Without objection, the bill will be made a part of the record.

[The bill follows:]

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101ST CONGRESS
1ST SESSION

# S. 1981

To permit the Bell Telephone Companies to conduct research on, design, and manufacture telecommunications equipment, and for other purposes.

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IN THE SENATE OF THE UNITED STATES

NOVEMBER 21 (legislative day, NOVEMBER 6), 1989

Mr. HOLLINGS introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

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# A BILL

To permit the Bell Telephone Companies to conduct research on, design, and manufacture telecommunications equipment, and for other purposes.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

**SECTION 1. SHORT TITLE.**

This Act may be cited as the "Telecommunications Equipment Research and Manufacturing Competition Act of 1989".

**SEC. 2. FINDINGS.**

The Congress finds that the continued economic growth and the international competitiveness of American industry would be assisted by permitting the Bell Telephone Compa-

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nies to conduct research on, design, develop, manufacture, and market telecommunications equipment for American residential and business telecommunications users.

SEC. 3. AMENDMENTS TO THE COMMUNICATIONS ACT OF 1934.

(a) IN GENERAL.—Title II of the Communications Act of 1934 (47 U.S.C. 201 et seq.) is amended by adding at the end the following new section:

"REGULATION OF MANUFACTURING BY BELL TELEPHONE COMPANIES

"SEC. 225. (a) Subject to the requirements of this section and the regulations prescribed thereunder, a Bell Telephone Company may conduct research on and manufacture and provide telecommunications equipment, notwithstanding any restriction or obligation imposed before the date of enactment of this section pursuant to the antitrust laws on the lines of business in which a Bell Telephone Company may engage, except that a Bell Telephone Company may not engage in such manufacturing or provision or both through a joint manufacturing agreement with another Bell Telephone Company.

"(b) Any Bell Telephone Company engaged in any activity authorized under subsection (a) shall conduct such activity other than basic research only through a subsidiary that is fully separate from any other entity owned or otherwise affiliated with any Bell Telephone Company, including any affiliate of one or more of the Bell Telephone Companies that



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provides telecommunications services over the telephone network. The Commission shall issue rules to ensure that such subsidiary shall—

"(1) maintain books, records, and accounts separate from the parent Bell Telephone Company which identify all transactions with such parent Company and, even if such subsidiary is not a publicly held corporation, prepare financial statements which are in compliance with Federal financial reporting requirements for publicly held corporations, file such statements with the Commission, and make such statements available for public inspection;

"(2) consistent with the provisions of this section, carry out directly its own marketing, sales, advertising, installation, production, maintenance operations, manufacturing, and research and development relating to the equipment it provides, except that institutional advertising of a type not related to specific telecommunications equipment carried out by the parent Bell Telephone Company shall be permitted if each party pays its pro rata share;

"(3) conduct all of its manufacturing activity, including design and development as well as fabrication, and including the manufacture of components, within the United States;



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"(4) have no more than 90 per centum of its equity owned by its parent Bell Telephone Company;

"(5) acquire all of the debt necessary to finance itself from the financial markets outside the operations of its parent Bell Telephone Company, and be prohibited from acquiring debt in a manner that would permit a creditor, on default, to have recourse to the assets of the Bell Telephone Company's telecommunications services business; and

"(6) shall operate at all times on an arms-length basis from any of its parent Bell Telephone Company's other businesses, including the Bell Telephone Company's telecommunications services businesses.

"(c) The Commission shall issue regulations requiring that any Bell Telephone Company that engages in any activity authorized by subsection (a) shall—

"(1) provide to other telecommunications equipment manufacturers opportunities to sell such equipment to itself or any of its affiliates which are comparable to the opportunities which it provides to itself or any of its affiliates; and

"(2) not subsidize its fully separated subsidiary with revenues from its regulated telecommunications services.



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"(d) For the purposes of administering and enforcing the provisions of this section and the regulations prescribed thereunder, the Commission shall have the same authority, power, and functions with respect to any Bell Telephone Company as the Commission has in administering and enforcing the provisions of this title with respect to any common carrier subject to this Act.

"(e) The authority of the Commission to prescribe regulations to carry out this section is effective on the date of enactment of this section. The Commission shall prescribe such regulations within one hundred and eighty days after such date of enactment.

"(f) As used in this section:

"(1) The term 'affiliate' means any entity (A) that is under direct or indirect common ownership by a Bell Telephone Company, or directly or indirectly owns a Bell Telephone Company, (B) that is under direct or indirect control by a Bell Telephone Company, or directly or indirectly controls a Bell Telephone Company, or (C) in which a Bell Telephone Company or its other affiliates directly or indirectly (i) have an equity interest (or the equivalent thereof) of more than 10 per centum or (ii) exercise substantial management influence.



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"(2) The term 'antitrust laws' has the meaning given such term by subsection (a) of the first section of the Clayton Act (15 U.S.C. 12(a)).

"(3) The term 'Bell Telephone Company' means those companies listed in appendix A of the Modification of Final Judgment entered August 24, 1982, in United States v. Western Electric, Civil Action No. 82–0192 (United States District Court, District of Columbia), and includes any successor or assign of any such company, but does not include any affiliate of any such company.

"(4) The term 'manufacturing' has the same meaning as such term has in the Modification of Final Judgment entered August 24, 1982, in United States v. Western Electric, Civil Action No. 82–0192 (United States District Court, District of Columbia) as interpreted in United States v. Western Electric, Civil Action No. 82–0192 (United States District Court, District of Columbia) (filed December 3, 1987).

"(5) The term 'telecommunications' means the transmission, between or among points specified by the customer, or information of the customer's choosing, without change in the form of content of the information as sent and received, by means of an electromagnetic transmission medium, including all instrumental-



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ities, facilities, apparatus, and services (including the collection, storage, forwarding, switching, and delivery of such information) essential to such transmission.

"(6) The term 'telecommunications equipment' means equipment, including customer premises equipment, telecommunications products used by a carrier to provide telecommunications services, and software necessary to operate such equipment.

"(7) The term 'telecommunications service' means the offering for hire of telecommunications facilities, or of telecommunications by means of such facilities.".

(b) CONFORMING AMENDMENT.—Section 2(b) of the Communications Act of 1934 is amended by striking "section 224" by inserting "sections 224 and 225".

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Senator INOUYE. Now, if I may call upon the witnesses, our first witness is the Chairman of the BellSouth Corporation of Atlanta, Georgia, Mr. John L. Clendenin.

Senator BREAUX. Mr. Chairman, before the witness talks, I would just like to commend the staff for the memorandum that I think was prepared probably for the Democratic side, but your staff did a really excellent job, and I think the record should show that. It is balanced, and I think it really helped me a lot in understanding the issues at hand.

Senator INOUYE. Mr. Clendenin.

## STATEMENT OF JOHN L. CLENDENIN, CHAIRMAN, BELLSOUTH CORP., ATLANTA, GA

Mr. CLENDENIN. Thank you very much, Mr. Chairman. Let me say how much I appreciate the opportunity to be here. We at BellSouth continue to believe that Congress should make national telecommunications policy. S. 1981 is a positive step in that direction as well as a big step toward a policy that serves America's economic and other interests at home and abroad. I commend committee Chairman Hollings for his vision in introducing this forward-looking legislation, and I also would like to thank the members of the committee for your willingness to consider its merits. I sincerely hope that at some time in the future the committee will also address the restrictions on information services and inter-LATA long-distance service since they too affect American competitiveness, but I am here today to address S. 1981.

The need for such a measure is clear. The MFJ is out of synch with the realities of global commerce and the demands of manufacturing in the information age. The problems it creates and aggravates are a drain on American competitiveness. With its overly broad definition of manufacturing, the MFJ stifles innovation in a strategic industry, aggravates the trade deficit, transfers American technology abroad, directs American capital to other nations, and I believe costs this country jobs.

I think we need to know just how broad this definition is, this definition of manufacturing, because the court has greatly expanded this restriction, and there has been considerable confusion on this issue. Under the MFJ, the restriction on manufacturing means far more than preventing us from fabricating a product. BellSouth cannot even write the fundamental software used in our network switching centers, which are actually giant computers, because under the court's definition creating this core network software is "manufacturing."

The court's definition also creates so much uncertainty that we do not feel safe in supporting American manufacturers, large or small, that ask us for capital to help bring a new product to market or to expand their capacity. As a customer, we are even sharply restricted in how closely we can work with a company that is manufacturing equipment for us. We cannot engage in the kinds of consultations that are common practice and necessary practice in efficient information age manufacturing. We can participate in only parts of the process. We are not allowed to weave the parts

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together into the full design process in a way that is so critical with today's technology.

But while BellSouth cannot take part in manufacturing in any real sense in this country, foreign companies have total freedom to enter the U.S. market. To me that just does not seem logical. Some folks have characterized the debate about the MFJ as a dispute between the Bell holding companies and AT&T. I believe it is much more than that. I believe it is a fundamental question of the general welfare. AT&T is one of the world's premier manufacturers and if S. 1981 becomes law, it will continue to be a winner at the highest levels in domestic and international competition. And if S. 1981 becomes law and we are ultimately allowed to participate in manufacturing, I am sure that contrary to what some have asserted, BellSouth will continue to be one of AT&T's largest customers.

Likewise AT&T Bell Laboratories will remain one of the world's premier research operations. With all of its resources and talent, Bell Labs will not be threatened by the many small companies that need assistance in bringing ideas to the market.

The issue thus goes far beyond the interests of AT&T, Bell South or the Bell holding companies. It really goes to the question of American competitiveness. Let me give you two examples of how the MFJ saps America's competitive strength in one important area, capital for small high tech manufacturers in this country. International Mobile Machines Corporation, a small Pennsylvania company, came to BellSouth with an idea for a wireless radio technology. This technology would have been useful for communications in rural areas, which BellSouth has plenty of, and perhaps more generally for cellular all over the place. The company needed capital to bring the product to market. We were interested, but the MFJ stood in the way. The company is now working with foreign interests to raise that money.

I hope IMM will not become yet another high tech asset to be taken out of America's competitive column and put into that of another nation. But if it is taken from our column, I guess I will not really be surprised.

Another company, CXC, Incorporated, located in California and known for making a telephone PBX called "The Rose", offered BellSouth an equity position so it could increase its manufacturing capacity. At the time, The Rose was at the very leading edge in switchboard design for the small and medium sized business market. Again, we were interested. Again, the MFJ stood in the way. Today a consortium of foreign companies owns the intellectual property rights in the technology developed by CXC.

Now, we all recognize that we are operating in a global economy, but I do not believe any of us would suggest that American policy should be designed to work in this fashion. And I certainly do not think any of us would maintain that results such as these enhance America's competitiveness. U.S.-based innovation marches offshore then returns as a foreign made product, contributing to a troubling free fall in the telecommunications trade deficit.

Yes, the MFJ involves very complex issues. But intricate arguments should not obscure these blunt facts. They tell us that something is terribly wrong with the current telecommunications policy. Maintaining the status quo on this policy is just not good enough.

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The status quo did not serve these two small companies that needed capital. It will fail too many others, and it will not serve America's competitive position.

Nor does the status quo serve America through that other peculiar twist of current policy that we always ought to keep in mind as we consider this issue: BellSouth is barred from manufacturing telecommunications equipment here in this country, but foreign companies do so freely.

I find that difficult to accept. Now, admittedly, BellSouth knows very little about the fabrication part of manufacturing, but we do have a great deal of expertise in telecommunications. And we believe we could couple our telecommunications expertise with the manufacturing expertise of American companies that make a variety of high tech products, both inside and outside the telecommunications industry.

A joint venture that combined our skills could, in effect, create a new company and benefit America through new jobs, new products and increased competitiveness. But that cannot happen under the MFJ.

Eight years ago, just before the divestiture of AT&T, America ran a trade surplus in telecommunications. Today the telecommunications trade deficit is some $2.6 billion. Stacked against the overall trade deficit, this might seem like a small amount. But it is nevertheless, $2.6 billion that the Senate and the House could affect simply by allowing the BHCs to add their resources to America's manufacturing muscle.

How much could we contribute to cutting the deficit? I cannot say specifically, Mr. Chairman, but we would sure like the chance to meet the competition head on in the marketplace, and I believe we have quite a bit to offer.

Earlier, I mentioned that the manufacturing restriction constrains our development of software and also precludes us from collaborating on the design of the equipment that others are making for us.

The software restriction is especially damaging in the way it slows the timely delivery of new services to our business and residential customers.

By upgrading the generic software in our network switching centers, we can provide a wider array of desired telecommunication services. But because of the MFJ, we have to go hat-in-hand, asking vendors for this software—vendors who, interestingly enough, are often our competitors.

As you might imagine, they are often less than enthusiastic about writing this software for us. Instead, they want to convince us to buy another newer switch.

We have experienced lags of up to two years in getting new software for network switches that we already own, and we think our customers deserve a more timely response. When we are a customer, we can provide only generic specifications to the manufacturers. We are supposed to design our networks without being allowed to even consult on the design of the equipment that goes into them.

Well, maybe that was workable in the days of smokestacks, but it is not workable today. In this age it is awkward, inefficient and impractical.

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Information age manufacturing requires that customers, suppliers and manufacturers work very closely together at every step in the process. We believe we should be able to take part all the way through, from the inception of the idea to the actual fabrication.

As it is, the effect of the MFJ is to discourage research and development and to slow down innovation. And it slows innovation at a time when the numbers on patents and R&D spending show that global competitors are gaining ground.

S. 1981 would address such problems, and we heartily applaud its thrust. We have offered some suggested refinements in my written testimony. We believe these will clarify a couple of areas and help ensure that the bill's aims are realized. But refinements aside, we feel that S. 1981 goes to the core issue, namely, how competitive America will be now and in the future.

Telecommunications is increasingly at the center of our Nation's competitiveness. Other nations have targeted American markets and are bent on exploiting their other advantages through the vast powers of information age telecommunications.

Many voices defend the status quo. They say there is no cause for alarm, that America is the clear leader in at least the network segment of telecommunications. That argument leaves me terribly uncomfortable.

Quite frankly, it does not jibe with the reality or the lessons of the last 30 years. If there is one collective lesson that we all should have learned in that time, it is that no industry is invulnerable. Autos, steel, consumer electronics—we thought they were all invulnerable.

Our trade deficit today is a telling measure, not only of our competitors' skills, but of our own mistaken complacency in an earlier time. Now we are paying a heavy price in the marketplace and the policy arena.

We dispatch trade negotiators around the world. They debate, they cajole, they sign agreements, and they come home. We wait for our overall trade position to improve. Here in the Senate you and your colleagues labor over legislation and other ways to turn the trade deficit around. You recognize that things are often tilted against American companies, and, quite rightly, you call for a level playing field.

Well, the telecommunications playing field is not level right here in America, but we cannot lay the blame solely on other nations. For the most part, we have done it to ourselves. We have tilted the playing field against our own players. The seven BHCs are relegated to sitting on the sidelines.

Now it is time to tilt the playing field back toward fairness, and unlike so many obstacles to improved trade that we might not be able to remove—such as other countries' customs or cultures or policies—we can remove this one. And S. 1981 would do the job.

We at BellSouth have made every effort to live by the letter and the spirit of the decree. Today, it is clear that the restrictions have outlived their usefulness. The public interest demands that they be re-examined.

I urge you to consider S. 1981 in the context of America's current standing in the international marketplace, our prospects for the

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future and the implications of both for American business and consumers.

I urge you to reassert the role of Congress in establishing telecommunications policy. I thank you again for this opportunity. I will remain in the audience during the proceedings and will gladly answer any questions beyond those that you may have now. Thank you very much.

[The statement follows:]

STATEMENT OF JOHN L. CLENDENIN, CHAIRMAN AND CEO, BELLSOUTH CORP.

Thank you, Mr. Chairman and members of this Subcommittee. I thank you for this opportunity to offer my views on S. 1981. At BellSouth we continue to believe that Congress should make national telecommunications policy. S. 1981 is a positive step in that direction as well as a big step toward a policy that serves America's economic interests domestically and internationally.

I commend the Chairman for his vision in introducing this forward-looking legislation aimed at improving American competitiveness. I also commend the members for your willingness to consider the merits of the bill.

America needs a telecommunications policy more suited to the realities of global commerce and to the process of manufacturing in the Information Age. Manufacturing in this age of computing and communicating technologies includes far more than the actual fabrication of a product, but the MFJ simply doesn't permit us to participate in what have become the necessary elements in an efficient, successful and competitive process.

S. 1981 gives us the opportunity to build a policy for the 21st Century. The bill could address a number of problems caused



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by current policy, problems that add up to a serious drag on America's competitiveness today and that put it at greater risk in the future.

And I want to emphasize that the issue is indeed American competitiveness. The issue is much more than a dispute between the Bell Holding Companies and AT&T.

AT&T is one of the world's premier manufacturers, and it's going to continue succeeding at the highest levels in international competition. And if S. 1981 becomes law and we are ultimately allowed to participate in manufacturing, I'm very sure that BellSouth will continue to be one of AT&T's largest customers, just as we are today. And they'll remain one of our biggest customers.

Likewise, AT&T Bell Laboratories will remain one of the world's premier research operations. It's an asset to America. We need many sources of new ideas in America and AT&T Bell Labs, with all of its resources and talent, is not threatened by the many small companies that need assistance in bringing ideas to the market.



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We're here to discuss an issue that goes far beyond the particular interests of BellSouth, the Bell Holding Companies or AT&T or, indeed the MFJ itself. That issue is, again, American competitiveness.

My views are based on my experience in telecommunications in general and at BellSouth in particular. To me, it's clear that the MFJ stifles innovation in this strategic industry, aggravates the trade deficit, transfers American technology abroad, directs American capital abroad and costs this country jobs.

To illustrate how flawed this policy is, let me give you two examples.

A high-tech, U. S. manufacturing company called International Mobile Machines Corporation came to BellSouth with an idea for a wireless radio technology that would have been useful for communications in rural areas and perhaps more generally for cellular. The company needed capital to make the technology a competitor in the marketplace. The MFJ prevented us from offering that help in a normal commercial relationship.



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But the idea was too good to be passed up, and sure enough, it hasn't been. The company is in the process of raising the necessary capital working with a foreign company. I can only hope that this will not become another high-tech firm that will be taken out of America's competitive column and put into that of another nation. That happens frequently in this industry.

Another company, CXC, Inc., known for making a PBX called The Rose, offered BellSouth an entity position that would allow CXC to gain the capital it needed to expand and increase capacity. We were interested, but, again, the MFJ wouldn't allow us to take part.

Unfortunately, CXC is no longer in existence. But their design and intellectual properties live on in the hands of foreign investors.

In a global economy, I suppose, we're going to see a great deal of this. Perhaps the idea of a truly global economy necessitates some of it. But I don't believe any of us would suggest that American policy should be designed to work in the



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fashion I just described. Nor would we maintain that results such as these enhance America's relative competitive position.

These examples get to the nub of the matter. Yes, the MFJ involves complex issues. But whatever the complexities, intricacies and subtleties paraded out in this debate, these examples should stand out clearly in the foreground of all our discussions; their blunt facts are sufficient in themselves to indicate that something is terribly amiss with current telecommunications policy.

America is plagued by a large and stubborn trade deficit; many small, high-tech American companies struggle for needed capital; you and I know it's vital that this country stay out front in telecommunications; we want to create more jobs. Yet we follow a policy that transfers American companies, talents and technology abroad. (See Attachment C-1.)

The two examples I cited are not isolated instances. I could give you others.



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At BellSouth, we've had literally dozens and dozens of serious inquiries. But we've reached the point where we seldom sit down and talk with companies that would like to join with us in some manufacturing venture. We stop them at the door, explaining that, much as we'd like to, no matter how promising their idea, there's no need to talk.

Often, such companies are eventually taken over by a foreign company. And, thus, U. S.-based innovation marches off shore, then returns as a foreign made product, contributing to a continuing free fall in the telecommunications deficit. (See Attachment B-1.)

In preparing for this testimony, I came across a survey that listed 70 American telecommunications and other high-tech companies that had been bought by foreign companies in the past five years.

Under the MFJ, BellSouth has no chance to help keep companies such as these in America's competitive column. Instead, the MFJ



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encourages their transfer to the competitive advantage of other nations. We can't blame other nations for this exodus; we're causing it ourselves.

An American company goes abroad for capital; then the profits leave here and become more foreign capital to buy yet another American company. And so it goes. Yet we're telling seven of this country's best telecommunications companies to take their capital elsewhere in the world if they want to invest in jobs and earn a return for their shareholders. National telecommunications policy makes it the only option.

BellSouth doesn't have the capital to fund every small, high-tech manufacturer that comes along with a good idea. Nor do any of the other six Bell Holding Companies. But we do have access to capital that would undoubtedly assist many promising and innovative companies to develop products and hence create jobs.

We'd like the chance to help these companies pursue their ideas, and we'd like the chance to pursue our own ideas.



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At BellSouth, we believe we could couple our telecommunications expertise with the manufacturing expertise of American companies that make a variety of high-tech products both inside and outside telecommunications. A joint venture that combined our skills would, in essence, create a new company and benefit America through new jobs, new products and increased competitiveness.

Foreign companies have complete freedom to manufacture telecommunications equipment and components here in America, while BellSouth can't. (See Attachments C-2 & C-3.) There has to be something basically flawed with a policy that allows foreign companies to do in this country what American companies are not allowed to do.

Of course, the MFJ allows BellSouth to manufacture overseas -- but only if it can be shown that the products do not come into this country.

We think American companies should be allowed the freedoms in America that are available to foreign companies here, including



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foreign telephone companies. We think America would benefit from our knowledge and our assets in dealing with the global marketplace.

Eight years ago, just before the divestiture of AT&T, America ran a trade surplus in telecommunications. Today, the surplus is only a memory, and the telecommunications trade deficit is some $2.6 billion. (See Attachment B-2.) While this $2.6 billion could be considered a relatively small piece of the overall trade deficit, it is nevertheless a deficit that the House and Senate could directly impact simply by allowing the Bell Holding Companies to participate meaningfully in the manufacturing process.

I should point out here that the very definition of manufacturing under the terms of the MFJ and related court interpretations causes serious problems. Manufacturing is defined so broadly that we can't even "manufacture" software crucial to certain innovative advances in telecommunications equipment. In the day-to-day business of operating and improving a telecommunications network, this is a particularly damaging restriction.



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In our industry, software rivals hardware in its importance for delivering services. Our big network switching centers are giant computers, and we can provide business and residential customers a richer array of telecommunications services simply by upgrading the generic software in these computers.

But since we are precluded from writing this fundamental software for these switches, we have to go hat-in-hand asking vendors for it -- vendors who are often our competitors. And too often they don't see it being in their interest to give us that software with any dispatch. Instead, they might want to convince us to buy another switch, another newer computer they've built. Our customers, of course, would have to pay for those or wait until the new software is written. And at BellSouth, we have experienced lags of up to two years in getting new software for network switches that we already own. We're confident that if we could write the software ourselves we'd get it done faster. Or, if our vendors knew we could, they'd be willing to move more quickly to respond to our customers' needs. We think the public deserves that.



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But this software restriction is evidence of a larger problem. Under the MFJ, we're barred from activities that are now essential to the manufacturing process -- from design and development through the actual fabrication of a product. The MFJ forces us to remain essentially vague about what we need from a manufacturer: We're allowed to deal only in generic specifications.

More than just hobbling us, then, the MFJ also hobbles companies that manufacture for us. We can't play the active role in the process leading up to the fabrication, the role demanded by the complexities of the equipment and the networks. Too often, this leaves these companies to a trial-and-error method to come up with exactly what we need.

We're supposed to design our networks without consulting on the design of the equipment that goes into them. We're supposed to come up with general requirements without providing any detailed specifications.



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Perhaps this was practical in the smokestack days of manufacturing. It is not today. And this is especially so as we merge computing and communications technologies that create the information and telecommunications networks that today are the heartbeat of world commerce.

Millions of components are combined on a single chip; we don't measure their speed in tenths of seconds or hundredths of seconds, but rather in billionths of seconds. And these are the building blocks of our technologies.

The whole manufacturing process is drastically different than it was during the Industrial Age. It's far more complex; it has to be aimed at tailoring products and services to very specific and specialized needs of customers.

The complex process requires that customers, suppliers, and manufacturers all work very closely together at every step in the development of a new product, or a change in process, or an updating of a feature. This is especially true in the case of products and services associated with the merging of computer and telecommunications technologies.

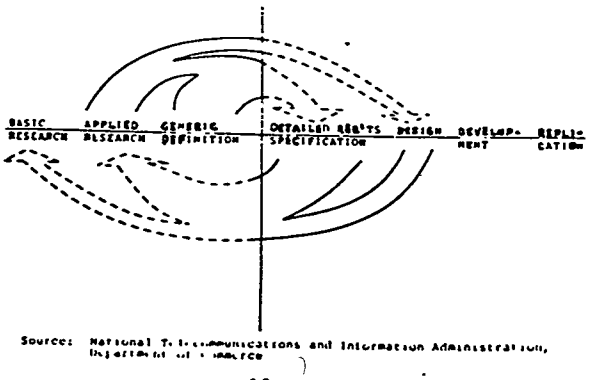


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But, because of the MFJ, BellSouth is not permitted to work closely enough with suppliers in the total design and development of a product. We're barred from a practice which is common in every other industry, an interaction that is typical of customer-manufacturer relationships in the Information Age.

The figure below illustrates the interactions that normally occur in the research, design and development phases of manufacturing. Encouraging these interactions is the key to strengthening industrial competitiveness. The dotted lines indicate the areas of interaction that the MFJ prohibits BellSouth from taking part in.

Figure 1 Effect of MFJ Manufacturing Restriction




Source: National Telecommunications and Information Administration, Department of Commerce



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We can engage in certain parts of the process. But we are not allowed to string the piece parts together into the full process from start to finish. We believe we should be able to take part all the way through -- from the inception of the idea to the actual fabrication.

Because of this broad definition of restrictions in manufacturing, we believe the MFJ hurts research and development, introduces serious inefficiencies in manufacturing, and slows innovation. And it slows it at a time when competitors are gaining ground. (See Attachment D-2.)

At divestiture, for example, Japanese telecommunications equipment manufacturers invested less than half as much in R&D as their U. S. counterparts. Today, the numbers suggest that Japanese companies have caught up and are now exceeding U. S. industrial R&D outlays in telecommunications. Moreover, Japanese companies are increasing their rate of investment in R&D by a 3 to 1 ratio over AT&T's growth rate of R&D investment. We feel that maintaining the status quo in these circumstances would invite serious repercussions for U. S. trade and technology interests. (See Attachment D-1.)



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Clearly, the MFJ discourages R&D in the seven Bell Holding Companies. While most high-tech companies spend 8 to 9 percent of their total sales on R & D, the BHCs collectively spend only 1.3 percent. (See Attachment B-3.)

Some might claim we have an obligation to spend more than this. But given the MFJ restrictions, devoting relatively little money to R&D is arguably the prudent and responsible course. As long as we cannot expect a reasonable return on R & D, we owe it to our shareholders and our customers not to spend more.

To put it bluntly, today, direct investment in R & D is something of a dead-end street for much of what we do. National telecommunications policy makes it so.

S. 1981 would address this and other problems associated with the current policy. We at BellSouth believe the bill can be improved to assure that the bill's aims are realized, and my recommendations for changes are in Attachment A. I'll not go into those here, but I would invite your perusal of these suggestions and would be pleased to respond to any questions you might have.



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My company sees the need for legislation like S. 1981 every day as we serve millions of business and residential customers, primarily in nine states of the southeastern United States. We have more than 17 million access lines, millions of which are in rural areas of the southeast. We are also a leading provider of cellular and other mobile communications services in major markets around America and in several other nations.

We're recognized as a leader in modernizing our telecommunications network with digital equipment and fiber optic cable. We want to remain a leader in technology because that's what it will take to provide our customers with the products and services they want and need.

But, as I've indicated, the MFJ restrictions on manufacturing don't allow us to serve our customers as we would like. For the people and businesses of our nine states and those in the other Bell regions, these circumstances alone, it seems to me, are sufficient reason to support the thrust of S. 1981.



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But, whatever our views on this particular bill or the MFJ, we all know the issue goes way beyond this aspect of the question. The issue goes far beyond BellSouth -- or any other single company. The issue goes to the heart of how competitive America will be in the coming decade and in the early decades of the next century -- perhaps far beyond that.

Because we all know we're not talking about an industry that sits on the sidelines of the economy. We're talking about an industry that is central to what is happening in commerce everywhere. Banking, finance, textiles, automobiles, agriculture, insurance, retailing, all forms of manufacturing -- we've seen them all transformed in recent years by the dynamics of information and telecommunications.

The essence of success in today's business, whatever it might be, seems to revolve around the ability to move, manipulate and access information at least as efficiently as the competition does. And the companies, cities, states and nations that stay out front in information and communication technologies are going to have an edge in the marketplace.



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Thus in S. 1981 we're talking about the capacities and capabilities of the telecommunications products and services that will be available to the businesses and the individual consumers in your states. We're talking about businesses whose markets have been targeted by skilled, aggressive competitors from abroad who are bent on exploiting their advantages through telecommunications.

Will America stay at the leading edge in telecommunications? I would not presume to say with certainty one way or the other. But I can say that our chances are not improved by forcing seven of our largest telecommunications companies to sit on the bench.

Being out front means innovating. To innovate, a company has to keep pushing technologies -- hardware and software. It has to be allowed the freedom to continually search for breakthroughs, new developments that will win in the marketplace against foreign and domestic competitors. An innovator doesn't just shop out of other people's catalogs.



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Manufacturing, then, is at the heart of innovation, and we're barred from manufacturing. And we're barred from manufacturing by a restrictive definition so broad that we're hampered even in pursuing routine ideas our own people come up with.

The MFJ works against America's larger interests. It expedites the flow of American technology and capital abroad, and, ultimately weakens an industry whose strength is increasingly at the very core of a nation's competitive powers.

S. 1981 is a serious effort to come to grips with these problems. It is an effort to build a policy based on reflection and choice rather than on inertia and the practices of the past.

Many people and companies defend the current policy -- the status quo. A number of companies and interests take this line. They say there's no cause for alarm, that America is the clear leader in telecommunications and that we'll continue to stay out front.



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This argument leaves me terribly uncomfortable. Because when you get right down to it, when you cut through all the twists and turns -- this argument suggests that the American telecommunications industry is invulnerable to today's serious challenges from the international marketplace.

As much as you and I would hope that will be the case, we're also realists. We've seen what's happened in other industries. If there's one collective lesson this nation should have learned in the last thirty years, it's that no industry is invulnerable. (See Attachment B-4.)

We all remember a day when the American automobile industry was supposedly invulnerable and so were our steel and consumer electronics industries. We were dominant and no one could touch us -- or so it seemed.

Our trade deficit today is a telling measure not only of our competitors' skills, but of our own mistaken complacency in an earlier day.



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Now, we're paying a heavy price in the marketplace and the policy arena. We send trade negotiators to tables around the world. They debate, they cajole, they sign agreements. They come home. They go back and debate some more and sign more agreements. Meanwhile, we wait for our overall trade position to improve.

Here in the Senate, you and your colleagues labor over legislation and ways to turn the trade deficit around. You recognize that things are often tilted against American companies, and, quite rightly, you call for a level playing field.

Well, the playing field is not level in telecommunications in this country. But we can't place the blame solely on other nations. For the most part, we've done it to ourselves. We've tilted the playing field against our own players.

Now it's time to tilt it back towards fairness. And unlike so many obstacles to improved trade that we might not be able to change -- other country's customs, cultures and policies -- we can change this one.



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S. 1981 will change it. I urge that you consider it carefully and seriously. I urge your reflection on it in the context of America's current standing in the international marketplace, our prospects for the future and the implications of both of these for American consumers and businesses.

Thank you.



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ATTACHMENT A

**Comments on S.1981: The Telecommunications Equipment Research and Manufacturing Competition Act of 1989**

There are certain aspects of this bill which need to be addressed in order for it to fully achieve its purpose of enhancing the competitive business environment in telecommunications manufacturing. The areas of concern and proposed alterations to the bill are presented in the remainder of this paper.

1. Designation of Business Entities Affected

In the bill the term "Bell Telephone Company" ("BTC") is used frequently to designate which business entities will be affected. On page 6 in lines 4-11, the term is defined to include the telephone companies listed in the consent decree and to exclude all affiliates of those companies. This has several very undesirable side effects, as explained below, without providing any corresponding public benefit:

A. Only subsidiaries of a "Bell Telephone Company" can manufacture

On page 2 in lines 12 through 17, permission is given to the BTCs to "... conduct research on and manufacture and provide telecommunications equipment, ...". Since affiliates of the BTC are not mentioned in the paragraph granting manufacturing relief, this means that all other business units of a BTC, including the BTC holding company itself, are not granted relief from the manufacturing restriction. Since one of the unstated but obvious purposes of the bill is to allow the BTCs into the manufacturing business while protecting ratepayers and competitors from the possibility of cross-subsidization and discrimination, that purpose is not served by this restriction. This restriction merely limits the business options available to the BTCs and thus limits their incentive to engage in manufacturing, which is detrimental to the American economy and the public.

B. Multiple telephone companies belonging to the same Bell Holding Company cannot cooperate in manufacturing

On page 2 in lines 17-20, a BTC is prohibited from engaging with another BTC in manufacturing or provision of telecommunications equipment. In BellSouth's case, for example, South Central Bell could not join with Southern Bell in manufacturing or providing telecommunications equipment. This would produce inefficiencies within the BellSouth companies and stifle innovation without producing any corresponding benefit to competition or to the public. This problem can be corrected, while addressing the bill's real concern of unrelated BTCs joining together to manufacture, by making the joint venture prohibition apply only to unaffiliated BTCs. Specifically, by adding the word "unaffiliated" before the phrase "Bell Telephone Company" on line 19 of page 2, the public interest is served without imposing

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unnecessary costs on a BTC (which would ultimately be passed on to the consumer in the price of goods sold).

2. Definition and use of the term "telecommunications equipment"

On page 7 in lines 4-8, "telecommunications equipment" is defined as "... equipment, including customer premises equipment, ... ". The definition goes on to qualify "telecommunications products" as being "... used by a carrier to provide telecommunications services, ...". Since the "equipment" of which customer premises equipment is a part is not qualified by any other language, the definition of "telecommunications equipment" is so broad as to encompass any kind of equipment. This definition causes some difficulties including the following:

A. The language could take away some freedoms the BTCs and their affiliates presently have under the decree

Under the decree, BTCs and their affiliates can already provide customer premises equipment without any restrictions on business structure or features, or on functions or uses of the equipment as long as the equipment is used by the customer to meet his or her private communications needs. The BTCs and their affiliates have offered customer premises equipment since divestiture, first through separate subsidiaries pursuant to FCC regulations and more recently, in some cases, without structural separation after the FCC modified those regulations. Precluding the BTCs and their affiliates from continuing to provide customer premises equipment would lessen competition in that market to the detriment of the consumer.

B. The customer premises equipment would be limited to that used by a carrier if the qualifier "used by a carrier to provide telecommunications services" is applicable

If this qualifier, which is cited on page 7 at lines 6-7, is intended to apply to the phrase "equipment, including customer premises equipment", it is a contradiction in terms. By its nature, customer premises equipment is used by the customer, not by the carrier. Thus no customer premises equipment could ever pass the test of this qualifying phrase. If the qualifier does not apply, then the problem identified in paragraph 2A, above, exists.

C. New separate subsidiary requirements would be imposed on the customer premises equipment business that do not now exist

On page 2 line 13, permission is granted for a BTC to "... provide telecommunications equipment, ...". As previously noted, the definition of telecommunications equipment includes customer premises equipment. On page 2 line 21 through page 3 line 2, the exercise of the right to provide telecommunications equipment (and therefore customer premises equipment) is conditioned on "... a subsidiary that is fully separate from any other entity ...". This has the effect of requiring the customer premises equipment provision business to be moved to a separate subsidiary, a requirement that does not exist

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today. Indeed, BellSouth just finished less than a year ago a very expensive effort to reintegrate the provision of customer premises equipment into its operating telephone companies pursuant to permission granted by the FCC. Reversing that action would result in tremendous expense and major disruptions of the BTC's businesses and of their customers' businesses.

All of the concerns about customer premises equipment can be corrected in two steps. First, remove customer premises equipment from the definition of telecommunications equipment and give each term the definition that it has in the consent decree. Second, in every case where the manufacture and provision of telecommunications is dealt with, add "and the manufacture of customer premises equipment." Since the provision of customer premises equipment is already permitted, any references to or inferences of the provision of customer premises equipment should be removed from the bill. This will allow the BTCs to provide their customer premises equipment on a competitive basis, which benefits consumers by giving them a wider choice.

3. The separate subsidiary language is unnecessarily broad

On page 2 beginning at line 21 and continuing on page 3 through line 2, a very sweeping separate subsidiary requirement is set forth. Because of the requirement that the manufacturing entity be separate from any other business unit, a Bell Holding Company could be put at a major competitive disadvantage in some of its unregulated businesses that have nothing to do with the local telephone company. For example, BellSouth has a subsidiary that is engaged in the sales and service of customer premises equipment outside of the territory served by its telephone companies. Some of its customers would like for it to customize either the hardware or the software of the equipment it provides to them. The bill as written would require that it set up another company to do those modifications since they are considered manufacturing under the consent decree. When such an entity clearly has no relationship to a BTC, and there is no possibility of the BTC subsidizing the activity, it does not in any way serve the bill's purpose to insist that the manufacturing activities be separated. The duplication of forces and effort merely adds expenses without providing any further protection to competition or to the ratepayer.

The solution is to change lines 23-26 on page 2 and lines 1 and 2 on page 3 to read, "... only through an affiliate that is fully separate from the Bell Telephone Company. The Commission shall issue rules to ensure that ...". This change provides full protection for the BTC customers without placing any unnecessary burdens on the other business units of a Bell Holding Company, and should be accompanied by the change described in paragraph 2C, above. In addition, the phrases "the parent" and "its parent" should be replaced by the phrase "the affiliated" wherever they appear in subsection (b) on pages 3 and 4, and the word "parent" should be deleted from line 6 on page 3.

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4. The bill may inhibit the BTCs from carrying out their normal business functions in the most economical manner, thus imposing costs on the public without any benefits to competition

On page 3 lines 13-21, a requirement is stated that the manufacturing business unit must "... carry out directly its own marketing, sales, advertising, installation, maintenance operations, manufacturing, and research and development relating to the equipment it provides, ...." This raises a number of concerns which will be dealt with below:

A. BTCs routinely do some of these functions with equipment from unaffiliated manufacturers

Almost all maintenance operations on telecommunications equipment are done by the BTC. This language would alow a BTC to perform maintenance on all of the equipment it owns except that which it has bought from its own affiliate. In the case of that equipment, the BTC's maintenance people would have to stand idly by while the manufacturing affiliate's maintenance people were summoned, were dispatched, and performed the maintenance. This is so wasteful that it would mean that a BTC could never afford to buy telecommunications equipment from its affiliate.

B. These provisions are contrary to all business practices observed in the highly competitive customer premises equipment business

Providers of customer premises equipment can typically only distinguish themselves from their competitors based on how well they perform their marketing, sales, installation, and maintenance functions. If the BTC is prohibited from doing any of those functions for customer premises equipment manufactured by its affiliate, then it has no way to distinguish itself. This produces no benefit to the American economy.

C. The prohibition on joint research and development could greatly diminish the value of Bellcore, one of America's important centers of industrial research

Under the provisions of the decree, the Bell companies can jointly sponsor research activities at Bellcore. Bellcore is an important national asset and is one of the leading industrial research organizations in the nation. The provisions of this paragraph may make the continuation of that outstanding joint effort a prohibited activity resulting in a greatly diminished role and standing for Bellcore.

The best remedy is to delete this paragraph entirely. The separate subsidiary requirements provide all the protection needed against cross subsidies, while still allowing each entity to perform the set of activities that are appropriate.

5. The 90% equity rule serves no useful purpose

On page 4 lines 1-2, there is a requirement that no more than 90%

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of the equity in a manufacturing organization can be held by a BTC. As mentioned earlier, the manufacturing relief, and therefore equity ownership, should be available to the BTCs and their affiliates. The 10% minority ownership provides no additional safeguards to the public or to competitors. Other sections of the bill already require full financial disclosure, and that the business entity issue its own debt which will also require public reporting of the business unit's activities. In the event that passive investors are not particularly interested in manufacturing, the BTCs may have to sell this minority interest at unrealistically low prices which would penalize their shareholders.

The best remedy is to delete this paragraph which adds nothing to the safeguards and introduces an unnecessary additional risk into an already risky business.

6. The definition of "telecommunications" puts unnecessary restrictions on what the manufacturing business unit can make

On page 6 beginning at line 20 and continuing through page 7 line 3, the term "telecommunications" is defined. The definition picks up some language which is used in the consent decree that does not presently concern the BTCs because they can neither manufacture nor provide telecommunications equipment. Specifically, line 24 of page 6 includes the "... without change in form of [sic] content ...." requirement. While this is a decree restriction on what lines of business the BTCs and their affiliates can presently enter as they provide services to their customers, it has no place in these new guidelines allowing manufacturing. Including this language in the definition of "telecommunications" and then including the definition of "telecommunications" in the definition of "telecommunications equipment" has the effect of telling the manufacturing business unit that it cannot make a piece of equipment that alters form or content. None of the bill's purposes is served by precluding a BTC's manufacturing business unit from being able to manufacture and provide equipment that would alter the form or content of information to some other company that is not under the decree restrictions. The decree restriction is on the provision of the service, not on the making of the equipment which allows someone else to provide the service or make the translations for their own benefit.

The remedy is to delete any reference to the decree restrictions on content generation or alteration. Indeed, since the BTCs are presently only restricted from the manufacture of telecommunications equipment and customer premises equipment and are already free to manufacture everything else, one approach to the bill is to simply say that affiliates of BTCs can manufacture anything they choose.

7. The domestic content requirements of the bill are counterproductive to the bill's purposes, and will not benefit the American public nor strengthen the economy

On page 3 lines 22-25, there is a requirement that all work including the manufacture of components be conducted in the United

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States. While this is a worthy goal, there are a number of components that simply are not made in the United States. The BTCs cannot single-handedly reverse major international trade patterns.

The provision as written will be counter-productive. If every single component could not be of domestic origin, a BTC would have to forego manufacturing an entire product line. In that case it would have to purchase from a supplier which is not subject to any domestic content requirement at all and American jobs and trade would wind up worse off rather than better off.

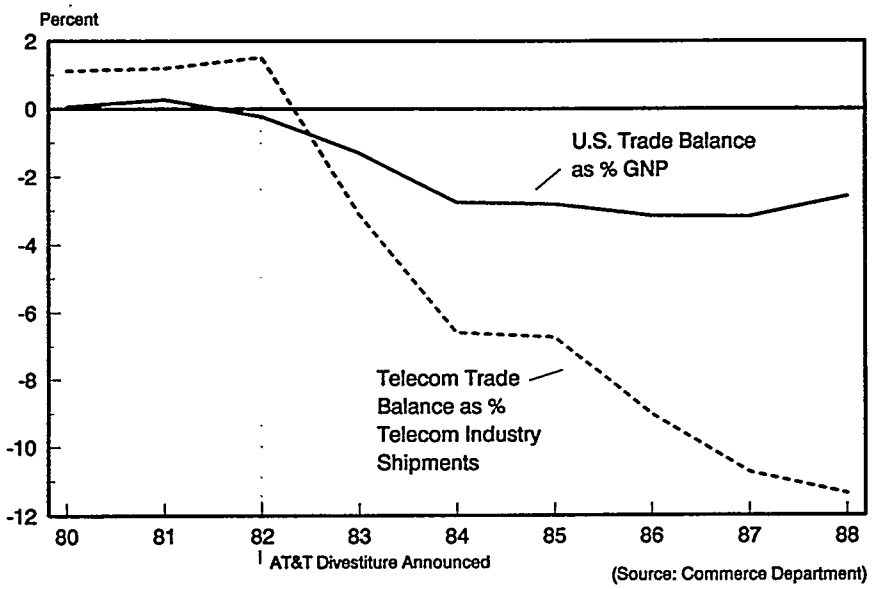
A possible solution to this problem would be to allow the BTCs and their affiliates to manufacture in the same manner as manufacturers in like industries in the United States. For instance, the bill could require that the BTCs or their affiliates perform their manufacturing with the same percentage of domestic content and labor as the average of all U.S. manufacturers of like equipment. This would provide the BTCs with an incentive to get into the manufacturing business, which would enhance the opportunity to fulfill the bill's purpose of strengthening the American economy.

ATTACHMENT B

Figure B-1

## U.S. Trade Balances

## Total and Telecommunications Trade




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Figure B-2

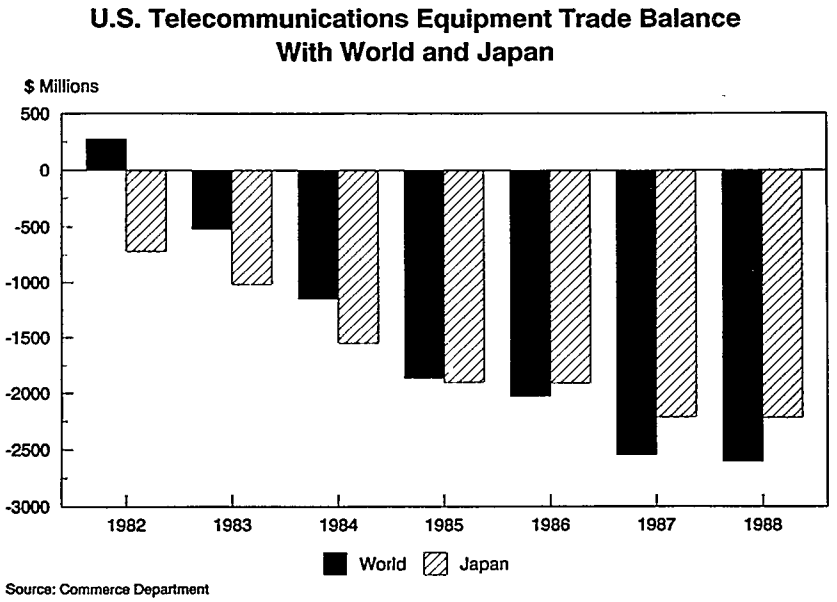
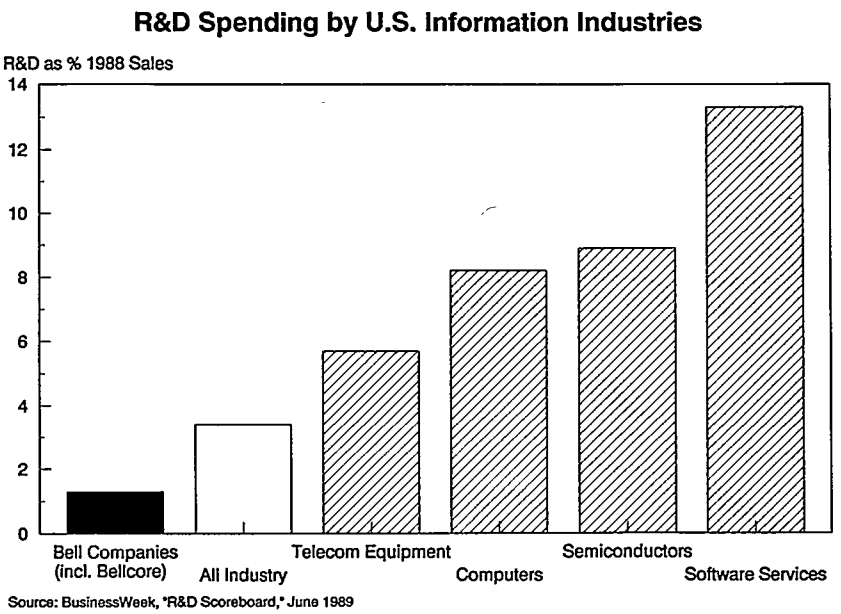



Figure B-3

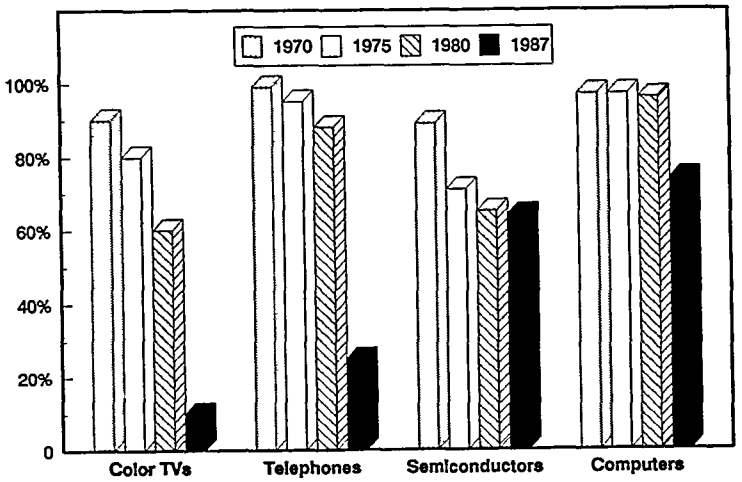



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Figure B-4

## Key Technologies Invented Here, Made Elsewhere

U.S. Producers' % Share of Domestic Market



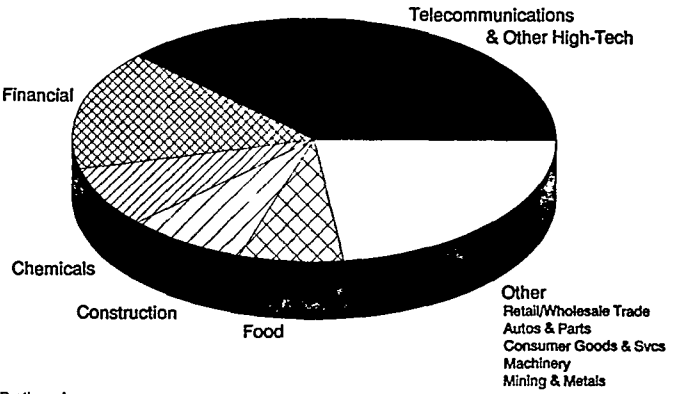

Source: BusinessWeek, June 1989

Attachment C

**Foreign Investment In the U.S. Telecommunications Industry Since AT&T's Divestiture**

Figure C-1

## Japanese Acquisitions of U.S. Companies Are Concentrating in High Growth Industries




Source: Ulmer Brothers, Inc.
1989 Top Industry Preferences

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Figure C-2

**Examples of Foreign Company Activity in U.S. Markets Closed to the Bell Holding Companies**

| *Company* | *Country* | *U.S. Business Activities* |
|---|---|---|
| Hitachi | Japan | - manufacturing computers and telecommunications equipment |
| Matsushita | Japan | - manufacturing electronic and communications equipment |
| Fujitsu | Japan | - research and development of digital central office switch technology<br>- manufacturing communications equipment |
| NTT | Japan | - data communications services<br>- fiber optic hardware |
| NEC | Japan | - manufacturing computers, semiconductors, communications equipment, and integrated systems<br>- research and development of communications systems software and home information systems technology |
| KDD | Japan | - telecommunications products and services<br>- secure computer, communications, data centers<br>- packet switch network, value-added network services |
| Nintendo | Japan | - interactive information service network |
| Recruit | Japan | - information management and telecommunications services |
| Toshiba | Japan | - manufacturing telecommunications equipment |
| Siemens AG | W. Germany | - manufacturing of wide range of telecommunications/automation equipment<br>- communications research and development |
| Deutsche Bundespost | W. Germany | - marketing videotext<br>- packet switch network, value-added services |

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| *Company* | *Country* | *U.S. Business Activities* |
|---|---|---|
| France Telecom | France | - long distance data communications<br>- videotext information and directory services<br>- packet switch network, value-added network services |
| Groupe Bull | France | - manufacturing computer equipment |
| Alcatel NV | France | - manufacturing telecommunications equipment |
| British Telecom | U.K. | - electronic database/information services<br>- nationwide value-added network<br>- computer/communications systems integration and equipment manufacturing<br>- interLATA automatic cellular services |
| Cable & Wireless | U.K. | - long distance telephone service throughout U.S. |
| Hawley Group | U.K. | - remote electronic security services |
| L.M. Ericsson | Sweden | - manufacturing of communications equipment<br>- integrated communications network systems<br>- digital public mobile data network |
| Elsevier | Netherlands | - electronic and traditional publishing; U.S. government/congressional information online databases |
| VNU BV | Netherlands | - electronic and traditional publishing; U.S. business and financial databases |
| N.V. Philips | Netherlands | - manufacturing of electronic/microelectronic equipment and components |
| Thyssen-Bornemisza | Monaco | - electronic publishing/information services; U.S. business and defense information databases |
| Int'l Thomson Org. | Canada | - electronic and traditional publishing; on-line financial database and equity research network<br>- software development for institutional investment community |

Source: Compiled by BellSouth DC from Various Annual Reports and Trade Publications

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Figure C-3

## Foreign Companies Are Doing What American Companies Cannot

Examples of Foreign Activity in U.S. Markets
Closed to the Bell Holding Companies by the MFJ Restrictions

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- HITACHI (Japan), is implementing strategy designed to significantly increase its information systems manufacturing base in the U.S. Is manufacturing computers and telecommunications equipment in several facilities around the country, and has plans to begin extensive research and development activity by 1990s.

- MATSUSHITA (Japan), operates eight plants in the U.S. and expects to add more. Since 1983, has developed/acquired U.S. facilities to produce cellular mobile telephones, pagers, and computer systems components.

- FUJITSU (Japan), has recently made commitment to capture share of U.S. digital central office switch and ISDN terminal equipment market. Has been running U.S. trials on terminal equipment since 1986 and purchased U.S. computer peripheral maker Intelligent Storage in 1988. A Fujitsu digital switching system is currently undergoing beta testing for U.S. market compatibility. Fujitsu's Business Communication Systems Division recently won 10 year, $17 million contract to build integrated telecommunication system for California State University at Fresno.

  Fujitsu has six research and development centers as well as communications equipment manufacturing facilities in the U.S. Began construction in Fall 1989 of $80 million telecommunications plant in Richardson, Texas scheduled for completion in 1992. New plant will be base for all Fujitsu North America's communications equipment manufacturing operations; will employ up to 4,500 by year 2000. Fujitsu wants to increase its product demand in U.S. from 20 percent to 50 percent by 1992.

- NIPPON TELEGRAPH & TELEPHONE (Japan), Japan's domestic telephone company, announced its entrance into rapidly growing $40 billion U.S. data communications services market in February 1990. Subsidiary, NTT Data Communications Systems Corporation, has opened offices in Jersey City, NJ; initial target will be Japanese companies doing business in U.S.; future targets are likely to be U.S. companies. NTT Data will manage data transmission facilities, office phone systems, and develop private data network software for customers. Project is NTT's largest investment in U.S.; will initially be about $100 million. NTT Data employs 7,000 worldwide and had 1989 revenues of $2.7 billion.



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NTT also owns over 50 percent of NTT International which established Dynamic Loop Corporation in Delaware to invest in communications projects in U.S.

NTT is also the major investor in Alcoa Fujikura, a Spartanburg, S.C. joint venture that produces fiber-optic hardware for assembling communications networks.

- NEC (Japan), has about 8 percent of North American office telephone switch/equipment market. Is dedicated to worldwide development of products and services that integrate computer and communications technologies. Operates four manufacturing plants in U.S. and in 1988 increased the capability of its specialized semiconductor design centers and added new facilities for developing communications systems software and home information systems technology. Opened new research facility in Irving, Texas in November 1989; Advanced Switching Laboratory will develop broadband hardware and software for central office and customer premises equipment.

- KOKUSAI DENSHIN DENWA (Japan), established first U.S. subsidiary to market telecommunications products and services to American firms in Fall 1989. In addition to seeking new business, KDD America will coordinate operations of Telehouse International, New York-based firm of which KDD is largest shareholder with 25 percent. Telehouse is leading provider of super-secure, disaster-proof computer, communications, and data processing centers to the financial industry. It recently opened second facility, a $35 million center on Staten Island. (Except for 12 percent interest purchased by AT&T in May 1989 the rest of Telehouse is held by other Japanese firms.) KDD is also part owner of Infonet, California-based packet switch network company that provides value-added network products and services to global data communications market.

- NINTENDO (Japan), is developing interactive videogame and information service network for introduction into U.S. market by 1991. Network would link already popular Nintendo Entertainment System (NES) videogames for long distance game playing and access to other information services. Users would access main computer and software from anywhere in U.S. AT&T is expected to be partner in venture.

- RECRUIT COMPANY (Japan), provides information management and telecommunications services in New York City area through subsidiary Recruit USA. Operates super-secure, disaster-proof data service centers in Newport, NJ and Staten Island serving customers primarily in the financial and banking industries. Dedicated fiber-optic network links centers to Manhattan.

- TOSHIBA (Japan), will begin to manufacture telecommunications equipment for U.S. market in Irvine, CA beginning in October 1989. Decision to move manufacturing from Japan is largely effort to avoid imposition of import duties if company is named in anti-dumping suit currently pending at Commerce Department. Toshiba added 103,000 square feet to its plant in Irvine to accommodate manufacture of PBXs and key systems.



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- SIEMENS AG (W. Germany), has launched concerted effort to increase its presence in U.S. by acquiring over 30 U.S. companies. Is concentrating on five high-growth areas: factory automation, office automation, telecommunications, semiconductor technology and diagnostic medical equipment. Major communications deals: purchased 80 percent interest in GTE's Communication Systems' Transmission Product Division (1986); acquired, for $165 million, full control of Tel Plus Communications, the largest U.S. independent interconnect company (1987); paid almost $1 billion for ROLM, IBM's telephone equipment manufacturing arm (1988). Purchase of ROLM increases Siemens' share of North American office-telephone equipment market from about 4 percent to over 20 percent; almost doubles its share of world market. Efforts to increase share of U.S. digital central office switch market are backed by 500-engineer research facility devoted to specialized software development.

- DEUTSCHE BUNDESPOST TELEKOM (W. Germany), will open U.S. office to spearhead effort to transfer its already successful German videotext and value-added network services to U.S. market. Is part owner of Infonet, California packet switch network company that provides value-added network products and services to global data communications market.

- FRANCE TELECOM (France), provides long distance data communications through Minitel Services Company (MSC is joint venture between Minitel USA and Infonet); MSC's "videotex network" is slated to eventually serve 150 cities in U.S. and Canada. Through U.S. subsidiary Minitelnet, France Telecom is offering over 10,000 videotext information services to U.S. including electronic directory services it publishes.

- ALCATEL NV (France), is launching strategy to develop and market intelligent network products worldwide. Gaining ground in American market is Alcatel's top priority; plans to reenter U.S. public switching market with broadband ISDN technology in mid-1990s. Recent acquisition of U.S. fiber and cable business makes Alcatel third largest supplier in U.S. In late 1987, Alcatel NV began manufacturing key systems and PBXs in Corinth, Mississippi.

- GROUPE BULL (France), agreed to purchase Zenith Data Systems for up to $635 million. Zenith Electronic's successful computer unit, Zenith Data Systems had 1988 sales of $1.4 billion; is largest seller of battery operated laptop computers in U.S. Acquisition will make Bull largest European computer company; it will gain market share in U.S. and Europe and be positioned to compete on global scale.

- BRITISH TELECOM (U.K.), wants to become leading information services company in U.S. by providing videotext and other information services through BT-Tymnet, company formed by consolidation of BT's Dialcom unit and recently purchased Tymnet. Dialcom, Rockville, MD-based operation with marketing arms in U.K. and continental Europe, was purchased from ITT in 1986 and ranked as third largest e-mail provider in U.S. in 1987. BT has invested over $40 million to add new databases and advanced e-mail services to



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Dialcom service. It has enhanced service offerings by linking its U.S. and U.K. data centers via long distance communications; arrangement allows BT to offer all services to all users (whether in U.K. or U.S.) without incurring cost of duplicating software or databases. Dialcom counts among its customers the U.S. Congressional Correspondence System which provides electronic mail service to the Hill.

In July 1989, BT reached agreement with McDonnell Douglas to purchase Tymnet, the second largest U.S. provider of value-added network services with annual revenues of about $250 million. Purchase price is reportedly $355 million. The acquisition of Tymnet will give BT a vast U.S.-based network linking over 750 U.S. cities and more than 30 countries. In addition to the network, sale also includes McDonnell Douglas' e-mail and electronic data interchange systems, which will substantially strengthen BT's already formidable position in the U.S. electronic services market.

BT is also aiming to penetrate North American computer/communications systems integration market. It plans to develop, manufacture and market broad range of data communications equipment through Herndon, VA based subsidiary BT Datacom. (Formerly Mitel Datacom, unit of Mitel, Canadian company in which BT has 51 percent interest). Products will include fiber optic LANs, computer integrated telephony products, PCs and terminals. BT is backing entry into U.S. data communications market with over $20 million research and development effort.

BT's purchase of 22 percent stake in McCaw Cellular Communications Inc. will give it access to 30 percent of U.S. mobile communications markets, including cellular radio, paging and digital cordless communications. Through this venture BT will be able to offer statewide automatic cellular services, a service BOC cellular operations cannot provide, at considerable competitive disadvantage, due to MFJ interLATA restrictions. Also purchased 80 percent of Metrocast paging from Metromedia Telecommunications and plans to spend over $21 million in system expansion, operations and marketing plans.

- CABLE & WIRELESS (U.K.), provides long distance telephone service throughout U.S. through owned and leased facilities. By almost doubling capacity of U.S. portion of its "Global Digital Highway," Cable & Wireless has coast-to-coast network that is more than 90 percent fiber optic and has access to 80 percent of U.S. business population with equivalent of 27 million miles of high quality circuit capacity. Long distance traffic over this network increased by 21 percent to over 630 million minutes. In December 1989, C&W will begin 100 percent digital end-to-end private line service in California for in-state data transmission. Company has been targeting services primarily to business customers, but plans to begin marketing more aggressively to residential customers.

- HAWLEY (U.K.), paid $715 million for American District Telegraph (ADT), leader in U.S. security products and services (including remote electronic security information services).



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- L.M. ERICSSON (Sweden), has assets in U.S. of only about $320 million but has about 5 percent of U.S. PBX equipment and multiplexer market and is aiming for 10 percent. Ericsson is becoming player in integrated communications systems business. In Spring 1989 was awarded $3 million contract to install integrated voice and data transport network for State University of New York health center; other installed systems include California State University and University of Massachusetts.

  Ericsson is very active in U.S. market for cellular system infrastructure equipment, primarily switching. In 1989, formed joint venture with GE to produce cellular phones, mobile radio products and Mobitex mobile data communications systems. Venture is 60 percent owned by Ericsson, 40 percent by GE. In late 1989, Ericsson established new company, Ericsson Mobile Data, Paramus, NJ, to supply, install and maintain Mobitex system. Ericsson is partner in American Mobile Data Communications venture to build and operate first nationwide 2-way all-digital Mobitex mobile radio network, linking top 50 U.S. specialized mobile radio systems.

- ELSEVIER (Netherlands), owns several traditional and electronic publishers in U.S. Holdings include Congressional Information Service, which specializes in U.S. government and congressional information publications and databases, and real estate data companies Real Estate Data and Damar. Growth of U.S. operations (32 percent increase in American publishing revenues between 1987 and 1988) prompted formation of two new business groups: Elsevier Information Systems and Elsevier Business Press.

- VNU BV (Netherlands), owns Disclosure, one of largest and most widely available U.S. business information database publishers.

- N.V. PHILIPS (Netherlands), generates 20 to 30 percent of total revenues through U.S. sales, mostly of consumer electronics. Plans to aggressively increase its stake in U.S. to about 50 percent by concentrating on improving its standing in information technologies markets; will increase already significant U.S. manufacturing base accordingly. Philips is largest European manufacturer of semiconductors and has healthy stance in U.S. market via acquisition of Signetics.

- THYSSEN-BORNEMISZA INC. (Monaco), owns Predicast, one of largest and most comprehensive U.S. business and defense information database publishers.

- INTERNATIONAL THOMSON ORGANIZATION LTD (Canada), established presence in U.S. business information services market through acquisition of U.S. service and software firms. In 1986, acquired Business Research Corp, developer of InvesText and First Call (leading on-line financial data base and equity research network) and Technical Data Corp., publisher of financial information and developer of software for institutional investment community. Companies are grouped with other holdings under "International Financial Networks Group" known as "Infinet."

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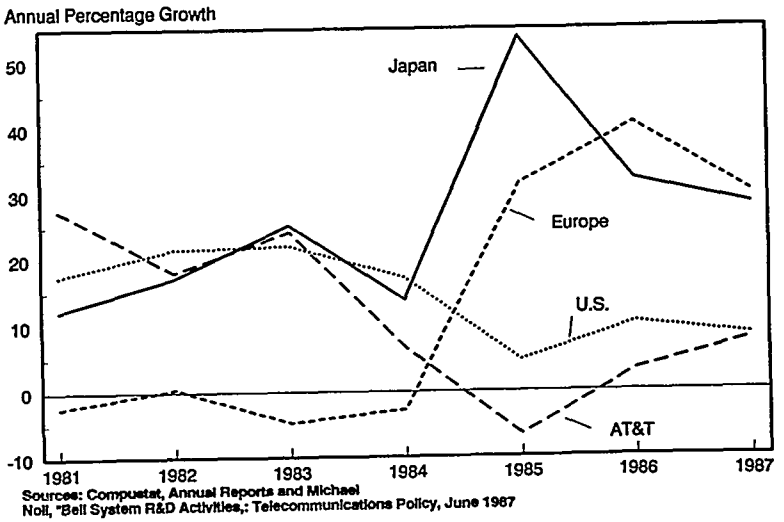
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Attachment D

R&D Spending By U.S., European and Japanese High-Tech Firms
Since AT&T's Divestiture

Figure D-1

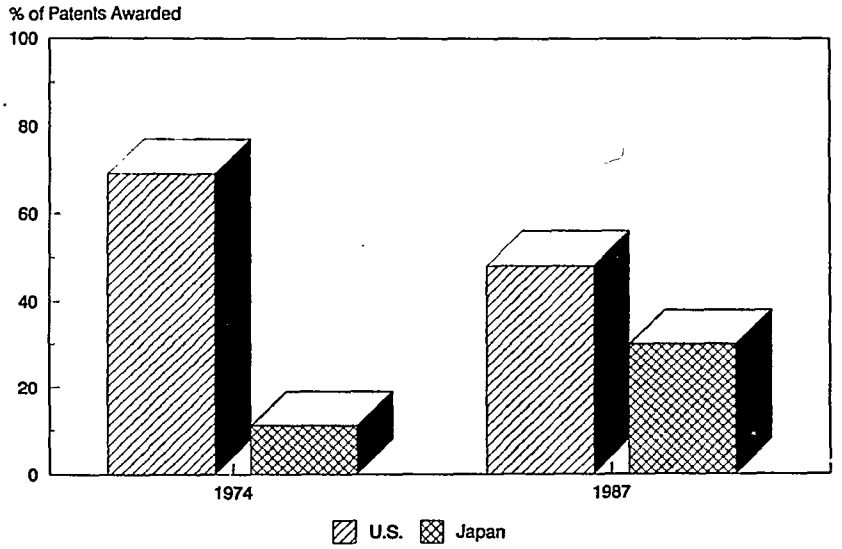
## Growth in High-Tech R&D Spending




Sources: Compustat, Annual Reports and Michael Noll, "Bell System R&D Activities,: Telecommunications Policy, June 1987

Figure D-2

## Trends in U.S. Telecommunications Patent Awards




Source: Commerce Department

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Senator INOUYE. Thank you very much, Mr. Clendenin. May I call upon the Chairman of the Committee, Senator Hollings.

Senator PRESSLER. Could we ask just a couple of questions at this point?

Senator INOUYE. We are going to have questions now.

Senator PRESSLER. Oh, good.

The CHAIRMAN. Mr. Clendenin, it is obvious we agree. The question would be put if you are a common carrier and making so much money that you want to manufacture, why do you not lower your rates?

Mr. CLENDENIN: We have done everything we can to keep rates down and intend to continue that process, Senator, and the fact that we are interested in getting into the efficiencies of the manufacturing process would help in that procedure.

The fact is the process now is not an efficient one. There is a lot of trial and error in the development of equipment for us because we cannot be part of the process. That costs telephone users in the form of the costs of doing business. And I think arguably, an enablement which would permit us to be part of the process would help us keep rates down.

The CHAIRMAN. What about research? Have you not got BellCore? Is that not adequate? You are doing research now, so what is the problem?

Mr. CLENDENIN. Here again, the research that BellCore is enabled to do for us, since it is controlled by the same restrictions that control us, is very generic in nature. It is not very specific, and it is not permitted to go into the kind of research relationships with small companies that I described in my two examples earlier.

It is controlled by the same restrictions that we are controlled by. It is a creature of the seven BHCs. So BellCore is not an avenue to the kind of research that we are talking about because it has the same restrictions overhanging it.

The CHAIRMAN. The accounting system, now will you describe for the committee the accounting system that you would work under? In other words, the divestiture, the Modified Final Judgment and the antitrust suit resulted because the FCC tried every way in the world to make AT&T operate under an accounting system without success. And the scholars never have decided whether long distance was subsidizing the local or local long distance. I hear that argument still.

What accounting system do you envision that would really prohibit the cross-subsidization of your manufacturing activities?

Mr. CLENDENIN. I think those accounting systems are, essentially, already in place. I think that in the last few years, the sophistication of the accounting systems at both the Federal and state level has been focused very directly on the process of avoiding any cross-subsidies.

Go back to the Computer Inquiry III process and the changes that were made as a result of that. I think that you will find that the FCC has aggressively pursued establishing an accounting separation which makes it clear where every dollar comes from and where every dollar goes. And I think that is replicated largely at the state level as well.

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So I would say that the type of accounting systems that are necessary to accomplish what you are concerned about have already been put in place and can be expanded to accommodate these changes without any question.

It is much more sophisticated, and there are fewer debates about it than there used to be, Senator.

The CHAIRMAN. Thank you, Mr. Chairman.

Senator INOUYE. Senator Pressler?

Senator PRESSLER. Thank you very much.

As one who does not have a defined position on this legislation, I am listening with great fascination.

Now, my main concern are the telephone subscribers in South Dakota. How would this improve the services available to that telephone user, and would it cost him more or less? Would it just cost him more in higher rates to subsidize the marketing arm?

Could he expect rate reductions? I guess most people look upon the telephone company as in the business of supplying telephone service, so I am concerned about the fellow dialing the phone.

What will this do for him?

Mr. CLENDENIN. Let me go right back to the subsidy issue. There is not going to be any subsidy for these kinds of endeavors from the rate payers. These kinds of endeavors are going to be financed by the shareholders, and they are going to have to stand on their own bottom.

Now if these kinds of endeavors produce new products that offer a wider array of services to the folks in South Dakota, then I think that is a benefit. If this kind of close linkage in the manufacturing process reduces cost and introduces efficiencies, that can be passed through to the users in South Dakota.

So I think that all of these things are ultimately liable to benefit the telephone users very, very directly.

Senator PRESSLER. So you would anticipate that our approving this would make more telephone service available at cheaper rates?

Mr. CLENDENIN. Let me give you an illustration from your part of the country. We talk a lot about the software development. I mentioned that several times, and I have also mentioned the fabrication. The company that serves out in your neck of the woods, U.S. West, has done some very innovative thinking about how to better serve people who have hearing handicaps.

They believe that they have both the hardware notion and the software notion to bring a product forth which would directly affect and help those people. But they are both restricted on the manufacturing side, and on the information services side, from pursuing that idea.

Now I think that is just illustrative of the kind of dynamics that are involved here.

Senator PRESSLER. I was fascinated when you said that even your software is considered a product that you cannot do. Now——

Mr. CLENDENIN. Manufacturing, if it has to do with the core network, yes, sir.

Senator PRESSLER. Now did BellSouth ask for a waiver for manufacturing its software?

Mr. CLENDENIN. I think all the Bell operating companies have explored the degrees to which the court's interpretations on soft-

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ware would permit them to move into this area, and it was in fact in the course of ruling on the "manufacturing" definition that the court did define manufacturing to include what we think is a terribly broad definition of manufacturing, coming all the way back into the development of software for the core network, to support switches that we already own.

Senator PRESSLER. How has our telecommunications balance of trade fared since the break-up of AT&T?

Mr. CLENDENIN. Well, the low end of the market and by that I mean the telephone instruments themselves, of course, has gone largely the way of the consumer electronics market in this country. It has essentially been taken over by foreign manufacturers. And American manufacturers who are continuing to compete in the low end of the market, like AT&T, do a great deal of their telephone instrument manufacturing overseas. That is just the nature of the low end of the market.

I think the switch side of the market is still a very strong balance in our favor in this country, but I would tell you that it is very clear to us that the next wave of interest that we will see from foreign manufacturers is to directly attack that large switch market. We are seeing the early signs of that already.

There has been a notion, Senator, and I guess this might give me a chance to comment on it, that if we were given freedom to participate in the manufacturing arena, that we would suddenly all rush out and align ourselves with foreign manufacturers. And I think that is really a very false premise.

That notion got its way into some studies that were made recently, that I think the Department of Labor projected job loss on, and it really is a crazy notion.

Let me give you some figures to illustrate that. I have some 1988 figures here, and I just did this in pencil on the plane so you will have to accept it as pretty raw. In 1988, we purchased, that is BellSouth—just my nine-state company—purchased $1.793 billion worth of telephone equipment. That includes only telecommunications equipment, such as switches, cable, fiber optic cable, transmission equipment, et cetera—not data processing equipment, not computers for our billing process.

Of that $1.793 billion we purchased 79 percent from American manufacturers: $1.417 billion. We purchased another $300 million from foreign manufacturers who manufacture the product in the United States. So that takes you to way up in the 90 percent category. So the notion that somehow all of this is going to push into a further onslaught of job loss and that we are all going to run out and join hands with foreign manufacturers, I do not think is really defended by the facts and the history.

Senator PRESSLER. Well, I suppose that in our country it has come to be a standard of living to have a telephone that works, that you can get reasonable rates for long distance, and as elected public officials we are expected to be a part of maintaining that. And I suppose that the general public has the impression that the telephone company provides telephone service; it can probably do other things, provided that that does not get neglected. I think that is a concern of people such as myself.

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My last question is, is there any analogous example in Europe, and I know that you cannot make analogies, but do the telephone companies there who provide basic telephone service, are they involved in other manufacturing and so forth, as you are proposing?

Mr. CLENDENIN. They most assuredly are, but they also are in this country. There are no manufacturing restrictions of this type that stop General Telephone from providing both manufacturing and telecommunication service, and I do not know of any that would stop United, if they had a manufacturing arm, or Cincinnati Bell, if they had a manufacturing arm, or SNET or ALTELL or any of the others.

The only ones that these kinds restrictions apply to are the seven BHCs.

Senator PRESSLER. Thank you, Mr. Chairman.

Senator INOUYE. Thank you.

Senator Breaux?

Senator BREAUX. Thank you very much, Mr. Chairman, and thank you, Mr. Clendenin, for your presentation.

Let me ask, the two basic arguments that I have heard in opposition to Senator Hollings' bill on manufacturing is first the cross-subsidization problem, and second, the concern about preferential treatment or the so-called self-dealing that might occur if the bill was to be adopted.

Now, the RBOCs have about 80 percent plus of the local telephone service in this country and have a substantial impact on the users in this country. What would prevent your companies from essentially deciding to design the equipment so that only your subsidiaries would be able to manufacture it? In other words, how do we prevent you from ensuring that the only equipment your people are going to buy is from your own people?

Mr. CLENDENIN. The whole regulatory process, Senator, focuses on putting the most efficient—from a cost-effective standpoint and from a service performance standpoint—the most efficient equipment into place.

There are a lot of benchmarks available today. In addition to the safeguards that I mentioned earlier that would prevent cross-subsidy, there are a lot of benchmarks. There are a lot of manufacturers offering products. If a Bell company tried to set up a captive manufacturer and buy only from that source, in light of all of the competitive benchmarks that exist today, that price and that efficiency and that quality better be there or they are going to get blown out of the water.

Senator BREAUX. Would it not always be in your company's interest though to buy from a subsidiary that you are helping to finance or making loans to——

Mr. CLENDENIN. Not in the regulatory environment that we live in and that is part and parcel of the industry, Senator, because the regulators, if they found that you were buying a product which could not—the choice of which could not be defended from an efficiency and cost standpoint, they would just disallow it in the regulatory process.

Senator BREAUX. Suppose you have designed a product that you need such as—which only your subsidiary could manufacture?

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Mr. CLENDENIN. I cannot conceive of that type of product, number one, because there is no lock on technology. The race today is so fast that any technology that comes on line is replicated in a variety of ways by other competitors.

So I cannot conceive of that lock that you are talking about, but I think the regulatory process would quickly identify it, and it would just be absolutely not defensible and would not stand. And the availability of benchmarks is clear today in a way that was not true in the old Bell system.

When the old Bell system existed there really was not an array of other manufacturing alternatives that you could benchmark against. Today there most assuredly is.

Senator BREAUX. Can the RBOCs manufacture and sell overseas?

Mr. CLENDENIN. We can engage in manufacturing overseas if we can make it very clear and evident to the court that none of that product would come back into this country.

Senator BREAUX. Have you done that?

Mr. CLENDENIN. No, we have not. We have not engaged in any manufacturing overseas. We have invested in the research on the software side of an American company's product that is being sold to the Bundespost in West German, but it is an American company that is competing for a piece of the West German marketplace, and we have a software orientation on that.

Senator BREAUX. If manufacturing is such a good idea, why have you not tried to enter into the foreign markets?

Mr. CLENDENIN. Well, we have not seen that we could really attack the foreign marketplace. We are not manufacturers, Senator.

Senator BREAUX. But is that not what this is all about?

Mr. CLENDENIN. We really do not know how to fabricate, and how would we really prevent that product from coming back into the United States? That is very difficult to do.

Senator BREAUX. You say you are not a manufacturer, is that not what this hearing is all about?

Mr. CLENDENIN. What we are talking about is wanting to become a part of the manufacturing process. When we were separated from AT&T, all of the manufacturing talent went with AT&T, and understandably so. We did not retain any of that talent.

We want to be part of the manufacturing process. We want to be part of the research process, and we think over time we can bring a great deal of skill to the game. We know the telecommunications market. We can apply that skill in the design of products that manufacturers can produce effectively.

We can fund the capital requirements for those products and bring them to our customers.

Senator BREAUX. I appreciate that answer. I do not want to belabor the point because my time is so short. I do not disagree with what you are responding.

On Page 10, you apparently try to make a case that the RBOCs have had problems with their vendors of equipment, that, in essence, the vendors are jerking you around, that they delay delivering, that they force you to accept new designs and new things that you may not be interested in accepting in that particular fashion.

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You say there does not seem to be any interest in giving us the software with any dispatch and that they might want to convince us to buy another switch or another new computer that they have built.

I would imagine that the AT&T folks would say, look, if you do not like what we are doing, there are 100 other companies out there. Go buy from somebody else. What is your response to that?

Mr. CLENDENIN. But you cannot, you see. You have already got your investment in an AT&T switch or somebody else's switch. It is sitting there. What we are talking about here is adding software features which bring new services out of that switch to the customer, and if we cannot get a fast reaction from the people who built that switch we cannot get it done because we are not permitted to develop that software ourselves even if we had the specifications from the manufacturer to help us. We would not be permitted to by the court.

So we are really talking there about a software kind of a situation, where we have already got the investment in that switch, and we want to bring new services out of that investment that are being asked for by our customers, business or residence, and we go to the vendors and say look, this is a service our customers are asking for. Will you develop it for us? And we are really at their mercy in terms of the timing of that development because we are restricted from doing it ourselves, and they know it.

Senator BREAUX. My final question will concern the question of cross-subsidization. You indicate that a system can be designed to ensure that it does not occur. Would you consider the NYNEX example—where $100 million or so found their way into the regulated base, that the FCC said were not proper charges,—an example of how the FCC's audit procedures are working or how the system is not working?

Mr. CLENDENIN. I think it is a good example of how the system does work. I think that the fact that it did work is plain as day here. I am not familiar with the details of the NYNEX case, and I really do not have any comment on it, but I think it is self-evident that the system worked by virtue of what action the FCC took.

Senator BREAUX. Thank you, Mr. Chairman.

Senator INOUYE. Thank you very much.

Senator Gorton?

Senator GORTON. Mr. Clendenin, I want to ask you a couple of questions about the example you set out on page 4 of your testimony, the company called CXC. Is it the thrust of what you are saying here that the United States and the competitiveness within the United States would be better off if you owned and controlled the CXC company than it is when that company is financed elsewhere and is owned by someone else?

The second part of that question, is it your implication that we would be better off without foreign capital in enterprises like this in the United States and with you having shifted capital to the owning of a manufacturing company, rather than, as Senator Pressler said, spending that capital on improving the retail service to your customers and/or lowering their prices?

Mr. CLENDENIN. No, I think the short answer is that the point is not at all that. I said also in my testimony, Senator, that I recog-

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nized this is a global economy. And I think that is a reality that is positive for the United States, because it means we can participate actively in attacking that global economy, just as they can participate actively in coming in here.

What I was trying to point out with a couple of examples, and I could provide you many, many more, is that all of the seven BHCs have been approached time and time and time again by small American companies who are starved for capital. If they could get the capital elsewhere in the United States, believe me they probably would have done that before they came to us. But they are starved for capital and they are looking at us as a possible resource for capital, to either fund additional manufacturing capabilities or R&D work or whatever and we have got to say, we cannot even talk to you.

Do we think that if we had come in and been able to fund some of the R&D for IMM, which is General Hillsman's company, that we would have taken it over? No, but we would have been able to participate in the development of cellular radio, which is going to be a very important element in rural America because he was attacking the cellular radio problems as they apply to rural America.

Now would we be owning IMM now if we had done that? Absolutely not, but we would have been able to fund research and development which we then would have been able to enjoy perhaps some royalties from, if the product succeeded. Now, maybe nine out of those 10 products that we might fund are going to fail, but the tenth one might succeed and bring a service to our customers.

We were interested in that project. We wanted it because we serve a great deal of rural America, and we could not participate actively in it. And I am just trying to illustrate that it seems to me ironic that these American companies cannot find us a source of capital and are so frustrated that they ultimately have to run to other sources of capital overseas. IMM that I mentioned here has already got a 10K out that is seeking financing overseas.

I think if you look at the ownership of the intellectual property of CXC, the one you asked about, you will find it is now shared by the French and the Swiss and the Japanese. They own that intellectual property.

So, I am just illustrating that these are the kinds of things that are taking place and how ironic it is that we can participate not at all and foreign companies can come in and participate with a totally free hand.

Senator GORTON. I understand that illustration. I am still wondering about the implications. Even you, as strong and powerful and well capitalized a company as you are, have a limited amount of capital.

Mr. CLENDENIN. Absolutely——

Senator GORTON. Presumably, if you invested in these companies you would not have used that capital for some other purpose. So why is that Mr. Pressler's, or your equivalent of Mr. Pressler's customers, would be better off with your capital going into organizations, which obviously found that capital some place else, rather than into your present business of providing retail telephone service to those customers?

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Mr. CLENDENIN. Senator, we are not one bit stingy with our present business. My construction program in the nine southeastern states is in excess of $3 billion a year. We have not had a rate increase case filed for more than five years. So we are not stingy with providing telephone service. We are deploying technology as rapidly as we can, even in small town America.

We have taken the electronic age to communities that you could not even find on the highway map, and we intend to continue doing that. We are not pulling away from our telecommunications business at all to try to explore new services and new technologies. Not one whit. So I do not think it is fair to even draw the two into the same question.

What we are talking about really is not going to detract from providing telephone service. As a matter of fact, as I have tried to argue, if it speeds up the access to new services, if it broadens the array of services, if it makes more flexible opportunities available to telephone customers, and if it, at the same time, enhances American competitiveness and tecnologically, I think it is a win-win-win, and that is what we are arguing for.

Senator GORTON. You have concentrated, not only in your formal testimony, but in this answer to me, on telecommunications equipment. Is BellSouth interested in other manufacturing: video equipment, electronic components, other types of manufacturing entities? Or is your interest solely in telecommunications equipment?

Mr. CLENDENIN. I cannot speak for the other six. I can only speak for BellSouth. As a policy, we made a judgment several years ago—we have announced it to our shareowners time and time again—that we are going to concentrate on telecommunications because that is what we know best.

I had my annual meeting yesterday in Memphis, and I told the shareholders exactly that. That is a policy we set out before we started this company. We have said it again every time we meet with the shareowners, and I said it again yesterday as I spoke to them in Memphis—or, I am sorry, Monday—as I spoke to them in Memphis.

So we are sticking to telecommunications because that is what we know best. And we have sort of said, telecom related things are the things we are interested in.

Now having said that, the information age is exploding, and the definition of what the information age is, and how telecommunications is part of that, changes every day. It will be different tomorrow morning when we come to work.

So I do not want to say that that is a static kind of a thing. Quite the opposite. But we are sticking to telecommunications and that has been BellSouth's approach ever since we started.

Senator GORTON. Thank you, Mr. Chairman.

Senator INOUYE. Senator Burns.

## OPENING STATEMENT BY SENATOR BURNS

Senator BURNS. Thank you, Mr. Chairman, I have an opening statement, if you would be so kind to indulge me.

This hearing is important and timely. I congratulate you and our very distinguished Committee Chairman—Senator Hollings—for

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moving forward to debate the effects of the MFJ line-of-business restrictions—in particular, the manufacturing prohibition.

In addition to a full discussion and debate on the manufacturing restriction, it is my view that the Subcommittee should also address and examine the MFJ information services restriction and, at least some aspects of, the interexchange prohibition.

I believe that it would be a mistake to examine any one of the line-of-business restrictions in isolation without analyzing the interrelationship and intertwined nature of all the line-of-business restrictions: manufacturing, information services and interexchange services.

First, with regard to the manufacturing restriction, we must examine whether the manufacturing restriction is hurting small, medium and large American firms by blocking them from collaborating with the Bell Regional Holding Companies.

Senator Hollings' bill—S. 1981—is a good starting point for debate. I have concerns, however, that S. 1981 does not go far enough because it would require a full separation of research, design and development activities from the knowledge and expertise base that resides in the Regional Holding Companies. At first blush, this appears to be inconsistent with the way truly effective research, design and development is done here in the U.S. and—too often with greater success—by foreign-based firms.

I want to be sure that government policy does not impede American telecommunications R&D investment.

Second, with regard to the information services restriction, we should examine whether the Regional Holding Companies would have an even greater incentive to undertake research and development if the information services restriction is modified because they would be more likely to benefit from the fruits of those efforts.

Third, Mr. Chairman, rural areas must not be left out of the developing "information age". In a state like Montana there will, for the foreseeable future, likely be fewer suppliers of information services than there are in more heavily populated areas. It is, therefore, essential that telephone companies in rural areas face a regulatory environment at both the federal and state level that encourages—or at least does not discourage—provision of information services. Thus, we should undertake an examination of whether some limited modification of the MFJ interexchange restriction may be necessary.

Finally, related to each of these three substantive restrictions, we should also analyze the jurisdictional question—that is, the question of whether Congress should reassert primary control over national communications policymaking.

I look forward to the testimony from our distinguished witnesses.

Thank you again, Mr. Chairman.

Mr. Clendenin, thanks for coming today. If Chairman Hollings' bill, in addition to permitting you to engage in manufacturing activities, also permitted you to provide information services, what impact would that have on your consumers?

Have you ever measured that? I know that you just touched on the information explosion, and I guess that is what caused the question.

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Mr. CLENDENIN. Well, I cannot give you a quantified answer, Senator, but I can tell you that there are a lot of families of information services that we think the American public has an interest in or would have an interest in and were we permitted to do those kinds of things, if a change occurred in the MFJ and we were permitted to do those kinds of things, we would begin the process of introducing them to our customers.

I think the recent court of appeals' decision is a hopeful sign, but it is certainly not a fait accompli at this point in time. So we are watching that and encouraged by it, but we still, at bottom, would say that ultimately telecommunications policy ought to be set by the Congress, not by the court.

Senator BURNS. If information services were included in this legislation—I imagine it will have to be dealt with at a later date—would you take a different look on the monies that you budget for R&D?

Mr. CLENDENIN. The information services that probably would come into the fold first are essentially services that have been developed by others and probably would not require additional R&D, but there is no permissibility for us to provide those services to the telephone-using public today and were we allowed to do so, we would implement some of those rather quickly.

I would think that there are any number of developers of software who have been working on ideas that fit into this area, but they need a critical mass. If you go back to the kind of services that were brought about in the early videatext trials, that the AT&T company partnered with the Knight-Ridder newspapers down in Miami, you can conceive of a whole family of kinds of information services. But unless you build critical mass, there is nobody who is going to find it economic to deliver those services.

We are experiencing the same kind of thing in our Transtext Universal Gateway in Atlanta, which is participated in by a lot of information database providers, but it is a question of the economics of the critical mass as to whether or not it is going to work.

If we are permitted to be part of that, then we would just add to the critical mass, and I think maybe some of these services will then begin to spread pretty quickly in this country.

A lot of the R&D for those kinds of services has long since been done by a lot of different information providers and database providers.

Senator BURNS. Again, thank you for coming.

Mr Chairman, that is all the questions I have. Thank you.

Senator INOUYE. Thank you. Mr. Clendenin, those who oppose your position have suggested that the telecommunications equipment industry in the United States has actually flourished since divestiture and hundreds of new companies have entered the market.

And they suggest that if this bill is passed, it would permit the RBOCs to drive these new companies out of business through cross-subsidizing and self-dealing.

Mr. CLENDENIN. Senator, I have said it before and I would reiterate, I do not think that the regulatory process and the current accounting situations that prevail within that process would permit cross-subsidization. It would become apparent immediately, and it simply would not be permitted.

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So I just do not accept that that is a realistic threat.

Senator INOUYE. On the matter of the $2.6 billion deficit that you cited, those who oppose your position have suggested that this is primarily the result of purchases of low-end products by consumers, which are primarily produced by Singapore and Taiwan. And they say that, for the more valuable products, the United States has a trade surplus.

Mr. CLENDENIN. I think I acknowledged that in my earlier answer, Senator, that the low-end markets are essentially abdicated to foreign manufacturers, as they have been in the consumer electronics world, and that the high end market, the American switch market, has essentially remained in this country.

That is why I quoted the figures about how much of that switch market we are spending our money on. I said in excess of 79 percent in 1988. So I agree with you.

My concern though is that I know full well from the announced intentions of manufacturers elsewhere in the world that they have targeted the U.S. market; they fully intend to attack the American switch market.

If we are on the sidelines, I do not think we can be effective in the process. If we are permitted to be part of the process, I think the American manufacturers of switches would actually find it to their advantage and not to their dismay.

Senator INOUYE. You would not get involved in the production of low-end products then?

Mr. CLENDENIN. We have no expertise in manufacturing. I would think that it would be a very bad business judgment to try to go into competition with experienced manufacturers in the low end of the market where the margins are very, very slim.

The reason those companies have all moved overseas, even American companies that manufacture in the low end of the market, like AT&T making its instruments overseas, is because it is a very difficult market. And we have no expertise in fabricating in that market, so it would be a very questionable business decision, and I think that my shareowners would not be well served by my assuming that I could make a success out of that where everybody else has not.

Senator INOUYE. So your contention is, with the present system of accounting and the obvious interest of other competitors, cross-subsidizing and self-dealing would be out of the question?

Mr. CLENDENIN. I believe it would be identifiable, very clearly, and that it would not be a problem to deal with.

Senator INOUYE. Mr. Clendenin, you have been very helpful to us.

The CHAIRMAN. Mr. Chairman, would you yield?

There is only one question. I think you have done well, Mr. Clendenin. There is only one matter implicit in the questions of my colleagues, that perhaps was not answered and that was the idea that if we allow the BOCs to engage in manufacturing then the monies that would go into manufacturing would be taken away and the rate payers could suffer.

I would ask, Mr. Chairman, respectfully that this newspaper article be included in the record by reference. It is dated December 10, 1989 in the Business Section of "The New York Times," entitled,

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"The Baby Bells Scramble for Europe." As this article shows, you are already doing it.

And we cannot even hold a hearing on controlling the BOCs' investments overseas because we cannot—the judge controls it and the foreigners do. And we are sitting up here doing nothing, as Senator Breaux said, other than palavering about it.

NYNEX owns half of Gibraltar Telephone, telephone network management services in Britain and France, financial services software in Britain, telephone service improvements in Poland and Hungary.

Southwest Bell Corporation: British cable, freedom phone sales, proposed business transaction links.

Bell Atlantic owns Sorbus Computer Services, computer leasing and sales in Munich, telecommunications consulting, West Germany, Italian phone system software.

Ameritech: British voice messaging.

Pacific Telesis: West German cellular system, cable television in Britain; wireless telephone ventures.

US West: Cellular system in Hungary, fiber-optic cable across the Soviet Union, cable television in Britain and France.

BellSouth: a stake in a French cellular company, wireless telephone bid in Britain.

And then I see, since you have answered, that you BellSouth are in West Germany in the software market and I happen to know Pacific Telesis is out in the Pacific.

So it is a given. I mean, some of the questions would say, well, wait a minute, we are starting a new policy. Well, it's not a new policy. We are simply repeating that old political slogan, "Come Home America". The policy is there. But we are not in control of it. The BOCs are going overseas, and if they are spending too much money then let us have a hearing on that, but we are not in a position to stop it because the judge has got control of it, and we do not have anything to do with it.

Thank you, Mr. Clendenin.

Senator INOUYE. Thank you. May I now call the Vice Chairman of——

Senator GORTON. Excuse me, while Mr. Clendenin is here, can I ask one more question?

Senator INOUYE. Certainly.

Senator GORTON. Mr. Clendenin, going back to 1987 when the Bell companies petitioned the court for the right, among other things, to go into manufacturing, Judge Greene found that you did not meet the competition test, that circumstances had not changed so as to warrant the removal of the manufacturing restrictions.

Is it your position here today that the court was wrong in 1987 or is it your position that the market has changed so dramatically between 1987 and 1990 that even though the court may have been right then, you should be allowed into manufacturing today because those circumstances no longer exist?

Mr. CLENDENIN. I think the latter is the one I would place the emphasis on, Senator. I do not want to go back and say that I agree with his decision in 1987, because I did not. But the real essence of it is the dramatic speed of change that is taking place, within the

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whole industry and as the information age dawns, will be even more accelerated in the future.

And clearly, the kind of circumstances that I have tried to describe or allude to here are changing right while we are sitting here, and I think that the nature of the change in the years between 1987 and 1990 has been extremely dramatic, very, very dramatic.

Senator GORTON. Thank you, Mr. Chairman. Thank you, Mr. Clendenin.

Senator INOUYE. Thank you very much.

Now may I call upon the Vice Chairman of AT&T, Mr. Randall L. Tobias. He is accompanied by Mr. Ross of Bell Labs and Mr. Zeglis, the Senior Vice President and General Counsel.

**STATEMENT OF RANDALL L. TOBIAS, VICE CHAIRMAN, AT&T; ACCOMPANIED BY JOHN D. ZEGLIS, SENIOR VICE PRESIDENT AND GENERAL COUNSEL; AND IAN M. ROSS, PRESIDENT, BELL LABORATORIES**

Mr. TOBIAS. That is correct, Mr. Chairman. I want to thank you very much for the opportunity to be here today.

As you know, the Chairman of the Board of AT&T, Bob Allen was asked to appear today. Unfortunately, he had a conflict and had to be in London today dealing with a very urgent matter that has to do with the expansion of our sales to some European customers.

As you have observed here, the ability of U.S. firms to compete and to compete successfully in global markets is really much of what this is all about, so I very much appreciate your understanding, and your invitation to me to testify here today on this pending legislation.

As we all know, competition was not always the norm in our industry. For nearly a century it was an industry characterized by monopoly markets. In 1949 the government brought an antitrust suit against the Bell system. That suit ended in 1956 with a consent decree that confined the Bell system to what was then thought to be an effective natural monopoly, that is, operating the Nation's local and long distance telephone network and manufacturing equipment for that network. And the Bell System agreed to stay out of all unrelated competitive businesses.

By 1974 two more pieces of the Bell System had become competitive: long distance and manufacturing. The government again brought a lawsuit to separate these competitive businesses from what were still considered natural monopolies, the local exchanges.

There were many allegations of abuse of those monopolies, which are essential facilities to both long distance and equipment manufacturing businesses. These allegations came in both the government suit and some 70 separately filed private antitrust suits.

The government case ended with the 1984 divestiture of the local exchange monopolies and corresponding restrictions on the local companies re-entering the long distance and the manufacturing businesses. The purpose of all of that was to end the controversy and to establish an industry structure that would be pro-competi-

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tive. Just as in 1956, the monopoly parts of the business were separated and excluded from the competitive businesses.

So how has the industry structure worked since that time? Well, six years later we look back and find that it is working very well, just like the Nation's competitive policies are supposed to work. Without the incessant controversies, without the fear that the local exchange companies are going to discriminate in favor of their own affiliates, we now see many more firms competing in both manufacturing and in long distance.

We see increases in both the level and the rate of R&D investment by U.S. firms. We see more features and service choices for business and residential customers, and we see significantly lower prices for virtually all equipment and all long distance services.

By any objective measure, this has been a considerable success. The data presented in recent studies like those conducted by the Consumer Federation of America and the International Communications Association and by the three major telecommunications manufacturing associations, also confirm the leadership of U.S. telecommunications networks and quantify the explosion of new products and services that has occurred in this country since 1984.

Our recent NTIA filing, which is attached to my formal testimony, shows that by any credible standard, the United States has the richest array of facilities, employing the most advanced technologies, providing the widest array of services to the broadest cross section of society and at the most reasonable cost of any nation in the world.

America is not number two or number three or number four. America is number one. Our Nation has the best technology, the best equipment and the best networks in the world, and we do not need academics to tell us what has driven this performance in this country.

Every day we now meet our competition in the marketplace and they meet us. Whereas, years ago, we had a virtual monopoly in both long distance and manufacturing, today we compete for each and every sale, against scores of competitors in each and every market.

And we know that the spur of competition has made us move faster and further in meeting customer needs in the marketplace. Competition has pushed us forward as a nation. It has pushed us to the front of the global race, producing benefits for American consumers and businesses.

And I think the success of this American experience has not been lost on other nations. Our competitive model in this industry was at first rejected by the largely state-run communications monopolies of the world. Since 1984 and increasingly, however, it has been taken seriously in country after country.

Competition, privatization, deregulation and, yes, even divestiture, these are terms in discussions that now dominate the new language that is increasingly being spoken at international telecommunications conferences around the world.

But we are the nation that has gone furthest along this path to the future. As an example, just a few weeks ago I was in Japan doing some business, generating some sales I am happy to say. When your counterparts in the telecommunications committee at

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the Diet learned that I was there, my views were sought on Japanese proposals to divest the NTT local exchange monopoly from its newly competitive long distance and cellular businesses. NTT does not manufacture today and would not do so in the future under any of the plans being considered, even in Japan.

My point is that our competitive policies here are on the right course, and we are ahead in the race and the world is playing catch-up.

These hearings act as a checkpoint in this global race. They also signify a crossroads. Do we go forward with our competitive model or do we retreat to the sole supply model of the pre-1984 days, where the local exchange monopolies had an affiliated supplier and all of the controversy and problems associated with that relationship.

Unfortunately, for the reasons set forth in my statement, including a generation of experience, this is an either/or situation. We cannot have it both ways. Monopoly and competition simply do not mix well in this industry. Regulation did not and it cannot change this law of nature.

There are a number of things the government can do and in many cases is doing to enhance the ability of U.S. firms to continue to lead the world in telecommunications products, services and technologies. Dr. Ross will speak to some of those.

In our view, reintegrating the Bell monopolies with competitive businesses that depend on those monopolies is not one of them. This would be a reversal of direction and would not produce benefits for our country.

Mr. Chairman, as you noted, I am accompanied today by Mr. Ian Ross, who is the President of AT&T's Bell Laboratories, and Mr. John Zeglis, who is the Senior Vice President of AT&T, who has responsibility for government affairs and is the corporation's general counsel.

Both of these gentlemen, however, are also members of the corporation's senior executive committee and it is in their multiple roles that they accompany me today, and with your permission, both have very short opening statements.

[The statement follows:]

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STATEMENT OF RANDALL L. TOBIAS, VICE CHAIRMAN, AMERICAN TELEPHONE AND TELEGRAPH CO.

Mr. Chairman and members of the Subcommittee: My name is Randall L. Tobias. I am Vice Chairman of the Board of American Telephone and Telegraph Company ("AT&T"). We greatly appreciate the Subcommittee's invitation to appear today to discuss S. 1981. This bill would eliminate the AT&T Antitrust Decree's ("Decree") prohibition against the manufacture of telecommunications equipment by the divested Bell Operating Companies ("BOCs") and would, instead, adopt "safeguards" that are designed to prevent abuses of the BOCs' bottleneck monopolies.

The basic issue before the Committee is how best to assure that the nation's telecommunications industry continues to be characterized by technological innovation, economic growth, and ever-declining costs for consumers. AT&T broadly addressed this question -- and the role of the Decree -- in the attached Comments we recently filed with NTIA.

My testimony today will show that S. 1981 -- and any bill eliminating the Decree's manufacturing prohibition -- would have precisely the opposite effect. It would not only recreate the controversies and stagnation that the Decree ended, but would create the worst of all worlds. It would be a death blow to American competitiveness in areas where we are the undisputed world leader. The proposed safeguards are no answer.

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My testimony is divided into three parts. First, I will explain the background and reasons for the Decree and its line of business restrictions. Second, I will describe the enormous consumer and other benefits that the Decree has fostered in the telecommunications industry. Finally, I will address the severe adverse effects that lifting the equipment manufacturing restriction would have on competition, consumers, and American manufacturing.

I. Background of the Line of Business Restrictions.

The Decree's line of business restrictions and AT&T's January 1, 1984 divestiture of the BOCs are "opposite sides" of a single coin. Each stems from the fact the BOCs' local exchange facilities are natural monopolies or "bottlenecks," and that it creates profound competitive problems -- and intractable regulatory disputes -- if a single firm both owns these monopoly facilities and participates in closely related competitive businesses.

Prior to 1984, the Bell System was in precisely that position. Through the BOCs, the Bell System owned the local telephone exchanges, which everyone recognized were natural monopolies that competitors could not duplicate. Through AT&T and Western Electric, the Bell System also participated in competitive businesses which depended on access to the BOCs' local "bottlenecks" or to information controlled by them. The



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Bell System provided interexchange (long distance) telephone services, which required the use of the BOCs' local exchange facilities to originate and terminate each call. And it engaged in the manufacture of telecommunications equipment, which is a market in which no firm can succeed unless they have information about the evolving technical characteristics of the BOCs' local exchanges and unless the BOCs will purchase the firm's equipment when it is in fact the best and the cheapest.

The Bell System's integration of the exchange monopolies and competitive long distance and manufacturing businesses produced great public benefits. Because a single entity essentially engineered, built, and managed the nation's telecommunications system, it created great opportunities for efficiency, and the Bell System built a single national telephone network that was the envy of the world.

But the combination of BOC exchange bottlenecks and competitive businesses also led to incessant controversy. More than seventy major private antitrust cases were brought against the Bell System in the 1970s alone, each of which claimed that the local monopolies had been "leveraged" to foreclose competitors in long distance, equipment manufacturing, or other markets by (1) discriminating in the pricing of local bottleneck facilities to favor Bell companies, (2) discriminating against competitors in the complex process of providing the local access facilities (or information controlled by them) upon which the



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competitors absolutely depend), or (3) purchasing a manufacturing affiliate's products at inflated prices, even when better or cheaper products had been (or could be) manufactured by others.

For example, equipment manufacturers charged that the BOCs had assured that it would always buy Western Electric products by (1) denying competitors timely access to the network engineering information required to design the products that the BOCs need, (2) cross-subsidizing equipment manufacturing by misallocating monopoly-funded design costs to monopoly telephone operations and thereby allowing sales of Western Electric products at misleadingly low prices, and (3) when all else failed, discriminating in procurement by purchasing its affiliates' products at inflated prices, despite the presence of better or cheaper alternatives (with the assurance that the inflated prices would be passed onto captive ratepayers). Indeed, the claim was that the each BOC would have irresistible incentives to engage in this conduct so long as it both owned exchange monopolies and was affiliated with a manufacturer.

In 1974, the United States filed an antitrust action that sought to prevent any possibility of abuses of the local monopolies in the most direct way possible: by requiring AT&T to divest the local exchange monopolies and, in turn, prohibiting the divested BOCs from reentering those competitive businesses so long as the local telephone franchises retained their natural monopoly characteristics.



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During this period, the FCC, the Congress, AT&T, and the Justice Department made massive efforts to develop "safeguards" that would prevent these abuses while allowing the integration of monopoly and competitive businesses to continue.

For example, the FCC instituted proceedings to assure that BOC procurement practices were fair (Docket 19129 [Phase II] and Docket 80-93), to assure that costs were properly allocated between competitive and monopoly telecommunications services (e.g., Docket 18128), to assure that monopoly revenues did not cross-subsidize equipment manufacturing (e.g., Docket 80-743), to assure that technical information was disclosed in a timely fashion, to assure that access to the local exchanges was non-discriminatory and the rates fair (e.g., Docket 78-72), to assure that the Bell System's competitive pricing responses were not predatory (e.g., Hi-Lo tariffs, DDS, MPL, Telpak), and to assure that detariffed telephone equipment competition would be fair (Second Computer Inquiry). These issues were so complex that several of these proceedings spanned decades, sometimes without any final resolution.

However, state and federal regulation could not prevent incessant antitrust controversies.

During the 1970s and early 1980s, Congress entered this quagmire and explored various possible legislative solutions that



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were designed to prevent abuses of the local bottleneck. Each relied on a version of "structural separation," but would allow common ownership of monopoly and competitive businesses. See, e.g., H.R. 5158, 97th Cong. 1st Sess. (1981); S. 898, 97th Cong., 1st Sess. (1981). Similarly, AT&T and the Justice Department tried to negotiate a detailed "regulatory" decree that would have established separate subsidiaries within the Bell System and other devices to prevent abuses.

These proposals would have created the worst of all worlds. They would have nullified the efficiencies of integration. But they would have continued its costs: the incessant antitrust litigation. The reality is that the BOC exchanges are so complex -- and the procurement and other decisions so subjective -- that no set of regulatory requirements could adequately assuage competitors' concerns and prevent disputes over discriminatory pricing, provisioning, and procurement by BOCs.

In this regard, the problem was not just that BOCs might commit antitrust violations. The Bell System's vertical integration caused stagnation and inhibited innovation, irrespective of whether there were such abuses. The incessant antitrust and regulatory controversies dragged down the Bell companies and the whole industry. More fundamentally, the integration of monopoly and competitive businesses itself operated as a powerful entry barrier. The ability and incentive



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to misuse the monopoly to prevent competition was so potent -- and so immune to regulatory control -- that unaffiliated firms believed that their products and services could not succeed on the merits and did not make the R&D and other investments required to compete in access-dependent markets.

By 1982, it became apparent that there was only one way to fully implement the national competitive telecommunications policy: separation of the BOCs' monopoly exchanges from competitive activities, with assurances that the monopolies would not re-integrate into related competitive businesses. This separation had been at the heart of each major legislative and regulatory proposal in the late 1970s, and the AT&T Decree made the separation wholly effective through divestiture and line of business restrictions on the BOCs. The Decree was thus a necessary and logical step -- and, indeed, the watershed event -- in implementing the national competitive policy.

This separation created a level playing field upon which non-Bell firms could compete -- with the assurance that all firms would obtain equal access to the BOCs' exchanges (and information about them). It meant that capital would flow to the firms with the best ideas, and that if products or services failed, the losses would be borne by private investors and entrepreneurs, not monopoly ratepayers.



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At the same time, the AT&T Decree was carefully fashioned to assure that the break-up of the Bell System did not destroy the most vital feature of the nation's telecommunications system -- its unified character. The single Bell System had assured that the national network was engineered as a single national network and that no equipment would be added to the network unless it both satisfied national and international interconnection standards and would interoperate optimally with other network equipment. The Decree sought to prevent the threatened balkanization of the network by (1) establishing Bell Communications Research, Inc. (Bellcore) (wholly-owned by the 7 BOCs) to establish generic engineering specifications for products and to evaluate different manufacturers products, and (2) assuring that BOCs' individual procurement decisions were based solely on quality (and compliance with these specifications) by excluding the BOCs' from developing their own proprietary products.

## II. Competition in the Post-Divestiture Telecommunications Industry.

The Decree has led to economic growth that is almost unprecedental in American economic history. For example, when the Decree was announced in 1982, AT&T had the only national long distance network. Although it was the envy of the world, it was principally an analog network. The networks of MCI, Sprint, and the other interexchange carriers were then collectively only five percent of the size of the AT&T network; none of their networks



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were ubiquitous; and they offered rates of blockage and grades of service that were unacceptable to sophisticated users.

In the ensuing eight years, three other national networks have been built, several regional networks have been constructed, and all the networks are mostly digital. Hundreds of new long distance telephone companies have entered the competitive interexchange market in reliance upon the equal access guarantees provided in the Decree and the fact that the owners of the essential local exchange facilities cannot compete in this market. Today there are over 400 interexchange carriers in competition with AT&T. This intense competition has provided extraordinary benefits to consumers. Interexchange rates have declined over 40 percent since divestiture in actual terms, and even more in real terms.

The consumer and other benefits have been equally dramatic in telecommunications equipment manufacturing. Since the Decree was announced, hundreds of new firms have entered the American market, made massive research and development investments, and began selling products to the BOCs. Since divestiture, domestic telecommunications equipment manufacturers have grown at a rate more than four times that of other manufacturers -- at a compounded annual rate of 7.1 percent as compared to 1.6 percent for all other manufacturers. During that time, prices have declined sharply for all product lines. Yet despite falling prices, the value of U.S. factory sales of



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telecommunications equipment has increased dramatically -- from $36.0 billion in 1980 to $74.2 billion in 1988.

The record in technological innovation has also been unparalleled. Developments in transmission technology have moved so quickly that the capacity of each strand of optical fiber has doubled each year since divestiture. Developments in micro-electronics and software technology have also driven down the costs and increased the capabilities of all equipment.

At the same time, these policies have allowed an increasingly positive balance of trade surplus in the telecommunications network equipment that BOCs buy -- over $600 million in 1989 -- which has occurred despite the fact that many major foreign markets are effectively closed to American manufacturers and the U.S. market is wide open to foreign firms. For AT&T's part, all the equipment it sells to LECs for use in their networks is manufactured in the United States.

And absent some change in government policy, continuous technological achievements and benefits to the nation are assured by the dramatic increases in telecommunications R&D that competition has spurred.



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III. The Decree's Line of Business Restrictions Should Not Be Changed.

The challenge for government policy is to continue the extraordinary growth and consumer benefits that has occurred in the past eight years. To eliminate the manufacturing restriction -- and again rely on "safeguards" -- would have precisely the opposite effect. It would not only recreate the controversy and stagnation that the Decree ended, but would be a death blow to American manufacturing.

The overriding fact is that the local exchange facilities of the BOCs indisputably continue to own bottleneck monopolies. It is for this reason that no one disputes that the interexchange services restriction is essential to the maintenance of competition and that it serves the public interest. Yet the continuation of the bottleneck equally requires continuation of the manufacturing restriction. Indeed, when the Court of Appeals recently upheld the findings that the interexchange and manufacturing restrictions should be retained, it found the need for retention of the manufacturing restriction to be compelling. See United States v. Western Electric, No. 87-5388, slip op. 37-44 (April 3, 1990).

To eliminate the manufacturing restriction would choke off the entry and investment that has produced the enormous consumer benefits. Firms will make the investments necessary to bring new telecommunications products to the market only if two



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conditions are met: (1) they are assured timely access to information about the BOCs' needs and the ever-changing technological characteristics of the BOCs' network which is critical to the design and development of new products, and (2) they are assured that the product each manufacturer develops will succeed, or fail, on the merits. As history demonstrates, those conditions cannot exist if the BOCs are permitted to develop and manufacture their own products. The incentives to discriminate are so strong -- and so immune to effective regulation -- that unaffiliated firms will not make the R&D investment.

Further, eliminating the restriction would do more than deny the public the benefits of increased competition and entry. Allowing monopolies to control the development of technology by manufacturing would also threaten the balkanization of the national telecommunications "infrastructure." If BOCs could manufacture, each would have incentives to develop and procure proprietary products, irrespective of whether they operate optimally with equipment in other carriers' networks.

In this regard, "safeguards" are no answer. They would not prevent the controversies and stagnation. To the contrary, effective safeguards could have only one consequence: precluding any BOC from achieving efficiencies through vertical integration even in manufacturing equipment for its regional network. For any safeguards that prevents the possibility of abuses would



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equally prevent any genuine efficiencies. It was largely because of this fact that the Bell System and the Courts concluded that safeguards were the worst of all worlds. Further, because no BOC controls more than one-seventh of the nation's access lines, no BOC can create the efficiencies that the former Bell System enjoyed.

Finally, lifting the prohibition against equipment manufacturing could also be a death blow to American competitiveness. Today, American firms with no foreign affiliation are preeminent in selling the telecommunications equipment (switching, transmission, and media) purchased by BOCs and the nation's local exchange carriers. Thus, in the case of AT&T, all the equipment it sells to the BOCs for use in their networks is manufactured in the United States. The revenues that these American firms earn in this country, in turn, support the efforts of American firms to sell telecommunications network equipment in those foreign markets that are not closed to American firms.

Whereas the balance of trade for network equipment is positive (see supra), the Decree has likely meant that the balance of payments is somewhat less favorable now than it was prior to divestiture. Before divestiture, the BOCs met over 95% of their needs from their then-affiliate, Western Electric. Because the divested BOCs have had no affiliate upon which to rely, they have wanted to establish multiple sources of supply,



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and there have been many products (e.g., central office switches) for which the only alternative to AT&T is foreign firms. That has meant that some sales that would otherwise have gone to American firms now go overseas, and these purchases of foreign equipment have not yet been offset by increased sales (domestic or export) by the American firms who have recently entered the equipment manufacturing market in reliance on the industry structure created by the Decree.

However, eliminating the equipment manufacturing prohibition would almost certainly mean that our nation's telecommunications trade balance would worsen, not get better. It would create the worst of all possible worlds for American manufacturers. The reality is that the BOCs could not enter the market for the manufacture of central office switches because the purchases of one BOC could not come close to supporting the R&D required for such a product. Accordingly, the BOCs could only participate in this market by forming joint ventures with such foreign manufacturers as Siemens or Ericsson and then satisfying all, or nearly all, their needs from these foreign affiliates.

The consequences for American competitiveness, and our balance of trade, would be devastating. It would simultaneously (1) foreclose American markets to American firms, (2) deny American firms the revenue needed to sustain the research and development needed to sell equipment to European, Asian, Middle Eastern, and other foreign markets, and (3) give foreign firms



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captive markets and guaranteed sales in this country. It is no answer that some of these foreign firms would perform assembly of equipment in this country. The high-technology work and jobs -- the R&D -- would be exported to other countries. This country's technological leadership would end.

The consequences would be especially severe because Japanese and European manufacturers have, to date, successfully excluded AT&T and other American firms from Japan, Germany, France, and other European markets. Changing of the injunction would have the extraordinary consequence that foreign firms would, through alliances with the BOCs, exclude American firms from the American market as well.

In short, the net result of BOC reentry into manufacturing would be simple: destroying American competitiveness in one of its remaining areas of preeminence in the world: the design and manufacture of network switching equipment.

I thank the Committee for its invitation and would be pleased to answer any questions.



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Mr. Ross. Thank you, Mr. Chairman, I have submitted my formal testimony for the record. What I will do now is just briefly summarize the three main points that are in that testimony.

The first point is that the U.S.A. today leads the world in telecommunications R&D and in telecommunications technical innovation. As one example, some 76 percent of telephone lines today are served by electronic software control machines, and that is some 50 percent greater than in the U.K. or in Japan.

The important point here is that it is these machines that provide the flexibility to permit a very wide range of services to customers. We have extensive deployment in the Nation of the most modern fiber optic transmission systems within our cities across the Nation and now under the oceans to Europe and to Asia.

Similar technology is being brought into the local exchange plant which connects the customers to the network. We have a rich supply of terminal equipment available to our end-users, and we have the most extensive deployment in the world of data networks for data customers.

My second point is that the health of the U.S. telecommunications equipment industry is indeed enhanced by the present industry structure. Since divestiture, literally scores of firms have either entered the telecommunications equipment manufacturing market or have expanded their roles in that market.

We have increased the amount of telecommunications R&D in the Nation. Before divestiture, the Bell System in total spent about $1.5 billion a year on R&D. Today, AT&T alone spends $2.6 billion a year on R&D.

We also have a very good dialogue ongoing between vendors ourselves and customers in the telephone companies, and that dialogue extends from an initial discussion of customer needs, discussions of what the technology can support, to the specifications of equipment, and all the way to having telephone company representatives in our plants to oversee our quality.

I would point out that this free flow of information would not be possible if our customers were also our competitors in the supply of their manufactured equipment.

So I see that the decree is working as designed, and importantly, it is working because equipment manufacturers receive timely access to information and they expect their products to be judged on the merits of those products.

Now were the BOCs to be permitted to enter the equipment manufacturing market, it would jeopardize, and I believe it would reverse, these good trends; after all, they control 70 to 80 percent of the exchange network technology, and if this market were not open to independent equipment manufacturers, those manufacturers would not be able, they would not be willing to making the investments, including the R&D investment, needed to bring such products to market.

This would weaken the U.S. industry. By the way, to the extent that the BOCs would choose to venture with overseas partners, that would strengthen foreign competition.

Now, my third point is that while allowing the companies to enter the equipment manufacturing business would hurt U.S. in-

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dustry, there are other actions that the government can take to improve the U.S. industrial competitiveness.

I happen to chair the National Advisory Committee on Semiconductors, which studied the health of the U.S. semiconductor industry and made a report to Congress and the administration last November.

In that report we identified a decline in the semiconductor industry and a related decline in the electronics industry. For example, as has already been mentioned, consumer electronics manufacture has almost essentially all left this country and is now down in Asia, and that includes the consumer electronics equivalent in the telecommunications terminal business.

If these declines in the semiconductor industry and the electronics industry are allowed to continue they could eventually undermine the United States computer industry and the United States telecommunications equipment industries.

Thus, there is an urgent need to improve our industrial competitiveness as a whole by improving the environment for U.S. industry. This involves lowering capital costs, improving our education, protecting our intellectual property and opening up foreign markets.

Such measures will help ensure the long-term health of our telecommunications industry and they need our urgent attention.

Thank you, Mr. Chairman.

[The statement follows:]

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**STATEMENT OF IAN M. ROSS**

**PRESIDENT, AT&T BELL LABORATORIES**

Mr. Chairman and Members of the Subcommittee: My name is Ian M. Ross, and I am President of AT&T Bell Laboratories. I am grateful for the opportunity to appear before the Subcommittee today to discuss the proposal to amend the Modification of Final Judgment (sometimes referred to as the "Decree") by relaxing or removing the Decree's restriction on the entry of the divested Bell Operating Companies ("BOCs") and their Regional Holding Companies ("RHCs") into the telecommunications equipment manufacturing business.

My testimony today will address three related subjects. First, it will show that, with respect to telecommunications research and development ("R&D") and technological innovation, the United States today leads the rest of the world. There is thus no need, as some have contended, to permit the BOCs to enter this business on the basis that there is some deficiency in the competitiveness of U.S. telecommunications technology. Second, my testimony will explain how, in fact, the good health of the U.S. telecommunications equipment industry is enhanced by the very industry structure created and fostered by the Decree and its line-of-business restrictions. Finally, although altering today's industry structure by allowing BOC entry into telecommunications manufacturing would only impair, not advance, the competitiveness of U.S. telecommunications technology, my testimony will show that there are actions that government <u>can</u> take to stimulate growth and development in

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other U.S. technology industries. These actions would help ensure the continued success of U.S. telecommunications manufacturing and R&D efforts.

I.

We can all take great pride in the fact that the United States not only has the world's finest telephone system and service today, but that the U.S. telecommunications industry as a whole leads the world in economic growth and technological innovation. No nation equals the United States in the availability, quality, reliability and affordability of telecommunications services. The United States also has the world's most technologically advanced telephone network. For example, in 1988, over 76% of U.S. telephone lines were served by electronic switching systems -- over 50% more than the United Kingdom, and more than double that of Japan.* Both analog and digital electronic switches, through their stored program control capability, can be readily and continually updated to provide a complete range of new services, and can be maintained more economically than older technologies.

The economic and technological vigor of the U.S. telecommunications system has been fueled by (and has fueled) dramatic growth and innovation in the design, development and

* Source: The World's Telephones, AT&T, 1989.

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production of new telecommunications equipment and technologies. Since the Decree was announced in 1982, scores of new U.S. firms have entered these markets and made substantial investments in R&D. As intense competition and rapid technological development spur greater efficiencies in this sector, prices have declined in all telecommunications product lines, and despite the falling prices, Commerce Department data show that the overall value of U.S. factory sales of telecommunications equipment has more than doubled, from $36 billion in 1980 to $74.2 billion in 1988.

Some who argue for allowing BOC entry into telecommunications manufacturing assert that the United States has assumed a "second class" status in telecommunications trade. This is unfounded. Indeed, the burgeoning domestic telecommunications equipment business has produced a positive balance of trade surplus in recent years -- over $600 million in 1989 alone -- in telecommunications network equipment. This network equipment includes the most sophisticated and complex switching and transmission systems -- and represents the "high end" technology of the type purchased by carriers for use in the national telecommunications infrastructure. By contrast, the $2.6 billion telecommunications trade deficit reported by the Commerce Department for 1988 is attributable overwhelmingly to the mass market consumer products (such as corded telephones and facsimile machines) that are also included in the

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telecommunications equipment category. Although it is true that, in recent years, the manufacturing of these terminal equipment products -- like virtually all consumer electronics goods -- has moved offshore, that phenomenon is part of a much broader problem which, as discussed later in my testimony, has nothing to do with the structure of the U.S. telecommunications equipment industry and would not be alleviated by permitting BOC entry into telecommunications manufacturing. In all events, American consumers are not being denied any benefits in this regard, for we enjoy the broadest array of low-priced feature-rich terminal equipment in the world.

Most importantly, the future holds great promise for economic and technological growth in the United States telecommunications industry -- so long as the conditions that have helped spur our recent successes are permitted to continue. This is so for the simple reason that the firms competing in the telecommunications equipment business in recent years have stimulated -- and continue to stimulate -- an enormous and increasing investment in domestic R&D, which in turn foreshadows a continued flowering of the innovative and beneficial new technologies upon which U.S. competitiveness depends.

In this regard, I am especially proud of my own company. In AT&T Bell Laboratories, the United States enjoys an unparalleled resource: the world's leading telecommunications research and development capability. And

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AT&T recently has expanded this capability. For example, in 1981 (the year before the Decree was announced), the Bell System as a whole spent about $1.5 billion on R&D. Although the post-divestiture AT&T is only 30% the size of the former Bell System, AT&T itself spent over 75% more on R&D in 1989 ($2.65 billion) than did the entire Bell System in 1981, and the other firms that comprised the former Bell System (Bellcore and the seven RHCs) spent approximately an additional $1 billion on R&D in 1989. AT&T Bell Laboratories R&D activities today employ more than 30,000 people in the United States. There have been equally dramatic increases in R&D investment by other leading U.S. telecommunications firms: for example, the annual R&D investments of 15 of the largest U.S. telecommunications manufacturers have grown from $778 million to over $1.2 billion since divestiture. Overall, in the years since the Decree was announced, company-funded R&D investment by domestic telecommunications manufacturers has averaged 8.4% of the value of the manufacturers' shipments -- compared to only 6.6% in 1980.*

On the strength of this broad and growing investment in R&D by U.S. telecommunications firms, it is hardly surprising that the United States has consistently offered the world's markets the best in new telecommunications switching

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* Source: The Post-Divestiture U.S. Telecommunications Equipment Manufacturing Industry: The Benefits of Competition, IDCMA, NATA and TIA (collaborative research study), March 1990.

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and transmission technology. R&D investment must continue to grow, however, if the United States leadership role in this regard is to be maintained.

New technologies and products are continually being brought to realization through the efforts of competing U.S. manufacturers. Only last week, for example, AT&T announced that it anticipates being able to offer commercially, within five years, a new generation of switching systems being developed by AT&T Bell Laboratories, based on the use of photonic technology. The so-called "optical switch" can bring to the nation's telecommunications infrastructure vastly greater capacity and efficiency by complementing and maximizing the advantages of optical transmission technologies that have recently been developed, and that themselves today permit the capacity of the extensive fiber optic facilities already in place in this country to be doubled each year. AT&T and other U.S. firms are also making great strides in the development of state-of-the-art speech synthesis and voice recognition technologies, and "artificial intelligence" capabilities.

II.

As these facts confirm, the industry structure established by the Decree is functioning exactly as it was designed to, and is bringing to the United States the full economic and technological benefits of competition. More

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significantly, I believe that any change in the industry structure that would allow BOC entry into the manufacturing business would jeopardize or reverse U.S. successes, and would weaken U.S. competitiveness in the world's telecommunications markets.

The BOCs collectively represent some 70% to 80% of the market for exchange network technology in this country. Moreover, each BOC exercises absolute control over the products and technologies used in its serving area by (i) determining the technical characteristics of the ever-evolving network and, therefore, what products will be able to operate compatibly with the network; and (ii) determining the specific products the BOC will purchase. Clearly, any prospective supplier of this technology will choose to participate in the market only if that firm reasonably can hope to attract some business from the BOCs. No firm, in turn, can hope to manufacture equipment for use with a BOC's network unless that firm can both obtain timely access to the technical information about the BOC's network needed to develop compatible equipment and have its products succeed or fail on their merits; that is, on the basis of price and quality.

During the antitrust litigation that led to entry of the Decree, it was claimed that the Bell System's integrated local exchange and equipment manufacturing operations deterred prospective manufacturers from competing (or disadvantaged those that tried) by (i) favoring the Bell System's

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manufacturing affiliate with superior access to technical information; (ii) improperly subsidizing design and development costs from local exchange revenues; and (iii) conducting biased product evaluations and procurements that favored "in-house" designs irrespective of price or quality. Whether or not these allegations were true, the perception that the Bell System operated in this manner was apparently enough to limit competitive entry and R&D investment -- as indicated by the significant growth in these measures after the Decree was announced.

The United States telecommunications and technology sectors cannot afford to return to the controversies and uncertainties that marked the predivestiture Bell System. The BOCs are by far the largest "consumers" of high end telecommunications technology, and are thus the largest source of new product funding -- which, in turn, provides the revenues that fund essential R&D investment by domestic manufacturers. Indeed, I estimate that at least 50% of the total R&D budget of AT&T Bell Laboratories derives from AT&T's sales of telecommunications network equipment -- sales made in largest part to the BOCs. Presumably, other domestic manufacturers are at least as dependent on sales to the BOCs to fund their investments in new technology.

This industry structure -- which assures that competing manufacturers efficiently can develop, produce and offer beneficial new technology -- could not be maintained if the Decree's manufacturing restriction were removed.

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First, even if the BOCs were to enter the manufacturing business without venturing or affiliating with existing foreign-based firms, the impact on the economic and technological health of the U.S. telecommunications industry would be severe. As I understand it, the Justice Department has assumed -- and no BOC has disputed -- that any RHC which became a manufacturer would thereafter satisfy virtually all of its equipment needs from its own manufacturing operation. Each RHC accounts for 10% to 15% of the nation's market for telecommunications network technology, meaning that 10% to 15% of that market would be absolutely foreclosed to competition for each RHC that chose to enter this business. If all seven RHCs became manufacturers, over 70% of the U.S. market would effectively be closed to the intense and beneficial competition that has flourished since divestiture.

The effect of such a foreclosure would be devastating. It is today's investment in R&D that drives tomorrow's new technology. As explained in Section I above, AT&T Bell Laboratories and other U.S. manufacturers are today keeping the United States at the forefront of developing such new technologies as photonic switching and transmission systems. However, AT&T can continue to invest in this R&D only to the extent that AT&T reasonably believes that its products -- the fruits of its R&D -- can succeed or fail on their merits, rather than on the basis of corporate affiliations. Presumably, other competing telecommunications

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manufacturers likewise will continue to invest in new technology only if they, too, are assured of a fair and stable U.S. market in which to offer their products. If, in contrast, the BOCs become manufacturers, control over the level of R&D funding and the pace of technological innovation would be in the hands of monopoly exchange service providers. They, not the market, would then dictate what technologies and products "win." Even if some or all of the RHCs entered the manufacturing business, therefore, it is likely that such entry would lead to a far broader exit among the existing domestic firms that today are responsible for the innovation and investment in the U.S. telecommunications network equipment business, and that are best positioned as well to facilitate the rebuilding of the U.S. terminal equipment and other consumer electronics industries. At the least, domestic R&D investment would decline because of the risk that new products developed on the strength of that investment will "lose" to products supplied by the BOCs' affiliates.

Of course, the effect on U.S. competitiveness of foreclosing BOC equipment markets to competing manufacturers would be even worse if -- as the Justice Department also assumes -- the BOCs in fact enter the manufacturing business through joint ventures with foreign telecommunications firms. In that event, not only would today's robust funding of R&D by the scores of competing domestic manufacturers be cut short, but the "fuel" for that R&D funding -- the revenues derived from equipment sales to the BOCs -- ultimately would flow

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offshore, to benefit the R&D efforts of the BOCs' foreign affiliates and thus increase U.S. dependence on foreign technological development.

In short, I believe that the U.S. telecommunications equipment industry today is healthy and efficient, and is well positioned to continue the nation's leadership status in telecommunications technology. This is attributable in many significant respects to the open, stable and competitive structure of the U.S. telecommunications equipment industry. The challenge for government is to ensure that this beneficial structure remains in place, so that U.S. firms can fulfill their technological promise.

If, in contrast, this industry structure is abandoned, and the BOCs are permitted to enter the manufacturing business, current U.S. manufacturers may no longer perceive that their products can win or lose on the merits in a fair market, or may find that substantial portions of the U.S. market are foreclosed to suppliers not affiliated with the BOCs. There will then be no incentive for these domestic companies, like AT&T, to continue to invest in critical R&D. The demise of indigenous U.S. R&D, in turn, can only impair U.S. technological development -- and strengthen foreign R&D efforts if revenues from BOC equipment purchases ultimately accrue to the benefit of foreign-based suppliers -- all to the detriment of vital U.S. national interests.

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III.

This is not to say that there is no action government can take to bolster legitimate U.S. telecommunications and technology interests. As explained above, the U.S. telecommunications equipment industry is healthy, and is likely to remain so if the future stability of today's fair and open market is preserved.

Other U.S. technology industries, however, are not as robust. In this regard, the National Advisory Committee on Semiconductors ("NACS"), of which I am Chairman, has identified serious problems that now affect the U.S. semiconductor and consumer electronics industries -- problems which, if not addressed, will assume even broader significance because of the essential linkages among all electronics-based industries.

It is widely recognized, for example, that the consumer electronics industry has now moved almost entirely abroad. The fact that the U.S. telecommunications trade deficit is attributable to mass market consumer goods -- while "high end" telecommunications network equipment contributes to a substantial U.S. trade surplus -- reflects this weak U.S. position in consumer electronics.

The decline in the U.S. consumer electronics industry, however, is likely to affect other U.S. technology sectors as well. Consumer electronics products now use 20% of the world's semiconductor production, and generate revenues that fund over

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$1 billion of R&D -- most of it outside the United States. As sales of foreign-made consumer electronic products continue to grow, the U.S. semiconductor industry increasingly is losing ground to foreign competitors. Indeed, U.S. semiconductor companies' share of the world semiconductor market has fallen to under 40% today.

The semiconductor industry is of major strategic importance to the United States not only because it represents leading-edge technology vital to our economic strength and national defense, but because it is the foundation for all electronics-based industries -- including computers and telecommunications. Network switching systems, for example, depend heavily on underlying semiconductor technology. It follows that if the United States continues to lose ground in semiconductor technology, the U.S. leadership position in sophisticated telecommunications technology and other important industries could likewise soon be jeopardized.

Accordingly, there is a role for government to play in seeking to recreate conditions that favor growth and investment in the U.S. semiconductor and electronics industries -- indeed, in industry as a whole. In this regard, NACS recently issued its first report proposing some initial steps government can take to enhance the competitiveness of U.S. semiconductor firms. These steps would be directed, for example, to (i) increasing incentives for investment in R&D by reducing the federal deficit and stimulating the rate of personal savings,

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thereby promoting the availability of affordable "patient capital" essential to semiconductor development;
(ii) continuing efforts to expand foreign trade opportunities for U.S. firms by advocating free access to markets and ending such unfair trade practices as "dumping" by foreign suppliers; and (iii) acting aggressively to rebuild a viable U.S. consumer electronics industry which can, in turn, stimulate greater investment by U.S. firms in semiconductor and related technologies.

Actions of this sort, I submit, will yield substantial dividends by improving the nation's technological competitiveness in general, and maintaining an environment favorable to continued U.S. leadership in telecommunications technology in particular. In contrast, any action to undermine the competitive structure of today's telecommunications equipment industry by allowing the BOCs to enter the manufacturing business would have precisely the opposite effect.

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Senator INOUYE. Thank you, Mr. Ross.

Mr. Zeglis?

Mr. ZEGLIS. Thank you, Mr. Chairman. I would like to take only a few minutes to explain why it is that this industry structure that we are discussing was ordered under the Nation's competition laws in an antitrust decree.

Very briefly, three factors control. First, we are dealing with monopolies, the telephone companies' local exchanges, and those are, of course, the epitome of the concern of the Nation's antitrust laws.

Secondly, telephone companies are not immune from the Nation's antitrust laws just because they are regulated by utility commissions. The Congress has provided no exemption there.

Thirdly, the local telephone companies are not just monopolies. They are bottlenecks for anyone who wants to compete in long distance or the manufacture of telecommunications equipment in this country.

Now, it is probably not hard to understand this bottleneck metaphor as it applies to long distance. Long distance companies can only get to their customers through the lines of the local telephone monopolies, through their bottle necks so to speak.

But we think the exchange is just as much a bottleneck, just as potent an anti-competitive weapon in the manufacture of telecommunications equipment.

Let me explain by taking the equipment that the local monopolies use in their local networks, switches, transmission lines and such.

The local exchange is the only game in town. You either sell to the local company or you do not sell at all. If the local company is buying only from its affiliated manufacturer, as the old Bell system did 95 percent of the time, you are out of business. There is no such thing as selling to the local company's competition because there is no competition.

Next, if I am the manufacturer, I have got to know what the local company is going to need in its network, and how the new equipment is going to connect to the old. I have to have information about how the exchange is being engineered. But if the local company tells its affiliated manufacturer first, he will always beat me to the market with the right equipment.

Finally, because the telephone company runs a monopoly local exchange, it can cross-subsidize, as we have heard in earlier questions. It can charge manufacturing development expenses to its monopoly telephone operations. And in our experience, no set of regulatory rules can identify and control the allocation of a local telephone company's research and development and network engineering costs.

As a result, the monopoly's affiliated manufacturer can appear to have lower equipment costs in the market even though the rest of us may really be more efficient. It is just that we do not have a monopoly to pay the costs for us.

Now these problems in the 1970s proved absolutely intractable to regulation, and for these reasons the government pursued the break up of the Bell system. In fact, it pursued it for over 30 years in the antitrust courts, and so did our competitors pursue us in those courts.

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We denied their allegations, but the controversies just would not go away. And from the government's point of view, worst of all, was that despite having the Bell System under this microscope, despite having layer after layer of regulation laid on us to assure fair dealing, there just was not much competitive entry.

So in the end, we agreed to the decree that gave the government exactly what it had been seeking in its antitrust case against the Bell system. Now my colleagues here have described the benefits that we are getting from this industry structure.

Let me say only that this application of the nation's competition policy to our industry has been repeatedly affirmed by the courts. When the decree was first proposed, the District Court conducted a searching inquiry before approving the decree, as in furtherance of the nation's competition policies.

That decree then went on up to the United States Supreme Court where Judge Greene was affirmed. Since then the D.C. Circuit Court of Appeals has on at least four separate occasions acknowledged and affirmed this competitive theory of the decree as it applies to the injunctions against long distance and manufacturing.

Most recently the Court of Appeals affirmed the District Court's decision in its first triennial review to continue the manufacturing restrictions. If I may, the Court of Appeals recognized the inherent problem of what it called a local company's "self-dealing bias" when it buys from itself. And the Court of Appeals explained how rate payer's subsidy of an RBOC manufacturing operation could allow the RBOC, and I am quoting again, "to raise prices in the foreclosed segments of the equipment market, by disguising inflated equipment prices as costs" in the local exchange market.

The Court went on to hold that the BOCs had not met their burden of justifying relief. In that holding, the Court agreed not only with AT&T but with virtually all of the consumer groups, both large and small, that participated in the judicial proceedings.

So, Mr. Chairman, in our opinion, the country's basic charter of economic freedom, the Sherman Act, has been applied in this case time and time again to produce pro-competitive, pro-consumer results and under those conditions we do not believe that any change is warranted.

Thank you.

[The statement follows:]

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**STATEMENT OF JOHN D. ZEGLIS**

**SENIOR VICE PRESIDENT AND GENERAL COUNSEL, AT&T**

Mr. Chairman and members of the Subcommittee: My name is John D. Zeglis. I am Senior Vice President - General Counsel and Government Affairs of American Telephone and Telegraph Company ("AT&T"). We greatly appreciate the Subcommittee's invitation to appear today to discuss the Modification of Final Judgment (sometimes referred to as the "Decree") and the Decree's line of business injunctions on the divested Bell Operating Companies ("BOCs") and their Regional Holding Companies ("RHCs").

My testimony is divided into four parts. First, it will discuss the antitrust basis and background for the Decree and how the Decree was a response to initiatives of the Congress and the FCC as well as decades of antitrust proceedings. Second, it will describe how the experience of the last six years has witnessed the very competitive conditions and consumer benefits that the antitrust laws are designed to advance. Third, my testimony will address the Court's 1987 holding that there have been insufficient changes in the BOCs' local exchange facilities to warrant any change in the Decree's two core line of business injunctions -- the manufacture of telecommunications products and the provision of interexchange services -- but that the other two injunctions originally in the Decree could be modified. Finally, my testimony will show that, contrary to some claims, the judiciary's role in administering the Decree is precisely the

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role federal courts have historically played in overseeing the numerous similar decrees entered under federal law, and there is thus no basis to consider changing or abridging the District Court's role.

I. THE ANTITRUST BASIS FOR THE DECREE.

The Modification of Final Judgment (or "Decree") granted the United States the structural antitrust relief that the Justice Department had sought in over three decades of antitrust litigation with the formerly integrated Bell System. The January 1, 1984, divestiture split the Bell System between its monopoly local exchange businesses (assigned to the BOCs) and its competitive long distance and manufacturing businesses (assigned to AT&T). The Decree originally contained four line of business injunctions and barred the BOCs from (1) interexchange services, (2) equipment manufacturing, (3) information services, and (4) nontelecommunications businesses.

The line of business injunctions are the "necessary counterpart" of this divestiture. By precluding the BOCs from reentering the long distance and manufacturing businesses, the line of business injunctions assure that the divested BOCs will not recreate the very combinations and controversies that the divestiture was designed to end. At the same time, the Decree was carefully fashioned to create an industry structure for telecommunications that would not only promote competition in

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long distance, manufacturing, and other markets, but also protect ratepayers, prevent balkanization of the national network, and promote America's international competitiveness and balance of payments.

Both the divestiture and the corresponding line of business injunctions received broad support among the 600 commentors that participated in the public interest proceedings which led to the entry of the Decree by District Judge Harold H. Greene. And each rests on a fact that the District Court, the Court of Appeals for the District of Columbia Circuit, and numerous other antitrust courts have recognized: it creates profound competitive controversies and threatens vital national interests for a BOC to use its control of local exchange networks unfairly to advantage its participation in competitive businesses that depend on "access" to these local exchanges or information about them.

These points are demonstrated by a brief review of (1) the antitrust litigation against the Bell System, (2) the fact that state and federal public utility regulation could not prevent these controversies, (3) the enormous costs that this antitrust problem imposed on the nation, and (4) the explicit antitrust findings that the District Court made when the Decree was entered and that appellate courts have since reaffirmed.

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A. The 1949 and 1974 Government Antitrust Cases And The More Than 70 Private Suits

Prior to 1984, the Bell System had been a single enterprise that participated in monopoly and related competitive businesses alike. Through the BOCs, the Bell System owned the local telephone exchanges, which everyone recognized to be natural monopolies that could not feasibly be duplicated. Through AT&T and Western Electric, the Bell System also participated in three actually or potentially competitive businesses that depended on access to the local exchange monopolies: (1) long distance or "interexchange" services, which require access to local telephone facilities to originate and terminate calls; (2) the manufacture of telecommunications equipment (including equipment located on customer premises), most of which was purchased by the BOCs and all of which requires access to information about the evolving technical characteristics of the network's local exchanges; and (3) the provision of a very few "information services" (i.e., time, weather, and sports information), which similarly require use of local telephone facilities for transmission of the information.

In the 35 years that led up to the Decree, the United States brought two separate antitrust actions to break up the Bell System: the first in 1949 (United States v. Western Electric, No. 17-49 (D.N.J.)) and the second in 1974 (United

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States v. AT&T, No. 74-1698 (D.D.C.)). The basis for each was the Justice Department's contention that the structure of the Bell System was inherently anticompetitive.

The Department proceeded under the theory that a firm with a lawful monopoly violates Section 2 of the Sherman Act if it "leverages" that monopoly to impede or foreclose competition in a related market -- even if the firm neither monopolizes nor attempts to monopolize that second market -- and that a monopolist acquires special duties if it controls an "essential facility" or a "strategic bottleneck" to which competitors require nondiscriminatory access.* Judge Greene and other courts found that this dual control over the local telephone exchange monopolies and related competitive business gave the Bell Companies both the "ability" and the "incentive" to foreclose competition in the long distance and equipment manufacturing markets through discrimination and cross-subsidization. See, e.g., United States v. AT&T, 552 F. Supp. 131, 187 (D.D.C. 1982), aff'd sub nom. Maryland v. United States, 460 U.S. 1001 (1983); Litton Systems, Inc. v. AT&T, 700 F.2d 785, 798-802 (2d Cir. 1983), cert. denied, 404 U.S. 1073 (1984).

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* See Otter Tail Power Co. v. United States, 410 U.S. 366, 377 (1973); Northwestern Pacific Railway v. United States, 356 U.S. 1, 11 (1958); Times-Picayune Publishing Co. v. United States, 345 U.S. 594, 608-09 (1953); United States v. Griffith, 334 U.S. 100, 107 (1948); M.A.P. Oil Co. v. Texaco, 691 F.2d 1303, 1305-06 (9th Cir. 1982); Berkey Photo, Inc. v. Eastman Kodak Co., 603 F.2d 263, 275-76 (2d Cir. 1979), cert. denied, 444 U.S. 1093 (1980); Sargent-Welch Scientific Co. v. Ventron Corp., 567 F.2d 701, 709, 711-13 (7th Cir. 1977), cert. denied, 439 U.S. 822 (1978).

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Equipment Manufacturing. The Department claimed that the Bell System's control over the local telephone exchanges inherently foreclosed competition in equipment manufacturing markets. In the Department's view, the Bell System could, and had, misused its local monopolies to foreclose competition in these markets in three different ways.

First, in numerous episodes in United States v. AT&T, the Department charged that the BOCs and their centralized engineering affiliate, Bell Laboratories, had "discriminated" against the Bell System's manufacturing competitors in providing access to essential technical and engineering information about the local exchange networks. Specifically, the Department contended that the Bell System's manufacturing affiliate, Western Electric, had been provided with preferential access to technical data, compatibility standards, information about the BOCs' needs and requirements, and other information about the evolving characteristics of the local exchanges that was essential to the design and manufacture of equipment for sale to the BOCs. See Plaintiff's Memorandum in Opposition to Defendant's Motion For Involuntary Dismissal, United States v. AT&T, No. 74-1698 (D.D.C.), pp. 49-51, 296-359, 366-410 (August 16, 1981) (hereinafter cited as "August 16, 1981, DOJ Memorandum"); Competitive Impact Statement, United States v. AT&T, No. 74-1698 (D.D.C.), p. 15 (February 10, 1982) (hereinafter cited as "Competitive Impact Statement").

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For example, the Department alleged that, "[b]y setting technical or compatibility standards and by either not communicating these standards to the general trade or changing them in mid-stream," the Bell System gave its manufacturing affiliate a "headstart" and insuperable advantages in designing equipment for use with the BOCs' local exchanges. See United States v. AT&T, 524 F. Supp. 1336, 1372 (D.D.C. 1981). This headstart allegedly assured that Western Electric would have the only products on the market that met the BOCs' requirements, such that the product could be purchased at inflated prices, and regulatory authorities would have no realistic alternative to passing these inflated prices through to ratepayers. See August 16, 1981, DOJ Memorandum, pp. 49-51; Competitive Impact Statement, pp. 15, 40-42.

Second, the Department claimed that the BOCs had "subsidize[d] the prices of their equipment with the revenues from their monopoly services." See United States v. AT&T, 552 F. Supp. at 190. This allegedly permitted the BOCs to provide customer premises equipment to their customers below cost or without regard to cost, and it permitted Western Electric sales to the BOCs themselves at below-cost prices when necessary to assure that Western Electric products would be selected. Specifically, the Department and others charged that the product design and development expenses of Western Electric had been misallocated to the systems engineering and research functions that were funded by the BOCs' payments to AT&T under

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the License Contract, using revenues derived from their local services. See, e.g., Plaintiff's First Statement of Contentions and Proof, United States v. AT&T, No. 74-1698 (D.D.C.), p. 53 (November 1, 1978); August 16, 1981, DOJ Memorandum, pp. 366, 389-91; Competitive Impact Statement, pp. 40-42. This conduct would produce both predatory pricing that harmed competition and inflated rates that harmed consumers.

Finally, the Department claimed that when Western Electric's "privileged access to information [and other conduct] failed to foreclose competition," the BOCs would simply favor their affiliate's products, even when better or less expensive alternatives were available from unaffiliated vendors. August 16, 1981, DOJ Memorandum, pp. 28-33, 376-88, 402-10; Competitive Impact Statement, p. 15. In episode after episode, the Department charged this misconduct and alleged that the monopoly character of the BOCs' local exchanges gave them the ability to buy equipment at inflated prices, to the detriment of competition and consumers alike. The Department argued such a use of vertical integration to "evade" rate regulation and inflate consumers' rates was a per se violation of Section 2 of the Sherman Act under Byars v. Bluff City News, 609 F.2d 843, 861 (6th Cir. 1979); 3 P. Areeda & D. Turner, Antitrust Law 218-19 (1978); and other like authorities. See August 16, 1981, DOJ Memorandum, pp. 362-64.

The Department further contended that the mere existence of the vertically integrated Bell System created

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"suspicions" that would inhibit competition, whether or not the Bell System in fact engaged in any anticompetitive abuses. The Department claimed that, whether due to the efficiencies of integration or the perceived likelihood of abuses, firms would be inhibited from entering the American market and selling products to the BOCs so long as they were affiliated with a manufacturer. See United States v. AT&T, 524 F. Supp. at 1379-80 (quoting August 16, 1981, DOJ Memorandum, p. 51).

Interexchange Services. The Bell System's control over local exchanges produced equally intractable controversies in the interexchange market. The Department contended -- and AT&T could not dispute -- that the local exchanges were "essential facilities" for all participants in this market. The reality is that no long distance carrier can compete in this market unless it obtains access to the BOCs' local loops and other local distribution facilities that connect the long distance carrier's intercity network to consumers. Because these BOC facilities are a "natural monopoly" that no interexchange carrier can feasibly duplicate, all interexchange carriers are absolutely dependent on obtaining access to these local bottlenecks in a timely fashion and at reasonable and nondiscriminatory prices. The Department thus relied on a line of cases holding that firms controlling strategic bottlenecks must provide access to them on nondiscriminatory terms.*

* The Department analogized the BOCs' local exchanges to such "essential facilities" as the stadium in Hecht v.

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The allegations in the many episodes in United States v. AT&T set forth a vast array of charges that Bell System companies had abused these local bottlenecks to impede interexchange competition. The Bell companies were charged with denying intercity competitors access to essential facilities; discriminatory pricing of essential facilities; negotiating in bad faith over new forms of interconnection to those facilities; misallocating joint and common costs between monopoly and competitive services to "cross-subsidize" interexchange services; engaging in "price squeezes" by charging inflated rates for local access while simultaneously lowering interexchange rates; delaying release of the interface information that long distance carriers need to develop new services; and continually "shifting from one anticompetitive activity to another." See United States v. AT&T, 552 F. Supp. at 167; August 16, 1981, DOJ Memorandum, pp. 67-285; United States v. AT&T, No. 74-1698, Plaintiff's First Statement of Contentions and Proof, pp. 74-258 (November 1, 1978). In the

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(footnote continued from previous page)

Pro-Football, Inc., 570 F.2d 982 (D.C. Cir. 1977), cert. denied, 436 U.S. 956 (1978); the warehouse in Gamco, Inc. v. Providence Fruit & Produce Bldg., Inc., 194 F.2d 484 (1st Cir.), cert. denied, 344 U.S. 817 (1952); the railroad terminal in United States v. Terminal R.R. Ass'n, 224 U.S. 383 (1912); the pipeline in Woods Exploration & Producing Co. v. Aluminum Co. of America, 438 F.2d 1286 (5th Cir. 1971), cert. denied, 404 U.S. 1047 (1972); and the power transmission facilities in Otter Tail Power Co. v. United States, 410 U.S. 366 (1973). See August 16, 1981, DOJ Memorandum, pp. 39, 76; United States v. AT&T, 524 F. Supp. at 1352-53.

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Department's view, all this actual or possible conduct foreclosed competition, inhibited entry, and injured consumers and competition alike.

These allegations were not limited to the two government antitrust suits. More than 70 private antitrust cases were brought against Bell companies under these same leveraging theories by interexchange carriers,* equipment manufacturers,** and other competitors.

B. Regulation

A principal Bell System defense to these antitrust charges was that, almost without exception, the challenged

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* See, e.g., Southern Pacific Communication Co. v. AT&T, 556 F. Supp. 825 (D.D.C. 1982), aff'd 740 F.2d 980 (D.C. Cir. 1984), cert. denied, 470 U.S. 1005 (1985); MCI Communications Corp. v. AT&T, 708 F.2d 1081 (7th Cir.), cert. denied, 464 U.S. 891 (1983); Data Transmission Corp. v. AT&T, No. 76-1544 (D.D.C.); MCI Communications Corp. v. AT&T, No. 79-1182 (D.D.C.); Southern Pacific Communications Corp. v. AT&T, No. 83-0094 & MDL 550 (N.D. Cal.); United States Transmission Systems v. AT&T, No. 82 Civ. 1986 (S.D.N.Y.).

** See, e.g., International Telephone & Telegraph Corp. v. AT&T, No. 77 Civ. 2854 (S.D.N.Y.); Conrac Corp. v. AT&T, No. 82 Civ. 2330 (S.D.N.Y.); Telesciences v. AT&T, No. 80-2445 (D.D.C.); General Dynamics Corp. v. AT&T, No. 82-C-7941 (N.D. Ill.); Glictronix Corp. v. AT&T, No. 82-4447 (D.N.J.); Gregg Communication Systems v. AT&T, No. 82-C-6291 (N.D. Ill.); Jack Faucett Assoc., Inc. v. AT&T, No. 81-1804 (D.D.C.) (and four consolidated cases); KWF Industries, Inc. v. AT&T, No. 83-0431 (D.D.C.); Phonetele, Inc. v. AT&T, No. 74-3566-FW (C.D. Cal.); Rice International Corp. v. AT&T, No. 82-2573 (S.D. Fla.); Selectron, Inc. v. Pacific Northwest Bell Telephone Co., No. 76-965-BE (D. Ore.); Sound, Inc. v. AT&T, No. 76-182-2 (S.D. Iowa) (and one consolidated case); DASA Corp. v. AT&T, No. 83-2695 (E.D. Pa.); Amtel Communications, Inc. v. AT&T, No. 82-8754 (S.D.N.Y.); Telephonic Equipment Corp. v. AT&T, No. 82-C-8478 (S.D.N.Y.).

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conduct was not only subject to regulation, but had actually been reviewed or approved by the FCC or the state utility commissions that regulated the Bell System companies.

Indeed, the existence of this regulation had been the basis for the 1956 Judgment that settled the Department of Justice's 1949 complaint. In the 1956 Judgment, the parties stipulated to the entry of a judgment that did not order any structural relief, but that, instead, limited the Bell System to the provision of regulated services and the manufacture of equipment used for such regulated services -- thereby relying on regulation to prevent future controversies over claimed abuses of the local exchange monopolies.

Consistent with the 1956 Judgment, AT&T contended in the government case filed in 1974 and the more than 70 private antitrust cases of this period that the conduct of the Bell companies was immune from attack under the antitrust laws because that conduct was pervasively regulated by the FCC and state public utility commissions. AT&T argued that the pervasive common carrier regulation to which the Bell companies were subject under the Communications Act of 1934 (47 U.S.C. § 151, et seq.) and corresponding state public utility laws was inherently inconsistent with the free and open competition that the antitrust laws are designed to foster, and that to apply the antitrust laws to pervasively regulated conduct would unfairly impose conflicting standards and requirements on the regulated company. Accordingly, AT&T contended that the

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application of the antitrust laws was repugnant to the regulatory scheme and that antitrust immunity was necessary to enable the regulatory scheme to work.

Shortly after the filing of the government's complaint in the 1974 case, the District Judge who was then assigned to the case -- Judge Waddy -- stayed all other activity in the case and requested the parties and the FCC as amicus curiae to brief this basic jurisdictional issue. Both the FCC and the Department of Justice contended that the FCC's regulatory authority over the conduct being challenged in the case did not displace the antitrust laws and did not deprive the court of jurisdiction to order injunctive relief. See Memorandum of Federal Communications Commission As Amicus Curiae (filed December 30, 1975).

The District Court agreed. It held that neither the Communications Act nor the FCC's regulation had impliedly repealed the antitrust laws or otherwise deprived the Court of antitrust jurisdiction over the case. United States v. AT&T, 427 F. Supp. 57, 61 (D.D.C. 1976), cert. denied, No. 77-1009 (D.C. Cir.), cert. denied, 429 U.S. 1071, 434 U.S. 966 (1977). Both the Court of Appeals for the District of Columbia Circuit and the Supreme Court declined to review that decision. In 1978, after the case was reassigned to Judge Greene, the District Court reconsidered the immunity issue and reaffirmed that "regulation by the Federal Communications Commission and state regulatory bodies does not immunize defendants in this

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antitrust action." United States v. AT&T, 461 F. Supp. 1314, 1320-30 (D.D.C. 1978). AT&T made identical immunity claims in numerous private antitrust cases brought against the Bell System companies. These claims were rejected by each federal court of appeals that considered them, with the Supreme Court refusing to review these decisions.*

In its 1974 case, the Department of Justice also introduced extensive evidence to prove that regulation cannot assuage the antitrust problem created by the combination of exchange monopolies and related competitive businesses -- and that a structural remedy thus was essential. The Department's evidence showed that the local telecommunications network is so complex, so technologically dynamic, and characterized by such great joint and common costs that existing forms of public utility regulation simply could not prevent disputes or abuses. Thus, the Department claimed that regulation could not prevent discrimination in the provision and pricing of bottleneck facilities to interexchange carriers, discrimination

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* See, e.g., Southern Pacific Communications Co. v. AT&T, 740 F.2d 980, 999-1000 (D.C. Cir. 1984), cert. denied, 470 U.S. 1005 (1985); MCI Communications Corp. v. AT&T, 708 F.2d 1081, 1101-05 (7th Cir. 1983), cert. denied, 104 S. Ct. 234 (1983); Phonetele, Inc. v. AT&T, 664 F.2d 716, 726-37 (9th Cir. 1981), cert. denied, 459 U.S. 1145 (1983); Northeastern Telephone Co. v. AT&T, 651 F.2d 76, 82-84 (2d Cir. 1981), cert. denied, 455 U.S. 943 (1982); Mid-Texas Communications Systems v. AT&T, 615 F.2d 1372, 1377-82 (5th Cir.), cert. denied, 449 U.S. 912 (1980); Sound, Inc. v. AT&T, 631 F.2d 1324, 1327-31 (8th Cir. 1980); Essential Communications Systems v. AT&T, 610 F.2d 1114, 1116-25 (3d Cir. 1979).

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in the provision of interface information and specifications for new products to equipment manufacturers, discrimination in the procurement of equipment, or misallocation of the BOCs' joint and common costs between competitive and monopoly activities. See, e.g., August 16, 1981, DOJ Memorandum, pp. 46-47, 125 n.*, 161-62, 281-82, 285, 374.

C. The Social Costs Of The Antitrust Problem

The Bell System vigorously defended all the conduct that was challenged in the more than 70 public and private antitrust cases -- and AT&T believes to this day that its conduct was reasonable and lawful. However, the litigation demonstrated that the mere fact of the Bell System's integration of bottleneck exchanges and related competitive businesses would continue to create antitrust controversies that threatened the Bell System, its shareholders, and the health and growth of a critical national industry -- no matter who won the pending cases.

First, the dual control of the local exchange bottlenecks and competitive businesses created inherent antitrust exposure -- and the certainty of enormous litigation costs. No single verdict could ever end the controversies. No matter who won United States v. AT&T and the other pending cases, exposure to these antitrust charges was inherent in the integrated structure of the Bell System. Under the Department's leveraging theory, virtually any competitive

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success by AT&T -- or failure by a competitor -- could be challenged in an antitrust court. A competitor could always claim that AT&T's success resulted from the misuse of its local exchange bottlenecks, not the efficiencies of integration. In each case, the allegation would raise a question of fact that would have to "go to the jury."

Equally important, the Bell System's integration of monopoly exchanges and related competitive businesses did more than create antitrust exposure that increased the Bell System's costs of doing business. It led to incessant antitrust, regulatory, and legislative proceedings throughout the 1970s and early 1980s that attempted to establish regulations that would prevent abuses of the local exchanges and thereby establish more level playing fields for the emerging competition.

For example, the risks of these anticompetitive abuses led to almost continuous congressional investigations and several legislative proposals during the last half of the 1970s and the early 1980s.* In 1978, a bill was introduced in the

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* See H.R. 12323, 94th Cong., 2d Sess. (1976); H.R. 13015 95th Cong., 2d Sess. (1978); H.R. 3333, 96th Cong., 1st Sess. (1979); S. 611, 96th Cong., 1st Sess. (1979); S. 662, 96th Cong., 1st Sess. (1979); H.R. 6121, 96th Cong., 1st Sess. (1979); S. 2827, 96th Cong., 2d Sess. (1980); S. 898, 97th Cong., 1st Sess. (1981); H.R. 5158, 97th Cong., 1st Sess. (1981); MCI Communications Corp. v. AT&T, No. 79-1182, Complaint for Violations of the Antitrust Laws, Prayer for Relief, ¶¶ 6-8 (D.D.C. April 30, 1987).

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House to require the Bell System to divest its equipment manufacturing operations within three years and to interconnect with all other carriers. H.R. 13015, 95th Cong., 2d Sess. (1978). Several additional bills were introduced in the 96th Congress that would have substantially rewritten the Communications Act to restrict potential anticompetitive conduct by the Bell companies. H.R. 3333, 96th Cong., 1st Sess. (1979); H.R. 6121, 96th Cong., 1st Sess. (1979); S. 611, 96th Cong., 1st Sess. (1979); S. 622, 96th Cong., 1st Sess. (1979); S. 2827, 96th Cong., 2d Sess. (1980). For example, H.R. 6121 was approved by the House Commerce Committee in August 1979. It would have required the Bell System to move any research and manufacturing operations that supported unregulated services or products to a separate subsidiary, and would have prohibited Bell companies from providing any information services that might compete with newspapers or periodicals, such as "electronic" Yellow Pages.

In 1981, the Senate passed S. 898, which is the source of several of the provisions of the Modification of Final Judgment. S. 898, 97th Cong., 1st Sess. (1981). S. 898 attempted to protect competing equipment manufacturers and suppliers from abuse of the BOCs' bottleneck position by ordering structural separation of the Bell System's research, development and manufacturing operations and by imposing restrictions on the Bell Companies' purchases of equipment from its manufacturing affiliate. S. 898 sought to protect

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competing interexchange carriers by requiring the establishment of "exchange telecommunications areas" within the states, and further establishing a timetable for the phase-in of "equal exchange access" by the BOCs. These interexchange and exchange access provisions of S. 898 were later incorporated directly into the Decree. See Modification of Final Judgment, Sections II(A), IV(G), and Appendix B, § A.

After S. 898 passed the Senate, legislation was introduced in the House in November of 1981 (H.R. 5158, 97th Cong., 1st Sess. (1981)) that adopted radically different solutions to the threats of competitive abuses by Bell exchange companies. The FCC pursued similar regulatory solutions.*

The Bell System thus was confronted not only with the claims in United States v. AT&T and the private antitrust suits, but also with a host of proposed and actual FCC regulations and several legislative proposals. These all sought to limit the Bell System's ability to abuse its exchanges through such devices ranging from structural requirements, to procurement quotas, to information flow rules, to interconnection standards, to pricing regulations.

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* See, e.g., Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry), 77 F.C.C.2d 384 (1980), aff'd sub nom. Computer & Communication Industry Association v. FCC, 693 F.2d 198 (D.C. Cir. 1982), cert. denied, 461 U.S. 938 (1983); FCC CC Docket No. 78-72 (exchange access); FCC CC Docket No. 80-742 (license contracts); FCC CC Docket No. 80-53 and No. 19129 (Phase II) (Bell System procurement practices); AT&T, Manual and Procedures for the Allocation of Costs, 84 F.C.C.2d 384, modified, 86 F.C.C.2d 667 (1981), aff'd sub nom. MCI Telecommunications Corp. v. FCC, 675 F.2d 408 (D.C. Cir. 1982).

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As the District Court found in 1982, the resulting uncertainty over industry structure and ground rules threatened the entire industry and the legitimate interests of all its participants. See United States v. AT&T, 1982-2 Trade Cases ¶ 64,726 at 71,526 (D.D.C. 1982). For while the regulatory, legislative and antitrust initiatives were pending, the industry participants had to wait, month after month, year after year, to learn what the "rules" and industry structure would be. While they waited, industry participants often could not move forward with new services and new investment, for fear of having to backtrack when the new "rules" were determined. Worse, industry participants bent their efforts toward prosecuting or defending the litigation (or agency or legislative proceedings) in order to influence the resulting "rules" to each participant's best advantage. As the Department of Justice contended, the mere existence of the integrated Bell System and its potential to abuse its bottleneck position inhibited many firms from entering the long distance and equipment manufacturing markets in competition with AT&T. In short, the costs of dispute dragged down all industry participants -- large and small companies, actual and potential investors, and customers of all sizes.

Under the bottleneck leveraging theory, there was only one antitrust remedy that could end the crippling uncertainty and incessant controversies: AT&T's divestiture of the local exchange monopolies of the BOCs and the imposition of

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corresponding line of business injunctions that would prevent the divested BOCs from reentering related competitive businesses. The Department sought this precise remedy in its 1974 case, both in the pretrial proceedings and at trial -- through three different administrations and the tenures of five different Attorneys General. The fact that this antitrust remedy was dictated by the Government's antitrust theory is vividly illustrated by the cover note that the then Assistant Attorney General for Antitrust (William Baxter) attached to the first draft of the Decree. It made one demand that was "non-negotiable": "the concept of separating the local exchange functions & confining the BOCs to local exchange functions" (December 21, 1981).*

D. The District Court's Antitrust Findings Under The Tunney Act.

Although the Decree was not AT&T's idea, AT&T decided that it was the best of the available alternatives and the only way to end the turmoil and the industry's paralysis. On January 8, 1982, AT&T consented to entry of the Department's proposed decree.

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* Thus, the Department contended that divestiture and the Decree's line of business injunctions were "necessary complements" to one another and that the Decree's line of business injunctions are the "opposite side of the divestiture coin . . . an integral part of the divestiture . . . and proceed on precisely the same theory [as divestiture]." United States v. AT&T, No. 74-1698, Tr. 25179; id., Brief of United States, p. 30 (June 14, 1982).

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Before this Decree could be entered, however, the Tunney Act required Judge Greene to conduct extensive proceedings to determine whether the proposed relief was in the public interest and to make explicit findings as to the appropriateness of this remedy. Over 600 entities submitted written comments on the Decree, including competitors in each of the relevant markets, the FCC, state utility commissions, public interest groups, and members of Congress. The commentors almost uniformly agreed that divestiture was a good idea. They also broadly agreed with the concept of line of business injunctions on the divested BOCs, although some commentors challenged some of the injunctions that the Department had proposed.

On the basis of this record and the voluminous trial record, Judge Greene found that AT&T's divestiture of the BOCs was "plainly in the public interest." United States v. AT&T, 552 F. Supp. at 223. Judge Greene similarly approved the line of business injunctions that would prevent the divested BOCs from reentering the interexchange and manufacturing markets that had been the subject of so many years of litigation.

The District Court found that the interexchange services injunction was necessary because access to the BOCs' local exchanges is "essential" for interexchange carriers and any BOC that provided these services could disadvantage interexchange carriers in a variety of ways so long as the local exchanges remained monopolies. Id. at 188. The court

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concluded that the equipment manufacturing injunction was necessary because "[t]here is a substantial likelihood" that the BOCs would "frustrate" competition by nonaffiliated manufacturers if the BOCs were not enjoined. Id. at 190. Although the court recognized that the information services market was evolving and uncertain, it also found that BOCs should also be excluded from that market "for reasons similar to those justifying the restriction on interexchange service." Id. at 189.*

At the same time, Judge Greene insisted that some of the proposed injunctions on the BOCs be loosened so that BOCs could participate in certain "noncore" businesses. Specifically, Judge Greene rejected the Department's proposal to enjoin the BOCs from providing "customer premises equipment" and "Yellow Pages" in connection with local exchange service. United States v. AT&T, 552 F. Supp. at 191-93 & 193-194. Judge

* In upholding these injunctions, the District Court rejected arguments that the creation of seven independent BOCs or the existence of state and federal regulations could eliminate the need for the line of business injunctions in the Decree. The court held that insofar as these injunctions and the threatened injuries to "competition, competitors, and ratepayers" are concerned, it is a "distinction . . . without a difference" that "the 'old' Bell System . . . was nationwide in scope while each of the seven Regional Companies possesses an equally powerful monopoly in [only] a particular geographic region." United States v. Western Electric, 627 F. Supp. 1090, 1095 (D.D.C. 1986). And the court held that "[i]f regulation could effectively prevent the [anticompetitive] practices [by these companies], there would have been no need for the AT&T action." United States v. AT&T, 552 F. Supp. at 187 n.229. See also United States v. Western Electric Co., 627 F. Supp. at 1097 n.22; id., 592 F. Supp. 846, 855 & n.20 (D.D.C. 1984).

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Greene further modified the Decree's fourth line of business injunction: the "catch-all" nontelecommunications services injunction that would have excluded the BOCs from all businesses other than local exchange telephone services. Rather than impose a blanket injunction, Judge Greene established a flexible "waiver" procedure under which a BOC could enter other businesses (other than long distance, manufacturing, or information services) upon a showing that there was no reasonable likelihood that their local exchanges could be leveraged to obtain improper competitive advantages.

In so doing, the District Court stated -- and repeatedly reiterated after divestiture -- that removal of the core interexchange and manufacturing injunctions would be governed by the bottleneck leveraging theory that is the basis for the Decree. United States v. AT&T, 552 F. Supp. at 195. Thus, the court stated shortly after divestiture that it would not consider proposals to allow the BOCs to participate in the core interexchange and manufacturing businesses unless and until their local exchanges ceased to be bottleneck monopolies:

> "The Court will not even consider the substantive merits of a waiver request seeking permission to provide interexchange services until such time as the Regional Holding Companies lose their bottleneck monopolies and there is substantial competition in local telecommunications service . . . Similar considerations govern the appropriateness of entry of the Regional Holding Companies into the information services and equipment manufacturing markets. No significant technological or structural changes have occurred in these markets to justify a relaxation of these

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> line of business restrictions, and no requests for waivers in these markets will be considered unless and until such changes have taken place." United States v. Western Electric Co., 592 F. Supp. at 868 & n.90 (emphasis added).

The Decree, with its line of business injunctions, and the explicit standard for their removal, was affirmed by the United States Supreme Court. Maryland v. United States, 460 U.S. 1001 (1983). And in 1986, the appropriateness of this antitrust remedy was reaffirmed by the Court of Appeals for the District of Columbia Circuit, in a panel of Circuit Judge James Buckley, Circuit Judge (now Justice) Antonin Scalia, and Circuit Judge Abner Mikva. United States v. Western Electric Co., 797 F.2d 1082 (D.C. Cir. 1986), cert. denied, 107 S. Ct. 1384 (1987). As Judge Buckley's opinion stated (797 F.2d at 1088):

> "We are not troubled by U S West's observation that the decree's expansive definition of a BOC results in broad application of the decree's [line of business injunctions and] restrictions to the [the RBOCs] and other companies affiliated with BOCs. This result is consistent with the decree's objective of sharply limiting the ability of businesses with bottleneck control of local telephone service to utilize their monopoly advantages to affect competition in competitive markets."

## II. COMPETITION IN THE POST-DIVESTITURE TELECOMMUNICATIONS INDUSTRY

Experience since divestiture has clearly demonstrated that the Decree is working. The industry structure that it created has allowed "more rapid and certain development of

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competition" in the interexchange and manufacturing markets in precisely the way that the Department and the District Court found that it would. Competitive Impact Statement, p. 8; United States v. AT&T, 552 F. Supp. at 160-66. As the former Chief of the Antitrust Division of the Justice Department stated, these markets have experienced "the introduction, at an unprecedented pace, of innovative products and services coupled with dramatic price reductions" in the years since divestiture."*

The developments and consumer benefits in the interexchange markets could scarcely be more dramatic. New long distance companies have entered this market "in reliance upon the competitive safeguards and industry structures provided in the Consent Decree," and especially on the fact that the Decree assures that owners of essential local exchange facilities may not compete in this market. Comments of National Communications Network, United States v. Western Electric, No. 82-0192, p. 4 (March 13, 1987). Today, there are literally hundreds of interexchange carriers in competition with AT&T.

The benefits to consumers have been extraordinary. Interexchange rates have declined over 45 percent since divestiture. Consumers have a choice of long distance

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* Testimony of Douglas H. Ginsburg concerning S. 2565, The Federal Telecommunications Policy Act of 1986, before Senate Committee of Commerce, Science and Transportation, p. 4 (September 10, 1986) (hereinafter cited as "Ginsburg Testimony").

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carriers, and interexchange carriers have developed and are introducing new services that benefit residential customers (e.g., AT&T's "Reach-Out America" and "Call Me" plans); small business customers (e.g., AT&T's "Pro-America" plan); and large customers (e.g., AT&T's Software Defined Network) at breakneck speeds.

The Decree has had the same effect in the telecommunications equipment manufacturing market. As one industry analyst has concluded, the United States equipment market consists today of AT&T, "a half-dozen towering international firms . . . plus one to two hundred key smaller firms of diverse heights and architecture," plus literally hundreds of even smaller recent entrants.* Indeed, since divestiture, new firms have entered the American market to supply residential telephones, key systems, private branch exchanges, central office switches, and transmission equipment; prices for each of these types of equipment have dropped; and the BOCs are continually establishing relationships with new suppliers. For example, BellSouth has agreed to purchase digital central office equipment from Plessy; U S West is buying similar equipment from Ericsson; and Siemens and other manufacturers have sold this equipment to other BOCs. See Communications Daily, p. 5 (April 8, 1987).

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* J. Michael Guite, Ph.D, Salomon Brothers, Stock Research on Telecommunications Equipment, the United States Market, p. 11 (February 1987).

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Against this background, it is not surprising that consumers have been the most virulent opponents of any modification of the Decree's interexchange and manufacturing injunctions. In the triennial review proceedings before the District Court in 1987, representatives of both small customers (e.g., the Consumer Federation of America) and large customers (e.g., the Ad Hoc Telecommunications Users Association and the International Communications Association) uniformly opposed any relaxation of these injunctions and made extensive arguments that the Decree's line of business injunctions on the BOCs are essential to consumer welfare.

## III. THE DISTRICT COURT'S 1987 DECISION MODIFYING THE DECREE'S LINE OF BUSINESS RESTRICTIONS

In its decision approving the Decree, the District Court recognized that technological developments could at some time in the future erode the BOCs' local exchange bottlenecks and obviate the need for some or all of the line of business restrictions in the Decree. See United States v. AT&T, 552 F. Supp. at 194-95. Accordingly, the court directed the Department of Justice to submit a report to the Court every three years concerning the continued need for the line of business injunctions.

On February 2, 1987, the Department submitted its first such report. It proposed that the court could remove the line of business restrictions that prevented the BOCs from manufacturing telecommunications equipment, providing

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information services, and entering unrelated nontelecommunications markets. The Department also proposed that the prohibition against the provision of interexchange services by the BOCs could be relaxed to permit the BOCs to provide cellular radio, paging, and other mobile interexchange services.* Thereafter, the BOCs filed motions with the District Court seeking the removal of all the Decree's line of business restrictions.

In an opinion issued on September 10, 1987, 673 F. Supp. 525 (D.D.C. 1987) (hereinafter cited as "September 10 Opinion"), Judge Greene denied these motions in part and granted them in part, holding that two of the four line of business injunctions would be modified.

A. Retention of Core Injunctions.

The District Court refused to modify the "core restrictions" enjoining the BOCs' provision of interexchange services and manufacture of telecommunications products. The court's opinion reviewed the events that led up to the trial of the 1974 government case, the evidence introduced by the Department at trial, and the public interest proceedings on the Decree. It reaffirmed that these line of business restrictions

* The Department's February 2, 1987 Report initially proposed that the BOCs should be permitted to provide interexchange services between points outside their regions and should further be authorized to provide in-region interexchange services where entry barriers were eliminated by state regulators. However, the Department withdrew these recommendations on April 27, 1987.

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were the "necessary counterpart" to the divestiture that occurred on January 1, 1984, and were essential to prevent abuses of the local exchange bottlenecks and to "end over thirty years of strife in the telecommunications industry." September 10 Opinion, 673 F. Supp. at 529-35. The court held that there had been no changes in the BOCs' local exchanges or in the regulation of them that could remotely support modification of these core injunctions.

First, the District Court held that there was "no basis" in fact for any claim that the BOCs "do not retain their monopoly power over the local bottlenecks." September 10 Opinion, 673 F. Supp. at 537. The court pointed out that the Department of Justice, its expert, Dr. Peter Huber,* and almost all the parties and intervenors agreed that the BOCs' local exchange facilities had not lost their monopoly characteristics. The evidence overwhelmingly established, and the Court found, that the local exchanges continue to be a monopoly," that "no substantial competition exists at the present time in the local exchange service," and the large customers and small customers alike are absolutely dependent on the BOCs for exchange and exchange access. Id. at 536-40. In this regard, the court found that "bypass" of the BOCs' local

* Although the Department's expert, Dr. Huber, predicted the eventual emergence of a "geodesic" network, the court pointed out that no such geodesic network presently exists and that such developments "will, if ever, impact the Regional Companies bottleneck control only in the future." Id. at 539.

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exchange bottlenecks has been virtually nonexistent to date. It found that the BOCs' local exchange facilities are used to provide access for "99.9 percent of all interexchange carrier traffic, generated by 99.9999 percent of the nation's telephone customers." Id. at 540.

In short, the District Court found that local exchange "monopoly bottlenecks continue to exist essentially in unchanged scope and form, and that they continue to provide the same basis for anticompetitive activity as they did prior to the Bell System break-up." Id. at 543. Accordingly, the court held that the "core" line of business injunctions against interexchange services and equipment manufacturing remain necessary to prevent leveraging of local monopolies by the BOCs.

In this regard, the September 10 Opinion considered and rejected arguments that there had been changes in other conditions that could justify elimination of the core restrictions. The court held that the fact that there are seven Regional Companies, whereas there was only one Bell System "does not constitute a new development;" the court noted that the fact that there would be seven divested companies was a premise of "the very same decree" that imposes the line of business restrictions. Id. at 547. The court similarly rejected the arguments that the BOCs' compliance with their "equal access" obligations could be grounds to eliminate the

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core injunctions. It reasoned that "[i]f equal access had been all that was involved, the decree could have simply mandated the Bell System to provide such access." Id. at 548.

Finally, the court rejected arguments that there had been regulatory changes that could justify elimination of the injunctions. The court emphasized that the Decree was entered because regulation "had simply not been capable of preventing the antitrust problems that the decree was to resolve" (id. at 541), and, indeed, the Decree rests on the findings that such regulatory measures could not "approach even remotely" the effectiveness of structural separation (see id. at 568), and that regulatory measures had proven "entirely inadequate" to prevent anti-competitive abuses of the local exchange bottlenecks. Id. at 567, 579. And the court found there had been no change in the character of regulation in the three years since divestiture. To the contrary, the court found that the changes in the past three years consisted of modifying pre-existing regulatory requirements to make them less stringent. Id. at 567-79.

With respect to the equipment manufacturing injunction, the court held that it "mirrors" the "core" injunction on interexchange services. Id. at 552. In the September 10 Opinion, the court found the continuation of the BOCs' local exchange monopolies means that "their incentive and ability to act anticompetitively" and foreclose competition in equipment manufacturing have not changed, and, indeed, that the

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exclusion of competitors was certain if this injunction were removed. As the court stressed: "The Department of Justice concedes that if the restriction [on equipment and manufacturing] were lifted, each of the Regional Companies would satisfy all or nearly all of its equipment needs from its own manufacturing affiliate," and independent equipment manufacturers would thereby be foreclosed from a very substantial portion of the equipment market. Id. at 556 (emphasis in original). The court concluded, therefore, that removal of the equipment manufacturing injunction "would be likely to extinguish or substantially curtail the healthy competitive domestic market that has emerged in the last three years" and foreclose competition in the design of equipment for the BOCs' exchanges. Id. at 562.

In refusing to end these two core restrictions, the District Court also relied on the fact that in the years since divestiture, competitors have repeatedly alleged that BOCs have misused their exchanges to engage in discriminatory activities and cross-subsidization in the few competitive markets available to BOCs under the Decree. Id. at 580-81. In two of these instances, AT&T was the complainant, and the Decree meant that AT&T was not required to file separate antitrust suits and incur the associated expense and delays of discovery and proving damages, but obtained a swift and certain remedy under

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the Decree.* Conversely, if the Decree's injunctions were modified, these swift remedies would disappear, and the post-divestiture AT&T and the many firms that have entered these markets since divestiture would again be remitted to filing suits, episode by episode, in district courts throughout the country and recreating the very burdens on the industry that the Decree sought to end.

The Court of Appeals for the District of Columbia Circuit recently affirmed the District Court's refusal to lift the manufacturing and interexchange restrictions. United States v. Western Electric Co., No. 87-5388, slip op. (D.C. Cir. April 3, 1990). The Court of Appeals noted that there was no dispute that the BOCs continue to possess bottleneck monopolies in local exchange services. Id. at 27. Because the core line of business restrictions in the Decree had been approved only after an explicit finding by the District Court that otherwise "the BOCs would have both the incentive and the ability to use their local exchange monopoly to impede competition" in the markets covered by those restrictions, the

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* The District Court enjoined one BOC, Pacific Telesis, from refusing to provide essential local facilities that AT&T needed to provide an interexchange public telephone service in competition with Pacific's coin and coinless telephones. United States v. Western Electric Co., 583 F. Supp. 1257 (D.D.C. 1984). Similarly, in 1986, the court enjoined U S West from seeking to replace the interexchange switching service that AT&T provides to the United States government by offering special low rates for bottleneck access facilities only if GSA agreed to obtain these services from U S West. United States v. Western Electric, Opinion (November 26, 1986).

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Court of Appeals concluded that the BOCs could obtain relief from those restrictions only by establishing "that something is different now from the time when the decree was entered so that they can no longer use their monopoly power to impede competition." Id. at 34. The Court of Appeals agreed with the District Court's conclusion that the mere existence of the seven RHCs created by the decree therefore was not itself significant, particularly in light of the undisputed continuation of their monopoly power. Id. at 34-35.

With respect to interexchange services, the Court of Appeals noted that the BOCs had not even seriously contested on appeal the Department of Justice's arguments that (1) existing FCC regulation was not designed to prevent anticompetitive conduct by BOCs if they were allowed to enter the interexchange market; (2) in any event, violations of regulatory equal access requirements "are extremely difficult to detect and remedy;" and (3) it would be easier for BOCs to acquire market power in the interexchange market because of the newly-competitive and capital intensive nature of that market. The Court of Appeals therefore affirmed the conclusion that the interexchange restriction should not be lifted. Id. at 38-39.

The Court of Appeals also affirmed the District Court on the manufacturing restriction, giving great weight to the Department of Justice's assumption that an RHC which manufactured equipment would purchase substantially all of its requirements from its affiliate, regardless of price or

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quality. The Court of Appeals affirmed that, even if this resulted in the foreclosure of only 5-15% of the telecommunications equipment market, the result would be to give a BOC the incentive and opportunity effectively to charge higher prices for the equipment that it produced through undetected cross-subsidization from the local exchange market. Thus, the BOC would be able to leverage its local exchange monopoly power into the equipment market, the very result that the Decree was designed was to prevent. Id. at 31, 43-44. Similar cross-subsidy concerns had been noted by the Court of Appeals in an earlier decision, which affirmed the District Court's interpretation of the scope of the Decree's manufacturing restriction. United States v. Western Electric Co., No. 88-5050, slip op. (D.C. Cir. February 2, 1990).

In short, Judge Greene's 1987 decision to maintain the core line of business injunctions under current circumstances is the only result that can be reconciled with basic antitrust principles and the basis upon which the Decree was held to be in the public interest. However, the Decree's line of business injunctions do more than promote competition. They are essential to such vital national interests as promoting foreign trade, preventing balkanization of the national telephone network, preserving reliable, high quality service, and protecting ratepayer interests and universal service. In its

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September 10 Opinion, the Judge Greene found that retention of the core interexchange and manufacturing injunctions is necessary to advance each of these objectives.

Foreign Trade. The Decree was carefully fashioned to assure that AT&T would not be foreclosed from any portion of the American market and thus be "preserved" as a "dynamic force" capable of competing in national and international markets. United States v. Western Electric Co., 569 F. Supp. 1057, 1120 (D.D.C. 1983). However, as the District Court, the Department of Commerce, the Justice Department and Dr. Huber each found, the removal of the manufacturing injunction would have created a market structure in which BOCs would have incentives to form joint ventures with established foreign manufacturers, to purchase equipment from these foreign firms exclusively, and to foreclose the only free market in the world to AT&T, America's leading full-line telecommunications equipment manufacturer. September 10 Opinion, 673 F. Supp. at 556 n.135, 557 n.141, 562.

The foreign trade consequences of lifting the manufacturing restriction would be devastating. Such a move would simultaneously (1) foreclose American markets to American firms; (2) deny American firms the revenues needed to sustain the research and development needed to sell equipment in Asian, Middle Eastern, and other foreign markets; and (3) give foreign firms captive markets and guaranteed sales in this country. The consequences would be especially severe because Japanese

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and European manufacturers have, to date, largely excluded AT&T from Japan, Germany, France, and other European markets. Removal of the injunction would have the extraordinary consequence that foreign firms might form alliances with the BOCs to exclude AT&T and other American firms from the American market as well.*

Prevention of Balkanization. Removal of the core line of business injunctions would also threaten the high quality and reliable telephone service that is critical to the nation's businesses, residences, and defense. Specifically, the Justice Department's recommendation to eliminate some or all of the core restrictions would, by its terms, have required severe curtailment of the BOCs' joint centralized engineering activities through Bell Communications Research (Bellcore). Id. at 559. Upon entering the Decree, the District Court found that these activities are essential to the "very survival" of the national telecommunications network and that the alternative to Bellcore is "balkanization," "deterioration and fragmentation of the national telephone system," and the transformation of this national resource in a system like Europe's. United States v. Western Electric Co., 569 F. Supp. at 1118.

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* It is for these reasons that the Department of Commerce found in its submission to the Decree Court that the Department's manufacturing recommendation would likely damage foreign trade. See NTIA Trade Report, p. iv.

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In rejecting the proposals to eliminate the core restrictions, the September 10 Opinion reiterated these findings in the strongest terms. The Court held that removal of the core restrictions would be unthinkable when such fragmentation would result (673 F. Supp. at 559):

> "Bellcore has responsibility under the decree to prevent the technical fragmentation and hence the deterioration of the national telephone network. . . . To decentralize or otherwise to limit the responsibilities of Bellcore so as to prevent its uses as a vehicle for anticompetitive action by the Regional Companies would inevitably fragment and frustrate Bellcore's centralizing responsibilities which, notwithstanding the divestiture, permit the nation's telecommunications systems to continue to function on the basis of one national network with one national quality standard."

In affirming the continuation of the core restrictions, the Court of Appeals did not directly address the balkanization question. And because it concluded that foreign trade and ratepayer protection were not directly relevant to the removal standard embodied in the decree, it also did not address the substance of the concerns expressed by the District Court on those subjects. It certainly did not, however, suggest that those subjects are not important public policy concerns -- as they plainly are.

B. Modification of Noncore Restrictions.

In the September 10 Opinion, the District Court also modified the two line of business injunctions that were not at issue in the 1974 Government suit and the other antitrust litigations of the 1970s and 1980s.

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First, the court eliminated entirely the Decree's "catch-all" restriction on the BOCs' provision of nontelecommunications services. The Court found that the likelihood that the BOCs would leverage their control over the local exchanges to gain an unfair competitive advantage in unrelated nontelecommunications markets was relatively small, whereas the removal of the restriction would eliminate the burdensome waiver process and permit the BOCs freely to participate in these markets without the involvement or supervision of the Court. Noting that it had already granted over 160 waivers of this restriction, the court concluded that the benefits from its elimination outweighed the danger that the BOCs might engage an improper cross-subsidization of competitive activities. September 10 Opinion, 673 F. Supp. at 597-99, 602-03.

Second, and more significantly, the court held that part of the information services injunction could be lifted, permitting the BOCs to perform a wide range of information transmission (or "gateway") functions, but continuing to bar their provision of information content. The court noted that because the BOCs' exchanges continue to be natural monopolies the BOCs continue to possess the ability to use their exchanges to foreclose competition in information services, and concluded that there is no justification for eliminating the information services injunction in its entirety. Id. at 564-67, 595-96. At the same time, the court was concerned that the BOCs'

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provision of the "infrastructures" and "gateways" for the information services of others may be an essential condition for the widespread availability in this country of the kind of information services that are becoming available in France, Great Britain, and Japan. The court rejected the suggestions of the Department of Justice and others that it could not consider these consumer interests in its modification decision, and the court held that it would modify the Decree to assure the broadest availability of information services to consumer. Id. at 583-85, 596-97.

The court "concluded that the apparently competing interests -- prevention of monopolization of information services versus broad availability of such services to the public -- can be reconciled by severing for decree purposes the generation of information content (which will remain prohibited to the Regional Companies) from the transmission of information services (which the Regional Companies will be allowed to provide)." Id. at 603. Thus, the court stated that it will modify the information services injunction to permit the RHCs' to provide the five functions found to be necessary to an information services gateway,* and ordered further proceedings to consider the precise scope of the modification. Id. at 587-97, 603-04.

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* These are: (1) data transmission, (2) address translation, (3) protocol conversion, (4) billing management, and (5) introductory information content.

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The further proceedings contemplated by the September 10 Opinion were conducted in late 1987 and early 1988, and gave the BOCs and interested parties the opportunity to propose precisely how the BOC gateways should be constituted to provide the most effective information services infrastructure. In its March 7 and June 22, 1988 decisions, the court adopted the suggestions of the BOCs and other parties and ruled that the gateways could be used to provide to consumers a broad range of services.

In particular, the court held that the BOCs could offer information providers the opportunity to store their information databases in the BOC gateways (and hence reduce transmission costs), and could offer "kiosk billing" (i.e., the billing of a flat rate per minute by a BOC for a consumer's use of any of the information services accessible through the gateway, with a portion of the proceeds remitted to the information provider). Further, the court held that the BOCs could store and provide to consumers "menu" information about the contents and use of the gateways. Finally, the court concluded that voice storage and retrieval and electronic mail functions were also permissible to the BOCs, allowing the BOCs to offer (through the gateways or otherwise) a wide range of voice messaging and electronic mail services directly to consumers. See June 22 Opinion, 690 F. Supp. 22 (D.D.C. 1988).

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Because no party to the Decree had opposed elimination of the entire information services restriction (including the generation of information content), the Court of Appeals concluded that that issue should have been analyzed under a "public interest" standard rather than the more specific standard of Section VIII(C) of the Decree. It therefore remanded to the District Court the question whether the entire information services restriction should be lifted, for a de novo determination by the District Court whether such removal would be anticompetitive or otherwise disserve the public interest under present market conditions.

## IV. THE ROLE OF THE DISTRICT COURT

Pursuant to the retention of jurisdiction provisions in Section VII of the Decree, the District Court has, since the Decree was entered, been responsible for hearing and resolving the numerous motions parties have filed, seeking enforcement or modification of the Decree (including the line of business injunctions). Although some parties now claim that this responsibility has involved the District Court too deeply in telecommunications "policy" matters, the fact is that the District Court's role has been fundamentally identical to the traditional responsibilities of federal courts to oversee and administer similar decrees entered under the antitrust and other federal laws.

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Consent decrees have been utilized extensively by the federal government to enforce laws and to implement policies of the Executive Branch. The Antitrust Division of the Department of Justice has been party to over 1,000 decrees entered since 1932, approximately 225 of which were entered within the last 10 years; consent decree modifications also occur frequently, as evidenced by the nearly 40 decrees modified since 1979.* See Appendix A.

These decrees involve a broad spectrum of antitrust violations regarding mergers and acquisitions, boycotts, collusive bidding, monopolization, price fixing, tying arrangements, patent licensing, warranties, exchange of information and exclusive dealing, among others. Moreover, they affect a broad range of industries and professions involving every imaginable service and commodity (see Appendix B). A review of 33 consent decrees terminated between 1984 and 1988 demonstrates that most decrees endure for a period extending beyond 25 years (see Appendix C). Moreover, consent decrees generally contain a "Jurisdiction Retained" provision stipulating that the court retains jurisdiction of the case and thus may issue any further orders and directions necessary regarding the construction of the judgment, the propriety of the conduct of the parties thereunder, and the modification or enforcement of the decree.

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* 1932 through 1988 Trade Cas. (CCH), Special Index, Antitrust Decrees.

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Judicial consent decrees have also become prevalent in environmental litigation. Since January 1, 1987, there have been 117 Superfund consent decrees. The decrees involve firms in a wide variety of industries, including oil companies, chemical companies, food processors, pharmaceutical/health and beauty care firms, can manufacturers, car and truck manufacturers, electronics firms, plastics manufacturers, aluminum processors, transit authorities, hospitals, churches, educational institutions, utilities, aerospace equipment manufacturers, and waste treatment, storage and disposal firms.* The duration of these decrees is in each case contingent upon some remedial action aimed at "cleaning up" the waste disposal site -- that is, an injunction requiring a company to take (or refrain from taking) certain steps.

Similarly, judicial decrees are commonly used to resolve claims brought by the Equal Employment Opportunity Commission ("EEOC") in labor discrimination cases. During 1987, 356 labor discrimination suits were resolved, 151 of which culminated in judicial consent decrees.** As in the environmental and antitrust areas, many different industries and organizations have been parties to these decrees, including

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* The Information Network for Superfund Settlements maintained by Morgan, Lewis & Bockius.

** Equal Employment Opportunity Commission, A Report On The Operations Of The Office of the General Counsel, October 1986 through September 1987, Appendix D, Summary of Cases Resolved in Fiscal year 1987, submitted July 11, 1988.

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banks, department stores, restaurants, management firms, travel agencies, insurance companies, communications companies, and social service organizations. The decrees generally dictate specific activities a party must undertake, or refrain from undertaking, regarding its recruiting, hiring, promotion and transfer policies, and the decree also frequently establishes "back pay" and other mandatory injunctive requirements. The courts that enter these decrees are also involved on a continuing basis in the monitoring of and enforcement of the decrees.

* * *

The foregoing history of the Decree and its application and enforcement reflect a careful balance between encouraging maximum participation by the BOCs in serving the needs of telecommunications consumers, on the one hand, and protecting legitimate and vital competitive interests on the other.

The Decree itself incorporates the flexibility to take account periodically of changing conditions that could justify modification of some or all of the Decree's restrictions. The District Court's administration of the Decree has consistently reflected this flexibility, as evidenced by the substantial modifications ordered in the September 10 Opinion and the broad definition of information gateways adopted in 1988. If other conditions underlying the Decree restrictions change, moreover,

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the procedures prescribed in the Decree ensure that these conditions can be fully considered -- as part of a triennial review or otherwise -- and the Decree modified as appropriate.

By the same token, however, the antitrust history of the Bell System confirms that for so long as the essential economic underpinning of the Decree -- the bottleneck character of the BOCs' exchanges -- does not change, entry by a BOC into the long distance or manufacturing businesses that remain dependent on access to (or information about) these exchanges can only recreate the anti-competitive and anti-consumer controversies that the Decree ended.

Senator INOUYE. Thank you very much. I will call upon Senator Hollings.

The CHAIRMAN. I enjoyed that description, Mr. Zeglis, of the proceedings. As I remember it, there were no less than 12 orders by the Federal Communications Commission outstanding on AT&T, none of which could be enforced because the lawyers were smarter than the commissioners and the government, and they kept appealing them up and I can see that they still have the best of lawyers.

So we will agree with what you have said, but it will be amusing later to read that description, particularly when you say you cannot deal with yourself. Now what a horrible thought.

Let me say this, Mr. Ross, before I get into this point, I agree with you, but do not put us off on semiconductors and communications. Call up Secretary Cheney, just like I am doing right now because they let Craig Fields go over there, head of DARPA. He is right down your alley and my alley and we have been fighting like the devil.

I would prefer that all of this research would be done on the civil side. We are trying to get the Department of Commerce into it;

Fields has done an outstanding job and that is really where you and I ought to be calling and telling Cheney to change that decision by Darman and Boskin; they do not know a blooming thing about trade. They are more interested in pleasing nuances from Japanese lawyers around this town on trade than they are on maintaining our competitive situation.

Now you did testify about the 70 percent of the local service market that the Bell operating companies control. I was interested the other day when MCI put out $1 billion and got an additional 1 percent of the long distance market to get them, I think, from 13 to 14 percent. I think U.S. Sprint has about 8 percent. You are talking about the seven Bell companies over here as a big old monopoly with their 70 percent. Now let us talk about AT&T with its 70 percent; both monopolies, I guess, both bottlenecks, only one can manufacture and the other cannot.

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You all very happily come to the table and say, whoopee, everything is just tip-top in America. We can manufacture and they cannot and do not let them manufacture.

Now what kind of position is that when all the foreigners can come in here and manufacture? Why do you object to them manufacturing when under the orders and under the Modified Final Judgment, Mr. Tobias, they are asking for only what is allowed you?

You are into big research. If they could manufacture as they said, as they plead for in this particular bill, they would put more into research and everything else of that kind. I do not understand. I do not want to say the lack of shame, but I do not see how you all put this show on.

You can come up here straight faced and you all have it; Both sides have 70 percent. You got long distance, they got local service. But you can manufacture and you can do all of that research and everything else of that kind. They cannot but both of you are struggling in order to compete.

Now I understand competition. You are over, as you are testifying, in Japan and England and everywhere else and the foreigners are all in here taking it over. And you say everything is tip-top and they cannot manufacture and you think that ought to persist and you can?

Mr. TOBIAS. Senator, I think there has been a good deal of debate and discussion and a number of studies done by virtually countless sources, including the Federal Communications Commission, on the whole issue of competitiveness in the interexchange long distance business in this country which, I assume, is what you are referring to with the 70 percent numbers.

The CHAIRMAN. I am not referring to studies, I am referring to the facts of life. Why can you manufacture and they cannot?

Mr. TOBIAS. I would tell you, Senator, that in the markets where I live, if I look at the competitive success of Sprint and MCI and several hundred others, I would suggest that they are doing very, very well. It is a very, very competitive——

The CHAIRMAN. I asked about manufacturing.

Mr. TOBIAS. In manufacturing, in 1981 we had over 90 percent of the equipment business in this country, that is sales to the RBOCs. In 1989 we had 56 percent of that market. That is because competition has entered that market in the strongest and most dramatic terms.

The reason that competition has entered that market has to do with the restructuring of the industry that I have just described. Conversely, 99.999 percent of the calls that go through a local exchange, the access into and out of the local exchange is handled by the local exchange company. Those are dramatic—dramatic differences and, as I think Mr. Zeglis said in his testimony, the only alternative buyer of the equipment that we are talking about for the local exchange companies is the monopoly local exchange company.

So, I think it is inappropriate in my view to compare the market position of AT&T in its businesses with the market position of the local exchange companies in their businesses. That is what the history of this is——

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The CHAIRMAN. I do not understand it. You can make the switches for long distance, but they are not supposed to make them for their business?

Is that not right? I mean, you make all the switches and you buy your own switches? You made it sound like it was horrible over here, buying from yourself. Eyes got that big around and everything else like that. I mean, what the heck.

Mr. TOBIAS. We make the switches. We buy a good deal of what we make——

The CHAIRMAN. You make and buy from yourself?

Mr. TOBIAS. That is correct.

The CHAIRMAN. Wonderful, wonderful, that is all we are asking for.

Mr. TOBIAS. And the pressures of the competitive marketplace and the cost structures associated with that are the discipline that would cause us to go right down the tube if we were not getting the very best equipment that is available at competitive prices.

The CHAIRMAN. Oh, now you and Clendenin are in agreement—you have this sing-song——

You all are back to where you were in the early 1970s, the best equipment at competitive prices, the greatest efficiencies, that sounded like the old hearings we used to have at the FCC.

Well, I wonder about it all because even in manufacturing, I am a little disillusioned. I know I competed years ago with Governor Luther Hodges of North Carolina for Western Electric. I wanted that manufacturing plant. He got it in Durham. I went through Singapore the other day and saw it. It has moved. I won out, I still got my Eastman Kodak.

So you all are moving it around everywhere. I have a stronger concern, because I have the greatest respect for AT&T and particularly the gentleman representing my backyard. They said they were going to lose thousands of jobs. What is there to prevent you from losing thousands of jobs by, let us say, Northern Telecom? They can come in. They are cross-subsidized by Bell Canada. And they have 20,000 employees in North Carolina and Tennessee.

Where is the policy that prevents that?

Mr. TOBIAS. Well, to the degree that it is the policy of the Canadian Government to let that cross-subsidy take place, I am sorry about it because I do not think it is a good idea. But, I can tell you they are very strong and capable competitors here in the United States.

The CHAIRMAN. We have them right here in the Senate. Northern Telecom provides our phones. We have Northern Telecom right in this place, in this building.

Mr. TOBIAS. And that illustrates my point. The competitive situation with respect to manufacturing that you refer to, Senator, I would like to comment on, if I might. I think there has been some misunderstanding about the numbers of manufacturing jobs in AT&T and where they are.

About 99.6 percent of what we sell in this country to the RBOCs is manufactured in this country. About 90 percent of what we sell in this country in total is manufactured in this country.

The only thing we have moved outside this country is the manufacturing related to cordless telephones, corded telephones and

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answer and record devices in the consumer electronics part of our business.

And our choices were two. We could either close down those consumer businesses and get out of the businesses and thereby shut off the funding that flows to research and development, eliminate the marketing jobs, the sales jobs, the servicing jobs or we could stay in those businesses, move the manufacturing part overseas, which we did.

Now I am pleased to tell you that, this year, because we have stayed in that business, we will for the first time since divestiture manufacture and sell in this country more consumer telephone sets than we did before divestiture.

Also, the technology is changing the way in which those sets are manufactured. We are beginning to move those manufacturing jobs back into the United States for the sale of products into the United States and I am very encouraged about the trend, there.

The rest of the manufacturing that we do outside the United States, we do as a part of our expansion to sell more globally in other parts of the world. And the research and development that feeds into those activities for global sales helps fund the research and development in Dr. Ross's organization and we are very pleased about that opportunity.

The CHAIRMAN. Do you think an accounting system can be devised that would properly pinpoint or verify any cross-subsidization if it occurred?

Mr. TOBIAS. No, Senator, I do not. And I have lived under those accounting systems for a number of years.

The CHAIRMAN. So you can cross-subsidize your manufacturing activities from your long distance revenues right now because we do not have an accounting system that could verify it?

Mr. TOBIAS. I certainly could if there were not the discipline of the competitive marketplace that exists in the long distance business. It would cause me to go right down the tube if I tried to do that.

So the issue, I think, is if you have to use that as a substitute for real competition and that is the only measure of whether or not cross-subsidy is going on, I think you have a very real problem.

The CHAIRMAN. Thank you, Mr. Chairman.

Senator INOUYE. Thank you. Senator Gorton?

Senator GORTON. Mr. Tobias, maybe you can try to explain to me in a little bit shorter a fashion what I guess the thrust of all of your testimony is. And that is the paradox that you are here speaking in favor of competition. The RBOCs are here in favor of competition.

We have various shibboleths around here, even playing fields, level playing fields, rather, and competition of course which is a very good word.

You probably have the laboring oar on this one because they are not allowed to compete in this particular method with you and with others at the present time.

And they give us the slogan, which is usually a pretty good one, the more the merrier, the more the better. You are telling us that somehow or another competition will be lessened if they are permitted into this business. You can summarize an answer as to why,

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what seems on the surface of it to be a rather bizarre argument, that less is more, is in fact the correct argument.

Mr. TOBIAS. Senator, I think it goes back to the fundamental difference between the two companies; that is, they are in the local exchange business, which I think by anyone's standards is a monopoly, we are in other businesses, none of which are monopolies.

Therefore, they have the capability, were they in the manufacturing business, to engage in a number of the things that we have talked about and that was discussed in Mr. Clendenin's testimony: The ability to cross-subsidize the manufacturing operations from their monopoly and thereby stifle competition of others who do not have the source of money to use to cross-subsidize those businesses.

There is also the question of the affiliated supplier and the predisposition of a company who is in the manufacturing business, regardless of the circumstances of the relationship, to favor that affiliated supplier at the expense of others who are trying to compete for that business. I think those two issues are the fundamental difference.

Senator GORTON. And you do not believe that there is any way to separate the companies in such a way to prohibit or eliminate cross-subsidization?

Mr. TOBIAS. Senator, I have spent my entire adult career in what was the Bell System and now in AT&T. I participated in a variety of ways, trying to work through those things. I think the issue is not so much wheather there is or is not cross-subsidy. It is that the argument and the debate and the controversy will never go away. And in the kind of monopoly situation we are describing, in some instances, it is virtually impossible to take those cost structures apart and with those two observations, I have reluctantly concluded some time ago that it is just not possible to do it.

Senator GORTON. Senator Hollings, in an attempt to meet one of the objections to simply allowing the RBOCs into manufacturing, has required them to manufacture domestically.

You have gone on and raised another one that, well, that is not effective because they will simply enter into some kind of joint arrangements or partnerships with foreign companies.

Cannot that particular fear of foreign competition be met almost solely and completely just by adding somewhat to the restriction which Senator Hollings already has in his bill?

Mr. TOBIAS. Well, Senator, I do not believe it can. Here is a place where I clearly agree with Mr. Clendenin, In the testimony that he has filed, he has suggested that those constraints are too strong——

And indeed, he says the foreign content provision in this bill ought to be changed so that it represents the average, I believe, if I read it correctly, the average of U.S. manufacturers of like equipment. So, I think both Mr. Clendenin and I would agree that that would be very difficult.

Senator GORTON. Finally, you heard that I asked Mr. Clendenin about changes between 1987 and 1990. His answer, quite appropriately, was that he still did not agree with the 1987 decision. Obviously you did; it was your company which persuaded the court that that was correct.

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I take it that you would not disagree with the statement which he made that the world has changed dramatically and mightily since 1987, but that your opposition will exist in 1990 and in 1995 and in the year 2010 for that matter simply because of the fact that the regional Bells are regulated monopolies with respect to their most fundamental businesses.

Would that be a correct summary?

Mr. TOBIAS. Yes, that would be a correct characterization, Senator. I think Mr. Clendenin is absolutely correct when he says, when we get up tomorrow morning the world is going to be different. It is going to be different next week and next month in those areas having to do with the technology in the marketplace of information and telecommunications.

But what is not different is the fundamental underpinning of all that we are talking about here. Nothing has changed with respect to the position that you referred to, that was taken several years ago; the local exchange monopoly bottleneck still exists.

At some point in the future if the monopoly bottleneck ceases to exist, then it becomes a different issue.

Senator GORTON. Then, when Judge Greene dealt with this question in 1987, why did you not object to the RBOCs going into informational services as well as these other fields? Is not the fear of this kind of monopoly as great in anything as it is in manufacturing?

Mr. TOBIAS. Maybe we should have, Senator, but I think our view was and is that the court has the responsibility in its oversight of the decree—and I really ought to let Mr. Zeglis respond perhaps to your question from that point of view—to apply a test as to the competitive aspects of all of this, and therefore we did not feel compelled to take that position.

Mr. ZEGLIS. Mr. Tobias is providing good counsel. The fact is, we were not in information services before or since the divestiture and left that to the other parties who participated in the triennial review, knowing full well they would raise the concerns and the judge would review those.

Senator GORTON. But, nevertheless, your rationale would apply equally there, I take it.

Mr. ZEGLIS. To a great extent, the local exchange is also a bottleneck for the distribution of information content, yes, sir.

Senator GORTON. Thank you, Mr. Chairman.

Senator INOUYE. Thank you. Senator Exon.

Senator EXON. Mr. Chairman, thank you very much.

Mr. Tobias, would Charlie Brown ever have agreed to divestiture if he had thought the Bell subsidiaries would be back in asking for a request to manufacture?

Mr. TOBIAS. Senator, I have known and respected Charlie Brown most of my adult life. In fact, I had the pleasure of spending last weekend with him down at Colonial Williamsburg.

Senator EXON. Did you talk about this?

Mr. TOBIAS. We did not talk about this particular issue.

Senator EXON. I am surprised.

Mr. TOBIAS. But we have on a number of occasions. And I would not presume to answer specifically what Charlie would think today. But I can tell you that at the time he participated in those delib-

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erations and the resulting decisions and made that part of the decision that was his responsibility to make, along with the government, it was his expectation that by making that very painful decision that it would put these decades of controversy behind us and that it would create a circumstance and a structure in the industry that would, for the foreseeable future, separate in this industry those businesses that operate in competitive environments from those businesses that are monopoly environments.

And therefore I guess it would be my expectation that he would be surprised if we were talking about that today.

Senator EXON. I want to follow up on some of the questions that Senator Hollings asked. Do you have a plant in Hong Kong at the present time?

Mr. TOBIAS. Senator, we do not have a plant in Hong Kong. We do have some OEM suppliers in Hong Kong, and we are looking at opportunities to, where the economics make sense, move the production that takes place in Hong Kong and places like that into our own factories, if it involves sale here in the United States.

Senator EXON. Let me press you on that a little bit. You are considering manufacturing facilities in Hong Kong in the future, but at the present time you only have distribution facilities there?

Mr. TOBIAS. No. I am sorry. Let me say that again, Senator.

We have manufacturing facilities in the Far East. Hong Kong does not happen to be a place where we have a factory.

Senator EXON. Where are those?

Mr. TOBIAS. But we have manufacturing in Singapore, for example, and we have manufacturing in Thailand, for example. What I am saying is, at the time we moved that manufacturing to those locations, our choices were to either exit the consumer telephone business in total or find a way to get the labor content and the cost associated with manufacturing down.

In the early 1980s, for example, there were 74 screws that had to be inserted by hand in a Trimline telephone. Today, the technology has changed to the point that there are one or two silicon chips that do the same functions in a telephone. Therefore, the labor component and cost of the labor is a much different factor than it was then.

At the same time, the costs of labor, the comparative costs of labor, around the world have changed. So by having stayed in the business during this period of time we have a business where we have continued to fund R&D, we have continued to have related jobs in other parts of the business, sales, marketing, servicing and so forth. That business has grown and flourished, and we are now looking for ways to move some of those manufacturing jobs, as the economics permit us to do so, back into the United States.

So my point is that we very much regretted having to make the painful decision of either moving those jobs offshore or getting out of the business, but I think we made the right decision. We believe that that business is flourishing and while I cannot make promises to our people that we are going to move those jobs back to the U.S., but we are working very hard on it. We are working with them on that, and I am very encouraged.

Senator EXON. What is the extent of your manufacturing facilities today offshore, the percentage?

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Mr. TOBIAS. The percentage, Ian may have in total?

Senator EXON. What I would like to know is, are you 75 percent, 80 percent domestic and 10, 20 percent overseas?

Mr. TOBIAS. Let me answer it this way, Senator, and see if this gets at what you are asking about. With respect to what we sell in the United States to the Bell companies, virtually 100 percent—I think it is 99.6 or 99.7 percent—of what we sell to them we manufacture here in the United States. Ninety percent of what we sell to any customer in the United States is manufactured here in the United States.

The exceptions to that are the kinds of things I talked about where our choice was to either move it overseas or get out of the business. That is very limited. The rest of our manufacturing overseas is there because we are trying to do the things that we think are appropriate for this country and for our company to increase the amount of business we are doing worldwide.

And a price of entry in many markets is the creation of manufacturing facilities in those markets, like Taiwan, for example, like Korea, for example. The research and development that supports what is done in those factories comes out of Mr. Ross's laboratories here in the United States.

Senator EXON. But the jobs are over there.

Mr. TOBIAS. The manufacturing jobs are over there, but those jobs over there create other jobs that are here in this country. And the alternative would be that if we did not have some of those jobs over there we would not be permitted to enter those markets at all.

Senator EXON. Do you have any joint ventures with foreigners?

Mr. TOBIAS. We do. The joint ventures that we have with foreign companies or foreign governments are related to the subject I just was addressing, that is to say, we have a joint venture in Korea with Goldstar-Lucky. We have a joint venture in Italy with Italtel, for example. And in both cases those are joint ventures that were entered by way of giving us the wherewithal to get access to those markets for the sale of AT&T equipment into those markets.

Again, some of the jobs associated with expanding our business in that way are there, but many of those jobs are right back here in the United States.

Senator EXON. In your view, to what extent is the current telecommunications trade deficit that was mentioned earlier by Mr. Clendenin the result of the court restrictions on the baby Bells' manufacturing ability?

Mr. TOBIAS. Well, first, Senator, I would like to dispute Mr. Clendenin's numbers a bit. I think he was quoting the 1988 telecommunications trade deficit of $2.6 billion. The Commerce Department number for 1989 is $1.9 billion, which is a 27 percent improvement.

If you back out of those numbers the low end equipment that we have been discussing here, the consumer telephone sets and that kind of thing, then in fact we had a trade surplus. And if you look at only the issue that I think we are really talking about here, which is the high end equipment—switching equipment, the transmission equipment, the high end, high value equipment—this country had a $173 million telecommunications trade surplus in 1988.

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And I am pleased to tell you that, related to some of the activities and joint ventures that you and I have just been discussing, that $173 million trade surplus in 1988, according to the Commerce Department numbers, has gone to a $607 million trade surplus in 1989.

Senator EXON. Without revealing any trade secrets, can you tell us about the success that you mentioned earlier on your recent sales trip to Japan? Were these breakthroughs of a magnificent nature, or are you one of these people that pander to the Japanese all the time?

Mr. TOBIAS. I do not think—you would have to ask my friends in Japan about that, Senator, but I surely would not characterize myself that way.

I think the people with whom we are dealing in Japan are very concerned about the whole context of what they see happening on the trade front. This government has been very helpful to us in a number of ways, and I would urge you to keep the pressure on.

Senator EXON. Which government?

Mr. TOBIAS. This one here in the United States, in helping to keep the focus on, and I would say we could use more help. The fact is that I am encouraged about what I see as to some opportunities in Japan. But I think it will be a long struggle.

Senator EXON. I am delighted. I hope you are right. I think you are wrong. This afternoon, just before I came over here, Mr. Chairman, and the reason I was late is that I had some cattle feeders and cattle raisers from Nebraska, a big industry out there, in telling me about how delighted they were about the fact that we are selling more meat to Japan and they think there is a great future in that.

As soon as they left my office, I had a call from a meat processor in Omaha, Nebraska, who said he had laid off half the people in his plant yesterday. He had developed, at long-time expense, the processing of beef, different forms of beef, and had a great distribution system over there, even though they had a 25 percent tariff. The Japanese suppliers were willing to pay that tariff.

On April 1, that tariff went from 25 percent to 75 percent on American processed meats, and the Japanese suppliers were going to have to go to Australia, where the Japanese government was only charging 25 percent tariff. I said, well, how can that be? Well, they said, because we have forced them to take more fresh beef. They want to take it over there and process it and work it there, and so they have played us off, once again, by saying we are going to buy more beef but cut us off on the other end with the processed beef.

I think they outfox you American businessmen all the time. I am glad you seem to think we are making progress. I am delighted with these wonderful pronouncements that come out of the Rose Garden. I think we are getting nowhere fast.

If I were you, I think there's a better chance of you and the baby Bells getting along over the long term than your getting along with the Japanese. But good luck in your effort.

Mr. TOBIAS. Senator, let me just say that my enthusiasm ought to be tempered by the fact that when you've been selling nothing, a

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little more than nothing is encouragement, and so it is a relative thing. I think it is going to be a long struggle.

Let me also say that there are enormous opportunities of things that AT&T and the Bell companies can do and do do together, and we are looking there for lots of opportunities.

Senator EXON. Thank you. Thank you, Mr. Chairman.

Senator INOUYE. Senator Breaux.

Senator BREAUX. Thank you, Mr. Chairman. I thank the witnesses for their testimony.

Mr. Ross, I was intrigued by what I felt was your argument that the passage of Senator Hollings' bill would somehow make it more difficult for American companies to be manufacturers than the current situation.

You have a plant in Shreveport in Louisiana that each year seems to get smaller and smaller as more and more of those functions are being done not in Louisiana but are being done in Singapore and other places that I do not know about, when you look to the other people in this country now that are doing manufacturing, you look at companies that are Canadian-owned, German-owned, French-owned, Swedish-owned, and so much of your stuff is now certainly leaving my State and going to Singapore, obviously because it is cheaper to do it over there.

Senator Hollings' bill, one of the real features of it, says that if the RBOCs were to be allowed to do manufacturing that the manufacturing, all of it, would be done here in the United States.

Now how can you make the argument that if you have a bill that says manufacturing will be done in the United States, now more and more of the stuff is being done overseas, how is this bill going to be more difficult than the current situation?

Mr. Ross. Well, Senator, Mr. Clendenin testified that it would be poor business sense for his company to attempt to go into what he called the low end product, which is now manufactured overseas, and it is only that low end product that in fact we are manufacturing overseas. So indeed this bill would have no effect on repatriating that consumer electronics industry, including the part of it which was in telecommunications.

Senator BREAUX. Do we just wipe it off, then? Are we just going to agree that all the low end stuff is going to be done by foreign firms? That is what you are saying.

Mr. Ross. No, sir. What I am saying is that I think that the plight of the electronics industry, the repatriation of the consumer electronics industry, is of vital importance to the United States. But when we look at that we have to look at what the root causes are that have caused those things to go overseas and to stay overseas. And they are not the structure of the telecommunications industry.

Senator BREAUX. Suppose you determine that after you helped other people in other countries learn how to manufacture the low end stuff that you are successful in teaching them how to manufacture the high end stuff. And if you can do it overseas cheaper, are you telling us that you are not going to do it overseas also?

Mr. Ross. Well, what I would like to see, Senator, is the level playing field in terms of the environment for manufacturing in this country. Now today the cost of capital that has to be used by man-

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ufacturers is, unarguably, higher by about a factor of two in the United States what it is in Asia. Now when you look at processes that require investments over a long period of time in the factories, investments in R&D that only pay off in five to ten years' time, it is very difficult for the United States manufacturers to make the long-term investments that are necessary to support the electronics type industry.

Now my belief is that if we were to bring our capital rate down, so that it is competitive with that overseas—and you know what that implies; it means balancing budgets and savings rates and all of that—you would see the possibility of a major turnaround in this departure of the electronics industry overseas. And I think this is a most important national issue that we ought to get at.

Senator BREAUX. Back to my question, though, my question is, if you have taught them how to do widgets in Singapore, when you teach them how to do super widgets in Singapore, are you not going to do them in Singapore because you can do it a heck of a lot cheaper there than you can in Shreveport? At least this legislation says that if the RBOCs are allowed to manufacture, all of it would be done in this country, whether it is a widget or whether it is a super widget.

Mr. ROSS. I think the days in which you manufacture overseas because of lower labor rates are behind us for two reasons.

Senator BREAUX. Oh, you are coming back home?

Mr. ROSS. We are trying to bring our manufacturing back home, and my fondest hope is that our plant in Singapore will eventually be used to manufacture a product that is only sold in Asia.

But two things are happening which are very important, or one thing is happening that is very important. The labor content in manufacturing is getting lower and lower. I mean, typically in a plant like Shreveport the labor content, direct labor content, used to be 30, 40, 50 percent. In most of AT&T's factories today that labor content is driven below 10 percent and going lower, and that is what you do with the manufacturing technology, which, by the way, is one of the reasons that the employment in Shreveport continues to go down. It is not so much that we are moving product overseas; we are making that factory more competitive by getting down the direct labor costs.

Now, if in addition to getting our labor costs down so that we do not have to chase cheap labor, which by the way is not as cheap as it used to be overseas, if we had our capital costs in better shape in the nation, I think we would have a major step up on repatriating some of these industries.

Senator BREAUX. Thank you. Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Ross, I wish it were true. I know from experience in our own State that we have got the best of technical training. We are not worried about high tech Bosch-Nissan automotive electronic engineering. They studied 22 countries and have just started up. We have got others that have come along, Hitachi and otherwise.

But we do have industries leaving to go to Taiwan, Mexico. In McQuilladora, in Mexico, there are almost 2,000 American industries down there now. So yes, wage rates are becoming a little bit

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more comparable, but the competition is becoming even again more keen.

So that is not the case at all. We are experiencing it as a general outflow still of that electronics, and that is why you are worried about the semiconductors.

Senator INOUYE. If I listened to Mr. Clendenin correctly, he has suggested that the present MFJ undermines U.S. competitiveness by holding up about 60 percent of the available capital assets of the telecommunications industry, assets that could be otherwise used to promote trade, develop new products and services, advanced technology. And they feel that the BOCs have a unique understanding of the telephone network and that they could use this to develop high quality products for use in the United States and in the world.

Do you believe that the MFJ undermines competitiveness in the United States?

Mr. TOBIAS. No, Senator. As I have said, I believe the MFJ promotes competitiveness in the United States. As I read Mr. Clendenin's testimony and listened to it, what I understood him to be saying is that there seem to be a number of firms who have only two possible sources of capital investment.

They can either turn to the Bell holding companies or they can go overseas, the implication being there is no one else in this country from among the community of investment bankers and entrepreneurs and Silicon Valley and venture capitalists, who see the same economic returns in these businesses that could cause them to want to invest in them.

That may well raise some questions about what those companies see in terms of the potential for cross-subsidy and, therefore, the economic incentives that relate to that investment. But for all of the reasons that we have talked about here, Senator, it would certainly be my strongly-held view that the MFJ has promoted competitiveness in this country and to do anything to change these provisions that we have talked about would set us back and take us away from the course of competitiveness in this industry.

Senator INOUYE. Although this has remained unsaid in the testimony here, I think it is correct to assume that one of your reasons in opposing Senator Holling's bill would be that if this measure becomes law it would deny you certain markets and thereby have a negative impact upon your profit margin and your employment picture.

How would it affect you?

Mr. TOBIAS. Well, I think it would likely affect us because of the natural propensity of a firm that had a manufacturer and therefore an affiliated interest in that manufacturer to do business with that manufacturer.

Our expectation is that Mr. Clendenin's company and other important companies who are our very important and large customers will do business with us only if they perceive that we are the best supplier with the best value available to them in the marketplace. And if we introduce circumstances into markets where purchases are being made for other than those reasons, then we are going to set back that competitiveness.

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Senator Exon asked me about the numbers of jobs we have in this country. We have 59,000 people employed in the United States in our manufacturing plants, 40,000 in various manufacturing support jobs, and about 30,000 in the related activities that Dr. Ross has, so that is 129,000 manufacturing related jobs in this country.

We have 17,000 manufacturing-related jobs outside the United States, and the vast majority of those are associated with our efforts to manufacture products that enable us to enter markets outside the United States.

Senator INOUYE. Do you have any idea as to how this bill would affect that employment picture?

Mr. TOBIAS. Well, I think it would put it at risk, Senator. I certainly would not have any way to quantify it, but I think the risk certainly is there that a company with an affiliated interest in a manufacturer would have a propensity to do business there rather than with us, for reasons that were not associated with the fundamentals of the products.

Senator INOUYE. And it is your contention that if this measure passes, notwithstanding the fact that you can produce a better product at a cheaper rate, these BOCs would buy from their own companies?

Mr. TOBIAS. Well, Senator, I think the GTE experience perhaps is instructive as a model, because GTE went through a period of time when, by their own statements, they were doing business with their own manufacturing company and thereby buying their own products.

When they concluded that it was no longer feasible for them to sustain leading edge technology, they first constructed a joint venture overseas and subsequently made a decision to exit the business. But during that period of time they still were buying from their own affiliated manufacturer. They had other reasons that caused them to do that. I think that is a very natural and understandable risk, that the RBOCs could do the same.

And it is, therefore, that issue that I am very concerned about.

Senator INOUYE. Under our system of capitalism, do you not think that the owners of the company, the stockholders would not tolerate the type of anticompetitive practice that you suggest BOCs would follow?

Mr. TOBIAS. Well, again, Senator, I think that the issue is not the shareowners' interest here; it is the interest of the customers, because the accusation that would be made, the controversy that would be created, would be one of creating an environment where some would charge that the cross-subsidy was flowing to this affiliated interest at the expense of the ratepayers because the cross-subsidy would cause rates to be higher than they otherwise would need to be in the monopoly part of the business.

So it is not the shareowners that would suffer.

Senator INOUYE. And it is your position that, notwithstanding the techniques of surveillance and accounting, it is still possible, with very little monitoring, to carry out cross-subsidizing and self-dealing?

Mr. TOBIAS. Senator, I would like to be very clear on one issue here. Many of the people who are running these companies are longtime friends of mine. I know them well. They are very, very

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honorable, honest people of the highest integrity. So the issue is not one of what people would try to do. The problem is that these kinds of schemes are so complex and so difficult and these businesses are so intertwined, and based on the experience that I have personally had for over a decade, I think, try as honorable people will try, it is just not feasible and they will not work.

Senator INOUYE. I thank you very much. Do you have any further questions?

The CHAIRMAN. Well, why does it work for you?

Mr. TOBIAS. Senator, again it works for us because we do not have to deal with those kinds of schemes, because we are dealing in a business, in all of our businesses, that are operating in competitive markets. They are operating against the disciplines of the competitive markets.

I would cite as evidence the very competitive dealings we have had with the U.S. Government as a supplier of products and services. There is great competitive pressure in the markets in which we operate because we do not enjoy a monopoly, and that is the fundamental difference.

The CHAIRMAN. Well, you have got 70 percent of the long distance, and you are buying your own switches, and you are saying that that is not any kind of monopolistic practice or cross-subsidization from your long distance service. But if the Bell operating companies did it, it would find itself including those costs into the local rates. That is your testimony.

Mr. TOBIAS. Senator, my testimony is that if the prices we are paying for what we are getting in the form of the equipment that we put into our network in some way do not permit us to charge the most competitive prices possible to our customers in the long distance business, those customers will leave us and go to one of the several hundred other competitors in the marketplace.

That same discipline does not exist in the monopoly bottleneck local exchange businesses that are at issue here, and that is really the fundamental difference.

The CHAIRMAN. I do not understand the difference. Your long distance rates are approved. Their local rates are approved. It is the same discipline. And then you come in the initial stage saying, look, everything is wonderful. It is very competitive out there. So if they start in seven more competitors, it seems to me logically that would increase the competition. The discipline is the same—the same person regulating your long distance rates and so forth regulates them.

Mr. TOBIAS. Senator, the disciplines that exist in the long distance market today are made up of, yes, the FCC in some ways, and the state public utility commissions. But the real discipline is the force of the competitive marketplace and the options that customers face every day.

And those are the pressures to pull our rates down. That is why in our long distance business, since divestiture, we have decreased our rates something between 40 and 45 percent.

The CHAIRMAN. GTE you cited. You have got Centel, Contel. GTE is as big as BellSouth, is it not?

Mr. TOBIAS. I do not know exactly.

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The CHAIRMAN. They are relatively the same size. Yet they can manufacture and they can get even into information services and into long distance, GTE, and they are in the local telephone business. They are doing it right now.

Mr. TOBIAS. Well, GTE has made a decision, as I said, Senator, to exit the switching business through a joint venture that we have formed with them, for the reasons that we stated.

The CHAIRMAN. So you have eliminated the GTE competition?

Mr. TOBIAS. No, we did not. But during the time that they were in the manufacturing business they certainly had the characteristics that we are describing here.

The CHAIRMAN. Your lawyer is frowning.

Mr. ZEGLIS. Smiling, Senator. May the record show I am smiling?

The CHAIRMAN. Thank you, Mr. Chairman.

Senator INOUYE. I have presided over many, many hearings and I must say that our witnesses today, Mr. Clendenin and Mr. Tobias and Mr. Ross and Mr. Zeglis, have been first-class. The Chairman just told me that.

The CHAIRMAN. They really are. We thank you very much.

Senator INOUYE. Thank you very much.

Mr. TOBIAS. Thank you, Mr. Chairman.

Senator INOUYE. Our final witness is the Director of the United States Telecommunications Marketing of Digital Equipment Corporation, Mr. Dan Latham. Mr. Latham, welcome, sir.

## STATEMENT OF DAN LATHAM, DIRECTOR, TELECOMMUNICATIONS INDUSTRY MARKETING, DIGITAL EQUIPMENT CORP.

Mr. LATHAM. Thank you very much, Mr. Chairman.

Somehow at the late hour I feel like the minister that has prepared a half-hour sermon and the choir has sung three songs three times too many.

The CHAIRMAN. That is accurate.

Mr. LATHAM. So I will attempt to give an abbreviated testimony and it certainly is part of the record.

Digital Equipment has been in the telephone industry supplying computers for 30 years. We appreciate the honor and the opportunity to participate today.

As the world's leader in supplying network computers and a leader in incorporating computer technology into the telecommunications world, Digital believes that S. 1981 corrects a major flaw in this nation's telecommunications policy—the exclusion of the regional Bell companies in manufacturing.

This exclusion impedes the flow of technology, precludes the normal and essential interactions between manufacturers and their customers. Number three, it injects substantial risks into the design and development process and consequently delays the introduction of efficiency-enhancing and productivity-promoting intelligent network services to the American public.

In light of this, Digital strongly supports the removal of the design and development ban that has been proposed as part of this legislation. At the same time, however, it would be premature to permit the RBOCs to engage in the actual fabrication of telecommunications equipment, and, moreover, Digital is concerned that

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the bill's requirement that all RBOC manufacturing take place in the U.S. could harm American manufacturers seeking to do business abroad. I will make some abbreviated statements about both of these general areas.

In the first area, fundamentally what Digital is proposing is that we really look at design and the development separately from the fabrication. We believe that design and development is necessary to move the industry forward, to really give us the new services that are required to make this not only a U.S. competitive environment but a global competitive environment.

We believe that we have some examples that I will attempt to iterate where this design problem that we have because of the MFJ has kept us from being successful. As most of you know, it takes somewhere between nine to 18 months, and sometimes longer, to develop the complex systems that are running the telephone networks of today. And what we are attempting to articulate is that in this environment we think that the risks that are there could be minimized by working more closely with the regional Bell companies.

A couple of examples. We have worked with a regional Bell company to deliver an open network architecture gateway that would allow information providers to access more equally the public network. As the MFJ decisions then were released and the court decided the interpretation, this project was cancelled, after nine months of investment with both capital and resources from Digital and the regional Bell company.

Another example was a product that has been announced regarding electronic mail. As a part of this, we announced this product, worked on the product for 18 months in discussions with the RBOC. Had we not completed this product prior to the MFJ discussing its restrictions, they would have never started or embarked on this product, which is now in the marketplace, yielding revenue and reducing the rate base.

The comments that I will conclude with regarding the two other areas—the bill's provisions regarding fabrication of equipment and domestic manufacturing—do raise certain concerns. First, Digital believes it would be premature to permit the RBOCs to engage in the actual fabrication of telecommunications equipment. Unlike RBOC involvement in design and development activities, fabrication authority is not necessary to eliminate existing barriers to the expansion of the network capabilities and enhancement of U.S. competitiveness.

Moreover, fabrication raises significant risks of the discriminatory procurement policies that have been discussed here today. And, as was well documented in the AT&T antitrust litigation, it certainly can cost the ratepayers substantial amounts of money.

Similarly, fabrication by the RBOCs markedly increases the risk that those companies will disclose critical network technical information to their own fabrication subsidiaries before providing the information to competing manufacturers or, if they should allow that information to be shared at all.

Accordingly, although Digital may not oppose allowing the RBOCs to engage in fabrication in the future, it urges Congress to take a more cautious, phased-in approach to granting fabrication

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authority at this time. In particular, Digital believes it would be valuable to permit the RBOCs, independent manufacturers, and the regulators to gain experience with RBOC design and development as the initial step for five years before authorizing fabrication.

During this waiting period, the FCC could develop and fine-tune the regulations, which do not currently exist, to ensure against discriminatory procurement, and the Commission could test such regulations out in practice, perhaps by authorizing limited waivers of the fabrication ban.

Digital submits that this more cautious approach achieves the bill's policy goals while more carefully balancing the interests of independent manufacturers and ratepayers.

Second, Digital is concerned by the bill's requirement that all manufacturing activities take place within the United States. As the Subcommittee is well aware, technology industries are now global, both in their competition for markets as well as their structure and their manufacturing operations. Although Digital and its peers among American technology producers add significant value, especially research and engineering investments that we have in our products here in the United States, we manufacture our products all around the globe.

Without addressing the complexities of the current requirements regarding domestic content and particular interested parties of policy, let me just suggest that American companies are struggling to maintain and grow competitive posture around the world. As we do so, the imposition of domestic manufacturing restrictions on good sold in the United States invites the European Community or Japan to impose similar restrictions for our products in addition to those we already face as we seek equal access to their markets.

Accordingly, Digital urges the Subcommittee to consider whether the domestic manufacturing requirements would in fact deleteriously affect U.S. trade interests.

Let me conclude and open up for questions. I would like to reiterate Digital's appreciation for being invited. I think it is important to get a different perspective, the computer perspective, on this testimony, its strong support for the goals of S. 1981 and its willingness to continue working with the Subcommittee in order to fashion legislation that permits the RBOCs to design and develop telecommunications equipment under conditions that promote full and fair competition.

And if it was now time for the offering, I would collect it. Thank you.

[The statement follows:]

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TESTIMONY OF DIGITAL EQUIPMENT CORPORATION
REGARDING S.1981

Digital Equipment Corporation ("DIGITAL") is pleased to submit this testimony regarding S.1981, the "Telecommunications Equipment Research and Manufacturing Competition Act of 1989." As a world leader in developing networked computer systems and integrating computing technology into telecommunications networks, DIGITAL strongly supports the bill's initiative to permit the Regional Bell Operating companies ("RBOCs") to engage in design and development of telecommunications equipment. Removing the current ban on RBOC design and development activities would remedy a fundamental flaw in this Nation's telecommunications policy, promote widespread access to intelligent network capabilities, and enhance the competitiveness of U.S. industries in the global marketplace.

At the same time, however, DIGITAL is concerned that it would be premature to permit the RBOCs immediately to engage in actual fabrication of telecommunications equipment, given the increased risks of discriminatory procurement. In addition, DIGITAL respectfully submits that requiring the RBOCs to conduct all manufacturing activities within the United States may make it difficult for American manufacturers to establish or increase their presence in the global telecommunications marketplace.

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1. Permitting the RBOCs to Design and Develop Telecommunications Equipment Would Remove Existing Barriers to Implementation of Intelligent Network Capabilities and Would Enhance U.S. Competitiveness

Section 2 of S.1981 states that "[t]he Congress finds that the continued economic growth and the international competitiveness of American industry would be assisted by permitting the Bell Telephone Companies to conduct research on, design [and] develop ... telecommunications equipment for American residential and business telecommunications users." DIGITAL wholeheartedly endorses this finding.

DIGITAL has long believed that RBOC involvement in the design and development of telecommunications equipment is necessary to promote the rapid and efficient implementation of intelligent network capabilities. These capabilities, in turn, should bring valuable new network-based information services to all Americans and significantly enhance the productivity and competitiveness of U.S. industry. Today, however, the RBOCs are precluded from engaging in design and development activities by the MFJ court's 1987 Manufacturing Order, which contains an exceptionally broad interpretation of the manufacturing restriction -- an interpretation that impedes the flow of technology, hinders normal and essential communications between manufacturers and their customers, injects massive uncertainty into the development process, and frustrates efforts to bring America fully into the Information Age.



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a. The Development of An Advanced Telecommunications Network Will Require Close Inter-Industry Cooperation

As DIGITAL explains below, the convergence of the telecommunications and computer industries means that development of an advanced network infrastructure and the services that will use that infrastructure, will necessitate close cooperation between network service providers, computer companies, switch manufacturers, and users. The regulatory structure in the U.S., unfortunately, has not recognized this convergence and does not currently permit such cooperation.

(1) There Has Been a Fundamental Convergence of Computers and Communications

Traditionally, the telephone industry and the computer industry were viewed as discrete entities, with the telephone network using analog, voice-optimized technology and computers using a digital, data-optimized technology.[1] In the past twenty years, however, the line separating computers and communications has been inexorably erased:

- Network transmission is moving from an analog, narrow bandwidth "voice" environment to a digital, broadband "data" capability which obscures the internal/external distinction. Not only has the network moved to digital media (fiber optics,

[1] For many years, such a distinction was not entirely inapt, as special modems, connections, and line conditioning were required in order to employ the existing network for nascent Information Age computer-based applications.



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e.g.), but the nature of transmission services has also changed.[2]

- Network switching also has evolved from analog to digital. New central office switches essentially function as large computers with enormous computing potential.[3]

- As intelligent networks incorporate sophisticated data processing and information services previously only used on an external basis by CPE and enhanced service providers, the integration of computer technology is carried several steps further.

- Local and wide-area voice and data networks, computers, PBXs and application software now perform many functions previously only available as part of the public network.[4]

In short, it has already become very difficult to differentiate between network and "external" functions, and it will be increasingly difficult to do so in the future. Network customers with more demanding requirements, such as LAN users, will demand increased digitization, higher throughput, and timely deployment of more responsive services

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[2] In particular, the development of advanced packet-switching and protocol processing has permitted enhanced functions to be integrated into network transmission, where before they were only available though value-added services.

[3] These "stored program control" switches ("SPC") operate under the direction of a central processing unit which can interact with a variety of databases and routing processors to efficiently allow the provision of a host of features through the public network.

[4] PBXs in particular have developed a great deal since the early 1970's. Current PBXs have begun to employ SPC technology, modular architectures and distributed processing to allow a wide range of features, including voice/data integration; code, speed, and protocol conversions; least cost routing; station message detail recording; distinctive ringing; calling number identification; access blocking for long distance lines; voice messaging; and traffic aggregation and compaction.



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-- all resulting in further integration. Moreover, as new server-based and computer technologies are increasingly incorporated into the network, new services made possible by these developments will even further defy antiquated categorizations.

(2) The Melding of Computing and Communications Technology Requires Interdisciplinary Cooperation

As a result of the increased interdependence between telecommunications and computers, telephone companies, computer companies, and switch manufacturers will have to work together to develop the highly complex hardware/software systems that will drive the intelligent networks of the future. These intricate products require such intensive research and development efforts that it is becoming increasingly unlikely that any one company would have sufficient expertise or resources to develop them. Moreover, the financial risks associated with such undertakings comprise a significant initial hurdle for both telecommunications and computer companies. Finally, given the substantial cost of developing new services, the flexibility of intelligent network architectures, and the increasing complexity of users' demands, individual users must also play a significant role in defining new services and capabilities. Unfortunately, the current regulatory structure in the U.S. does not facilitate this type of interactive development.



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b. The Current Interpretation of the Manufacturing Ban of the MFJ is a Substantial Barrier to Necessary Cooperation in the Design of Advanced Network Products

The greatest impediment to cooperation is Judge Greene's 1987 Manufacturing Order, which interpreted the MFJ's manufacturing restriction very broadly.[5] Specifically, in the Manufacturing Order, Judge Greene held that the BOCs may not engage in the design and development of telecommunications equipment, CPE, or software that is integral to such equipment. The BOCs may, however, determine generic requirements for equipment used in the network, and may design the network itself. Indeed, the Judge stated that "the performance of such [network design activities] is a far cry from the design of specific products -- a process that takes place after generic specifications for the network have been defined and disseminated."

The description of the manufacturing process used by the court was virtually identical to a conceptual model outlined by AT&T, and the line between permitted and prohibited activities is drawn precisely where AT&T had argued that is should be drawn. Briefly stated, AT&T's conceptualization of the manufacturing process, and the one adopted by the court, has seven stages: basic research, applied research, generic definition, detailed requirements specification, design,

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[5] United States v. Western Electric Co., Inc., 673 F.Supp. 525 (D.D.C. 1987), aff'd C.A. No. 88-5050 slip op. (D.C.Cir. Feb. 2, 1990).



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development, and replication. Under this model, each phase of the process generates results that can be articulated and are sufficient to support the next independent phase of operations.

As applied to complex systems, however, this interpretation rests on several profoundly mistaken assumptions:

- First, it assumes that the manufacturing process is in fact linear and composed of discrete stages which do not overlap to any significant extent. While this may be true for the development of relatively simple products, DIGITAL has found that when it comes to the manufacture of complex telecommunications products, the process cannot be so easily segmented. Indeed, for these products, the various stages described by AT&T often overlap and may even merge into a single activity.

- Second, it assumes that a clear line can be drawn between "design of the network" and "design of equipment used in the network." When a company such as DIGITAL "manufactures" sophisticated hardware/software systems, however, the development of generic standards necessarily merges into the formulation of detailed product specifications. These systems are inherently complex and must be carefully customized for a given purchaser. Accordingly, the very same steps that must be taken to develop useful generic requirements will also result in detailed specifications for the product.[6]

- Third, it assumes that a clear line can be drawn between specification of "generic requirements" for network products and of the "actual design" of those products. However, the public telephone network is rapidly evolving into an intelligent network in which complex computing systems play an integral role. As a consequence, telecommunica-

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[6] Indeed, the components of the system (hardware and software), and the methods of linking those components together, are simply so intricate that typical DIGITAL customers have neither the expertise nor the resources to specify, in any detail, standards that could be used to independently design and develop an appropriate computing system.



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> tions service providers realize that it has become increasingly difficult to design the network without simultaneously designing the hardware and software systems to be used in the network.

Contrary to these assumptions, the development of sophisticated hardware and software systems for use in an intelligent network architecture is a non-linear process that relies on close cooperation and interaction between computer manufacturers, switch vendors, and telephone companies. For example, when DIGITAL is approached by domestic independent telephone companies or foreign PTTs to develop network products, the result is usually an extended relationship that allows both companies to merge their respective expertise in design of the product.

Because the companies normally arrive with only the most general requirements, DIGITAL spends a great deal of time, often restarting from scratch, to develop a high-level architecture for the proposed product. Once a high-level architecture is developed to the company's satisfaction, DIGITAL typically produces a more in-depth system design, which involves detailing hardware and software requirements and conducting feasibility studies to ascertain the optimal solution for solving the identified problem. The next stage in the process involves building a "proof of concept," which incorporates the best system from the previous feasibility tests and shows the customer exactly what it would see in terms of hardware and software if the final system actually were produced. Upon review of the proof of concept, the



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customer sometimes concludes that the system is not what it was looking for, which will necessitate starting anew. It is only when the proof of concept has been approved that DIGITAL is able to formulate product requirements for the system and actually design the product.

In a typical case, between 9 and 18 months elapse between the initial contact between DIGITAL and the customer and formulation of firm product requirements. Even if DIGITAL has prior experience with the design of the system type at issue, it will have already expended considerable amounts of money. Those sums may have quadrupled, moreover, if DIGITAL has been required to venture into new design areas for the client. It is thus apparent why DIGITAL prefers to work closely with the customer at all stages of design and development -- it allows DIGITAL to avoid costly trial-and-error mistakes, conserves time, effort and money, increases efficiency, and produces a customized system that provides the best possible service to the client.

In contrast, DIGITAL and other manufacturers are precluded under the current interpretation of the manufacturing clause from engaging in a similar interactive dialogue with their BOC clients. Regardless of the sophistication of the system to be created, DIGITAL must undertake this crucial phase without access to the particular areas of expertise that the BOCs possess and consequently must design and



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develop high-level architectural designs, feasibility studies and proofs of concept without input from the BOCs.

Given the substantial investment that is required for such development activities, the broad interpretation of the consent decree creates intolerable inefficiencies. Deprived of essential customer input, manufacturers must redesign equipment several times before they can adequately meet an RBOC's needs. In addition, because of the risk and expense involved in developing complex network products, smaller manufacturers are reluctant to work with RBOC customers, thus removing an important source of innovation.

Quite apart from the inefficiencies inherent in Judge Greene's interpretation, the uncertain applicability of the ruling is also having counterproductive effects. From its own experience, DIGITAL can offer two examples of how such uncertainty has impacted the market. In the first of these examples, DIGITAL worked with an RBOC to develop a public electronic mail system prior to release of the Manufacturing Order. In that case, DIGITAL's off-the-shelf product matched 90 percent of the RBOC's requirements, but some degree of customization was still necessary. Although this product will be announced shortly, DIGITAL was subsequently informed that the project would never have been initiated after the court's decision.

In the other instance, DIGITAL was asked by another RBOC to assist in designing and developing a ONA gateway. This



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gateway would have provided easy, fast, and efficient access to network basic service elements for information service providers by integrating certain network functionalities with computer networking techniques. After eight months of development work by several DIGITAL engineers, Judge Greene's manufacturing order was issued and soon thereafter DIGITAL was informed by the RBOC that it was terminating the project because of the court's decision. The result was that both DIGITAL and the RBOC expended several man-years of non-recoverable engineering resources and a promising new service was never brought to market.

Whether or not these activities were actually in violation of the decree is immaterial. The fact is that the broad ban on design and development has created confusion and caution because of the fear that projects might be in violation of the decree. Given the already substantial risks involved in such design activity, as well as the substantial resources that must be irrevocably committed to the process, additional uncertainties are a factor the market cannot bear.

At bottom, the ban on design and development delays or precludes the implementation of intelligent network architectures that can support advanced information services. The ban, as currently interpreted, creates substantial inefficiencies in design of products; deters the entry, and consequent innovations, of small developers; and generates uncertainties in the marketplace. Accordingly, retaining the



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current interpretation of the restriction risks undermining the competitiveness of information-dependent industries and depriving consumers of efficient access to Information Age capabilities. For these reasons, S.1981 represents sound, and vitally necessary, public policy.

2. Notwithstanding its General Support for S.1981, DIGITAL Believes the Bill Raises Two Serious Concerns.

As discussed above, DIGITAL strongly endorses the bill's authorization of RBOC design and development of telecommunications equipment. At the same time, however, DIGITAL believes that two aspects of the bill raise serious concerns.

First, it would be premature to permit the RBOCs to engage in fabrication of telecommunications equipment. Unlike RBOC involvement in design and development activities, fabrication authority is not necessary to eliminate existing barriers to expansion of network capabilities and enhancement of U.S. competitiveness. Moreover, fabrication raises significant risks of discriminatory procurement (a practice that was well documented in the litigation giving rise to the consent decree), which impedes competition and can cost ratepayers substantial amounts of money. Similarly, fabrication by the RBOCs markedly increases the risk that those companies will disclose critical network technical information to their own fabrication subsidiaries before providing the information to competing manufacturers.



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Accordingly, although DIGITAL may not oppose allowing the RBOCs to engage in fabrication in the future, it urges Congress to take a more cautious, phased-in approach to granting fabrication authority at this time. In particular, DIGITAL believes it would be valuable to permit the RBOCS and independent manufacturers to gain experience with RBOC design and development activities for five years before authorizing fabrication. During this waiting period, the FCC could develop and fine-tune regulations, which do not exist today, to ensure against discriminatory procurement. In addition, the Commission could test such regulations out in practice, perhaps by authorizing limited waivers of the fabrication ban. DIGITAL submits that this more cautious approach achieves the bill's policy goals while more carefully balancing the interests of independent manufacturers and ratepayers.

DIGITAL's second concern with the bill pertains to the requirement that all RBOC manufacturing activities take place within the United States.[7] As the Subcommittee is well aware, technology industries are now global both in their competition for markets and in the structure of their manufacturing operations. Although DIGITAL and its peers among American technology producers add the lion's share of value -- especially research and engineering investment in our products -- here in the United States, we manufacture our

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[7] See proposed Section 225(b)(3).



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products all around the globe. Without addressing the complexities of current U.S. "domestic content" requirements -- such as the government's "Buy America" policies -- DIGITAL suggests that American companies are struggling to maintain a competitive posture around the world. Against this background, the imposition of domestic manufacturing restrictions on goods sold in the United States invites the European Community or Japan to impose similar restrictions for our products -- in addition to those we already face -- as we seek equal access to their markets. Accordingly, DIGITAL urges the Subcommittee to consider whether the domestic manufacturing requirement would in fact deleteriously affect U.S. trade interests.

3. Conclusion

By permitting the RBOCs to engage in the design and development of telecommunications equipment, S.1981 would remedy a serious flaw in this Nation's existing telecommunications policy, promote expansion of the capabilities of the RBOCs' networks, and enhance U.S. competitiveness. DIGITAL respectfully recommends, however, that the bill be amended to withhold authority for the RBOCs to engage in fabrication for five years following its effective date. Similarly, the provision requiring all manufacturing activities to take place within the United States should be deleted.

DIGITAL reiterates its appreciation for being afforded the opportunity to submit testimony. In addition, DIGITAL hereby expresses its willingness to work with the Subcommittee as it continues to consider legislation to permit the RBOCs to engage in design and development of telecommunications equipment under conditions that promote full and fair competition.

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Senator INOUYE. Thank you. Senator Hollings.

The CHAIRMAN. We do appreciate very much your appearance and your testimony. I am trying to get a full grasp of it. It is a given. Let's say, all right, the BOCs go forward with the research and with the development you have described. I do not understand and I want you to clarify even further the issue with respect to fabrication. And then I want to get into this overseas effect.

The BOCs are putting monies all over the world now that could be used to take advantage of the foreign ratepayers. Whereas in this country I know my telephone rates are is going to be reviewed by a public body and I know good and well I am not going to pay the highest price for the worst equipment. The inducement of the manufacturers as a result is what now has been characterized as the discipline of the marketplace. The inducement would be to even get its equipment cheaper, to even get it more efficient, to even get it more responsive to my particular Bell operating company.

It seems the logic is otherwise. Elaborate a little bit more where you think it will hurt to fabricate. You do not want to go that far, you say. Tell me once again why not.

Mr. LATHAM. I think the network is extremely complex. Start with the network itself. There fundamentally are three elements. One is the transmission medium. Number two is the switches. And number three are the computers that help design and manage that network.

When we look at the position that we are in regarding the MFJ, we really cannot share information. It forces us to try to build to some idea of what the network is going to need, and allows us to go through trial and error and try to deliver something.

The inability to communicate and share information in a normal customer-supplier relationship that is really balanced around the world and is impeded here has really showed down things like the intelligent network. If we are able to share information and if we are able to share research and design, we will be able to make this network in the United States much more competitive just basically because of our sharing. Right now we are not able to do that.

The manufacturing of the equipment is almost a real third partner, third step of that. The sharing of the network, the building of the software, and adding the services to the network are really where the competitiveness is going to be gained.

The CHAIRMAN. Well, is there not a very competitive market out there already, as you indicated? And adding nine more into the competitive market would even then again add some more competition.

Mr. LATHAM. Basically my premise is that the manufacturing piece of this marketplace is extremely competitive, as you said. The real key is to share the information to build the global competitive products that can be marketed around the world. Adding of the manufacturing does not necessarily give us any real competitiveness.

Over the next five years, we believe that we can build the safeguards in so that there really is none of the jeopardies that were mentioned by AT&T and build the safeguards in to support a growing network and be competitive at the same time.

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The CHAIRMAN. The provision that would require the manufacturing to be within the country does not really change any market, does it? I mean, it is all being bought here now, from what they are saying—all the switches, 99-point-something percent of the RBOCs are buying from AT&T, and the other equipment.

I do not see why there would be the reaction you speak of in the international global competition because the others really have the same domestic content provisions galore, and in fact we are going to have to sober up. The EEC is not orchestrating and organizing at the moment for a free market; they are girding for the trade war and to be able to compete and give and take and make it to the economic interest, let us say, of the Pacific Rim and of the United States. And that is the way it should be.

This nonsense about we are going to start in the fourth quarter, it is a very great dynamic situation out there. The government is an integral part of it, only ours is working against us and all of their governments are working for them. So when I look now at what the competition is going to be and what the requirements are with respect to all commodities and everything else like that, you cannot sell anything. The gentleman from AT&T is lucky he got in and out of Japan, because they would not let in NTT, or whatever it is, the largest corporation in the world.

They are not about to let AT&T start up business over there. They want their expertise, their expert advice and counsel there. They are not about to buy a telephone or a switch. We are having a hard enough time with all the other particular products over there and what have you.

But, anyway, we do appreciate it, Mr. Chairman. Thank you very much.

Senator INOUYE. Mr. Latham, I am really intrigued by your proposal. If I may, may I ask Mr. Clendenin and Mr. Tobias if you are prepared to give your response to this, or would you like to submit a statement?

Mr. CLENDENIN. Mr. Chairman, we would be happy to do that. I am not prepared to do that. As I suspect you can understand, I have been concentrating on other parts of the hearing, but I would be delighted to respond for the record.

Senator INOUYE. Will you study Mr. Latham's statement and give us your reaction to it?

Mr. TOBIAS. I would be very happy to.

Senator INOUYE. Mr. Clendenin, would you do the same thing, too?

We would be happy to do the same thing.

Mr. CLENDENIN. I would parenthetically like to say, though, that the distinction that he started off with is of critical importance. It was the heart of the first two-thirds of my testimony, and that is the understanding of this totally artificial barrier which the court's current definition of manufacturing has placed in what should be an orderly process. We are not allowed to work with or exchange information with or do anything of the normal process of design of equipment that we are indeed going to be using.

That is a critical piece of his testimony that I would just, without any delay, say ought to be substantially agreed to. And it is curious, because Dr. Ross himself has made a number of speeches

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where he has talked about the total integration of the design process as being critical to the efficient building of the network, and that is what we are talking about.

I applaud DEC's position, saying that the RBOCs at a very minimum right now should be allowed into the manufacturing process, at least to that extent. We will give some consideration to the balance of his testimony and give you our response.

Mr. TOBIAS. Mr. Chairman, I would just say we believe much of what is being discussed here is indeed permissible under the terms of the decree today, and with your permission we will submit for the record a more specific response to that.

Senator INOUYE. Since it should be obvious to one and all today that we did not call this hearing just for the sake of filling up time, we anticipate some action on this measure. That has been the policy of this subcommittee.

That being the case and because of the complexity of this problem, may I ask Mr. Tobias and Mr. Clendenin to study each other's testimony and give us your reactions thereto?

Mr. TOBIAS. Yes, Mr. Chairman, we would be happy to do that.

Senator INOUYE. With that, I would like to thank all of the witnesses. You have been extremely helpful. I am certain that your testimony will bear a lot upon what we decide to do in future days.

With that, this hearing will be adjourned until May 9.

[Whereupon, at 4:42 p.m., the subcommittee adjourned.]

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# TELECOMMUNICATIONS EQUIPMENT RESEARCH AND MANUFACTURING COMPETITION ACT OF 1989

WEDNESDAY, MAY 9, 1990

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION,
SUBCOMMITTEE ON COMMUNICATIONS,
*Washington, DC.*

The subcommittee met, pursuant to notice, at 9:35 a.m. in room SR-253, Russell Senate Office Building, Hon. Ernest F. Hollings (Chairman of the committee) presiding.

## OPENING STATEMENT BY THE CHAIRMAN

The CHAIRMAN. The committee will come to order.

Good morning. I am pleased to be here once again to consider S. 1981, my bill to lift the manufacturing restriction on the Bell operating companies. At our first hearing 2 weeks ago we heard some very persuasive testimony, to my mind, from the President and CEO of Bellsouth, Mr. John Clendenin. He made it clear that the manufacturing restriction is jeopardizing this country's world lead in telecommunications technology. I could not agree more. Unless we can put to use the tremendous assets held by these Bell companies, America's telecommunications industry is likely to go the way of our consumer electronics industry—overseas.

We also heard 2 weeks ago from AT&T, which is opposed to any change in the current situation. AT&T presented an interesting story of the potential for the Bell companies to abuse their monopoly. But the times have changed. The market for telecommunications equipment is a global one, and we are losing our competitive advantage. These foreign competitors may well be cross-subsidizing and self-dealing. And of course we need to prevent these abuses as much as we can. But we cannot let our concerns about these problems tie up our industry so that we cannot compete at all. It is a new game, and we need to be in it.

I was interested to hear from Digital Equipment Corporation last week. Digital's position that the Bell companies should be allowed to design and develop equipment but not to fabricate it for at least 5 years strikes me as an interesting effort to deal with the problems we are facing today.

Fortunately, we have a number of witnesses here today who will help us to develop a greater understanding of the problems and issues we are facing today. I am particularly interested in hearing from the Federal Communications Commission concerning its abili-



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ty to enforce the safeguards that are contained in S. 1981. This matter affects a number of interested parties, and I am pleased that we will have the opportunity this morning to hear from them.

In my view, there is no more important issue for Congress to be working on than lifting this manufacturing restriction. Congress is not in control, the foreigners are. We cannot allow this situation to continue any longer. I look forward to the testimony this morning and to moving forward on legislation in the near future.

We are very pleased this morning to have as our first witness the Chairman of our Federal Communications Commission accompanied by counsel, Mr. Firestone.

Do you have an opening statement?

Senator PACKWOOD. No, thank you, Mr. Chairman.

THE CHAIRMAN. Do you, Conrad?

## OPENING STATEMENT BY SENATOR BURNS

Senator BURNS. I have an opening statement.

The CHAIRMAN. Go right ahead, sir.

Senator BURNS. Thank you, Mr. Chairman. I will just give you a brief report as we go into these important hearings.

Thank you, Mr. Chairman. I think these hearings are very important as we move down this road of trying to develop some kind of communications policy that is consistent with our economic stability in this country.

As you know, last month I hosted a three-day telecommunications conference in Helena, Montana just on Information Age technologies and economic development. I am planning a second one in Billings coming up in October.

As far as I am concerned, the two, technology and economic development, go hand in hand. For my state to prosper, for rural America to survive, and for America to remain competitive in a global economy, the long talked-about promised telecommunications technology and the Information Age is going to have to be realized.

As part of my conference, a number of telecommunications companies were invited to display their wares, and we saw some pretty exciting developments: two-way interactive video and audio distance learning; rural medical applications such as high definition medical imaging; and emergency systems, just to name a few.

It has become clear to me in the short time that I have been a member of this body and a member of this Communications Subcommittee that there is one thing missing, a comprehensive coherent set of national communications policies to accommodate and spur this communications and Information Age revolution.

So I am sort of issuing a challenge to my colleagues not on this committee but in the Senate and in the government that we need to fashion a bipartisan comprehensive national communications policy agenda for the 1990s and on into the 21st Century.

As a first step to develop such a scheme, at the Commerce Committee markup on the cable bill I will offer some telco entry and safeguards amendments that will provide a long-term competitive solution to the so-called cable problem, and it will result in extraordinary benefits to the American telephone and cable TV customers

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by substantially increasing the speed at which telephone and cable telecommunications can modernize their infrastructure through the installation of fiber optic transmission systems.

Specifically, I will offer an amendment package of strict regulatory safeguards that addresses all the legitimate concerns which have been raised by the various parties in that telco debate. It is a middle ground approach, I think.

The issue being debated at today's hearing, the MFJ reform, is another piece of the overall communications policy agenda which must be addressed, and I heartily congratulate our Chairman for realizing that we have to start down this road. I fully support the overriding goal of Senator Hollings' bill, S. 1981, which is to increase manufacturing in the United States. We need the jobs, to be very honest with you. More importantly, we need to remain in the forefront of the telecommunications technological revolution that I mentioned earlier.

I am convinced that to achieve that goal will require close collaberation between the telephone companies and the manufacturers. A good idea in the laboratory does not always translate into a product that capture the public's imagination and fancy. As a result, it's important that researchers, manufacturers and sales all work together.

I am also concerned that as we make policy that stimulates manufacturing, we insure the competitiveness of American firms that take advantage of that policy. That means these companies will have to have access to the parts and materials essential to the manufacturing process. We ought not to overburden these companies by restricting where they go for materials—not if we expect them to compete in a global economy.

Thank you, again, Mr. Chairman.

I look forward to the testimony of our distinguished witnesses—in particular, my good friend, FCC Chairman Al Sikes.

Mr. Chairman, I applaud you, and as we go down this road I know there are many things that I can learn and hope to learn from these hearings. I congratulate you.

The CHAIRMAN. Very, very good. We appreciate it.

I have a statement that Senator Pressler would like to have included in the record.

[The statement follows:]

OPENING STATEMENT BY SENATOR PRESSLER

Mr. Chairman, I am pleased that we will have the opportunity to hear today from a number of additional witnesses their views on S. 1981, the Telecommunications Equipment Research and Manufacturing Competition Act of 1989. How we regulate the activities of America's telephone companies is extremely important to the economic vitality of American busines in general.

Since the breakup of Ma Bell, this country has seen an explosion of new products and services in the telecommunications field. Does this mean that the current regulatory structure is working fine? Does it mean that we can now relax the retrictions on the Bell Operating Companies? Or does it indicate that we ought to relax these restrictions in order to take advantage of the opportunity to solidify a dominate world position for America in telecommunications?

My primary concern in this area is that the consumer, particularly the consumer in rural and small town America, continues to receive the full range and the best quality of telephone service available anywhere. I also want him to receive this service at an affordable price. Several of today's witnesses should be able to answer the question of how this legislation will affect that service.

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