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Untangling Telecommunications Technology

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Business activity is no longer defined by the size of a town or the boundaries of a nation, but rather, by the telecommunications networks that transcend the barriers of time and space. Nowadays, the nation's telecommunications infrastructure - a complex system of optical fibers, communications satellites, microwave transmitters, copper wire, cellular telephone and electronic switches - influences virtually every facet of our business and personal lives.

Today, almost half the U.S. work force is employed in information-handling activities. Unlike natural resources such as iron ore, coal or oil that are depleted with use, information gains value when it is processed and used.

More and more, intelligence is built into the computer terminals and telephone networks, allowing the networks to link offices around the world, control inventory through just-in-time manufacturing, improve delivery of government services, and enhance the daily lives of all Americans.

Just think, for example, of the ease and efficiency by which states operate their lottery systems. That same technology, transmitted over telephone lines, is equally applicable to other public services such as voting, motor vehicle registration, jury duty, and food stamps and Medicaid disbursements.

During the past hundred years, most Americans have become so accustomed to low-cost, universal telephone service that all too often they take

the telecommunications infrastructure for granted. Yet, the potential of the touchtone phone remains largely untapped. Not until we are able to manage our households through our kitchen phone with commands from afar will we be full participants in the Information Age.

Information is of limited value unless it can be transmitted from supplier to user, from headquarters to back office, and from laboratory to factory. And this can best be done through a state-of-the-art public telecommunications network that is available to all households and firms in cities and in outlying areas.

All citizens have a stake in maintaining a robust telecommunications infrastructure that improves our productivity by harnessing technology to meet the diverse needs of individuals and business.

For example, telecommunications technology can readily improve public sector productivity by providing medical monitoring in the home rather than in the hospital, by facilitating electronic filing of taxes, and by equipping the elderly with special home security systems. Equally important, telecommunications makes it possible to improve our schools by using telephone lines to connect the classroom with specialized instructors and curriculum materials. This technology is particularly meaningful to residents in rural areas.

But we can no longer assume that traditional regulatory policies will promote the necessary network innovation and investment essential for advanced information services, economic development and global competition. The nation's long-term future hinges on our ability to maintain a high quality and ubiquitous telephone network, one that allows individuals and firms to compete on a worldwide basis through the deployment of advanced telecommunications.

To do so, public policy must first recognize the strategic importance of telecommunications to domestic economic growth. Policy must then foster investment in communications, eliminate barriers to provision of new information services, and regulate prices rather than earnings. Further, policymakers must acknowledge the vital importance of stimulating domestic research and development and strengthening the nation's capacity to compete in manufacturing telecommunications equipment.

The rise of global financial capitals such as New York, London and Tokyo

demonstrates that communications technology is not a substitute for face-to-face contact, but a way to extend the geographic reach of human beings. Today, business converts ideas and decisions into goods and services that are then distributed and marketed through telecommunications networks that span the world.

Information is the most valuable raw material the United States produces, but maximizing the use of information technology will require new policies to assure that technological advances are not hampered by outmoded regulations.

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