



ADVANCING GLOBAL COMMUNICATIONS

www.tiaonline.org

2500 Wilson Boulevard, Suite 300
Arlington, VA 22201-3834 USA

Tel: +1.703.907.7700
Fax: +1.703.907.7727

Testimony of Adam Drobot

Chief Technology Officer, Telcordia Technologies

Advisor to the Board, Telecommunications Industry Association (TIA)

Before the U.S. Senate Committee on Commerce, Science, and Transportation

“Communications, Broadband and Competitiveness: How Does the U.S. Measure Up?”

April 24, 2007

Thank you, Mr. Chairman, Ranking Member Stevens, and Members of the Committee. I am appearing today as the Chief Technology Officer of Telcordia Technologies and an Advisor to the Board of the Telecommunications Industry Association (TIA).

I am grateful for the opportunity to appear before you today among this distinguished panel of witnesses to discuss the importance of communications technology and broadband deployment to the United States' competitiveness.

Communications technology is vital to the global economy, serving as its central nervous system, and broadband technology will be the foundation of 21st century global communications networks. Telecommunications, as an industry, represents about 7.1% of our Gross Domestic Product and plays a fundamental role that touches all other industries, impacts the productivity of our industries and our economy, and pivotally affects public safety, education, health care, and countless other functions in our daily lives.

The advances we can expect are as profound and far-reaching as what we have experienced over the last quarter century – the explosive growth of the Internet, computers connected by high speed networks driving commerce around the world, the convenience of wireless mobility, and information services which are changing everything from how we spend our time to how we interact with our fellow citizens.

It is vital for the United States to maintain the leadership and future competitiveness in this critical industry – for the health, general welfare and defense of our population.

Communications and Broadband Deployment Incentives

Next-generation broadband communications capabilities are dependent upon incentives, removal of barriers, and experimentation with new business models for deployment. In the past several years, we have witnessed the demand for broadband and high-speed services fuel the revitalization and growth of telecommunications industry, as carriers invest in new fiber, new IP technology and new wireless infrastructure to provide state-of-the-art voice, video and data services. The U.S. market grew 9.3 percent in 2006 to total \$923 billion in revenue, and the worldwide telecommunications market grew 11.2 percent to total \$3 trillion, according to TIA's Market Review & Forecast.

We have seen technologies like broadband video, voice over Internet protocol or VoIP, as well as new mobile data services, spark new growth in the telecommunications industry. As a result, cable, telcos, wireless, and others are offering more competitive all-in-one bundled packages, and consumers are seeing lower prices and more services.

Broadband video is one driving force behind deployment of the state-of-the-art fiber needed to carry the high-capacity signal; it allows telephone carriers to provide a competitive TV service comparable to cable TV. Demand for broadband has also been propelled by VoIP. The broadband-based phone technology is forecast to make up 34 percent of all U.S. residential landlines by 2010, or 25.5 million subscribers, up from just 10 percent and 9.5 million subscribers in 2006.

Beyond entertainment, the creation and sale of information and communications technology equipment creates thousands of jobs, fosters health care, education, financial services, transportation, and public safety. Important to TIA and its membership, next-generation communications capabilities will facilitate public safety communications and allow our nation's first responders assist the public in times of emergencies. Technology plays a crucial role in the safety and security of our country.

The exploitation of technology in telecom is important because it has a day-to-day impact that improves productivity for individuals, government and corporations. For example, advancements in technology

have led to the removal of economic barriers in the enterprise market. Advancements of technology accomplishes two things, it promotes creativity, and as we mentioned earlier drives the economy to improvements in productivity. In other words, there are new things that can be done, and old things can be done at a lower cost.

There was a point in time that for information and communications technology the U.S. was an undisputed source of ideas and their implementation. Increasingly, we are finding that the source of new ideas is as likely to come from Europe or Asia as it is for the United States.

A good example is SAP, a German-owned and operated company, which recognized early on that technology could improve day-to-day business. SAP created Enterprise Resource Planning (ERP) systems, which perform accounting functions for large corporations around the world. With the proliferation and use of PCs and the Internet, SAP recognized that large centralized mainframes were not necessary and that it is possible to share data within large enterprises if one took advantage of the fundamental communications technologies that are available already. SAP perfected a system that allows data to travel wherever the user demands the information, using basic telecommunications capabilities available to ordinary users. SAP created a new way of doing business by taking advantage of the telecommunications infrastructure that already exists.

In the United States, we must focus on next-generation broadband services and capabilities, especially in the rural areas of our country where deployment is costly due to challenges associated with terrain, low population density, etc. Health care in rural areas are in demand, which will serve as an incentive to next-generation broadband deployment in those areas. The USDA has made progress through no interest loans, in order to spur broadband deployment for this purpose. We applaud this effort, and we believe that it serves as another example of how innovative products and services can stimulate deployment of next-generation broadband infrastructure.

We must work together to determine what is the proper balance between government involvement and incentives, and the hands-off approach which has proven successful in the last several years. We should first determine where broadband deployment has not occurred and why, so that we can identify incentives and eliminate barriers to moving forward.

Basic Long-Term Telecommunications Research

I now turn to the importance of long-term basic telecommunications research and the impact that it can have on next-generation communications capabilities. Other countries have discovered the importance of basic research early on, and they are now reaping the benefits. The Framework Programs in the European Union; national programs in Korea, Taiwan, Hong Kong, Singapore and Japan conducted through national laboratories and economic development authorities; and growing investments in China targeted at all aspects of communications. These programs are further accompanied by coordinated transitional activities which forge academic, national laboratory, and local industry partnerships aimed at native deployment and eventual domination in international markets. An example would be the deployment of “Wibro” in Korea – this is high speed Internet connectivity at speeds greater than 10 megabits per second for ubiquitous fixed and mobile wireless services based on the WIMAX standards. A by-product of the early stage investment in innovation that these geographies have made is the deployment of next-generation systems significantly ahead of the United States.

Another technology that came out of Europe and is being deployed around the world is IPV6, which has been widely adopted by leading countries including the United States.

While the United States is still the single largest market for communications and has the most robust economy, we now fall far behind others in penetration of high-speed broadband, and we have not commercially brought next-generation services to the consumer. As a consequence, it is more than likely that the next wave of services and technologies will be developed where test beds and deployment of infrastructure will support experimentation of new concepts and ideas and where the human capital is concentrated – locations where business executives, scientists and engineers are familiar with the technology.

The experience from my own corporation confirms this. Telcordia, which traces its heritage to “Bell Labs” and which participated in the invention of much of modern communications, is the largest seller of Operations Support Systems to the telecommunications industry. To maintain our edge, we are finding it a necessity to rely on growth in foreign markets and are facing increasing foreign competition, which is advantaged by public spending in the local markets and long range government funding.

What Must Congress Do

First, do no harm. It is vital that Congress continue on its current path and facilitate deployment of next-generation broadband technology. And indeed, Congress has already taken steps in this direction. In particular, we commend you for making available valuable spectrum through legislation over the past few years. Congress must continue to recognize that applications and services – whether used for entertainment, public safety, business, or health care – will continue to be the single-most driver of *future* broadband deployment.

TIA believes that Public policies should foster a climate conducive to innovation and investment, avoiding overly-prescriptive regulatory regimes. The constant goal must be to achieve a market-based policy framework that fosters investment in network facilities and competition in the provision of converged, multimedia services and applications. TIA's key governing principles are as follows:

- Universally available, high quality, and affordable broadband connectivity
- Competition among existing and emerging platforms and providers
- Increased availability of unencumbered, prime spectrum in adequate blocks for commercial services
- Utilization of market-based mechanisms to drive spectrum to its highest and best uses
- Light-handed, narrowly focused regulation, where it is necessary
- Technology neutrality and flexibility
- Uniformity in regulation, where appropriate, including national rules wherever possible
- Elimination of regulatory barriers to investment

In regard to an assessment of high-speed Internet access service already available in the U.S., our industry would greatly benefit from an increase in accurate reporting that is monitored at the federal level, based on metrics that are valuable to the public and the service providers. This would be a good first step in determining which parts of the country are most in need of access to broadband communications technology. We look forward to working with Congress to determine next steps.

Second, we are asking that the Federal Government invest more of its research dollars in the critical area of basic telecommunications-specific research. Fierce competition and financial realities have made it difficult for U.S. industry to self-fund long-term, basic research, and because the U.S. Government is not

devoting sufficient resources on long term communications research, the U.S. position in this vital area is waning.

I would like share some examples where the investments that we propose could impact the citizens of our great country:

- In everyday life - devices with much simpler interfaces, but at the same time, much more functionality with greater adoption in our society – Imagine a single device the size of your cell phone today, which is your PC, your camera, a projector, shows HDTV, plays music, is a portal to the internet – without a button in sight?
- Reduction in traffic accidents and deaths – sensors on a car that could alert you to hazardous conditions, such as black ice, another vehicle in your blind spot when you are about to change lanes, a deer in the roadway, a washout in the highway, and the communications system that can convey warnings about such hazards to traffic behind you.
- Health care for the elderly – a handheld device that your grandmother has, which could diagnose and warn about medical problems, call for a nurse or a doctor’s intervention, or improve quality of life by fostering the ties with a grandchild three time zones away through effortless, high-quality communications.
- New commercial systems – a slim and light portable device to securely purchase, receive, redeem, and store concert tickets, airline boarding passes, subway tickets, and conduct financial transactions from anywhere - without printing a thing?

These are only a few examples, among many, that correlate our nation’s next-generation communications infrastructure and its related services and applications to the economic growth of the United States and the world and the quality of life for all consumers. New partnerships between industry and government are needed to meet tomorrow’s challenges and to maintain the competitive position of the United States in the communications industry.

Thank you again for the opportunity to appear before you today.