

**Remarks of  
Michael K. Powell  
Chairman, Federal Communications Commission  
at the  
2004 Satellite Leadership Dinner  
Folger Shakespeare Library  
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**(As prepared for delivery)**

**“U.S. Leadership: The Satellite Partnership”**

Thank you David for your kind introduction. To the members of Congress and the Executive Branch, the CEOs and members of industry, to all of you here -- good evening. It is a pleasure to be with you in these revered walls. This setting reminds me that William Shakespeare often referred to the concept of the “harmony of the spheres.”

Under this philosophy, when all elements on Earth and in the heavens are balanced, the music of the spheres is considered to be the most exquisite. Satellite systems illustrate this concept. By orchestrating technology in the sky and on the Earth, satellites deliver benefits to U.S. consumers across our nation -- from a firefighter in Texas to a farmer in Montana. *That* is music to *my* ears.

Maestros and Musicians

We are all players in the “Global Satellite Partnership.” The partnership includes the U.S. commercial space industry, the Congress, the U.S. government, including the FCC, as well as their counterparts around the globe.

In 1962, when black rotary phones were the rage, Congress laid the foundation for the world’s first global satellite communications satellite system. Then, in 1965, while I was watching a 12-inch black and white television in my family living room, INTELSAT launched the first communications satellite, “Early Bird.”

While satellites may appear to be only a small fraction of any given communications service market, the fact that satellite firms participate in so many market segments -- telephony, Internet, television, and radio -- means they are a key force in inter-modal competition. In many instances, the particular strengths of satellite technology -- gives it a competitive edge in the provision of some services. This means that satellite services contribute to innovation, thus, spurring competition in larger measure than looking at market share statistics alone would suggest. The headline here is that the satellite industry is providing competitive alternatives for U.S. consumers.

With vision and tenacity, the satellite industry has demonstrated that it can be a strong competitor with other telecommunications services – as well as a collaborator. Satellite systems unequivocally are a key platform in the digital migration. In the current culture of cell phone cameras, Tivo and WiFi, satellite providers are delivering new services to people on the road, in the sky, on the water, at work and at home. The spotlight -- and Wall Street -- are focusing currently on Direct Broadcast Satellite and Digital Audio Radio Satellite services -- two true *consumer* services. Today, one in five television households in the United States receives television by satellite, the fastest growth ever for a consumer electronics product.

The commercial satellite industry must remain prudent. Though satellites are invisible to we mortals who live on earth, as the CEOs here tonight know all too well, deploying a satellite system is costly and time-consuming. It takes lift -- literally blastoff -- to thrust even *one* satellite in space. A single geostationary satellite costs up to \$150 million to build and more than another hundred million to launch and insure. And every satellite system requires equipment on the earth. The time and money it takes to get satellite services into consumers' eyes, ears and hands is daunting – and requires considerable foresight and planning on the part of satellite operators.

Like the industry itself, the FCC has used foresight regarding satellites. As early as the 1970s, under its “Open Skies” policy, the FCC established a framework of maximum flexibility and minimum regulation. The FCC fully opened the U.S. market to commercial communications satellite providers to serve the United States. And they did. In the 1980s, commercial communications satellite systems populated the Earth. And to accommodate increasing requests for more geostationary satellites, we literally made room in space. The FCC allowed for smaller spacings between orbital locations; and, in return, providers in the Fixed Satellite Service had to operate at lower power levels to avoid interference. That’s an example of partnership.

### From Chorus to Orchestra: Globalization Takes the Stage

The globalization explosion of the 1990s has led to a smaller but more complex world today. The signing of the World Trade Organization Agreement in 1997 dramatically altered the telecom landscape. At the same time, liberalization took hold and monopolies broke apart. New multinational alliances formed; intergovernmental satellite organizations privatized. Responding to competitive changes, some satellite companies restructured. The satellite industry is more global than ever before.

Globalization has challenged regulators worldwide. Whereas the First Radio Telegraphic Conference in 1903 had nine participating nations, the 2007 World Radiocommunications Conference will host nearly 150 nations. Whereas 70 years ago, the FCC allocated spectrum for a small number of radio services, today the call for spectrum – especially bands with cutting edge technical properties -- are loud and plentiful.

I have heard industry's various calls and the Commission has responded. During my tenure, the FCC has authorized earth stations on vessels; secured spectrum at WRC '03 for satellite services, including Internet in the sky; authorized ancillary terrestrial components for certain MSS satellite systems; and coordinated operations of many satellite systems with other nations. The FCC also is streamlining its systems. Last summer, based on the maturity of the industry and the premium placed on faster licensing, the FCC unanimously adopted a new "First-Come, First-Served" approach. Whereas in the past, getting a space station license could take up to three years, today it takes six to nine months. Consistent with technological changes, the FCC also streamlined earth station licensing and modernized our electronic filing system.

### Solos and Symphonies: Satellite Services for the People

The impact of satellites on Americans is more profound than ever before. From ports in Alaska to ships in the Atlantic, satellite services beam up and reach down to touch us in every aspect of our lives. Satellite services allow a small business in Tennessee to track company inventory worldwide; a health care professional in Appalachia to provide medical services under the guidance of a doctor in Chicago; and law enforcement officials in Ohio to see high resolution images of buildings, bridges and approaching storms. Some satellite systems also help provide universal service, advancing the availability of telecommunications services in our country.

Satellite networks using Very Small Aperture Terminals bring tremendous benefits, for instance, enabling companies to conduct credit card validations in lightning speed. In addition, the industry's time-tested service of backhauling other telecommunications services and distributing programming to broadcasters and cable companies continues to thrive.

In November 1989, live footage of the fall of the Berlin Wall in Germany reached the United States by satellite. On September 11, 2001, instant images of the collapse of the World Trade Center towers reached every time zone on earth via satellite.

For decades, satellites have been providing national security and emergency preparedness functions. Today, they are recognized as critical infrastructure and a vital force for homeland security. Satellites provide voice, data, video, as well as location and remote sensing services for our nation's first responders. Under FCC requirements, providers of mobile satellite voice service must establish 911 emergency call centers and explore the technical feasibility of identifying a 911 caller's physical location.

The U.S. Government, of course, is a major user of commercial satellite communications. For example, in the Iraq War, over 80% of its satellite communications went over commercial networks, including systems authorized by the FCC.

### Harmony and New Horizons: Opportunities and Challenges

Today, satellite systems are linking people and nations on earth like the music in a symphony. Exactly 213 years ago in France, two brothers sent the first optical telegraph

message. The text of that message read, “If you succeed, you will soon bask in glory.” Like them, the commercial satellite industry has demonstrated success and is primed to bask in new opportunities.

Estimates show that in 2002, the satellite services sector yielded over \$50 billion dollars in worldwide revenue and \$17 billion in U.S. revenue. The same year, the entire satellite sector, including manufacturing, launch services and ground equipment produced over \$ 42.2 billion in U.S. revenue and 122,000 U.S. jobs. Today, in the geosynchronous orbit, there are approximately 90 FCC-licensed active commercial communications satellites and over 25 non-U.S. satellites authorized to serve the United States. In non-geostationary orbits, there are four active commercial communications satellite systems comprising approximately 145 FCC-licensed satellites to serve the United States.

Two-way broadband by satellite already is available in the United States and soon Ka-band satellites will bring Americans additional competitive service options. As demonstrated in story after story at the Rural Satellite Forum that the FCC hosted in January, satellites are providing basic and advanced services in rural and remote areas throughout our country. On a personal note, I would like to thank the many satellite companies and entrepreneurs that came to the FCC that day and demonstrated first-hand the services they receive by satellite.

Satellite operators are continuously pushing the edge of the envelope – or I should say, the universe – in inventing advanced technologies to deliver satellite services. Video compression and new modulation schemes enhance spectrum efficiency and increase the amount of information throughput per hertz. At the same time, satellite manufacturers are making space stations with larger, 30-meter antennae that unfurl in the sky like large umbrellas, dispersing smaller spot beams to even smaller consumer handsets.

Further growth is on the horizon. A recent forecast predicts that the demand for transponder capacity will grow 60% in the next ten years. For the near-term, the areas of expected highest growth include telecommunications in the air (including Internet access), last mile data (especially for businesses) and subscription television. And while satellite television and radio services are blanketing the United States, like any consumer good or service, the price points for these services will remain important factors.

The ongoing challenges for the industry are: to compete, innovate and educate. As it naturally seeks to provide the least costly and most effective services, the industry must continue to be a fierce competitor to cable and other communications systems; utilize hybrid networks such as satellites and WiFi; be imaginative with technology and spectrum; and make satellite networks more reliable, secure and interoperable. The FCC is serious about milestone enforcement and I encourage companies, consistent with the terms of FCC authorizations, to use, not squander, spectrum. The industry may seek gains in new opportunities that the FCC has created through the upcoming DBS auction and secondary markets in spectrum. It also may see benefits by educating policymakers about the magic and the merits of satellites.

From my perspective at the FCC, I see a much more complex, competitive and technologically advanced world than the one Early Bird saw. I see satellite services using different spectrum bands, government operations using commercial spectrum and dual-flagged satellite systems. As industry innovates, consumer demands rise and the vital interests of the United States intensify, FCC issues are becoming even more complicated, challenging dated definitions and models. As a result, government policy makers and international bodies must do more than react and adapt. They must look ahead and create new approaches. They must constantly take the pulse of change. They must be alert and agile.

To further this effort at the FCC, I encourage dialogue, ideas and solutions from industry and all members of the public. Under my leadership, the FCC will continue to make decisions faster and smarter. We will continue to provide regulatory flexibility, take into account the role of satellites as critical infrastructure, and let technology stimulate the economy with new jobs and more revenue. In the end, the market and consumers should be free to determine the services of the future. The truth is that no matter how high-minded anyone of us is about satellites, consumers don't care about how a technology works or where it comes from – be it space, undersea cable, or utility wire. Consumers are agnostic about the *makeup* of a technology. They care about *services*. I challenge each of us to continue to explore new ways to bring satellite services home to the American people and to the world.

In conclusion, I thank the Satellite Industry Association and the Satellite Broadcast Communications Association for the invitation to join you tonight. To all the honored guests, thank you; it has been a delight.