

## On the front line - shaping wireless policy

by Meredith Attwell Baker, Acting Assistant Secretary of Commerce for Communications and Information

The National Telecommunications and Information Administration (NTIA), helps shape US Government domestic and international policies to foster increased private sector innovation and investment in the telecommunications and information industries. The agency aims to improve the nation's competitiveness and economic growth, and guide interactions with foreign policy makers to open markets worldwide. They strive for a technology-neutral approach, with investment decisions driven by perceived market value and technical merit. The NTIA has actively pursued reforms to free up spectrum for commercial use.



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By any metric - the number of subscribers, minutes of use, plan options, applications, service providers, or handset offerings - commercial mobile services have experienced astonishing growth over the course of their relatively short history. In just 25 years, wireless service has evolved from novelty to expediency for more than 255 million mobile subscribers in the United States and over three billion subscribers worldwide. With nearly one in seven wireless-only American households and a penetration rate reaching 84 per cent of the U.S. population, demand for wireless connectivity for voice, data and video applications, from the city to the countryside, in our homes and in transit, has never been greater.

Like the evolution in handset technology, from the lone 'brick' model of 1983 to the slim, multi-functional devices in today's market, the wireless landscape has experienced a rapid transformation. Advances in services and applications arrive with increasing speed and frequency, each successive generation of wireless technology giving consumers faster and more diverse mobile capabilities. We now stand on the threshold of genuine mobile

broadband services with speeds comparable to wireline platforms.

### The role of NTIA

As Acting Assistant Secretary of Commerce and Acting Administrator of the National Telecommunications and Information Administration (NTIA), I serve on the front lines in the shaping of domestic and international policies that will foster increased private sector innovation and investment in the telecommunications and information industries. Together these objectives anchor nation's competitiveness and economic growth, and guide our interactions with foreign policy makers to open markets worldwide.

Also guiding our policy formulation and advocacy is a technology-neutral approach, with investment decisions driven by perceived market value and technical merit rather than government policy prescriptions. Had U.S. policy makers prescribed a single technical standard in early wireless allocation and licensing decisions, it could have diverted the investment and research activities that led to

many of the more recent innovations that are now reaching the commercial market.

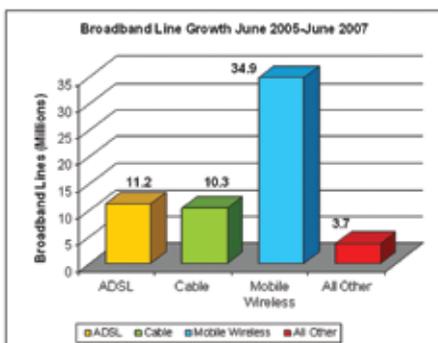
The race between 3G and 4G systems is less important from a policy perspective than the technological and competitive leapfrogging it represents. Our focus at the national policy level is not on the finish line, but rather on the factors that make the race possible. By remaining technologically neutral, encouraging the elimination of unnecessary regulation, and making the critical resource of spectrum available for commercial applications, our Federal policies contribute significantly to the robust commercial wireless market our nation now enjoys.

Policy Leadership - Early in the Administration, President Bush recognized that advanced high-speed communications and information networks - broadband - held particular promise to catalyze American productivity and economic growth, and to revolutionize our culture and quality of life. That is, broadband technology offers consumers new tools facilitating e-commerce, increased opportunities for tele-work, tele-medicine, and distance learning; and rich, new

information and entertainment applications. In announcing a goal of universal, affordable broadband by 2007, and plenty of choice among broadband providers thereafter, the President made broadband development and deployment a keystone of his technology agenda.

Implementation of the President's broadband vision has been one of NTIA's highest priorities. Through a comprehensive package of technology, fiscal, and regulatory policies, the Administration has sought to liberate ingenuity and entrepreneurship, stimulate innovation and competition, and create incentives for private investment in broadband technologies and infrastructure. NTIA documented the Administration's policy efforts and the effect on U.S. broadband growth in *Networked Nation: Broadband in America, 2007*, released in January 2008.

In the report, we noted that commercial mobile services are the fastest growing sector of America's broadband economy (see chart below). In the past eight years, the number of wireless broadband subscribers jumped from 97 million to 256 million, almost a three-fold increase; and the average number of minutes per month used by subscribers grew at an even higher rate, from 228 minutes to 746 minutes per month. With responsibility for the management of spectrum use by the federal government, NTIA has played a key role in facilitating the availability of the limited spectrum resource for growth in commercial mobile services.



Spectrum Reform - Wireless technologies and services support the missions of sixty-five federal departments and agencies. As changing priorities increase the demand for mobility and agility by Federal spectrum users, and demand for spectrum to support advanced wireless services from the private sector grows, NTIA's attention to greater efficiencies in Federal spectrum use has greatly intensified in recent years.

Our efforts to devise more efficient and dynamic methods for the Federal

Government to use spectrum stems in part from the President's 21st Century Spectrum Policy Initiative, announced in May 2003. The Initiative's purpose is bold but straightforward: to develop a spectrum policy that fosters economic growth, ensures our national and homeland security, maintains U.S. global leadership in communications technology and service, and satisfies other vital U.S. needs such as public safety, scientific research, transportation, and law enforcement.

Consistent with the Spectrum Initiative, we endorsed legislation in 2004 to reallocate spectrum used by the Federal government in the 1710-1755 MHz band for commercial Advanced Wireless Services. In March 2008, NTIA transmitted to Congress our first annual report on Federal agencies' progress in relocating their affected wireless communications systems from this band. The report shows that Federal agencies' actual relocation times and costs generally fell below estimates. We continue to work with Federal agencies to relocate these systems expeditiously in order to facilitate more rapid introduction of new commercial services.

Among the specific actions taken pursuant to the Spectrum Initiative, NTIA earlier this year released the Federal Strategic Spectrum Plan, the most comprehensive compilation of information to date on how Federal agencies use spectrum. The Spectrum Plan calls for "a new, evolutionary model for spectrum management" to enable federal agencies to get more use from the same amount of spectrum, thereby ensuring access to spectrum for further private sector growth and innovation.

The plan also contains a set of recommendations to improve federal users' spectrum efficiencies. These recommendations include encouraging federal agencies to use commercial wireless services where feasible; employing dynamic access and 'smart' radio technologies to improve adaptability and flexibility within an operational environment; increasing spectrum sharing among federal users and between federal and non-federal users; and improving coordination among federal spectrum users and with the private sector, among others.

With the Federal Strategic Spectrum Plan as a foundation, NTIA will work in coordination with the Federal Communications Commission (FCC), which manages non-federal spectrum use, to create a National Strategic Spectrum Plan. The National Plan will address spectrum requirements for essential Federal missions; state and local spectrum needs; and requirements of non-

federal entities for spectrum to support new services and systems.

Another component of the Spectrum Initiative is the creation of a Spectrum Test-Bed. Working in collaboration with the FCC, we will be able to objectively evaluate new technologies to facilitate sharing between Federal and non-Federal spectrum users in a test environment. The test-bed is scheduled to become operational this summer.

NTIA has also reached out to the private sector for advice on developing and implementing spectrum efficiencies. In 2006, we established the Commerce Spectrum Management Advisory Committee, composed of representatives of the private sector, to provide advice on domestic spectrum management and policies. Their work has focused on improving spectrum efficiencies and the use of economic incentives in Federal spectrum management.

We are also engaged at the international level in ensuring the availability of spectrum that will support broader markets for advanced wireless services. For example, at the World Radiocommunication Conference (WRC) held in the Fall of 2007, the United States successfully advocated the reallocation of the 700 MHz band for advanced wireless systems, such as International Mobile Telecommunications 2000 (or IMT-2000). Coupled with an agreement to include WiMAX in the IMT-2000 family of technologies, this action offers the potential of a larger, more competitive, and open market for a variety of advanced wireless services.

The notion that new technologies can be rapidly deployed through market competition and reduced regulation, with lower prices and high quality services, is well supported throughout the telecommunications industry. It was a principle motivation for, and the express policy articulated in, the last major amendments to the Communications Act of 1934 enacted in 1996. This approach has greatly contributed to the deployment of broadband, the proliferation of Internet services and applications, and the explosion in wireless technologies, among other technological advances.

From my vantage point in government, I believe it is essential to maintain such policies to foster the continued growth across each and every wireless metric. The benefits to American consumers and to our overall economy - whether 3G, 4G or both technologies - will almost certainly accrue from this further evolution in commercial mobile services. ●