

BEFORE THE  
Federal Communications Commission  
WASHINGTON, D.C.

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SEP 14 1998

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

In the Matter of )  
 )  
Inquiry Concerning the Deployment of )  
Advanced Telecommunications )  
Capability to All Americans in a )  
Reasonable and Timely Fashion, and )  
Possible Steps to Accelerate Such )  
Deployment Pursuant to Section 706 )  
of the Telecommunications Act of 1996 )

CC Docket No. 98-146

COMMENTS OF THE  
CELLULAR TELECOMMUNICATIONS INDUSTRY ASSOCIATION

The Cellular Telecommunications Industry Association ("CTIA")<sup>1</sup> hereby submits its Comments in the above-captioned proceeding.<sup>2</sup>

DISCUSSION

The wireless telecommunications industry will play a prominent role in the delivery of advanced telecommunications capabilities and services to American consumers. CTIA strongly

<sup>1</sup> CTIA is the international organization of the wireless communications industry for both wireless carriers and manufacturers. Membership in the association covers all Commercial Mobile Radio Service ("CMRS") providers and manufacturers, including 48 of the 50 largest cellular and broadband personal communications service ("PCS") providers. CTIA represents more broadband PCS carriers and more cellular carriers than any other trade association.

<sup>2</sup> Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, CC Docket No. 98-146, Notice of Inquiry, FCC 98-187 (rel. Aug. 7, 1998).

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encourages the Commission to heed the statutory instruction embedded in Section 706 by promoting the deployment of advanced telecommunications capability "without regard to any transmission media or technology"<sup>3</sup> and, specifically, to consider and to accommodate the wireless telecommunications industry's participation in any initiatives adopted pursuant to that provision.

The wireless industry has made and continues to make major contributions to economic and broader social welfare in the United States and throughout the world. Most of these contributions have taken the form of vastly expanding the reach of narrowband communications by making voice and one-way messaging (paging and other data transmission) connectivity mobile. Now technology has begun to enable similar contributions in the realm of broadband data communications. Although the deployment of wireless data on a mass consumption basis is in its infancy, there has been sufficient progress to permit market analysts to make predictions of substantial growth over the next several years and to permit some insight into the likely nature of these services in the near term. The actual outcomes, of course, depend upon many factors, particularly prudent public policies in the form of spectrum allocations and other legal and regulatory arrangements that are pro-competitive and congenial to the growth of wireless advanced telecommunications service.

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<sup>3</sup> Pub.L. 104-104, Title VII, § 706(c), Feb. 8, 1996, 110 Stat. 153 ("Section 706").

The market analysts predict substantial growth in demand for wireless advanced telecommunications services. For example, Frost & Sullivan expect the wireless data market to grow to ten times its current value and to reach levels of close to \$2.5 billion by the year 2002.<sup>4</sup> Similarly, Strategis predicts a 40 percent annual growth rate in the wireless data market through 2002.<sup>5</sup> The Gartner Group observes that wireless data communications growth potential is enormous, with nearly 25 percent of the American workforce having mobile job requirements.<sup>6</sup>

The earlier digital wireless networks focused primarily on voice applications. However, in response to market analysts' forecasts and customer demand, carriers have increased their efforts to enhance high-speed wireless data capabilities. These efforts have been successful. As a result, cellular digital packet data (CDPD) has been developed as a digital platform that supports Internet Protocol (IP). CDPD is a connectionless, multiprotocol network service that provides peer network wireless extension to the Internet. Applications for CDPD are already available. For example, optimized for smaller screen devices, wireless Internet connections allow users to access and retrieve

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<sup>4</sup> Frost & Sullivan reports, "Mobile Data Services: How to Keep Your Customers and Profits Moving" and "North American Wireless Office Markets."

<sup>5</sup> U.S. Mobile Data Marketplace: 1997.

<sup>6</sup> The Gartner Group, The Dataquest Market Analysis Perspective, "Wireless Data in the United States: Pieces of the Puzzle are Missing, but a Picture is Taking Shape."

information off the World Wide Web and should eventually replace the need to carry bulky laptops and modems.

With great success, wireless services utilizing narrowband frequencies have been deployed for some time in a multitude of business applications. In recent years, wireless applications using cellular and PCS frequencies have also begun to build upon and expand this market. In the future, even greater capabilities are possible for broadband CMRS based services under a regulatory environment that promotes market-driven decisions. To realize the benefits of competition in these advanced telecommunications services, the Commission must make a conscious effort to include wireless technologies in its policies. Final rules should be flexible and not serve to exclude CMRS providers from this critical market, consistent with the technology-neutral mandate of Section 706. Moreover, state efforts to regulate these services, under a traditional state regulatory regime, only serves to thwart their deployment. State regulatory efforts, if any, must be consistent with the statutory mandate to encourage deployment of advanced telecommunications capabilities on a reasonable and timely basis.

The proliferation of handheld personal computers using wireless modems is playing an important role in increasing productivity and improving communications for mobile employees throughout the nation. In addition to the more common uses of handheld wireless devices for shipping and delivery services, wireless products are also being deployed in many other markets. For example, financial professionals are using wireless

applications to substantially improve communications between stock traders and their customers. Wireless communications utilizing the CDPD standard are also enabling mobile workers in all industries to send and receive wireless e-mail in real-time.<sup>7</sup>

Anywhere, anytime connectivity has become the business standard as a direct result of advances in wireless communications. As businesses and consumers have come to rely upon mobile voice communications as an integral part of their affairs, wireless data communications will also be integrated into the regular course of business operations. The demand for real-time wireless data communications in the business community is fueled by the desire for increased efficiency, which, eventually, benefits all consumers through lower prices.<sup>8</sup> Mobile data communications is critical for realizing these gains in productivity and efficiency.<sup>9</sup> Moreover, consumers demanding ever

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<sup>7</sup> *Infowave Proving Demand for Wireless Messaging Software with First Ten Orders*, <[http://www.infowave.net/whats\\_new/html/06\\_02\\_98.html](http://www.infowave.net/whats_new/html/06_02_98.html)>.

<sup>8</sup> See, e.g., *Wireless Data Technology Helps Clawson Concrete Beat the Clock*, <<http://www.ameritech.com/products/wireless/data/acsd0026.htm>> ("Each time [a concrete company] loads one of its trucks with concrete, the clock starts ticking and the company has a 90-minute window in which to deliver its product. Once 90 minutes have passed, most inspectors will reject the load, and in some cases it could mean having to remove the concrete from the truck with a jackhammer." Implementing an automated vehicle-location system dispatchers are able to assist lost drivers, direct trucks on their most efficient routes, and prevent product loss. Information that was once sent over an 800 MHz radio and could take as long as 20 minutes to get through, can be delivered via CDPD in 3/10 of a second.)

<sup>9</sup> See generally Alan Greenspan, *Inflation Still a Threat to the U.S. Economy*, *Business Times* (Singapore), Oct. 11, 1997 at 16 ("The combination of advancing telecommunications and

faster Internet and e-mail connectivity will eventually be doing so from wireless data devices.

The benefits of advanced wireless data communications are also witnessed in a variety of educational and safety applications. Last year, a professor of computer science at the University of Mississippi established a National Classroom Project to bring from class to class 25 handheld PCs, using wireless modems, into computer science classes and workshops for children in the community.<sup>10</sup> In another example, a Remote Elevator Monitoring system has been deployed by Otis Elevator Company. Seeking to replace 2,000-5,000 landline modems with Bell Atlantic Mobile's wireless IP network, which can transmit data at speeds of up to 19.2 kbps, the elevator company has improved response time to elevator maintenance and emergency situations.<sup>11</sup> Similar data networks can be deployed in security systems and utility monitoring devices.<sup>12</sup> In Las Vegas, wireless data systems are replacing voice communications and paper-based dispatching at the Las Vegas Valley Water District to deliver

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computer technologies have induced large investment outlays to support the Internet and utilise it to realise efficiencies in purchasing, production, and marketing.")

<sup>10</sup> *Leading Corporations and U.S. Government Integrate Windows CE 2.0-Based Handheld PCs Into Their Core Businesses*, <<http://www.microsoft.com/presspass/press/1997/oct97/wcegvtp.html>>.

<sup>11</sup> *Companies Team to Provide Wireless Remote Elevator Monitoring Systems*, <<http://www.novatelwireless.com/press16.html>>.

<sup>12</sup> Id.

crucial water to this region.<sup>13</sup> Without question, under the proper regulatory framework, numerous other wireless data applications will be developed that will also serve the public interest.<sup>14</sup>

The capabilities of these advanced wireless modems are increasing on an exponential basis. Advanced wireless data services will play a key role in meeting the demand for increased data transmission facilities. In the future, advances in existing digital transmission techniques, including GSM, CDMA, and TDMA, along with the development of third generation wireless transmission standards,<sup>15</sup> are sure to establish mobile wireless services as an invaluable element to the nation's advanced telecommunications infrastructure. CTIA is anxious to work closely with the Commission as it seeks to promote deployment of advanced networks.

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<sup>13</sup> See *Advantex-Utility Solution No Gamble for Las Vegas Valley Water District*, <<http://www.mdsi-advantex.com/06ne02prcu/19980810.html>>.

<sup>14</sup> See *Wireless Technology Makes Recovery Easier for Natural Disaster Victims at American Family Insurance*, <<http://www.ameritech.com/products/wireless/data/acsd0028.htm>> ("American Family Insurance . . . is using a wireless data solution provided by Ameritech to process claims and write checks to its policy holders at disaster sites more quickly than ever before. . . . [T]he insurance company equipped a 'Catastrophe Van' with a 32-port controller, computer terminals and printers with wireless remote connectivity from the Catastrophe Van to their host computer located at company headquarters.")

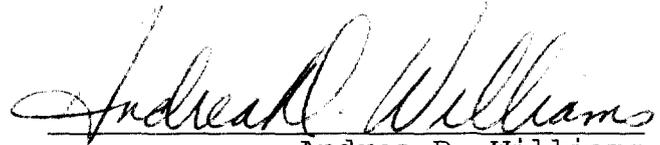
<sup>15</sup> See FCC Public Notice, "Commission Staff Seek Comment on Spectrum Issues Related to Third Generation Wireless/IMT-2000," Report No. IN 98-48, DA 98-1703 (rel. Aug. 26, 1998).

**CONCLUSION**

For the foregoing reasons, CTIA respectfully requests the Commission adopt policies which enhance the availability of advanced telecommunications services and capabilities which utilize CMRS.

Respectfully submitted,

**CELLULAR TELECOMMUNICATIONS  
INDUSTRY ASSOCIATION**



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September 14, 1998