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**BEFORE THE  
Federal Communications Commission  
WASHINGTON, D.C.**

**FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY**

In the Matter of	)	
	)	
Amendment of Part 2 of the Commission's Rules	)	ET Docket No. <u>00-258</u>
to Allocate Spectrum Below 3 GHz for Mobile and	)	
Fixed Services to Support Introduction of New	)	
Advanced Wireless Services, including Third	)	
Generation Wireless Systems	)	
	)	
Petition for Rulemaking of the Cellular	)	RM-9920
Telecommunications Industry Association	)	
Concerning Implementation of WRC-2000:	)	
Review of Spectrum and Regulatory Requirements	)	
for IMT-2000	)	
	)	
Amendment of the U.S. Table of Frequency	)	RM-9911
Allocations to Designate the 2500-2520/2670-	)	
2690 MHz Frequency Bands for the Mobile-	)	
Satellite Service	)	

**REPLY COMMENTS OF THE  
CELLULAR TELECOMMUNICATIONS & INTERNET ASSOCIATION**

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**REPLY COMMENTS OF THE  
CELLULAR TELECOMMUNICATIONS & INTERNET ASSOCIATION**

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

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<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 cellular, broadband PCS, ESMR, as well as providers and manufacturers of wireless data services and products.

<sup>2</sup> See Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems Petition for Rulemaking of the Cellular Telecommunications Industry Association Concerning Implementation of WRC-2000: Review of Spectrum and Regulatory Requirements for IMT-2000 Amendment of the U.S. Table of Frequency Allocations to Designate the 2500-2520/2670-2690 MHz Frequency Bands for the Mobile-Satellite Service, ET Docket No. 00-258, RM-9920, RM-9911, *Notice of Proposed Rulemaking and Order*, FCC 00-455 (rel. Jan. 5, 2001) ("Notice").

## **I. INTRODUCTION AND SUMMARY**

The rapid growth and success of the market for advanced wireless services in the United States depends in part on the Commission's regulatory leadership and the level of certainty with which it approaches the spectrum allocation process. If consumers are to receive the benefits of advanced wireless services, the Commission must proceed decisively and forcefully with spectrum allocation to accommodate advanced wireless services. Moreover, it must remain steadfast to its market-based spectrum management policies so that the U.S. wireless market can continue the impressive growth and dynamism that the Commission's policies have enabled in the past. Although it may not be perfectly attainable, the Commission should approach global harmonization through its allocation process in order to facilitate maximum exploitation of the associated efficiencies. One way to accomplish this goal involves an aggressive and energetic attempt to convert military spectrum in the 1710-1850 MHz and 2110-2160 MHz bands to civilian use as quickly and thoroughly as possible. By pairing these bands, the spectrum can be used more efficiently to provide advanced wireless services. Moreover, the Department of Defense already is sharing spectrum in these bands outside of the United States, and as these bands are harmonized on a global basis for 3G wireless services, the United States military will be forced to migrate out of these bands throughout the world.

## **II. NEGATIVE PREDICTIONS FOR ADVANCED WIRELESS SERVICES SHOULD NOT DERAIL THE COMMISSION'S ALLOCATION PROCESS.**

Several commenters predict a lack of consumer demand for advanced wireless services and urge the Commission to abandon its 3G spectrum allocation efforts on the basis of this

conjecture.<sup>3</sup> The dire predictions not only are speculative, but also reveal a myopic perspective. For example, the Wall Street Journal article cited by the opponents to spectrum allocation limits its discussion to a time period covering only the next 12 to 24 months.<sup>4</sup> While Wall Street analysts may feel compelled to take a quarter-by-quarter approach to the allocation of resources, the Commission is ill-advised to follow suit. To the contrary, the public interest demands that the Commission adopt a perspective that contemplates a more extensive horizon. Moreover, because the allocation, assignment, and subsequent construction processes involve a considerable amount of time, the Commission should not waiver from the process of allocating new 3G spectrum.

The naysayers of consumer demand for advanced wireless services join an historic assemblage of pessimistic skeptics that foresaw no migration from telegraph to telephones and predicted wireless telephony would remain a luxury that would not enjoy widespread consumer demand. Certainly, not every technological advance enjoys the commercial success it arguably deserves. In this instance, though, the proponents of advanced wireless services provide a sound basis for anticipating substantial consumer demand for the benefits these services will offer. For example, the Council of Economic Advisers notes that “[t]he market for high-speed, or ‘broadband’ wireless access has tremendous potential.”<sup>5</sup> It also explains that “[t]he potential

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<sup>3</sup> See, e.g., Wireless Communications Association International Comments at n.137; National ITFS Association Comments at 17-18; IPWireless Comments at 9; Illinois Institute of Technology Comments at 5; ArrayComm Comments at 1; Spectrumlink Networks Comments at 15.

<sup>4</sup> David Pringle and Kevin J. Delaney, “Next Generation of Cellphones Becomes Murky,” *Wall Street Journal* at B1 (Feb. 21, 2001); see also, Stephanie Mills, “Wireless-Web Industry Has Issues to Clear Before Its Devices Begin to Flood Market,” *Wall Street Journal* at B11 (Mar. 8, 2001).

<sup>5</sup> “The Economic Impact of Third-Generation Wireless Technology,” A Report by The Council of Economic Advisers at p. 4 (Oct. 2000)(“CEA Report”).

consumer benefits from introducing 3G technology are substantial” and warns that “[i]n light of such potential benefits, delays in the introduction of these services can be extremely costly to consumers.”<sup>6</sup>

Equipment manufacturers express confidence in the market for and viability of advanced wireless services. Nokia refers to a Strategis Group report indicating phenomenal growth in wireless data subscribership<sup>7</sup> and Ericsson similarly points to commercial market studies demonstrating explosive demand for advanced wireless services over the next decade.<sup>8</sup> Openwave Chairman and CEO recently explained that “the number of the mobile Internet users went from 6.9 million to 12.1 million” in one quarter and explained that “huge growth, five million users in 90 days, shows the acceptance worldwide of the technology.”<sup>9</sup> NTT DoCoMo recently indicated that it continues to press forward aggressively with deployment of 3G rollout.<sup>10</sup> COM DEV Wireless and Alpine PCS recently announced a partnership to conduct advanced high speed wireless trials with full operations scheduled to begin next year.<sup>11</sup> Microsoft announced plans to employ advanced wireless services as a means of entering the

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<sup>6</sup> Id. at p. 6.

<sup>7</sup> Nokia Comments at 2 (“According to the Strategis Group, mobile data subscribers in the United States are expected to grow to 78.7 million in 2005 and 171.9 million in 2007 from 10.4 million in 2001.”).

<sup>8</sup> Ericsson Comments at 6.

<sup>9</sup> Mark Haines, Richard Hoey, “Openwave Chairman and CEO Interview,” CNBC/Dow Jones Business Video, Transcript # 012300cb.y53 (Jan. 23, 2001).

<sup>10</sup> “3G Future Still on Track And Bright for NTT DoCoMo,” New York Times (Mar. 7, 2001)(available at [www.nytimes.com](http://www.nytimes.com)).

<sup>11</sup> “COM DEV and Alpine PCS Partner to Conduct M/ERGY High Speed Wireless Internet Trials,” PR Newswire (Feb. 8, 2001).

mobile market and stating that it is ready to begin trials of third generation smartphones.<sup>12</sup>

Nortel Networks and Mitsubishi Electric announced an expanded partnership to accelerate their advanced wireless services efforts.<sup>13</sup> Separately, Nortel is working with Samsung and PrairieComm to test 3G mobile terminals and wireless network infrastructure<sup>14</sup> and many other companies similarly have announced trials and development of 3G wireless technology and equipment.<sup>15</sup>

Wireless carriers demonstrate their confidence in the U.S. consumer demand for advanced wireless services by describing their aggressive efforts to provide those services.<sup>16</sup> When announcing Motorola as its chosen vendor to provide the 3G upgrades to its wireless network, Sprint PCS CTO Oliver Valente was quoted as saying, “[t]he wireless consumer in the United States is anxious to receive better quality voice and higher speed data capabilities on their mobile devices, and Sprint PCS intends to deliver these wireless services and the applications

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<sup>12</sup> Daniel Thomas, “Stinger and Symbian 3G Smartphones to Start Market Trials,” Computer Weekly at p. 33 (Mar. 1, 2001).

<sup>13</sup> “Mitsubishi Electric Telecom Europe, Nortel Networks Expand 3G Wireless Internet Efforts,” Business Wire (Feb. 21, 2001).

<sup>14</sup> “Nortel Networks, Samsung, PrairieComm Testing UMTS Interoperability,” Business Wire (Feb. 21, 2001).

<sup>15</sup> See e.g., “Malibu Networks and Fuzion Ink Master Agreement; Strategic Relationship to Accelerate Development and Commercial Deployment of Enhanced Broadband Wireless Access Technology,” Business Wire (Feb. 20, 2001); see also “20 Firms For The Next Generation,” Wireless Week at p. 14 (Dec. 18, 2000)(listing twenty vendors at the vanguard of 3G wireless technology).

<sup>16</sup> See, e.g., AT&T Wireless Comments at 4-5; Cingular Wireless Comments at 5-6.

that will change the way people work and play.”<sup>17</sup> The American Petroleum Institute expects the energy industries to be consumers of 3G wireless services.<sup>18</sup>

Thus far, the European experience also suggests strong demand for advanced wireless services.<sup>19</sup> The billions of dollars invested in spectrum bands in Europe for 3G wireless services demonstrates carriers’ commitments to offering 3G services and will ensure that the spectrum does not lie fallow. After participating in Sonera’s recent 3G trial in Finland, 93% of the trial participants claimed they would use 3G service several times a week and over 50% said they would use advanced wireless services several times a day.<sup>20</sup> Similarly, approximately 72 percent of Japanese cellular telephone owners use their handsets to connect with the Internet.<sup>21</sup> American demand for advanced wireless services is likely to exceed demand in Europe and Asia given that American use of the Internet dwarfs Internet usage in those other regions.<sup>22</sup> In all, the

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<sup>17</sup> “Motorola Chosen to Upgrade Sprint PCS Networks to 3G High-Speed Packet Data Capable,” PR Newswire (Jan. 9, 2001).

<sup>18</sup> American Petroleum Institute Comments at 3.

<sup>19</sup> Consumers in West European countries indicated a willingness to pay more for mobile Internet access. See Emily Bourne, “Survey finds consumers will pay up to E25 for mobile Internet,” TotalTelecom. (Mar. 2, 2001). The CEO of the London consulting firm conducting the studies indicated confidence in consumer demand that will grow over time, stating that “[t]he results we are getting now look very similar to the results we got from mobile voice telephony, in studies carried out between 1992 and 1998.” *Id.* Similarly, in the U.K., Siemens’ studies indicate that “cell-phone users are willing to pay up to 66 percent more than they presently do to access 3G services of their choice.” “3G Survey Indicates Willingness by Users to Pay,” RCRNews.com (Jan. 12, 2001)(available at [www.rcrnews.com/rcr/fetch.php3?id=13365](http://www.rcrnews.com/rcr/fetch.php3?id=13365)).

<sup>20</sup> “Sonera 3G Trials Reveal Most Popular Wireless Services,” New Media Age at p. 14 (Dec. 14, 2000).

<sup>21</sup> See “Wireless Web Fails to Impress,” at Nua Internet Surveys (Feb. 26, 2001)(available at [www.nua.ie/surveys](http://www.nua.ie/surveys)).

<sup>22</sup> See “Digital Economy 2000,” Economics and Statistics Administration, United States Department of Commerce, T. 2.1 (June 2000)(indicating that as of March 2000, there were approximately 136.9 million Internet users in the United States and Canada. At the same time, there were 83.4 million Internet users in Europe and 68.9 million Internet users in the Asia/Pacific region). As of November 2000, it is estimated that there were approximately 167.12 million Internet users in the U.S. and Canada and approximately 113.14 million and 104.88 million Internet users in Europe and the Asia/Pacific region respectively. NUA Internet Surveys at [www.nua.ie/surveys/how\\_many\\_online/index.html](http://www.nua.ie/surveys/how_many_online/index.html).

evidence strongly suggests that advanced wireless services will be -- indeed, already are -- in great demand by American consumers.

Nevertheless, the instant rulemaking does not compel the Commission to choose sides in the battle of competing analyst reports and magazine articles. As a matter of agency tradition, the Commission does not select the winners and losers in the marketplace.<sup>23</sup> Rather, it pursues the more general goal of promoting the efficient and best use of the spectrum by applying a combination of regulatory mechanisms that includes competitive bidding<sup>24</sup> and flexible allocation.<sup>25</sup> The Commission's policies have resulted in a thriving and competitive wireless marketplace that constantly adapts to meet the ever-increasing and changing expectations of U.S. consumers.<sup>26</sup> The Commission should continue to employ its successful and well-tested market-

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<sup>23</sup> See "Technology and Regulatory Thinking: Albert Einstein's Warning," Address of Commissioner Michael K. Powell before the Legg Mason Investor Workshop (delivered March 13, 1998)("[W]e must acknowledge that we cannot accurately predict what technologies and services will ultimately prevail in the marketplace. Regulatory history is filled with examples of failed predications about technological progress. . . . We should not dare to pick technology winners or losers, whether consciously or unconsciously."); see also MTS and WATS Market Structure, CC Docket No. 78-72, Phase I, *Memorandum Opinion and Order*, 102 FCC2d 849 at ¶ 22 (1985)("It would not be appropriate policy making, however, for us to slant our rules to favor firms that we forecast will be 'winners' in the competitive battle and, in effect, write-off other competitors that we forecast will be 'losers.' It is for the marketplace, not this Commission, to determine which competitors will be 'winners' and 'losers.'"); Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147 et al., *Memorandum Opinion and Order, and Notice of Proposed Rulemaking*, 13 FCC Rcd 24011 at ¶ 2 (1998)("The role of the Commission is not to pick winners or losers, or select the 'best' technology to meet consumer demand, but rather to ensure that the marketplace is conducive to investment, innovation, and meeting the needs of consumers.").

<sup>24</sup> See Implementation of Section 309(j) of the Communications Act - Competitive Bidding, PP Docket No. 93253, *Second Report and Order*, 9 FCC Rcd 2348 at ¶ 5 (1994)("In general, competitive bidding is a licensing scheme that should place licenses in the hands of the parties able to use them most efficiently.").

<sup>25</sup> See Gregory L. Rosston and Jeffrey S. Steinberg, "Using Market-Based Spectrum Policy to Promote the Public Interest," 50 Fed. Comm. L.J. 87, 99-103 (Dec. 1997)(explaining the benefits of the FCC's implementation of flexible spectrum allocation policies)("Rosston and Steinberg").

<sup>26</sup> The explosive growth of subscribership to mobile wireless services is evidence of the industry's success in meeting consumer preferences. See Implementation of Section 6002(b) of the Omnibus Budget and Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, Fifth Report, FCC 00-289, at Section I.C. ("In the twelve months ending December 1999, the mobile telephony sector generated over \$40 billion in revenues, increased

based spectrum policies when increasing the ability of carriers to offer mobile wireless advanced services.

### **III. THE COMMISSION SHOULD NOT PERMIT DOUBTS CONCERNING THE PROMISE OF ADVANCED WIRELESS SERVICES TO UNDERMINE ITS MARKET-BASED APPROACH TO SPECTRUM MANAGEMENT.**

The Commission must allocate sufficient spectrum for advanced wireless services. Spectrum management is one of the Commission's core functions.<sup>27</sup> Over time, the Commission's spectrum management policies have evolved based on the recognition that, wherever possible, decisions concerning spectrum should be left to the operation of market forces.<sup>28</sup> By relying on market forces to shape its spectrum management policy, the Commission has been able to ensure that spectrum resources are put to their best and highest use. By seeking and obtaining authority from Congress to auction spectrum, the Commission has been able to award licenses in a market-based manner.<sup>29</sup> The Commission has now conducted more than 30 auctions of spectrum.<sup>30</sup> In addition, the Commission has enabled wireless licensees to engage in

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subscribership from 69.2 million to 86.0 million, and produced a nationwide penetration rate of roughly 32 percent.”).

<sup>27</sup> See 47 U.S.C. §§ 301-337 (describing the Commission's duties with respect to management of domestic radio communication services); see also In re Principles for Reallocation of Spectrum to Encourage the Development of Telecommunications Technologies for the New Millennium, *Policy Statement*, 14 FCC Rcd. 19868, 19870 ¶ 6 (1999) (“Spectrum management is one of the Commission's core functions. This core function would continue unabated despite dramatic changes in the U.S. communications industry. In fact, increasing demand generated by new services in a more competitive environment will make this function increasingly important and more difficult.”) (internal citation omitted).

<sup>28</sup> See In re Principles for Promoting Efficient Use of Spectrum by Encouraging the Deployment of Secondary Markets, *Policy Statement*, FCC 00-401, ¶ 8 (rel. Dec. 1, 2000) (“[I]n general, the best way to realize the maximum benefits from the spectrum is to permit and promote the operation of market forces in determining how spectrum is used.”).

<sup>29</sup> See *id.* ¶ 10 (“The assignment of spectrum through competitive bidding has facilitated more efficient and rapid licensing of spectrum to those who value it most.”).

<sup>30</sup> See *id.* ¶ 10 n. 15.

a number of market-based arrangements with third parties, such as management agreements, joint marketing agreements, roaming agreements, and resale arrangements, without the need for Commission approval.<sup>31</sup> Similarly, it has adopted rules for leasing by ITFS licensees of excess channel capacity to MDS operators on a for-profit basis and by licensees of space stations of transponder capacity in the Fixed Satellite Service, and has introduced the concept of “band manager” licensing for certain bands.<sup>32</sup> The Commission is currently considering wider use of spectrum leasing in order to facilitate a more robust secondary market for spectrum.<sup>33</sup> This preference toward a market-based approach mandates that, with respect to advanced wireless services, the Commission similarly rely on market forces to ensure that new spectrum is utilized for the highest valued services and in the most efficient manner.

The National ITFS Association argues that “the FCC must require proponents of 3G mobile services to demonstrate that existing and future demand justifies the additional spectrum they seek.”<sup>34</sup> The National ITFS Association contends that “proponents [of 3G services] should be required to articulate the extent to which their demand projections, and their service plans, really amount to little more than a desire to provide more mobile voice service.”<sup>35</sup> Other commenters make similar statements about the uncertainty surrounding 3G, questioning the need for additional allocations.<sup>36</sup> If given credence, these statements could return the Commission to

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<sup>31</sup> See id. ¶ 14.

<sup>32</sup> See id.

<sup>33</sup> See In re Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, *Notice of Proposed Rulemaking*, FCC 00-402, ¶ 3 (rel. Nov. 27, 2000).

<sup>34</sup> Comments of the National ITFS Association at 20.

<sup>35</sup> Id.

<sup>36</sup> See Comments of Nucentrix Broadband Networks at 33; Comments of the Ad Hoc MDS Alliance at 3.

the paradigm that guided its early spectrum management decisions, long since outgrown, “under which the Commission actively determined the best use for each block of spectrum and assigned spectrum according to specific criteria.”<sup>37</sup> This model is unsuited to the growth in wireless communications technologies and consumer demand for services that characterize the wireless industry today.<sup>38</sup>

Wherever possible the Commission relies on market forces to allocate spectrum, based on the recognition that “[n]o government agency . . . can reliably predict public demand for specific services or the future direction of new technologies.”<sup>39</sup> The Commission must pursue a broad, predictive inquiry to determine the existence of a general level of demand for spectrum-based services and the likelihood that commercial introduction of such services could occur in a reasonable and timely manner. These questions, however, cannot be answered with certainty nor with the level of detail suggested by the National ITFS Association. Once the Commission ascertains the existence of expectant demand and a reasonable time frame for the technology’s introduction, the agency’s responsibilities are properly fulfilled. It should then adhere to its allocation decision unless it becomes clear and certain that drastic changes warrant reconsideration of its decision. In the present matter, all evidence suggests there will be

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<sup>37</sup> Rosston and Steinberg at 89. As part of this inquiry, the Commission determined “whether any service would be better provided over wireline telecommunications facilities, which services were most important, how many people would benefit from each service, and which services would be most accepted by the public.” *Id.* at 89-90.

<sup>38</sup> Congress and the courts discredited a similar approach by the Interstate Commerce Commission to calibrate intermodal competition. See *ICC v. New York, New Haven & Hartford Railroad*, 372 U.S. 744, 757-758 (1963) (noting Congress’s view that “[t]he Commission . . . had thwarted effective competition by insisting that each form of transportation subject to its jurisdiction must remain viable at all costs and must therefore receive a significant share of the traffic. It had, in the words of one Congressman, become a ‘giant handicapper.’”)(internal citations omitted).

<sup>39</sup> Rosston and Steinberg at 92.

substantial demand for advanced wireless services, and technology to provide these services will be commercially available within a reasonable period of time. To attempt greater refinements to the broad and predictive judgments that inhere in the allocation decision is ill-advised. Such attempts would likely introduce instabilities to the process and render the negative predictions a self-fulfilling prophecy. Thus, the objections of these commenters should not undermine or delay the Commission's decision to allocate additional spectrum for new advanced wireless services, including 3G services.

**IV. UNCERTAINTY CREATED BY THE FAILURE TO PROMPTLY ALLOCATE SUFFICIENT SPECTRUM FOR ADVANCED WIRELESS SERVICES WILL NEGATIVELY IMPACT THE DEVELOPMENT OF 3G AND OTHER ADVANCED WIRELESS SERVICES.**

Allocation of spectrum must occur promptly if the promise of advanced wireless services in the United States is to be realized. The Commission previously has recognized that “[l]icensees should generally have clearly defined usage rights to their spectrum, including frequency bands, service areas, and license terms of sufficient length, with reasonable renewal expectancy, to encourage investment.”<sup>40</sup> A properly-defined market is necessary for market principles to function properly. If the identification of spectrum for advanced wireless services is not certain, potential bidders, equipment manufacturers, and financial investors will be reluctant to invest resources to develop advanced wireless equipment and applications. In addition, the U.S. will be unable to take advantage of the benefits of global harmonization.<sup>41</sup> Through indecision concerning spectrum allocations, the Commission may create disincentives to the development of and investment in advanced wireless spectrum. Therefore, the

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<sup>40</sup> Secondary Markets Policy Statement at ¶ 20.

<sup>41</sup> As discussed below, these benefits include global roaming and manufacturing economies of scale.

Commission's spectrum management duties under the Act require prompt identification of spectrum for advanced wireless services.

Indeed, it is very likely that delay by the Commission in identifying spectrum for advanced wireless services already has contributed to negative public perception concerning the viability of these services.<sup>42</sup> Continued postponement of the establishment of a U.S. policy for advanced wireless services -- including the allocation of sufficient spectrum -- serves only to foster speculation concerning the viability of 3G and other advanced wireless services.<sup>43</sup> As recognized by the Council of Economic Advisors, delay in the introduction of 3G products and services in the United States will be costly.<sup>44</sup> The allocation of more spectrum is needed if U.S. mobile operators are to transition to 3G in an efficient and cost-effective manner.<sup>45</sup> By delaying the identification of appropriate spectrum for advanced wireless services, and thereby creating regulatory uncertainty, the Commission will impede the development advanced wireless services.<sup>46</sup>

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<sup>42</sup> See, e.g., John Sullivan, "Outside Developments Gradually Refine 3G's Focus," *Wireless Insider* (Nov. 13, 2000) ("Spectrum allocation remains very questionable, and the demand for full-blown wireless multimedia among consumers is still unknown. In short, the future of 3G is very unclear at this point.").

<sup>43</sup> *Id.*

<sup>44</sup> CEA Report at 14.

<sup>45</sup> *Id.* at 13. CEA explains that given the need to replace capital equipment to accommodate advanced wireless services and the physical capacity limitations of the current mobile spectrum allocations, "the provision of additional spectrum for high-speed applications should be considered a cost reduction for mobile data services." *Id.*

<sup>46</sup> *Id.* ("Uncertainty itself can also cause firms to delay investments and hinder the diffusion of new technologies.").

**V. THE COMMISSION SHOULD PURSUE GLOBAL HARMONIZATION ONLY TO THE EXTENT THAT IT WILL NOT DELAY THE ALLOCATION OF SPECTRUM FOR ADVANCED WIRELESS SERVICES IN THE NEAR TERM.**

CTIA agrees with those commenters who urge the Commission to allocate spectrum for advanced wireless services consistent with decisions made internationally.<sup>47</sup> Global harmonization will lead to important benefits, such as global international roaming.<sup>48</sup> Also, harmonization will permit manufacturers, providers, and consumers to benefit from economies of scale for wireless equipment.<sup>49</sup> While global harmonization is the optimal approach, the Commission must restrain itself from allowing the perfect to be the enemy of the good. Thus, while the Commission attempts to achieve the very worthy goal of global harmonization, it is not necessary or prudent to delay allocation of spectrum for advanced wireless services in order to completely harmonize U.S. allocations with international allocations.<sup>50</sup> The Commission is well aware of the challenges that such a task entails, particularly when such efforts involve reconciling differences in the existing allocations held by incumbents in the U.S. and internationally. Addressing such challenges, however, should not delay the advent of new

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<sup>47</sup> See Motorola Comments at 18; AT&T Wireless Comments at 8; Nortel Networks Comments at 6; Qualcomm Comments at 12; VoiceStream Comments at 1-2.

<sup>48</sup> AT&T Wireless Comments at 8 (urging “the use of at least some of the same bands domestically and internationally for second and third generation services” to promote use of a single hand set in the U.S. and internationally).

<sup>49</sup> Motorola Comments at 18 (noting that “[t]he importance of harmonization goes beyond global roaming . . . the bigger issue is the resulting savings in equipment costs through economies of scale and ensuring that advanced services are available and deployed as quickly as possible”).

<sup>50</sup> See Cingular Comments at 11-12 (“It is of paramount importance that the deployment of 3G technologies and services in the United States not be compromised for the purpose of pursuing rudimentary harmonization that ultimately may take years to happen.”); see also Qualcomm Comments at 12 (The Commission should “attempt to harmonize [its spectrum allocations] to the greatest extent possible with other countries.”).

wireless services.<sup>51</sup> Nevertheless, as the Commission approaches the ideal of global harmonization, a component of this effort will involve an aggressive and energetic attempt to convert military spectrum in the 1710-1850 MHz and 2110-2160 MHz bands to civilian use as quickly and thoroughly as possible. By pairing these bands, the spectrum can be used more efficiently to provide advanced wireless services. Moreover, the Department of Defense already is sharing spectrum in these bands outside of the United States, and as these bands are harmonized on a global basis for 3G wireless services, the United States military will be forced to migrate out of these bands throughout the world.

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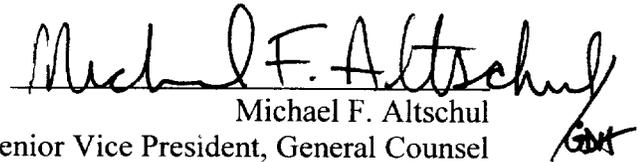
<sup>51</sup> It bears emphasis that the Commission must not rely on technologies such as Software Defined Radios to accomplish global harmonization goals. The wireless industry continues to actively research and develop technological capabilities to increase spectral efficiency. But, reliance on such technological solutions is misplaced in the short to medium term. Moreover, technological harmonization solutions continue to involve interference issues with adjacent bands, involve substantial costs, and are likely to necessitate larger equipment sizes that will lessen consumer demand for the underlying services.

**VI. CONCLUSION**

For the foregoing reasons, CTIA respectfully requests that the Commission proceed without delay to allocate additional spectrum for advanced wireless services and to approach the ideal of global harmonization of the bands in such a manner that does not slow or thwart the introduction of advanced wireless services in the United States.

Respectfully submitted,

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