

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Spectrum Policy Task Force Seeks Public	)	ET Docket No. 02-135
Comment on Issues Related to Commission's	)	DA 02-1311
Spectrum Policies	)	
	)	

**EX PARTE COMMENTS OF AT&T WIRELESS SERVICES, INC.**

Pursuant to the Spectrum Policy Task Force's Public Notice, AT&T Wireless Services, Inc. ("AWS") hereby submits its ex parte comments in the above-captioned proceeding.<sup>1/</sup>

**INTRODUCTION AND SUMMARY**

The Task Force has been charged with conducting a systemic evaluation of existing spectrum policies and making recommendations as to possible improvements. In order to begin this process, the Notice puts forth a broad range of questions. Rather than attempting to answer each question, AWS will address certain fundamental issues that it believes should be the focus of the Task Force's reform efforts.<sup>2/</sup>

While AWS generally supports a more deregulatory approach to spectrum management, market forces alone should not dictate spectrum allocation and assignment decisions. The Federal Government must ensure that spectrum is put to its highest and best use and used efficiently; define the rights of licensees; and prevent interference among users. These are areas

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<sup>1/</sup> *Spectrum Policy Task Force Seeks Public Comment on Issues Related to Commission's Spectrum Policies*, ET Docket No. 02-135, *Public Notice*, DA 02-1311 (June 6, 2002) ("*Notice*").

<sup>2/</sup> AWS looks forward to participating in the upcoming workshops the Task Force has scheduled to address certain spectrum policy issues in more detail. *Spectrum Policy Task Force Announces Public Workshops on Issues Related to Commission's Spectrum Policies*, ET Docket No. 02-135, *Public Notice*, DA 02-1643 (July 10, 2002).

in which AWS believes that the Commission's efforts to reform its spectrum policies could be most effective.

AWS believes that other issues raised in the Notice should be left to other, more focused proceedings. For example, the questions posed in the public safety section of the Notice are critically important to improving the Nation's public safety communications, but should be addressed in a more comprehensive way, such as in the Commission's ongoing proceeding to improve public safety communications in the 800 MHz band.<sup>3/</sup>

## **DISCUSSION**

As the Commission investigates the issues raised in the Notice, AWS believes that it must consider how all these subjects will fit together in the broader, longer-term spectrum management context. There is widespread agreement that the current spectrum management process is broken and in serious need of repair.<sup>4/</sup> The discussion below highlights several areas in which improvements could be made to improve spectrum policymaking.

### **I. Allocation and Assignment Policies**

The Notice notes that the Commission has been adopting policies aimed at transitioning toward a more market-oriented approach to spectrum allocation and assignment in an effort to facilitate optimal spectrum use. AWS believes that the current process of allocating spectrum to broad categories of use can work well, as long as spectrum users and manufacturers have sufficient legal and technical certainty to develop long-term business plans. Recent proceedings involving spectrum for advanced wireless services and unlicensed ultra-wideband devices also

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<sup>3/</sup> See *Improving Public Safety Communications in the 800 MHz Band*, WT Docket 02-55, *Notice of Proposed Rulemaking*, FCC 02-81 (rel. Mar. 15, 2002).

<sup>4/</sup> See *Private, Government Spectrum Users Urge Long-Term, Market-Based Planning*, TRDaily, April 5, 2002.

have exposed several flaws in the way the allocation process is managed. Allocation policies must be forward-looking, comprehensive and not constrain successful, expanding services.

**A. Appropriate Use of Market-Oriented Allocation and Assignment Processes**

**Allocation.** The process of allocation is the critical first step in determining how a particular band of spectrum will be used and, if done correctly, allows manufacturers and potential licensees to plan for its efficient use. In the past, bands of spectrum were allocated to very specific services, which resulted in spectrum that was allocated for successful services becoming overused and congested, while other allocations were unused or used inefficiently. Over time, the Commission and the International Telecommunication Union (“ITU”) have moved to more general allocations that provide users with flexibility to provide services within broad categories. As part of a properly structured spectrum management policy, flexible allocations for new licensees can prevent inefficient use of spectrum and encourage innovation and the rapid deployment of new services.<sup>5/</sup>

Flexibility alone, however, is not a substitute for sound spectrum management policies, and grants of flexibility cannot be unlimited. Particular bands are most suitable for certain services and should be preserved for those services, and “flexible” uses that would interfere with or otherwise hinder other licensees’ use of their spectrum should not be permitted. Appropriate interference and other restrictions are also necessary to provide manufacturers and licensees with the certainty they need to develop long-term business plans. Without such certainty, market mechanisms cannot function effectively. “Markets don’t exist in vacuums. They depend on laws, regulations, self-regulation, norms, standards and values.”<sup>6/</sup> If the allocation process is

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<sup>5/</sup> See *Notice*, question 2.

<sup>6/</sup> Daniel Yergin, *Herd on the Street: A Quarterly Stampede*, Washington Post, June 30, 2002, at B5.

turned completely over to market forces -- sometimes called “allocation by auction” -- it could lead to chaos. A variety of incompatible services and users could be authorized in the band, which could delay implementation or severely constrain deployment as interference issues and other issues are worked through. Such uncertainty also can prevent the Commission from realizing the true value of the spectrum, as the Wireless Communications Services (“WCS”) auction underscored. The WCS spectrum was auctioned in April 1997 with flexible rules for its use by licensees,<sup>7/</sup> but the auction generated little interest from bidders and a precious resource was essentially given away.<sup>8/</sup> By contrast, the Commission’s decision to authorize providers of broadband Personal Communications Services (“PCS”) to offer either fixed or mobile services has given PCS licensees the flexibility to respond to changing market conditions and advances in technology.

In deciding when and how to apply flexibility, AWS notes that the Commission already has a basic set of requirements governing flexible use. Section 303(y) of the Communications Act permits the Commission to provide for such “flexibility of use” only if it makes an affirmative finding after public notice and comment that flexibility will further the public interest, will not deter investment in communications services and systems, and is consistent with international treaties.<sup>9/</sup>

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<sup>7/</sup> See FCC Auctions website, <http://www.fcc.gov/wtb/auctions/> (“WCS spectrum may be used for any fixed, mobile, radiolocation or broadcast-satellite (sound) use consistent with the international agreements concerning spectrum allocations, and subject to the technical rules of Part 27, Title 47 of the Code of Federal Regulations.”).

<sup>8/</sup> See *WCS Auction Closes; Winning Bidders in the Auction of 128 Wireless Telecommunications Service Licenses, Public Notice*, 12 FCC Rcd 21653 (1997).

<sup>9/</sup> 47 U.S.C. § 303(y).

In order to satisfy these requirements, flexibility should be granted only on a prospective basis.<sup>10/</sup> Retroactive grants of flexibility to incumbents infringe on other incumbent users' rights, degrade the value of spectrum by injecting uncertainty regarding the rights that may be acquired at auction, and make long range planning extremely difficult. A request for retroactive flexibility often suggests that the incumbent licensee is not putting the spectrum to its highest and best use, in which case the appropriate response is to reclaim the spectrum in question, reallocate it, and assign it through competitive bidding. The Commission should not use retroactive flexibility as substitute for adopting and enforcing sound spectrum management policies or as a way to prop up failed services or business cases. Moreover the Commission must distinguish between valid requests for ancillary authority and surreptitious attempts at private reallocation.<sup>11/</sup>

**Reallocation.** Because the spectrum is now almost fully allocated, the Commission will be faced more often with decisions about reallocating spectrum, *i.e.* removing it from a technically, socially, or economically inefficient use and making it available to users who will put it to its highest and best use. Spectrum that is being fully, effectively, and efficiently used clearly should not be reallocated. Licensees that utilize their spectrum efficiently and otherwise comply with the terms of their licenses should have an expectation that the spectrum usage right they have been granted will not be diminished during their license term. In particular, spectrum licensees who obtained their licenses at auction bid based on their expectations about what they would be receiving. This type of regulatory certainty is critical for making sound investment and business decisions.

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<sup>10/</sup> Notice, question 2.a.

<sup>11/</sup> Cf. Comments of AT&T Wireless Services, Inc., IB Docket No. 01-185, ET Docket No. 95-18, at 2, 5 (filed Oct. 22, 2001) (explaining that allegedly “ancillary” terrestrial use rights sought by MSS operators are in fact separate allocation for which any interested party should be able to compete through an auction).

On the other hand, if a licensee is not using its spectrum, the Commission's rules are quite clear that spectrum must be returned to the Commission for reassignment.<sup>12/</sup> Similarly, if a given radio service is not able to make full use of the spectrum allocated to that service, that spectrum should be reclaimed by the Commission as quickly as possible, reallocated, and redistributed for others to use. For example, licensees of the mobile satellite service ("MSS") have admitted the futility of their business plans.<sup>13/</sup> The Commission therefore should reallocate at least a portion of this band for terrestrial use and license this spectrum through an auction open to all interested bidders.<sup>14/</sup>

In the case of MSS spectrum in the 2 GHz band as well as in other cases requiring the Commission to determine whether to reallocate spectrum, the Commission should be guided by the market. Markets are quite good at determining winners and losers and identifying when a business has failed. The Commission should not be in the business of propping up failed licensees or industries, and it should not continually change service rules in the hopes of hitting

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<sup>12/</sup> See, e.g., 47 C.F.R. § 22.946 (automatic termination for failure to construct facilities and begin providing service by date certain); 47 C.F.R. § 90.155(a) (automatic termination for failure to construct and place into operation private land mobile station within eight months from date of grant); 47 C.F.R. § 24.203(a) (automatic expiration of PCS license for failure to timely construct); 47 C.F.R. § 1.946(c) (automatic termination for failure to timely commence service or meet coverage or substantial service requirements in each wireless radio service).

<sup>13/</sup> See Letter from Lawrence H. Williams, New ICO Global Communications (Holdings) Ltd. to FCC Chairman Michael Powell, Mar. 8, 2001, at 1-2 ("[D]ue to the failures of early MSS projects and the instability of the telecom and satellite financial markets," the viability of the MSS industry "is in dire jeopardy") (emphasis omitted); *id.* at 3-4 (describing the financial woes of various MSS providers); *In the Matter of Motient Services, Inc. and Mobile Satellite Ventures Subsidiary, LLC for Assignment of Licenses and Authority to Launch and Operate a Next-Generation Mobile Satellite Service System*, File No. SAT-ASG-20010302-0017, at 12-13 (filed Jan. 16, 2001).

<sup>14/</sup> See *In the Matter of Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Band; Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile Satellite Service*, IB Docket No. 01-185, ET Docket No. 95-18, *Notice of Proposed Rulemaking*, 16 FCC Rcd 15532 (2001).

upon a winning service that would allow incumbents to survive. Failure should not be rewarded. Instead, the Commission should reallocate unused or underutilized spectrum, consistent with its duty to exercise its spectrum management authority responsibly and maximize efficient use of spectrum. A commitment to reallocating underutilized spectrum must be an integral part of any well-considered, comprehensive spectrum management policy.

**Assignment.** Once spectrum has been appropriately allocated or reallocated, AWS believes that market mechanisms should continue to be used as the primary method for assigning licenses. As the Commission has repeatedly recognized by its reliance on auctions,<sup>15/</sup> grant of licenses through a system of competitive bidding provides numerous public benefits, including “speed[ing] the development and deployment of new services . . . and encourag[ing] efficient use of the spectrum” by placing licenses in the hands of “those parties who value them most highly” and are therefore most likely to “introduce service rapidly to the public.”<sup>16/</sup>

The Commission also has noted that auctions promote innovation by leaving delicate and ever-changing determinations regarding the likelihood of success of new products or technologies to the market rather than to a well-intentioned but inflexible and distant regulatory

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<sup>15/</sup> Services that have been auctioned include: (1) narrowband and broadband Personal Communications Services; (2) Public Mobile Services; (3) 218-219 MHz Service; (4) Specialized Mobile Radio Services; (5) Private Carrier Paging Service; (6) General Wireless Communications Service; (7) Local Multipoint Distribution Service; (8) Wireless Communications Service; (9) Digital Audio Radio Service; (10) Direct Broadcast Service; (11) 220-222MHz radio service; (12) Location and Monitoring Service; and (13) VHF Public Coast Stations. *Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended*, 14 FCC Rcd 5206 ¶ 8 (1999). The Commission has also completed its auction of the 700 MHz Guard Band and has announced upcoming auctions of (1) 700 MHz Band, (2) Limited Low Power Television, and (3) 24 GHz Band (“DEMS”).

<sup>16/</sup> *Implementation of Section 309(j) of the Communications Act -- Competitive Bidding*, 9 FCC Rcd 2941 ¶ 6 (1994).

mechanism.<sup>17/</sup> Finally, relying on the market for licensing decisions frees regulatory and industry resources that would otherwise be devoted to such determinations, and directly compensates the public for use of a very scarce and valuable asset.<sup>18/</sup> Both Congress and the Commission have emphasized that, whenever possible, the market is far better than regulators at distributing resources efficiently, encouraging productive technological innovation, and governing market development.<sup>19/</sup>

**Market Failures.** As the Task Force recognizes,<sup>20/</sup> an allocation and assignment process that relies on market forces may not work in certain circumstances. When such market failures can be reliably predicted, it may be appropriate to modify the standard allocation and assignment process in order to achieve other goals, such as setting aside public safety spectrum and exempting public safety service providers from auction requirements in order to ensure that such

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<sup>17/</sup> See *Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended*, 14 FCC Rcd 5206 ¶ 7 (1999).

<sup>18/</sup> See *id.*

<sup>19/</sup> See *Deployment of Wireline Services Offering Advanced Telecommunications Capability*, 13 FCC Rcd 24011, 24014 (1998) (asserting that the Commission's role "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."); *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 Telecomm. Act of 1996*, 14 FCC Rcd 2398 ¶ 5 (1999) (noting that the Commission's role is not to select technological winners and losers and that it "intends to rely as much as possible on free markets and private enterprise"); *In the Matter of Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets*, Policy Statement, 15 FCC Rcd 24178 ¶ 8 (2000) ("[T]he 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"). Cf. H.R. 2264, 103d Cong., 139 Cong. Rec. H3088 (1993) (enacted) (finding that "a carefully designed system to obtain competitive bids from competing qualified applicants can speed delivery of services, promote efficient and intensive use of the electromagnetic spectrum, prevent unjust enrichment and produce revenues and produce revenues to compensate the public for use of the public airwaves"); H.R. Conf. Rep. No. 103-213, at 481 (1993), *reprinted in* 1993 U.S.C.C.A.N. 1088, 1173 (incorporating such findings by reference).

services are available. In these limited cases, however, rules must be established to ensure that issues normally addressed by the discipline of the market are adequately and fairly regulated by the Commission. For example, incentives -- whether market-based or regulatory -- must exist to encourage the efficient use of spectrum by all users.

### **B. Long Term Planning and Interagency Coordination**

Although the Commission's more flexible allocation process can work well, recently it has been undermined by the reactive and piecemeal manner in which it has been applied. The recent debate over additional spectrum for next generation commercial wireless services is an example. Although the need for more spectrum for such services has been well-known for many years, the current spectrum allocation and management process has so far been unable to deliver resources to one of the most dynamic parts of the U.S. economy. It is AWS' belief that with proper management and planning, such problems can be solved.

In this regard, two overarching issues -- one procedural and one structural -- need to be addressed. First, the current spectrum allocation process is primarily reactive, which results in ad hoc decision-making and inconsistent treatment of services, making it difficult for spectrum-dependent businesses and other spectrum users to make long term plans. The Commission should immediately adopt a forward-looking process for managing the spectrum resource that identifies long term goals and establishes short term plans to realize those goals based on both domestic priorities and international considerations. Under one such proposal, the U.S. government would use a "rolling" spectrum planning process that would include both long-term (perhaps ten year) goals for spectrum use, as well as more concrete short-term plans (perhaps every three years) to achieve those goals through specific allocation decisions. The policies

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<sup>20/</sup> See Notice, question 4.

developed as a result of the Task Force's efforts could serve as the initial inputs into both the longer-term goals and the shorter-term plans.

Second, the questions posed in the Notice, while comprehensive, only apply to part of the spectrum -- that allocated for private sector and state and local government use -- and not to the large amount of spectrum currently allocated for use by the Federal Government and regulated by the National Telecommunications and Information Administration ("NTIA"). In the past, the problems associated with this structural separation may have been manageable, but as demand for spectrum has increased, conflicting requirements and a lack of coordination have led to sub-optimal and slow allocation decisions. At the same time, however, the spectrum allocation and assignment policies of the two agencies have become inextricably intertwined; in large part as a result of Congressional directives to reallocate spectrum used by the Federal Government to commercial use.<sup>21/</sup> Consequently, if spectrum planning is to be truly effective, it must comprehensively address *all* the spectrum. To ensure that the spectrum policies of the Commission and the NTIA are integrated and consistent, a more effective coordination process must be established between the two agencies. A number of options have been proposed over the years, including better coordination within the existing divided structure, establishment of an interagency planning organization, establishment of a high-level group to oversee both the Commission and NTIA, and combining the spectrum management functions of the Commission and NTIA in a single organization. While AWS believes that the agencies' recent attempts to improve coordination have shown much promise, AWS remains concerned that their structural separation could lead to diverging interests and conflicting policies in the future. To avoid such

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<sup>21/</sup> See, e.g., Omnibus Budget Reconciliation Act of 1993, Pub. L. 103-66, 107 Stat. 312 (1993); Balanced Budget Act of 1997, Pub. L. 105-33, 111 Stat. 251 (1997).

a result, each of the approaches outlined above should be examined more carefully as part of a larger overhaul of the U.S. spectrum management process.

**C. Spectrum Policies That Vary by Band or Geographic Area<sup>22/</sup>**

The Commission should not adopt different spectrum allocation and assignment policies for different portions of the spectrum or different geographic regions. Such an approach would be fraught with logistical difficulties and would enshrine uncertainty in the regulatory process. It also would impose unacceptable burdens on spectrum users and the Commission itself. The definition of what is a “rural” area or a “congested” band inevitably will change over time. Not long ago, only the spectrum below 2 GHz was considered congested, whereas now everything below 3 GHz is considered congested. In addition, as the Notice recognizes, any rules governing particular bands of congested spectrum would be linked inextricably to geographic area because “congested” spectrum is not congested everywhere. Accordingly, the Commission would be forced to constantly evaluate each region and each spectrum band, and institute a proceeding to make changes when necessary. Licenses for affected areas or bands would have to be changed accordingly, and incumbent users could be subjected to new regulations. Subjecting spectrum users to constantly changing regulations would give them no certainty with which to plan and invest.

Finally, because regulation would vary based upon the spectrum band or geographic area in which service was provided, this approach would be inconsistent with Congress’s decision to treat like services alike.<sup>23/</sup> While different frequency ranges may have different technical characteristics that require different technical parameters, such as power limits that take into

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<sup>22/</sup> See *Notice*, question 3.

<sup>23/</sup> See Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66, § 6002(b)(2)(A), 107 Stat. 312, 392 (1993).

account the fact that radio waves propagate farther in lower bands, spectrum allocation and assignment policies should be the same no matter where a service is located.

#### **D. Secondary Markets**

The Commission's policy statement on secondary markets was a welcome indication of the Commission's commitment to relying on market forces rather than regulation to govern spectrum distribution whenever possible.<sup>24/</sup> Although no substitute for the adoption of a comprehensive spectrum policy including the reallocation of underutilized spectrum for more pressing needs, robust secondary markets would provide licensees with substantially more control over their economic fates and allow them to take some action to resolve problems stemming from spectrum scarcity in particular areas. Wireless carriers to date have been unable to take full advantage of potential opportunities to trade or sell spectrum in such secondary markets because the Commission has not yet clearly defined the regulatory scheme -- particularly licensees' rights and obligations -- that would govern participation in such markets. Secondary spectrum markets will not become a truly useful tool until the Commission adopts clear rules that will allow licensees, investors, and others to make informed, rational economic decisions without the need to overcome superfluous regulatory barriers.<sup>25/</sup>

#### **II. Interference Protection**

The Task Force asks whether new definitions of "interference" and "harmful interference" are needed, and whether incumbents require more explicit protections from harmful

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<sup>24/</sup> See generally *Principles for Promoting the Efficient Use of Spectrum By Encouraging the Development of Secondary Markets*, Policy Statement, FCC 00-401 (rel. Dec. 1, 2000).

<sup>25/</sup> For example, while AWS believes licensees today are permitted to lease spectrum if no transfer of control occurs, additional guidance from the Commission likely would make spectrum leasing a more viable option.

interference.<sup>26/</sup> As the spectrum becomes increasingly congested and incidents of interference become increasingly common, it is very important for the Commission to ensure that users -- both licensed and unlicensed -- have clearly defined rights and obligations relating to interference. To provide such clarity, the Commission should thoroughly examine the potential interference that may result from any grant of flexibility, whether prospective or retroactive, and define more explicitly the interference rights and obligations of both incumbent and new spectrum users.

**A. Relationship Between Interference and Increased Flexibility<sup>27/</sup>**

As noted above, while flexibility can be beneficial for new licensees, granting flexibility to existing licensees creates numerous problems. In particular, a grant of retroactive flexibility will create an entirely new interference environment that may not be well understood and that will affect both in-band and adjacent band users. Thus, a critical component of determining whether the public interest will be served by any grant of flexibility is a thorough examination of the potential interference the new “flexible” use or service will cause to other existing services. To the extent that new flexible services will be provided using, for example, significantly different power levels, modulation techniques, or system architectures, a comprehensive interference analysis would be needed in order to ensure that harmful interference will not be caused to the existing users and that more efficient future operations are not constrained.

Three different types of interference should be analyzed prior to, and as a prerequisite for, any grant of additional flexibility: (1) interference between licensees offering newly flexible services and those continuing to offer traditional services within the same band; (2) interference between licensees offering newly flexible services and those in adjacent bands; and (3) the effect

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<sup>26/</sup> See Notice, questions 7 and 9.

that interference caused by licensees offering newly flexible services would have on existing agreements with Canada and Mexico regarding cross-border interference. In each of these situations, the potential interference created by newly flexible services will need to be analyzed to determine whether appropriate mitigation or avoidance techniques can be used or whether the newly flexible services will cause irreparable interference to existing licensees, in which case flexibility should not be granted.

**B. Defining Interference Protection Rights<sup>28/</sup>**

As the Commission correctly notes, the spectrum is becoming increasingly congested and incidents of interference, in general, are on the rise. In this environment, the Commission needs to define more explicitly the rights and obligations users -- both licensed and unlicensed -- have regarding interference protection over the long term. Licensees who acquired their licenses at auction bid based on the technical and service rules in place at the time, and expected to have a stable interference environment going forward. These expectations were the basis for not only the amount of money bid for the license, but also the system design and engineering that went into deploying an efficient system. If it turns out that these expectations were unfounded because of a lack of clarity about exactly what rights the licensee has to interference protection, millions or even billions of dollars of investment would be put at risk. Unless bidders have confidence that the licenses for which they are bidding will be governed by a hard and fast set of interference rules for the duration of the license, auction participation and investment in new networks and services will lag.

When defining interference protection rights, the Commission should make it clear that under no circumstances will an incumbent user be forced to mitigate interference caused by the

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<sup>27/</sup> *Id.*, question 8.

introduction of a new service to the band where it is currently operating. In some cases, such as with ubiquitous unlicensed devices, it may not be possible for the incumbent to mitigate interference without great cost. Networks may have to be reengineered, new transmitting sites acquired, and new equipment purchased. Moreover, adding new sources of interference to an incumbent's band could constrain its technical and service options going forward, limiting flexibility and undermining the terms of the original license. Depending on the degree of harm the interference causes to the incumbent, such a modification could result in a regulatory taking,<sup>29/</sup> violate section 316 of the Communications Act,<sup>30/</sup> or, in the case of a license obtained at auction, cause the government to be liable for damages for breach of contract.<sup>31/</sup> The Commission historically has required new licensees to provide interference protection to incumbents, and this policy should be clarified and incorporated in the Commission's rules.<sup>32/</sup>

With regard to interference protection rights more generally, AWS believes that it may be possible to establish a "menu" of different interference rights, addressing the complete range of interference issues, including for example, noise floor limits and out of band emissions. The

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<sup>28/</sup> *Id.*, question 9.

<sup>29/</sup> See *Penn Central Transp. Co. v. City of New York*, 438 U.S. 104, 124 (1978) (articulating test for whether regulatory action is regulatory taking).

<sup>30/</sup> 47 U.S.C. § 316 (requiring Commission to comply with certain procedures before modifying license).

<sup>31/</sup> See Comments of Sprint Corporation, ET Docket No. 02-135, at 10-11 (filed July 8, 2002).

<sup>32/</sup> See, e.g., *Lower and Upper Paging Bands Auction Scheduled for June 26, 2001*, 16 FCC Rcd 7675 (2001) at 6-7 (citing interference protection new licensees must provide to incumbent licensees); *Auction of Licenses for Fixed Point-to-Point Microwave Services in the 38.6 to 40.0 GHz (39 GHz) Band*, 15 FCC Rcd 850 (2000) at 9 (same); *Auction of 800 MHz Specialized Mobile Radio Service Licenses*, 13 FCC Rcd 1875 (1997) at 3-4 (same); *Amendment of Parts 21 and 74 of the Commission's Rules with regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service*, 10 FCC Rcd 9589 at ¶¶ 56-58 (rule making adopting interference protections for existing licensees with respect to new MDS licenses to be auctioned).

specific rights and obligations to be assigned to particular users (licensed and unlicensed) would then be chosen from this menu when service rules are established. For example, more stringent interference protection rights may be required for sensitive services. If specific additional rights are required for a particular band, they can be added to the menu at the same time.

In addition, AWS also notes the importance of separating the concept of interference protection “rights” from the actual interference parameters that ensure that the spectrum users’ rights are not violated. The Commission must first define the interference protection rights to which a user is entitled, i.e., the specific expectations and obligations that the user has with regard to its assigned spectrum. The Commission would then adopt parameters, i.e. assign band-specific numbers or other criteria to be used in judging if and when a user’s rights have been violated. Under this approach, a general set of rights would be identified in Part 1 of the Commission’s rules, while the specific parameters would be included in the specific rules for each service.

**C. Differences in Interference Rights Between Incumbent and New Spectrum Users<sup>33/</sup>**

While the Commission needs to make its interference protection rules more clear, AWS does not believe that the Commission can revise all its rules governing all its services and users, both incumbent and new, at one time because that process would take years if not decades. Other than clarifying the fundamental right of incumbents to protection from interference from new services or users, the Commission should begin this process with the rights of new users going forward. Once more specific interference protection rights have been defined in that context, they can then be applied to existing services, users, and devices, when necessary. In some cases, when new services are identical to existing services, it may be possible to

immediately insert the newly developed interference rights and protections into the existing rule part so that all licensees benefit from the new rights. In other cases, new interference rules and rights may have to be developed for existing services in a later proceeding. Not all existing rules governing interference will have to be revised. For example, the rules governing interference between CMRS carriers<sup>34/</sup> generally work well to prevent and mitigate interference, although there may be occasional problems between specific licensees.

The Commission's goal as it defines these new interference rights should be to keep the rights as similar as possible for like services. However, beginning this process with new services and new licensees means that there may be differences between the interference rights of incumbents and new spectrum users in some cases. Done correctly, however, AWS believes that such differences will not create significant technical or competitive distortions between users and licensees providing similar services. Incumbent users can continue to use the current regulatory process to resolve interference issues, while the new interference rules will provide new spectrum users with greater certainty and similar levels of protection. Bringing all users under the same set of rules should be a priority for the Commission.

Given the technical and legal complexities of more precisely defining interference rights - in addition to the usual engineering issues -- the Commission will likely have to step up its compliance and enforcement efforts. On the technical side, the Commission's lab should be capable of testing new products quickly, reliably and thoroughly. Perhaps more importantly, the Commission's field operations units must have adequate resources, including trained personnel and state-of-the art equipment to identify and evaluate alleged cases of interference. On the legal

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<sup>33/</sup> *See Notice*, question 13.

side, the Commission will need to prepare for a period of rulings, interpretations, clarifications, and revisions when the new definitions of interference rights are initially put into practice.

**D. Evolving Definitions of Unacceptable or Harmful Interference<sup>35/</sup>**

Consistent with the above discussion, the Commission must be very careful about redefining “harmful” interference every time technology changes. Certainty about and, more importantly, control over the interference environment is critical for licensees who will invest millions or billions of dollars building out their systems, whether they are private, public, or commercial spectrum users. Regulatory certainty provides a stable environment within which licensees can make informed investment decisions, while changes to the interference environment could force changes in system design, equipment purchases, and the pace of build out, all of which could impose high costs on licensees. As set forth above, under no circumstances should interference rules be changed in a way that allows additional interference into an incumbent’s licensed spectrum. Moreover, given the complex and extremely technical nature of these issues, which potentially will differ from service to service, site to site, and even user to user, engaging in ongoing reassessments of interference issues would impose an enormous drain on the resources of both the Commission and spectrum users.

**III. International Issues**

**A. Effect of International Considerations on the Spectrum Policy of the United States<sup>36/</sup>**

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<sup>34/</sup> See, e.g., 47 C.F.R. § 22.913 (establishing effective radiated power limits for the cellular radiotelephone service); 47 C.F.R. § 24.232 (establishing power and antenna height limits for the broadband personal communications service).

<sup>35/</sup> See *Notice*, question 12.

<sup>36/</sup> *Id.*, question 25.

The Commission and other policymakers in the United States must recognize that domestic spectrum policymaking exists in an international context. Unless the United States more closely integrates its domestic and international spectrum policy efforts, it will find itself increasingly out of step with the rest of the world. Such an outcome is undesirable for two primary reasons.

First, the United States risks further eroding its influence in international telecommunications fora. The United States continues to be a key leader in international telecommunications policymaking, but in the last decade European and Asian countries have been steadily increasing their power. As a result, it has become increasingly difficult for the United States to impose its views on the rest of the world. In addition, too often in the past, the United States has taken positions domestically that are inconsistent with decisions made at the international level through the ITU. The United States' unwillingness to compromise and its fluctuating positions (appearing to agree to something at a World Radio Conference ("WRC"), only to adopt a conflicting domestic policy later), has eroded its credibility. Unless the United States makes a better attempt to harmonize its policies and allocations with those of the rest of the world, the United States' influence will continue to decline as its isolation increases.

Second, and more importantly, consumers and businesses in the United States have suffered from this isolated approach to spectrum policy. While the United States was once the largest market in the world for spectrum-dependent technology and services -- and able to command manufacturers' attention first -- that is no longer the case. As other countries made use of globally harmonized frequencies, for second generation cellular systems for example, manufacturers focused on those bands first. The change in the market is evident to anyone who has been in a mobile phone store overseas, where there are a wealth of handsets with various

features that are not available in the United States. Use of non-harmonized frequencies leads to a loss of economies of scale and scope, which in turn lead to higher costs and production delays. It has been estimated that advanced features do not become available to consumers in the United States until two years after such features have become available in other parts of the world. Similar delays plague U.S. companies, which must wait as new technologies are developed first in Europe and then eventually rebanded for use in the United States. Lack of harmonization is also the primary reason that international roaming remains inconvenient and difficult for U.S. consumers. If harmonized spectrum were available in the United States, more international roaming would occur and more roaming revenues would be produced.

The United States must find a better way to balance domestic interests with international considerations. Certainly, U.S. policy and the positions the United States takes at international meetings must reflect the United States' priorities. However, the United States needs to make more of an effort to integrate its policies with those of the rest of the world. If the United States takes the position that only its views are correct, the traditional U.S. approach, it will continue to suffer from isolation, higher costs, and difficult roaming. If, however, it can take the decisions made in international fora and apply them domestically, benefits will accrue.

These principles should be applied during the preparation process for WRCs, which are the key intersection of domestic and international spectrum policymaking. To improve preparations for and success at future WRCs, AWS also believes that two issues need to be immediately addressed.

- 1) Planning. Based on the domestic planning process proposed above, the United States should be able to formulate more effective and forward-looking international positions to take to the WRCs. By setting goals and developing specific plans in advance, the United States

will be better able to develop integrated, harmonized proposals with a longer lead time to “sell” them overseas.

2) Preparation. The WRC preparation process needs to be standardized. Preparation for WRCs takes several years -- to formulate preliminary views, explore other countries’ positions, and finally, to develop proposals that reflect consensus in the United States. In the past, such preparations have been criticized as being “too little, too late” and domestic debates on contentious issues have dragged on almost to the start of the WRC itself. If the United States is to be successful at future conferences, adequate time has to be provided to prepare. Preparation for WRC-03 has already been under way for almost two years and many issues have already been resolved. AWS believes that these preparations may serve as a model for future conferences.

**B. Effect of the ITU Spectrum Allocation Process on Domestic Spectrum Policies<sup>37/</sup>**

The ITU’s allocation process plays a critical role in ensuring the coordinated and harmonized use of spectrum around the globe. Without such a process, the use of spectrum would be ad hoc and vastly different from country to country with extremely negative results. Just as occurred in the United States before the advent of the Commission, multiple users would compete for the same spectrum, each attempting to literally overpower the other. Interference would be unmanageable, and in the extreme case, the most heavily used portions of the spectrum could become essentially unusable -- a tremendous waste of a valuable public resource.

The ITU allocation process itself neither impedes nor facilitates the development of domestic policies, but merely helps establish the context within which spectrum decisions in the

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<sup>37/</sup> *Id.*, question 27.

United States are made.<sup>38</sup> The allocation *outcomes* of a WRC, however, may directly affect domestic policymaking and allocation decisions. If the United States has developed good proposals and is successful in persuading other countries to accept those proposals, the decisions reached at the WRC will facilitate the development of United States domestic policy and lead to U.S. policies that are consistent with ITU allocations. If, however, the United States is unsuccessful, difficult decisions will then have to be made to balance domestic priorities with international decisions. As set forth above, to the extent domestic policies and allocations mirror international decisions, U.S. consumers and businesses will benefit.

### **CONCLUSION**

AWS believes that the Commission's efforts to reform its spectrum policies will be most effective if the Task Force focuses on ensuring that spectrum is put to its highest and best use and used efficiently; defining the rights of licensees; and preventing interference between users. AWS looks forward to continuing to work with the Task Force as it develops its recommendations.

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<sup>38</sup> It is important to note that the agreements produced at the WRC have treaty status and must be approved by the Senate. However, the United States always retains its sovereign right to make its own decisions regarding how spectrum is used domestically, and can always pursue its own course, regardless of what the rest of the world chooses to do, if it unfortunately chooses to do so.

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

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