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Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, DC 20554

In re Request of	)
	)
AT&T Inc., BellSouth Corporation, Comcast	)
Corporation, NextWave Broadband Inc.,	)
NTELOS, Inc., Sprint Nextel Corporation,	)
Verizon Laboratories Inc., and WaveTel NC	)
License Corporation	)
	)
For Limited Extension of Deadline for	)
Establishing Compliance With Section 27.14	)
Substantial Service Requirement	)

**CONSOLIDATED REQUEST FOR LIMITED EXTENSION OF  
DEADLINE FOR ESTABLISHING WCS COMPLIANCE WITH  
SECTION 27.14 SUBSTANTIAL SERVICE REQUIREMENT**

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## SUMMARY

The members of the WCS Coalition (which includes all but one of the licensees of Wireless Communications Service ("WCS") spectrum in the continental United States) request that the Commission temporarily extend their July 21, 2007 deadline for establishing compliance with the 2.3 GHz band WCS substantial service requirement set forth in Section 27.14(a) of the Commission's Rules until July 21, 2010. This limited relief is warranted because deployment in the band has been hampered by circumstances beyond the licensees' control, such that strict compliance with the construction requirements would be unduly burdensome and contrary to the public interest.

Grant of the requested extension will allow the Commission time to resolve the regulatory uncertainty that stems from the long-standing lack of rules governing the operation of Digital Audio Radio Service ("DARS") terrestrial repeaters in spectrum adjacent to the WCS allocation – an uncertainty that has effectively precluded the widespread offering of broadband and other advanced wireless services over the 2.3 GHz band. Trials and limited deployments to date have established that there is a public demand for such services, and most WCS licensees have concluded that satisfying such demand represents the best use of this spectrum. However, until the Commission adopts rules governing the operation of DARS terrestrial repeaters, the extent to which WCS operations will be vulnerable to brute force overload and intermodulation interference from DARS terrestrial repeaters will remain unknown and unknowable. Only after the necessary rules are in place will WCS licensees and the equipment vendor community enjoy – for the first time – the regulatory certainty required to complete equipment development, design networks and deploy facilities capable of providing the ubiquitous, interference-free broadband and other advanced wireless services that most WCS licensees hope to provide. The promulgation of rules protecting WCS from terrestrial DARS interference is thus the regulatory linchpin needed to spur the deployment of WCS-based broadband services.

Timely adoption of permanent DARS terrestrial repeater rules will enable WCS licensees to meet the July 21, 2010 extended deadline being requested by the WCS Coalition. If, however, the DARS interference issues cannot be resolved before July 21, 2007, the Commission should extend the WCS performance requirement until three years after the release date of an order resolving such issues, thereby assuring that WCS equipment vendors and carriers have a fair opportunity to respond to whatever interference environment is ultimately established.

Extending the substantial service deadline as requested is both reasonable and necessary. It will provide sufficient time to ensure that the Commission has resolved the DARS repeater interference problem, that equipment is widely available, and that WCS licensees have the time necessary to design and deploy rational, cost-effective, and consumer-driven broadband networks. Even if the Commission were to adopt rules that protect WCS from DARS interference today, equipment production and network deployment simply cannot occur quickly enough to enable WCS licensees to meet the current July 2007 deadline. Thus, if the Commission does not grant the requested relief, WCS licensees will be forced to consider alternative uses of the band to satisfy their performance requirements under the rules. This, in turn, would force licensees to make uneconomic choices about service deployment and to divert valuable capital resources to sub-optimal business plans. The result would be to delay, if not entirely foreclose, the delivery of wireless broadband services to the public, particularly in rural and other areas where alternative services are not readily available.

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**CONSOLIDATED REQUEST FOR LIMITED EXTENSION OF  
DEADLINE FOR ESTABLISHING WCS COMPLIANCE WITH  
SECTION 27.14 SUBSTANTIAL SERVICE REQUIREMENT**

AT&T Inc., (“AT&T”) BellSouth Corporation (“BellSouth”), Comcast Corporation (“Comcast”), NextWave Broadband Inc., NTELOS, Inc., Sprint Nextel Corporation, Verizon Laboratories Inc. (“Verizon”), and WaveTel NC License Corporation (jointly the “WCS Coalition”),<sup>1</sup> hereby request, pursuant to Section 1.925(b)(3)(ii) of the Commission’s Rules,<sup>2</sup> that the Commission extend their July 21, 2007 deadline for establishing compliance with the 2.3

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<sup>1</sup> The WCS Coalition consists of the companies that through subsidiary companies indirectly hold the substantial majority of the Wireless Communications Service (“WCS”) authorizations. The specific WCS licensees and authorizations that are the subject of this consolidated request are identified in Exhibit A. WCS License Subsidiary, LLC, which is owned and controlled by WCS Wireless, Inc. (“WWI”), is the only licensee of WCS spectrum within the continental United States that is not a member of the WCS Coalition. WWI secured its WCS spectrum recently, and subsequently agreed to merge with XM Radio Satellite Holdings Inc. (“XM”). See Application for Assignments of Authorization and Transfers of Control (Form 603), File No. TC-0002240823 (submitted July 15, 2005). WWI and XM have advised the Commission that they “contemplate using [their WCS spectrum] to provide mobile multimedia services similar to those being provided or under development by entities such as Crown Castle in the 1670-1675 MHz band and QUALCOMM in the 700 MHz band.” Reply Comments of WCS Wireless, Inc. and XM Satellite Radio Holdings Inc., WT Docket No. 03-264, at 2 (filed Jan. 17, 2006). Given that their intended use is substantially different from that contemplated by the members of the WCS Coalition, the concerns of the WCS Coalition are not necessarily applicable to them.

<sup>2</sup> 47 C.F.R. § 1.925(b)(3)(ii).

GHz band WCS substantial service requirement set forth in Section 27.14(a) of the Commission's Rules.

## **I. INTRODUCTION**

For the reasons discussed below, a limited extension of the Commission's WCS substantial service deadline is warranted under applicable Commission rules and precedent. Such an extension will allow the Commission ample time to resolve the regulatory uncertainty that stems from the long-standing lack of rules governing the operation of Digital Audio Radio Service ("DARS") terrestrial repeaters in spectrum adjacent to the WCS allocation – an uncertainty that has effectively precluded the widespread offering of broadband and other advanced wireless services over the 2.3 GHz band. Trials and limited deployments to date have established that there is a public demand for such services, and most WCS licensees have concluded that satisfying such demand represents the best use of this spectrum. Until rules governing the operation of DARS terrestrial repeaters are adopted, however, the extent to which WCS operations will be vulnerable to interference from DARS terrestrial repeaters remains unknown and unknowable. Only after those rules are in place will WCS licensees and the equipment vendor community enjoy – for the first time – the regulatory certainty necessary to complete equipment development, design networks and deploy facilities that are capable of providing the ubiquitous, interference-free broadband and other advanced wireless services that most WCS licensees hope to provide.

The WCS Coalition requests a three year extension of the current deadline. Timely adoption of permanent DARS terrestrial repeater rules will enable WCS licensees to meet the July 21, 2010 deadline the WCS Coalition requests. If, however, the DARS interference issues

cannot be resolved before July 21, 2007,<sup>3</sup> the Commission should extend the WCS performance requirement until three years from the time it releases an order resolving such issues, thereby assuring that WCS equipment vendors and carriers have a fair opportunity to respond to whatever interference environment is ultimately established.<sup>4</sup>

## **II. THE CONTINUED LACK OF RULES GOVERNING THE OPERATION OF DARS TERRESTRIAL REPEATERS AND THE UNAVAILABILITY OF EQUIPMENT JUSTIFY GRANT OF THE LIMITED EXTENSION REQUESTED BY THE WCS COALITION**

Section 27.14 of the Commission's Rules requires each WCS licensee to demonstrate by July 21, 2007 that it is providing "substantial service" within its authorized service area to avoid forfeiture of its license.<sup>5</sup> Section 1.925(b)(3)(ii) of the Commission's Rules, however, provides

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<sup>3</sup> In recent filings, Sirius Satellite Radio, Inc. ("Sirius") has urged the Commission expeditiously to resolve the DARS terrestrial repeater service rule issues, and to tie resolution of those issues to other issues relating to interference among and between WCS and DARS licensees. See Letter from Carl R. Frank, Counsel for Sirius Satellite Radio, Inc., to Marlene H. Dortch, Secretary, FCC, WT Docket No. 03-264 (filed Feb. 13, 2006). Although the members of the WCS Coalition do not necessarily agree with Sirius as to how the issues should be resolved, the WCS Coalition agrees that the Commission should consider all of the issues surrounding interference between and among WCS and DARS licensees (including appropriate power levels and spectral masks for both services) on a consolidated basis. The WCS Coalition is prepared to work towards the earliest possible resolution of those issues, and believes that if all parties show good faith, a resolution this year is possible.

<sup>4</sup> The WCS Coalition requests that the Commission grant the relief requested in this filing no later than July 21, 2006, one year prior to the WCS substantial service deadline. Without relief by this date, some of the WCS Coalition members undoubtedly will have to pursue alternative uses of the WCS spectrum to preserve their licenses, rather than deploy the broadband and other advanced wireless services that most licensees believe are the highest and best use of the spectrum. To meet the existing deadline through such an alternative use will require a licensee soon to begin testing, purchasing equipment, and deploying networks based upon the limited WCS equipment available today. As a result, significant capital investment would be diverted to sub-optimal business plans. And, because of the sunk investment in these facilities, the deployment of broadband and other advanced services in the 2.3 GHz band will be at best delayed and at worst precluded altogether. This result will be to the detriment of consumers everywhere, but especially consumers in rural and other underserved areas that may be most efficiently served by wireless.

<sup>5</sup> 47 C.F.R. § 27.14(a); see also *Amendment of the Commission's Rules to Establish Part 27, the Wireless Communications Service*, Report and Order, 12 FCC Rcd 10785, 10843 (1997) ("WCS Order"). As with most geographically licensed wireless services, substantial service is defined as "service which is sound, favorable, and substantially above a level of mediocre service which just might minimally warrant renewal" and the traditional safe harbors apply. *Id.* at 10843-44 (citation omitted).

that the Commission may waive this requirement where unique or unusual factual circumstances render application of the rule inequitable, unduly burdensome or contrary to the public interest.<sup>6</sup> The instant request for a temporary waiver extending the deadline satisfies this standard.<sup>7</sup> Thus, the WCS Coalition requests that the Commission grant this temporary waiver, and routinely process and grant applications for WCS license renewal in 2007, conditioned upon the submission of a substantial service showing by July 21, 2010.

As the Commission is aware, WCS licensees have faced a variety of unique challenges. From Congress' mandate that the Commission auction the spectrum in an extraordinarily short time frame<sup>8</sup> and the resulting "undeveloped nature of equipment for use in this band" at the time of auction,<sup>9</sup> to the post-auction proposal to deploy a domestic satellite service in the WCS bands that threatened to cause massive cochannel interference to other WCS licensees,<sup>10</sup> to the

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<sup>6</sup> 47 C.F.R. § 1.925(b)(3)(ii).

<sup>7</sup> The conditions set forth herein also demonstrate that the members' inability to meet the Section 27.14(a) substantial service requirement is due to circumstances beyond their control, thereby satisfying the standard of 47 C.F.R. § 1.946(e)(1).

<sup>8</sup> Congress directed the Commission to complete rulemaking proceedings for the reallocation and reassignment of the frequencies at 2305-2320 and 2345-2360 MHz, promulgate service and auction rules for the spectrum and complete the auction, all within one year. See Omnibus Consolidated Appropriations Act, 1997, P.L. 104-208, 110 Stat. 3009 (1996). This created an environment which, in the words of the then-Chief of the Wireless Telecommunications Bureau, deprived auction participants of the time they needed to "assess the various [possible] . . . services that [could] be provided on WCS spectrum." Keynote Address By Michele C. Farquhar, Chief of the Wireless Telecommunications Bureau Before the Telecommunications Reports 'Next Generation Wireless' Conference, 1997 FCC LEXIS 864, \*12 (Feb. 13, 1997).

<sup>9</sup> *WCS Order*, 12 FCC Rcd at 10843. The undeveloped nature of the equipment for this band was largely due to the fact that the Commission imposed an extraordinarily stringent spectral mask at the boundaries of the WCS spectrum in order to address any potential interference to DARS operations from WCS. See *id.* at 10787. These out-of-band emission limits have proven problematic because potential 2.3 GHz band equipment manufacturers have been unable to effectively migrate equipment designed for other bands to WCS, and as the Commission recognized at the time, have been forced to develop new methods and technologies to meet the Commission's spectral mask. *Id.* at 10843 ("It may be that a potential licensee could efficiently conduct certain operations on WCS spectrum, but must await further technological developments to do so affordably.").

<sup>10</sup> See *Satellite Policy Branch Information, Applications Accepted For Filing*, Public Notice, Report No. SAT-00006 (rel. Dec. 14, 1998). This effort to provide DARS using WCS spectrum was opposed by a

prolonged negotiations between the United States and Mexico that established appropriate maximum signal levels for Mexican satellites operating in the WCS band that contain footprints covering significant United States territory,<sup>11</sup> the WCS community has been confronted with substantial uncertainty.

Today, however, the lack of permanent rules governing operation of DARS terrestrial repeaters and the resulting lack of availability of WCS equipment make compliance with the substantial service deadline unduly burdensome and contrary to the public interest. Over the past eight plus years, numerous WCS licensees have launched a variety of fixed service offerings in the WCS band on a limited basis.<sup>12</sup> This experience has led many WCS licensees to conclude

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variety of interested parties, including members of the WCS Coalition, XM, and Sirius. See Petition of BellSouth Wireless Cable, Inc., Bell Atlantic Corp., and PCSCO Partnership to Dismiss or Deny, File Nos. SAT-LOA-19981113-00085 and SAT-LOA-19981113-00086 (filed Jan. 13, 1999); Reply of BellSouth Wireless Cable, Inc. to Consolidated Opposition to Petition to Dismiss or Deny, File Nos. SAT-LOA-19981113-00085 and SAT-LOA-19981113-00086 (filed Feb. 8, 1999); see also Opposition of the National Association of Broadcasters, File Nos. SAT-LOA-19981113-00085 and SAT-LOA-19981113-00086 (filed Jan. 13, 1999); Petition of XM Satellite Radio, Inc. to Deny, File Nos. SAT-LOA-19981113-00085 and SAT-LOA-19981113-00086 (filed Jan. 13, 1999); Petition of Satellite CD Radio, Inc. to Dismiss or Deny, File Nos. SAT-LOA-19981113-00085 and SAT-LOA-19981113-00086 (filed Jan. 13, 1999). The application ultimately was withdrawn.

<sup>11</sup> When the WCS licenses were issued and paid for in 1997, the International Telecommunication Union Radio Regulations had not yet allocated the 2.3 GHz WCS spectrum for Mexican DARS. This changed almost immediately when, in November 1997, footnote S5.393 to the International Table of Frequency Allocations was amended to permit Mexico to operate satellite DARS in the WCS band. This amendment necessitated international coordination between the United States and Mexico to resolve the potential for harmful interference from Mexican DARS to the licensed WCS operations. These negotiations lasted from approximately the first quarter of 1998 until the third quarter of 2000 when the United States and Mexico entered into the July 24, 2000 "Agreement Between the Government of the United States of America and the Government of the United Mexican States Concerning the Use of the 2310-2360 MHz Band." The agreement provides that Mexico may utilize 2324.25 – 2328.25 MHz and 2350-2353 MHz for satellite or terrestrial operations, and that if this spectrum hosts satellite usage, the Mexico service must meet a power flux density of  $-130.5 \text{ dBW}/4\text{kHz}/\text{M}^2$  within the United States.

<sup>12</sup> Among others, AT&T, BellSouth, Comcast, Verizon and Metricom, Inc. (or their predecessors in interest) have all deployed facilities in the 2.3 GHz band over the past several years to trial a variety of services. See *infra* at note 25. The results of those trials and the important lessons learned are briefly discussed in part *infra* at note 21. Today, BellSouth has the most significant WCS operations in the nation. BellSouth began testing WCS broadband platforms in 2000 and in September 2005, BellSouth launched its first non-trial broadband system utilizing WCS spectrum in Palatka, Florida, a rural, economically-distressed market. BellSouth then expanded its WCS-based commercial offering to

that the most efficient and viable business model for the 2.3 GHz band is to use the spectrum for the provision of advanced wireless services, including wireless broadband. Widespread deployment of such advanced wireless services has not yet occurred, however, and it is not expected to occur prior to the current July 21, 2007 deadline for demonstrating compliance with the substantial service requirement of Section 27.14(a). The reason for this is the unresolved threat of harmful interference from terrestrial DARS repeaters.

The Commission proceeding to establish firm technical parameters for terrestrial DARS repeaters has been pending for some time. It has been more than six years since the WCS industry first established in IB Docket No. 95-91 that, unless appropriately regulated, the operation of terrestrial DARS repeaters causes substantial harmful interference to WCS operations. When the Commission adopted service rules for DARS in 1997 just prior to the WCS auction, it acknowledged that "some satellite DARS applicants intend to implement, as necessary, terrestrial repeaters, or 'gap-fillers', in urban canyons and other areas where it may be difficult to receive DARS signals transmitted by a satellite."<sup>13</sup> The Commission, however,

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Deland, Florida, another rural market, in January 2006. In each case, BellSouth selected rural communities where interference from terrestrial DARS repeaters would not be an issue. More recently, as part of its hurricane disaster recovery efforts, BellSouth launched WCS-based wireless broadband services on a commercial basis in portions of New Orleans, Louisiana, Gulfport, Mississippi, and Biloxi, Mississippi, in September, November and December, 2005, respectively. Although New Orleans is served by a handful of DARS repeaters, BellSouth has been able, through careful design, to provide a wireless broadband service over a limited geographic area that is acceptable under the unique circumstances currently present in that city. However, the equipment being deployed in these markets utilizes proprietary "pre-WiMax" technology that is not economically viable for widespread deployments. BellSouth elected to proceed with these limited deployments to gain experience, to improve its odds for success once the Commission resolves the DARS repeater interference issues and standardized equipment is readily available, and to restore services in areas devastated by Hurricane Katrina. See *infra* at note 21.

<sup>13</sup> *Establishment of Rules and Policies for the Digital Audio Radio Satellite Service in the 2310-2360 MHz Frequency Band*, Report and Order, Memorandum Opinion and Order, and Further Notice of Proposed Rulemaking, 12 FCC Rcd 5754, 5810-12 (1997) ("*DARS Order and FNPRM*"). See also *Satellite CD Radio, Inc.*, Order and Authorization, 13 FCC Rcd 7971, 7988 n.103 (1997) ("Terrestrial repeaters may be necessary to implement ('gap-fillers') in urban canyons and other areas where it may be difficult to receive SDARS signals transmitted by a satellite.").

concluded that it lacked sufficient information to craft technical rules governing such repeaters and issued a *Further Notice of Proposed Rulemaking* (“*Further DARS Repeater Notice*”) soliciting information on a variety of issues associated with the deployment of such “gap fillers.”<sup>14</sup>

Two years following the release of the *Further DARS Repeater Notice*, XM and Sirius provided the Commission with the first detailed technical parameters for their contemplated terrestrial repeater systems.<sup>15</sup> This technical information made clear for the first time that their terrestrial DARS repeaters would not be low-powered “gap fillers,” but rather high-power transmitters that would cause harmful interference into the WCS bands, and the WCS licensee and vendor community promptly informed the Commission of this fact.<sup>16</sup> In subsequent filings,

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<sup>14</sup> See *DARS Order and FNPRM*, 12 FCC Rcd at 5810.

<sup>15</sup> See Supplemental Comments of XM Radio Inc., IB Docket No. 95-91, GEN Docket No. 90-357 (filed Dec. 17, 1999); Supplemental Comments of Sirius Satellite Radio, IB Docket No. 95-91, GEN Docket No. 90-357 (filed Jan. 18, 2000). As WCS licensees have noted, however, much of the precise technical information contained in the initial filings by XM and Sirius has changed over the years, presenting the WCS community and the Commission with a “moving target” that has slowed Commission resolution of the issues. See, e.g., Letter from Douglas I. Brandon, VP External Affairs and Law, AT&T Wireless Services, Inc. *et al.*, to Magalie Roman Salas, Secretary, FCC, IB Docket No. 95-91, RM 8610, DA No. 01-2570, at 2 (filed July 27, 2001) (“[T]he information finally revealed in the STA request is radically different from the most recent prior data provided by XM to the Commission and the WCS licensees at a meeting on January 11, 2001 []. At that time, XM represented that its nationwide network would make use of 150 high power repeaters and that only three cities would have more than three such repeaters. In stark contrast, its recent STA request encompasses more than five times as many high power repeaters and 50 cities with more than three such repeaters. Needless to say, these discrepancies have forced the WCS licensees to reexamine some of their analyses of SDARS terrestrial repeater deployment and its potential impact on WCS services. It has also led them to wonder what surprises may be in store when the other SDARS licensee, Sirius Satellite Radio, finally discloses the characteristics of the terrestrial repeater network it has been deploying under its own experimental authorization.”).

<sup>16</sup> See e.g., Reply Comments of Metricom, Inc., IB Docket No. 95-91, GEN Docket No. 90-357 (filed Mar. 8, 2000); Letter from Karen Gulik, Counsel to AT&T Wireless, to Magalie Roman Salas, Secretary, FCC, IB Docket No. 95-91, at 1 (filed Feb. 1, 2001) (“Regardless of band emission limits, the brute force overload of such high power transmissions would dramatically affect the integrity of the WCS licensees’ services. AT&T Wireless, for example has calculated a 1 kilometer exclusion zone surrounding each transmitter where its fixed wireless access equipment would be rendered useless.”); Letter from Paul J. Sinderbrand, Counsel to the Wireless Communications Association International, Inc., to Magalie Roman Salas, Secretary, FCC, IB Docket No. 95-91, at 2 (filed Dec. 15, 2000) (the analysis of George W. Harter

the WCS licensee community provided the Commission with extensive analysis of the potential for overload and intermodulation interference to WCS if DARS terrestrial repeaters are not appropriately regulated.<sup>17</sup> The Commission has consistently recognized the legitimacy of these concerns, conditioning its grants of special temporary authorizations allowing XM and Sirius to operate terrestrial repeaters upon curing interference to any WCS operations and upon future compliance with whatever permanent rules it adopts to govern the operation of terrestrial DARS repeaters and limit interference to WCS.<sup>18</sup>

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“concludes that the proposed deployment of numerous high-power terrestrial DARS repeaters poses a substantial threat of interference.”).

<sup>17</sup> See, e.g., Letter from Karen L. Gulik, Counsel to AT&T Wireless Services, Inc., to Thomas Sugrue, Chief, WTB, FCC, IB Docket No. 95-91 (filed Aug. 9, 2001) (“As various WCS licensees have documented in this proceeding, the interference generated by high power SDARS repeaters will create large exclusion zones within which WCS operators will effectively be precluded from offering their services.”) (citation omitted); accord Letter from Karen L. Gulik, Counsel to AT&T Wireless Services, Inc., to Magalie Roman Salas, Secretary, FCC, IB Docket No. 95-91, at 6 (filed Feb. 20, 2001); Letter from Karen L. Gulik, Counsel to AT&T Wireless Services, Inc., to Magalie Roman Salas, Secretary, FCC, IB Docket No. 95-91 (filed April 30, 2001); Comments of BellSouth Corporation, File Nos. SAT-STA-20010712-00063, SAT-STA-20010724-00064, at i (filed Aug. 21, 2001) (“operation of SDARS terrestrial repeater networks . . . poses the potential for interference in the WCS spectrum”); Letter from Karen B. Possner, BellSouth Corporation, to Magalie Roman Salas, Secretary, FCC, IB Docket No. 95-91 (filed May 18, 2001); Opposition of WorldCom, Inc., to STA Request, File Nos. SAT-STA-20010712-00063, SAT-STA-20010724-00064, at 1 (filed Aug. 21, 2001) (“the power levels requested by XM and Sirius for their terrestrial repeaters will interfere with WorldCom’s operating WCS system in Memphis, Tennessee and planned system in Dallas/Fort Worth, Texas”); Letter from Karen B. Possner, BellSouth Corporation, to Magalie Roman Salas, Secretary, FCC, IB Docket No. 95-91 (filed Aug. 28, 2001) (providing additional information on BellSouth’s analysis of DARS interference requested by FCC staff); Letter from Paul J. Sinderbrand, Counsel to WCA, to Magalie Roman Salas, Secretary, FCC, IB Docket No. 95-91 (filed Oct. 2, 2001); Letter from the WCS Coalition, to Magalie Roman Salas, Secretary, FCC, IB Docket No. 95-91 (filed Nov. 2, 2001); Comments of the WCS Coalition, IB Docket No. 95-91, RM 8610, DA No. 01-2570 (filed Dec. 14, 2001); Reply Comments of the WCS Coalition, IB Docket No. 95-91, RM 8610, DA No. 01-2570 (filed Dec. 21, 2001); Letter from the WCS Coalition, to William Caton, Acting Secretary, FCC, IB Docket No. 95-91 (filed Feb. 4, 2002); Letter from the WCS Coalition, to William Caton, Acting Secretary, FCC, IB Docket No. 95-91 (filed Feb. 19, 2002).

<sup>18</sup> See *XM Radio Inc., Application for Special Temporary Authority to Operate Satellite Digital Audio Radio Service Complementary Terrestrial Repeaters*, Order and Authorization, 16 FCC Rcd 16781 (IB 2001), modified, 16 FCC Rcd 18484 (IB 2001); *Sirius Satellite Radio, Inc., Application for Special Temporary Authority to Operate Satellite Digital Audio Radio Service Complementary Terrestrial Repeaters*, Order and Authorization, 16 FCC Rcd 16773 (IB 2001), modified, 16 FCC Rcd 18481 (IB 2001); *XM Radio Inc., Request for Special Temporary Authority to Operate Additional Satellite Digital Audio Radio Service Terrestrial Repeaters*, *Sirius Satellite Radio Inc., Request to Modify Special*

The continuing lack of permanent rules for terrestrial DARS repeaters has rendered it impossible for the WCS licensees to develop and implement the type of ubiquitous wireless broadband operations that many believe are needed to put WCS spectrum to its highest and best use. Until the WCS industry knows with certainty the extent to which WCS will be vulnerable to harmful interference from brute force overload and intermodulation caused by DARS terrestrial repeaters, WCS licensees cannot design and deploy networks capable of providing the fast, reliable quality of service that consumers demand, and equipment suppliers will be unable to complete development of products for use in the 2.3 GHz band within the United States.<sup>19</sup>

As noted above, the WCS Coalition believes that the issues involving the coexistence of WCS and DARS can be resolved in 2006.<sup>20</sup> However, even if the threat of interference from DARS terrestrial repeaters were to disappear overnight, equipment production and network deployment cannot occur quickly enough to enable WCS licensees to deploy such networks in time to meet the Commission's July 2007 deadline. It will take more than the 15 months between now and then for equipment designs to be completed and hardware certified, for the licensees to design networks, test and purchase equipment, and then deploy service. A three year extension until July 21, 2010 therefore will serve the public interest by providing the

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*Temporary Authority to Operate Satellite DARS Terrestrial Repeaters*, Order and Authorization, 19 FCC Rcd 18140 (IB 2004).

<sup>19</sup> Intel Corporation and Airspan Networks, Inc. have each recently announced their development of broadband equipment for use in the 2.3 GHz band. See Lawson, Stephen, "IDF: Intel Mobile WiMax Card Coming This Year," PCWORLD.COM (Mar. 8, 2006); Press Release, Airspan Networks, Inc., "Airspan Announces First Mobile WiMax Device" (Mar. 9, 2006). Both companies, however, have advised the WCS Coalition that their equipment is intended for use solely in the Asia market and that they have not finalized plans for 2.3 GHz products in the United States because of the technical uncertainties surrounding the band. Of course, the delay between the adoption of final DARS terrestrial repeater rules and the availability of equipment for domestic deployments will necessarily depend on the degree to which domestic WCS operations will be subject to interference not encountered under Asian regulatory regimes.

<sup>20</sup> See *supra* at note 3.

Commission time to resolve the continuing problems of terrestrial DARS repeaters, which (if the Commission does so by July 2007) will give enough time for equipment to become widely available and for WCS licensees to design and deploy networks capable of providing services that consumers demand.

Despite the uncertainty associated with the unresolved DARS terrestrial repeater rulemaking and the inability of equipment vendors to complete their designs for 2.3 GHz band equipment for the United States market, substantial progress has been made of late in the design of standardized equipment that will be capable of supporting economically-viable broadband networks at 2.3 GHz. As a result of numerous trials conducted by WCS licensees, the industry has been able to guide the vendor community in the development of a standard that will satisfy the consumer demand for broadband and other advanced wireless services.<sup>21</sup> Equipment manufacturers are now beginning to develop equipment based on this standard (the IEEE 802.16e WiMax standard) for use in the 3.5 GHz and 2.5 GHz bands, and many are expected to develop equipment for use in the 2.3 GHz WCS band after the effective resolution of the DARS interference issues.<sup>22</sup> The WCS industry is now at the cusp of pursuing meaningful deployments

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<sup>21</sup> Most significant, earlier WCS trials by AT&T, Comcast and Verizon all established the need for subscriber equipment that did not require a direct line-of-sight to the base station, that was sufficiently portable or mobile, and that could be installed by the consumer without the need for professional installation. These trials also established the likely importance of deploying standards-based technologies, since the economic viability of the service is significantly driven by the costs of the consumer equipment, and such costs will almost inevitably be reduced (to the ultimate benefit of the consumer) through the deployment of standards-based equipment.

<sup>22</sup> On January 19, 2006, the WiMax Forum announced the first certifications of fixed wireless broadband network products developed according to the certification profile for 802.16-2004 products. *See* Press Release, WiMax Forum, "WiMax Forum Announces First WiMax Forum Certified Products" (Jan. 19, 2006). This equipment, however, is for use in the 3.5 GHz band, not the 2.3 GHz band. The WiMax Forum has not yet released any certification profile for the 2.3 GHz band. Moreover, most WCS licensees that are exploring the use of WiMax-compliant equipment at 2.3 GHz believe that equipment compliant with the IEEE 802.16e portable standard is most likely to drive successful deployments. The WCS Coalition understands that, while the WiMax Forum has done preliminary work on the 802.16e 2.3 GHz profile, it is not expected to release that profile before sometime in 2007. It is not expected that

of WCS equipment for broadband and other advanced wireless services – assuming, of course, that they are afforded sufficient time to do so, and that the Commission adopts rules that reasonably protect WCS from terrestrial DARS interference.

Conversely, strict application of the current July 21, 2007 deadline would be contrary to the public interest. Although each WCS licensee will have to decide for itself how to make the best use of its spectrum holdings, most WCS licensees will be forced to construct facilities based on what they believe is the most expeditious way to meet the Commissions' construction requirements given the current regulatory uncertainty, not based on what they believe is the highest and best use of the spectrum. This would divert valuable capital resources to sub-optimal business plans and ultimately delay, if not preclude entirely, the delivery of broadband and other advanced wireless services to the public, including service to rural and other underserved areas.<sup>23</sup> In other words, strict enforcement of the WCS substantial service requirement will not “promote efficient use of the spectrum” or “encourage the provision of service to rural, remote and insular areas” as the Commission originally intended.<sup>24</sup>

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802.16e equipment for use in the band could become available until several months after the certification profile is released. And, of course, once the WiMax-compliant 2.3 GHz band equipment does become available, WCS licensees will need time to design networks, test and purchase the equipment, and construct the needed infrastructure. *See also supra* at note 19.

<sup>23</sup> Because strict application of the current deadline will require WCS licensees to move forward with deployments without knowledge of the vulnerability of those deployments to DARS repeater interference, the resulting services likely will be inefficient and/or subject to reliability problems associated with DARS interference. Further, once the Commission does issue service rules for terrestrial repeaters, WCS licensees may have to redesign and reconfigure their facilities to accommodate the new operating environment. And, because of the sunk costs associated with these rushed deployments, licensees may not be in a position to then deploy broadband and other advanced wireless services in the 2.3 GHz band.

<sup>24</sup> *WCS Order*, 12 FCC Rcd at 10843.

### III. GRANT OF THE REQUESTED EXTENSION IS CONSISTENT WITH COMMISSION PRECEDENT

Grant of the instant request for extension of the July 21, 2007 WCS substantial service deadline is warranted because of factual circumstances outside of the licensees' control that render strict enforcement of the WCS substantial service rule inequitable, unduly burdensome, and contrary to the public interest. As explained in detail above, the pending DARS terrestrial repeater proceeding and corresponding regulatory uncertainty has limited the availability of 2.3 GHz band equipment and licensees' ability to design networks and deploy services. The Commission has previously extended performance deadlines under analogous circumstances, and it should do so here as well.

The Commission has extended construction deadlines where, as in this case, equipment is scarce or unavailable and deployment is not economically feasible.<sup>25</sup> For example, in 2004, the

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<sup>25</sup> See, e.g., *Request of Warren C. Havens for Waiver or Extension of the Five-year Construction Requirement for 220 MHz Service Phase II Economic Area and Regional Licensees, and Request of BizCom USA, Inc. for Waiver and Extension of the Construction Requirements for 220 MHz Phase II Regional and Nationwide Licenses*, Memorandum Opinion and Order, 19 FCC Rcd 12994 (WTB 2004) ("Havens"); *FCI 900, Inc. Expedited Request for Three-Year Extension of 900 MHz Band Construction Requirements and Neoworld License Holdings, Inc. Request for Waiver of 900 MHz Band Construction Requirements and Petition for Declaratory Ruling*, Memorandum Opinion and Order, 16 FCC Rcd 11072, 11077 (WTB 2001) ("FCI 900, Inc."). In the instant case, many carriers have undertaken trial or other limited deployments, but discovered that such operations were not economically feasible at the time. For example, between 1998 and 2000, AT&T utilized WCS spectrum in a system to provide a Time Division Multiplexing compressed voice service with low-bit rate data service (128-384k downstream/64k upstream). AT&T launched the service on a trial basis in the Dallas/Fort Worth market in 2000 and, during 2001 and 2002, undertook full commercial launch of the service in the Los Angeles, San Diego, Houston, Galveston, Corpus Christi, Santa Barbara, Seattle, Vallejo, Chicago, and Alaska markets. AT&T ultimately discontinued this service, however, because costs proved too high to support the business case for this WCS application and technical problems proved difficult to surmount. Comcast developed and tested in conjunction with Hybrid Networks Inc., ADC Telecommunications, Inc., and California Amplifier, Inc. a one-way 10 Mbps High-Speed Internet modem with telephone return fixed wireless service utilizing WCS spectrum. Verizon conducted two separate trials of pre-WiMax proprietary equipment utilizing WCS spectrum from approximately July 2002 to March 2003. The first test was conducted in Herndon, Virginia, and employed equipment manufactured by BeamReach Networks, Inc. The second was conducted in Ellicott City, Maryland, and employed equipment manufactured by SOMA Networks, Inc. And, as noted *supra* at note 12, BellSouth is currently operating a series of WCS-based broadband systems that utilize pre-WiMax technology as a means of developing expertise in the business and providing critical post-Katrina communications services.

Commission extended the construction requirements in the 220 MHz Phase II service because the equipment for use in that spectrum was “scarce presently or face[d] technical and economic challenges.”<sup>26</sup> In the Commission’s view, it was not “reasonable to fault licensees who obtained licenses and then faced an unexpected” unavailability of equipment.<sup>27</sup> Along similar lines, the Commission extended the five-year construction deadline for certain 900 MHz SMR licensees because digital voice equipment was not available in sufficient quantities to enable all the licensees to meet the deadline.<sup>28</sup> As the Commission reasoned:

[T]he public interest would be ill served by compelling 900 MHz MTA licensees to devote scarce resources to the construction of stopgap legacy analog systems in order to meet the five-year construction deadline.<sup>29</sup>

These cases certainly are applicable to the present facts. As discussed above, the unavailability of equipment to support nationwide deployment of 2.3 GHz wireless broadband and other advanced services is directly related to the lack of terrestrial DARS repeater rules well into the WCS license term. As in the case of the 900 MHz band, now that the WCS industry is on the verge of deploying broadband and other advanced wireless services, it makes little sense to require the immediate deployment of stopgap systems that will preserve licenses, but not drive the WCS spectrum to what many believe to be its highest and best use for consumers.

The Commission also has extended performance requirements in a variety of other analogous circumstances. For example, in 1997 the Commission granted a blanket extension of the construction deadline for authorizations in the Interactive Video and Data Service (“IVDS”)

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<sup>26</sup> *Havens*, 19 FCC Rcd at 13001.

<sup>27</sup> *Id.*

<sup>28</sup> *See FCI 900, Inc.*, 16 FCC Rcd at 11077.

<sup>29</sup> *Id.* at 11078.

granted by lottery.<sup>30</sup> The Commission found a blanket extension was warranted because it intended to commence a rulemaking to consider significant revisions to the IVDS rules that would affect the nature of the services that could be offered.<sup>31</sup> Therefore, the Commission concluded it would be fundamentally “unreasonable and contrary to the public interest to require IVDS licensees to meet the [existing] build-out requirement.”<sup>32</sup> The Commission reaffirmed this reasoning one year later when it extended construction deadlines for other IVDS authorizations granted through auction, finding that “[r]equiring IVDS licensees to comply with rules which are under Commission review would not further the public interest in this instance, particularly since the subject rule directly impacts IVDS system planning and implementation.”<sup>33</sup>

The Commission again applied this rationale in extending the build-out requirement for Multipoint Distribution Service (“MDS”) BTA authorizations. In 2001, the Commission extended the MDS construction deadline during a period of substantial regulatory uncertainty associated with recent service rule changes that provided MDS licensees new authority to offer innovative data, voice, and broadband services, instead of anticipated video programming services.<sup>34</sup> The Commission again suspended the MDS construction deadlines in 2003, when it began a massive rewrite of the MDS rules.<sup>35</sup> There, the Commission emphasized that “[t]his

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<sup>30</sup> See *Requests by Interactive Video and Data Service Auction Winners to Waive the March 28, 1997 Construction Deadline*, Order, 12 FCC Rcd 3181 (WTB 1997).

<sup>31</sup> *Id.* at 3182.

<sup>32</sup> *Id.*

<sup>33</sup> *Requests by Interactive Video and Data Service Auction Winners to Waive the January 18, 1998, and February 28, 1998, Construction Deadlines*, Order, 13 FCC Rcd 756, 758 (WTB 1998).

<sup>34</sup> See *Extension of the Five-Year Build-out Period for BTA Authorization Holders in the Multipoint Distribution Service*, Memorandum Opinion and Order, 16 FCC Rcd 12593, 12596 (MMB 2001).

<sup>35</sup> See *Amendment of Parts 1, 21, 73, 74 and 101 of the Commission's Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands*, Notice of Proposed Rule Making and Memorandum Opinion and Order, 18 FCC Rcd 6722 (2003).

approach is consistent with prior Commission actions suspending a deadline while relevant policy is subject to the pending rulemaking proceedings.”<sup>36</sup>

This same rationale supports the WCS Coalition’s request for extension. Here, as in the IVDS and MDS cases, there is a pending rulemaking which is inextricably tied to WCS licensees’ ability to construct desired facilities. The pending DARS terrestrial repeater rulemaking directly affects WCS system planning and implementation, just as the IVDS and MDS proceedings affected network planning and implementation. It would therefore be equally inequitable and contrary to the public interest to require WCS licensees to meet the Section 27.14 substantial service requirements by July 2007.

#### IV. CONCLUSION

As shown above, unique factual circumstances outside the WCS licensees’ control render strict application of the Section 27.14(a) substantial service requirement inequitable, unduly burdensome, and contrary to the public interest. The Commission therefore should extend the

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<sup>36</sup> *Id.* at 6805. Indeed, the Commission has often extended performance requirements where, as in this case, relevant policy issues were subject to pending Commission proceedings. See, e.g., *DTV Build-out, Requests for Extension of the Digital Television Construction Deadline, Commercial Television Stations With May 1, 2002 Deadline*, Order, 19 FCC Rcd 10790 (2004) (“The DTV construction deadline for the remaining 4 ‘satellite’ stations is deferred pending the outcome of the DTV periodic review proceeding.”) (citation omitted); *ASC Communications, Inc., Licensee of Multipoint Distribution Service Station WMH541, San Diego, California -- Request for Declaratory Ruling*, Memorandum Opinion and Order, 19 FCC Rcd 24100, 24103 (2004) (“since the grant of the license was conditioned upon grant of USSC’s Amended Request, ASC clearly could not construct until there was a ruling on the Amended Request”); *Application for Extension of Time to Construct, Application for Assignment of Conditional License, Requests for Extension of the Digital Television Construction Deadline*, Order, 18 FCC Rcd 22705, 22706-07 (2003) (The Commission “defer[red] the construction deadlines of the 30 satellites stations requesting construction extensions pending the outcome of the DTV periodic review proceeding” because the *Second DTV Periodic NPRM* “requested comment on whether the public interest would be served by allowing [satellite] stations to turn in their digital authorization and ‘flash cut’ to DTV transmission at the end of the transition period.”); *1998 Biennial Regulatory Review -- Streamlining of Mass Media Applications, Rules and Processes*, Report and Order, 13 FCC Rcd 23056 (1998), *recon. granted in part and denied in part*, 14 FCC Rcd 17525, 17536 (1999); *Southern Company, Request for Waiver of Section 90.629 of the Commission's Rules*, 14 FCC Rcd 1851, 1857 (1998) (“there are three planned or pending proceedings that may ultimately result in Southern’s current time-based construction requirement being modified. Thus, we find that Southern has no reasonable alternative within the existing rules to an extension of its implementation period.”).

current WCS substantial service deadline until July 21, 2010. This extension will provide the time necessary for equipment suppliers to complete the design and manufacture of required equipment, and for WCS licensees to design and deploy rational, cost-effective, and consumer-driven networks, assuming that the Commission adopts new technical rules for terrestrial DARS repeaters before July 21, 2007. In the event that the Commission is unable to resolve the interference problems within this timeframe, however, the Commission should extend the construction requirements until three years after the release date of an order resolving such issues.

Respectfully submitted,

**AT&T INC.  
BELLSOUTH CORPORATION  
COMCAST CORPORATION  
NEXTWAVE BROADBAND INC.  
NTELOS, INC.  
SPRINT NEXTEL CORPORATION  
VERIZON LABORATORIES INC.  
WAVETEL NC LICENSE CORPORATION**

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March 22, 2006

**EXHIBIT A**

<b>Licensee</b>	<b>Call Sign</b>	<b>Market#</b>	<b>Block</b>	<b>Market Name</b>	<b>Construction/ Renewal Date</b>
AWACS, Inc.	KNLB203	MEA013	B	Cincinnati-Dayton	7/21/2007
AWACS, Inc.	KNLB211	MEA035	B	Wichita	7/21/2007
AWACS, Inc.	KNLB244	MEA014	B	Columbus	7/21/2007
AWACS, Inc.	KNLB245	MEA021	A	Des Moines-Quad Cities	7/21/2007
AWACS, Inc.	KNLB249	MEA034	A	Omaha	7/21/2007
AWACS, Inc.	KNLB250	MEA035	A	Wichita	7/21/2007
AWACS, Inc.	KNLB251	MEA036	A	Tulsa	7/21/2007
AWACS, Inc.	KNLB252	MEA036	B	Tulsa	7/21/2007
AWACS, Inc.	KNLB253	MEA037	A	Oklahoma City	7/21/2007
AWACS, Inc.	KNLB254	MEA037	B	Oklahoma City	7/21/2007
AWACS, Inc.	KNLB256	MEA039	A	El Paso-Albuquerque	7/21/2007
AWACS, Inc.	KNLB260	MEA042	A	Salt Lake City	7/21/2007
AWACS, Inc.	KNLB261	MEA042	B	Salt Lake City	7/21/2007
AWACS, Inc.	KNLB262	MEA043	A	San Francisco-Oakland-San Jose	7/21/2007
AWACS, Inc.	KNLB264	MEA047	A	Alaska	7/21/2007
AWACS, Inc.	KNLB265	MEA047	B	Alaska	7/21/2007
AWACS, Inc.	KNLB267	MEA050	A	Puerto Rico	7/21/2007
AWACS, Inc.	KNLB268	MEA050	B	Puerto Rico	7/21/2007
AWACS, Inc.	KNLB269	MEA051	B	American Samoa	7/21/2007
AWACS, Inc.	KNLB270	REA007	C	Alaska	7/21/2007
AWACS, Inc.	KNLB271	REA007	D	Alaska	7/21/2007
AWACS, Inc.	KNLB273	REA010	C	Puerto Rico/U.S.Virgin Islands	7/21/2007
AWACS, Inc.	KNLB274	REA010	D	Puerto Rico/U.S.Virgin Islands	7/21/2007
AWACS, Inc.	KNLB279	MEA018	B	Chicago	7/21/2007
AWACS, Inc.	KNLB285	MEA033	B	Denver	7/21/2007
AWACS, Inc.	KNLB286	MEA043	B	San Francisco-Oakland-San Jose	7/21/2007
AWACS, Inc.	KNLB324	MEA039	B	El Paso-Albuquerque	7/21/2007
AWACS, Inc.	KNLB325	REA003	D	Great Lakes	7/21/2007
AWACS, Inc.	WPQL708	REA003	C	Great Lakes	7/21/2007
AWACS, Inc.	WPQL709	REA003	C	Great Lakes	7/21/2007
AWACS, Inc.	WPQL712	REA003	C	Great Lakes	7/21/2007
AWACS, Inc.	WPQL714	REA003	C	Great Lakes	7/21/2007
Bell South Wireless Cable Inc.	KNLB201	MEA007	A	Charlotte-Greensboro-Greenville	7/21/2007
Bell South Wireless Cable Inc.	KNLB221	MEA007	B	Charlotte-Greensboro-Greenville	7/21/2007
Bell South Wireless Cable Inc.	KNLB222	MEA008	A	Atlanta	7/21/2007
Bell South Wireless Cable Inc.	KNLB223	MEA008	B	Atlanta	7/21/2007
Bell South Wireless Cable Inc.	KNLB224	MEA009	B	Jacksonville	7/21/2007
Bell South Wireless Cable Inc.	KNLB225	MEA010	A	Tampa-St. Petersburg-Orlando	7/21/2007
Bell South Wireless Cable Inc.	KNLB226	MEA010	B	Tampa-St. Petersburg-Orlando	7/21/2007
Bell South Wireless Cable Inc.	KNLB227	MEA011	A	Miami	7/21/2007

Licensee	Call Sign	Market#	Block	Market Name	Construction/Renewal Date
Bell South Wireless Cable Inc.	KNLB228	MEA011	B	Miami	7/21/2007
Bell South Wireless Cable Inc.	KNLB229	MEA022	A	Knoxville	7/21/2007
Bell South Wireless Cable Inc.	KNLB230	MEA023	A	Louisville-Lexington-Evansville	7/21/2007
Bell South Wireless Cable Inc.	KNLB231	MEA023	B	Louisville-Lexington-Evansville	7/21/2007
Bell South Wireless Cable Inc.	KNLB233	MEA025	A	Nashville	7/21/2007
Bell South Wireless Cable Inc.	KNLB234	MEA025	B	Nashville	7/21/2007
Bell South Wireless Cable Inc.	KNLB236	MEA027	A	New Orleans-Baton Rouge	7/21/2007
Bell South Wireless Cable Inc.	KNLB237	MEA027	B	New Orleans-Baton Rouge	7/21/2007
Bell South Wireless Cable Inc.	KNLB238	REA002	C	Southeast	7/21/2007
Bell South Wireless Cable Inc.	KNLB239	REA002	D	Southeast	7/21/2007
Bell South Wireless Cable Inc.	KNLB240	REA004	C	Mississippi Valley	7/21/2007
Bell South Wireless Cable Inc.	KNLB241	REA004	D	Mississippi Valley	7/21/2007
BellSouth Mobile Data, Inc.	KNLB202	MEA006	B	Richmond	7/21/2007
BellSouth Mobile Data, Inc.	KNLB214	MEA031	B	Houston	7/21/2007
BellSouth Mobile Data, Inc.	KNLB246	MEA024	A	Birmingham	7/21/2007
BellSouth Mobile Data, Inc.	KNLB247	MEA028	A	Little Rock	7/21/2007
BellSouth Mobile Data, Inc.	KNLB248	MEA029	B	Kansas City	7/21/2007
BellSouth Mobile Data, Inc.	KNLB257	MEA040	A	Phoenix	7/21/2007
BellSouth Mobile Data, Inc.	KNLB258	MEA041	A	Spokane-Billings	7/21/2007
BellSouth Mobile Data, Inc.	KNLB259	MEA041	B	Spokane-Billings	7/21/2007
BellSouth Mobile Data, Inc.	KNLB263	MEA045	B	Portland	7/21/2007
BellSouth Mobile Data, Inc.	KNLB266	MEA048	A	Hawaii	7/21/2007
BellSouth Mobile Data, Inc.	KNLB272	REA008	C	Hawaii	7/21/2007
BellSouth Mobile Data, Inc.	KNLB277	MEA012	B	Pittsburgh	7/21/2007
BellSouth Mobile Data, Inc.	KNLB287	MEA044	B	Los Angeles-San Diego	7/21/2007
BellSouth Mobile Data, Inc.	KNLB288	MEA046	B	Seattle	7/21/2007
BellSouth Mobile Data, Inc.	WPQL634	REA001	C	Northeast	7/21/2007
BellSouth Mobile Data, Inc.	WPQL635	REA003	C	Great Lakes	7/21/2007
BellSouth Mobile Data, Inc.	WPQL707	REA001	C	Northeast	7/21/2007
BellSouth Mobile Data, Inc.	WPQL710	REA003	C	Great Lakes	7/21/2007
BellSouth Mobile Data, Inc.	WPQL711	REA003	C	Great Lakes	7/21/2007
BellSouth Mobile Data, Inc.	WPQL713	REA003	C	Great Lakes	7/21/2007
BellSouth Mobile Data, Inc.	WQDM396	REA003	D	Great Lakes	7/21/2007
Comcast WCS ME02, Inc.	KNLB204	MEA002	B	New York City	7/21/2007
Comcast WCS ME02, Inc.	WPQL636	REA001	C	Northeast	7/21/2007
Comcast WCS ME04, Inc.	KNLB275	MEA004	B	Philadelphia	7/21/2007
Comcast WCS ME04, Inc.	WPQL631	REA001	C	Northeast	7/21/2007
Comcast WCS ME05, Inc.	KNLB276	MEA005	B	Washington	7/21/2007
Comcast WCS ME16, Inc.	KNLB278	MEA016	B	Detroit	7/21/2007
Comcast WCS ME16, Inc.	WPQL632	REA003	C	Great Lakes	7/21/2007
Comcast WCS ME19, Inc.	KNLB280	MEA019	A	Indianapolis	7/21/2007
Comcast WCS ME19, Inc.	KNLB281	MEA019	B	Indianapolis	7/21/2007
Comcast WCS ME19, Inc.	WPQL633	REA003	C	Great Lakes	7/21/2007

Licensee	Call Sign	Market#	Block	Market Name	Construction/ Renewal Date
Comcast WCS ME22, Inc.	KNLB282	MEA022	B	Knoxville	7/21/2007
Comcast WCS ME26, Inc.	KNLB283	MEA026	A	Memphis-Jackson	7/21/2007
Comcast WCS ME28, Inc.	KNLB284	MEA028	B	Little Rock	7/21/2007
Nextel Spectrum Acquisition Corp.	KNLB205	MEA032	A	Dallas-Fort Worth	7/21/2007
Nextel Spectrum Acquisition Corp.	KNLB232	MEA024	B	Birmingham	7/21/2007
Nextel Spectrum Acquisition Corp.	KNLB235	MEA026	B	Memphis-Jackson	7/21/2007
Nextel Spectrum Acquisition Corp.	KNLB291	MEA032	B	Dallas-Fort Worth	7/21/2007
Nextel Spectrum Acquisition Corp.	WPSL350	MEA007	B	Charlotte-Greensboro-Greenville	7/21/2007
Nextel Spectrum Acquisition Corp.	WPSL351	MEA008	B	Atlanta	7/21/2007
Nextel Spectrum Acquisition Corp.	WPSL352	MEA009	B	Jacksonville	7/21/2007
Nextel Spectrum Acquisition Corp.	WPSL353	MEA010	B	Tampa-St. Petersburg-Orlando	7/21/2007
Nextel Spectrum Acquisition Corp.	WPSL354	MEA023	B	Louisville-Lexington-Evansville	7/21/2007
Nextel Spectrum Acquisition Corp.	WPSL355	MEA025	B	Nashville	7/21/2007
Nextel Spectrum Acquisition Corp.	WPSL356	MEA027	B	New Orleans-Baton Rouge	7/21/2007
Nextel Spectrum Acquisition Corp.	WPSL357	MEA007	A	Charlotte-Greensboro-Greenville	7/21/2007
Nextel Spectrum Acquisition Corp.	WPSL358	MEA008	A	Atlanta	7/21/2007
Nextel Spectrum Acquisition Corp.	WPSL359	MEA010	A	Tampa-St. Petersburg-Orlando	7/21/2007
Nextel Spectrum Acquisition Corp.	WPSL360	MEA023	A	Louisville-Lexington-Evansville	7/21/2007
Nextel Spectrum Acquisition Corp.	WPSL361	MEA025	A	Nashville	7/21/2007
Nextel Spectrum Acquisition Corp.	WPSL362	MEA027	A	New Orleans-Baton Rouge	7/21/2007
Nextel Spectrum Acquisition Corp.	WPYP768	MEA032	B	Dallas-Fort Worth	7/21/2007
Nextel Spectrum Acquisition Corp.	WPYP769	MEA032	A	Dallas-Fort Worth	7/21/2007
NextWave Broadband Inc.	KNLB200	MEA001	B	Boston	7/21/2007
NextWave Broadband Inc.	KNLB206	MEA017	B	Milwaukee	7/21/2007
NextWave Broadband Inc.	KNLB213	MEA009	A	Jacksonville	7/21/2007
NextWave Broadband Inc.	KNLB215	MEA038	B	San Antonio	7/21/2007
NextWave Broadband Inc.	KNLB217	MEA017	A	Milwaukee	7/21/2007
NextWave Broadband Inc.	KNLB218	MEA020	A	Minneapolis-St. Paul	7/21/2007
NextWave Broadband Inc.	KNLB219	MEA040	B	Phoenix	7/21/2007
NextWave Broadband Inc.	KNLB220	MEA044	A	Los Angeles-San Diego	7/21/2007
NextWave Broadband Inc.	KNLB255	MEA038	A	San Antonio	7/21/2007
NextWave Broadband Inc.	KNLB292	MEA020	B	Minneapolis-St. Paul	7/21/2007
NextWave Broadband Inc.	KNLB293	MEA021	B	Des Moines-Quad Cities	7/21/2007
NextWave Broadband Inc.	KNLB294	MEA034	B	Omaha	7/21/2007
NextWave Broadband Inc.	KNLB322	MEA030	B	St. Louis	7/21/2007
NextWave Broadband Inc.	KNLB323	MEA031	A	Houston	7/21/2007
NTELOS, Inc.	KNLB243	MEA014	A	Columbus	7/21/2007
Verizon Laboratories, Inc.	KNLB210	MEA001	A	Boston	7/21/2007
Verizon Laboratories, Inc.	KNLB312	MEA002	A	New York City	7/21/2007
Verizon Laboratories, Inc.	KNLB313	MEA003	A	Buffalo	7/21/2007
Verizon Laboratories, Inc.	KNLB314	MEA004	A	Philadelphia	7/21/2007
Verizon Laboratories, Inc.	KNLB315	MEA005	A	Washington	7/21/2007
Verizon Laboratories, Inc.	KNLB316	MEA006	A	Richmond	7/21/2007

Licensee	Call Sign	Market#	Block	Market Name	Construction/ Renewal Date
Verizon Laboratories, Inc.	KNLB317	MEA012	A	Pittsburgh	7/21/2007
Verizon Laboratories, Inc.	KNLB318	MEA013	A	Cincinnati-Dayton	7/21/2007
WaveTel NC License Corporation	WPZA810	MEA008	A	Atlanta	7/21/2007
WaveTel NC License Corporation	WPZA811	MEA007	B	Charlotte-Greensboro-Greenville	7/21/2007
WaveTel NC License Corporation	WPZA812	MEA008	B	Atlanta	7/21/2007
WaveTel NC License Corporation	WPZA813	MEA007	A	Charlotte-Greensboro-Greenville	7/21/2007