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August 26, 2016

**VIA Federal Express**

Wireless Telecommunications Bureau  
Federal Communications Commission  
P. O. Box 979097  
St. Louis, MO 63197-9000

**RE: NSAC, LLC**  
**Request for 2.5 GHz Special Temporary Authority**  
**(BTA024 – Atlanta, GA)**

To Whom It May Concern:

Sprint Corporation, on behalf of NSAC, LLC, hereby submits an original and one copy of a request for Special Temporary Authority (“STA”). This request is being filed manually due to the ULS not accepting applications for STAs in the BRS radio service. Also enclosed is an FCC Form 159 for payment to the Federal Communications Commission in the amount of \$130.00 for the applicable filing fee. Please date stamp the extra copy of the enclosed application and return to the undersigned in the postage prepaid, pre-addressed envelope.

If there are any questions regarding this matter or additional information is required, please contact me at (703) 592-2968.

Sincerely,

A handwritten signature in blue ink, appearing to read "K. Entz".

Kyle B. Entz  
Manager, Regulatory Affairs

cc (via email): Blaise Scinto  
John Schauble  
Elizabeth Fishel



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## **REQUEST FOR SPECIAL TEMPORARY AUTHORITY**

Pursuant to Section 1.931 of the Federal Communications Commission's Rules, Sprint Corporation, on behalf of its wholly-owned subsidiary NSAC, LLC (collectively "Sprint"), respectfully requests Special Temporary Authority ("STA") to operate on one megahertz of "white space" in the K Guard Band associated with the 2.5 GHz Educational Broadband Service ("EBS") G channel group.<sup>1</sup> Specifically, Sprint requests access to the KG1, KG2 and KG3 channels (2615.0-2616.0 MHz) where those channels are currently not licensed in the 2.5 GHz EBS band in the Atlanta ("Atlanta") Basic Trading Area ("BTA") 024.<sup>2</sup> Attachments B, C, and D, are maps demonstrating the available unused areas of the BTA that are the subject of the instant STA request. This STA will facilitate Sprint's deployment of multiple, wideband channels to enhance the performance of Sprint's broadband operations and thereby better meet its subscribers' increasing demand for high-speed data communications, including video content.<sup>3</sup>

### **BACKGROUND**

Section 27.1220 of the Commission's Rules permits Broadband Radio Service ("BRS") operators, such as Sprint, to deploy wideband operations provided they use digital modulation, meet the power spectral density requirements, and comply with the out-of-band emission limits set forth in Section 27.53 of the Commission's Rules. In accordance with these rules, Sprint seeks to deploy at least two and where possible three 20 megahertz-wide channels using Long-Term Evolution ("LTE") broadband technology in the mid and upper band segment of the

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<sup>1</sup> See Attachment A illustrating the 2.5 GHz band plan, 47 C.F.R. §27.5.

<sup>2</sup> Sprint recognizes that the Commission may allocate and assign the "white space" associated with the G Group channels in the future. Sprint would cease operations and surrender its authority to operate on these K Band channels as soon as the G Group channels are granted to new EBS licensees in any overlapping areas.

<sup>3</sup> In November 2015, the FCC authorized similar STAs in seventeen BTAs in the New York, New Jersey, Pennsylvania and Florida areas. See ULS File Nos. 0006858203-0006858219.

2.5 GHz band (2602 – 2673.5 MHz) throughout the country.<sup>4</sup> Sprint is the licensee of all BRS spectrum in BTA 024 and is licensed on all of the BRS spectrum (Blocks E1 - E3, F1 - F3 and H1 - H3) between 2602 – 2673.5 MHz, including the portion of the K Block Guard Band associated with the BRS spectrum (2614 – 2615 and 2617- 2618 MHz). Sprint, however, is not licensed for the one megahertz of the K Block Guard Band channels (at 2615 – 2616 MHz) reserved for EBS licensees authorized for the EBS G Block channel group, except for where Sprint is the lessee of the G Group from EBS licensees.<sup>5</sup> Obtaining use of the KG1, KG2, and KG3 channels in white space areas will enable Sprint to deploy three 20 megahertz-wide broadband LTE channels in the Atlanta area specified in the above-referenced BTA.<sup>6</sup>

Adding an additional 20 megahertz-wide LTE channel at 2.5 GHz to Sprint's network will greatly improve capacity and speed of its Network and provide a more consistent and improved experience for Sprint's customers. The Telecommunications Industry Association has noted the significant improvement to LTE performance that wider channels provide when it explained, "High data rates need wider bandwidth. The most proficient LTE performance requires wider bandwidth channels because larger and wider channels will result in more efficient and effective networks."<sup>7</sup> Additionally, Nokia Siemens Networks has similarly explained the value of 20 MHz (and wider) channels for LTE performance indicating, "Wide contiguous channels are needed to deliver the speeds and capacity that users are demanding . . .

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<sup>4</sup> The Commission acknowledged the increasing importance of providing wireless broadband services on 20 MHz-wide channels in the Incentive Auction proceeding, noting evidence that "20 megahertz of contiguous spectrum is particularly valuable for the deployment of next-generation networks." See *Policies Regarding Mobile Spectrum Holdings, Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd 6133, ¶¶ 162, 190 (2014).

<sup>5</sup> See Attachment A.

<sup>6</sup> 47 C.F.R. §27.1222. "All operations in the ... 2614-2618 MHz bands shall be secondary to adjacent-channels operations." In the 2.5 GHz Band, the K channel group at 2614-2618 MHz was designated as Guard Band Channels separating the Upper Band and the Mid-Band segments, including three megahertz for BRS operations licensed in the E, F, and H channel groups and one megahertz for EBS operation licensed in the G channel group. See Attachment A. Sprint currently has access to the K band G Group channels only in those areas where Sprint is the lessee of the G Group from an EBS licensee. As described further below, there are numerous gaps in the coverage of the G Group channels and the associated K Band Guard Band channels.

<sup>7</sup> Comments of the Telecommunications Industry Association, *Amendment of the Commission's Rules with Regard to Commercial Operations in the 1695-1710 MHz, 1755-1780 MHz, and 2155-2180 MHz Bands – Notice of Proposed Rulemaking and Order on Reconsideration*, GN Docket No. 13-185, at 5 (Sept. 18, 2013).

Even wider channels will be needed in the near future so Nokia Siemens Networks supports allocations that permit channels of up to 40 MHz (20 MHz in each direction.)”<sup>8</sup> These wide channels are especially critical in dense, high-traffic areas such as those sought in the instant STA request.<sup>9</sup>

As demonstrated in Attachments B, C and D, significant portions of Atlanta BTA 024 are completely clear of EBS licensees authorized on the G channel group, which in turn results in the associated one megahertz Guard Band (KG1, KG2, and KG3) channels going wholly unused. In Atlanta BTA 024, these unused channels prevent Sprint from offering an additional wider bandwidth channel to 34% of the area. Because this “white space” area is unused, it can be immediately incorporated into Sprint’s 2.5 GHz LTE network in combination with Sprint’s existing BRS footprint on the BRS 2 Channel, and the E, F and H BRS Channel Groups with no harm to existing incumbent operations.

In the areas of the BTA where the “white space” breaks up Sprint’s access to contiguous spectrum, this one megahertz of unused Guard Band spectrum (2615.0-2616.0 MHz) strands twelve megahertz of Sprint’s BRS spectrum in the mid-and-upper-band segment portion of the 2.5 GHz band.<sup>10</sup> Specifically, Sprint’s authorizations for mid-band segment BRS channels, E4 and F4 (2602.0-2614.0 MHz) cannot be aggregated with the remaining 55.5 MHz of BRS spectrum authorized to Sprint in the upper band segment, including the BRS2, E1-3, F1-3 and H1-3 channel groups (2618.0-2673.5 MHz), absent access to the entire K Band. Deployment of this stranded, high-band spectrum (equivalent to a 5+5 MHz FDD channel) is not economical or feasible, particularly given the limited propagation of this spectrum.<sup>11</sup> Where the G channel

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<sup>8</sup> Comments of Nokia Siemens Networks, *Service Rules For Advanced Wireless Services in the 2000-2020 MHz and 2180-2200 MHz Bands*, WT Docket Nos. 12-70, 04-356, ET Docket No. 10-142, at 4 (May 17, 2011).

<sup>9</sup> Reply Comments of AT&T, *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services*, GN Docket No. 14-177, at 6 (Feb. 18, 2015) (“To achieve these results will require wide channels to support traffic demands, particularly in dense urban areas and event venues. Similar to large band size, large contiguous blocks permit licenses to have the bandwidth to provide higher peak data rates.”); Reply Comments of CTIA, *Amendment of the Commission’s Rules with Regard to Commercial Operations in the 1695-1710 MHz, 1755-1780 MHz, and 2155-2180 MHz Bands*, GN Docket No. 13-185, at 4 (Oct. 28, 2013) (“As wireless services have become more advanced and bandwidth-intensive, the demand for large contiguous blocks of spectrum has increased.”).

<sup>10</sup> See Attachment A.

<sup>11</sup> Comments of AT&T Inc., *Amendment of the Commission’s Rules with Regard to Commercial Operations in the 1695-1710 MHz, 1755-1780 MHz, and 2155-2180 MHz Bands*, GN Docket No. 13-185, at 6 (Sept. 18, 2013) (“LTE is at its most efficient when used in large

group is not licensed to EBS licensees, the three associated KG Guard Band channels are lying fallow at a time when usable spectrum can be seamlessly deployed to facilitate the Commission's important public policy goals related to broadband deployment and competition.

Sprint recognizes that the Commission may in the future license the "white space" associated with the G Group channels to eligible applicants. When this occurs, Sprint would cease operations of any additional area it is operating pursuant to the STA and surrender its secondary authority to operate on these channels upon notification that the new licensee is ready to commence operations on the now licensed G Group channels. Sprint emphasizes that it will accept a condition on such STAs as set forth above.

Sprint acknowledges that future licensed use of these channels will not necessarily require Sprint to discontinue service to its wireless broadband customers. Among other things, Sprint may pursue leasing such spectrum as permitted under applicable Commission rules or take other actions to maintain its services. Accordingly, Sprint understands and accepts that its use of the additional G Group white space may be terminated by future Commission licensing actions or at any time.

Accordingly, Sprint respectfully requests that it be permitted to operate in the "white space" available on these three 2.5 GHz EBS K Guard Band channels in the Atlanta BTA 024 *on a temporary basis, until the Commission assigns the G Group spectrum (including the associated K Band channels) in this BTA.* In accordance with the Commission's Rules, Sprint will continue to protect nearby EBS G channel group licensees from interference and will ensure that no 2.5 GHz licensees suffer harmful interference from operations pursuant to the requested STA.<sup>12</sup>

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contiguous channels, generally requiring minimum channel sizes of 10x10 MHz or more to justify investing in an additional band class."); Letter from Peter D. Keisler, Counsel for AT&T, to Marlene H. Dortch, Secretary, FCC, *Policies Regarding Mobile Spectrum Holdings*, WT Docket No. 12-269, at 2 (May 7, 2014) (asserting the need for a minimum block of 10 x 10 MHz of spectrum in order to take full advantage of LTE); Letter from Kathleen Grillo, Senior Vice President – Federal Regulatory Affairs, Verizon, to Marlene H. Dortch, Secretary, FCC, *Amendment of the Commission's Rules with Regard to Commercial Operations in the 1695-1710 MHz, 1755-1780 MHz, and 2155-2180 MHz Bands*, GN Docket No. 13-185 (filed March 24, 2014) ("LTE equipment is optimized for 20x20 MHz, and wider channels (10x10 MHz and higher) enable licensees to provide greater throughput to more customers. For this reason, companies deploying LTE on AWS-1 spectrum have generally done so on blocks that are 10x10 MHz or greater.").

## CONCLUSION

The 2.5 GHz EBS K Guard Band channels are underutilized, as shown on the map in Attachments B, C, and D. Sprint is prepared to put these channels of limited use to any other operator to immediate use in its wireless broadband Network to increase its broadband capacity. For the reasons stated herein, Sprint requests an STA to operate on the specified three 2.5 GHz EBS K Block Guard Band channels on a temporary basis in order to accelerate its broadband deployment to better serve its customers, consistent with the Commission's goals of expanded competitive wireless broadband availability. Accordingly, Sprint requests that it be granted an STA to operate on the specified KG1, KG2, and KG3 Guard Band channels until such time as the Commission assigns this spectrum to any other eligible applicant.

Should there be any questions, please contact the undersigned.

Sincerely,

*/s/ James B. Goldstein*

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## FOREIGN OWNERSHIP STATEMENT

Section 310(b)(4) of the Communications Act<sup>1</sup> establishes a 25 percent benchmark for investment by foreign individuals, governments, and corporations in U.S.-organized entities that directly or indirectly control U.S. common carrier wireless licenses. Section 310(b)(4) also grants the Commission discretion to allow higher levels of foreign ownership in a licensee's controlling U.S.-organized parent unless the Commission finds that the public interest will be served by refusing to permit such foreign ownership.

The Commission has long recognized that “foreign investment has been and will continue to be an important source of financing for U.S. telecommunications companies, fostering technical innovation, economic growth, and job creation.”<sup>2</sup> In its *Foreign Ownership Second Report and Order*, the Commission adopted rules modifying its foreign ownership policies and procedures that “apply to foreign ownership of common carrier radio station licensees – *i.e.*, companies that provide fixed or mobile telecommunications service over networks that employ spectrum-based technologies, either in whole or in part” in order to “reduce delay, uncertainty, and expense to facilitate further investment in our wireless networks.”<sup>3</sup>

Sprint Corporation (“Sprint”), on behalf of all of its subsidiaries holding licenses and authorizations (“Sprint Licensee Subsidiaries”), recently sought and received Commission approval, pursuant to 47 U.S.C. § 310(b)(4) and the FCC’s implementing rules that were adopted in the *Foreign Ownership Second Report and Order*, for all of its foreign ownership exceeding the 25 percent benchmark.<sup>4</sup> Sprint also received advance approval for SoftBank Group Corp. and SoftBank Group International GK to increase its interests up to and including 100 percent of Sprint’s direct and/or indirect equity and/or voting interests, and for Masayoshi Son to increase his interests up to

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<sup>1</sup> 47 U.S.C. § 310(b)(4).

<sup>2</sup> *Review of Foreign Ownership Policies for Common Carrier and Aeronautical Radio Licensees Under Section 310(b)(4) of the Communications Act of 1934, as Amended*, Second Report and Order, 28 FCC Rcd 05741, ¶ 3 (2013) (“*Foreign Ownership Second Report and Order*”); *see also Rules and Policies on Foreign Participation in the U.S. Telecommunications Market*, Report and Order and Order on Reconsideration, 12 FCC Rcd 23891, ¶¶ 50, 111 (1997) (“*Foreign Participation Order*”).

<sup>3</sup> *Foreign Ownership Second Report and Order* ¶ 1; 47 C.F.R. §§ 1.990, *et seq.*

<sup>4</sup> Petition for Declaratory Ruling of Sprint Corporation, IBFS File No. ISP-PDR-20160411-00006 (filed April 11, 2016; granted effective June 30, 2016) (“Sprint Petition”); Public Notice, *International Authorizations Granted*, Report No. TEL-01804, DA 16-827, at 2-3 (rel. July 21, 2016) (“Sprint Declaratory Ruling”). Sprint previously received Commission approval for up to 100 percent indirect foreign ownership in 2013, before the rules adopted by the *Foreign Ownership Second Report and Order* became effective, as part of the Sprint/SoftBank transaction. *Applications of SOFTBANK CORP., Starburst II, Inc., Sprint Nextel Corporation, and Clearwire Corporation for Consent to Transfer Control of Licenses and Authorizations*, Memorandum Opinion and Order, Declaratory Ruling, and Order on Reconsideration, 28 FCC Rcd 9642, ¶ 124 (2013) (“*Sprint/SoftBank Order*”).

and including 49.99 percent of Sprint's direct and/or indirect equity and/or voting interests, pursuant to 47 C.F.R. §§ 1.991(k)(1)-(2).<sup>5</sup>

Accordingly, the Commission determined that it would not serve the public interest to prohibit the indirect foreign ownership of the Sprint Licensee Subsidiaries (including the subject applicant) in excess of the 25 percent benchmark in 47 U.S.C. § 310(b)(4).

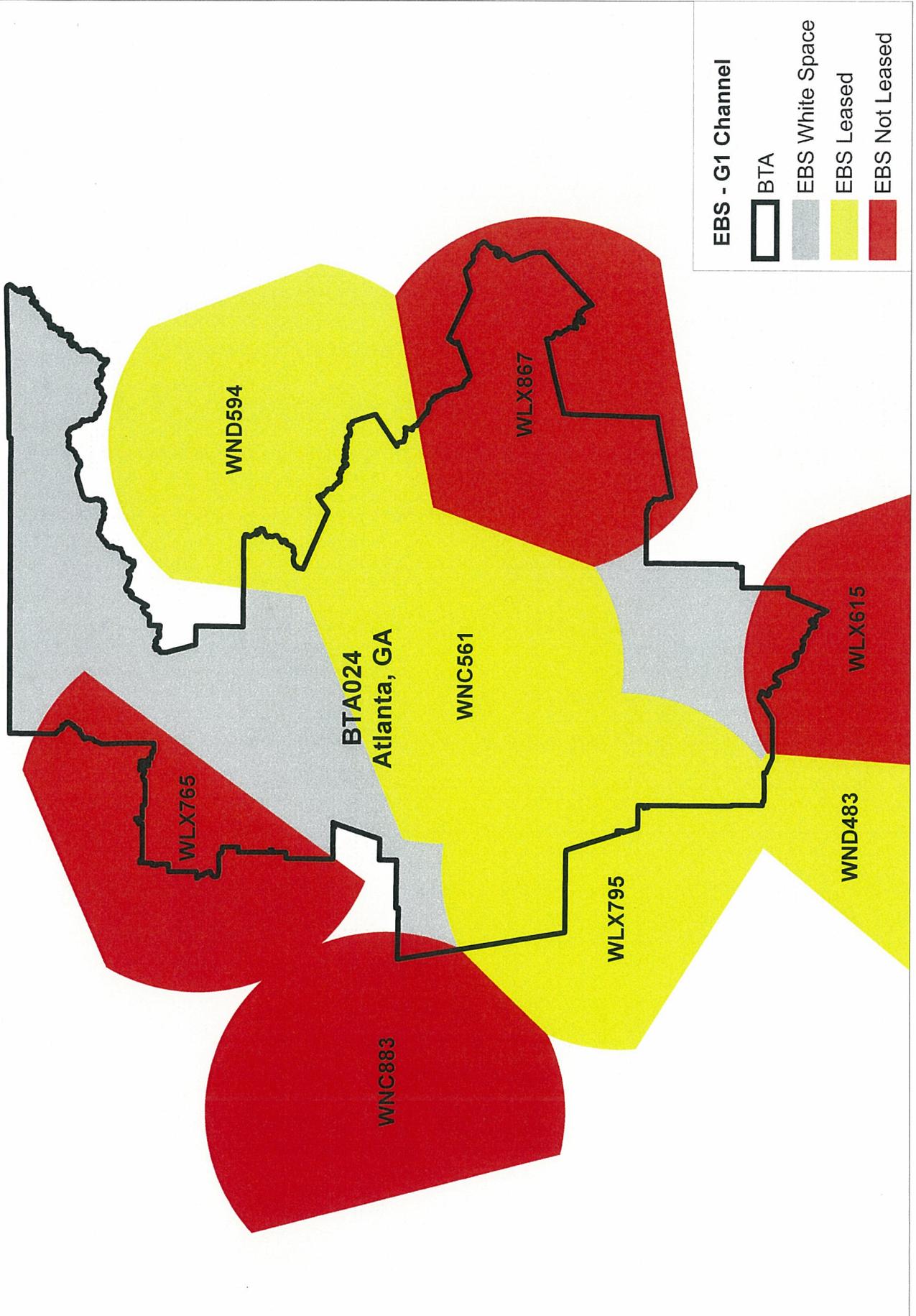
There has been no change in the foreign ownership of Sprint and the Sprint Licensee Subsidiaries since the Commission's grant of the Sprint Petition.

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<sup>5</sup> See Sprint Petition at 10; Second Supplement to Sprint Petition, IBFS File No. ISP-PDR-20160411-00006 (filed May 10, 2016); Sprint Declaratory Ruling at 2.



Attachment B - Map Showing G1 Channel Licensees and Available KG1 Channel White Space in Atlanta Markets





Attachment D - Map Showing G3 Channel Licensees and Available KG3 Channel White Space in Atlanta Markets

