

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of

Application of Triangle Communication System, Inc.            )  
and Cellco Partnership dba Verizon Wireless                    )  
For Long Term Spectrum Manager Lease                         )

WT Docket No. 15-210

To: Marlene H. Dortch, Secretary

**Triangle Communication System, Inc.’s Response to  
General Information Request  
Regarding the Verizon/Triangle Spectrum Lease Transaction**

Triangle Communication System, Inc. (Triangle), by its attorney, hereby submits its response to the Commission’s October 1, 2015 General Information Request regarding Triangle’s pending application File No. 0006824167 to lease Upper Band Block C 700 MHz spectrum from Cellco Partnership dba Verizon Wireless (Verizon).<sup>1</sup> Kindly contact counsel listed below if any additional information is required.

October 15, 2015

Respectfully submitted,  
/s/ Timothy E. Welch  
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<sup>1</sup> Triangle Communication System, Inc. and Cellco Partnership d/b/a Verizon Wireless have filed a long-term spectrum manager leasing notification involving an upper 700 MHz C Block license in Montana, WT Docket No. 15-210, *Public Notice*, DA 15-1111 (WTB rel. October 1, 2015) (“*Comment Public Notice*”); File No. 0006824167.

**Request 1.a** Provide a detailed discussion of Triangle's plans for a new wireless broadband service offering, including a discussion of timing, in the Relevant Areas. Include in this discussion a detailed description of Triangle's plans to provide new wireless broadband services to customers of both Triangle and Verizon Wireless in the rural areas served by Triangle.

**Response 1.a** Triangle's plan is to deploy a significant number of sites using the leased spectrum to provide 4G services to Verizon, to other LRA participants, and to Triangle's own customers. Triangle recently turned up its 1st phase of sites. Triangle has made substantial progress toward construction of a number of other sites: Triangle's 2nd phase of sites is projected to be turned up in December 2015 and Triangle's final 3rd phase of sites is projected to be turned up in June 2016. Triangle intends to begin activating customers on Triangle's nationwide 700 MHz 4G voice/data service when the new form factor UICC's are available from Gemalto. We hope the new UICC's will be available in December 2015 or sooner so we can begin providing our customers with advanced technology 4G devices that will work on the spectrum being leased from Verizon.

**Request 1.b** Provide a detailed explanation of why the Company needs more than approximately one-third of the suitable and available spectrum below 1 GHz for the provision of mobile wireless services.

**Response 1.b** The 700 MHz spectrum which Triangle is leasing from Verizon concerns a small portion of the Upper Band C Block 700 MHz market area which Verizon acquired in Auction 73 under Call Sign WQJQ694. WQJQ694 covers the REA006 market area and includes market area in which Triangle has long provided fixed wireline and mobile wireless telecommunications services. Triangle participated in Auction 73 and acquired Lower Band B Block 700 MHz spectrum. Triangle's understanding is that Verizon acquired all of the Upper Band C Block REA market licenses which were available in Auction 73 for service over the Continental United States (the lower 48 states).

Triangle's experience has been that the larger carriers are unwilling to enter into 700 MHz

roaming agreements with small carriers like Triangle. This unwillingness rendered it impossible for Triangle to offer nationwide 4G voice/data service on its own 700 MHz licenses to its historic service area customers.<sup>2</sup> Accordingly, several years ago when Triangle began investigating mechanisms to offer nationwide 4G voice/data service to its customers the only solution Triangle could see was to try to enter into a lease arrangement with a nationwide carrier through which the nationwide carrier would lease the nationwide carrier's spectrum to Triangle.<sup>3</sup> Triangle would have preferred to use its own 700 MHz spectrum, but it appeared at the time that the Commission's rules did not require larger nationwide carriers to enter into 700 MHz roaming arrangements and Triangle's 700 MHz spectrum was, and remains, unusable for the provision of nationwide 700 MHz 4G voice/data service.<sup>4</sup> Therefore, the only possible way for Triangle to provide nationwide 700 MHz 4G voice/data service to its historic service area customer base is via the subject leasing arrangement or a similar arrangement with a nationwide carrier. With all due respect, it's not so much that Triangle "*needs* more than approximately one-third of the suitable and available spectrum below 1 GHz for the provision of mobile wireless services," but rather that Triangle *must use* the subject leased spectrum to provide the envisioned nationwide 4G voice/data services to customers

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<sup>2</sup> Triangle uses its own 700 MHz licenses to provide a wireless Internet access service.

<sup>3</sup> When Triangle moved forward with its 4G service plan several years ago Triangle's 800 MHz Cellular system (KNKQ433 & KNKQ439) was unable to provide 4G services and it is believed that it is still not possible to offer nationwide 4G voice/data service on 800 MHz cellular systems via roaming. In any event, Triangle's planned 700 MHz 4G buildout under the subject 700 MHz spectrum lease envisions a much more developed/broader coverage area than exists with Triangle's 800 MHz cellular system which services significant roadway and major population centers.

<sup>4</sup> On October 29, 2013 the Commission released an order (FCC 13-136) which extended the Lower Block A & B initial buildout deadlines and which imposed a roaming obligation upon AT&T, but not upon the numerous other Lower Block A & B licensees. Verizon has the only nationwide network of 700 MHz licenses.

residing in Triangle's historic service area. Absent the subject leased spectrum, Triangle simply could not provide the intended advanced technology 4G voice/data services to the sparsely populated rural areas covered by the subject lease.

**Request 2.a** In Chouteau county in CMA 524 (Montana 2 – Toole), Triangle would increase its attributable below-1-GHz spectrum holdings from 24 megahertz to 46 megahertz as a result of the proposed lease. In Phillips county in CMA 525 (Montana 3 – Phillips), Triangle would increase its attributable below-1-GHz spectrum holdings from 37 megahertz to 59 megahertz as a result of the proposed lease. In both counties, Triangle would be increasing its below-1-GHz spectrum holdings from less than one-third to in excess of one-third of the below-1-GHz spectrum. Provide a detailed explanation of why the potential public interest benefits of the additional concentration of this below-1-GHz spectrum outweigh the potential public interest harms. Provide all documents relied on in preparing the response.

**Response 2.a** It is Triangle's understanding that as of today no carrier is providing 4G voice/data services within the subject lease areas. Accordingly, the subject lease would provide the first such high speed telecommunications service in the subject lease areas with the attendant public interest benefits which accrue from the provision of that first advanced technology 4G service. Triangle is unable to discern any public interest harm which might arise under the existing facts – 4G service does not yet exist in the leased area and Triangle is leasing spectrum from the entity which holds all of the C Block spectrum in the Continental United States. The 4G voice/data service could eventually (and theoretically) be provided by the nationwide carrier in the subject lease area, but the lease arrangement ensures that such 4G voice/data will be provided to the persons/companies in the leased area as promptly as possible. The subject lease arrangement will not result in the reduction of 4G voice/data service providers, rather, the subject lease arrangement will expedite the provision of such services in the rather remote, very rural, sparsely populated service areas encompassed by the subject spectrum lease.

**Request 2.b** In Blaine, Hill, and Liberty counties in Montana 2 – Toole, Triangle already holds 49 megahertz of below-1-GHz spectrum and, as a result of the proposed lease, it would be attributed

with 71 megahertz of such spectrum. In these three counties, Triangle already holds more than one-third of the below-1-GHz spectrum, and would be further increasing its below-1-GHz spectrum holdings. Provide a detailed explanation of why the public interest benefits of the additional concentration of this below-1-GHz spectrum clearly outweighs the public interest harms, irrespective of other factors, i.e., potentially lessening the ability of rival service providers to offer competitive responses. For instance, explain in detail how Triangle is maximizing use of its spectrum and how the proposed lease is necessary to maintain, enhance, or expand mobile telephony/broadband services provided to consumers. Provide all documents relied on in preparing the response.

**Response 2.b** Triangle's response to this Request is the similar to the responses discussed above.

The nationwide carriers would not allow Triangle to use its own 700 MHz frequencies as a basis of nationwide roaming so Triangle has been unable to offer nationwide 4G voice/data service to the customers in its historic service area. Due to circumstances beyond its control, Triangle is unable to offer nationwide 4G voice/data services over its 800 MHz cellular and 700 MHz spectrum. Moreover, because no one is currently providing 4G voice/data service in the subject lease area, because the subject lease is not reducing the number of 4G service providers in the leased area, and because local rural carriers have historically provided advanced services to remote rural areas long before nationwide carriers, it would seem that there is no chance of "potentially lessening the ability of rival service providers to offer competitive responses."

**Request 3** Provide polygons in an ESRI shapefile format representing geographic coverage for Triangle, including each mobile broadband network technology (e.g., CDMA, EV-DO, EV-DO Rev. A, GSM, EDGE, UMTS, HSPA, HSPA+, LTE) deployed in each frequency band (e.g., Lower 700 MHz, Cellular, AWS-1, PCS). Provide all assumptions, methodology (e.g., propagation, projection, field measurements), calculations (including link budgets), tools (e.g., predictive and field measurements) and data (e.g., terrain, morphology, buildings) used in the production of the polygons, and identify the propagation tool used, the propagation model used within that tool, including but not limited to, the coefficients used in the model and any additions, corrections or modifications made to the model.

**Response 3** Shape files are being submitted as directed by Commission staff. Triangle considers that these shapefiles constitute HIGHLY CONFIDENTIAL INFORMATION which is

not otherwise available from publicly available sources. Triangle has kept this information strictly confidential because it contains some of Triangle's most sensitive business data and release of this data could allow others to gain a significant competitive advantage in the marketplace or in negotiations. Accordingly, pursuant to the *Protective Order*, DA 15-1113, released October 1, 2015, Triangle requests that public access to the shapefiles be restricted as per the *Protective Order*.

**Request 4** On pages 1-2 of the Public Interest Statement, the Applicants claim that while Triangle currently holds other mobile wireless licenses in the Relevant Areas, the leasing arrangement raises no competitive concerns. In addition, the Applicants assert that there will continue to be a high degree of competition because there are numerous other providers holding CMRS spectrum in the Relevant Areas, including the four largest national providers. For the Relevant Areas, provide a detailed discussion of how the proposed lease promotes and preserves meaningful competition, would still allow rival service providers and potential new entrants to provide an effective competitive constraint, and how it would allow Triangle to become a more effective competitor. Provide all documents relied on in preparing the response.

**Response 4** Triangle's response to this Request is similar to the responses provided above to the various other Requests. Today there is no provider of 4G voice/data service in the subject lease area and Triangle would provide the first such service. The subject lease is not reducing the number of 4G voice/data service providers in the subject market. The subject lease will, in fact, result in the introduction of the first such service to the leased service area on an expedited basis.

To the extent that the Commission wishes to view the relevant service market more broadly as being CMRS generally rather than as the provision of 4G service, Triangle does not see how its subject lease would adversely affect mobile communications in the leased areas. As discussed in the lease filing, there are numerous CMRS licensees in the subject county areas including nationwide carriers and Triangle remains well under the 194 MHz initial mobile spectrum screen in the leased area. Even Lessor Verizon has CMRS spectrum in the subject lease area which Verizon could and/or is using to provide mobile service. Verizon possesses the underlying 700 MHz

license from which the subject lease area is carved and, in theory, Verizon could have decided eventually to provide the 4G voice/data service in the sparsely populated rural areas which Triangle seeks to provide. It seems that in these rural areas, more immediate provision of 4G voice/data service by a local, rural carrier is preferable to theoretical provision of such service at some undetermined future date by a nationwide carrier which essentially holds a nationwide license for the subject spectrum band. Moreover, the Commission itself seems to have suggested that accumulation of below 1 GHz spectrum by non-nationwide carriers does not raise significant public interest concerns. *See Mobile Holdings Spectrum Order*, FCC 14-63, para. 181 where it was determined that non-nationwide service providers possessing more than 45 MHz of sub-1 GHz spectrum are eligible to bid on 600 MHz reserved licenses in the upcoming incentive auction whereas nationwide carriers possessing that much spectrum are precluded.

Assisting me in the preparation of this Response was Timothy E. Welch, Hill & Welch, 1025 Connecticut Ave., NW #1000, Washington, D.C. 20036 (202-321-1448) and Mark Cole, VP RF Engineering, 4G Unwired Inc., 325 Fifth Avenue, Ste 100, Indialantic, FL 32903 (321-726-4183).

I hereby certify under penalty of perjury that I have read the foregoing Response 1 and that except for matters of which official notice may be taken, the facts stated herein are true and accurate to the best of my knowledge, information, and belief.

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Richard Stevens, CEO & General Manager  
Triangle Communication System, Inc.  
October 15, 2015

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