

**General Information Request**  
**Regarding the Triangle Communication System/Verizon Wireless Spectrum Lease**  
**Questions for Triangle Communication System**  
**WT Docket No. 15-210**  
**October 1, 2015**

1. On page 1 of the Public Interest Statement, the Applicants contend that the leasing arrangement would allow Triangle Communication System, Inc. (“Triangle”) to use Verizon Wireless’s Upper 700 MHz C Block spectrum for a new wireless broadband service offering in the market areas at issue. The Applicants further assert that this leasing arrangement would serve the public interest by allowing Triangle to participate in Verizon Wireless’s “LTE in Rural America” program, which, they claim, would expedite the availability of broadband service in a large portion of Triangle’s current wireless service area.
  - 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.
  - 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.

Provide all documents relied on in preparing the responses to 1(a)-1(b).

Provide separate responses to each of 1(a)-1(b).

2. The Commission determined in the *Mobile Spectrum Holdings Report and Order* that increased aggregation of below-1-GHz spectrum would be treated as an “enhanced factor” under its case-by-case review of proposed transactions, if post-transaction, the entity would hold more than one-third of the currently suitable and available below-1-GHz spectrum.<sup>1</sup> The *Mobile Spectrum Holdings Report and Order* also requires, where an entity acquiring below-1-GHz spectrum already holds approximately one-third or more of the below-1-GHz spectrum in a particular market, that the demonstration of the public interest benefits of the proposed transaction would need to clearly outweigh the potential public interest harms, irrespective of other factors.<sup>2</sup>
  - 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.

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<sup>1</sup> See Policies Regarding Mobile Spectrum Holdings; Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, WT Docket No. 12-269, GN Docket No. 12-268, *Report and Order*, 29 FCC Rcd 6133, 6240 ¶¶ 286-88 (2014) (“*Mobile Spectrum Holdings Report and Order*”), recon. denied, *Order on Reconsideration*, FCC 15-79 (rel. Aug. 11, 2015).

<sup>2</sup> See *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6240 ¶ 287.

- 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.
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.
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.

## Definitions

**In this Information and Document Request, the following terms shall have the following meanings (such meanings to be equally applicable to both the singular and plural forms of the terms defined):**

1. The term “Triangle” means Triangle Communication System, Inc., its domestic and foreign parents, predecessors, divisions, subsidiaries, affiliates, partnerships, and joint ventures, and all directors, officers, employees, agents, and representatives of the foregoing. The terms “parents,” “subsidiary,” “affiliate,” and “joint venture” refer to any person in which there is partial (10 percent or more) or total ownership or control between the company and any other person.
2. The term “Verizon Wireless” means its parents, predecessors, divisions, subsidiaries, affiliates, partnerships and joint ventures, and all directors, officers, employees, agents, and representatives of the foregoing. The terms “parent,” “subsidiary,” “affiliate,” and “joint venture” refer to any person in which there is partial (10 percent or more) or total ownership or control between the company and any other person.
3. The terms “and” and “or” have both conjunctive and disjunctive meanings.
4. The word “any” shall be construed to include the word “all,” and the word “all” shall be construed to include the word “any.” The word “each” shall be construed to include the word “every,” and the word “every” shall be construed to include the word “each.” All words used in the singular should be construed to include the plural, and all words used in the plural should be construed to include the singular.
5. The term “Applicants” means Verizon Wireless and Triangle, collectively.
6. The term “Application” means the application submitted Verizon Wireless and Triangle on June 2, 2015, with the file number for the wireless radio services listed as 0006824167.
7. The term “CDMA” means Code Division Multiple Access technology.
8. The term “CMA” means Cellular Market Area.
9. The term “competitor” includes any actual or potential competition from any partnership, corporation (including a business trust), joint stock company, trust, unincorporated association, joint venture, limited liability company, or other entity in any relevant area for any relevant product.
10. The term “discussing” when used to refer to documents means analyzing, constituting, summarizing, reporting on, considering, recommending, setting forth, or describing a subject. Documents that contain reports, studies, forecasts, analyses, plans, proposals, evaluations, recommendations, directives, procedures, policies, or guidelines regarding a subject should be treated as documents that discuss the subject. However, documents that merely mention or refer to a subject without further elaboration should not be treated as documents that discuss that subject.
11. The term “documents” means all computer files and written, recorded, and graphic materials of every kind in the possession, custody, or control of the Company. The term “documents” includes without limitation drafts of documents, copies of documents that are not identical duplicates of the originals, and copies of documents the originals of which are not in the possession, custody, or control of the Company. The term “documents” includes, without limitation, materials of every kind in the possession, custody, or control of the Company whether created internally or externally. In addition, the term “documents” includes without limitation any amendments, side letters, appendices, or attachments. The term “computer files” includes without limitation information stored in, or accessible through,

computer or other information retrieval systems. Thus, the Company should produce documents that exist in machine-readable form, including documents stored in personal computers, portable computers, workstations, minicomputers, mainframes, servers, backup disks and tapes and archive disks and tapes, and other forms of offline storage, whether on or off the Company's premises. Electronic mail messages should also be provided, even if only available on backup or archive tapes or disks. Computer files shall be printed and produced in hard copy or produced in machine-readable form (provided that Commission staff determine prior to submission that it would be in a format that allows the Commission to use the computer files), together with instruction and all other materials necessary to use or interpret the data. Unless otherwise specified, the term "documents" excludes bills of lading, invoices, purchase orders, customs declarations, and other similar documents of a purely transactional nature and also excludes architectural plans and engineering blueprints. Where more than one identical copy of a requested document exists, the Company shall only submit one representative copy.

12. The term "EDGE" means Enhanced Data rates for GSM Evolution technology.
13. The term "EvDO" or "EvDO Rev. A" means Evolution-Data Optimized or Evolution-Data Optimized Revolution A. technology.
14. The term "GSM" means Global System for Mobile Communications technology.
15. The term "HSPA" or "HSPA+" means High Speed Packet Access or High Speed Packet Access + technology.
16. The term "identify," when used with reference to a document, means to state the date, author, addressee, type of document (*e.g.*, the types of document, as described above), a brief description of the subject matter, its present or last known location, and its custodian, who must also be identified.
17. The term "including" shall be construed as including, but not limited to, and indicates examples for the Applicants to address. The term should not be construed as to limit the response to only those examples listed.
18. The term "LTE" means Long Term Evolution technology.
19. The term "mobile wireless application," also referred to as "application software" or "app," means a computer system that enables one or more function on a mobile wireless device running a mobile operating system (*e.g.*, Android, iOS).
20. The term "mobile wireless telephone number," means the 10-digit telephone number assigned to an end-user to access mobile wireless services.
21. The term "mobile wireless data services" means any data communications service using radio transmission between mobile or fixed stations and a network providing communication of packet data information, including but not limited to, broadband data, video, remote file access, status reporting, facsimile, and internet/intranet access. Mobile wireless data services include non-interconnected Voice over IP but exclude mobile wireless voice and text services, as defined herein.
22. The term "mobile wireless services" includes mobile wireless voice services, mobile wireless text services, mobile wireless data services, and mobile wireless applications.
23. The term "mobile wireless text services" means any communications service using radio transmission between mobile or fixed stations and a network providing communication of numeric or alphanumeric messages, such as multi-media messaging, short messaging, and short codes. Mobile wireless text services exclude e-mails.

24. The term “mobile wireless voice services” means interconnected voice communications services provided using radio transmission between mobile or fixed stations on a wireless basis to customers, other than fixed wireless services. Mobile wireless voice services include interconnected Voice over IP.
25. The term “Person” includes the Company, and means any individual, partnership, corporation (including a business trust), joint stock company, trust, unincorporated association, joint venture, limited liability company or other entity, or a government or any political subdivision or agency thereof.
26. The term “plans” means tentative and preliminary proposals, recommendations, or considerations, whether or not finalized or authorized, as well as those that have been adopted.
27. The term “plans, analyses, and reports” means business plans, strategic plans, written policies, budgets, analyses, reports, presentations (including quantitative presentations), and similar documents, including all appendixes and attachments thereto, prepared for, presented to, reviewed by, discussed by, or considered by the Company’s board of directors or the Company’s executive management, or any member thereof. The term “plans, analyses and reports” includes without limitation copies of plans, analyses and reports that are not identical duplicates of the originals, and copies of plans, analyses and reports, the originals of which are not in the possession, custody, or control of the Company, but does not include drafts of plans, analyses and reports, but only the final version or the latest draft if the final version does not exist or is not in the possession, custody, or control of the Company.
28. The term “POPs” means total aggregate population.
29. The term “proposed lease” means the proposed long-term spectrum manager leasing of Verizon Wireless’s licenses by Triangle filed on June 2, 2015, with the application file number for the wireless radio services listed as 0006824167.
30. The term “Public Interest Statement” refers to the document filed by the Applicants on June 2, 2015, entitled “Summary and Public Interest Statement.”
31. The term “Relevant Area” means, and information must be provided separately for, each Cellular Market Area.
32. The term “relevant product” means (and information must be provided separately for, any of the mobile wireless services and using any of the following formats: GSM, EDGE, CDMA, EV-DO, EV-DO Rev. A, UMTS only, HSPA, HSPA+, and LTE):
  - 1) feature mobile devices: wireless handset devices that are cable of supporting voice services as well as text services;
  - 2) smartphones: wireless handset devices other than iPhones, with advanced computing capability and connectivity sufficient to run complete mobile operating system software (*e.g.*, Android, Research in Motion Ltd. Blackberry, Windows phone) to support all mobile wireless services, including broadband data and video applications as well as voice, photographic cinematic, and audio-visual media player services (including books, periodicals, movies, music, games);
  - 3) iPhones: smartphones designed and marketed by Apple Inc.;
  - 4) tablet PCs (includes netbook PCs): portable devices (other than iPads) with touch screen and/or a QWERTY keyboard input, and advanced computing capability and connectivity sufficient to run complete operating system software (*e.g.*, Android, Windows) to support broadband data and video applications as well as photographic, cinematic, and audio-visual media player services (including books, periodicals, movies, music, games);
  - 5) iPads: tablet PCs designed by Apple Inc.;
  - 6) e-readers: portable personal computing devices with a display size of 6" to 10" typically, with advanced computing capability and connectivity sufficient to enable users to shop for, purchase,

- download, and display text, designed primarily for the purpose of reading books, newspapers, and periodicals;
- 7) “air cards” (also referred to as “laptop cards”): portable wireless modems that enable personal computing devices to connect to a mobile wireless network in order to support and deliver voice, data, and video services;
  - 8) mobile hotspots devices: network routing devices that enable portable, Wi-Fi enabled handset and personal computing devices to connect to a mobile wireless network in order to support and deliver voice, data, and video services; and
  - 9) other mobile wireless devices not listed above. Describe the other devices included in this category.
33. The term “relevant service” means (and information must be provided separately for, any of the services identified below and using any of the following formats: GSM, EDGE, CDMA, EV-DO, EV-DO Rev. A, UMTS only, HSPA, HSPA+, and LTE):
- 1) mobile wireless voice services;
  - 2) mobile wireless text services;
  - 3) mobile wireless data services; and
  - 4) mobile wireless applications.
34. The term “subsidiary” as to any Person means any corporation, partnership, joint venture, limited liability company, or other entity of which shares of stock or other ownership interests having ordinary voting power to elect a majority of the board of directors or other managers of such corporation, partnership, joint venture, limited liability company or other entity are at the time owned, or the management of which is otherwise controlled, directly or indirectly, through one or more intermediaries, or both, by such Person.
35. The term “UMTS” means Universal Mobile Telecommunications System technology.
36. “United States” or “U.S.” means the United States, its possessions, territories, and outlying areas.

## Instructions

1. Unless otherwise specified, all Information and Document Requests cover the period from June 15, 2014 through September 15, 2015.
2. Corporations and other entities, including affiliated or subsidiary entities, shall be identified by the Central Index Key (“CIK”) assigned by the Securities and Exchange Commission (“SEC”). A unique identifier should be used for each entity that has not been assigned a CIK by the SEC.
3. Contact Commission staff to discuss an acceptable format for the submission of all documents and data.
4. Each requested document shall be submitted in its entirety, even if only a portion of that document is responsive to a request made herein. This means that the document shall not be edited, cut, or expunged, and shall include all appendices, tables, or other attachments, and all other documents referred to in the document or attachments. All written materials necessary to understand any document responsive to these requests shall also be submitted. Provide final versions of each document; however, if a final version does not exist, provide one copy of the latest draft of the document.
5. Those documents written in a language other than English must be translated into English; automated or machine translations are not permitted. Submit the foreign language document, with the English translation attached thereto.
6. Unless otherwise specified, provide data and interrogatory responses separately for prepaid, post-paid, wholesale, and all mobile wireless services. The Company should provide a separate response for interrogatory, data, and documents (*i.e.*, please do not submit the Company’s interrogatory and data responses on the same discs).
7. Data provided in response to this Request should include a list of all parameters/assumptions on which the data are based.
8. Unless otherwise agreed to by the Commission, requests for the production of documents (and any particular type of document) require the production of all responsive documents in the possession, custody, or control of the Company.
9. Documents must be uniquely and sequentially numbered across the entire production. For each document or statement submitted in response to the requests, indicate, by number and subsection, the request to which it is responsive and, for documents, identify the Person(s) from whose files the document was retrieved (*i.e.*, custodian). Group submitted materials according to the request number to which they are responsive and then, within each of those request-number groupings, by the appropriate custodian.
10. If search terms were used to conduct all or any part of a search conducted in response to this Information Request, provide a list of search terms used, along with a glossary of industry and company terminology. In addition, describe the search methodologies and the applications used to execute the search.
11. The specific requests made herein are continuing in nature. The Company is required to produce in the future any and all documents and information that are responsive to the requests made herein but not initially produced at the time, date, and place specified herein. In this regard, the Company must supplement its responses (a) if the Company learns that, in some material respect, the documents and information initially disclosed were incomplete or incorrect or (b) if additional responsive documents or information are acquired by or become known to the Company after the initial production.

12. Any documents that are withheld in whole or in part from production based on a claim of privilege shall be assigned document control numbers (with unique consecutive numbers for each page of each document).

13. For each Document identified on the Company privilege log:

- 1) Provide the document control number(s);
- 2) Identify all authors of the document;
- 3) Identify all addressees of the document;
- 4) Identify all recipients of the document or of any copies of the document, to the extent not included among the document's addressees;
- 5) Provide the date of the document;
- 6) Provide a description of the subject matter of the document;
- 7) State the nature or type of the privilege that the Company is asserting for the document (*e.g.*, "attorney-client privilege");
- 8) Provide the number(s) of the Request to which the document is responsive;
- 9) Provide the document control number(s) of any attachments to the document, regardless of whether any privilege is being asserted for such attachment(s); and
- 10) State whether the document has been produced in redacted form, and include the range of Document ID labels for those produced documents.

14. The Company's privilege log shall also conform with all of the following requirements:

- 1) Provide a separate legend identifying each author, addressee, and recipient identified on the Company's privilege log.
- 2) Identify on the privilege log, and denote with an asterisk, all attorneys acting in a legal capacity with respect to the withheld document or communication.
- 3) The description of the subject matter of each document shall describe the nature of the document in a manner that, though not revealing information that is itself privileged, provides sufficiently detailed information to enable the Commission to assess the applicability of the privilege claimed.
- 4) For each document withheld under a claim that it constitutes or contains attorney work product, also state whether the Company asserts that the document was prepared in anticipation of litigation or for trial and, if so, specify the anticipated litigation or trial upon which the assertion is based.
- 5) Produce all nonprivileged portions of any responsive document (including nonprivileged or redactable attachments) for which a claim of privilege is asserted, except where the only nonprivileged information in the document has already been produced. Note where any redactions in the document have been made.
- 6) The privilege log shall be produced in both hardcopy and electronic form, the electronic form of which shall be both searchable and sortable.
- 7) Documents sent solely between counsel, including in-house counsel acting solely in a legal capacity, and documents authored by the Company's outside counsel that were not directly or indirectly furnished to any third party, such as internal law firm memoranda, may be omitted from the privilege log. However, any attachments to such documents must be included on the privilege log (if a privilege is applicable to such materials), unless such attachments are addressed and sent solely to counsel.