

Request for Experimental Station Authorization

DigitalBridge Spectrum Corp. (DBC)¹ hereby seeks an extension of temporary authorization WE2XZI, to perform a limited market study² on vacant Broadband Radio Service (BRS) spectrum until such time as the Commission grants DigitalBridge Spectrum II, LLC's ("DBII") license for BR-BTA373 it won at auction,³ or for a period of up to 12 months to test a fully mobile, WiMAX-compliant 802.16e system in Richmond, Indiana, a rural community DBC presently serves with a fixed WiMAX system. DBII's BRS BTA authorization will cover the same geographic area as that authorized pursuant to the STA.⁴ Submitted pursuant to Section 5.63 of the FCC's rules,⁵ this statement explains the complete details about DBC's proposed operation, a description of the equipment, and the specific objectives. DBC respectfully requests expedited review and grant of its request to perform a limited market study.

DBC is testing a fully mobile, WiMAX-compliant 802.16e system utilizing 8 vacant BRS channels at five separate sites. At each site, DBC installed one, three sector base station with up to 4 Watts of transmit power per sector covering approximately an eleven kilometer radius. Applicant uses Time Division Duplex (TDD) technology that transmits and receives on a 5 or 10 MHz channel. DBC's tests determine which is more efficient. DBC utilizes WiMAX-compliant 802.16e equipment by Alvarion.⁶ DBC testing includes the following:

- procedure for software and configuration upgrade to customer premise equipment;
- propagation analysis of 2nd and 4th order diversity sectors;
- throughput testing of mobile and nomadic devices across all available modulation levels;
- frequency reuse capabilities and self-interference analysis;
- aggregate sector throughput testing;
- intra-base-station and inter-base-station mobile handover performance; and

¹ It is DBC's mission to use wireless broadband technology, WiMAX, to bring advanced wireless broadband services to rural and underserved communities nationwide. DBC's mission and execution are unique in the U.S. today. Since launching service in 2007, DBC has deployed wireless broadband services in 14 rural communities. Today, DBC serves over 20,000 rural subscribers with wireless broadband, wireless voice and wireless video service.

² 47 C.F.R. §§5.3(j), 5.93.

³ Auction of Broadband Radio Service Licenses Closes, Winning Bidders Announced for Auction 86, Public Notice, 24, FCC Rcd 13572 (2009). An affiliate of DBC, DigitalBridge Spectrum II, LLC, was the high bidder for BRS License BR-BTA373, Richmond, IN.

⁴ DBII's auction application was timely filed, all payments were timely made, the application has been accepted for filing, and the accepted for filing Public Notice period ended with no petitions to deny or informal objections being filed against the application. *See* ULS File No. 0004040685.

⁵ 47 C.F.R. §5.63.

⁶ Equipment specifications are attached to this application.

- quality of service tests to validate the ability to deliver voice and video applications.

Alavriion's WiMAX-compliant 802.16e equipment utilizes the IEEE 802.16e standard. In addition to the increased benefits of mobility, this equipment provides a higher broadband capacity and ability to serve more customers in the market. It will also provides the ability to support 802.16e standardized devices at a reduced cost, increased availability to subscribers, and the capability to provide roaming between other 802.16e networks.

The FCC's rules allow experimental testing, such as the tests the Applicant is conducting, for the purpose of performing limited market studies.⁷ The FCC's rules allow testing for a period of either two or five years.⁸ In order to achieve the necessary test results, DBC was granted a temporary authorization for 12 months.⁹ DBC requests an extension of this authority so it may continue its tests because the FCC has not yet granted DBII's BRS BTA license it won at auction for Richmond, Indiana. Once the auction authorization is granted, DBC will no longer need temporary authorization because it will be able to seamlessly transition its testing and new services to the auction authorization.

As required by the FCC's limited market study rule, Applicant owns all the equipment that will be utilized in its tests.¹⁰ Applicant will also inform all participants in the testing that the service or device is granted under an experimental authorization and is strictly temporary.¹¹ As a part of its request for experimental authorization, Applicant also requests an exemption from the FCC's station identification rule.¹² Section 5.115 of the FCC's rules requires that an experimental station transmit its assigned call sign at the end of the each complete transmission in clear voice or Morse code. Similar to all other digital cellular technology, Applicant's proposed digital cellular equipment is incapable of station identification in accordance with Section 5.115. Therefore, Applicant requests that the terms of its experimental authorization provide an exemption from the FCC's station identification rule.

In addition to the technical benefits of DBC's proposed test and limited market study, public interest justifies grant of the requested extension of DBC's experimental authorization. The test and limited market study are enhancing the development, extension, utilization and adoption of mobile WiMAX technology in rural, heavily treed areas. This is the first deployment of its kind in the rural Midwest.

At this time, DBC only has access to the D-group channels in Richmond, which it leases from Ball State University (Ball State). The excess capacity leased to DBC on this

⁷ 47 C.F.R. § 5.93.

⁸ 47 C.F.R. § 5.71.

⁹ See 47 C.F.R. § 5.71(b).

¹⁰ 47 C.F.R. § 5.93(a).

¹¹ 47 C.F.R. § 5.93(b).

¹² 47 C.F.R. § 5.115.

channel group is fully utilized and provides the current generation of WiMAX wireless broadband service – a fixed service – to the community. These channels cannot be used, simultaneously to test a mobile WiMAX service in Indiana. However, there is ample vacant spectrum in Richmond, Indiana, including the E-group and F-group channels. DBII is the BTA license high bidder for the Richmond, Indiana BTA (BTA 373). There is only one licensee, Ball State, in BTA 373 and DBC currently leases this spectrum. DBC is the only broadband provider with operations in the Richmond, Indiana area and several surrounding markets. If this request is expeditiously granted, DBC will be able to continue testing mobile WiMAX service and transition its operations to DBII's auction authorization.

In addition to testing the limits of current mobile WiMAX technology in a rural, heavily-treed environment, the test and limited market study continues to reap substantial benefits. DBC is already providing fixed wireless broadband services to about 1,000 customers in Richmond. DBC sales in Richmond have been very strong, as the other broadband providers in the area have limited coverage, poor service quality, and high prices. This test and limited market study bring to Richmond the same advanced, wireless WiMAX services that residents of more populated areas already enjoy. DBC plans to deploy in rural markets the mobile services that are similar to the services Clearwire has deployed in Baltimore, Chicago, Portland and Washington, D.C.¹³ Mobile wireless broadband will be deployed in the 2.5 GHz band nationwide,¹⁴ and DBC wants its systems and its customers to be ready for this next generation of service when it is nationally deployed.

There is sufficient precedent for the FCC allowing use of fallow 2.5 GHz spectrum to provide wireless broadband service in rural areas.¹⁵ In addition, no other licensee would be negatively affected by granting DBC this experimental license. Clearwire is the only other carrier that provides service in adjacent markets in Indiana. Due to the nature of DBC's proposed tests and the location of the testing, DBC can conduct experimental testing without causing harmful interference to adjacent users. Of course, if any interference results from DBC's tests, it would take whatever remedial actions the FCC requires.

¹³ In the Matter of Sprint Nextel Corporation and Clearwire Corporation, Application for Consent to Transfer Control of Licenses, Leases and Authorizations, Memorandum Opinion and Order, 23 FCC Rcd 17570 (2008) (Clearwire Order).

¹⁴ See Clearwire Order, ¶ 42.

¹⁵ See In the Matter of Gateway Telecom LLC d/b/a StratusWave Communications, Applications For New Educational Broadband Service Stations on the A and B Group Channels in Centerville, Ohio; and A and B Group Channels in Arden, West Virginia, Memorandum Opinion and Order, 22 FCC Rcd 15789, ¶ 13 (2007) (StratusWave Order); see also Choice Communications, LLC Request for Special Temporary Authority, ULS File No. 0003487551, granted on October 27, 2008; Board of Trustees of Northern Michigan University Request for Special Temporary Authority, ULS File No. 0003187729, granted on October 23, 2007; Nextel Spectrum Acquisition Corp. Request for Special Temporary Authority, ULS File No. 0002940367, granted on March 21, 2007; Choice Communications LLC, 20 FCC Rcd 10906, ¶ 15 (2005).