

Southern Communications Services, Inc. d/b/a Southern Linc

Statement in Support of Experimental STA Application

Pursuant to Section 5.63(c)(1) of the Rules of the Federal Communications Commission (“FCC” or “Commission”), Southern Communications Services, Inc. d/b/a Southern Linc (“Southern Linc”) hereby provides this narrative statement in support of its application for an experimental special temporary authority (“STA”) to conduct technical trials using spectrum in the 3.5 GHz CBRS band from specified locations in Alabama in accordance with the technical and operating parameters described in the accompanying application.

Southern Linc requests the grant of an experimental STA for a term of the shorter of (a) six (6) months from grant of this application, or (b) Southern Linc’s grant of authority from a Spectrum Access System (“SAS”) and Environmental Sensing Capability (“ESC”) to operate the authorized equipment and facilities on a General Authorized Access (“GAA”) basis.

I. BACKGROUND

Southern Linc operates a commercial digital 800 MHz ESMR system that uses an all-LTE platform to provide interconnected voice, dispatch, push-to-talk, text and picture messaging, internet access, and data transmission services over the same handset. Southern Linc provides these services over a 127,000 square mile service territory covering Georgia, Alabama, southeastern Mississippi, and the panhandle of Florida.

Southern Linc is a wholly owned subsidiary of Southern Company, a holding company based in Atlanta, Georgia, which operates regulated electric and gas utilities serving 9 million customers in nine states. Southern Company owns three electric utility subsidiaries – Alabama Power Company, Georgia Power Company and Mississippi Power Company – which provide retail and wholesale electric service throughout a 100,000+ square mile service area in Alabama, Georgia and Mississippi. Southern Company supplies wholesale electric power to municipalities, rural electric cooperatives, and other distribution providers through its Southern Power subsidiary, which operates natural gas, solar, wind, and biomass generating facilities in nine states. Southern Company Gas provides natural gas distribution and storage in four states: Illinois, Georgia, Virginia and Tennessee.

As a subsidiary of Southern Company, Southern Linc directly and indirectly supports the internal communications needs of its affiliated electric utility operating companies, which include not only mobile services but also fixed point-to-point and fixed point-to-multipoint wireless services for a variety of applications that support the safe, reliable, and efficient delivery of essential electric utility services, such as monitoring, load management, protective relaying, and supervisory control and data acquisition (“SCADA”) systems.

II. OVERVIEW

Southern Linc is currently using its 800 MHz LTE network for various applications in support of its affiliates' electric and gas utility operations. These applications include Advanced Meter Infrastructure ("AMI") backhaul, SCADA, remote engineering access, telephony, push-to-talk, fault monitoring, and general workforce mobility applications. As described herein, Southern Linc is actively exploring additional spectrum options for expanded LTE network operations, including the 3.5 GHz CBRS band.

In order to evaluate the technical viability and capability of the 3.5 GHz CBRS spectrum (including propagation, building signal penetration and mobility aspects), Southern Linc seeks an experimental STA to conduct technical trials to evaluate the performance and capabilities of 3.5 GHz CBRS spectrum to support critical electric and gas utility communications applications as proposed in this application. When the FCC commences the Initial Commercial Deployment ("ICD") period for the 3.5 GHz band, Southern Linc may terminate use of any granted experimental STA and continue equipment evaluation and product development under the ICD through a partner SAS.

Accordingly, Southern Linc requests the grant of an experimental STA for a term of the shorter of (a) six (6) months from grant of this application, or (b) Southern Linc's grant of authority from a SAS and ESC to operate the authorized equipment and facilities on a GAA basis.

III. REQUEST FOR CONVENTIONAL EXPERIMENTAL RADIO STA

A. Purpose of Test

Southern Linc requests a conventional experimental radio STA to test LTE equipment on spectrum in the 3.5 GHz CBRS band for the purpose of conducting technical radio research. In particular, this testing is intended to confirm propagation modeling characteristics; performance in dense urban canyon environments with obstacles including large buildings of various materials composition, large mobile vehicles and some foliage; performance in rural environments with obstacles including small buildings and dense foliage; and the ability of a mobile end-user device to seamlessly roam between a 3.5 GHz CBRS base station utilizing up to 40 MHz of spectrum and an 800 MHz Band 26 base station utilizing 3 MHz of spectrum. Additionally, the testing is intended to confirm that the 3.5 GHz CBRS spectrum band can provide the necessary capacity and latency for various applications and use cases in support of electric and gas utility operations, including, but not limited to, AMI backhaul, SCADA, remote engineering access, telephony, push-to-talk, fault monitoring, general workforce mobility applications and other applications such as street lighting, cameras, gunshot detection devices and parking monitoring and enforcement devices. In addition, Southern Linc plans to incorporate SAS/ESC integration of equipment into the trial once SAS and ESC alpha and beta testing become viable with at least one party, which would enable Southern Linc to evaluate the integration of the equipment and utility communications services with the SAS and ESC.

B. Technical Parameters of Test

The testing will involve wireless connectivity to fixed and mobile locations within the listed radii of each transmitter site. Details on the Ericsson transmitting equipment to be used in this testing are provided in the technical sections of this application. The models that Southern Linc plans to test are certified LTE Band Class 48 equipment that has been deployed worldwide at 3.5 GHz. Southern Linc plans to deploy one directional antenna at each site, the details of which also are provided in the technical section of this application.

As with standard field area network systems, the testing of the fixed wireless LTE equipment will be automated to transmit/receive intermittent information between the transmitters and the end-point locations. While most of the monitored testing would take place during normal business hours (8:00 AM – 5:00 PM local time), Southern Linc anticipates that data transmissions will occur throughout the 24-hour day. Consistent with the requirements of Section 5.107 of the Commission's Rules, system management and monitoring will be handled remotely from Southern Linc's offices at Birmingham, Alabama, except for installation, setup, and any equipment adjustments that will be conducted by qualified personnel on site. Southern Linc will monitor construction and operation to ensure that there will be no harmful interference to Incumbent Access users and to remedy harmful interference in the unlikely event it occurs.

Further, there appears to be no ground-based radar within 100 miles of the planned trial area that would require ESC or coordination with incumbents, and the proposed areas of operation are outside the coastal protection zone. Commission records also show that there are no Fixed Satellite earth stations in the 3600-3650 MHz band operating anywhere in the vicinity of the trial location.¹

During the trial, and prior to the certification of a SAS and ESC, Southern Linc will comply with the power levels in Section 96.41 as they apply to End User Devices and Category B CBSDs. At the conclusion of the requested experimental STA term, Southern Linc will either transition to Part 96 GAA if equipment is certified and authorized under GAA rules or, if not, cease operation in 3550-3650 MHz. As noted above, when the FCC commences the ICD period for the 3.5 GHz band, Southern Linc may terminate use of any granted experimental STA and continue equipment evaluation and product development under the ICD through a partner SAS.

Accordingly, Southern Linc requests the grant of an experimental STA for a term of the shorter of (a) six (6) months from grant of this application, or (b) Southern Linc's grant of authority from a SAS and ESC to operate the authorized equipment and facilities on a GAA basis.

¹ See *Amendment of the Commission's Rules with Regard to the 3550-3650 MHz Band*, Notice of Proposed Rulemaking and Order, GB Docket No. 12-354, 27 FCC Rcd 15594 (2012), at Appendix A.