

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

### **Statement in Support of Experimental License 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 license to conduct technical trials using spectrum in the 896-901/935-940 MHz band from specified locations in Alabama in accordance with the technical and operating parameters described in the accompanying FCC Form 442. Southern Linc requests a license term of two (2) years from grant of this application.

#### **I. BACKGROUND**

Southern Communications Services, Inc. d/b/a Southern Linc (“Southern Linc”) operates a commercial digital 800 MHz ESMR system 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 in the process of transitioning its network from the iDEN air interface to an all-LTE platform.

Southern Linc is a wholly owned subsidiary of Southern Company, a holding company based in Atlanta, Georgia, which operates 11 regulated utilities serving 9 million customers in nine states. Southern Company owns four electric utility subsidiaries – Alabama Power Company, Georgia Power Company, Gulf Power Company, and Mississippi Power Company – which provide retail and wholesale electric service throughout a 120,000 square mile service area in Alabama, Georgia, Florida, 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 seven states: Illinois, Georgia, Virginia, New Jersey, Florida, Tennessee, and Maryland.

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 intends to use 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 896-901/935-940 MHz band (“900 MHz band”).

Currently, the 900 MHz band is licensed through licenses that are configured in 20 blocks of 10 contiguous 12.5 kHz channels (125 kHz) that cover entire Metropolitan Trading Areas (“MTAs”), with each block separated by 10-channel allocations of site-specific Business/Industrial/Land Transportation (“B/ILT”) frequencies. Since the minimum channel size for a LTE carrier is currently 1.4 MHz, the existing 900 MHz band configuration prevents the deployment of these services.

In 2014, PdvWireless, Inc. (“PDV”) and the Enterprise Wireless Alliance (“EWA”) submitted a Petition for Rulemaking requesting realignment of the 900 MHz band to create a 3X3 MHz allocation to facilitate broadband deployment for business enterprise entities, including those classified as Critical Infrastructure Industry.<sup>1</sup> After receiving public comment on the Petition, the Commission issued a *Notice of Inquiry* in 2017 requesting comment on the future use of the 900 MHz band, including realignment of the band as proposed by PDV and EWA.<sup>2</sup>

In order to evaluate the technical viability and capability of PDV’s proposed 3X3 MHz allocation in the 900 MHz band, as well as to evaluate potential interference to systems operating on adjacent bands, Southern Linc seeks an experimental license to use 900 MHz channels currently licensed to PDV as proposed in this application in Tallapoosa and Elmore Counties in Alabama.

### **III. REQUEST FOR CONVENTIONAL EXPERIMENTAL RADIO LICENSE**

#### **A. Purpose of Test**

Southern Linc requests a conventional experimental radio license to test LTE equipment on spectrum in the 900 MHz band for the purpose of conducting technical radio research. In particular, this testing is intended to confirm whether a broadband service of up to 3 MHz can be deployed on 900 MHz band spectrum using LTE-certified Band Class 8 equipment to 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, and general workforce mobility applications.

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<sup>1</sup> / Petition for Rulemaking of the Enterprise Wireless Alliance and Pacific DataVision, Inc., RM-11738 (filed Nov. 17, 2014).

<sup>2</sup> / *Review of the Commission’s Rules Governing the 896-901/935-940 MHz Band*, WT Docket No. 17-200, Notice of Inquiry, 32 FCC Rcd 6421 (2017) (“*Notice of Inquiry*” or “*NOP*”).

In addition, this testing is intended to confirm whether such operations may be conducted in the 900 MHz band without causing interference to systems operating in adjacent spectrum bands.<sup>3</sup>

The testing will be conducted on 900 MHz channels currently licensed to PDV on an MTA basis and on interleaved B/ILT channels. The testing will comply with Section 5.84 of the Commission's Rules and will not cause interference to either co-channel or adjacent channel licensees authorized pursuant to the current 900 MHz band plan.

## **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. It should be noted that this is equipment is experimental only to the extent that it has not yet been certified for use on Part 90 spectrum; the models that Southern Linc plans to test are certified LTE Band Class 8 equipment that has been deployed worldwide at 900 MHz. Southern Linc plans to deploy three directional antennas 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 requests a 24-month term for the experimental license for a valid equipment evaluation and product development trial and to make adjustments to the testing as needed.

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<sup>3</sup> / Southern Linc notes that its affiliates operate an extensive AMI system on the adjacent Narrowband PCS band (901-902/940-941 MHz) that must be protected from interference.

### ***Deployment Parameters***

The experimental trial proposes operation from the three sites, which are identified on the application. Throughout the test Southern Linc will use various 3 megahertz channels with the signal oriented at specific azimuths. The chart below provides information requested in the Directional Antenna section of the form.

<b>Location 1- 2285 Martin Dam Road, Tallahassee, AL</b>	
Coordinates	32°40'51"N / 85°54'49"W
Width of beam in degrees at the half power point	65°
Orientation in horizontal plane (degrees from True North)	0°, 120° and 240°
Orientation in vertical plane (degrees from horizontal)	0°

<b>Location 2 – 8491 County Road 34, Dadeville, AL</b>	
Coordinates	32°46'2.81"N / 85°47'29.53"W
Width of beam in degrees at the half power point	65°
Orientation in horizontal plane (degrees from True North)	120°, 240° and 345°
Orientation in vertical plane (degrees from horizontal)	0°

<b>Location 3 – 251 Slaughters Crossing Rd., Camp Hill, AL</b>	
Coordinates	32°49'3.45"N / 85°42'36.84"W
Width of beam in degrees at the half power point	65°
Orientation in horizontal plane (degrees from True North)	100°, 230° and 330°
Orientation in vertical plane (degrees from horizontal)	0°

September 7, 2018

Mobility Division  
Federal Communications Commission  
1270 Fairfield Road  
Gettysburg, PA 17235

RE: Consent for experimental use of 900 MHz Channels

To Whom It May Concern:

PDV Spectrum Holding Company, LLC (“Licensee”), is the licensee of the following stations:

KNNX362  
KNNX363  
KNNY220  
KNNX942  
KNNY239  
KNNX487  
KNNX943  
KNNX488  
KNNX489  
KNNX944  
KNNX490  
KNNY294

The Licensee certifies that these stations are constructed and fully operational.

The Licensee hereby consents to the use of frequencies designated under a Southern Communications Services, Inc. d/b/a Southern Linc (“Southern Linc”) Experimental License for the proposed experimental use of the frequencies in the Lake Martin area of Alabama pursuant to the conditions of any granted license. Southern Linc agrees to resolve any RF interference issues that may arise from their use. This consent shall be for a term of one year beginning October 1, 2018.

Should the Commission require any additional information, please contact the undersigned. Thank you for your attention to this matter.

Very truly yours,

*Lance Johnson*

Lance Johnson  
Director, Strategy & Government Affairs  
PDV Spectrum Holding Company, LLC  
Authorized Signatory