South.com, LLC
Request for Part 5 Experimental
Special Temporary Authority
OET File No. 0864-EX-ST-2012

EXHIBIT A
NARRATIVE STATEMENT

South.com, LLC ("South"), a wholly owned indirect subsidiary of DISH Network Corporation ("DISH"), requests special temporary authority ("STA"), pursuant to Sections 5.3(d) and (i) and 5.61 of the FCC's rules, for a six-month period beginning November 26, 2012, to conduct experimental testing of two-way wireless backhaul services in the Cheyenne, Wyoming Designated Market Area ("DMA") area prior to further assessing the business case for potential full-scale deployment of Multichannel Video and Data Distribution Services ("MVDDS") at 12.2-12.7 GHz. South holds an MVDDS license covering the Cheyenne DMA.

South seeks this STA to operate a low-level test signal from two temporary fixed transmit sites for purposes of assessing the suitability of such sites for full-scale two-way wireless backhaul operations using the MVDDS spectrum and under the Commission's Part 101 power limits. Part 101 of the FCC's rules sets forth the procedures for licensees to establish full power or permanent MVDDS transmission sites.[1] However, the rules do not currently allow for two-way operations without using other spectrum.[2] Moreover, the procedures for full power or permanent sites require licensees to follow a highly detailed and time-consuming (i.e., 90-day) coordination process. While those procedures may be appropriate prior to the deployment of full-power sites, they are unduly burdensome when performing short-term site evaluation testing using a low-level test signal.

In South's view, successful deployment of MVDDS services is critically dependent on being able to incorporate innovative services into its parent company's (DISH) far-reaching business plans. Wireless backhaul services would effectively complement DISH's nascent nationwide wireless plans. Additionally, even though wireless backhaul is a two-way service, it is a point-to-point service, and therefore it realistically is operating a one-way transmit path, albeit on two different frequencies segments. Because of various uncertainties regarding the ability to offer effective two-way services under the MVDDS Part 101 power limits, this STA will be used to evaluate whether wireless backhaul is a viable MVDDS service offering. As described below, the testing would use a combination of interference mitigation factors to prevent harmful interference to incumbent operations (specifically DBS receive dishes) including utilizing a narrow beamwidth antenna suitable for microwave backhaul, which prevents exceeding the applicable EPFD protection levels.

[1] 47 C.F.R. § 101.1440.

[2] 47 C.F.R. § 101.1407.

A. Purpose of Operation and Need for STA

Part 101 of the FCC's rules does not permit two-way services unless other spectrum or media is used for the return or upstream path. Thus, South is requesting this STA to permit testing of two-way services from temporary fixed sites to define the commercial viability of such operations and to assess whether a waiver of the Commission's rules for permanent operations would be appropriate. In addition, South seeks to operate at a higher Effective Isotropically Radiated Power **("**EIRP") than currently allowed. South will take the steps described herein to ensure that no harmful interference occurs.

South is an MVDDS licensee that currently holds FCC authorizations in 37 DMAs, including Cheyenne. This STA will allow South to efficiently evaluate whether two-way wireless backhaul services are feasible for MVDDS without impacting any other entities that may be authorized to operate in the 12.2-12.7 GHz band. These other entities are: Non-Geostationary Orbit ("NGSO") Fixed Satellite Service ("FSS") licensees; public safety Private Operational Fixed Service ("POFS") stations; adjacent area MVDDS stations; and Direct Broadcast Satellite ("DBS") licensees (including South's parent DISH).[3]

The proposed operation will neither cause harmful interference to NGSO FSS licensees (because the required levels for protection will be met) nor will it cause harmful interference to public safety POFS station licensees (because there are no such licensees within the identified area). There currently are no NGSO FSS licensees operating anywhere in the U.S. To South's knowledge, there also are no currently operating MVDDS stations in adjacent areas.

While there are likely DBS receive dishes within the proposed testing area, South will avoid causing harmful interference to customers of DBS licensees through a combination of interference mitigation factors that ensure that the Equivalent Power Flux Density ("EPFD") level at any DBS receive dish is well below the level required by the rules governing MVDDS operations in the band. In particular, South must ensure that the EPFD signal level does not exceed -171 dBW/m2/4kHz at any DBS customer of record location before deploying full-power MVDDS services in the identified area.[4]

For these reasons, the operations proposed to be conducted under this STA will not cause harmful interference to DBS customer locations. In fact, grant of this STA will enable South to identify and efficiently assess sites that can be used for MVDDS deployments without causing harmful interference to DBS licensees and their customers. As noted above, prior to commencing full-power operations from any site located within the test operations to be conducted under this STA, South will follow the 90-day interference coordination and notification process with DBS licensees.[5]

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[3] *See, e.g.*, 47 C.F.R. §§ 101.103, 101.105, 101.129, 101.1440, and 101.1421.

[4] *See* 47 C.F.R. §§ 101.105(a)(4), 101.1440(b).

[5] See 47 C.F.R. § 101.1440.

B. Location of Proposed Operation

South proposes to conduct its tests from temporary fixed locations between the following two sites separated by 6.5 km:

Wyoming DMA

Station 1
North Latitude: 41° 9' 34.32" N
West Longitude: 104° 43' 19.85" W
Azimuth: 136.72°
Elevation 6,114 feet ASL/1,863 meters
Datum: NAD83

Station 2
North Latitude: 41° 7' 1.00" N
West Longitude: 104° 40' 9.00" W
Azimuth: 316.76°
Elevation 5,992 feet ASL/1,826.36 meters
Datum: NAD83

C. Technical Specifications:

1. Frequencies Desired

South requests authorization to operate its testing of two-way backhaul services at 3 possible (50 MHz) channels for each station within the 12.2-12.7 GHz MVDDS band. For Station 1, South seeks to transmit at 12575 MHz, 12625 MHz, and 12675 MHz. For Station 2, South seeks to transmit at 12225 MHz, 12275 MHz, and 12325 MHz.

South has selected a specific frequency range, signal level and configuration for the testing that it has determined will not cause harmful interference to DBS licensees. Out of an abundance of caution, South will provide contact information to DBS licensees serving customers in the identified area, so DBS licensees may immediately contact South in the unlikely event the test operations covered by this STA cause harmful interference to DBS customers.

South has evaluated environmental considerations to ensure compliance with Section 1.1306 of the FCC's rules, 47 C.F.R. § 1.1306, including the human exposure requirements set forth in FCC OET Bulletin No. 65, and determined that there will be no adverse environmental impact.[6]

2. Effective Isotropically Radiated Power ("EIRP") and Equipment

The transmit power level will be such that there is no interference to existing DBS and NGSO FSS operations and the respective EPFD will be met.[7] The test transmitter will be the

[6] *See* 47 C.F.R. § 101.1425.

Dragonwave Horizon Compact transceiver. The transmit power of the antenna will be 25 dBm with an EIRP, after considering antenna gain, of 63 dBm. The EIRP level of 14 dBm/24 MHz is derived for the protection of NGSO services and would be appropriate for a wide beamwidth transmission intended to cover a 360 degree horizontal area that could exceed the PFD requirements for their protection. South will operate at a higher EIRP relative to this, however it will be based on narrow beamwidth antenna for a point-to-point communication link that will be focused in one direction and designed so they do not exceed the NGSO protection levels nor interfere with it.

3. Modulation and Emissions

South proposes to operate an unmodulated carrier with emission designator D7W. The maximum occupied bandwidth of this signal, including noise sidebands will not exceed 47.1 MHz.

4. Antenna Information

South will be using 3 foot antennas. For South's test sites, the temporary fixed transmitter locations will be 24.76 meters above ground for station 1 and 91.99 meters above ground for station 2. The antennas have a vertical orientation with a beam width of two degrees. The temporary fixed antennas will not be mounted in a fashion that requires approval under FAA and FCC regulations.

D. Equipment

The equipment that will be used pursuant to this STA will be two Dragonwave Horizon Compact transceivers.

E. Restrictions on Operation

South understands that the operation of equipment under experimental authority must not cause harmful interference to authorized facilities.[8] While South believes that signal and test parameters of operation set forth above will not cause harmful interference to other licensees, in the event such interference occurs, South will take immediate steps to resolve the condition, including discontinuance of operations. Should South need to discontinue operations to resolve harmful interference, it will not resume any transmissions until it has remedied such interference.[9]

In addition, South will immediately suspend transmitter operation upon detection or notification of a deviation from the technical requirements of the STA and will not resume operations until such deviation is corrected.[10]

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[7] *See* 47 C.F.R. § 101.113(a).

[8] *See* 47 C.F.R. § 5.111.

[9] 47 C.F.R. § 5.111(a)(2).

[10] *See* 47 C.F.R. § 5.115.

South understands that it may only make transmissions that are necessary and directly related to the stated program of experimentation specified in this application for STA and that all transmissions will be limited to the minimum practical transmission time.[11]

Prior to commencing any tests, South will provide DBS licensees that are serving customers in the identified area with the contact name, phone number, and email of the South representative(s) overseeing the testing, so South can investigate immediately any instances of alleged interference and terminate any testing that is found to be causing harmful interference. As noted above, DBS licensees and South currently are the only entities authorized to use these frequencies in the identified area.

The equipment used during this testing will be under the control of South. No unapproved equipment will be offered for sale or lease, or will be sold or leased.

Finally, given the nature of the tests, South respectfully requests that it be exempted from the station identification requirements in Rule Section 5.115.[12]

F. Public Interest

The requested STA is in the public interest, convenience, and necessity because South will be able to perform the short-term evaluation testing necessary to determine whether two-way wireless backhaul services are viable under the MVDDS technical rules

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[11] 47 C.F.R. § 5.111(a)(1).

[12] See 47 C.F.R. § 5.115.