

Another Block Of Spectrum Is One Step Closer To Coming to Market

October 31, 2019 by Vivek Stalam

What's New: The FCC has reportedly sent an Order on Ligado's license modification application to NTIA for review by the Interdepartment Radio Advisory Committee (IRAC). This is a positive sign for the company; the FCC is advancing the process, at last. It is still unclear how (or if) NTIA / IRAC will respond to the FCC proposal; however, if the FCC is able to adopt the Ligado application, it would release 30MHz of L-Band spectrum for terrestrial wireless use. After a decade of being sidelined due to complaints from the GPS community, the industry would no doubt welcome seeing this spectrum repurposed. Moreover, it could be released for terrestrial use at an interesting time; Ligado has been testing use cases in which the spectrum is paired with higher frequency bands to improve their propagation (see our Intelsat initiation [HERE](#) for our detailed thoughts on the value of C-Band).

Details of the Ligado proposal: Ligado's license modification proposal would grant them terrestrial rights to 30MHz of spectrum: 10MHz of downlink (1526-1536MHz), and 20MHz of uplink (1627.5-1637.5MHz and 1646.5-1656.5MHz). The proposal sets power limits for the L-Band that are akin to CBRS power limits, which could reduce its reach relative to spectrum with standard power limits. The company has explored configuring the spectrum as two 10x10MHz pairs, using another 5MHz license that it has access to (1670-1675MHz) and 5MHz currently used by NOAA (1675-1680MHz)^[1]. The spectrum from 1670-1680MHz has no meaningful power limitations and can be used for uplink or downlink.

Details of the regulatory process: According to a Memorandum of Understanding between the FCC and NTIA ([LINK](#)), the FCC is meant to give notice to the NTIA 15 days prior to any proposed action that could cause interference to government operations. The IRAC is an inter-agency committee that is meant to represent US interests before the NTIA; its members include those who have historically opposed Ligado's and its predecessor's proposals, such as Department of Transportation and various defense interests. It remains to be seen whether IRAC members will oppose this proposal, given the modifications Ligado has made to accommodate prior objections.

Thesis impact: We don't cover Ligado (public debt; no public equity), though the fact that the FCC has moved this forward is a positive for them. If the application is ultimately approved, it could make an additional 30-40MHz of spectrum available to wireless carriers in close proximity to the CBRS and C-Band auctions. We doubt this will have any impact on our estimate for what the C-Band could fetch (\$50BN; see detailed report [HERE](#)); they are not really substitutes. However, there are other intriguing possibilities for this band.

The spectrum could be deployed in two 10x10MHz pairs, one of which would be full-powered (similar to traditional mid-band spectrum like AWS), and one of which would be lower-powered (more akin to CBRS). This could be used by existing carriers to augment LTE capacity on traditional macro and/or small cells deployments; the lower-powered 10x10MHz might be especially attractive to cable companies for offloading traffic from their MVNO (see our thoughts on the CBRS use-case for cable [HERE](#)).

There is some prospect that the 30MHz of L-Band uplink could be used to increase the utility and value of the C-Band due to the opportunity to increase their reach by using lower frequency L-Band as uplink in conjunction with C-Band downlink. The uplink is usually the limiter on propagation because it is transmitted under lower power from the phone back to the cell site. Because L-Band is lower frequency and naturally propagates further, it would extend the functional reach of the higher frequency C-Band. In addition, given that up to 90% of traffic is carried on the downlink, spectrum can be paired asymmetrically with 30MHz of uplink serving 100MHz (or more) of downlink.

Full 12-month historical recommendation changes are available on request

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1. The 1675-1680MHz band is currently subject to a different proceeding at the FCC, which unanimously adopted a notice of proposed rulemaking proposing (NPRM) earlier this year to reallocate the spectrum band for shared use between incumbent federal entities and non-federal wireless operations.