

EXPERIMENTAL DESCRIPTION

The proposed experimental license would facilitate testing of narrowband Internet of Things devices for wider-area connectivity for sensors and other devices with low throughput requirements, which could benefit from the special propagation characteristics of White Spaces spectrum. This continuation of Microsoft's existing Special Temporary Authorization¹ will allow Microsoft to continue to test and develop the FarmBeats technology as detailed in prior Microsoft experimental license applications, but in new rural applications.²

In particular, the proposed testing will evaluate the feasibility of new network topologies for sensors that are not necessarily confined to a single farm or other venue but which may require connectivity across a wider area. This differing network design may necessitate the use of increased antenna height relative to other White Space IoT devices, but still well within the Commission's height limitations for fixed White Space devices. We will begin testing on channel 17 which, at the time of this application, is available for TVWS devices at the appropriate power level throughout the experimental area. However, we will continue to monitor the White Spaces database to ensure the continued availability of the channel selected for this test, potentially selecting a new channel of operation if the channel availability reported by the White Space database changes.

¹ Microsoft Corporation, Experimental Licensing System File No. 1623-EX-ST-2019.

² Microsoft Corporation, Experimental Licensing System File Nos. 0046-EX-CM-2019 and 0215-EX-CM-2019.