

**Ericsson**

**Exhibit to Experimental License Application, File No. 0065-EX-ML-2016**

**Date Filed: March 29, 2016**

Description and Objectives to be Accomplished

Ericsson is filing this request to modify our existing license, call sign WI2XDB, File No. 0801-EX-PL-2015, in order to advance our 5G testing with Verizon. We seek authorization to move the base stations within a 2 mile (3.22 km) radius around the Ericsson facility at which they are presently located. The user equipment will also be operating within the 2 mile radius. The purpose of this is to add residential house/apartment /neighborhood cell coverage clusters, each with a 1000 foot radius.

These trials will continue to use both 15 GHz and 28 GHz spectrum, as specified on Form 442, and will include multiple base stations. The specific objectives for the field market trial with Verizon remain the same - to develop 5G hardware and software to support later commercial deployment to end users and to support numerous 5G use cases.

The use cases we will continue to test are:

[REDACTED]

These use cases will apply to [REDACTED].

This research will contribute to new areas of radio by continuing the development of 5G technologies, and ultimately enabling 5G deployment. 5G will provide high data rates, very high traffic capacity with up to 100Gbps-massive MIMO, and will have very low latency to support improved user performance and new use cases. It will support massive number of devices and improve spectral efficiency for massive numbers of devices equipped for machine-to-machine communication. These devices will be very low cost and require minimal amounts of energy to function. 5G will also provide the ultra-high reliability and availability necessary for industrial use.

Timing Request

[REDACTED] we request that this application be processed as expeditiously as possible, by or before April 30, 2016.

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Requested Government Spectrum

Ericsson requests authorization to transmit on 14.5-15.35 GHz only because the experimental equipment was built to function on this spectrum for initial testing in Sweden and it continues to be used for our overall 5G research program. Ericsson has no plans to request that this spectrum be repurposed for commercial use.

Recognizing the existence of government systems in the 15 GHz band, out of an abundance of caution we are providing a 24 hour emergency contact to turn off any transmissions should interference be detected. The contact information is: Hiep Pham, 925-216-8068 and [hiep.pham@ericsson.com](mailto:hiep.pham@ericsson.com).

Maximum Output Power

Note that the output power listed within the application is reflects EIRP, not ERP. The maximum EIRP will be 47dBm. The average EIRP will be 23dBm.

Directional Antenna Information

The four base stations, which have directional antennas, will [REDACTED]

The antenna parameters will be:

- Polarization: [REDACTED]
- Horizontal HPBW: [REDACTED]
- Vertical HPBW: [REDACTED]
- Antenna gain: [REDACTED]
- EIRP:  $\leq 47$  dBm
- Electrical tilt: [REDACTED]
- Mechanical tilt: [REDACTED]