

The LTE emulation transmitter test will prepare the Aerospace Corporation to validate cellular use in the frequency band from 1695 to 1710 MHz. This test will provide the capability to assess the impact of cellular migration into the pre-defined AWS-3 coordination zones. This test will include a LTE-like transmitter mounted to a vehicle which will function as a cellular user. The test will be accomplished at low power levels (EIRP less than 20 dBm). The test will be performed at the Aerospace Corporation's El Segundo Campus and will greatly enhance our understanding of the system and improve the equipment for future testing.

The LTE-like transmitter will consist of a Signal Generator, attenuator, band pass filter, amplifier and low gain Omni directional antenna. The signal generator will be an industry standard generator that is capable of generating the latest LTE version. The attenuator will provide accurate control of the signal from the signal generator. The band pass filter will ensure that the signal is free of unwanted harmonics and spurious signals. The amplifier and antenna are going to be operated to ensure linear operation which will limit any additional erroneous signals.

The signals will be received by a similar Omni antenna and supporting electronics to see the signal on a spectrum analyzer located a short distance away (less than 200 meters). Figure 1 shows the test setup.

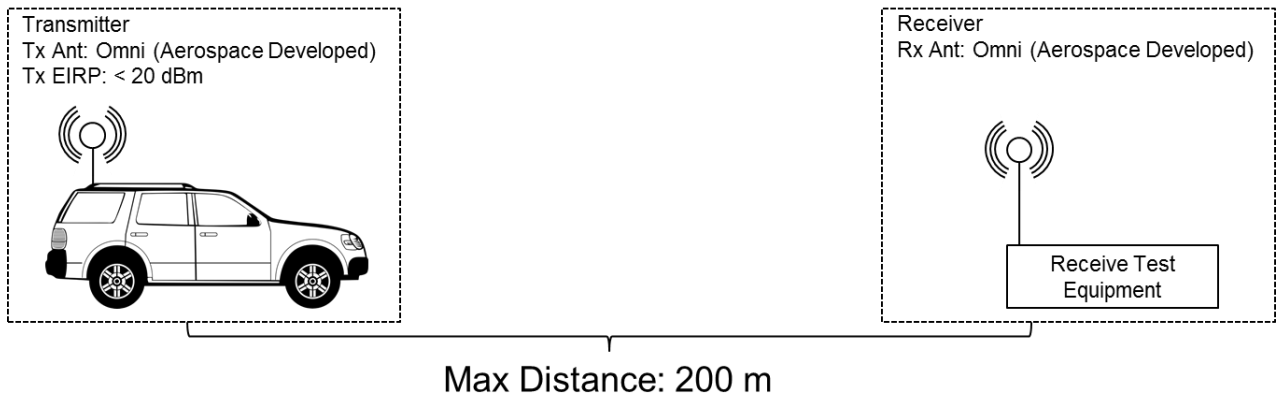


Figure 1. Test Diagram