

FCC Form 442 Exhibit Attachment

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Question 4: Statement Regarding Government Contract

With DARPA (Defense Advanced Research Project Agency) sponsorship under contracts HR0011-14-C-0045(10060) Enabling Propagation Measurement Seedling (DARPA) and D14PC00069 Foliage Propagation Model Development, Systems and Technology Research (STR) is performing field measurements to support the modelling of electromagnetic wave propagation in a variety of forested environments, to aid the development of future advanced communications systems. Measurements are made with mobile radio units utilizing commercial-off-the-shelf, software defined radios operating at low power (< 1 W) over the RF bands identified in this application. Phenomenology being measured includes bulk attenuation as a function of distance, time delay spread, effects of transmitter and receiver polarization, and distance between transmitting and receiving antenna pairs.

Earlier research under this contract has been conducted at an experimental forest—Harvard Forest in Petersham, MA—using ISM frequency bands. However, ISM bands are limited in their spectral coverage, and this application seeks approval for experimental access to several additional government allocated bands. The geographical location for these tests are limited to three experimental forest locations in the US and Puerto Rico, an Air Force testing range in FL, and a small area near the STR offices in MA.