

**Comtech Systems, Inc.
Request for Experimental
Authorization
File No. 0730-EX-CN-2017**

EXHIBIT I

DESCRIPTION OF EXPERIMENT

Comtech Systems, Inc. ("Comtech") hereby requests FCC experimental authorization license¹ to conduct experimental testing utilizing its Modular Transportable Transmission System ("MTTS").

The proposed testing involves the use of two troposcatter units, one installed locally and second installed at a remote site. Each unit will transmit and receive a continuous wave that bounces off of the troposphere. This method of propagation uses the tropospheric scatter phenomenon, where radio waves at particular frequencies are randomly scattered as they pass through the upper layers of the troposphere. Radio signals are transmitted in a tight beam aimed at the troposphere, midway between the transmitter and receiver sites. As the signals pass through the troposphere they are scattered, allowing the receiver station to pick up the signal. The experimental data to be collected include characterization of tropospheric fading, changes in refractivity versus seasonal climactic changes, measuring aperture coupling losses and characterizing overall system performance.

Comtech acknowledges that all testing conducted under this experimental authorization will be on a non-interference basis. Further, Comtech will coordinate frequency usage pursuant to any directives issued by the Commission on the experimental authorization.

Because the equipment is technically incapable of providing station identification, Comtech respectfully requests a waiver of the station identification provisions of Section 5.115 of the Commission's rules, 47 C.F.R. § 5.115.

The stop buzzer contact for this experiment is Paul Kelly at Comtech, tel: (407) 854-1950 ext. 3050, mobile: (321) 948-4315, e-mail: paul.kelly@comtechsystems.com.

Comtech submits that a grant of this application is necessary and in the public interest because it will facilitate advancements in communications equipment used by the US Military abroad.

¹ Comtech was authorized under STA (See File Nos. 0974-EX-ST-2016 and 0110-EX-ST-2017) to conduct testing utilizing its Modular Transportable Transmission System. An extension request of this STA was filed with the Commission July 28, 2017 and remains pending (See File No. 1055-EX-ST-2017).