

Description of Research Project - Jackson

Applicant seeks approval to operate experimental tests to verify and validate receivers, transmitters, and radar systems using Software Defined Radios (SDRs) and the GTRI designed Angry Kitten. A majority of the tests will have a fixed emitter and fixed receiver site and always located within the Cobb County Research Facility area with some tests designed with the receiver on a mobile platform. Test waveforms will include FSK, PSK, FM, and AM type modulations with bandwidths up to 1 GHz in S-, C-, X-, and K-bands (four distinct carrier frequencies). Data measured with the receivers will be used to evaluate Electronic Intelligence (ELINT) algorithms and transmitter characteristics. Another objective is to triangulate on the source of emission by using multiple receivers.

The series of experiments at CCRF will be used to diagnose, characterize, and catalog data collected for verification of system performance across the four distinct carrier frequencies in an open environment that is nearly impossible to reproduce with Hardware-In-The-Loop (HWIL) tests performed in a lab environment.