

## **Experimental Request Summary**

ISR Group, Inc. is requesting an Experimental Request for frequencies at the ISR Group Range Complex in Hardin County, TN. The Experimental Request will be for the Unmanned Aircraft Systems (UAS) to conduct flight operations support and various aeronautical research projects and activities:

**Flight Operations Support:** MTSU, in collaboration with ISR Group, is developing a UAS program with the goal of establishing a concentration in UAS for an Aerospace Bachelor of Science degree. In order to establish UAS Flight Labs or “hands on” syllabus requirements, actual flight operations are required for faculty certifications and student training, as well as internships in UAS operations, maintenance, management & air traffic control procedures on various unmanned systems.

**Aeronautical Research:** MTSU is an active voting member on the ASTM International F38 committee. The primary objective of the F38 committee is to assist the FAA with the development of industry consensus standards to support specifically the integration of Small Unmanned Aircraft systems (sUAS) into the U.S. National Airspace System (NAS). UAS flight operations & collected data will aid MTSU in gathering and providing the committee with accurate information and system data. Additionally, MTSU holds leadership responsibilities on the ASTM F38.03 subcommittee which is assisting to develop new specifications for sUAS crew training.

**System Engineering (SE) 2020 Next Generation Air Traffic Management:** UAS flight operations & collected data will also assist with SE 2020 initiatives in defining Next Generation Air Traffic Management system requirements. As an ITT Industries SE 2020 team member, MTSU in partnership with ISR Group, Inc. will provide critical flight profile data that will contribute toward additional procedures and protocols to enhance safer operations of various UAS types in the NAS. As the ISR Range Complex is located in the NAS versus Restricted Airspace, coupled with the sparse population, it is an ideal location for these studies. Much like the focus on future sUAS pilot training for ATSM F38, flight operations under current protocols will assist in enhancing future manned and unmanned aircraft integration efforts.