

Application For Special Temporary Authorization

Valinor Enterprises (“Valinor”) respectfully requests special temporary authorization (“STA”) pursuant to part 5 of the Commission’s rules to conduct short-term experimental radio operations in support of a live experimentation event focused on identifying vulnerabilities in emerging technologies before they are fielded. The requested authority will permit operation of the equipment described in this application at the specified site and time period. Because the test conditions and threat scenarios central to this event cannot be fully replicated in a laboratory environment, field operation under experimental authority is required.

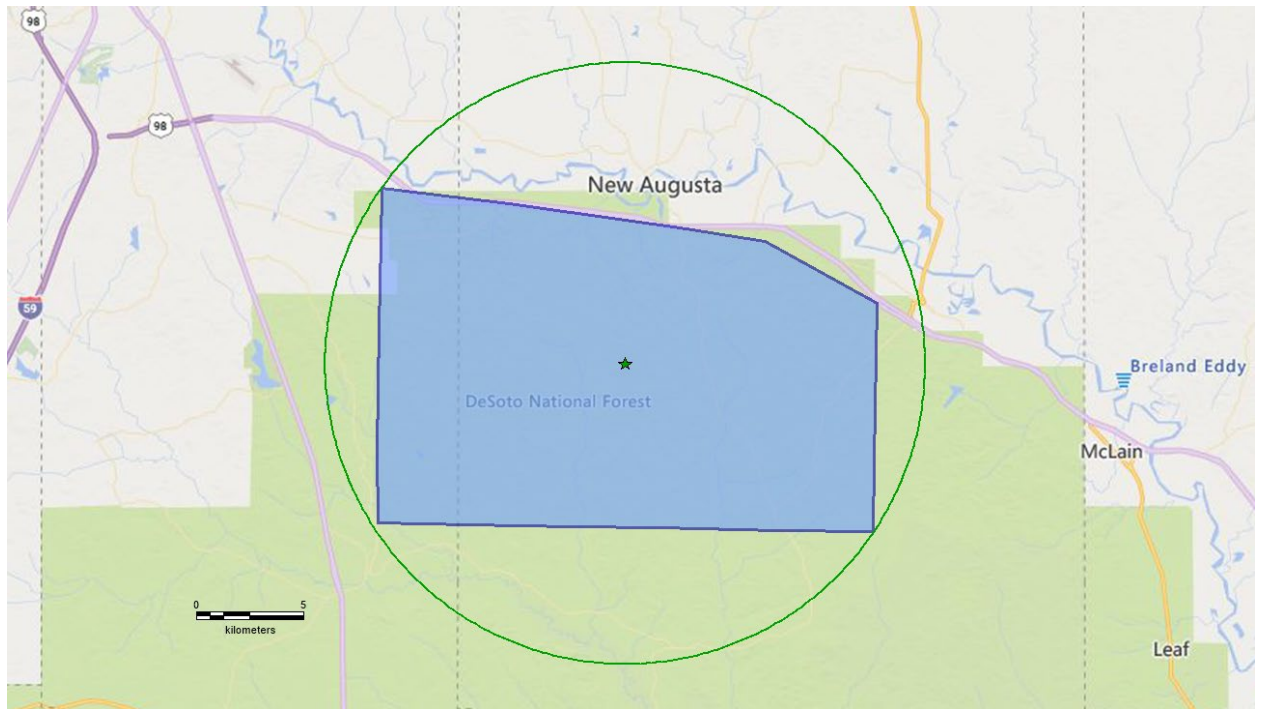
1. Purpose of Experimentation

The purpose of this experiment is to identify vulnerabilities in emerging technologies before they are fielded, thereby improving operational security, force protection, and survivability. The equipment will be tested under realistic, challenging conditions designed to assess performance degradation under contested effects, as well as interoperability, adaptability, and ease of use and training requirements. Focusing on infrastructure vulnerabilities, testing will incorporate a small unit incursion scenario, in which small teams attempt to breach or exploit protected infrastructure, to evaluate performance against the representative threat.

2. Experimental Location

Operations will be conducted in the New Augusta, Mississippi, area within a defined geographic area centered at 31° 8’ 40.02” N, 89° 3’ 52.35” W¹ with a maximum radius of operation of 13.9 kilometers. In actuality, all testing will occur in the blue shaded polygon included within the 13.9-kilometer radius. Operations will include mobile ground and airborne configurations within this area and airborne radios will not exceed an altitude of 29,000 feet above ground level. The selected location provides sufficient space for controlled testing while minimizing the potential for interaction with nearby population centers or sensitive radio facilities.

¹ Due to formatting limitations in the Experimental Licensing System, the application form accepts coordinates only to whole seconds. The coordinates in this narrative reflect a more precise site location; any discrepancy is solely the result of rounding in the form.

Test area:**3. Equipment and Technical Parameters**

Valinor seeks authority to operate the radio equipment identified in the application, including DTC BluSDR series radios deployed in airborne and ground mobile configurations, as reflected in the table below.

Manufacturer	Model	Antenna Gain	Radiated Power (EIRP)
DTC	BluSDR-90-UL (Airborne)	1.9 dBic (-1.1 dBi)	38.9 dBm
DTC	BluSDR-90-UL (Ground)	12.5 dBi	52.5 dBm

Valinor's testing will include two types of antennas. The TrueRC Singularity 2.4 V2 antennas will be airborne. The Poynting A-HELI-0013-V3-01-RH ground antennas are directional with a 40-degree horizontal beamwidth and will be manually oriented toward the aircraft. The ground-based antennas will not extend more than 6 meters above the ground or a building.

All equipment is commercially manufactured, and operations will be conducted only within the frequency ranges, emission designators, bandwidths, and power and ERP levels specified in the

application. Emissions will remain within authorized band edges, and Valinor will use the minimum power necessary to conduct the testing.

4. Duration and Duty Cycle

The requested STA is for a 180-day period. The extended duration is necessary to accommodate the multiple testing phases contemplated by the experiment, including baseline assessments, systematic evaluation of technology performance under contested effects, and validation testing across varying environmental and seasonal conditions and echelons. The testing schedule is also subject to coordination with military operations in the area, including scheduling around small unit incursion scenarios, which may require flexibility in timing. Operations will be intermittent during this period and limited to the times necessary to conduct testing. Continuous operation will not occur, and transmissions will cease when testing is not underway.

5. Interference Protection and Mitigation

All operations will be conducted on a non-interference, non-protected basis. Valinor will take immediate corrective action if any interference to authorized services occurs or is suspected, including modification of operating parameters or suspension of transmissions. Valinor will coordinate as necessary with affected licensees and will comply promptly with any Commission directive regarding interference.

6. RF Safety and Environmental Considerations

Operations will comply with all applicable FCC rules governing human exposure to radiofrequency energy. Antennas will not extend more than six meters above ground level, and operations will be structured to ensure that personnel are not exposed to RF fields exceeding permissible limits.

Grant of the requested authorization will not result in any construction or modification that would require environmental review under section 1.1307 of the Commission's rules.

7. Experimental Nature of Authorization

Valinor acknowledges that any authority granted under this STA is temporary and experimental in nature and confers no right to continued operation or to use any frequency beyond the scope and duration authorized. Valinor will not market, sell, or lease equipment or conduct any commercial service or market trial under this authority.

8. Station Identification

Pursuant to section 5.115(b) of the Commission's rules, Valinor respectfully requests a waiver of the station identification requirements of section 5.115(a). In lieu of over-the-air identification, Valinor will maintain detailed records of all operations and will make those records available to the Commission upon request. Given the experimental nature of the proposed operations, the

limited duration and geographic scope, and the non-interference basis of operation, grant of this waiver request is consistent with the public interest.

9. Stop Buzzer Contact Information

The individual best able to respond to questions regarding this STA and to act as the technical and interference (“stop buzzer”) contact is:

Harshal Singh

Telephone: (919) 949-5386

Email: hsingh@valinor.co

10. Conclusion

Valinor Enterprises respectfully requests that the Commission grant the requested special temporary authorization to permit the proposed experimental operations in accordance with part 5 of the Commission’s rules.