

Ulrich Rohde
Experimental STA Application
File No. 1115-EX-ST-2026

Explanation of Experiment and Need for STA

This application is being filed on behalf of Dr. Ulrich Rohde, a radio researcher whose experiments have led to the development of sophisticated technologies including products sold by Rohde and Schwarz.

The application seeks to use HF signals to test the robustness of the radio waves being used.

Need for an STA

Dr. Rohde is working on this experiment as part of the development of some scientific papers. There is a predicted period of solar weather activity, and he is seeking to have the STA in place to be able to test while there is an active solar weather pattern because the test will show more results.

Technical Synopsis

- Frequencies Needed: 1.612 MHz, 2.014 MHz, 3.292 MHz, 4.502 MHz, 4.51 MHz, 4.99 MHz, 5.808 MHz, 6.769 MHz, 7.507 MHz, 8.098 MHz, 9.213 MHz, 10.188 MHz, 24.45 MHz, 14.516 MHz, 17.475 MHz
- Time of Use: 2-3 hours per day, with 50% duty cycle
- Power and ERP: 20 W, with 6.11 W ERP
- Emission: 3K00Q1W

Description of Operations

Dr. Rohde will be testing the robustness of a digital wave form. He is searching for solutions that will prevent signal fading. In addition, he is looking at adjacent site interference to the wave forms. And, by conducting testing during an expected time of active solar weather, he will be able to determine the effect of the solar radiation on the radio waves. The wave form is encrypted.

The development of this technology, if it is successful, will allow users use digital voice communications over long distances with clarity. To date, most of the HF voice communications suffer from interference making it difficult for the parties to actually communicate. The application of this approach to communications could be significant, particularly to our fighting forces.

Radio Use

The frequencies will be stepped through, not used constantly. There is a pulsed, HF transmission. The testing is expected to last from 2-3 hours per day. The when testing is underway, the duty cycle is 50%.

Location of Operations

Dr. Rohde is proposing to work on this testing from his laboratory locations in Florida, New Jersey, and Maryland.

The operations will be outdoors to allow for long distance communications.

Stop Buzzer Point of Contact

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Conclusion

Dr. Rohde is seeking an experimental STA to him to test a new digital wave form to see how robust it. If the radio wave form is able to withstand adjacent site interference and sustain its performance through solar storms, it will offer a new way to communicate over long distances.

If there are any questions about this application, please contact Anne Cortez, 520-360-0925 or anne@washingtonfederalstrategies.com.