

Schedule H, Question 2 - Description of Activity Attachment

Background

Orbisat Remote Sensing is a private enterprise based in Brazil that is active worldwide in the field of radar technology. Our know-how represents the latest in international radar techniques. In particular, the application of Synthetic Aperture Radar Interferometry (InSAR) permits us to accurately determine height information and to generate three-dimensional images of the earth's surface. The use of aircraft allows the acquisition of data during both day and night and in all weather conditions.

Orbisat Remote Sensing is represented in U.S.A. by Kiernan Consulting Services, Inc, 1239 Lakeshore Drive, Boulder, CO 80302. The contact person is the president of the company, Mr. Brian Kiernan.

This request is for a Special Temporal Authority (STA) to operate Orbisat's P-Band radar system in a data capture mission to test the system's capabilities, and compare the results with existing data in the test area. Orbisat has selected the Morrison Quadrangle in Colorado as the test area since significant data captured by both SAR and LIDAR technologies in this area is available for comparison.

From USGS:

Name	MORRISON
County	Jefferson
State(s)	CO
Map Type	Topographic (feet)
Scale	1:24000
Currentness Year	1990

ISBN Number	0607124458
USGS Order ID	TCO1332
USGS Entity ID	MPTCO1332PP01

Area Covered	7.5 minute
Projection	Universal Transverse Mercator

Northwest corner	39.7500°N, -105.2500°W
Northeast corner	39.7500°N, -105.1250°W
Southwest corner	39.6250°N, -105.2500°W
Southeast corner	39.6250°N, -105.1250°W

Technical Description

The equipment to be utilized basically consists of a flight segment - the radar ORB-1 is manufactured by Orbisat Remote Sensing. During the flight acquisition, the navigation system of the aircraft gets the GPS corrections from the on-board GPS receiver. This provides the pilot with very accurate position data in real time to precisely control the aircraft flight paths and SAR data capture process. FCC permission for the radar is needed for carrying out the project, and this explanation accompanies the applications for that permission.

The operation type will be a unique airborne survey, with the Radar equipment on board a US aircraft, with a simultaneous ground survey performed by Orbisat employees.

The sensor to be licensed will be used as transmitter and receiver, which will allow us to generate high precision digital elevation models and SAR-Ortho images. These products will be used to generate the information and maps required by the County.

We anticipate that data will be captured over a 3-4 week period to be scheduled between OCTOBER 15 and December 31. 2002.

At this time, our research of FCC rules indicates that the frequencies we will operate on do not require use of a frequency coordinator, however we verified this through the services of FIT, 871 Country Club Road, Eugene OR 97401-2200.