PR 81-0621-15

STATEMENT OF WORK-
APEX ASSEMBLY UPGRADE

This Statement of Work is for a proposed contract to upgrade the apex assembly on several large aperture antennas that are used by the NRL Pomonkey Facility. The estimated period of performance is 6 months.

The NRL Pomonkey Facility has several large aperture antennas, both CONUS and OCONUS, whose prime focus feed mounting assembly (i.e. apex assembly) requires an upgrade to better accommodate feed mounting, feed adjustment in 3-axis, and associated RF and network hardware that requires to be mounted as part of the apex assembly. This Statement of Work outlines the required development tasking.

The contract is proposed to proceed as follows. The contractor will assess the existing feed mounting and adjustment capabilities and propose to NRL Code 8124 a modular scheme that is interchangeable between antenna assets. The contractor will also assess the hardware required to be mounted as part of the apex assembly and propose a modular mounting scheme for low noise amplifiers, block downconverters, network switches, and custom RF distribution junction boxes. Accommodations must also be made to provide proper power, both AC and DC, control cabling, and pressurized air as required by the apex assembly components. The feed mounting and adjustment design, as well as the design for the mounting scheme for low noise amplifiers, block downconverters, network switches, custom RF distribution junction boxes, AC and DC power distribution, control cable distribution, network switch distribution, and air line distribution design must be first documented for approval by Code 8124. Once approved, the contractor must fabricate, implement, and test the mounting components associated with the feeds, designed AC and DC power distribution units, control cable junction boxes, network switches, and air line manifold. The contractor must perform the tasks so as to minimize impact on the Facility's mission.

Upon completion and final testing approval by Code 8124, the contractor will also deliver a final documentation package for each antenna asset to include the implemented feed mounting plates, 3-axis feed adjustor assembly, modular mounting assembly for low noise amplifiers and block downconverters, schematics and mechanical design of the AC & DC power distribution junction boxes, schematics and mechanical design of the network switch mounting assembly, schematics of the control cable distribution, and a diagram of the pressurized air distribution system.