

Base Notice: RF Antenna Array at 35 GHZ - NRL-11-LG01**NOTICE DETAILS**

Solicitation #:
NRL-11-LG01

Procurement Type:
Sources Sought

Date Posted:
July 26, 2011

Title:
RF Antenna Array at 35 GHZ

Classification Code:
59 - Electrical and electronic equipment components

NAICS Code:
335999 - All Other Miscellaneous Electrical Equipment and Component Manufacturing

Is this a Recovery and Reinvestment Act Action?:
No

Response Date:
Aug 15, 2011 12:00 pm Eastern

Primary Point of Contact:
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Description:

Added: Jul 26, 2011 9:14 am

Reference Number NRL-11-LG01, issued 07/26/2011, entitled RF Antenna Array at 35 GHZ, is a Request for Information (RFI) issued by the Naval Research Laboratory for information and planning purposes only. No awards will be made from the responses to this announcement. However, responses may be used to determine the appropriate acquisition strategy for a future acquisition.

The Naval Research Laboratory (NRL), Tactical Electronic Warfare Division, Integrated Electronic Warfare Simulation Branch (Code 5760) requests information and Rough Order of Magnitude (ROM) estimates of cost for design, component procurement, software development, and installation of an array of at least 8 antennas to upgrade an existing hardware-in-the-loop simulation facility. This array will enable the simulation of a radar echo from a simulated target with control of the pulse time delay, pulse width, amplitude, and pulse location to an angular accuracy of 1 milliradian within the array. NRL requests information on the design approach, major components required, and plans that would indicate the capability to deliver the array within 12 months ARO.

The purpose of this RFI is to gauge industry interest, capabilities, and relevant experience and know-how for providing such a simulation antenna array. NRL will be using responses and ROM cost estimates for determination of system design capabilities and affordability.

The Antenna Array Characteristics provided in Table 1 represent the minimum desired characteristics for the eventual installation. Additional description of these requirements and the context of the existing simulation facility are provided in the Statement of Work which can be viewed in Attachment 1. The Attachment also addresses some design goals that are in excess of the minimum requirements. One purpose of stating these goals is to indicate that a system design should not preclude such upgrades in the future. In addition, it is desirable for an interested party to address these goals as options and provide ROM cost estimate for each.

Table 1 - Antenna Array Characteristics
Parameter Minimum or Initial Configuration

Array
Amplitude Control 0.1 dB
Phase Control 3 Deg
Focal Point 75 ft (22.86 m)
Antenna Spacing 1.25 deg
ERP Flatness 1.5 dB
Center Frequency 35 GHz
ERP -40 to + 50 dBm
Dynamic Range 90 dB
Polarization Horizontal or Vertical (switchable)
Signal to Noise 15 dB
Array Coverage Azimuth 8.75 Deg, Elevation none
(8 X 1) 8 Antennas @ 1.25 Deg Separation
Calibration Cal sensor & controller (manual)

Target Parameters
Pulse Width 100 nsec to 100 usec + CW mode
PW Resolution 5 nsec
Angle Accuracy 1.0 mrad
PRI Jittered (300 Hz to 5000 Hz)
Number of targets 1 per feed
Target Generation Array/Target Controller
Update Rate 200 Hz (5 msec) via VMIC

Range 2 μ sec to 250 μ sec
Range Accuracy 10 nsec

Feed Capability
Frequency Agility +/- 500 MHz pulse-to-pulse
System Communications VMIC (High Speed)and Lan (1 Gbps)
Independent Feeds One steerable
Target Switching 1.75 μ sec
Coherency No
Intra-pulse Modulation No
Target Angular Distribution No

In the information provided in response to this RFI, NRL requests component specifications (or means of accessing such specifications, such as the URL of COTS suppliers and specific part numbers) as well as other data supporting the capability of the design to achieve the performance requirements. Installation of the antenna array would be made within the existing Central Target Simulation (CTS) facility, Building 210 at NRL. NRL will provide some technical support to assist with the installation, as it will involve interconnection with NRL facilities. Scheduling of such installation must be at NRL's convenience since the facility is heavily used. Acceptance of the installed array would follow successful demonstration of performance, as per an acceptance test plan proposed by the developer with the participation and concurrence of NRL.

This RFI is for planning purposes only and shall not be construed as a Request for Proposal (RFP) or as an obligation on the part of NRL to acquire any product or services. The NRL does not intend to award a contract based on this RFI or otherwise pay for the information requested. Submission of a response to this RFI is voluntary. The voluntary submission of a response to this RFI shall not obligate the NRL to pay or entitle the submitter to any compensation. All information and data received in response to this RFI marked or designated as corporate or proprietary information will be protected as such.

Responses shall be transmitted by email to lauren.gooding@nrl.navy.mil in either Microsoft Word or pdf format. All responses shall be received on or before 8 August 2011, 12 Noon, Eastern Time. If paper copies are sent, they must be received at 4555 Overlook Ave. SW, Washington, DC 20375-5320, Attn: Lauren Gooding, Code 3220.LG. The package should be marked with the RFI number, due date and time.

The U.S. Postal Service continues to irradiate letters, flats, Express and Priority Mail with stamps for postage and other packages with stamps for postage destined to government agencies in the ZIP Code ranges 202 through 205. Due to potential delays in receiving mail, offerors are encouraged to use alternatives to the mail when submitting proposals.

Other business opportunities for NRL are available at our website <http://heron.nrl.navy.mil/contracts/rflist.htm>.

Place of Contract Performance:

Naval Research Laboratory
4555 Overlook Ave. S.W
Washington, District of Columbia 20375
United States

Archiving Policy:

Manual Archive

Allow Vendors To Add/Remove From Interested Vendors:

Yes

Allow Vendors To View Interested Vendors List:

Yes