

**THIS NOTICE CONSTITUTES AMENDMENT NO. 03 TO SOLICITATION
NNK08198573Q FOR A REMOTE NETWORKING RELAY VEHICLE.**

Companies shall acknowledge all amendment(s) in their quote. This notice serves as the official amendment to subject synopsis/RFQ and a written amendment will not be issued.

The purpose of this amendment is to post technical questions and answers received to date. These can be reviewed below.

NOTE: No additional questions will be accepted as of December 4, 2007.

The due date for receipt of offers is extended to December 12, 2007.

Companies shall provide the information stated in the synopsis/RFQ posted on the NASA Acquisition Internet Service (NAIS) on December 12, 2007. Documents related to this procurement are available over the Internet. These documents reside on a World Wide Web (WWW) server which may be accessed using a WWW browser application. The Internet site, or URL, for the NASA/KSC Business Opportunities home page is <http://prod.nais.nasa.gov/cgi-bin/eps/bizops.cgi?gr=D&pin=76>

Point of Contact

Name: Erik Whitehill

Title: Contract Specialist

Phone: 321-867-5504

Fax: 321-867-1166

Email: Erik.C.Whitehill@nasa.gov

**SOLICITATION NNK08198573
AMENDMENT NO. 03**

Questions and Answers

- 1. Would NASA consider extending the bid for a period of two weeks? We want to make sure that our Suppliers as well as our in house staff have sufficient time to put together the most appropriate response for this major project.**

As a result of this amendment, the bid due date is extended. All responses are due no later than 4:30 PM on December 12, 2007.

- 2. Do you have any more detailed information on this truck such as specific model numbers of video gear requested? Are there specific layouts for this truck such as door openings, windows, compartments, etc.? Will all hook up cables be supplied by the truck manufacturer or by NASA. If not, can NASA supply schematics for how they would like the equipment configured?**

In section 1.2 of the solicitation NNK08198573Q, the Government listed specific model numbers for items (or equals). It is NASA's expectation that the vehicle will come equipped with all cables needed to operate the truck and a location to transport and store the needed cables

The Government did not specify layouts for roof, window or door openings nor provide schematics on how everything would be connected. It is NASA's expectation that the expertise of the vendor will produce a layout based on products they currently offer and their experience in building similar vehicles.

It is NASA's belief that typical industry practice is to provide for only one small window on the vehicle in the door to the main working area. As for other layout requirements, Section 1.2 of the solicitation identifies the minimum requirements for the chassis and box. The specification calls for a minimum of 240 rack units (minimum of six (6) 19" racks of 40 rack units) with a minimum of 4 racks having rear access and a front writing surface. It is intended to have working space for a crew of 4 inside the vehicle.

The rear access requirement and I/O bulkhead implies other openings but those will be dictated by how the Vendor chooses to layout the vehicle. There needs to be sufficient other compartments to house the working details of the truck (generator, batteries, pneumatics, power cables, video/audio snakes, RF Feeds etc) but there is no specific requirement for their location.

- 3. We were putting together the quote for this and we noticed that there is no mention in the specs for any cabinetry. Did you want any cabinetry or counters? It is unusual in this type of unit to have all the equipment requested and not have any cabinetry.**

The Government did not provide detailed specifications defining the interior layout, locations of cabinets or storage compartments or the finish of the unit. It

**SOLICITATION NNK08198573
AMENDMENT NO. 03**

Questions and Answers

is NASA's expectation that the expertise of the vehicle/sat truck vendor will provide completely finished system. This includes all interior trim, cabinetry, racks, wall carpeting, flooring etc. that would typically be found on an SNG/DSNG Uplink truck.

- 4. In a truck like this one there are many engine and transmission choices. To be able to make a good choice could you tell us if this vehicle will be primarily used on the highway, primarily local, or a combination of the two?**

The Government intends to use the Remote Networking Relay Vehicle on a variety of surfaces. The vehicle will be based at the Kennedy Space Center, Florida and will need to be able to travel to test sites in Arizona, New Mexico and Utah once or twice a year. As the mast on the vehicle will make it too tall to travel to those locations via a "low-boy" trailer, the vehicle will need to be able to drive the interstate. Additionally, the vehicle will be used on "un-improved" roads, including dirt and gravel surfaces.

- 5. We would like to know if we can e-mail our response to you and to confirm the time of day by which we must respond.**

Responses can be e-mailed to the Contract Specialist at the following address:

Erik.C.Whitehill@nasa.gov

- 6. How many hard copies you are requiring for this bid.**

Per box 28 of the SF1449 two hard copies are required. However the Government will accept an electronic copy submitted via e-mail in lieu of the two hard copies. All restrictions regarding the proposal size and format limitations remain unchanged.

- 7. Question - Is this a 4 Port Ku and 4 Port C-Band feed requirement?**

The Government's requirement is for a 2.4 meter Dual Band (C-Band and Ku-Band) antenna. NASA is not requiring an item that can do C-Band and Ku-Band at the same time. Ku-Band TX/RX feeds come in 2 or 4 ports and C-Band feeds come in 2 or 3 ports. NASA's requirement is for an antenna with a 4-port Ku feed assembly with the additional option that would allow the feed to be swapped out to support a 3 port C-Band operation.

- 8. Do you have any more detailed information on this truck such as specific model numbers of video gear requested? Some of the gear is out of production or doesn't contain enough specific information to accurately substitute.**

**SOLICITATION NNK08198573
AMENDMENT NO. 03**

Questions and Answers

The video gear and model numbers listed are all specified as "or equal". They are intended to provide a general idea as to the size, function and capability expected to provide a working vehicle. It is NASA's expectation that if a specific model number is out of production or not specified in detail, the vendor will propose an equally capable substitute.

9. Will all audio, video & data cables be supplied by the truck manufacturer or by NASA?

All interior audio, video and data cables are to be supplied by the vendor. NASA will provide all exterior fiber and network cables. The only exterior cables provided by the vendor are identified in Section 1.2, "Audio/Video Patch Panels" as 2 video/audio snakes (60ft and a 120ft each) and in Section 1.2, "Power" as a 150 ft shore power cable.

10. Will the Government supply schematics for how NASA would like equipment configured?

It is NASA's expectation that the expertise of the vendor will produce a system design necessary to produce a functional vehicle. NASA has some items (approximately 30 rack units) that it will need to be installed in the vehicle after delivery that will not be the responsibility of the vendor. All NASA equipment will interface to the vendor's provided equipment either thru the exterior bulkhead or internal vendor provided patch panels.

11. What quantity of each jacks are required on exterior or truck? ie. xlr-m, xlr-f, bnc, rj-45, ph, st?

The interior of the truck needs to support the routing, selection and display of 16 video inputs and outputs and 16 stereo audio inputs and outputs. The exterior bulkhead needs to send all jacks to interior patch audio, video, fiber and network patch panels for patching / monitoring to interior switching and routing components.

The exterior panel should support 8 XLR-M, 8 XLR-F, 16 BNC, 8 RJ-45, 2 PH Single Mode 12 conductor bulkhead, 8 ST single mode fiber bulkhead adapters.

12. Should each snake contain audio & video connections?

It is acceptable to provide separate snakes for video and audio.

13. If so how many of each?

Per Section 1.2, "Audio/Video Patch Panels" there should be a 2 snakes of each type, one 60ft and one 120ft. The audio snake should support 8 XLR In / 8 XLR Out and the video snake 8 BNC's.

14. Mast is specified on first line as 56 ft then 60 ft on next line, which is correct?

**SOLICITATION NNK08198573
AMENDMENT NO. 03**

Questions and Answers

Per Section 1.2, "Masts" the requirement is for a rotatable payload 56ft mast with a 200lb payload capacity or equal. The example mast listed that meets (and exceeds) this requirement is a locking mast from Wilburt 10-60 which is 59ft. The Vendor is free to propose any locking or non-locking mast that rises a minimum of 56ft and can carry the payload and NYCOIL cable weight.

- 15. I wanted to confirm that you want two (2) masts. One rotating 56' mast and One Locking, Non-Rotating 60' mast. Each with its own NYCOIL. Is this correct?**

The weather system and lighting systems do not need to be on a tall mast. The Government's specification is for a vehicle with only 1 (one) tall (greater than or equal 56') pneumatic (either locking or non-locking) mast that can meet the payload capacity requirements. The vendor provided integrated payload consists of the NYCOIL coil and wires, basket, integrated payload bracket housing a fixed off-air antenna, mast camera (with pan/tilt/zoom) and mast dual-polarity antenna and positioner. The mast needs to allow the payload (camera and antenna) to point in the proper direction by either rotating the entire mast at its base or by using a mast mounted rotation system.

- 16. Do you have model number of off air antenna, RF dual polarity antenna & positioner or the wi-max system (antenna mount transmitter)? What do you mean by: "Mast RF Dual Polarity Antenna and positioner"? Do you need a full microwave system with transmitter and antenna? If so, what frequency do you need? Typical is 2Ghz, 7Ghz, 2/7 Ghz. Or do you just need an antenna? And if so, what frequency?**

The vendor is free to use their best judgment on the selection of the antennas on the mast but is not required to provide any microwave transmitter equipment for the mast. The Government will not be using a traditional analog broadcast microwave system on the mast. NASA will be using a government provided 300Mb/s IP based microwave transmitter at 5.8 Ghz which requires a horizontally polarized transmit signal and a vertical polarized receive signal. This requires a Dual Polarity Antenna and 2 low loss "N-type" RF cables in the NYCOIL housing. NASA is expecting the vendor to provide a complete and balanced payload solution (offsetting the weight of the mast PTZ camera and off-air antenna) and thus require the Vendor to provide the antenna for the NASA provided connectorized transmitter (Motorola PTP-600 / OS-Spectra Series) to be mounted on the roof of the vehicle.

<http://www.motorolapt.com/products/ptp600.php>

Alternatively, NASA can provide a self contained transmitter that has an integrated Dual Polarity antenna that can be mast mounted but the vendor would need to integrate and provide an antenna positioner capable of moving the antenna/transmitter pair (14.5"W x 14.5"H x 3.75"D) weighing 12.1 lbs. In this case, the vendor would substitute the RF cables in the Nycoil tube with power, data and network cables.