

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT1. CONTRACT ID CODE
DO-C9PAGE OF PAGES
1 5

2. AMENDMENT/MODIFICATION NO. 0002	3. EFFECTIVE DATE 12 MAR 2002	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
6. ISSUED BY CODE CONTRACTING OFFICER, Code 3235/EJS NAVAL RESEARCH LABORATORY - SSC Department of the Navy Stennis Space Center, MS 39529-5004		7. ADMINISTERED BY (If other than Item 6) CODE	

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) TO ALL OFFERORS	(X)	9A. AMENDMENT OF SOLICITATION NO. N00173-02-R-SE04
	X	9B. DATED (SEE ITEM 11) 21 FEB 2002
		10A. MODIFICATION OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 11)
CODE	FACILITY CODE	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:
 (a) By completing items 8 and 15, and returning 2 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment your desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor is not, is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

SEE PAGE 2.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)	16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)	16B. UNITED STATES OF AMERICA (Signature of Contracting Officer)
15C. DATE SIGNED	16C. DATE SIGNED

The purpose of this amendment is to answer questions from potential offerors and revise the statement of Attachment (1).

A. Answer questions and provide clarifications as follows:

1. "Will there be or has there been a bidders conference on this procurement?"

ANSWER: No, there has not been a bidders conference and no we do not anticipate having one.

2: " Has there been a predecessor (i.e. Proof of Concept) project associated with this program and if so, who performed that work?"

ANSWER: No.

3. " It is assumed the all stabilization systems and the pointer trackers require 3 axis of stabilization. Is this correct?"

ANSWER: Yes. The stabilization performance specifications for all three axes are given in Attachment (1), Table 6.

4. "What are the weight, volume and power limits for the stabilization systems and the pointer trackers?"

ANSWER: Bounds for expected size and weight are found for the payload in Attachment (1), Par. 2.0, and all bidders are to base tentative design on these numbers except with a payload weight on the low end of the stated range, 25 lb. For this demonstration program weight of the stabilization unit is significant but not a dominant issue. Reference M.2.1.

5. "Table 6; Wouldn't the forward-looking system require a minimum of +/- 35 Degrees of roll travel and the port -starboard systems require +/- 35 Degrees of Elevation travel to accommodate ship roll motion per Para 4.2? "

ANSWER: See paragraph 4.1 and 4.2 of Attachment 0001.

6. "We assume all stabilization systems will be interchangeable as to their performance and locations on the ship. Is this correct?"

ANSWER: Yes.

7. “Ref 6.2; Does the Navy have a preference between mechanical stabilization (via spinning mass gyroscopes) and servo-stabilization via Fiber Optic Gyroscopes and active torque motors?”

ANSWER: No. Reference Attachment (1), paragraph 6.2 as revised by the answer to question 8 below.

8. “Should separate proposals be provided for the “ideal” 1-pixel drift solution and the required “Drift Control” solution?”

ANSWER: The mechanical stabilization should limit motion drift to less than a pixel during an entire track time of 5 sec. The “Drift Control specifications of column one should be improved by a factor of 50 and be replaced by the “knowledge” numbers of column two. Offerors should include in technical discussion whether serious impact to achievability or cost would occur if requirements were more stringent.

9. Ref 6.3; “What is the performance and latency of the ships gyro reference? Is the amplitude and frequency of the mast flexure a significant element of the motion to be stabilized against in addition to ship motion?”

ANSWER: The accuracy errors of the ship’s gyro and of mast flexure are simply to be passed through by the stabilization unit of this RFP. Par. 6.3 assumes that it would be expensive for the stabilization unit to determine accurate true vertical on its own. If it does not, then without help, what the stabilization unit would know about the line of sight of the camera payload would be only its drift rate and its pointing direction relative to the ship mast, but not its pointing direction in inertial space. The stabilization unit is, however, required to do more than this. It is to point the payload line of sight to a prescribed position (usually on the horizon) by using the ship gyro reference information. (For old-style masts flexure has been on the order of a few mRad at rates the same as Table 1.)

10. Ref to 7.2 Motion Jig; “We have a 6DOF motion table, which we use for ship motion testing at our facility. Would this be acceptable or is a separate piece of deliverable test equipment needed?”

ANSWER: A separate piece of deliverable equipment is required. The intent is not to duplicate the full high-quality motion table that should be used at the factory for final acceptance testing. The motion jig required as a deliverable is not intended to be a full motion test table but, a way of addressing integration issues after accepting delivery of the stabilization unit.

11. Ref 8.1; “Who is responsible for incorporation of position and drift data into the camera’s digital data stream? If incorporated by the stabilization system vendor, how is this performed?”

ANSWER: Incorporation of the stabilization unit’s data into the video stream is not a requirement under this RFP. The stabilization vendor is required to provide access to digital I/O control and monitoring signals to some form of buffer with specifications such that an electrical engineer can design an interface box to retrieve and use those signals.

12. Ref to 12.2, "Resolution now is 10uRad"; "Does this refer to an existing system? What absolute (deck coordinate or inertial coordinate) accuracy and jitter is required for the pointer-trackers?"

ANSWER: The sentence starting with "Resolution now is 10 uRad..." is hereby replaced to start with "Resolution of the Intevac imager is 8.7 uRad..." Jitter was not specified, only open-loop gain, because it was assumed that the stabilization vendor would not have error signals. However; the high-resolution Intevac imager will be provided as GFE for this option. Video output is 512x512 digital @ 15 frames/sec, and the stabilization vendor shall use this video for pointing stabilization reference and error generation via a software tracker. Half-second RMS jitter of the Intevac imagery is to be one pixel or less with wander over ten seconds less than ten pixels. Acceptance testing may be done using a small-dedicated control box or computer, but the software tracker is also to be loadable on both windows and Macintosh operating systems. A buffer for pointer-tracker I/O signals shall be provided with specifications such as above so that an electrical engineer can design an interface box to retrieve and use those signals. After acceptance, the government will configure the pointer with Intevac imager system to operate remotely from the software tracker and processor and at a distance of a couple hundred feet over a data link (probably gigabit ethernet) with the Intevac imagery integrated into other displays.

13. Ref Note 2 on Page 7 of the RFP; "Can NRL release your referenced budgetary cost for the DAS system with/without the higher stability requirements?"

ANSWER: No. see the answer to question 15 below.

14. "Are electronic submissions acceptable for this answers to this solicitation?"

ANSWER: No, submissions of offers in response to this solicitation shall be in writing, see section L-9.

15. "Does the Government have a not to exceed budget for the basic contract (Items 0001 & 0002) as well as Options 0003 through 0008?"

ANSWER: The government has developed an independent estimate for the price of this procurement with and without options. Limited funding for CLIN 0001 has been appropriated. This procurement is focused on performance hardware demonstrations that, if successful, are planned for transition to ship deployment which would involve options 0003 through 0008. There is no current funding for the options under this procurement.

16. "Based on the CDR date of January 2003, and performance test completion by April 2003, does the Government intend to make a sole source award by April 1, 2002?"

ANSWER: No, as stated in the synopsis, this acquisition will be processed as a full and open competition. The required dates for reporting, such as the CDR may require revision dependent upon the date of contract award.

17. “Will the DAS be operate in a temperature stable environment, or will it be exposed to the outside ambient temperatures? What is the operating and non-operating temperature range for the DAS? Are there other environmental conditions that apply besides the shock and EMI specified in the SOW?

ANSWER: DAS is required to operate when scene temperatures are between freezing and 100 F. It is anticipated that the DAS units will be inside a low-radar-cross-section structure and looking out through a widow, so that sun loading will be minimal but air flow for cooling might be restricted. Use freezing to 150 F for the range of immediate-surround air temperatures in which the stabilization unit(s) must operate.

18. “What is the level of high frequency vibration for shock isolation referenced in Section 5.5 of the SOW?

ANSWER: Reference Attachment (1), paragraph 5.5, third sentence.

19. “Are there any weight or physical envelope restrictions for the DAS?

ANSWER: See the question/answer to 4 above.

B. Revise Attachment (1) DAS STABILIZED POINTING SYSTEM as follows:

1. Revise paragraph 6.2 to read the same as the answer to question 8 above.

2. Add the high-resolution Intevac imager referenced in the answer to questions 12 above to paragraph 2.0 Government Furnished Equipment.

3. Revise paragraph 12.2 Optional Three-Axis Pointer Trackers to include or replace, as applicable with the information provided in the answer to questions 12 above.