



DEPARTMENT OF THE NAVY
NAVAL AIR WARFARE CENTER TRAINING SYSTEMS DIVISION
12211 SCIENCE DRIVE
ORLANDO, FLORIDA 32826-3224

IN REPLY REFER TO:
J&A 16_0391

**JUSTIFICATION AND APPROVAL
FOR USE OF OTHER THAN FULL AND OPEN COMPETITION**

1. Contracting Activity.

Naval Air Warfare Center Training Systems Division (NAWCTSD) - Orlando, FL

2. Description of the Action Being Approved.

This Justification and Approval (J&A) authorizes and approves the issuance of a sole source Firm Fixed Price (FFP) contract for the CNATRA T-45 Simulators Windows 10 Upgrade program to:

National Instruments Corporation
11500 Mopac Expwy
Austin, TX 78759-3504
(512) 683-0100

3. Description of Supplies/Services.

The Department of Navy (DON) Chief Information Officer (CIO) has mandated the eradication of Windows XP Operating System (OS) in all weapons and training systems due to known Cyber Security threats and vulnerabilities.

This CNATRA T-45 Windows 10 Upgrade acquisition is for the procurement of National Instruments products, to support conversion from Windows XP to Windows 10. The current Host Input/Output (IO) software utilized within the T-45 Simulators was developed by National Instruments.

The CNATRA Simulators Windows 10 Update Program will consist of updating the Windows XP Operating System (OS) in the following twelve Operational Flight Trainers (OFTs) and the T-45C (2F138E) Software Support System (SSS):

- Six (6) Undergraduate Military Flight Officer (UMFO) OFTs (2F205A) located at Naval Air Station (NAS) Pensacola, FL
- Six (6) T-45C OFTs (2F138E) located at NAS Kingsville, TX
- One T-45C (2F138E) SSS located at NAS Kingsville, TX

Intermediate and advanced strike fighter pilot training tasks are accomplished in the T-45C training devices, while the UMFO devices support intermediate and advanced Naval Flight Officer (NFO) curriculum.

Converting the current Simulators from Windows XP to Windows 10, requires changes to the Host Interface Software, due to a requirement to change from the Windows XP 32 Bit encryption, to the Windows 10 64 Bit encryption. In order to maintain the configuration baseline and to ensure adequate information assurance is applied and tested on the software baseline, it is critical the identical part is used and National Instruments is the only source which currently offers the part. No other company's products will work as such.

The total estimated value of this J&A procurement is [REDACTED]

Estimated Dollar Value in Thousands

	FY16	Total
APN-7	[REDACTED]	[REDACTED]
APN-6	[REDACTED]	[REDACTED]
Total	[REDACTED]	[REDACTED]

4. Statutory Authority Permitting Other Than Full and Open Competition.

41 U.S.C. 1901 Simplified Acquisition Procedures
 FAR 13.501(a)(1)(ii) Simplified Procedures for Certain Commercial Items

5. Rationale Justifying Use of Cited Statutory Authority.

The specified items are unique to the T-45 SIM Host IO Software Development Requirements and will maintain the baseline software architecture for the training systems. Market research was conducted with the industry that indicated no other companies were capable of providing identical products besides National Instruments. Future procurements may result in different conclusions depending on the technology available at that time.

Any attempt to introduce alternative software development tooling would result in a significant cost increase, delay program schedule, and not support the software baseline. Utilizing a product other than National Instruments' would require the procurement of an entirely new IO system, to include an IO Cabinet, IO Chassis, IO Cards, Interconnect Cables, Junction Boxes, and a significant number of Software Lines of Code (SLOC).

The current system utilizes approximately 75K lines of code in the IO computer and an additional 20K in the host computer to operate all of the cockpit indications and controls. It also controls the motion cueing, primary flight controls, and secondary flight controls. To replace this IO system with a system other than National Instruments would require approximately 2,000 hours of software development, 1,000 hours of hardware redesign, 4,000 hours of drawing changes, and 1,000 hours of documentation changes. This would delay the schedule and increase the system's costs.



Based on the above, National Instruments is the only source which is currently compatible with the existing CNATRA Simulator Host Interface software.

6. Description of Efforts Made to Solicit Offers from as Many Offerors as Practicable.

Pursuant to FAR Subpart 10.001(a)(2)(ii), ongoing market research has been conducted to determine if there exists another commercially available item or non-developmental item to satisfy the Government's requirement, or if the Government's requirement could be modified such that another commercially available item or non-developmental item could satisfy the Government's requirements. It has been documented in the Market Research Checklist and concluded through reliance on on-going continuous market research, that there does not exist another commercially available item or non-developmental item to satisfy the Government's requirement.

In accordance with FAR 5.201, the Procuring Contracting Officer (PCO) issued a pre-solicitation notice to Federal Business Opportunities (FedBizOpps) via the Navy Electronic Commerce Online (NECO) on 9 June 2016. The intent of the notice was to ensure full consideration is given to all potential sources. No responses offering alternative comparable components were received.

7. Determination of Fair and Reasonable Cost.

In accordance with FAR 15.402(a), the Contracting Officer shall ensure that the supplies and services provided by this J&A will be fair and reasonable. The contractor will submit a formal price proposal with sufficient information to support the accuracy and reliability of the estimate. The National Instruments proposal will be reviewed by experienced technical analysts and contract specialists. The Contracting Officer will utilize price analysis as the basis for negotiating a fair and reasonable price. Price analyses will be conducted in accordance with FAR Part 15.404-1.

8. Actions to Remove Barriers to Future Competition.

This is a one-time need to meet the requirement to transition computers with Windows XP to an approved, current, and supportable Windows 10 OS. The Navy will pursue competitive acquisition strategies to the greatest extent possible should additional requirements arise beyond the scope of this document. Additionally, the Government will continually monitor the commercial marketplace via tradeshows and publications for other potential sources.