

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
GEORGE C. MARSHALL SPACE FLIGHT CENTER

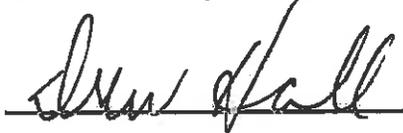
JUSTIFICATION FOR OTHER THAN FULL AND OPEN COMPETITION (JOFOC)
PURSUANT TO TITLE 10 U.S.C. 2304(c)(1)

1. This document is a Justification for the Other Than Full and Open Competition (JOFOC) prepared by the NASA Marshall Space Flight Center (MSFC) in accordance with Federal Acquisition Regulation (FAR) Part 6.3, Other Than Full and Open Competition, and NASA FAR Supplement (NFS) Part 1806.3, Other Than Full and Open Competition.
2. Description of the action being approved: This procurement is for the purchase of 32 new PCI Express Expansion Systems, part number EB16-SX8-X8, Magma brand only in support of the Space Launch System Program (SLSP) avionics system testing and development within the Integrated Avionics Test Facilities (IATF) which includes the System Integration Labs (SIL), the Software Development Facilities (SDF), and the System Integration Test Facilities (SITF). These labs perform the integration and testing of the avionics systems and flight software for the new launch vehicles.
3. Description of the supplies or services required to meet the agency's need, including estimated value: Magma brand multi-host 16 Slot PCI Express expansion systems to support MSFC IATF labs. The expansion systems support the implementation of electronic interfaces for the SLSP avionics integration, development, and test. The total estimated cost of this effort is \$224,000.00.
4. Statutory authority permitting other than full and open competition: This recommendation is made pursuant to FAR 6.302-1, which implements the authority for 10 U.S.C. 2304(c)(1) for acquisition of supplies or services from only one source and no other supplies or services will satisfy agency requirements, full and open competition need not be provided for.
5. A demonstration that the proposed contractor's unique qualifications or the nature of the acquisition requires the authority cited: The Magma brand PCI Express expansion system is the only system that supports multiple PCI Express boards making them transparent to the real-time operating system of the Concurrent servers without the need for any additional software. The Magma brand expansion systems support a minimum of 16 PCI Express 2.0 compatible slots simultaneously. They have a reliable system startup and card compatibility with the various I/O cards currently utilized in the IATF labs. The Magma brand expansion systems' direct memory access (DMA) speeds meets the real-time environment requirements of the IATF labs. Through a rigorous program test performance, functionality and compatibility with the Concurrent real-time servers and the various I/O cards has been established.
6. Description of the efforts made to ensure that offers are solicited from as many potential sources as practicable: Pursuant to NFS 1804.570, this proposed contract action will be published on the NASA Acquisition Internet Service (NAIS) and pursuant to FAR 5.201; this proposed contract action will be synopsisized in the Federal Business Opportunities. The results received in writing will be added to this document by addendum.
7. A determination by the contracting officer that the anticipated cost to the Government will be fair and reasonable: Based upon previous purchases.

8. Description of the market survey conducted, and the results, or a statement of the reasons a market survey was not conducted: Market research and product evaluations were conducted by the simulation development engineers. The evaluations were conducted with a Concurrent real-time computer connected to an expansion chassis fully loaded with a representative combination of I/O cards from DDC, AltaData, General Standards, CommTech, Microgate, and Mellanox. The evaluation resulted in the Magma PCI Express expansion system being the only one to demonstrate the functionality and performance required for the SLS avionics integration and test support.
9. Other facts supporting the use of other than full and open competition, such as technical data packages, specifications, engineering descriptions, statements of work, or purchase descriptions suitable for full and open competition are not viable due to the fact that the Magma PCI Express expansion systems are already deployed in multiple products – System Integration Test Facility in support of Core Stage avionics integration and test; and Software Development Facility 1,2, 3 in support of SLS Flight Computer Flight Software development and test. Guaranteed performance, functionality and compatibility across products must be maintained. Choosing another brand would require another extensive test with the Concurrent real-time servers and various I/O cards then replacing all the existing Magma expansion systems. This would be time consuming and costly delaying schedules and hardware delivery.
10. Sources, if any, that expressed an interest in writing in the acquisition: See addendum
11. The actions, if any, the Agency may take to remove or overcome barriers to competition before any subsequent acquisition for the supplies or services required: There are no known actions which the agency may take to remove or overcome barriers to competition before any subsequent acquisition for the systems required.

For the above reasons, full and open competition is not feasible. Therefore, purchase of the supplies or services Magma brand is the only practical approach.

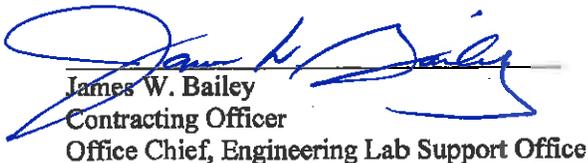
I hereby certify the facts in this justification and any supporting data used for this justification are accurate and complete to the best of my knowledge.



Drew Hall
Avionics & Software Ground Systems Test
Branch
ES53

6/9/2014
Date

I hereby certify that the above justification is complete and accurate to the best of my knowledge and belief. In addition, I hereby determine that the anticipated cost to the Government will be fair and reasonable.



James W. Bailey
Contracting Officer
Office Chief, Engineering Lab Support Office

7-15-2014
Date

Approved:

RCM

Roxanne C. Melton

Roxanne C. Melton

Contracting Officer

Office Manager, Engineering Support Office

7/16/14

Date

