

General Information

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Point of Contact Information

COMMANDER
NAVAL SEA SYSTEMS COMMAND
ATTN: JOE SOLER/ PEO SUB S-A
1333 ISAAC HULL AVENUE SE STOP 2050
WASHINGTON NAVY YARD, DC 20376-2050
joseph.soler@navy.mil

COMMANDER
NAVAL SEA SYSTEMS COMMAND
ATTN: MERCEDES BURRELL/ SEA 02621M
1333 ISAAC HULL AVENUE SE STOP 2050
WASHINGTON NAVY YARD, DC 20376-2050
mercedes.burrell@navy.mil

Description

THIS IS A SOURCES SOUGHT NOTICE ONLY. THIS IS NOT A REQUEST FOR PROPOSALS. THERE WILL NOT BE A SOLICITATION OR DRAWINGS AVAILABLE. THIS SOURCES SOUGHT NOTICE IS PUBLISHED FOR MARKET RESEARCH PURPOSES ONLY. THE GOVERNMENT IS CONDUCTING MARKET RESEARCH TO DETERMINE WHETHER THIS EFFORT CAN BE SET ASIDE FOR SMALL BUSINESS. ONLY ORGANIZATIONS CURRENTLY REGISTERED AS A SMALL BUSINESS UNDER NAICS CODE 334511 ARE TO SUBMIT A CAPABILITY SUMMARY. The Naval Sea Systems Command (NAVSEA) PEO SUB seeks information as to potential qualified commercial sources with specific experience and expertise necessary to support integration of combat systems on new construction and in-service submarines. The effort required is typical of that needed for engineering and integration of large, complex, software intensive Information Technology (IT) systems*. Execution of work scope requires expertise in the areas of IT component level electronics, COTS open system standards software, and high quality of service network design, operation, and maintenance. Additionally, functional expertise in the areas of IT network security and DoD regulatory compliance, network level performance testing, electronic interface configuration control, and overall programmatic integration and planning are required.

Modern Submarine combat system components are acquired by a diversified group of government and private party (shipbuilder) organizations from a variety of electronics suppliers, and must be integrated to produce a fully functional, effective, and suitable multi-mission warship. Starting with the inception of the first open system networked combat system for the

** Large, complex, software intensive networked systems are defined to contain all of the following: millions of lines of software, multiple operating systems, hundreds of servers, COTS & custom electronics, open systems middleware, all information bearing data types (analog, digital, optical, RF, video), high QOS architecture supporting safety of flight interface and weapons systems compatibility, defensive cyber attack measures, and purposely designed operator maintenance suitability*

VIRGINIA Attack Class SSN, PEO SUB has outsourced Systems Engineering & Integration (SE&I) to industry. PEO SUB has a continued need for this work scope which has been expanded to include all classes of submarines. The overall effort is described in greater detail in a draft Statement of Work. Interested parties may request a draft version of the Statement of Work from Mercedes Burrell via email at mercedes.burrell@navy.mil. This document will not be posted online as an attachment to the sources sought notice. At this time, national policy does not support release of this document to foreign sources.

Responsible sources should provide technical information addressing the following areas:

1. MANAGEMENT

Provide a description to demonstrate comprehensive understanding of the personnel resources and management practices required to execute the SE&I agent duties described in the draft statement of work (SOW).

Staffing and Key Personnel

Describe the staffing composition and organizational structure that will be formulated to perform the SE&I scope of work. The description should include the following:

- (a) An organization chart depicting the proposed SE&I agents' organizational structure. Assigned roles of personnel from within the prime contractors' organization and any subcontractors should be clearly defined and depicted.
- (b) Identify ability to fill eight (8) Key Personnel positions and fully describe the unique knowledge, training, or skill sets that would be factored into these assignments.

Program Manager: Minimum of 15 years of progressively more responsible program management duty, with 4 years specialized in the management of large, software intensive IT networked systems*.

Deputy/Business Manager: Minimum of 14 years progressive project management experience with 4 years specialized in the business acumen associated with contract management of a complex technical system.

Chief SE&I Engineer: Minimum of 15 years general electronics and/or software engineering experience, with 4 years specialized in large IT networked technical systems.

Suitability engineer: 15 years of general logistics experience associated with military weapons systems, with 4 years associated with suitability aspects (maintenance and training) of large IT networked systems.

IA Technologist: 12 years of general electronics and/or software engineering background, with 4 years of specialized knowledge in the area of IT network security design, functionality, and DoD regulatory compliance.

Hardware Technology Specialist: 12 years of general electronics and/or software engineering background, with 4 years of specialized knowledge in the area of IT network hardware design, component functionality, and system maintenance.

Software Technology Specialist: 12 years of general electronics and/or software engineering background, with 4 years of specialized in IT network software operation, interface configuration control, and data transfer technologies.

T&E specialist: 10 years of general electronics and/or software engineering background, with 3 years specialized in the area of IT network installation and test.

- (c) In addition to a description of key personnel, provide the proposed staffing plan would be employed to perform the SE&I duties described in the draft SOW, as well as support the Navy IPPD forums and rhythm identified below. (L = lead, P = active participation, C = coverage for situational awareness)

IPPD Venue	Calendar Week											
	1	2	3	4	5	6	7	8	9	10	11	12
Electronic Integration												
Interface Working Group	L				L				L			
Interface CCB						L						L
Joint test Group				P				P				P
Systems Engineering												
Information Assurance WG		P				P				P		
EM compatibility Advisory Board			C									
Power Interface WG			C									
Tech Insertion IPT	P					P						P
SWFTS Architecture WG				P								P
Management												
Principal System Engineer IPT	P				P				P			
Leadership IPT		C					C					C
Tech Refresh IPT	P					P						P
Life Cycle Engineering IPT			P						P			
Platform												
VACPIT	P		P		P		P		P		P	
ORPIT		P		P		P		P		P		P
Sonar SIT	C				C				C			
ECS SIT		C				C				C		
Weapons SIT			C				C				C	
TACLANSIT				C				C				C
Navigation SIT		C				C				C		
Hotel Services/FOCP WG			C				C					C

PIT= Platform Integration Team, SIT = System Integration Team, WG = working group

Program Execution

- (a) Address understanding of the submarine combat system modernization planning and execution processes as it pertains to electronics integration and test prior to platform installation. Include evidence of understanding of the management and oversight required to support the PEO SUB-S responsibility for platform-level effectiveness and suitability amid simultaneous modernization and new construction activity. Address the management interaction envisioned to be required with PEO SUB-S, subsystem Program Office

representatives, NAVSEA Contracts Directorate personnel, the local DCMA representatives, navy warfare centers and industry partners to accomplish all SOW efforts.

- (b) Provide a detailed Integrated Master Schedule (IMS) for events over the base year. Describe the approach taken to create the IMS including the incorporation of reviews, baseline definition milestones, decision points, test events, subsystem deliveries of hardware, software, documentation, and key/critical events for a typical baseline development, test, and integration and delivery cycle. Describe relationship between key events on the IMS and excerpt of the Submarine Combat and Acoustic Modernization Plan (SCAMP) below in developing the IMS.

Ship class	CY14	CY15	CY16	CY17	CY18	CY19
SSGN	727 CSRR I1V3 729 CSRR I1V3	726[10-14] 728[10-14]	727[10-14] 729[10-14] 728 CSRR I1V3	727 CANES 729 CANES	726 CANES 727 CANES 728 CANES	726 [14-18] 727 [14-18] 729 [14-18]
SSN21	21 [04-12] 22 CSRR I1V3	21 CANES,CSRR I1V3 23 CSRR I1V3		22 [12-16], CANES 23 [08-16],CANES	21 [12-16]	
SSN688I	753 [08-12] CANES,CSRR I1V3 754 [08-12] CSRR I1V3 756 [06-14] CANES,CSRR I1V3 762 [08-12] 770 [04-12] CSRR I1V3 757 CANES CSRR I1V3 759 CANES	758 [06-14] CSRR I1V3 759 [06-14] CANES CSRR I1V3 760 [06-14] CANES CSRR I1V3 765 CSRR I1V3	751 [08-14] 764 [08-14] CSRR I1V3 765 [08-14] 767 [10-14] 761 CANES 762 CANES CSRR I1V3	757 [10-16] 761 [08-16] 769 [10-16] 772 [12-16] 773 [12-16] 763 CANES CSRR I1V3	766 [08-16] CSRR I1V3 768 [12-16] 771 [10-16] 754 CANES 751 CANES CSRR I1V3	753 [12-18] 756 [14-18] 752 [10-18] CSRR I1V3 758 [14-18] 763 [10-18] 772 [16-18] CSRR I1V3 773 [16-18] CSRR I1V3
SSN688 VLS		723 [08-14] CANES 725 [08-14] CANES	721 [08-14] CANES	750 [10-14] CANES 722 [08-14]		
SSN688 Non-VLS		717 [08-14]				
SSN774	774 [02-12] CSRR [I1V1-I1V3] 783 [02-12] 790-[14]nc CSRR I1V3	776 [02-14] CANES,CSRR I1V3 791-[14]nc CSRR I1V3 785 - CANES	777 [08-14] CANES CSRR [V2-I1V4] 778 [02-14] CANES 781 [10-14] 792-[14]nc,CSRR I1V3	775 [10-16] 782 [12-16] 784 [10-16] CANES 793-[14]nc 779 CANES 779 CSRR [I1V3-I1V3] 781 CSRR [I1V2-I1V3]	774 [12-16] CANES 777 CSRR [I1V1-I1V3] 778 CSRR [I1V2-I1V3] 779 [08-16] 780 [10-16] CANES,CSRR I1V3 783 [12-16] CANES 794-[16]nc,CSRR I1V4 795-[16]nc,CSRR I1V4	781 [14-18] 796-[16]nc CSRR I1V4 797-[18]nc CSRR I1V4
SSBN
KEY:	T1 = Technology Insertion [from-to]					
	nc = new construction					
T112		T114		T116		T118

CSRR = Common Submarine Radio Room, CANES = Consolidated Afloat Network Enterprise Solution

- (c) Describe an SE&I risk management process and its relationship to existing PEO SUB-S, Ship Acquisition Program Manager (SHAPM), and Participating Acquisition Resource Manager (PARM) processes or forums.

2. TECHNICAL

Provide a comprehensive understanding of the technical engineering expertise required to execute Submarine Command Control Communications and Intelligence (C3I) Systems Engineering and Integration (SE&I) actions under this solicitation.

Systems Engineering Approach

- (a) The approaches to analyze functional and operational requirements prescribed by the government and synthesize new electronic interface requirements as necessary. Include a discussion on any differences in the synthesis process, if any, which result depending on

whether the requirement is tactical performance driven, IA compliance driven, or network maintenance driven. Discuss the method used once these requirements are decomposed to allocate and track them for validation testing, as well as determine if new or modified technical performance measures need to be addressed.

- (b) The concerns, challenges, risks and dependencies (within the context of both modernization and new construction environments and across all submarine platform configurations), for upgrading existing fielded system interface baselines to a subsequent baseline in an environment involving different sub-system upgrade business models.
- (c) The capacity and expertise to support design and specification of performance requirements of the core System of Systems (SoS) Network/Architecture as it pertains to indigenous electronics performance, suitability (maintenance and training), and reliance/interface with functional IA components.
- (d) The effort to define and configuration manage the Government Furnished Information (GFI) subsystem electronic interface baselines for multiple variants, baselines and capabilities. Include the approach to manage and control subsystem external interfaces, and whether manual or automated means would be used to manage interface products and baselines.
- (e) The effort and methods that would be used to assess overall Network/Architecture performance, maintainability and security within the integration test window or on a continuing basis for fielded baselines where no parametric technical performance measures exist.

Test and Integration Approach

- (a) Address the overall Test and Integration approach for planning and performing C3I SoS Level Testing of multi-subsystem functionality across various baselines and platform configurations (688, 688I, SSGN, SEAWOLF, VIRGINIA) as depicted above. Describe how the System Requirements Verification Matrix will be used during System Level Tests and System Integrated Tests to provide 100% test coverage and the extent and basis for any overlap or redundancy. Conversely, when limitations or “holes” in land based test facility hardware exists as depicted below, describe the approach to quantify and manage the risk.

SWFTS Subsystem	Test Facility 1 (Newport RI)	Test Facility 2 (Manassas VA)
BYG-1	Tactical	Tactical w/simulated launchers
Sonar	None	Tactical
ISIS	None	Tactical
Radar (BPS-16)	Tactical EDM	None
Radar (BPS-15)	Simulator	None
ESM	Functional Equiv	None
AIS	Tactical	Tactical via WAIF
RLGN/ECDU	Tactical	Tactical
TFDS	Tactical	Tactical
VMS	Tactical	Tactical
GCCS-M	Tactical	None
Radio Room	Tactical	None
CWL	Tactical	Simulated
Ship Control	Simulator w/Tactical RICs	Simulated w/Tactical RICs
SubLAN	Tactical	None
PSCS	Functional Equivalent	None
CKTD (Blk I/II)	Functional Equivalent	None
DPS	Tactical	Functional Equivalent

- (b) Discuss the approach for establishing a single baseline problem tracking system, and approach to resolving interface issues between subsystems. Describe the understanding of Team Submarine problem reporting systems and role of the subsystem and shipbuilder JTGs, and explain how the problem tracking system and prioritization scheme will interact.
- (c) The approach to using tools or applications (i.e, automated testing) to reduce total test time
- (d) The approach to establishing a Requirements Verification Matrix (RVM) supporting system performance and subsystem interface requirements

Interested sources are requested to provide unclassified company literature and/or provide a capability summary not to exceed 50 pages in length addressing the topics described above. **RESPONSES SHOULD INCLUDE THE FOLLOWING INFORMATION:** Company name; Address; Point of Contact; Phone Number; E-mail address; and Level of Facility clearance. All information submitted in response to this notice shall be provided on or before 12 July 2013. Submit information both in hardcopy and on CD by mail to Joe Soler and Mercedes Burrell at their respective aforementioned mailing addresses. Telephonic responses are not acceptable. The Government may not respond to any specific questions or comments submitted in response to this sources sought notice or information provided as a result of this sources sought notice. Any information submitted by respondents as a result of this sources sought notice is strictly voluntary. This sources sought notice is for information planning purposes and the Government will not pay or otherwise reimburse respondents for information submitted. All documentation shall become the property of the Government. The Government is not soliciting, nor will it accept proposals as a result of this sources sought notice. This sources sought notice is a market research tool being used to determine the existence of qualified experienced sources. All firms responding to this sources sought notice are advised that their response to this notice is not a

request to be considered for a contract award. If a solicitation is issued, it will be announced later via NECO/FedBizopps and all interested parties must respond to that solicitation announcement separately from the response to this sources sought notice. Response to this notice is not a request to be added to a bidders list or to receive a copy of a solicitation. THE GOVERNMENT DOES NOT INTEND TO AWARD A CONTRACT SOLELY ON THE BASIS OF THIS SOURCES SOUGHT NOTICE.

Points of Contact

Primary: Joe Soler, PEO SUB S-Ajoseph.soler@navy.mil, 202-781-4082

Secondary: Mercedes Burrell, SEA 02621M, mercedes.burrell@navy.mil, 202-781-1843