

Section C - Descriptions and Specifications

STATEMENT OF WORK

Section C - Description/Specifications/Work Statement

1.0 ENCORE II INFORMATION TECHNOLOGY (IT) SOLUTIONS.

1.1 Organization. Defense Information Systems Agency (DISA)

1.1.1 Identification.

Defense Information Technology Contracting Organization (DITCO) - Scott Field Office
 Attn: ENCORE II Program Manager (PL8313)
 2300 East Drive
 Scott AFB, IL 62225-5406

1.1.2 Customers. The primary customers are the Military Services, the Department of Defense (DoD) and other agencies of the Federal Government.

1.2 Acquisition Background and Objective.

1.2.1 Background.

1.2.1.1 DISA Mission. DISA is an integral component in the development of the Global Information Grid (GIG), a network-centric environment required to achieve information superiority. The GIG is the globally-interconnected, end-to-end set of information capabilities, associated processes, and personnel to manage and provide information on demand to warfighters, policy makers and supporting personnel. It will enhance combat power through greatly increased battlespace awareness, improved ability to employ weapons beyond line-of-sight, employment of massed effects instead of massed forces and reduced decision cycles. It will also contribute to the success of non-combat military operations. Unique user data, information and user applications are not considered part of the GIG, but can also be accommodated under the contract (i.e., support for other Federal agencies). The emerging revolution in DoD's business affairs requires a distributed approach to conducting day-to-day operations that the contract can provide.

1.2.1.2 DISA is helping to meet these challenges by:

- * Identifying and maintaining the legacy baseline of requirements, processes, applications and automated systems
- * Collecting, validating and integrating requirements
- * Managing data standardization
- * Performing cross-functional analysis for data sharing through corporate/shared data structures
- * Developing integration standards, processes and methodologies
- * Performing cross-functional analysis for applications interfaces, interoperability and integration; developing migration/integration strategies and plans; providing functional and technical integration solutions; developing common shared infrastructure services; prototyping functional applications and required infrastructure support to validate requirements and solutions
- * Managing migration and integration through the use of program metrics tools and capabilities

1.2.2 Objective. The objective of this contract is to provide global net-centric capabilities, attributes or services under multiple award, Indefinite-Delivery/Indefinite-Quantity (ID/IQ) task order type contracts that support the military services, the DoD and other Federal agencies. DISA actively facilitates the migration of information systems and common, standard data into an integrated and interoperable GIG that supports the Department's Joint Vision 2020 (JV2020) concept. DoD is transitioning from a collection of stovepipe systems and architectures to an integrated and interoperable environment. Other Federal agencies have unique legacy processes and systems in place and require similar migration and integration activities. Many costly redundancies and duplications of

functionality exist within the current legacy environment (including applications, data and other infrastructure elements) and recent DoD mobilizations have proven that the current legacy environment is inadequate to meet the evolving mission needs of the user. The vision of an integrated global environment that meets the JV2020 concept necessitates a distinct set of information system capabilities required in the GIG. These include:

- * Seamless worldwide coverage and connectivity
- * Secure and assured service tailored to the threat
- * Operational flexibility to resize and reconfigure
- * Same “look and feel” when training as deployed or afloat
- * Real-time network control
- * Interoperability with joint and combined task forces
- * Access to tailored intelligence and support information systems
- * Split Base/Reach Back into integrated data assets (intelligence, logistics, etc.)
- * Bandwidth on demand (bandwidth where and when it’s needed)
- * More affordable and fewer mission support staff among deployed forces
- * Information flows tailored to user needs such as collection, storage and distribution
- * Web Services
- * Service Oriented Architectures (SOA)

1.3 Scope. The scope of this effort includes all activities within the Military Services and DoD. Other Federal agencies may utilize this contract to satisfy their Information Technology (IT) requirements after making the appropriate Economy Act Determination in accordance with Federal Acquisition Regulation (FAR 17.5). IT solutions encompass a range of capabilities from old legacy systems to new, emerging net-centric technologies. As a result, the contractor shall assist the government in providing IT solutions for activities throughout all operating levels of all customer organizations in support of all functional requirements including Command and Control (C²), Intelligence, and Mission support areas, and to all elements of the GIG. The contractor shall assist the government by furnishing all personnel, products, materials, facilities, travel, services, managed services and other items needed to satisfy the worldwide development, deployment, operation, maintenance and sustainment requirements of DISA and its customers.

The following cannot be obtained under ENCORE II: point to point circuits; transmission (voice/data/video) and network management in support of the DISN; and standalone hardware purchase and/or maintenance and standalone software purchase and/or maintenance

1.4 Applicable Documents. The contractor must have a complete understanding of DoD technical architecture requirements, standards and guidelines contained in the documents listed below. Applicable technical architecture documents will be specified in respective task orders. Source documents for Information Assurance are located in Section H.33 of the contract.

* Department of Defense Architecture Framework (DoDAF) (current version - see http://jitc.fhu.disa.mil/jitc_dri/pdfs/dodaf_v1v1.pdf)

* High-Level Architecture (HLA) (current version - see <https://www.dmsomil/public/transition/hla>)

* CJCSI 3170.01E Joint Capabilities Integration and Development System (JCIDS) – see http://www.dtic.mil/cjcs_directives/cdata/unlimit/3170_01.pdf

* CJCSI 6212.01C Interoperability and Supportability of Information Technology and National Security Systems see http://www.dtic.mil/cjcs_directives/cdata/unlimit/6212_01.pdf

* DoD Instruction 4630.8, "Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," see <http://www.dtic.mil/whs/directives/corres/pdf/463008p.pdf>

*DoD Directive (DoDD) 4630.5: Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS), see <http://www.dtic.mil/whs/directives/corres/pdf/463005p.pdf>

*CJCSM 3170.01B: Operation of the Joint Capabilities Integration and Development System, see http://www.dtic.mil/cjcs_directives/cdata/unlimit/m317001.pdf

*DoDD 8320.2 – Data Sharing in a Net-Centric Department of Defense. This directive requires un-metered discovery access to data without proprietary client-side software or hardware, or the need for licensed user-access. To accomplish this, DoD plans to leverage net-centric technologies (e.g. service-oriented architecture and Web Services) to expose data assets to the DoD Enterprise, based on community of interest-developed data schema and business rules. See <http://www.dtic.mil/whs/directives/corres/pdf/832002p.pdf>

* Department of Defense Net-Centric Data Strategy, 9 May 2003. See http://www.defenselink.mil/cio-nii/docs/Services_Strategy.pdf

* JMBC2 Implementation of the DOD Net-Centric Data Strategy. See Attachment 12 to this solicitation.

* Net-Centric Review Process and Strategy for DISA. See Attachment 13 to this solicitation.

* VADM A. K. Cebrowski and J. J. Garska, “Network Centric Warfare: Its Origin and Future,” Proceedings of the Naval Institute, 124:1 (Jan 1998)

* OASD(NII), Net-Centric Checklist, Version 2.1.3, May 12, 2004

www.defenselink.mil/horizontalfusion/docs/20040427_Transforming_to_A_Net-Centric_Environment.ppt

* Net-Centric Data Collection Instrument:

www.defenselink.mil/horizontalfusion/docs/20040608_HF05_Selection_Process.ppt

* “Industry Best Practices in Achieving Service Oriented Architecture (SOA),” Net-Centric Operations Industry Forum (NCOIF), Data Sharing and Services Strategy Working Group. Association for Enterprise Integration (AFEI), Arlington, VA. 22 April 2005.

* DoD Directive 8100.2, Use of Commercial Wireless Devices, Services, and Technologies in the Department of Defense (DoD) Global Information Grid (GIG) (aka “DoD Wireless Security Policy”), April 14, 2004, <http://www.dtic.mil/whs/directives/>

* DOD(NII), Net-Centric Data Strategy, May 9, 2003, http://www.afei.org/pdf/ncow/DoD_data_strategy.pdf

* Net-Centric Enterprise Solutions for Interoperability (NESI) Development Guidance <http://nesipublic.spawar.navy.mil>

* DoD Information Technology Security Certification and Accreditation Process (DITSCAP) outlined in DoD 8510.1-M (see <http://www.dtic.mil/whs/directives/corres/pdf/851001p.pdf>).

* DoD 5220.22-M, National Industrial Security Program Operations Manual (NISPOM) (see https://www.dss.mil/GW/portlets/AutonomyRetrieval/autosuggest.jsp?username=e8e9e6e5f9e0f8&threshold=20&numresult=10&defaultlogo=i_html.gif&display=782&url=%2Fusr%2Flocal%2Fweblogic%2Fbea92%2FportalContent%2F%2Fisp%2Fodaa%2Fdocuments%2Fnispom2006-5220.pdf&links=522022,M&command=getoriginal)

The following documents will be implemented via the Task Order Process for future requirements awarded under ENCORE II:

* Department of Defense (DoD) Information Technology Standards Registry (DISR) (see

<https://disronline.disa.mil/DISR/index.jsp> **Access to the DISRonline is limited to those who are directly involved in the development or support of projects, programs, or systems that make use of the DoD IT Standards Registry (DISR). Government contractors are required to provide their current contract number**

and identify a military or government point of contact (POC) that can verify their justification for DISRonline access. The need to access DISR will be indicated in the actual Task Order requirement.

- * Net-Centric Review Process and Strategy for DISA, Version 1.0, 31 Oct 2005
- * CJCSI 6510.01D, "Information Assurance (IA) and Computer Network Defense (CND)", 15 June 2004
- * CJCSM 6510.01, "Defense-in-Depth: Information Assurance (IA) and Computer Network Defense (CND)," 25 March 2003
- * NTISSP No. 200, "National Policy on Controlled Access Protection," 15 July 1987
- * NTISSD No. 600, "Communications Security (COMSEC) Monitoring," 10 April 1990
- * NSTISSD No. 503, "Incident Response and Vulnerability Reporting for National Security Systems," 30 August 1993
- * DCID 6/3, "Protecting Sensitive Compartmented Information Within Information Systems," 5 June 1999
- * DOD Directive C-5200.5, "Communications Security (COMSEC)," 21 April 1990
- * DOD Directive 5200.1, "DOD Information Security Program," 13 December 1996
- * DOD Directive O-8530.1, Computer Network Defense (CND), January 8, 2001
- * DOD Instruction O-8530.2, Support to Computer Network Defense (CND), March 9, 2001
- * DoD 5220.22-S-2, Marking Supplement to Industrial Security Manual for Safeguarding Classified Information (C3I).

1.5 System Security

Security requirements that shall be accomplished by the Contractor will be per the DoD Information Technology Security Certification and Accreditation Process (DITSCAP) outlined in DoD 8510.1-M (see <http://www.dtic.mil/whs/directives/corres/pdf/851001p.pdf>). The Contractor shall transmit and deliver any classified material/reports IAW the National Industrial Security Program Operations Manual (NISPOM) and the Industrial Security Regulation (DoD 5220.22-S-2). Individual system security requirements shall be accomplished as specified in the Task/Delivery Order.

2.0 WORK REQUIREMENTS.

2.1 Technical Requirements. The contractor shall assist the government by providing net-centric solutions, including network engineering, analysis and support for the acquisition, installation, fielding, training, operation and life-cycle management of components and systems in the operational environments of Combatant Commands and their subordinate components, the military services, Defense agencies, Office of the Secretary of Defense (OSD) and other Federal agencies. This includes providing assistance with the procurement of various products, including but not limited to, hardware, software and licenses, as applicable, when such products are incidental to the implementation of the solution. A single solution may be fielded to several sites or across the enterprise. Network analysis and support includes providing assistance with the procurement of services necessary and incident to the protection of the client's domains and systems to ensure continuity, viability while reducing vulnerabilities of the GIG. Net-Centric solutions, services and support anticipated under this contract exist within the scope of the 20 task areas identified below:

- * **Task Area 1 - Enterprise IT Policy and Planning**
- * **Task Area 2 - Integrated Solutions Management**
- * **Task Area 3 - Performance Benchmarking**

- * **Task Area 4 - Business Process Reengineering (BPR)**
- * **Task Area 5 - Requirements Analysis**
- * **Task Area 6 - Market Research and Prototyping**
- * **Task Area 7 - Information and Knowledge Engineering**
- * **Task Area 8 - Custom Application Development**
- * **Task Area 9 - Product Integration**
- * **Task Area 10 - Test and Evaluation (T&E)**
- * **Task Area 11 - Asset Management**
- * **Task Area 12 - Communications Engineering**
- * **Task Area 13 - Security Engineering Certification and Accreditation**
- * **Task Area 14 - Telecommunications Support**
- * **Task Area 15 - Computer-Telephony Integration (CTI)**
- * **Task Area 16 - Web Services**
- * **Task Area 17 - Operations Support**
- * **Task Area 18 – Hardware**
- * **Task Area 19 – Software**
- * **Task Area 20 – Managed Services**

2.1.1 These task areas provide a comprehensive template for the contracting of all life-cycle phases of net-centric solutions. Although not explicitly stated, this includes providing assistance with the engineering efforts in each task area to provide the net-centric solutions required by the military services, the DoD and other Federal agencies. IT services, hardware, software and enabling products will be obtained on an as-needed basis (i.e. through the issuance of task orders). The contractor will perform the required effort under these task areas, both within and outside the United States, throughout the term of this contract. An individual task order may relate to a single task area or involve functions from multiple task areas. Task orders will be issued to identify the net-centric solutions required and to provide a specific technical resolution (including the schedule for all deliverables and the identification of any applicable Government-Furnished Property (GFP), Government-Furnished Information (GFI) and/or Government-Furnished Workspace (GFW). The contractor shall assist the government by providing net-centric solutions for the acquisition, installation, fielding, training, operation and life-cycle management of components and systems in the operational environments of Unified Commands and their subordinate components, the military services, defense agencies, OSD and other Federal agencies. This includes providing assistance with the procurement of various products to include hardware, software and licenses and ancillary support products, as applicable. A single solution may be fielded to several sites or across the enterprise. Each of these locations may require site surveys and corresponding site-specific implementation and integration. Fielding documentation, such as “as-built drawings,” and acceptance tests and out-briefs may be required at each location, as specified in the individual task order.

2.1.2 ENCORE II will be able to provide assistance to Service/Agency engineering and other support as they transition legacy systems to use the Core Enterprise Services (CES) of DoD’s Net- Centric Enterprise Services (NCES) program. NCES will eliminate duplicative services within DoD by providing a common set of interoperable services supporting users in the warfighter, business, and intelligence domains. ENCORE II will enable both service and data providers on the “net” by providing and managing the underlying capabilities to deliver content and value to end-users. ENCORE II will support a broad array of services that will allow implementation of both the NCES enterprise capabilities and Community of Interest (COI) capabilities across the enterprise. Rapid development and deployment of services, used to respond promptly to Program of Record and COI requirements, are needed to enable support of Network Centric Warfare (NCW). ENCORE II will also be able to support the provisioning of these requirements as managed services.

2.1.2.1 ENCORE II is flexible and readily adaptable to satisfy the specific requirements of a variety of customers. Enterprise services will be defined independently from specific network and systems technology, as needed. Exploitation of new technology will be made easier by the flexibility of the service architecture, which fits in an environment with multiple providers of services. The coexistence of a number of stakeholders, performing various roles, must be supported. In addition, required solutions must provide a flexible framework with respect to changes, and must define an open environment, which enables the introduction and modification of services, the introduction

and modification of software and hardware components from different vendors and organizations, and the interoperability among such services and components.

2.1.2.2 A key goal of ENCORE II is to maximize the use of commercial products and technology, and to focus the limited Government Research and Development (R&D) capacity on unique requirements. Unique requirements would include specialized matters which rely heavily on creating and finding innovative ways to protect and defend DoD networks. The architecture and engineering must enable the management of services and the service infrastructure, and must facilitate the control and management aspects of services. Users must be able to access services independently from the physical location and the types of solutions being used. In addition, this contract will allow for inter-working with existing systems and services (e.g., with legacy or web-based services).

2.1.2.3 The contractor shall use industry and DOD best practices when developing solutions that comply with DOD functional and technical requirements for net-centricity, Information Assurance (IA) and IPv6. Sections C 1.4 and J of the contract contain or identify the requirements, standards, and guidelines that are to be used by the contractor when developing net-centric, IA and IPv6 compliant solutions. As specified in the language of each individual task order, the contractor shall assist the government to:

- identify the applicable compliance requirements
- assess their solution's net-centricity and IPv6 compliance against the OASD (NII) Net-Centric Checklist and/or the IPv4 and IPv6 profiles contained in the DOD IT Standards Registry (DISR).
- provide timelines, critical path dependencies, and other essential information/data for accomplishing net-centricity and/or IPv6 compliance

For IPv6 solutions, the contractor shall assist the government in supplementing the DISR profile information with the following ten operational criteria as listed in the DoD IPv6 Transition Plan and DoD IPv6 Master Test Plan. These operational criteria are:

1. Demonstrates security of unclassified network operations, classified network operations, black backbone operations, integration of High Assurance IP Encryptors (HAIPE), integration of IPsec, and integration with firewalls and intrusion detection systems
2. Demonstrates end-to-end interoperability in a mixed IPv4 and IPv6 environment
3. Verifies equivalent to, or better performance than, IPv4 based networks
4. Demonstrates voice, data and video integration
5. Demonstrates effective operation in low-bandwidth environments
6. Demonstrates scalability of IPv6 networks
7. Supports mobile terminals (voice, data and video)
8. Demonstrates transition techniques
9. Demonstrates ability to provide network management of networks
10. Demonstrates tactical deployability and ad hoc networking.

For products and services produced specifically for DISA, the DISA Net-Centric Review Process and Strategy document shall be used as a companion document to the OASD NII Checklist, DISR profile information, and the above IPv6 documents and 10 criteria. The contractor shall report the findings of their assessment to the DISA/DITCO Contracting Officer (CO) as part of the Quarterly Progress Report contained in Section 2.4.1.1. of the SOW.

2.2 Task Area Descriptions.

2.2.1 Task Area 1 - Enterprise IT Policy and Planning. This task area provides technical and programmatic support to assist departments and agencies with all aspects of planning, engineering, fielding and operating IT systems and resources. It provides technical and programmatic support for review, analysis and coordination of processes, policy, doctrine, directives, regulations and implementation of instructions. The contractor shall assist the government in performing the following:

2.2.1.1 Policy. Review, consolidate and develop domestic, international and coalition policy in accordance with the user's requirements. Provide technical support and assistance to customer organizations and assess IT policies, standards, guidelines or procedures to ensure a balance of security and operational requirements.

2.2.1.2 Planning. Review, develop and consolidate strategic, tactical and operational plans, including requirements definition and mission planning.

2.2.1.3 Process Management. Review, re-engineer if required, and manage technical and business processes such as acquisition planning, financial reporting, engineering, solution fielding, strategic and operational planning, engineering, training, operations, and customer support. Processes shall be in accordance with the user's guidelines.

2.2.1.4 Program and Project Management Support. The contractor shall provide contract and task order management functions, including:

2.2.1.4.1 Management Planning. Prepare management plans at task/delivery order initiation. These plans will describe the technical approach, organizational resources and management controls employed to meet the cost, performance and schedule requirements throughout the task order period of performance.

2.2.1.4.2 Task Order Management. Perform the daily activities required for successful program completion. Examples of activities under this task area include management and status reporting, quality assurance monitoring, configuration management, risk management and security management.

2.2.1.4.3 Regulatory Compliance. Administer productivity and management methods such as quality assurance, configuration management, work breakdown structuring and human engineering. The contractor shall comply with Federal Information Processing Standards (FIPS) and Federal laws and regulations that affect IT systems operations. Examples are the Privacy Act of 1974, the Computer Security Act of 1987 and the Joint Financial Management Improvement Program (JFMIP).

2.2.1.4.4 Documents. Provide systems engineering support necessary to draft, review, revise and deliver documents identified within individual task orders.

2.2.1.5 NCES Development Services. Assist Service/Agencies as they transition information technology Programs of Record to use NCES services. The NCES program will provide a set of core enterprise services that support the exchange of information between producers and consumers (human or information systems) while leveraging Information Assurance (IA)/Security and NetOps capabilities to protect the information from unauthorized use or access. These services will allow users and information systems to find and access relevant information, expose the information they produce for others to discover, and collaborate in a more effective manner. ENCORE II will provide engineering support for Service/Agency developers to effectively utilize the NCES core enterprise services, including: Enterprise Services Management, Messaging, Application, Discovery, Mediation, Collaboration, Storage, Information Assurance/Security; and User Assistant. The core enterprise services will be invoked from four major NCES product lines: DoD Enterprise Collaboration, Content Discovery/Delivery, Service Oriented Architecture (SOA) Foundation, and the Defense Online Portal. ENCORE II engineering support will provide assistance in utilizing the NCES capabilities via the four product lines.

2.2.1.6 Data Engineering Services. Assist Service/Agencies. The contractor shall assist Services and Agencies in implementation of the DOD Net Centric Data Strategy. The contractor shall provide support to Communities of Interest (COIs) within the Department. A community of interest is one or more activities that need to share data. The contractor shall assist the COIs to identify metadata to be shared, assist in registration of metadata in the DOD

Metadata Registry, and attribute or tag metadata with information required for discovery. The contractor shall assist the COI user groups in development of taxonomies, a means for categorizing metadata, and integrating COI taxonomies with the DOD Core Taxonomies developed by the DOD Taxonomy Focus Group. The contractor shall provide technical assistance to the COIs to facilitate use/reuse of registered metadata artifacts in piloting activities and by participating in DOD Data Management forums such as focus groups and working groups.

2.2.2 Task Area 2 - Integrated Solutions Management. The requirements of this task area include management and technical support for research, analysis recommendation and documentation of integration issues and approaches. The issues and approaches considered under this area evolve from a variety of sources such as external audits, technical reports, Federal standards, operational policies and doctrines, technical guidelines and best practices. The contractor shall assist the government in performing the following activities for services required under this task area:

2.2.2.1 [Integration Management Support.](#) Provide support to the Government's integration program. This includes conducting management reviews to identify integration issues and problems such as requirements definition, architecture and policy compliance and engineering guideline compliance.

2.2.2.2 [Cross-Functional Integration Support.](#) Identify cross-functional applications and technical issues from selected symbiotic functional areas and document the opportunities for resolving issues. Recommend opportunities for resolving issues in requirements, data, applications and infrastructure elements. Also, plan, analyze and report programmatic impacts on the issues such as costs, risk analysis, return on investment, schedule dependencies, and recommend functional and technical solutions.

2.2.2.3 [Analysis and Review.](#) Examine functional, management and technical requirements and/or issues to provide effective solutions for integration efforts that include:

- * Requirements Analysis
- * Compliance with Legal and Regulatory Guidance
- * Interoperability
- * Architectures
- * Common Infrastructure Services
- * Open Systems Environment
- * Security
- * Standards
- * Data and Data Sharing
- * Functional and Technical Integration
- * Benchmarking/Baselining

2.2.2.4 [Documentation.](#) Develop documentation resulting from studies, analyses, assessments, system implementations and architectures, engineering designs and information brochures. Documentation may include subject matter originated by the contractor as well as Government-provided topics. Data items to be delivered will be identified in each task order.

2.2.2.5 [Information Dissemination.](#) Provide information dissemination support relating to the technical requirements and functional areas supported by this contract. Conduct activities such as professional development seminars, demonstrations, trade shows, conferences and briefings relating to enterprise-wide integration issues or programs. Implement an integrated solutions management capability and identify integration issues and problems such as requirements definition, architecture and policy compliance and engineering guideline compliance; identification of cross-functional applications and technical issues; examination of functional, management and technical requirements and/or issues to provide effective solutions for integration efforts, and conduct of activities to facilitate enterprise-wide integration issues and operational employment.

2.2.2.6 [User Assistance.](#) Develop user assistance end-user facing services and activities, including analysis and review of compliance with legal and regulatory guidance, architectures, common infrastructure services, security and standards.

2.2.3 Task Area 3 - Performance Benchmarking. This task area includes program, functional, technical and data benchmarking efforts and development of related benchmarking tools and methods for integration. The contractor shall consider current and emerging technologies, information infrastructures and ongoing and future IT systems support. This task area also provides for baselining of existing legacy systems, which is the first step in the selection of migration systems supporting functional activities. The contractor shall develop a baseline inventory to show the “as-is” process and underlying information systems and technology. The contractor shall perform the following activities for services required under this task area:

2.2.3.1 Program Benchmarking. Examine and evaluate functional and technical programs for integration implications. Review factors such as operational scope, functional and process relationships, business practices, resource requirements and cost impacts.

2.2.3.2 Functional Benchmarking. Review and analyze defined work processes and information needs of users within and across the functional area being examined. This includes functional and cross-functional requirements definition, functional descriptions, functional architectures and requirements validation.

2.2.3.3 Technical Benchmarking. Examine current and emerging technologies for effectiveness and/or potential to support customer needs. These technologies/systems/services may include legacy systems or migration to new technologies.

2.2.3.4 Data Benchmarking. Review and analyze data, databases and cross-functional data sharing relating to the effectiveness of the information support provided to functional elements of the end-users.

2.2.3.5 Benchmarking Tools and Methods. Develop new or modify existing tools and methods to enable a disciplined process of benchmarking. Examples include templates, checklists, models and guidelines.

2.2.3.6 Baseline Definition. Identify the baseline of support for the functional area or activity either being supported or for which support is contemplated. These efforts include business systems analysis of functions and the inventory of support tools and their use. The contractor shall support configuration management of the GIG from the DoD and other end-user perspective. Perform the initial steps of establishing or reviewing operations, processes, data and information baseline for the functional activity. Since integration is an iterative process between various elements of the organization and its processes or operations, the contractor shall conduct the recurring steps to define, evaluate and implement the incremental improvements needed to achieve simplified and streamlined operation of the functional activity. The contractor shall also perform the following tasks:

2.2.3.6.1 Evaluate Existing Operations or Processes and Data. Document and analyze differences in the way common functional operations or processes are executed or interfaced, benchmark these processes against the best public and private sector achievements, identify existing “as-is” processes and data, and document known problems in existing processes and data that must be corrected to provide a functionally adequate standard. Recommend data processes, interfaces and data baselines that together meet the process and associated information needs of the functional activity.

2.2.3.6.2 Establish Operations and Data Baselines. Recommend proposed operations/processes, data baselines, and interfaces based upon peacetime or normal operations and anticipated wartime, mobilization, or emergency operations.

2.2.3.7 Support. Performance benchmarking is needed to meet customer requirements and provide for service-level agreements. Provide benchmarking tools and methods of integration that consider current and emerging technologies, end-user agency information infrastructures and ongoing and future IT systems support. Baselining of existing legacy systems is the first step in the selection of migration systems supporting functional activities, which provides an inventory of the “as-is” process and underlying information systems and technology. Key activities include examination and evaluation of functional and technical programs for integration implications, functional and cross-functional requirement definition, functional descriptions, functional architectures, and requirements validation; examination of current and emerging technologies for effectiveness and/or potential to support customer

needs; review and analysis of data, database, and cross-functional data sharing; evaluation of existing operations or processes and data; and recommendation of proposed operations/processes, data baselines, and interfaces. Support the development of Service Level Agreement (SLA) metrics based on benchmark results.

2.2.4 Task Area 4 - Business Process Reengineering (BPR).

2.2.4.1 [Improved Performance](#). This task area involves the use of BPR as an approach for improving organization performance and covers the range of BPR activities including services needed to implement new or revised business or functional processes arising from BPR undertakings. The contractor shall assist the government in examining organization goals, objectives, structures/hierarchies, cultures, systems and roles for the purpose of executing a ground-up redesign for achieving long-term, full-scale integration required for the GIG or the enterprise level requirements and standards of end-user agencies. Improving performance and reengineering processes includes services in support of, and helping shape, the direction of GIG security, including those applications and approaches to network defense required to protect the GIG from unauthorized entry and intrusions, as well as measures designed to track and prevent future damage to DoD's communication capabilities.

2.2.4.2 [Support](#). Implementation of leveraged web services and the provision of services in a network centric environment requires business process reengineering. This contractor shall assist the government with the examination of organizational goals, objectives, structure/hierarchies, cultures, systems and roles for the provision of enterprise-level requirements and standards. For example, existing business processes must be examined and reengineered where necessary to provide for the use of a mediation service, which provides a layer of processing between information producers and information consumers.

2.2.4.3 [Computer Network Defense](#). The contractor shall assist the government with identifying and migrating existing business processes utilizing current GOTS, COTS and by leveraging new technologies in support of net-centric services.

2.2.5 Task Area 5 - Requirements Analysis.

2.2.5.1 [Optimal Solutions](#). Under this task area, the contractor shall assist the government with design, develop, install, test and validate applications and databases to determine optimal cross-functional solutions integral to the integration process. The contractor shall develop schedules and implementation plans with definable deliverables, including parallel operations where required, identification of technical approaches and a description of anticipated prototype results. The contractor shall also develop data collection tools, conduct surveys, hold meetings with customers, analyze data, and consolidate and refine user requirements.

2.2.5.2 [Support](#). The key to satisfying users is the analysis of requirements including the design, development, installation, testing and validation of applications and databases for enterprise use. The contractor shall assist the government with the development of schedules and implementation plans with definable deliverables, including parallel operations where required, identification of technical approaches and a description of anticipated prototype results.

2.2.5.3 [Support for Computer Network Defense Applications](#). The contractor shall assist the government with researching, designing and building, using either or both spiral and incremental technology development approaches, to develop, document, test, certify, and validate various applications to stay on the leading edge of new technologies designed for network operations management and computer network defense purposes. This includes the necessary research and development of deliverables that may, in the course of their lifecycle, change the end product depending on the maturation of technology and addition of new or improved capabilities.

2.2.6 Task Area 6 - Market Research and Prototyping.

2.2.6.1 [Market Conditions](#). Under this task area, the contractor shall assist the government in researching current market conditions and provide solutions to prevent premature systems obsolescence. Operate and maintain prototype applications and databases to determine optimal cross-functional solutions for integration concepts and problems integral to the integration process.

2.2.6.2 [Prototype Support](#). The contractor shall assist the government in providing definition, development, tailoring, installation, testing, evaluation, operation, and training of prototype systems and services. This support can cover the entire life-cycle of a prototype from initial knowledge engineering and user requirements identification through prototype evolution to provide an operational product that supports evolving mission requirements. This support for prototyping may include use of research to develop new applications, tools, techniques, systems and processes to support the integrity and defense of the GIG.

2.2.6.3 [Support](#). Leveraging the best commercial off-the-shelf (COTS) solutions, open systems and web services that are National Information Assurance Partnership (NIAP) approved, requires diligent market research and prototyping. In addition, the strategy to provide plug and play services requires the operation and maintenance of prototype applications and databases to determine optimal cross-functional solutions for integration concepts and problems integral to the integration process.

2.2.6.4 [Technical Conference Support](#). The contractor shall support regular vendor meetings and industry technology presentations. The contractor shall assist with developing, setting up, and managing technical conferences. The contractor shall participate in research and development efforts and assist in outreach programs to academia, industry and other government entities.

2.2.7 Task Area 7 - Information and Knowledge Engineering. This task area includes development of information flow models across functional domains; functional data models; standardization and implementation of common data elements; prototyping, development and implementation of shared databases in standard/common/migration system or systems, data mining, and development of data migration strategies to identify the plans and processes for the transition of legacy data to shared data through the utilization of data standards. This task area includes knowledge management support for Law Enforcement/Counterintelligence (LE/CI) activities, technical network analysis and operations support, information dissemination management/content staging, and technical and engineering efforts in support of the DoD GIG. The contractor shall assist the government in performing the following activities for services required under this task area:

2.2.7.1 [Interim and Target Functional and Data Architecture Development](#). Identify and evaluate interim and target functional data architectures including:

- * Applicable open systems standards (data standards) to be implemented
- * Standard modeling and software engineering tools to be used in functional and data model development
- * Process and simulation models within a functional area to facilitate data model development and data integration
- * Logical, functional and physical data models required for architecture development
- * Data elements targeted for standardization

2.2.7.2 [Data Management Strategy Development](#). Identify methodologies for centralized management of distributed database environments, functional processes to identify single data entry points and opportunities for data reuse by other standard/common/migration systems and applications. The contractor shall also provide data mining services to sort through data in order to identify patterns and establish relationships. Data mining parameters include:

- * **[Association](#).** Search for patterns where one event is connected to another event.
- * **[Sequence or Path Analysis](#).** Search for patterns where one event leads to another later event.
- * **[Classification](#).** Search for new patterns (may result in a change in the way the data is organized)
- * **[Clustering](#).** Find and visually document groups of facts not previously known.
- * **[Forecasting](#).** Discover patterns in data that can lead to reasonable predictions about the future.

2.2.7.3 [Cross-Functional Integration Strategy Development](#). Evaluate other functional areas and their associated standard/common/migration systems to identify opportunities for cross-functional data integration and data sharing.

2.2.7.4 [Implementation Planning](#). Develop transition plans for the implementation of data migration strategies developed under this task area.

[2.2.7.5 Support](#). Implementation of enterprise services requires the identification and evaluation of interim and target functional and data architectures to support the core services; identification of methodologies for centralized management of distributed database environments; identification of opportunities for cross-functional data integration and data sharing; and the development of transition plans for the implementation of data migration strategies. Identification of interim and target functional data architectures includes identification and evaluation of open systems standards; standard modeling and software engineering tools; process and simulation models; logical, functional and physical data models; and data elements targeted for standardization.

[2.2.7.6 Knowledge Management Support](#). The contractor shall provide assistance in developing processes and procedures designed to facilitate increased all source intelligence, law enforcement/counterintelligence (LE/CI), and technical data fusion support. This shall include assisting with the compilation and maintenance of references for intelligence and operational watch-standers, assisting with development of data mining and visualization initiatives to improve situational awareness leading to a Common Operating Picture (COP). Support under this task may include intelligence and LE/CI efforts designed to support information operations and information assurance, intelligence methods, development and maintenance of intelligence websites and data, assistance with internal communications and process, including database development.

[2.2.7.7 Law Enforcement/Counterintelligence \(LE/CI\) Knowledge Management Engineering Support](#). The contractor shall assist in researching, analyzing, developing and implementing processes and procedures designed to facilitate increased all source LE/CI fusion support. The contractor shall assist in tracking developments in DOD and LE/CI Community architectures and will provide information required by DoD LE/CI center architectures. The contractor shall execute tasking with LE/CI Center Liaison guidance and authority in the areas of LE/CI technologies to support analytical initiatives. Support would consist of research, identification, and development implementation plans for software, hardware and architectures, assisting with and/or participating in LE/CI community meetings, providing LE/CI systems architecture, engineer, plans and policy coordination assistance. This would include coordinating with civilian and active duty military law enforcement and counterintelligence representatives, government civilians and other contractors when required to determine optimal information requirements, Request for Information (RFI) architectures and dissemination methods. The contractor may also be required to assist with database administration and development in support of LE/CI databases, as well as assisting in the development of database designs, maintenance of backup and recovery plans, performance monitoring, and execution of data migrations. The contractor shall assist in the production of technical manuals and procedural guides at the Data Base Administrator (DBA), System Administrator and user levels for LE/CI Center specific architectures. This support shall also include the thorough documentation of data elements and schema for databases, and periodic updates as modifications are made. The contractor shall provide as required tools for importing data from disparate Defense component databases of LE/CI interest, and in ensuring data feeds are useable and compatible with LE/CI systems, and provide technical advice on LE/CI architectural transformations to accommodate LE/CI requirements. The contractor shall provide visualization support to aid in analysis of data gathered in the databases and from other sources.

[2.2.7.8 Technical Network Analysis and Operations Support](#). The contractor shall provide assistance in developing processes and procedures designed to facilitate NetOps and information assurance operational support. The contractor shall assist in compiling and maintaining references for operational watch-standers. The contractor personnel will assist in analyzing ongoing Information Assurance/Computer Network Defense activities on DoD systems and make recommendations for action to protect the DoD Global Information Grid (GIG). The contractor will produce special reports and assessments related to specific cyber incidents and trends when required, which may include employing extensive and advanced open source and intelligence research techniques for developing specific reports. The contractor may develop and present in-depth intelligence briefings and presentations and reports on incidents affecting DoD computer networks. The contractor may also assist with the management of intelligence and LE/CI websites. The contractor shall provide technical and analytical support on a 24/7 basis to monitor and detect network irregularities and assist with the response, reporting, and briefing of GIG activities.

[2.2.7.9 Technical and Engineering Support](#). The contractor shall provide incident analysis and handling support, to include vulnerability analysis and assessment and incident and vulnerability trends analysis. This will include assisting with the development of bulletins, courses of action (COAs), tactics, techniques and procedures (TTPs),

concept of operations (CONOPS) and response actions for defending the DoD GIG in support of operation plans (OPLAN), concept plans (CONPLAN), functional plans (FUNCPLAN) and support plans This support will also include assisting with network management functions which may include technical and analytical computer network defense support, coordination with LE/CI and counterintelligence authorities, assisting with responses and countermeasures for execution in response to exercises, crisis and contingency operations, vulnerability and global network attacks, assisting with development of emerging DoD information assurance policy, computer network defense policy and doctrine and DoD network operations and programs. The contractor shall also assist with the development of documents and presentations supporting network operations.

2.2.7.10 Information Dissemination Management/Content Staging Support. The contractor shall provide operational support that includes efforts designed to gather, integrate and disseminate information in support of net-centric solutions for the DoD GIG.

2.2.8 Task Area 8 - Custom Application Development. The contractor shall assist the government to design, develop, document and test custom applications and their infrastructures including but not limited to the items listed below. Standard/common/migration application development will generally occur through modification of one or several legacy applications and/or will be built primarily by use of COTS or MainLine Commercial Products (MLCP) and services.

2.2.8.1 Application Development. Provide services for custom application design, development and enhancements and the preparation of detailed systems designs. Detailed systems design include, but are not limited to, detailed data and process models, program specifications, interface specifications/documentation, screen and report designs, prototypes, testing, program control specifications, structure charts, module definitions, compile or build units, data usage definitions, networking or teleprocessing considerations, and hardware and network architecture, as well as lifecycle management and certification (e.g. DITSCAP, etc.). The contractor shall:

- * Define and use an integrated Computer Assisted Software Engineering (CASE) technology environment
- * Establish detailed systems architecture
- * Design database and file structures
- * Finalize input and output designs
- * Define special design considerations
- * Define program design specifications
- * Finalize test, conversion and implementation plans
- * Simultaneous documentation of development for certification process

2.2.8.2 Technical Support. Provide technical support in areas that supplement design stage activities, including information and design reports on specialized software (i.e., languages, Database Management Software (DBMS), client-server applications, etc.); analysis and evaluation of existing Government and COTS packages; review and evaluation of management, planning, security, audit and other products; attendance at design sessions and evaluation and modification of previously prepared design stage documents.

2.2.8.3 Documentation Preparation and Control. Provide documentation and control measures to ensure that all systems are properly documented in accordance with approved Federal and DoD standards. The contractor shall ensure that the inventory of system documentation and use is correct and up-to-date, including identification of missing, outdated or invalid documentation. Conduct and/or attend walk-throughs and meetings where contractor-developed documentation is discussed. Provide, at a minimum, responses to issues and questions, modifications to all or part of the documentation, responses to management concerns, and any additional or supporting information where required.

2.2.8.4 Support. Standard/common/migration application development will generally occur through modification of one or several legacy applications and/or will be built primarily by use of COTS or MLCP and services. There is still a need for detailed systems designs, technical support to supplement the design stage activities and documentation of systems in accordance with approved Federal and DoD standards, and the control of that documentation.

[2.2.8.5. Advanced Application and Software Development](#) The contractor shall provide support of advanced software and application development in support of GIG defense. This effort will include the necessary research, design, documenting, prototyping, operationalizing, and deployment of tools and analytical capabilities for network management and defense of the GIG.

2.2.9 Task Area 9 - Product Integration. Integration strategies are structured processes to reduce the large number of legacy systems to a more manageable, cost-effective, standard number of standard/common/migration applications as end-users transition to their target information architecture supporting interoperability and cross-functional data sharing. Integration strategies encompass those functional and operational activities required to develop plans and methodologies for the successful migration of legacy information systems, databases and infrastructure to an integrated environment. Integration strategies attempt to examine all aspects of change to the organization resulting from functional process improvements and the selection of standard/common/migration applications. The contractor shall choose an integration strategy that considers all integration management components in order to recommend a standard/common/migration system, provide cost and economic analyses supporting the migration strategy, identify and evaluate risks inherent with the proposed strategy and provide a tentative implementation plan. The contractor shall assist the government in performing the following activities for services required under this task area:

[2.2.9.1 Definition of Objectives.](#) Define objectives and establish priorities for the migration strategy.

[2.2.9.2 Interim and Target Architecture.](#) Identify interim and target architectures, both functional and technical. Also, identify the standards for compliance to include a description of services for managing, formatting and exchanging data.

[2.2.9.3 Integration and Migration Strategy Development.](#) Analyze current support requirements and capabilities in relation to existing functions, operations, technology and technical trends. Using the resultant information, develop strategies for the migration of support from its current base to an integrated functional and technical structure that meets guidelines. Integration strategy development encompasses consideration of:

- * Number of applications/systems
- * Number of installations
- * Current technical architecture
- * Connectivity
- * Degree of integration
- * Degree of compliance with existing DoD and Federal agency standards/guidelines
- * Performance requirements
- * Contract vehicles
- * Functional requirements
- * Current functional process improvements
- * Current system development projects
- * Consequences of lost functionality

[2.2.9.4 Support.](#) Product integration efforts are needed to provide integration strategies that consider all integration management components in order to recommend a standard/common/migration system, provide cost and economic analyses supporting the migration strategy, identify and evaluate risks inherent with the proposed strategy and provide a tentative implementation plan. Product integration support also includes any necessary system and data integration efforts.

2.2.10 Task Area 10 - Test and Evaluation (T&E).

[2.2.10.1 Technical Tasks.](#) The contractor shall provide technical support to early operational assessments, developmental testing, operational testing, and evaluation of IT systems. The nature of the Testing Directorate (TE) mission is all inclusive and the unique support requirements will be detailed in individual task orders. Specific TE tasks include, but are not limited to:

General Support:

- Participating in readiness exercises
- Staffing Hot line call centers
- Publishing:
 - quarterly Lessons Learned Reports
 - reports on DoD interoperability
 - demonstration plans, guidebooks, and
 - data collection, reduction and distribution strategies
 - measures of effectiveness, measures of performance, and test scenarios
- Managing trained, deployable support teams
- Maintaining automated information repositories
- Planning, configuring, operating, and maintaining test environments Support Property Control Management
- Delivering products at any worldwide location
- Assisting development of Strategic Management System components:
 - Generating Work Breakdown Structures (WBS)
 - Documenting Roles & Responsibilities
 - Maintaining the Master Test Schedule
 - Generating Risk Assessments
 - Identifying performance measures
 - Generating Performance Metrics
 - Identification of end-to-end performance measures
 - Supporting Government integrated product teams
- Supporting financial requirements:
 - Generating Missile Testing Range Facility Base proposal products
 - Cost Estimating
- Supporting security, marketing, logistics, supply, distribution, and other services
- Generating mission thread capabilities
- Support pre-test readiness reviews
- Support post-test assessment reviews
- Altering physical facilities as required of the test mission
- Assisting NATO, allies and other Government agencies
- Provide acquisition recommendations

Development of Developmental, Operational, Interoperability, Conformance, or 'Other' Test Products:

- User requirements and testing criteria
- Master Test and Evaluation Process
- Test and Execution Master Plan (TEMP)
 - Objective(s)
 - **Scope**
 - Design of appropriate test and environment
 - Strategy
 - Planning
 - Entry & exit criteria
 - Test scenario and case generation Test scripting
 - Test automation generation
 - Conducting or executing laboratory testing
 - Test reporting
 - Analysis and summary of test results
 - Test assessment and evaluation
- Installation and configuration documentation validation
- Perform Advanced Concepts Test Demonstrations (ACTD)
- Monitor testing performed by Service components

- Training materials

Analytical Support:

- Analysis of acquisition documents
- Analysis of test requirements
- Produce Requirements Traceability Matrix
- Analysis of available of test methods
- Interface analyses
- Develop and manage the stimulation, modeling, and simulation programs
- Provide hardware and software system engineering
- Produce Trend Analysis Matrix
- Support Future Capabilities, Standards, and Evaluation

2.2.10.2 Operational Assessment and Testing. T&E efforts will require technical support for early operational assessments, development testing and operational test and evaluation for IT systems. These efforts will include the test and evaluation of prototype systems and services.

2.2.10.3 Applicable Documents: Information regarding the Testing Directorate can be obtained from the following web sites:

For the Director of Testing and Evaluation (T&E): <http://www.disa.mil/main/te.html> .

For the Joint Interoperability Test Command (JITC): <http://jite.fhu.disa.mil/mission.htm> .

2.2.11 Task Area 11 - Asset Management. The contractor shall provide maintenance and support to control the entire asset life-cycle, from procurement to retirement, that includes applications, license agreements, IT systems and hardware, as well as IT support equipment such as video teleconferencing (VTC) operations. Provide asset inventory and asset tracking services that track the financial aspects of an asset to include cost and depreciation as well as contract management aspects to include leases, maintenance agreements and service contracts.

2.2.11.1 Software License Agreements. Manage software license agreements for leveraged suppliers, exploiting the agreement and optimizing software expenses, while remaining compliant with the agreement's terms and conditions. Support summary information to include the general terms and conditions, benefits, strategic and tactical directions, license ordering information, internal billing process, pricing and deployment and support of the products included in the agreement. Respond to questions and issues from the internal customers and, as required, initiate the discussion of issues with the supplier.

2.2.11.2 Software License Agreement Negotiation. Support negotiation of software license agreements with suppliers to obtain favorable terms, conditions and pricing.

2.2.11.3 Software Direction Policies. Support procurement activities in the direction of software products identified as "approved" or "alternative" and advise which products have been identified as "avoid." Support organizations with the responsibility for determining the strategic use of software products.

2.2.11.4 Hardware Maintenance Agreements. Manage hardware maintenance agreements by soliciting bids from qualified hardware maintenance vendors to determine the lowest maintenance cost while avoiding diminished support and/or productivity.

2.2.11.5 Hardware Disposition. Support the disposition and disposal of assets to include the processing of lost/stolen/destroyed assets and lease expiration activities.

2.2.11.6 Demand Management (Order, Receive, Install, Track). Support common practices for ordering assets, tracking orders and assets, and (for hardware/equipment), tagging the assets. Interface at various organizational levels in order to support this task.

[2.2.11.7 Application Installation, Operation and Maintenance](#). Support application installation, application operations, customer support, training, application maintenance and sustainment and configuration control. This includes the procurement of supporting hardware and software licenses.

2.2.12 Task Area 12 - Communications Engineering. This task area addresses network engineering for programs, labs and command systems, as defined in individual task orders. It includes network design, network policy dissemination, performance monitoring and fault management, which includes networks, servers, applications and force generation databases; collection of operational performance statistics, data analysis, identification of potential problems, and recommendation of engineering solutions for these problems; network architecture design and development of implementation options in conformance with specified guidelines; network engineering for Internet protocol (IP) convergence and integrated voice, data and video communications systems; network technologies and capabilities; and review and update of system and network management CONOPS. This also includes provision of a control point to resolve and implement local area network (LAN) configuration issues and equipment hookups; analysis, isolation and coordination of corrective action for communications related problems; configuration of communications equipment to satisfy specific test bed requirements of the user; and provision of networking capability for customers to ensure customers are isolated from each other to prevent unintentional harmful actions of one customer from impacting other customers. This effort may include engineering efforts for defensive actions necessary to prevent unauthorized access that could impact the performance of the GIG and its end users. The contractor may also provide technical coordination for communications engineering requirements, for example in transitioning from LAN to metropolitan area network (MAN) and wide area network (WAN) connectivity.

[2.2.12.1 Network Support](#). Identify networks, servers, applications and force generation database requirements to support these communications services and environments. Provide a control point to resolve and implement LAN configuration issues and equipment hookups; analyze, isolate and coordinate corrective action for communications-related problems; and the configuration of communications equipment in support of these environments. Support the identification of networks, servers, applications and force generation database requirements to support these services and environments.

[2.2.12.1.1 Analysis, Reports, Briefings](#). Provide data analysis and report generation to support law enforcement, intelligence, and system provider network authorities. Develop, or assist with the development of, a variety of reports and briefings related to network operations and incident handling.

[2.2.12.1.2 Network Monitoring and Response Actions](#). Provide network attack/intrusion/fault detection, including malicious code analysis, traffic analysis, incident handling, network and host-based technical and vulnerability analysis, and computer forensics.

[2.2.12.1.3 Laboratory Experiments](#). Assist with set up of laboratory and conduct controlled lab tests experiments as well as develop and maintain demonstration networks.

[2.2.12.1.4 Operations Support](#). Coordinate, monitor, respond, and detect network events in real time. This would include use and evaluation of analytical tools, including tools for text search, visualization, data manipulation, incident handling, language translation, image management, and other tools as required. The contractor shall provide personnel with the necessary language and translation skills to accomplish this work.

[2.2.12.2 Data Storage and Access](#). Identify networks, servers and application requirements to support data storage and access methods needs to include network infrastructure impacts.

[2.2.12.3 User Assistance/Accessibility](#). Define how Section 508 standards will be implemented including how interfaces, tool kits, or other common look-and-feel standards will impact the design of the network infrastructure.

[2.2.12.4 Security](#). Identify how basic security capabilities such as access management, identity management and access enforcement will impact the design of the network infrastructure. Identify the policies and procedures that are needed to support cross-classification connectivity. This includes emerging requirements to provide advanced

technology support for security safeguards, for example, the need to tailor security safeguards (e.g. firewalls) for Voice-over-IP and Video-over-IP, and to provide technical support for Certification and Qualification activities in attaining approval to operate.

[2.2.12.4.1 Advanced Security Measures for GIG](#). In support of network operations developed to provide uninterrupted continuity of GIG services, the contractor assist and support with computer network defense operations as identified in the individual task orders.

[2.2.12.5 Communications Engineering and Network Operations](#). Provide communications engineering support for the planning, processes and procedures needed to enable sound cross-domain activities. Define how service levels will be determined and agreed upon for cross-domain services. Define end-to-end GIG performance monitoring, configuration management, problem detection/resolution, as well as enterprise IT resource accounting and addressing.

[2.2.12.6 Storage](#). Identify how shared storage, including providing physical and virtual places to host data on the network, will impact the design of the network infrastructure. Determine the optimum storage architecture to provide for increased storage and retrieval requirements to support implementation of other core services.

2.2.13 Task Area 13 - Security Engineering Certification and Accreditation. This task area addresses planning, design, development, testing, demonstration, rapid prototyping, integration, site survey, installation, operation and maintenance of C² communications, displays, firewall/guards, intrusion detection systems and information sensors of computer/network systems and infrastructure operations. This includes the protection and sustainment of the information assurance requirements for system and information availability, access control, integrity, confidentiality and non-repudiation; protection of the operating environments and software, including network, operating systems and databases; integration and implementation of information assurance features for client-server and web enterprises; participation in the planning and performance of Security Test & Evaluation (ST&E), Modified Developmental Tests (MDT), and other testing scenarios; support for implementation of user, server and object certificates and other identification and authentication infrastructure elements; and support for DoD Public Key Infrastructure (PKI) implementation strategies.

[2.2.13.1 Intrusion Detection and Prevention](#). Identify how firewall/guards, intrusion detection systems and information sensors of computer/network systems and infrastructure operations will protect and sustain the information assurance requirements for system and information availability, access control, integrity, confidentiality and non-repudiation for these environments.

[2.2.13.2 PKI Environment](#). Identify standard data formats, translation responsibilities, data storage and access methods, conversion methods from original formats, governance of authoritative sources for conversion, and identify how that impacts the implementation of the DoD PKI environment.

[2.2.13.3 Information Assurance \(IA\)](#). Identify information assurance features for client/server and web enterprises; provides for participation in the planning and conduct of ST&E, MDT and other testing scenarios; and support implementation of user, server and object certificates, and other identification and authentication infrastructure elements incorporating automated methods.

[2.2.13.4 Security Engineering](#). Provide security engineering support for planning, design, development, testing, demonstration, rapid prototyping, integration, site survey, installation, operation and maintenance of command and control communications, displays, firewall/guards, intrusion detection systems and information sensors of computer/network systems and infrastructure operations.

2.2.14 Task Area 14 - Telecommunications Support. The contractor shall provide value-added telecommunications support to improve information technology systems by enhancing form or content or by providing for more efficient storage and retrieval. The contractor shall design and install wireless and microwave technology when appropriate and as specified in individual task orders. Examples of telecommunications integration services include:

- * On-line data processing

- * On-line database storage and retrieval
- * Electronic data interchange
- * E-mail
- * Voice mail
- * IP convergence
- * Security features
- * Integrated user directory services

2.2.15 Task Area 15 - Computer-Telephony Integration (CTI). The contractor shall provide computer telephony (use of computers to manage telephone calls). This includes computerized services of call centers, such as those that direct phone calls to the correct department or office. CTI also includes the ability to use a personal computer to initiate and manage phone calls. CTI applications provide the ability to do the following:

- * Authenticate callers; using one of several standard methods, the telephone number of the caller can be screened against a database.
- * Recognize a voice, either for authentication or for message forwarding
- * Using live, recorded voice, or touch-tone entered input, determine how to process a call (for example, by forwarding it to the appropriate person or department)
- * Provide interactive voice response (IVR) to callers
- * Match the number of a caller with a customer record and display it for reference when talking to the caller
- * Manage voice or video conferences
- * Collect and display pending live calls or messages that have been left by callers
- * Receive fax messages and route them to appropriate fax machines
- * For outbound calling such as telemarketing, pre-dial callers
- * Based on call input, initiate a smart agent application to provide help with the caller's request

Support will also be provided for IP-convergence activities, in particular, Voice-over-IP. The contractor shall also provide CTI support such as integrated user directory services and advance security features.

2.2.16 Task Area 16 - Web Services. The contractor shall provide web design and maintenance services consisting of programming, data, human resources Web services design, development, and maintenance activities. This may also include foundational components for Service Oriented Architecture (SOA) such as: architecture definition and guiding principles, governance structures and processes, and development tools and methodologies. Web development support may include design and development of web-based tools for enhanced network visibility and defense.

2.2.17 Task Area 17 - Operations Support.

2.2.17.1 Application Installation. Under this task area, the contractor shall provide support services for all aspects of installing approved standard/common/ migration applications/systems. All services provided under this task area shall use and be integrated with approved DoD and Federal standard communications, security, data and other defined technical specifications. Applications shall be integrated with existing infrastructure or built with new infrastructure in compliance with approved DoD and Federal standards and architectures. Tasks within this area include but are not limited to planning, controlling, overseeing and conducting successful installation, development and/or conduct of initial training, conversion and acceptance testing of migration applications. The contractor shall conduct site surveys, site planning, site installation, initial system file and table builds, data acquisition/conversion and installation tests. Tasks may include support services necessary to convert from one or more legacy systems to the migration applications including steps such as parallel operations.

2.2.17.2 Application Operations. Provide systems operation support services to include technical and administrative support for standard/common/migration applications or systems. Activities include application/system and network administration services, maintenance of documentation related to system and network operations, routine system problem identification and correction and LAN/WAN administration. Provide applications and systems modification, testing, installation and ongoing quality assurance activities.

2.2.17.3 Customer Support. Provide support services to operate a customer support function including a help desk facility; dial-up access to provide information, tools, techniques and procedures to assist application users at all levels; automated support for management of the customer service function; problem reporting and resolution of customer problems; and support to new and existing customer information and support centers. This effort may be for long-term or short-term needs, which will be determined by the nature of the tools being supported.

2.2.17.4 Training. Provide training services for all levels of information system managers, operators, maintainers and users to include development of alternative training scenarios, development of recommendations for appropriate training approaches to include centralized, regional, on-site, train-the-trainer, train-the-end-user; preparation of training plans; development of training curricula and materials for information systems managers and users; preparation of materials and schedules; and administration and conduct of training sessions on Government and/or contractor sites.

2.2.17.5 Applications Maintenance and Sustainment. Provide support services for maintenance of standard/common/migration applications to include analysis of problem or change requests, preparation of resource estimates and schedules to effect necessary changes, design and code changes, conduct testing of all changes, complete and/or update of all documentation affected by the required changes; and coordination of change implementation through appropriate approvals and user notifications. Convert and test software to run on new hardware platforms. Maintain application software to run on upgraded system software or upgraded COTS/MLCP applications. Provide both forward and backward compatibility.

2.2.17.6 Configuration Control. Provide configuration control support that includes analysis, tracking and reporting. The contractor shall identify and document the characteristics of a configuration item, to control changes to a configuration item and to record and report change processing and implementation status.

2.2.17.7 Support. Operations support is needed for application installation, application operations, customer support, training, application maintenance and sustainment and configuration control.

2.2.18 Task Area 18 – Hardware. This task area provides for acquisition of IT equipment including, but not limited to, servers, central processing units (CPU), disks, disk drives, display screens, keyboards, printers, boards, memory, chips, tapes and tape drives, secure wireless solutions, hubs, transceivers, terminal servers, desktop and laptop computers, personal digital assistants (PDA) and ancillary peripheral hardware. Hardware delivered under this contract, as appropriate, shall include all controllers, connectors, cables, drivers, adapters and other associated hardware and software required for operations, as provided by the Original Equipment Manufacturer (OEM). In accordance with the provisions of FAR 51.1 Contractor Use of Government Supply Sources, the Contracting Officer has determined it is the best interests of the Government for contractors to use General Services Administration (GSA) schedules as sources of supply. Purchases other than through use of the GSA schedules shall be justified and such justification shall be documented for review as a part of the contractor's purchasing system reviews.

2.2.19 Task Area 19 – Software. This task area provides for acquisition of software including, but not limited to, applications, operating systems and licenses. The contractor shall provide a complete solution for all software including any component necessary for integration. For large or ongoing programs, where multiple purchases of software are made, typically the latest software version is installed, however the software being delivered must be of the identical version control numbers unless the Government agrees that mixed versions are acceptable. In accordance with the provisions of FAR 51.1 Contractor Use of Government Supply Sources, the Contracting Officer has determined it is the best interests of the Government for contractors to use General Services Administration (GSA) schedules as sources of supply. Purchases other than through use of the GSA schedules shall be justified and such justification shall be documented for review as a part of the contractor's purchasing system reviews. Further, in accordance with Defense Federal Acquisition Regulation Supplement (DFARS) 208.7400 the Enterprise Software Agreements (ESA) established by DoD using Basic Purchasing Agreements competitively awarded off of the GSA Schedules shall be used to the fullest extent possible.

2.2.20 Task Area 20 – Managed Services. This task area provides for acquisition of managed services. Specific service elements may include computer room production capacity, application maintenance, configuration

management, network support, performance monitoring and tuning, system backup and recovery, database management, storage management, data protection and management, help desk, system operations, infrastructure facilities, and information security. In the provision of managed services, the components used by the service provider may include, but are not limited to, facilities, hardware and software, network connectivity, labor, and other infrastructure.

2.3 Performance Requirements.

2.3.1 Specifications and Standards. IT requirements shall be satisfied with COTS open-systems based capabilities and enabling products to the maximum extent practicable.

2.3.2 Environmental Protection Agency (EPA) Energy Star Compliance. All personal computers, notebook computers, monitors, and printers acquired for customers through this contract by the contractor and/or any of its subcontractors shall be compliant with EPA Energy Star specifications.

2.3.3 Section 508 Compliance for IT Accessibility. Unless specifically exempted to include exemption located at FAR 39.204, all task orders issued under this contract shall comply with Section 508 of the Rehabilitation Act Amendments of 1998 to ensure IT accessibility to disabled persons. Only in situations where an approved exception to Section 508 is provided by the Chief Information Officer (CIO) of the requiring agency/organization will a task order be issued that exempts the contractor from complying with Section 508 requirements contained in the contract. As applicable, the following specifications are incorporated into each task order issued through the contract. Information on Section 508 compliance can be obtained at http://www.ditco.disa.mil/asp/news/ntc_05_01.asp

- * § 1194.21 - Software Applications and Operating Systems (Appendix A)
- * § 1194.22 - Web Based Intranet and Internet Information and Applications (Appendix B)
- * § 1194.23 - Telecommunications Products (Appendix C)
- * § 1194.24 - Video and Multimedia Products (Appendix D)
- * § 1194.25 - Self Contained, Closed Products (Appendix E)
- * § 1194.26 - Desktop and Portable Computers (Appendix F)
- * § 1194.31 - Functional Performance Criteria (Appendix G)
- * § 1194.41 - Information, Documentation and Support (Appendix H)

2.3.4 Personal Computer Memory Card International Association (PCMCIA). All personal notebook computers, modular peripherals and other mobile-oriented technology acquired under this contract by the contractor and/or any of its subcontractors shall be compliant with PCMCIA standards and specifications.

2.3.5 DISA World Wide Web (WWW) Handbook Compliance. All deliverables to be provided for DISA customers through this contract, which are to be posted to the web, shall be compliant with the DISA WWW Handbook. Information can be obtained at: <http://www.disa.mil/handbook/toc.html>

2.3.6 Scientific and Technical Information Program (STIP). In support of the STIP, the contractor shall provide a copy of any new scientific, technical, or management report or study generated in response to any task order to the Defense Technical Information Center (DTIC) library.

2.4 Deliverables.

2.4.1 Reports. The following reports shall be provided. These reports shall be delivered by e-mail in a format compatible with Microsoft Office 2003 or current version identified by the government. The contractor shall provide these reports at no additional cost to the Government. The contractor shall ensure that the Contract Number and Task Order Number, if applicable, is included at the beginning of the Subject Line of all e-mail submissions.

[2.4.1.1 Contract Level Quarterly Progress Report](#). This report shall include the following information:

- a. Orders placed by any DITCO Office:
 - (1). Total Number of Task Orders
 - (2). Total Lifecycle Value of all Task Orders
 - (3). Total Obligated Value of all Task Orders
 - (4). Percentage of Performance Based Task Orders
 - (5). Percentage of Task Orders by Contract Type
 - (6). Percentage of Task Orders by dollar value that are Time and Material

- b. Quarterly Progress Report for Orders placed by any non-DITCO Office (Decentralized Orders):
 - (1). Total Number of Task Orders Awarded
 - (2). Total Lifecycle Value of all Task Orders Awarded without DITCO Fee
 - (3). Total Obligated Value of all Task Orders
 - (4). Percentage of Performance Based Task Orders
 - (5). Percentage of Task Orders by Contract Type
 - (6). Percentage of Task Orders by dollar value that are Time and Material.

See Section G.8 for additional reporting details.

[2.4.1.2 Individual Task Order Report](#). The contractor shall provide a monthly or quarterly report regarding specific task order status (work progress, cost, schedule data and achievement of Small and Small Disadvantaged Business goals) as required in the Statement of Work for that individual task order. It is anticipated that this will be accomplished using, but not limited to:

- a. Performance: Past Performance Information Management System (PPIMS) or Contractor Performance Assessment Reporting System (CPARS)
- b. Quality Assurance Surveillance for Performance Based Acquisition awards
- c. Task Order Deliverables
- d. Monthly Invoice Receipt and Acceptance

The format for the Individual Task Order Report will be contained in the respective Statement of Work.

[2.4.1.3 Report Format](#). It is anticipated that a Post Award meeting will be held following the award of the ENCORE II contracts. Prior to this Post Award meeting, the contractors who received a contract shall review Section J, Attachment 7 of the contract and provide their recommendations for any revisions to the format. Attachment 7 contains the Draft Format for the data requested in 2.4.1.1.a. (1) through (10). and 2.4.1.1.b. (1) through (11). For the data requested in 2.4.1.1.a. (11) and (12) and 2.4.1.1.b.(12), the data shall be provided in contractor determined format. The format for all data provided shall be non-proprietary and compatible with Microsoft (MS) Office 2003 or current version identified by the government. After considering the recommendations, the Contracting Officer will determine the report format to be used for this contract.

Quarterly progress reports shall be submitted within thirty (30) calendar days after the end of each quarterly reporting period (January-March; April-June; July-September and October – December). One (1) copy shall be provided to the ENCORE II mailbox at ENCORE2@disa.mil . The reports shall be delivered by e-mail in a format compatible with Microsoft Office 2003 or current version identified by government.

[2.4.2 Contract Data Requirements List \(CDRL\)](#). CDRL items may be used to satisfy the need for contractor-developed documentation, as indicated in individual task orders.

2.5 Meetings.

2.5.1 Executive Council Meetings. The contractor shall attend annual Executive Council Meetings in which all ENCORE II contractors, the Program Manager, the Contracting Officer, and other interested user community members can review and discuss current issues pertaining to performance under the contracts. The date and location of these meetings will be determined by the ENCORE II Contracting Officer.

2.5.2 Periodic In-Progress Review (IPRs). The contractor shall conduct informal IPRs concerning task order and performance-related issues on an as-needed basis.

2.5.3 Briefings. The contractor shall prepare and present briefings to the Government on the results of efforts undertaken under this contract and individual task orders. The schedules and formats for these briefings will be specified in individual task orders or as mutually agreed to between the contractor and the TM.

3.0 SUPPORTING INFORMATION.

3.1 Place of Performance. The contractor will be required to perform work associated with task orders throughout the United States and its territories and possessions. In addition, the contractor will be required to perform work in any country where the customer has a presence.

3.2 Period of Performance. The period of performance for this contract consists of a sixty (60) month Base Period and five (5) one-year option periods.

3.3 Special Considerations.

3.3.1 DoD Enterprise Software Initiative (ESI). In situations where the purchase of new COTS software is needed to satisfy the requirements of a particular task order, the contractor will first be required to review and utilize available DoD ESI sources. In the event that the software required to satisfy a particular task order is not available to the contractor through a DoD ESI source, the contractor shall be authorized to obtain the software through an alternate source. The listing of COTS software available from DoD ESI sources can be viewed on the web at <http://www.esi.mil/>.

3.3.2 Government-Furnished Property (GFP), Government-Furnished Information (GFI) and Government-Furnished Workspace (GFW). The Government may provide the items listed below as necessary for the contractor to fulfill the tasks described in task order statements of work.

3.3.2.1 GFP. The Government may provide hardware and/or software requiring technical analysis, evaluation, verification, or study in support of a specific task. Such GFP will be specified in individual task orders. GFP provided to the contractor in support of individual task orders shall be tracked through applicable procedures provided by the Contracting Officer in accordance with the FAR. Property shall be accounted for and marked accordingly for identification and tracking purposes with the Contract Number, Task Order Number, Serial Number and other information as required by the Contracting Officer. The Government does not intend to provide hardware/software equipment required to accomplish day-to-day work requirements in support of the overall contract-level effort. All GFP shall be returned to the Government at the completion of each task order unless otherwise specified.

3.3.2.2 GFI. The Government may provide information (e.g., technical data, applicable documents, plans, regulations, specifications, etc.) in support of a specific task. Such GFI will be specified in individual task orders.

3.3.2.3 GFW. The Government may provide workspace on an as-available basis while on trips to Government facilities or installations. Such Government-furnished workspace will be specified in individual task orders.

APPENDIX A

§ 1194.21 - Software Applications and Operating Systems

- a. When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually.
- b. Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer.
- c. A well defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that assistive technology can track focus and focus changes.
- d. Sufficient information about a user interface element including the identity, operation and state of the element shall be available to assistive technology. When an image represents a program element, the information conveyed by the image must also be available in text.
- e. When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance.
- f. Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes.
- g. Applications shall not override user-selected contrast and color selections and other individual display attributes.
- h. When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user.
- i. Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.
- j. When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided.
- k. Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz.
- l. When electronic forms are used, the form shall allow people using assistive technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.

APPENDIX B

§ 1194.22 - Web-Based Intranet and Internet Information and Applications

- a. A text equivalent for every non-text element shall be provided (e.g., via “alt,” “longdesc,” or in element content).
- b. Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.
- c. Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup.
- d. Documents shall be organized so they are readable without requiring an associated style sheet.
- e. Redundant text links shall be provided for each active region of a server-side image map.
- f. Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.
- g. Row and column headers shall be identified for data tables.
- h. Markup shall be used to associate data cells and header cells for data tables that have two or more logical levels of row or column headers.
- i. Frames shall be titled with text that facilitates frame identification and navigation.
- j. Pages shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.
- k. A text-only page, with equivalent information or functionality, shall be provided to make a web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.
- l. When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by assistive technology.
- m. When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with §1194.21(a) through (l).
- n. When electronic forms are designed to be completed on-line, the form shall allow people using assistive technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues.
- o. A method shall be provided that permits users to skip repetitive navigation links.
- p. When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.

Note to §1194.22:

1. The Board interprets paragraphs (a) through (k) of this section as consistent with the following priority 1 Checkpoints of the Web Content Accessibility Guidelines 1.0 (WCAG 1.0) (May 5, 1999) published by the Web Accessibility Initiative of the World Wide Web Consortium:

Section 1194.22 Paragraph	WCAG 1.0 Checkpoint
(a)	1.1
(b)	1.4
(c)	2.1
(d)	6.1
(e)	1.2
(f)	9.1
(g)	5.1
(h)	5.2
(i)	12.1
(j)	7.1
(k)	11.4

2. Paragraphs (l), (m), (n), (o), and (p) of this section are different from WCAG 1.0. Web pages that conform to WCAG 1.0, level A (i.e., all priority 1 checkpoints) must also meet paragraphs (l), (m), (n), (o), and (p) of this section to comply with this section. WCAG 1.0 is available at <http://www.w3.org/tr/1999/wai-webcontent-19990505>.

APPENDIX C

§ 1194.23 - Telecommunications Products

a. Telecommunications products or systems which provide a function allowing voice communication and which do not themselves provide a Text Telephone (TTY) functionality shall provide a standard non-acoustic connection point for TTYS. Microphones shall be capable of being turned on and off to allow the user to intermix speech with TTY use.

b. Telecommunications products that include voice communication functionality shall support all commonly used cross-manufacturer non-proprietary standard TTY signal protocols.

c. Voice mail, auto-attendant, and interactive voice response telecommunications systems shall be usable by TTY users with their TTYS.

d. Voice mail, messaging, auto-attendant, and interactive voice response telecommunications systems that require a response from a user within a time interval, shall give an alert when the time interval is about to run out, and shall provide sufficient time for the user to indicate more time is required.

e. Where provided, caller identification and similar telecommunications functions shall also be available for users of TTYS, and for users who cannot see displays.

f. For transmitted voice signals, telecommunications products shall provide a gain adjustable up to a minimum of 20 dB. For incremental volume control, at least one intermediate step of 12 dB of gain shall be provided.

g. If the telecommunications product allows a user to adjust the receive volume, a function shall be provided to automatically reset the volume to the default level after every use.

h. Where a telecommunications product delivers output by an audio transducer which is normally held up to the ear, a means for effective magnetic wireless coupling to hearing technologies shall be provided.

i. Interference to hearing technologies (including hearing aids, cochlear implants, and assistive listening devices) shall be reduced to the lowest possible level that allows a user of hearing technologies to utilize the telecommunications product.

j. Products that transmit or conduct information or communication, shall pass through cross-manufacturer, non-proprietary, industry-standard codes, translation protocols, formats or other information necessary to provide the information or communication in a usable format. Technologies that use encoding, signal compression, format transformation, or similar techniques shall not remove information needed for access or shall restore it upon delivery.

k. Products which have mechanically operated controls or keys, shall comply with the following:

- (1) Controls and keys shall be tactilely discernible without activating the controls or keys.
- (2) Controls and keys shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls and keys shall be 5-lbs. (22.2 N) maximum.
- (3) If key repeat is supported, the delay before repeat shall be adjustable to at least 2 seconds. Key repeat rate shall be adjustable to 2 seconds per character.
- (4) The status of all locking or toggle controls or keys shall be visually discernible, and discernible either through touch or sound.

APPENDIX D

§ 1194.24 - Video and Multimedia Products

a. All analog television displays 13 inches and larger, and computer equipment that includes analog television receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes, and displays closed captions from broadcast, cable, videotape, and DVD signals. As soon as practicable, but not later than July 1, 2002, wide-screen digital television (DTV) displays measuring at least 7.8 inches vertically, DTV sets with conventional displays measuring at least 13 inches vertically, and stand-alone DTV tuners, whether or not they are marketed with display screens, and computer equipment that includes DTV receiver or display circuitry, shall be equipped with caption decoder circuitry which appropriately receives, decodes and displays closed captions from broadcast, cable, videotape and DVD signals.

b. Television tuners, including tuner cards for use in computers, shall be equipped with secondary audio program playback circuitry.

c. All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain speech or other audio information necessary for the comprehension of the content, shall be open or closed captioned.

d. All training and informational video and multimedia productions which support the agency's mission, regardless of format, that contain visual information necessary for the comprehension of the content, shall be audio described.

e. Display or presentation of alternate text presentation or audio descriptions shall be user-selectable unless permanent.

APPENDIX E

§ 1194.25 - Self Contained, Closed Products

- a. Self-contained products shall be usable by people with disabilities without requiring an end-user to attach assistive technology to the product. Personal headsets for private listening are not assistive technology.
- b. When a timed response is required, the user shall be alerted and given sufficient time to indicate more time is required.
- c. Where a product utilizes touchscreens or contact-sensitive controls, an input method shall be provided that complies with §1194.23 (k) (1) through (4).
- d. When biometric forms of user identification or control are used, an alternative form of identification or activation, which does not require the user to possess particular biological characteristics, shall also be provided.
- e. When products provide auditory output, the audio signal shall be provided at a standard signal level through an industry standard connector that will allow for private listening. The product must provide the ability to interrupt, pause, and restart the audio at anytime.
- f. When products deliver voice output in a public area, incremental volume control shall be provided with output amplification up to a level of at least 65 dB. Where the ambient noise level of the environment is above 45 dB, a volume gain of at least 20 dB above the ambient level shall be user selectable. A function shall be provided to automatically reset the volume to the default level after every use.
- g. Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element.
- h. When a product permits a user to adjust color and contrast settings, a range of color selections capable of producing a variety of contrast levels shall be provided.
- i. Products shall be designed to avoid causing the screen to flicker with a frequency greater than 2 Hz and lower than 55 Hz.
- j. Products which are freestanding, non-portable, and intended to be used in one location and which have operable controls shall comply with the following:
 - (1) The position of any operable control shall be determined with respect to a vertical plane, which is 48 inches in length, centered on the operable control, and at the maximum protrusion of the product within the 48-inch length (see Figure 1 of this part).
 - (2) Where any operable control is 10 inches or less behind the reference plane, the height shall be 54 inches maximum and 15 inches minimum above the floor.
 - (3) Where any operable control is more than 10 inches and not more than 24 inches behind the reference plane, the height shall be 46 inches maximum and 15 inches minimum above the floor.
 - (4) Operable controls shall not be more than 24 inches behind the reference plane (see Figure 2 of this part).

APPENDIX F

§ 1194.26 - Desktop and Portable Computers

- a. All mechanically operated controls and keys shall comply with 1194.23 (k) (1) through (4).
- b. If a product utilizes touchscreens or touch-operated controls, an input method shall be provided that complies with § 1194.23 (k) (1) through (4).
- c. When biometric forms of user identification or control are used, an alternative form of identification or activation, which does not require the user to possess particular biological characteristics, shall also be provided.
- d. Where provided, at least one of each type of expansion slots, ports and connectors shall comply with publicly available industry standards.

APPENDIX G

§ 1194.31 Functional Performance Criteria

- a. At least one mode of operation and information retrieval that does not require user vision shall be provided, or support for assistive technology used by people who are blind or visually impaired shall be provided.
- b. At least one mode of operation and information retrieval that does not require visual acuity greater than 20/70 shall be provided in audio and enlarged print output working together or independently, or support for assistive technology used by people who are visually impaired shall be provided.
- c. At least one mode of operation and information retrieval that does not require user hearing shall be provided, or support for assistive technology used by people who are deaf or hard of hearing shall be provided.
- d. Where audio information is important for the use of a product, at least one mode of operation and information retrieval shall be provided in an enhanced auditory fashion, or support for assistive hearing devices shall be provided.
- e. At least one mode of operation and information retrieval that does not require user speech shall be provided, or support for assistive technology used by people with disabilities shall be provided.
- f. At least one mode of operation and information retrieval that does not require fine motor control or simultaneous actions and that is operable with limited reach and strength shall be provided.

APPENDIX H

§ 1194.41 Information, Documentation and Support

- a. Product support documentation provided to end-users shall be made available in alternate formats upon request, at no additional charge.
- b. End-users shall have access to a description of the accessibility and compatibility features of products in alternate formats or alternate methods upon request, at no additional charge.
- c. Support services for products shall accommodate the communication needs of end-users with disabilities.

(END OF SECTION C)