

UNCLASSIFIED

EXHIBIT R-2, FY2003 RDT&E,N Budget Item Justification

DATE: FEBRUARY 2002

BUDGET ACTIVITY: 7

PROGRAM ELEMENT: 0305188N

PROJECT NUMBER: X2456

PROGRAM ELEMENT TITLE: Joint (C4ISR) Battle Center (JBC)

PROJECT TITLE: Joint
Battle Center (JBC)

(U) COST (Dollars in thousands)

PROJECT NUMBER & TITLE	FY 2001 ACTUAL	FY 2002 ESTIMATE	FY 2003 ESTIMATE	FY 2004 ESTIMATE	FY 2005 ESTIMATE	FY 2006 ESTIMATE	FY 2007 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
X2456 Joint (C4ISR) Battle Center	9,458	13,493	21,970	23,676	23,951	24,130	24,330	CONT.	CONT.
TOTAL	9,458	13,493	21,970	23,676	23,951	24,130	24,330	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Joint Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) Battle Center (JBC) is the U.S. Joint Forces Command (JFCOM) and Chairman, Joint Chiefs of Staff (CJCS) facility for warfighter exploration and assessment of C4ISR capabilities. The Center provides the combatant commands, at the Joint Task Force (JTF) level, with a near-term joint assessment and experimental environment for the warfighter and technologist in support of Joint Vision 2020 (JV2020). It serves as the technical analysis and assessment agency for the Joint Requirement Operating Council (JROC) in determining C4ISR system "value-added" PRIOR to introduction to the CINCs and in advance of system fielding in operational environments. The intent is for the JBC to be a forcing function for joint synchronization and a means to foster rapid, near-term insertion of C4ISR technology. The mission of the JBC is to provide rapid assessment of required C4ISR interoperability and warfighter utility, join emerging C4ISR technology with new operational doctrine, and result in fielding C4ISR capabilities that meet the joint warfighter's needs.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under OPERATIONAL SYSTEMS DEVELOPMENT because it provides rapid assessment of required C4ISR interoperability, as well as rapid insertion of emerging technology, with new operational doctrine that will result in fielding C4ISR capabilities that meet the joint warfighter's need.

UNCLASSIFIED

EXHIBIT R-2, FY2003 RDT&E,N Budget Item Justification

DATE: FEBRUARY 2002

BUDGET ACTIVITY: 7

PROGRAM ELEMENT: 0305188N

PROJECT NUMBER: X2456

PROGRAM ELEMENT TITLE: Joint (C4ISR) Battle Center (JBC)

PROJECT TITLE: Joint
Battle Center (JBC)

B. (U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 2001 ACCOMPLISHMENTS:

- (U) Program Development. The Program Development Directorate within the JBC is responsible for CINC requirements coordination (including CINC Conferences), science and technology (S&T) community coordination, doctrine, C4ISR operational requirements document (ORD) reviews, Service and Agency technical working group participation, program plan development, and architecture support.
- (U) (\$127K) CINC Requirements Office (CRO): The JBC will continue to identify the CINC's C4ISR near-term requirements through the CINCs' Requirements Office. The CRO collects C4ISR information from each of the CINCs, coordinates the prioritization of the information into CINC C4ISR issue categories, and then works with JBC project teams to identify and define projects. By integrating the JBC process with USJFCOM the CINCs will gain the additional assistance that may be required to support those CINC requirements, especially those that the JBC could not address due to lack of resources or lack of near-term solutions. The CRO identifies the operational problems applicable to the JTF and those areas where assistance by the JBC might be able to achieve a "forcing function" for operational enhancements leveraged by C4ISR improvements. FY 01 Accomplishments: Coordinated/completed interoperability reviews of policy documents in support of the Joint Forces Command Integration Council (JFCIC); attended Millennium Challenge 02 (MC02) and Federated Battle Lab (FBL) conferences to gather information in support of FY 02 project build; planned and hosted FY 02 CINC Planning Conference in Aug 01; reviewed various C4ISR plans to better define specific target technologies in support of the warfighter.
- (U) (\$340K) Joint Operational Architecture. The focus of Joint Operational Architectures is on C4ISR support to the warfighter across the "Range of Military Operations." The objective is to describe the doctrinally based tasks and activities, operational elements, and the time phased information flows required to accomplish Joint military operations. The architectures will be used to assess and analyze doctrine, Tactical Technical Procedures (TTPs), system and procedural interoperability, processes, and synchronization issues that impact Joint Forces. These Operational Architectures will provide the baseline to identify warfighter requirements, design and structure assessments, and generate functional metrics. They will be developed and documented in close coordination with OSD, Joint staff, CINCs, and Services. FY 01

UNCLASSIFIED

EXHIBIT R-2, FY2003 RDT&E,N Budget Item Justification

DATE: FEBRUARY 2002

BUDGET ACTIVITY: 7

PROGRAM ELEMENT: 0305188N

PROGRAM ELEMENT TITLE: Joint (C4ISR) Battle Center (JBC)

PROJECT NUMBER: X2456

PROJECT TITLE: Joint
Battle Center (JBC)

Accomplishments: Engineered and developed web site architecture to allow viewing of experiment configurations for Joint User Interoperability Communication Exercise 01 (JUICE 01); attended meetings to gather information and interact with defense community for the purpose of potential operational architecture impact in the area of both systems and doctrine; Millennium Challenge 02 Architecture Support.

- (U) (\$174K) Science & Technology (S&T): The Science and Technology (S&T) Group has been productively supporting the execution of FY01 projects. As a matrixed organization of personnel, they provided some of the FY01 project technology candidates through the build and release of a request for information to industry and the DoD S&T community. They also managed the Industry Day and S&T conference that provided the basis for the FY01 program. The S&T group managed the JBC input into the USJFCOM Industry Day. There was significant travel executed across the JBC directorates that provided an S&T input to many of the projects as well as a general understanding of the current S&T activities external to the JBC. In FY02 the S&T Group will take a much stronger role in the program build, identifying the technologies to be assessed to the project assessment group. The S&T collection of data from travel will be managed to better influence the future project technology selection.
- (U) C4ISR Assessments. The C4ISR Assessments Directorate within the JBC is responsible for managing and coordinating projects that will lead to a decision from higher authority. Included in this is the development and execution of project assessments. In addition to technical factors, the assessment analysis includes economics, training, personnel, policy and POM. Once an assessment is complete, a recommendation for the assessment is developed and briefed, a "quick look" is prepared then the final report is prepared, staffed, published and distributed. These products are used by higher authority in the C4ISR decision-making process.
- (U) (\$2,142K) FY01 C4ISR Projects: Joint Task Force (JTF) Command & Control; Theater Air Missile Defense Initiative (TAMDI) Interoperability; Joint Intelligence Surveillance Reconnaissance (ISR) TPED Management; Joint Intelligence Interoperability Board (JIIB) SBA Joint I3 Implementation; Joint Battle Management Integration (JBMI); CINC and JTF Command Center Decision Aids; JTF Operations; Imagery & Geo-Spatial Compression; Information Dissemination Management (IDM); Joint Auto Single Guard Solution; Automated Network Information Flow; NSM Correlation & Display Systems; Joint En-Route Mission Planning and Rehearsal System, Near-Term (JEMPRS-NT).

UNCLASSIFIED

EXHIBIT R-2, FY2003 RDT&E,N Budget Item Justification

DATE: FEBRUARY 2002

BUDGET ACTIVITY: 7

PROGRAM ELEMENT: 0305188N

PROJECT NUMBER: X2456

PROGRAM ELEMENT TITLE: Joint (C4ISR) Battle Center (JBC)

PROJECT TITLE: Joint
Battle Center (JBC)

- (U) Combined and Joint Operations. The Combined and Joint Operations Directorate within the JBC is responsible for the Federated Battle Lab (FBL), the Intelligence Federated Battle Lab (IFBL), the Combined Federated Battle Lab (CFBL), and transformation/synchronization (includes JBC participation in various major exercises: Joint Experimentation (JE), Unified Vision (UV), United Endeavor (UE), Millennium Challenge (MC), and Joint Warrior Interoperability Demonstration (JWID) as examples).
- (U) (\$1,449K) Follow-on JWID. Upon completion and evaluation of each theme year for JWID, the CINC's and CJTF's involved identify systems which demonstrated warfighting utility but which require further refinement and follow-on assessment. These technologies are forwarded to the JBC for inclusion in the fiscal year plan. Enhancements and follow-on assessments are conducted by JBC and programmatic recommendations are prepared.
- (U) (\$2,115K) Federated Battle Lab (FBL). The FBL is a consortium of Joint and Service battle centers/laboratories formed to promote solutions to operational problems in CJTF environments. The JBC is recognized as the joint FBL hub by CINCs, services, agencies and CJTFs. The JBC, as chairman of the consortium, will coordinate efforts to capitalize on lessons learned in order to continue these effective and successful collaborative experiments in future years. FY01 FBL projects supported: Covert Localized Tracking (USAF Lead), Centric Network Computing (USN Lead), Advanced Joint Comm Support (USA Lead).
- (U) (\$137K) Combined Federated Battle Lab (CFBL): The CFBL is a consortium of nations and international organizations formed to evaluate combined C4ISR interoperability shortfalls, assess potential solutions through the utilization of agreed upon phased assessment procedures, report the results of those assessments, and make recommendations in order to foster improved combined CIS for the explicit purpose of promoting near-term concepts and acceptance of solutions. The CFBLNet is based on the JWID developed Combined Area Network (CWAN) concept as implemented in support of JWID '99-R execution period in July 1999. CFBLNet will span the US and connect to several allied sites. The CFBLNet will support the overarching CFBL concept and provide infrastructure to support applications, databases, and network services for participants in a collaborative RDT&E joint and/or combined environment. FY 01 Accomplishments: Assisted in coordination planning efforts for the CFBL Conference with OSD, Joint Staff and DISA-CAT; attended coordination meetings with OSD, Joint Staff (CFBL Executive Agent), DISA CAT (CFBL Secretariat) on the plans, structure and goals of the CFBL; coordinated with OSD, Joint Staff, DISA-CAT and EUCOM on FY 01 CFBL initiatives.

UNCLASSIFIED

EXHIBIT R-2, FY2003 RDT&E,N Budget Item Justification

DATE: FEBRUARY 2002

BUDGET ACTIVITY: 7

PROGRAM ELEMENT: 0305188N

PROGRAM ELEMENT TITLE: Joint (C4ISR) Battle Center (JBC)

PROJECT NUMBER: X2456

PROJECT TITLE: Joint
Battle Center (JBC)

- (U) (\$50K) Intelligence Federated Battle Lab (IFBL): It is envisioned that the IFBL will be a voluntary, JBC chaired, consortium linking the National/Service Intelligence Agencies and the CINCs. It will provide upfront IC buy-in while mining the Services for Joint capabilities. The IFBL would provide inter-agency collaboration and joint leveraging of service dollars. It would provide a bridge between the NFIP and the TIARA (Tactical Intelligence and Related Activities) world and provide additional access to the Joint Battle Center for the expanded Intelligence Community. The IFBL proposed for in this initiative will provide unprecedented cross-Agency, cross-CINC and cross-Service collaboration during all phases of spiral technology development applicable to the Intelligence Community. In addition, CINCs, Service and Agency participants in the IFBL will be able to expose their technology initiatives to FBL and CFBL participants in the overall quest for joint and multinational interoperability. FY 01 Accomplishments: Attended DoD intelligence conference and meetings for program planning, coordination and information gathering; briefed members of the Senate Select Committee on Intelligence (SSCI), Senate Select Committee on Security (SSCS), USN, and JFCOM NSA representative on IFBL merits.
- (U) Engineering. The Engineering Directorate at the JBC is responsible for information engineering and development of the Joint C4ISR Integration Facility (JCIF), which is a standing JTF battle management system, and of the Reconfigurable C4ISR Lab, which is used to accommodate various assessment and technological scenarios. In support of these efforts and the JBC operations as a whole, Engineering is responsible for information technology, enterprise management, telecommunications, video systems, project engineering, information security, facilities support, web/database engineering, and lab resources.
- (U) (\$695K) Joint C4ISR Integration Facility (JCIF): The Joint C4ISR Integration Facility (JCIF) is a subset of the larger JBC Lab. The JCIF is comprised of all the major C4I systems found at the JTF echelon, including the CINC, Commander, Joint Task Force (CJTF), NAVFOR, ARFOR, AFFOR, MARFOR, JSOTF, JIC, and JCCC components. The systems include Global Command and Control System (GCCS), GCCS I3, JDISS, GCCS-Maritime, GCCS-M I3, GCCS-Army, Advanced Field Artillery Tactical Data System (AFATDS), All Source Analysis System (ASAS) RWS, Theater Battle Management Core System (TBMCS), MSBL, SOF-IV, and JDIICS-D. The JCIF also contains several multi-level secure systems. All of these baseline systems allow introduction of other software or systems to test their integration and interoperability abilities. Each component is on a separate subnet, enabling simulation of physical separation at various bandwidths. The JCIF is normally operated on a U.S. SECRET local network interconnected to the SIPRNET, but can also be disconnected to operate in a closed, controlled environment. FY01

UNCLASSIFIED

EXHIBIT R-2, FY2003 RDT&E,N Budget Item Justification

DATE: FEBRUARY 2002

BUDGET ACTIVITY: 7

PROGRAM ELEMENT: 0305188N

PROGRAM ELEMENT TITLE: Joint (C4ISR) Battle Center (JBC)

PROJECT NUMBER: X2456

PROJECT TITLE: Joint
Battle Center (JBC)

Accomplishments: Network Security Management Correlation & Display (NSM C&D), Automated Information Network Flow (ANIF), and Command Center Decision Aids (CCDA) participated in Unified Vision 01, a JFCOM Joint Experiment, testing the reachback headquarters and Common Relevant Operational Picture concepts; Joint Intelligence, Imagery and Information Integration (JI3I) Interoperability, testing JI3I on NT platforms using the CJTF and NAVFOR components; ANIF, NSM C&D, Joint Battle Management Integration (JBMI), and Joint Automated Single Guard Solution (JASGS) conducted their warfighter assessments in the Joint User Interoperability Communication Exercise 2001 (JUICE 01); Theater Battle Management Core System (TMBCS) installation, consisting of seven servers and two clients, plus a Virtual Private Network; Global Command and Control System (GCCS) version upgrade from 3.03 to 3.2; Advance Field Artillery Tactical Data System (AFATDS) version upgrade from 98 to 99; Marine Corps Air Ground Task Force (MAGTF) System Baseline upgrade to Intelligence Operation System; GCCS-Maritime version upgrade from 3.1 to 3.2; GCCS-Army version upgrade to 3.2.4.

- (U) (\$300K) Reconfigurable C4ISR Lab: The JBC Lab provides a learning and experimentation environment to assess promising technology that will meet CINC's stated requirements. The Lab is a composite of the Defense Information Infrastructure, providing Solaris and NT platforms and networks as building blocks for a given assessment. Capabilities include WAN/LAN emulation, network services, collaboration tools, network management tools, data collection, and performance analysis. The Lab is able to provide communications at the unclassified U.S. SECRET, Coalition SECRET, NATO SECRET, and Special Compartmented Information (SCI) levels. Typically, projects use the lab to conduct assessments in a closed, controlled environment prior to including warfighters in a distributed event. FY01 Accomplishments: Defense Collaboration Tool Suite (DCTS) demonstrations; Joint Interface Control Officer (JICO) demonstrations; Coalition Multilevel Hexagon Prototype (CMHP) demonstrations; Coalition Federated Battle Lab (CFBL) Coalition Wide Area Network (CWAN) multicast testing; Command Center Decision Aids (CCDA) OSIM Limited Objective Experiment; Automated Network Information Flow (ANIF) Phase I; Network Security Management Correlation & Display (NSM C&D) Phase I; Joint Automated Single Guard Solution (JASGS) Phase II; Joint Intelligence Surveillance Reconnaissance Management (JIRSM) Phase II; Joint Enroute Mission Planning Reporting System - Near Term (JEMPRS-NT) Phase I; Joint Warfighter Interoperability Demonstration 2001 (JWID 01); Stood up Information Assurance Cell; Deinstalled Global Broadcast System Phase I and installed GBS Phase II Receive suite.
- (U) (\$1,929) Interoperability Process Software Tools. Develop, prototype, demonstrate, and package an end-to-end process and related tools for anticipating and correcting C4ISR

UNCLASSIFIED

EXHIBIT R-2, FY2003 RDT&E,N Budget Item Justification

DATE: FEBRUARY 2002

BUDGET ACTIVITY: 7

PROGRAM ELEMENT: 0305188N

PROGRAM ELEMENT TITLE: Joint (C4ISR) Battle Center (JBC)

PROJECT NUMBER: X2456

PROJECT TITLE: Joint
Battle Center (JBC)

interoperability problems as well as defining interoperability requirements for future systems. This includes the building of a representative integrated architecture at the Joint Task Force (JTF) level to support C4ISR system interoperability evaluation.

2. (U) FY 2002 Plan:

- (U) Program Development. The Program Development Directorate within the JBC is responsible for CINC requirements coordination (including CINC Conferences), science and technology (S&T) community coordination, doctrine, C4ISR operational requirements document (ORD) reviews, Service and Agency technical working group participation, program plan development, and architecture support.
- (U) (\$121K) CINC Requirements Office (CRO): The JBC will continue to identify the CINC's C4ISR near-term requirements through the CINCs' Requirements Office. The CRO collects C4ISR information from each of the CINCs, coordinates the prioritization of the information into CINC C4ISR issue categories, and then works with JBC project teams to identify and define projects. By integrating the JBC process with USJFCOM the CINCs will gain the additional assistance that may be required to support those CINC requirements, especially those that the JBC could not address due to lack of resources or lack of near-term solutions. The CRO identifies the operational problems applicable to the JTF and those areas where assistance by the JBC might be able to achieve a "forcing function" for operational enhancements leveraged by C4ISR improvements.
- (U) (\$346K) Joint Operational Architecture. The focus of Joint Operational Architectures is on C4ISR support to the warfighter across the "Range of Military Operations." The objective is to describe the doctrinally based tasks and activities, operational elements, and the time phased information flows required to accomplish Joint military operations. The architectures will be used to assess and analyze doctrine, Tactical Technical Procedures (TTPs), system and procedural interoperability, processes, and synchronization issues that impact Joint Forces. These Operational Architectures will provide the baseline to identify warfighter requirements, design and structure assessments, and generate functional metrics. They will be developed and documented in close coordination with OSD, Joint staff, CINCs, and Services.
- (U) (\$173K) Science & Technology (S&T): The Science and Technology (S&T) Group has been productively supporting the execution of FY01 projects. In FY02 the S&T Group will take a

UNCLASSIFIED

EXHIBIT R-2, FY2003 RDT&E,N Budget Item Justification

DATE: FEBRUARY 2002

BUDGET ACTIVITY: 7

PROGRAM ELEMENT: 0305188N

PROGRAM ELEMENT TITLE: Joint (C4ISR) Battle Center (JBC)

PROJECT NUMBER: X2456

PROJECT TITLE: Joint
Battle Center (JBC)

much stronger role in the program build, identifying the technologies to be assessed to the project assessment group. The S&T collection of data from travel will be managed to better influence the future project technology selection.

- (U) C4ISR Assessments. The C4ISR Assessments Directorate within the JBC is responsible for managing and coordinating projects that will lead to a decision from higher authority. Included in this is the development and execution of project assessments. In addition to technical factors, the assessment analysis includes economics, training, personnel, policy and POM. Once an assessment is complete, a recommendation for the assessment is developed and briefed, a "quick look" is prepared then the final report is prepared, staffed, published and distributed. These products are used by higher authority in the C4ISR decision-making process.

- (U) (\$3,290K) FY02 C4ISR Projects: JBC projects are nominated in August of a particular fiscal year, submitted to Joint Staff for approval in the September/October timeframe, and are finally approved in the October/November timeframe (i.e., during first quarter of the actual FY work is to begin). A CINC Planning Conference is coordinated and hosted by the JBC in August. This conference, in accordance with the CINC requirements and subsequent CJCS concurrence, will determine the following fiscal year's work.
 - Established by Chairman, Joint Chiefs of Staff at the request of the CINCs during the 95-2 CINC Conference, the mission of the JBC is to provide rapid assessment of required C4ISR interoperability and warfighter utility, join emerging C4ISR technology with new operational doctrine, resulting in fielding C4ISR capabilities that meet the joint warfighter's needs. The goal is to complete the assessments and make recommendations to the JROC within a 12-18 month timeframe.

 - This forces the JBC to be a "reactive" organization.

- (U) Combined and Joint Operations. The Combined and Joint Operations Directorate within the JBC is responsible for the Federated Battle Lab (FBL), the Intelligence Federated Battle Lab (IFBL), the Combined Federated Battle Lab (CFBL), and transformation/synchronization (includes JBC participation in various major exercises: Joint Experimentation (JE), UV, United Endeavor (UE), Millennium Challenge (MC), and Joint Warrior Interoperability Demonstration (JWID) as examples).

UNCLASSIFIED

EXHIBIT R-2, FY2003 RDT&E,N Budget Item Justification

DATE: FEBRUARY 2002

BUDGET ACTIVITY: 7

PROGRAM ELEMENT: 0305188N

PROJECT NUMBER: X2456

PROGRAM ELEMENT TITLE: Joint (C4ISR) Battle Center (JBC)

PROJECT TITLE: Joint
Battle Center (JBC)

- (U) (\$2,561K) Federated Battle Lab (FBL). The FBL is a consortium of Joint and Service battle centers/laboratories formed to promote solutions to operational problems in CJTF environments. The JBC is recognized as the joint FBL hub by CINCs, services, agencies and CJTFs. The JBC, as chairman of the consortium, will coordinate efforts to capitalize on lessons learned in order to continue these effective and successful collaborative experiments in future years.
- (U) (\$993K) Combined Federated Battle Lab (CFBL): The CFBL is a consortium of nations and international organizations formed to evaluate combined C4ISR interoperability shortfalls, assess potential solutions through the utilization of agreed upon phased assessment procedures, report the results of those assessments, and make recommendations in order to foster improved combined CIS for the explicit purpose of promoting near-term concepts and acceptance of solutions. The CFBLNet is based on the JWID developed Combined Area Network (CWAN) concept as implemented in support of JWID '99-R execution period in July 1999. CFBLNet will span the US and connect to several allied sites. The CFBLNet will support the overarching CFBL concept and provide infrastructure to support applications, databases, and network services for participants in a collaborative RDT&E joint and/or combined environment.
- (U) (\$46K) Intelligence Federated Battle Lab (IFBL): It is envisioned that the IFBL will be a voluntary, JBC chaired, consortium linking the National/Service Intelligence Agencies and the CINCs. It will provide upfront IC buy-in while mining the Services for Joint capabilities. The IFBL would provide inter-agency collaboration and joint leveraging of service dollars. It would provide a bridge between the NFIP and the TIARA (Tactical Intelligence and Related Activities) world and provide additional access to the Joint Battle Center for the expanded Intelligence Community. The IFBL proposed for in this initiative will provide unprecedented cross-Agency, cross-CINC and cross-Service collaboration during all phases of spiral technology development applicable to the Intelligence Community. In addition, CINCs, Service and Agency participants in the IFBL will be able to expose their technology initiatives to FBL and CFBL participants in the overall quest for joint and multinational interoperability.
- (U) Engineering. The Engineering Directorate at the JBC is responsible for information engineering and development of the Joint C4ISR Integration Facility (JCIF), which is a standing JTF battle management system, and of the Reconfigurable C4ISR Lab, which is used to accommodate various assessment and technological scenarios. In support of these efforts and the JBC operations as a whole, Engineering is responsible for information technology,

UNCLASSIFIED

EXHIBIT R-2, FY2003 RDT&E,N Budget Item Justification

DATE: FEBRUARY 2002

BUDGET ACTIVITY: 7

PROGRAM ELEMENT: 0305188N

PROGRAM ELEMENT TITLE: Joint (C4ISR) Battle Center (JBC)

PROJECT NUMBER: X2456

PROJECT TITLE: Joint
Battle Center (JBC)

enterprise management, telecommunications, video systems, project engineering, information security, facilities support, web/database engineering, and lab resources.

- (U) (\$709K) Joint C4ISR Integration Facility (JCIF): The Joint C4ISR Integration Facility (JCIF) is a subset of the larger JBC Lab. The JCIF is comprised of all the major C4I systems found at the JTF echelon, including the CINC, CJTF, NAVFOR, ARFOR, AFFOR, MARFOR, JSOTF, JIC, and JCCC components. The systems include GCCS, GCCS I3, JDISS, GCCS-M, GCCS-M I3, GCCS-A, AFATDS, ASAS RWS, TBMCS, MSBL, SOF-IV, and JDIICS-D. The JCIF also contains several multi-level secure systems. All of these baseline systems allow introduction of other software or systems to test their integration and interoperability abilities. Each component is on a separate subnet, enabling simulation of physical separation at various bandwidths. The JCIF is normally operated on a U.S. SECRET local network interconnected to the SIPRNET, but can also be disconnected to operate in a closed, controlled environment.
- (U) (\$300K) Reconfigurable C4ISR Lab: The JBC Lab provides a learning and experimentation environment to assess promising technology that will meet CINC's stated requirements. The Lab is a composite of the Defense Information Infrastructure, providing Solaris and NT platforms and networks as building blocks for a given assessment. Capabilities include WAN/LAN emulation, network services, collaboration tools, network management tools, data collection, and performance analysis. The Lab is able to provide communications at the unclassified U.S. SECRET, Coalition SECRET, NATO SECRET, and Special Compartmented Information (SCI) levels. Typically, projects use the lab to conduct assessments in a closed, controlled environment prior to including warfighters in a distributed event.
- (U) Joint Integration and Interoperability (JI&I). USJFCOM will collect, consolidate and prioritize real world interoperability and integration needs on behalf of the Chairman, Joint Chiefs of Staff. The JI&I will serve as the Chairman's advocate for these issues and will produce a single serialized and prioritized "list" of CINCs Services Agencies (C/S/A) interoperability and integration concerns that can be attacked in a synchronized manner. This prioritized list will be provided to the JROC for endorsement. Following endorsement of the prioritized list by the JROC, the JI&I execute DOTMLPF remedy sets. FY 02 plans are identified below:

R-1 Shopping List - 206-10 of 206-19

UNCLASSIFIED

Exhibit R-2, RDT&E,N Budget Item Justification

UNCLASSIFIED

EXHIBIT R-2, FY2003 RDT&E,N Budget Item Justification

DATE: FEBRUARY 2002

BUDGET ACTIVITY: 7

PROGRAM ELEMENT: 0305188N

PROJECT NUMBER: X2456

PROGRAM ELEMENT TITLE: Joint (C4ISR) Battle Center (JBC)

PROJECT TITLE: Joint
Battle Center (JBC)

- (\$2,754K) Army and Marine Corps Digitization of the Battlefield: The JI&I will begin this synchronization effort by validating the requirement (developed IERs and KPPs), facilitate a MOA between Army and USMC to develop an initial digital interface between the Service systems at the Battalion level (messages), engaged the JFPO/CIPO office in SPAWAR for engineering support for the interface test plan and has engaged the Multi-Service C2 General Officer Steering Committee (MSC2GOSC) to develop a Concept of Operations between the systems. The JI&I will coordinate and synchronize efforts as the material interface is developed and tested leading to a Joint Distributed Engineer Plant (JDEP) demonstration and validate the CONOPS/TTP during the Millennium Challenge 02 field exercise.
- (\$2,200K) Collaborative Planning Tools: The JI&I will field the Defense Collaborative Planning Tool Suite (DCTS) to USCENTCOM, USPACOM and USJFCOM in support of Operation Enduring Freedom and Operation Noble Eagle for Homeland Security. JI&I will leverage the initial assessment by JBC and the endorsement by the JROC to provide a single joint collaborative tool set to the warfighter. DISA will provide integration support to JI&I fielding the CPT capability to the various CINCs.

3. (U) FY 2003 Plan:

- (U) Program Development. The Program Development Directorate within the JBC is responsible for CINC requirements coordination (including CINC Conferences), science and technology (S&T) community coordination, doctrine, C4ISR operational requirements document (ORD) reviews, Service and Agency technical working group participation, program plan development, and architecture support.
- (U) (\$115K) CINC Requirements Office (CRO): The JBC will continue to identify the CINC's C4ISR near-term requirements through the CINCs' Requirements Office. The CRO collects C4ISR information from each of the CINCs, coordinates the prioritization of the information into CINC C4ISR issue categories, and then works with JBC project teams to identify and define projects. By integrating the JBC process with USJFCOM the CINCs will gain the additional assistance that may be required to support those CINC requirements, especially those that the JBC could not address due to lack of resources or lack of near-term solutions. The CRO identifies the operational problems applicable to the JTF and those areas where assistance

UNCLASSIFIED

EXHIBIT R-2, FY2003 RDT&E,N Budget Item Justification

DATE: FEBRUARY 2002

BUDGET ACTIVITY: 7

PROGRAM ELEMENT: 0305188N

PROGRAM ELEMENT TITLE: Joint (C4ISR) Battle Center (JBC)

PROJECT NUMBER: X2456

PROJECT TITLE: Joint
Battle Center (JBC)

by the JBC might be able to achieve a "forcing function" for operational enhancements leveraged by C4ISR improvements.

- (U) (\$345K) Joint Operational Architecture. The focus of Joint Operational Architectures is on C4ISR support to the warfighter across the "Range of Military Operations." The objective is to describe the doctrinally based tasks and activities, operational elements, and the time phased information flows required to accomplish Joint military operations. The architectures will be used to assess and analyze doctrine, Tactical Technical Procedures (TTPs), system and procedural interoperability, processes, and synchronization issues that impact Joint Forces. These Operational Architectures will provide the baseline to identify warfighter requirements, design and structure assessments, and generate functional metrics. They will be developed and documented in close coordination with OSD, Joint staff, CINCs, and Services.
- (U) (\$166K) Science & Technology (S&T): The Science and Technology (S&T) Group has been productively supporting the execution of FY01 and FY02 projects. In FY03 the S&T Group will continue to take a much stronger role in the program build, identifying the technologies to be assessed to the project assessment group. The S&T collection of data from travel will be managed to better influence the future project technology selection.
- (U) C4ISR Assessments. The C4ISR Assessments Directorate within the JBC is responsible for managing and coordinating projects that will lead to a decision from higher authority. Included in this is the development and execution of project assessments. In addition to technical factors, the assessment analysis includes economics, training, personnel, policy and POM. Once an assessment is complete, a recommendation for the assessment is developed and briefed, a "quick look" is prepared then the final report is prepared, staffed, published and distributed. These products are used by higher authority in the C4ISR decision-making process.
- (U) (\$3,343K) FY03 C4ISR Projects: JBC projects are nominated in August of a particular fiscal year, submitted to Joint Staff for approval in the September/October timeframe, and are finally approved in the October/November timeframe (i.e., during first quarter of the actual FY work is to begin). A CINC Planning Conference is coordinated and hosted by the JBC in August. This conference, in accordance with the CINC requirements and subsequent CJCS concurrence, will determine the following fiscal year's work.

UNCLASSIFIED

EXHIBIT R-2, FY2003 RDT&E,N Budget Item Justification

DATE: FEBRUARY 2002

BUDGET ACTIVITY: 7

PROGRAM ELEMENT: 0305188N

PROJECT NUMBER: X2456

PROGRAM ELEMENT TITLE: Joint (C4ISR) Battle Center (JBC)

PROJECT TITLE: Joint
Battle Center (JBC)

- Established by Chairman, Joint Chiefs of Staff at the request of the CINCs during the 95-2 CINC Conference, the mission of the JBC is to provide rapid assessment of required C4ISR interoperability and warfighter utility, join emerging C4ISR technology with new operational doctrine, resulting in fielding C4ISR capabilities that meet the joint warfighter's needs. The goal is to complete the assessments and make recommendations to the JROC within a 12-18 month timeframe.
- This forces the JBC to be a "reactive" organization.
- (U) Combined and Joint Operations. The Combined and Joint Operations Directorate within the JBC is responsible for the Federated Battle Lab (FBL), the Intelligence Federated Battle Lab (IFBL), the Combined Federated Battle Lab (CFBL), and transformation/synchronization (includes JBC participation in various major exercises: Joint Experimentation (JE), UV, United Endeavor (UE), Millennium Challenge (MC), and Joint Warrior Interoperability Demonstration (JWID) as examples).
- (U) (\$2,614K) Federated Battle Lab (FBL). The FBL is a consortium of Joint and Service battle centers/laboratories formed to promote solutions to operational problems in CJTF environments. The JBC is recognized as the joint FBL hub by CINCs, services, agencies and CJTFs. The JBC, as chairman of the consortium, will coordinate efforts to capitalize on lessons learned in order to continue these effective and successful collaborative experiments in future years.
- (U) (\$1,007K) Combined Federated Battle Lab (CFBL): The CFBL is a consortium of nations and international organizations formed to evaluate combined C4ISR interoperability shortfalls, assess potential solutions through the utilization of agreed upon phased assessment procedures, report the results of those assessments, and make recommendations in order to foster improved combined CIS for the explicit purpose of promoting near-term concepts and acceptance of solutions. The CFBLNet is based on the JWID developed Combined Area Network (CWAN) concept as implemented in support of JWID '99-R execution period in July 1999. CFBLNet will span the US and connect to several allied sites. The CFBLNet will support the overarching CFBL concept and provide infrastructure to support applications, databases, and network services for participants in a collaborative RDT&E joint and/or combined environment.
- (U) (\$38K) Intelligence Federated Battle Lab (IFBL): It is envisioned that the IFBL will be a voluntary, JBC chaired, consortium linking the National/Service Intelligence Agencies and the CINCs. It will provide upfront IC buy-in while mining the Services for Joint

UNCLASSIFIED

EXHIBIT R-2, FY2003 RDT&E,N Budget Item Justification

DATE: FEBRUARY 2002

BUDGET ACTIVITY: 7

PROGRAM ELEMENT: 0305188N

PROGRAM ELEMENT TITLE: Joint (C4ISR) Battle Center (JBC)

PROJECT NUMBER: X2456

PROJECT TITLE: Joint
Battle Center (JBC)

capabilities. The IFBL would provide inter-agency collaboration and joint leveraging of service dollars. It would provide a bridge between the NFIP and the TIARA (Tactical Intelligence and Related Activities) world and provide additional access to the Joint Battle Center for the expanded Intelligence Community. The IFBL proposed for in this initiative will provide unprecedented cross-Agency, cross-CINC and cross-Service collaboration during all phases of spiral technology development applicable to the Intelligence Community. In addition, CINCs, Service and Agency participants in the IFBL will be able to expose their technology initiatives to FBL and CFBL participants in the overall quest for joint and multinational interoperability.

- (U) Engineering. The Engineering Directorate at the JBC is responsible for information engineering and development of the Joint C4ISR Integration Facility (JCIF), which is a standing JTF battle management system, and of the Reconfigurable C4ISR Lab, which is used to accommodate various assessment and technological scenarios. In support of these efforts and the JBC operations as a whole, Engineering is responsible for information technology, enterprise management, telecommunications, video systems, project engineering, information security, facilities support, web/database engineering, and lab resources.
- (U) (\$712K) Joint C4ISR Integration Facility (JCIF): The Joint C4ISR Integration Facility (JCIF) is a subset of the larger JBC Lab. The JCIF is comprised of all the major C4I systems found at the JTF echelon, including the CINC, CJTF, NAVFOR, ARFOR, AFFOR, MARFOR, JSOTF, JIC, and JCCC components. The systems include GCCS, GCCS I3, JDISS, GCCS-M, GCCS-M I3, GCCS-A, AFATDS, ASAS RWS, TBMCS, MSBL, SOF-IV, and JDIICS-D. The JCIF also contains several multi-level secure systems. All of these baseline systems allow introduction of other software or systems to test their integration and interoperability abilities. Each component is on a separate subnet, enabling simulation of physical separation at various bandwidths. The JCIF is normally operated on a U.S. SECRET local network interconnected to the SIPRNET, but can also be disconnected to operate in a closed, controlled environment.
- (U) (\$294K) Reconfigurable C4ISR Lab: The JBC Lab provides a learning and experimentation environment to assess promising technology that will meet CINC's stated requirements. The Lab is a composite of the Defense Information Infrastructure, providing Solaris and NT platforms and networks as building blocks for a given assessment. Capabilities include WAN/LAN emulation, network services, collaboration tools, network management tools, data collection, and performance analysis. The Lab is able to provide communications at the unclassified U.S. SECRET, Coalition SECRET, NATO SECRET, and Special Compartmented

UNCLASSIFIED

EXHIBIT R-2, FY2003 RDT&E,N Budget Item Justification

DATE: FEBRUARY 2002

BUDGET ACTIVITY: 7

PROGRAM ELEMENT: 0305188N

PROGRAM ELEMENT TITLE: Joint (C4ISR) Battle Center (JBC)

PROJECT NUMBER: X2456

PROJECT TITLE: Joint
Battle Center (JBC)

Information (SCI) levels. Typically, projects use the lab to conduct assessments in a closed, controlled environment prior to including warfighters in a distributed event.

- (U) Joint Integration and Interoperability (JI&I). USJFCOM will collect, consolidate and prioritize real world interoperability needs on behalf of the Joint warfighter leveraging the annual CINC survey. The JI&I will serve as a repository for these issues and will produce a single serialized and prioritized "list" of C/S/A interoperability concerns that can be attacked in a synchronized manner. This prioritized list will be provided to the JROC for endorsement. Following endorsement of the prioritized list, the JI&I will act as a routing function to recommend the best option to conduct assessments, insert technology or develop non-material solutions via a transition fund support more rapid DOTMLPF synchronized fielding of validated remedy sets. FY 03 plans are identified below:
 - (\$2,036K) Coalition Multi-level Security: Multi-level security is the single biggest hurdle to interoperability with allies. JI&I will support an ACTD to demonstrate a multi-level security capability called Coalition Information Based Security (CIBS). In FY02 the ACTD will be ready to demonstrate/test. If the technology proves viable, the JI&I will support initial implementation and logistic support; coordination and testing with NSA and other intelligence organizations will be required; to bring this type of capability to the warfighter, the synchronization of the other DOTMLPF aspects will be required.
 - (\$2,200K) Tactical Data Information Links (TADIL): JI&I will support TADIL interoperability issues for Homeland Security. The multi-TDL architecture supporting JTF Noble Eagle is managed by the NORAD CONUS Region Commander's JICO. The MTN operates over entire CONUS and includes TDL A, J, B, SADL, RADIL and fixed, ground-based RADAR data. JI&I will provide a DOTMLPF solution set that includes immediate Multi-TADIL management technology, communications support and Tactics Training and Procedures (TTP) for all CONUS operations. Long-term requirements development will also be conducted by JI&I for the future TADIL management system.
 - (\$2,700K) Joint Automated Single Guard Solution (JSAGS): The process for exchanging information between security domains is inefficient and lacks standards causing a significant percentage of Secret information to be trapped on a top secret (JWICS) network and not shareable with allied and coalition partners. JASGS provides the CINCS with

UNCLASSIFIED

EXHIBIT R-2, FY2003 RDT&E,N Budget Item Justification

DATE: FEBRUARY 2002

BUDGET ACTIVITY: 7

PROGRAM ELEMENT: 0305188N

PROJECT NUMBER: X2456

PROGRAM ELEMENT TITLE: Joint (C4ISR) Battle Center (JBC)

PROJECT TITLE: Joint
Battle Center (JBC)

technology that facilitates the exchange of multiple information types between U.S. Forces and Multinational partners across different security domains.

- (\$1,800K) Collaborative Planning Tools (CPT): The JI&I will continue to deliver common CPT capability to additional CINCs beyond that approved by the JROC for initial implementation in FY02. This project continues to leverage the initial work by DISA and JBC which coordinated the selection/recommendation of a single joint solution for a set of tools that can make all CINCs interoperable through commercial software products.
- (\$2,000K) Automatic Network Information Flow (ANIF): ANIF will provide the CINCs dynamic bandwidth management. ANIF consists of selected technologies that can aid the Joint Task Force (JTF) in installing networks that are capable of providing the users with end-to-end prioritized Quality of Service (QoS) and give the commanders' information managers the ability to dynamically reapportion bandwidth. ANIF guarantees the warfighters delivery of critical time-sensitive information during times of network congestion regardless of bandwidth constraints.
- (\$800K) Joint Enroute Mission Planning and Rehearsal System Near Term (JEMPRS-NT): The CINCs require a suite of critical enroute and lateral communications, collaboration and planning tools that will support dynamic re-tasking of an "initial entry force" from the alert phase through execution phase/deep strike. JEMPRS-NT will enhance Dominate Maneuver and Rapid Decisive Operations (RDO) through all levels of warfare. JI&I will provide this initial enroute planning capability to USCENTCOM and SOCOM.
- (\$1,800K) Network Security Management Correlation and Display (NSM C&D): Provides all CINC/JTF Commanders with a centrally monitored enterprise security management system designed to provide secure and reliable communications from network intrusion detection sensors, filters and correlates from among the millions of sensor-detected alerts, identifies significant security events/intrusions, provides a rules-based decision and recommendation responses capability, enables scalable web-based access to common operational picture for cyber attacks against DII and tactical networks and systems. The system maturity has been validated by JBC assessment and verified during Unified Vision 01 and JUICE 01. The capability has been implemented at FEMA and LIWA.

UNCLASSIFIED

EXHIBIT R-2, FY2003 RDT&E,N Budget Item Justification

DATE: FEBRUARY 2002

BUDGET ACTIVITY: 7

PROGRAM ELEMENT: 0305188N

PROJECT NUMBER: X2456

PROGRAM ELEMENT TITLE: Joint (C4ISR) Battle Center (JBC)

PROJECT TITLE: Joint
Battle Center (JBC)

C. (U) PROGRAM CHANGE SUMMARY:

FY 2001: Section 8086 .7% Pro-Rata Reduction (-\$69K), Interoperability Process Software Tools (+\$2,000K), Government-Wide Rescission: PL 106-554, Sec 1 (-\$21K), SBIR Assessment (-\$247K).

FY 2002: Section 8123: Management Reform Initiative (-\$120K), Section 8032: FFRDC (-\$5K).

D. (U) OTHER PROGRAM FUNDING SUMMARY: (Dollars in thousands)

	FY 2001 ACTUAL	FY 2002 ESTIMATE	FY 2003 ESTIMATE	FY 2004 ESTIMATE	FY 2005 ESTIMATE	FY 2006 ESTIMATE	FY 2007 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
(U) OMN 1C6C (JBC/JI&I)	12,310	15,216	15,490	15,742	15,989	15,974	15,959	Cont	Cont

E. (U) ACQUISITION STRATEGY

- FY 2000-3. The JBC/JI&I do not have a major contract for their RDT&E efforts. Equipments that are required to support our various projects are either bought from other service contracts and/or from the GSA schedule. Services are provided by other services and/or various vendors with expertise on a specific assessment we are accomplishing.

UNCLASSIFIED

EXHIBIT R-3, FY 2001 RDT&E,N PROJECT COST ANALYSIS

DATE:FEBRUARY 2002

BUDGET ACTIVITY: 7

PROGRAM ELEMENT: 0305188N

PROJECT NUMBER: X2456

PROGRAM ELEMENT TITLE: Joint (C4ISR) Battle Center (JBC)

PROJECT TITLE: JBC

Exhibit R-3 Cost Analysis (page 1)										Date: Feb 2002		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT: 0305188N							PROJECT NAME AND NUMBER: JBC/X2456		
Cost Categories	Contract Method & Type	Performing Activity & Location	Total Pys Cost	FY01 Cost	FY01 Award Date	FY02 Cost	FY02 Award Date	FY03 Cost	FY03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Dev Support Equip Acquisition	MIPR	GSA Schedule	617	373	Var	670	Var	672	Var	Cont	Cont	Cont
Systems Engineering	C-CPFF	S. Carolina Res.		1887	09/01	43	09/02					
Systems Engineering	C-CPFF	ODU	255	112	01/01	394	03/02	396	10/02	Cont	Cont	Cont
Government Engineering Supt	C-CPFF	General Dynamics	450	389	04/01	641	03/02	657	11/02	Cont	Cont	Cont
Contractor Engineering Supt	C-CPFF	SAIC		0		121	11/01	121	11/02	Cont	Cont	Cont
Government Engineering Supt	MIPR	Various DoD	1592	691	Var	1176	Var	1178	Var	Cont	Cont	Cont
Travel	N/A	N/A		31	Var	123	Var	125	Var	Cont	Cont	Cont
Subtotal Product Development			2914	3483		3168		3149				
Remarks:												
Systems Engineering	C-CPFF	ODU	206	81	01/01	399	03/02	401	10/02	Cont	Cont	Cont
Contractor Engineering Supt	C-CPFF	General Dynamics	579	283	04/01	466	03/02	478	11/02	Cont	Cont	Cont
Contractor Engineering Supt	C-CPFF	SAIC		0		180	11/01	180	11/02	Cont	Cont	Cont
Government Engineering Supt	MIPR	Various DoD	1489	503	Var	1003	Var	998	12/02	Cont	Cont	Cont
Travel	N/A	N/A		0	Var	86	Var	87	Var	Cont	Cont	Cont
C/S/A Contractor Eng Supt	MIPR	Various DoD						3105	Var	Cont	Cont	Cont
C/S/A DOTMLPF Support	MIPR	Various DoD						1009	Var	Cont	Cont	Cont
Subtotal Support			2274	867		2134		6258				
Remarks												

UNCLASSIFIED

EXHIBIT R-3, FY 2001 RDT&E,N PROJECT COST ANALYSIS

DATE:FEBRUARY 2002

BUDGET ACTIVITY: 7

PROGRAM ELEMENT: 0305188N

PROJECT NUMBER: X2456

PROGRAM ELEMENT TITLE: Joint (C4ISR) Battle Center (JBC)

PROJECT TITLE: JBC

Exhibit R-3 Cost Analysis (page 2)										Date: Feb 2002		
APPROPRIATION/BUDGET ACTIVITY: 1319/BA 7				PROGRAM ELEMENT: 0305188				PROJECT NAME AND NUMBER: JBC/X2456				
Cost Categories	Contract Method & Type	Performing Activity & Location	Total Pys Cost 99/00	FY01 Cost	FY01 Award Date	FY02 Cost	FY02 Award Date	FY03 Cost	FY03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Dev Support Equipment Acq	MIPR	GSA Schedule	1119	1324	Var	1395	Var	1375	Var	Cont	Cont	Cont
Systems Engineering	C-CPFF	ODU	480	315	01/01	787	03/02	794	10/02	Cont	Cont	Cont
Systems Engineering	C-CPFF	MITRE	130	100	03/01	110	01/01	106	10/02	Cont	Cont	Cont
Systems Engineering	C-CPFF	Dataline	0	146	09/01							
Systems Engineering	C-CPFF	Anzus, Inc		0		458	10/01	458	10/02	Cont	Cont	Cont
Contractor Engineering Supt	C-CPFF	General Dynam	1175	1098	04/01	1806	11/01	1851	11/02	Cont	Cont	Cont
Contractor Engineering Supt	C-CPFF	SAIC		0		968	10/01	1018	10/02	Cont	Cont	Cont
Government Engineering Support	MIPR	Various DoD	5096	1946	Var	2342	Var	2322	Var	Cont	Cont	Cont
Travel (T&E)	N/A	N/A		179	Var	325	Var	330	Var	Cont	Cont	Cont
Subtotal T&E			8000	5108		8191		8254				
C/S/A Systems Eng Support	MIPR	Various						2158	Var	Cont	Cont	Cont
C/S/A Dev Support Equip Acq	MIPR	Various						2151	Var	Cont	Cont	Cont
Subtotal C/S/A Support								4309				
Remarks												
Total Cost			13188	9458		13493		21970		Cont	Cont	Cont
Remarks												