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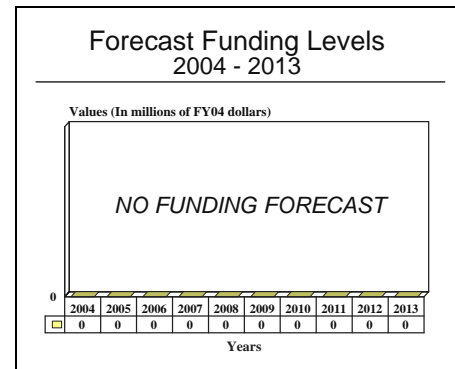
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Joint Simulation System (JSIMS) - Archived 8/2005

Outlook

- Program officially shut down September 30, 2003
- Army continues work on its portion
- Study was to salvage development to date
- Look for alternative simulation systems to meet requirements
- Further JSIM funding not likely
- This report will be archived next year, August 2005



Orientation

Description. The Joint Simulation System (JSIMS) is a U.S. Department of Defense (DoD) interoperable training simulation system that is capable of combining warfighting doctrine; command, control, communications, computer, and intelligence (C⁴I); and logistics for full spectrum joint warfare.

Sponsor

U.S. Department of Defense (DoD)
Defense
JSIMS Joint Program Office
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Orlando, FL 32826-3294
USA
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Web site: <http://www.jsims.mil>

Status. Congress shut down program as of September 30, 2003, citing delays, technical challenges, and conflicting demands. The U.S. Army plans to continue and test through September 2004.

Total Produced. One prime core system completed, with three separate modules to cover air, land, and sea warfare that can be run individually or together.

Application. Simulation warfare training and planning for joint services.

Price Range. Not applicable. R&D funding ongoing. Over US\$1.5 billion is believed to have been spent in developing JSIMS.

Contractors

TASC, <http://www.it.northropgrumman.com>, 4805 Stonecroft Blvd, Chantilly, VA 20151 United States, Tel: 1 (703) 633-8300, (Scenario Creation Management)

Northrop Grumman Corporation, Corporate Headquarters, <http://www.northropgrumman.com>, 1840 Century Park East, Los Angeles, CA 90067-2199 United States, Tel: 1 (310) 553-6262, Fax: 1 (310) 201-3023 (Common Core Engine)

Science Applications International Corp, SAIC, <http://www.saic.com>, 10260 Campus Point Drive, San Diego, CA 92121-1522 United States, Tel: 1 (800) 430-9212, Subcontractor

Lockheed Martin Simulation, Training & Support, Information Systems, <http://www.lockheedmartin.com/lm/s>, 12506 Lake Underhill Rd, Orlando, FL 32825-5002 United States, Tel: 1 (407) 306-1000, Subcontractor

BTG Inc, <http://www.btg.com>, 3877 Fairfax Ridge Road, Fairfax, VA 22030-7448 United States, Tel: 1 (703) 383-8000, Fax: 1 (703) 383-8999, Subcontractor

Sonalysts Inc, <http://www.sonalysts.com>, 215 Parkway North, Waterford, CT 06385 United States, Tel: 1 (860) 442-4355, Fax: 1 (860) 447-8883, Subcontractor

Technical Data

Design Features. The main objective of JSIMS is to support unified combat operations and joint task force training in all phases of military operations. It was conceived specifically for joint mission-essential task requirements at the strategic-national, strategic-theater, operational, and tactical levels.

The JSIMS program was to develop an interoperable training simulation system that is capable of combining warfighting doctrine; command, control, communications, computer, and intelligence (C⁴I); and logistics for full spectrum joint warfare. The actual system itself provides an overall architecture filled with core and common services, utilities, and mission space objects. A common simulation engine includes system software that enables JSIMS to run on commercially available, open architecture computer hardware and networks. JSIMS exercises are distributed through the approved

Department of Defense High Level Architecture (HLA), which is part of the common simulation engine that allows an exercise to be distributed locally among machines as well as across states or countries.

There are two key U.S. military training and coordination centers employing the JSIMS exercises. They are the Joint Warfighting Center at Fort Monroe in Virginia, which supports all unified commands, and the U.S. Atlantic Command's Joint Training Analysis and Simulation Center in Suffolk, Virginia, which supports all U.S.-based combat forces. The Army's module is known as the Warfighter's Simulation 2000 (WARSIM 2000). The Air Force's module is known as the National Air-Space Module (NASM). The Navy's module is called the Maritime Simulation Model (MARISM).



Joint Simulation System (JSIMS)

Source: U.S. DoD

Variants/Upgrades

Although JSIMS is one system, there are three prime submodules to the system that cover air, land, and sea. Each module is designed to run individually or be

combined into one large command and control simulation.

Program Review

Background. The U.S. began seriously developing JSIMS in FY96 when it reprogrammed its Management Headquarters (Joint Staff) program. By the start of FY97, the JSIMS effort had developed into its own program element (PE#0902740J). Major software integration into a true JSIMS system began in FY98 with the completion of the first build cycle (Build 0). By the end of FY98, the second build cycle, Build 1, had commenced, and involved the development of software that would mature the core infrastructure of the primary simulation system.

Build 1 was completed in early FY99 and Build 2 started. This third cycle, Build 2, was completed at the end of FY99 and involved major software integration for operational testing. Software development and integration continued through FY00.

In July 2000, BTG Inc was awarded an additional US\$6.5 million from the National Security Agency to build the Security Common Component (SCC) for the JSIMS Alliance. The purpose of the SCC program is to provide a common security framework to be used throughout the JSIMS Alliance. The SCC effort makes

it possible to protect data at two classification levels necessary for U.S. training. Initial development of the SCC was completed in April 2002.

The program agenda for FY01 called for proceeding with software development and integration work conducted during FY00.

Rising Costs and Program Delays. At one point it was feared JSIMS was spiraling to what Defense Department officials called an “unrecoverable death.” The Department stepped in early in 2000, announcing that JSIMS program management was being restructured. Being one of the most complicated simulation programs ever attempted, the program was bound to run into some technical and management problems trying to work evenly with three services. With so much invested, the Defense Department reorganized the program and placed it under the direct leadership of an Army general, Brigadier General

William Bond, commanding general of the U.S. Army Simulation, Training and Instrumentation Command. The program was slipped by 91 months.

Termination Announcement. In December 2002, the JSIMS program was directed to shut down by the end of September 2003. Program delays, technical problems, and conflicting DoD demands have been cited as the main reasons for the termination. Ironically, all through 2002 the program has appeared to be getting back on track, especially with the delivery of the Block 1 JSIMS Version 1.0 software, which had been considered a crucial step in the program’s milestones. The program is asking Congress for funding to at least carry the effort through to completion of Block II, which is in development and scheduled to be completed by September 2004. The U.S. Army also plans to keep going with its portion known as WARSIM, at least through the testing phase.

Funding

Development of JSIMS was largely completed in year 2002. Cancellation of the program was finalized for September 2003, although the U.S. Army continues to hope for additional funding to complete a development segment already in progress. Additional enhancement funding may be allocated by the various U.S. DoD services and agencies on an as-needed basis but it appears unlikely for the moment.

Recent Contracts

<u>Contractor</u>	<u>Award (US\$ millions)</u>	<u>Date/Description</u>
Sonalysts	25.5	Sep 1999 – An indefinite delivery/indefinite quantity contract for systems analysis and systems engineering services to provide large-scale naval warfare simulation support for C ⁴ I system research and development as well as command and control training. These services include the design, development, and testing of simulation systems, interfaces, and models, and system installation, operation, and maintenance. Simulation systems of principal interest are the Research, Evaluation, and Systems Analysis (RESA) Facility, the Joint Simulation System (JSIMS), and the Battle Force Electromagnetic Interference Evaluation System (BEES). Contract is expected to be completed by September 2004. (N66001-99-D-0024)
BTG	6.5	Jul 2000 – Addition to an existing US\$28 million Joint Simulation System Signals Intelligence Simulation contract from the National Security Agency to build the Security Common Component (SCC) for the JSIMS Alliance.
Raytheon	12.9	Feb 2002 – CPFF contract modification to provide for JSIMS program interdependencies, the revised JSIMS Alliances Schedule, architecture changes, and related JSIMS interface activities. (F19628-97-C-0016, P00026)

Timetable

<u>Month</u>	<u>Year</u>	<u>Major Development</u>
1st Qtr	1998	Build 0 Development Readiness Milestone
2nd Qtr	1998	Build 0 Integration Readiness Milestone
2nd Qtr	1999	Build 1 Development Readiness Milestone
3rd Qtr	1999	Build 1 Integration Readiness Milestone, Build 2 Development Readiness Milestone
4th Qtr	1999	Build 1 Demonstration
1st Qtr	2000	Build 2 Integration Readiness Milestone, Build 3 Development Readiness Milestone
2nd Qtr	2000	Build 2 Collaborative Event
3rd Qtr	2000	Build 3 Integration Readiness Milestone
1st Qtr	2001	Build 3 Collaborative Event
Dec	2002	Announcement to terminate program, Block 1 JSIMS Version 1.0 software release
Sept	2003	Final termination date, all work stops
Sept	2004	Planned completion of Block 2/Version 2 JSIMS software

Worldwide Distribution

JSIMS is a **U.S. Department of Defense**-led program used by all branches of the U.S. military, as well as selected allied nations.

Forecast Rationale

Just what is the status of U.S. Department of Defense's (DoD) Joint Simulation System (JSIMS) development program? No one really seems to know. Officially, the program has been canceled, yet the U.S. Army is proceeding with its portion (WARSIM) through the testing phase of the Version 2.0 software, which could be by the end of September 2004. Some members of the DoD are trying to get the U.S. Congress to refund and revive the program; others are actively looking for a replacement. Now there is talk of JSIMS being reborn and being used in a more narrow area for Homeland Defense.

Was JSIMS simply too ambitious a project? Hard to say. The overall requirements to meet the needs of all the services were certainly many and technically difficult to fill; however, even with "young" technology in the simulation field, the JSIMS possibility was not deemed unobtainable with the tools on hand.

Rarely has the DoD terminated a program so far along and with so much money already invested in it. It was known from the start that JSIMS was going to be a real

technological challenge, and difficulties and delays were expected (as they are with all DoD programs). Even more ironic is that the program has made significant advances over the past few years to get back on track and seemed to be proceeding on course again. Right now the Army is lobbying for additional funding to at least carry the program through to September 2004 so it can complete the Block II/Version 2 software development already in progress. Whether or not JSIMS can get the additional funding it needs to complete this latest segment depends on how many congressional representatives it can win over to its side. With the war on terrorism ongoing, and the cost for the war with Iraq climbing, it looks like JSIMS is going to have an uphill fight. Even claiming to tailor it for the latest budget "sweetheart" known as Homeland Defense will not seem to help.

For now JSIMS is in need of a major overhaul. It is very unlikely the effort will survive in its current form. However, several years from now as computer simulation technology advances, look for this program to resurface in some form.

Ten-Year Outlook

JSIMS has been ordered to terminate all work as of September 20, 2003, citing cost overruns, program delays, and changing requirements. The forecast chart has been omitted.

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