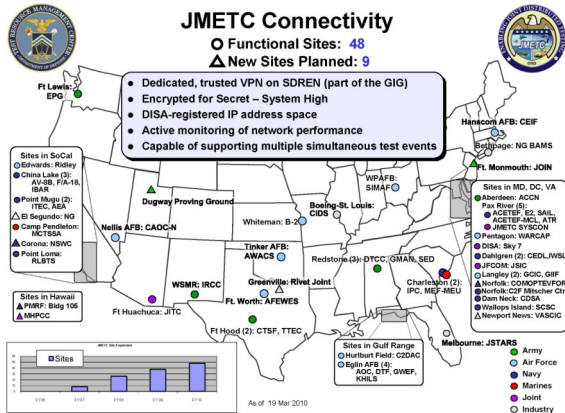## OPERATIONAL ENVIRONMENT

The current connectivity of the distributed JTDL testbed is depicted below. Along with JITC, the military Services and Defense Agency testbeds provide the full range of testing capabilities required for the joint standards validation, standards conformance, interoperability certification and performance testing. The JMETC network supports the overall framework for certification testing. Test analyses and recommendations are provided to the user as part of the unique service provided by JITC.

INTERNATIONAL ARENA

JITC is the test agent for combined interoperability testing. Combined tests are conducted with NATO members under the NATO Interoperability Management Plan and with other countries working with their associated US Combatant Commands via Command and Control Interoperability Boards.

DISA
Defense Information Systems Agency
Department of Defense

JTDL POC

For additional information contact:

DSN 879-5139
(520) 538-5139

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Joint Interoperability Test Command

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http://jitc.fhu.disa.mil

Experts in Testing and Certification

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JOINT TACTICAL DATA LINK (JTDL) LABORATORY

Joint Interoperability Test Command

INTRODUCTION

Joint Tactical Data Links (JTDL)

In order to test Tactical Data Links (TDLs) JITC leverages hardware-in-the-loop and field events to ensure systems:

♦ Comply with military standards
♦ Meet data exchange performance thresholds
♦ Interoperate effectively in a Joint environment

The diverse nature of DoD C4I systems presents many challenges to this mission requiring JITC to employ a suite of capabilities that allow it to test and certify systems that employ tactical data links. These capabilities include:

ATC-Gen

Automatic Test Case Generator

ATC-Gen is a software tool that provides online, rapid, repeatable "Pass-Fail" tests for Link-16 conformance testing, using a set of validated test cases. It is a web service available on the JMETC network and can be accessed from a browser by a remote user. As part of a test, ATC-Gen generates Link-16 messages and DIS messages. The DIS messages are used to provide sensor simulation to the System Under Test (SUT).

JIMES

Joint Interoperability Modular Evaluation System

JIMES is a suite of software tools designed to support testing of Link 11/11B/16 standards compliance and interoperability in joint United States (US) and combined (US/Allied) operations. JITC uses operationally configured system hardware and software for data link testing.

JIMES is equipped with a sensor stimulator and is capable of providing participating systems sensor tracking simulation recording of all exchanged messages and produces a formatted report to facilitate posttest analysis. JIMES interfaces with participating systems through standard communications and cryptographic equipment. For Link 11/11B/16 testing, connectivity between the remote C4I systems and their JTIDS/MIDS terminals is achieved through a gateway system produced by Space and Naval Warfare Systems in San Diego. Systems are connected via the DISN or through leased T-1 for combined testing.

The JITC also gathers data in the field using the Joint Operational C4I Assessment Team (JOCAT) discussed in a different brochure.

WHAT STEPS ARE REQUIRED FOR TDL CERTIFICATION?

The DoD has directed that "all C4I systems developed for use by the US Forces are considered to be for joint use." The Joint Staff published the TDL 11/11B/16 standards used to ensure systems meet end users' information exchange needs and interoperability requirements. Program milestone decisions now depend on joint interoperability and certification. TDL interoperability certification is part of a system's overall requirement to be certified for interoperability. JITC's laboratory and field capabilities assist the program's needs to obtain the joint interoperability certification.

All policy documents pertaining to joint interoperability testing and certification are on our web site at http://jitc.fhu.disa.mil/ciidocs.htm

1. Contact your service Participating Test Unit Coordinator listed below.
2. Contact JITC Point of Contact (POC) for inclusion in the System Tracking Program. Project Managers should put in a placeholder for their system early in program development.
3. Plan and budget for Joint Interoperability Testing during development (CJCSI 6212.01E).
4. Include Joint Testing and Certification in ICD, CPD, and CDD [Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 6212.01E].
5. Provide system TDL Implementation and System Descriptions to JITC.

Participating Test Units

Air Force DSN 575-2939
Navy DSN 553-8045
Army DSN 987-2515
Marines DSN 365-2165
NSA DSN 969-3987