



JTRS Lab

- **Additional info**

- We work closely with JTRS Joint Program Office as well as the individual JTRS Cluster managers
- Currently providing technical support to the Joint Operational Test Bed System – a JFCOM unit
 - Planning and preparation for EXERCISE FORWARD LOOK
 - JITC helping in the UHF SATCOM arena
 - Providing technicians, use of lab, and loaning radios



ACTD Lab



Mission:

The Advanced Concept Technology Demonstration Lab is responsible for supporting the testing, analysis and certification of all assigned ACTD projects.



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ACTD Lab

- **Capabilities:**

- The ACTD Lab has the hardware and software resources on hand to support the collection of ACTD data from numerous sources
- The data analysis tools in the ACTD Lab provide the capability to perform mission thread, throughput, and translation accuracy analyses.



ACTD Lab

- **Major Test Equipment**

- ADSI
- GTE Gateway
- Class-2 JTIDS Terminal
- MIDS Terminal (LVT-1)
- LMS-16
- 18 Windows-based PCs in various configurations used to support data collection and analysis.
- TIAC Data Collection Tools



ACTD Lab

- **ACTD Lab Background**

- The ACTD Lab is the only one of its kind in its makeup. The combination of data collection, system simulation/stimulation, and data analysis tools make it quite unique
- We work very closely with Joint Forces Command in our support of their ACTDs:
 - Close Air Support (CAS) Mission Support
 - Multi-Source Integration (MSI) Demonstrations
 - Time Sensitive Targeting (TST) Testing
 - RAIDER Integration
 - Adaptive Joint C4ISR Node (AJCN)



ACTD Lab

- **ACTD Lab Background (Cont)**

- **Additional Support**

- We have supported USSPACECOM in their development of the SBBFT MMC.
- We are currently supporting the 1st Air Force in the conduct of the Clear Skies IV exercise and its follow-on test events.



ACTD Lab

• ACTD Lab Background (Cont)

Interfaces

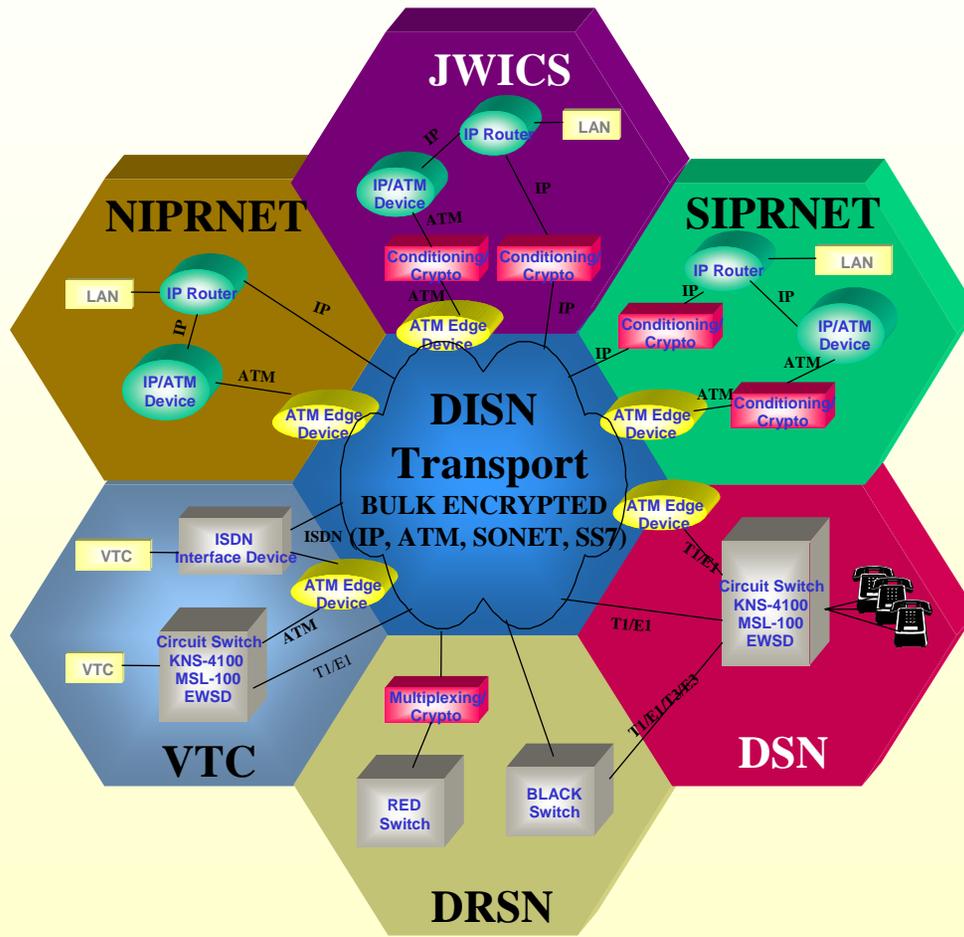
- 1553 Bus
- Synchronous Serial
- Asynchronous Serial
- TCP/IP (PTP or Multicast)
- UDP(PTP, Multicast, or Broadcast)
- X.25

Data Formats

- TADIL-A/B/J
- CEC
- USMTF
- VMF/JVMF
- ARSR-4
- ASR-9
- Sentinel



Network Engineering and Integration Lab (NEIL)



Mission:

Conduct conformance and interoperability certification testing of GIG network infrastructure (existing DISN) components in response to requests from DoD and commercial vendors.

Work closely with all Combatant Commands to resolve real-world issues.



- **Capabilities:**

- **Sole DOD interoperability certifier of:**

- **Defense Switched Network (DSN) components**
 - **Defense Red Switch Network (DRSN) components**
 - **Asynchronous Transfer Mode (ATM) systems**
 - **Communications Security (COMSEC) devices**



- **Major Test Equipment**

- Test equipment to ensure standard interfaces from single channel 64 Kbps through Optical Carrier-12 (OC-12, 622 Mbps)
- Traffic loaders to simulate operational environment heavy usage of network components
- Test equipment to simulate network delays



NEIL Lab

- **Unique Features:**

- **NEIL is the only facility that contains all major telephone switches within DOD**
- **NEIL is the only DOD test facility for DRSN components**
- **NEIL is the only DOD facility able to simulate voice network problems for the warfighter**



JDEP Lab



Mission:

JITC is committed to providing comprehensive interoperability support to the Joint Distributed Engineering Plant (JDEP) community.



- **Capabilities:**

- **Defense Information System Network - Leading Edge Services (DISN-LES)**
- **Tactical Data Information Link (TADIL) A, B and J Site Inter-Connectivity**
- **Secure Voice Inter-Connectivity (both SpherePhone and ASTI)**
- **High Level Architecture (HLA) Scenarios such as the Common Reference Scenario (CRS)**
- **Theater Air & Missile Defense (TAMD) Interoperability Analysis Capability (TIAC)**
- **VTC – for visual connectivity among sites**



- **Major Test Equipment:**
 - **2 TIAC 3-D Visualization Workstations**
 - **5 TIAC Data Collection and Display Workstations**
 - **1 Zogios Monitoring Workstations**
 - **1 Network Monitoring Workstation with Cisco Works, What's Up Gold and NetVCR Client software**
 - **1 DX/DR Server**
 - **GPS Time Server**



JDEP Lab

- **Additional info:**
 - Only one of its kind – TIAC is an agile software platform suited for data gathering and analysis
 - We work closely with the JDEP/DEP Community: SIAP-SE, JPO, JNIC, and JTAMDO
 - Unique features – Zogios Network monitoring tool – COTS item adapted to our JDEP Ops Center needs
 - Work in Progress- Quantity of COTS computer servers and provisioning S/W to enable rapid reconfiguration of lab to meet a wide variety of test requirements



Theater Air and Missile Defense Lab



Mission:

JITC is committed to providing comprehensive interoperability support to the Theater Air/Missile Defense community. The TAMD lab provides the community with a wide range of event planning, in-process, and post-test analysis capabilities.



TAMD Lab

- **Capabilities:**

- LMS-16
- Data Analysis Reporting Tool (DART)
- 3-D Visualization Tools
- Parsing Tools
- Association Tools
- Ad Hoc Analysis, Parsing and Queries
- Current data capabilities: TADIL-A,-B,-J, HLA, DIS, TSPI, TIBS, and TDDS



TAMD Lab

- **Major Test Equipment:**
 - 4 Analyst Workstations
 - 6 Developer Workstations
 - 2 Database Servers
 - 1 Webserver
 - 2 3-D Visualization Workstations



TAMD Lab

- **Additional info:**

- Only one of its kind – very responsive to a wide range of data analysis needs
- We work closely with the JDEP/DEP community: SIAP-SE, JPO, JNIC, and JTAMDO
- Unique features: Association Tools for ease in analyzing common data characteristics



High Frequency Test Facility



Mission:

The High Frequency Test Facility supports standards conformance and interoperability certification testing on HF radios and modems for US Military, Federal Agencies, NATO Allies, and commercial vendors.



High Frequency Test Facility

- **Standards Conformance Test Support:**
 - MIL-STD-188-110B (HF Modems)
 - MIL-STD-188-141B (HF Radios)
 - STANAG 5066 (HF Protocol for E-mail)
 - STANAG 4203 (HF Radios)
 - STANAG 5511, Annex B (HF Radios)



High Frequency Test Facility

- **Interoperability Support Equipment:**
 - **TRANSCEIVERS**
 - RT-2200
 - AN/VRC-100
 - AN/ARC-220
 - Micom 2ES
 - AN/PRC-138(V)2
 - **MODEMS**
 - RF- 5710A
 - MDM Q9600
 - MDM 3001



High Frequency Test Facility

- **Major Test Equipment**
 - 2 Spectrum Analyzers
 - 2 Oscilloscopes
 - 1 Vector Analyzer
 - 4 Bit Error Rate Testers (Firebirds 6000)
 - 1 Audio Analyzers
 - HF Simulator



High Frequency Test Facility

- **Additional Information**

- **HFTF is Responsible Test Organization for USAF SCOPE Command HF Global Communications System (HFGCS)**
- **Owner/Operator of 3-Level SCOPE Command Station on JITC compound**



Joint Information Assurance Lab



Mission:

The Joint Information Assurance Laboratory (JIAL) is a JITC initiative to provide Commanders-in-Chief, Services, Agencies, and Program Manager's Information Assurance (IA) test support



- **JIAL Capabilities**

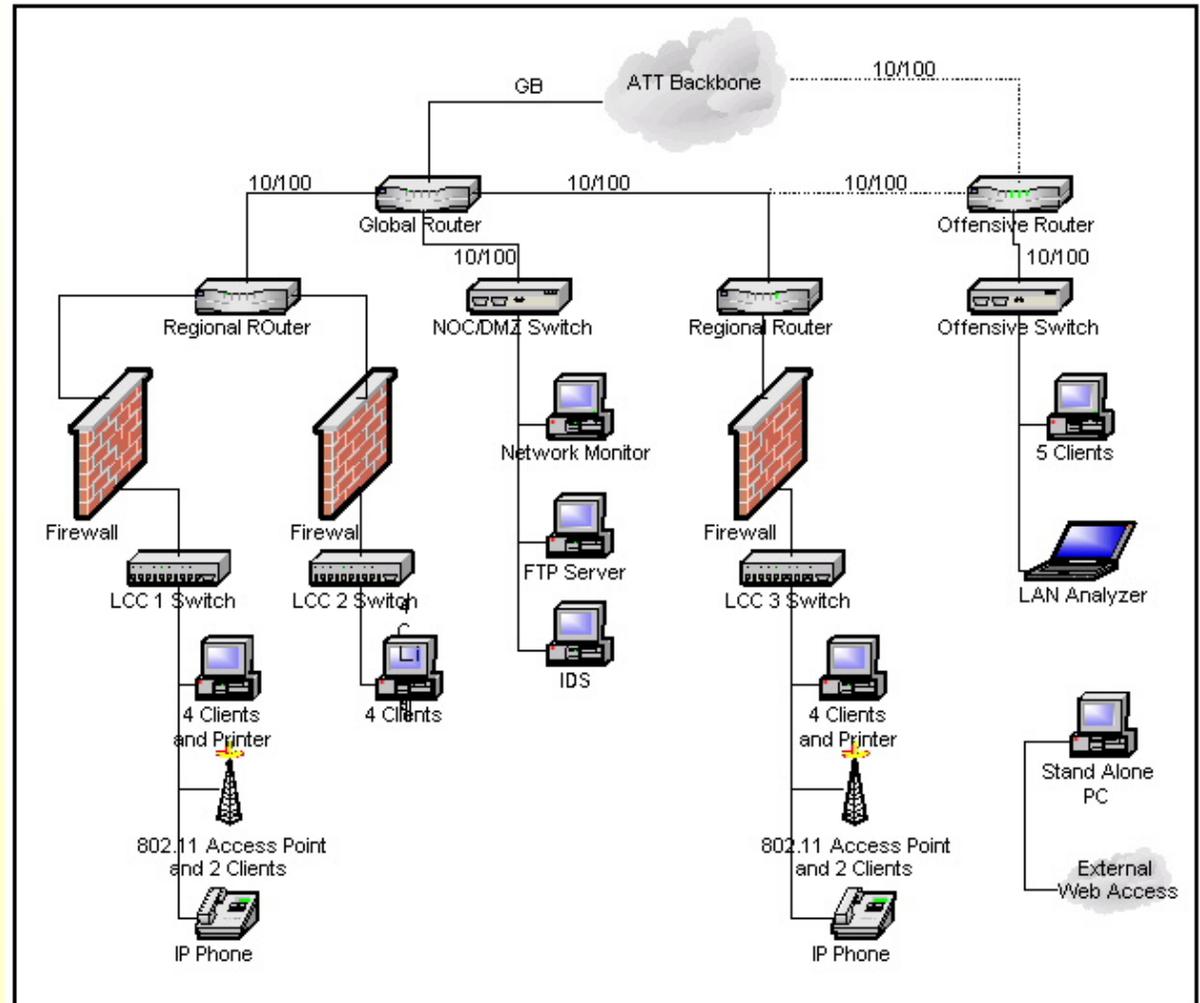
- Automated test environment comprising an integrated set of standard, flexible IA test methods, procedures, measures, and scripts (manual and automated)
- Includes COTS and GOTS hardware, software, and network tools to automate testing:
 - Security configuration assessment tools
 - Vulnerability assessment tools
 - Risk assessment tools
 - Host- and network assessment tools
 - Defense in Depth architecture analysis tools



- **JIAL Fixed Station (Indian Head, MD)**
- **Capabilities:**
 - Designed to represent the DoD GIG
 - Supports a wide range of test and evaluation requirements
 - Four enclaves networked over a three-tier architecture can replicate almost any DOD environment
 - Additional testing and evaluations possible through connections to other JITC labs and its Risk Mitigation Network



Fixed Station Configuration



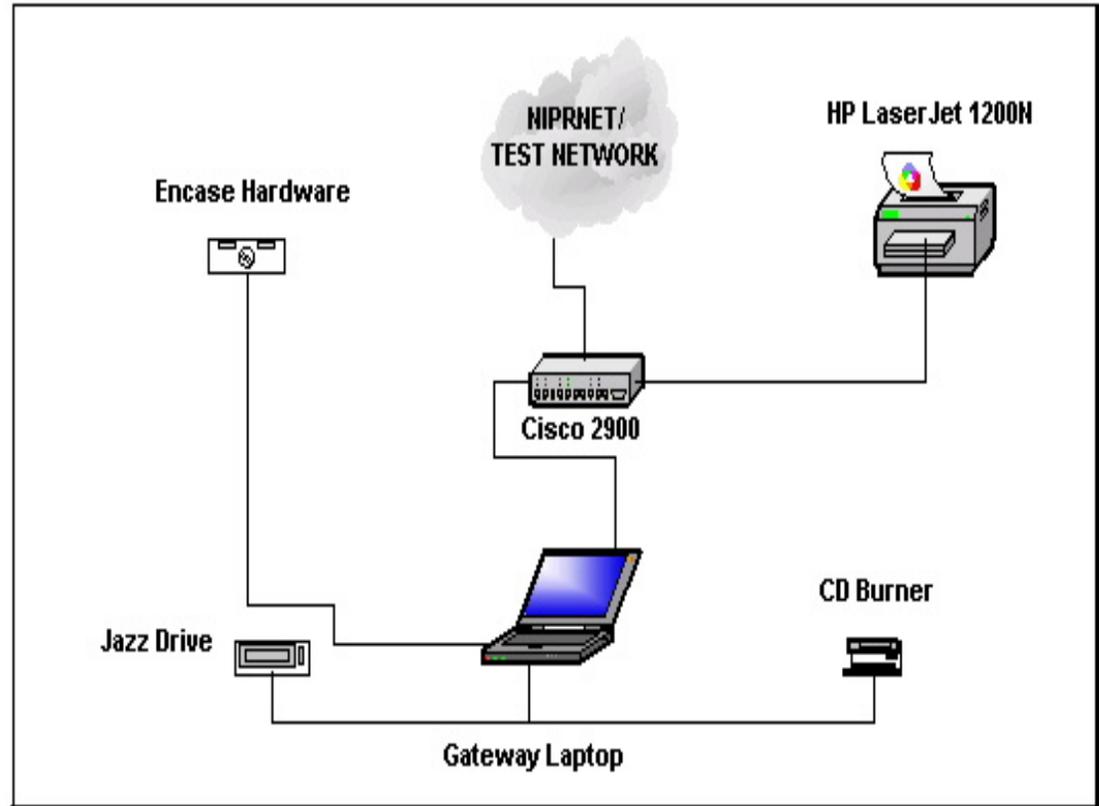


- **JIAL Portable Station**
- **Capabilities:**
 - **High-end laptop computer**
 - **Preloaded with best of breed IA tools**
 - **Used for vulnerability assessment and penetration testing**
 - **Programmable network switch**
 - **Allows easy connection to virtually any type of network protocol and media where the targeted systems reside**
 - **Laser printer**
 - **Two backup devices, jazz drive and CD-RW**



JIAL Lab

Portable Station Configuration





- **JIAL can test all GIG Operating Systems:**
 - Macintosh OS 9
 - OS 10X
 - Solaris Unix
 - Linux
 - Hewlett Package Unix
 - Windows 95, 98, ME, XP, NT 4.0
 - DOS
 - Windows Pocket PC 2002
 - Palm OS
 - Cisco IOS



- **Hardware capabilities include:**
 - Sparc
 - x86 Intel and AMD
 - Power PC
 - Dragonball
 - Cisco 3620/7200
 - KVM switching



- **Topologies supported by the JIAL:**
 - **Wireless 802.11a and 802.11b**
 - **10/100 Ethernet**
 - **Gigabit Ethernet**
 - **Asynchronous Transfer Mode (ATM)**
 - **Fiber Distributed Data Interface (FDDI)**
 - **Packet over SONET (PoS)**



- **JIAL in Summary:**
 - Open architecture with future expansion potential
 - Host- and network-centric solutions
 - Builds upon existing JITC IA test capabilities
 - Leverages existing and planned JITC infrastructures
 - A fixed station (static) and portable version
 - Supports a wide range of test and evaluation requirements worldwide



Common Data Link Testbed



Mission:

- Serve as DoD and other Agencies only independent CDL waveform compliance tester.
- Provide greater access to CDL Waveform test equipment to Program Managers and developers.
- Conduct CDL Waveform Compliance and CDL System Interoperability Testing.



CDL Testbed

- **Capabilities:**

- Test CDL Surface Communications Element and Platform Communications Element Terminals for compliance with CDL Waveform Specifications
- Test to CDL, Advanced-CDL, and Network-CDL Waveform Specifications
- Test frequencies in the X and Ku Bands
- Test data rates from 200Kbps to 274Mbps
- Test digital functions associated with the various CDL Waveforms



CDL Testbed

- **Major Test Equipment**
 - **CDL Gold Standard Test System (under development)**
 - **CDL- Digital Functional Tester**
 - **10/100 Ethernet Server**
 - **Client Computers**
 - **FIREBERD 6000A Communications Analyzer**
 - **E4407B Spectrum Analyzer**
 - **83731B Synthesized Signal Generator**
 - **53151A Frequency Counter**



CDL Testbed

- **Designated Executive Agent for CDL Compliance Verification and Joint Interoperability Certification by OSD**
- **We work closely with:**
 - CDL Program Manager
 - CDL Working Group
 - System Program Managers
 - CDL Vendors
- **Unique features**
 - Only Test Agency that Verifies CDL Waveform Compliance



Joint Tactical Data Link Lab



Mission:

Provide interoperability test, assessment, and certification support for the DoD National Security Systems/Information Technology Systems (NSS/ITS).



- **Capabilities:**

- Provides DOD the capability to perform joint and combined C4I system tactical data link interoperability testing
 - LINK 11
 - LINK 11B
 - LINK 16
- Test execution and post-test data analysis
- Comprehensive data base of all test results