JPEOJTRS

CONNECTING THE TACTICAL EDGE

MOVING NET-CENTRIC WARFARE BEYOND THE COMMAND CENTER

Joint Program Executive Office for the Joint Tactical Radio System

The Joint Tactical Radio System (JTRS) has evolved from a loosely associated group of radio replacement programs to an integrated effort to network multiple weapon system platforms and forward combat units where it matters most – at the last tactical mile. In 2005, JTRS was restructured under the leadership of a Joint Program Executive Officer (JPEO) headquartered in San Diego, California. The JPEO JTRS provides an enterprise acquisition and management approach to successfully and efficiently develop, produce, integrate, test and field the JTRS networking capability.

By developing and implementing an open architecture of cutting-edge radio waveform technology, multiple radio types (e.g., handheld, ground-mobile, airborne, maritime) are now capable of communicating with one another. The ultimate goal is to produce a family of interoperable, modular, software-defined radios that operate as nodes in a network. These radios enable secure wireless communication and networking services for mobile and fixed forces, consisting of joint, U.S. allies and coalition partners, and in time, disaster response personnel.

Significance of the JTRS Program

JTRS is critical to connecting the warfighter – on the ground, in the air and at sea – into networking capabilities that are delivered through the Global Information Grid (GIG). As a vital component of the DoD network centric transformation effort, JTRS provides:

- Ad-hoc networked communications, on-the-move and at the tactical edge to support information sharing and combat readiness – the most challenging requirement, representing the highest capability payoff
- Interoperability through a common set of shared open standards and applications, including the Software Communications Architecture (SCA)
- More spectrally efficient communications than current force radios
- Tactical voice, video, and data battlefield communications when reachback is not possible
- Cost savings via an Enterprise Business Model that promotes competition among differing vendors

JTRS is more than a set of legacy radio replacements; JTRS is a joint tactical networking enabler that moves net-centric warfare beyond the command center to ultimately connect the warfighter where it matters most – at the tactical edge.

JTRS Product Delivery

JTRS Ground Mobile Radios (GMR)

- – GMR Milestone C (4QFY11)
- – GMR Limited User Test (3QFY11)
- ✓ System Integration Testing (Sept 2010)
- ✓ 91 sets for GMR Developmental Testing/Operational Testing - 91 delivered
- ✓ PEO-I purchasing 153 Engineering Development Models through Boeing Prime/ Boeing GMR agreement for System Development and Demonstration, Test, and fielding to IBCT #1 – 30 Delivered for Test

JTRS Handheld, Manpack, and Small Form Fit (HMS)

- – Milestone C: AN/PRC-154 (FY11); AN/PRC-155 (FY12); MUOS capable AN/PRC-155 (FY13)
- – HMS Network Excursion (2QFY11)
- ✓ BCT Integration Exercise (July 2010)
- ✓ MUOS High Power Amplifier Program Design Review (July 2010)
- ✓ Engineering Development Models Delivered: 29 Manpacks (AN/PRC- 155); 32 JTRS Rifleman Radio (AN/PRC-154); 163 JTRS Rifleman Radio (AN/PRC-154) (CV1); 213 SFF-A; 21 SFF-D

Airborne and Maritime/Fixed Station (AMF) JTRS

- – Small Airborne (SA) Engineering Development Model (EDM) First Article Delivery (3QFY11)
- ✓ Delivered pre-production representative unit to the Army's AH-64D Long Bow Apache to support platform integration (Sep 2010)
- ✓ Initial Hardware Software Demonstration – SA (Aug 2010)
- ✓ Completed System Critical Design Review (Dec 2009)
- ✓ Air-to-Air-to-Ground SRW demonstration (Jun 2009)
- ✓ System Development and Demonstration contract awarded (Mar 2008)

JTRS Network Enterprise Domain (NED)

- – Legacy waveform upgrades planned (VHF/UHF LOS, HQII, Bowman, EPLRS, Link 16)
- ✓ Networking waveforms/management completed Formal Qualification Testing (FQT), in JTRS Information Repository (IR) (WNW 4.0.2, SRW 1.01.1c, SRWNM 1.0R, SRWNM 1.0.2, JWNM 4.1.3); Interim versions in JTRS IR (TTNT 6.0)
- ✓ Legacy waveforms completed FQT, in JTRS IR (VHF/UHF LOS, HQ II, COBRA, SATCOM 181/182/183/184, SINCGARS, EPLRS, JTRS Bowman, Link 16, HF)

Multifunctional Information Distribution System (MIDS) JTRS

- – Initial Operational Capability withwith the Navy's F/A-18E/F Super Hornet (4QFY11)
- ✓ MIDS JTRS Limited Production & Fielding Decision 2 (Jan 2011) – 42 production terminals to support F/A-18E/F and as well as the Air Force's EC-130H Compass Call and RC-135 Rivet Joint
- ✓ Operational Testing (Jul – Nov 2010); > 828.0 Operating hours ; > 650.5 total flight test hours conducted on F/A-18E/F platform
- ✓ Technology Readiness Level 7 achieved (May/Jun 2010); Completed Developmental Testing (Apr 2010); NSA Certification (Mar 2010)
- ✓ MIDS JTRS Limited Production & Fielding Decision 1 (Dec 2009) - 41 production terminals to support F/A-18E/F and the Air Force's E-8C Joint STARS

Consolidated Single Channel Handheld Radios (CSCHR)

- ✓ Delivered over 161,000 radios & accessories to the Services
- ✓ Have returned over $560M to the Services – significant savings due to competitive acquisition strategy
- ✓ Reduced unit costs by over 75%

Airborne and Maritime/Fixed Station (AMF)

AMF JTRS consists of a two channel Small Airborne (SA) Joint Tactical Radio (JTR), a four channel Maritime/Fixed (M/F) JTR, and common ancillaries to support platform integration. Increment I AMF JTRS-SA will provide the MUOS, WNW, SRW, Link 16, SINCGARS ESIP, HAVE QUICK II (HQ II), VHF FM Military Tactical, and UHF AM/FM PSK Military Tactical waveforms. It will also be integrated into a variety of airborne platforms including Army rotary wing, UAV aircraft, and Air Force C-130s. Increment 1 AMF-M/F will support the UHF SATCOM and MUOS waveforms and be integrated into maritime and fixed station platforms such as Navy ships and submarines, Air Force Command and Control (C2) Centers, and Navy Shore C2 installations.

Ground Mobile Radios (GMR)

JTRS GMR, a software defined, multi-channel, multimode communications system, can be reconfigured to emulate and interoperate with current force radios as well as operate new advanced waveforms that have enhanced performance capabilities. GMR provides secure communications and enables simultaneous multimedia communications over independent channels to ground vehicle platforms such as: System Integrated Command Post System Carrier, Abrams Tank, Bradley Fighting Vehicle, High Mobility Multipurpose Wheeled Vehicle, and the Light Armored Vehicle. GMR will interoperate with current force equipment in use in civilian and military operations.

Consolidated Single Channel Handheld Radios (CSCHR)

Currently available are two handheld, single-channel, software-defined radios, with options for Vehicle Adapter Amplifiers (VAAs) and accessories. These handheld radios – the AN/PRC-148 and AN/PRC-152 and their associated VAAs, the AN/VRC-111 and AN/VRC-110 – are interoperable with other military radios and commercial systems through instantiation of legacy waveforms (e.g., SINCGARS, HaveQuick II, and ANDVT). NSA certified and considered "JTRS approved," these products are presently deployed in combat, aiding U.S. warfighters in Afghanistan.

Multifunctional Information Distribution System (MIDS) JTRS

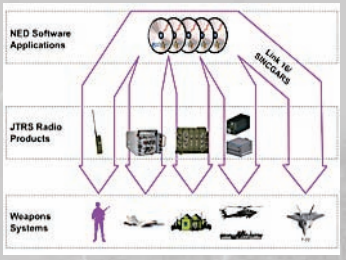
MIDS is a wireless, jam-resistant, and secure information system providing Link 16, Secure Voice and TACAN to airborne, ground and maritime warfighting platforms. It provides real-time information and situational awareness via digital and voice communications. The MIDS Program includes MIDS-Low Volume Terminal (MIDS-LVT) which is in full rate production and MIDS JTRS, an evolutionary development product that is currently in limited production. MIDS JTRS is a "form, fit, function" replacement for MIDS-LVT and possesses three additional channels for hosting other JTRS waveforms as requested by platforms.

Handheld, Manpack and Small Form Fit (HMS)

The future of tactical radio communications is being defined by the need for smaller, lightweight and more powerful devices that are interoperable and flexible. HMS is developing small form fit factors that provide tactical networking for soldier-carried handheld and manpack radios, unmanned ground vehicles, munitions and sensors, and unmanned aerial vehicles. These cost effective radios will enable net-centric operations to move beyond the command center to battlefield locations previously unreachable by legacy radios.

Network Enterprise Domain (NED)

NED delivers, maintains, upgrades, and enhances portable, interoperable, transformational networking waveforms (e.g., WNW, SRW, MUOS), legacy waveforms to maintain current force interoperability (e.g., UHF SATCOM, SINCGARS, EPLRS) and network management and enterprise network services software to fully enable JTRS' mobile, ad-hoc networking capability. NED products produce the networking capability that allows joint and coalition warfighters at the tactical edge from all military services to access and share relevant information in real time. This program is the heart of the JTRS interoperable networking capability.



JPEO JTRS
33000 Nixie Way, Bldg. 50, STE 339
San Diego, CA 92147-5110
Phone: 619-524-4600
Email: jpeo_jtrs_help_desk@navy.mil
http://jpeojtrs.mil