Joint Tactical Radio System (JTRS) Waveform

DESCRIPTION AND SPECIFICATIONS

The Joint Tactical Radio System (JTRS) Waveform is a software reprogrammable, multi-band/multi-mode and network-capable system that provides JTRS software products developed for use by all services. The system features a number of improved capabilities, including multiple-frequency bands and channels for better communication capability and flexibility; full interoperability with legacy operational requirements document (ORD) waveforms; software upgradability; and embedded/programmable crypto equipment applications (CEA).

The JTRS software radio is based on a common architecture and is to meet the following goals:

- Interoperability with legacy system radios
- Use of commercial technology
- Open system architecture
- High reliability
- Low unit cost
- Competitive acquisition
- Use by all services

Special features include the following:

- Waveforms interoperable between radios
- Use/reuse common software across waveforms
- Scalability in number of channels and across form factors
- Open commercial standard architecture
- Includes all radio systems (2MHz to 2 GHz and above)

The JTRS Waveform Program, managed by the JTRS Joint Program Office (JPO), is responsible for:

- Developing software waveform applications and software representative of associated cryptography
- Evolving the software communications architecture (SCA)
- Certifying compliance of both hardware (with system software) and software waveforms with the SCA
- Ensuring overall joint interoperability and adaptability in support of varied mission requirements

PROGRAM STATUS

- 4QFY04 Waveform deliveries for SINCGARS (ESIP)
- FY04 Delivered two waveforms, 12 cryptographic equipment algorithms and two cryptographic chips.
- Critical design reviews for 21 waveforms under initial hardware contract completed; impacts of ASD (NII) mandated Internet protocol version 6 requirement and radio frequency policy are being assessed.

PROJECTED ACTIVITIES

- FY05 Continue technology advancement to include areas such as multiple independent levels of security (MILS), multiple level security (MLS), and network modeling and security
- 3QFY05 Waveform deliveries for HAVEQUICK II, May 2005
- FY06 Operate JTRS Technical Laboratory (JTeL) to certify waveforms, establish JTRS post-deployment software support for base waveform software applications; provide JTRS technical policy to hardware managers and services.
- 1QFY07 Milestone C, post-deployment software support scheduled upon delivery of certified wideband networking waveform

CONTRACTORS

Prime/System Integrator/Waveform Developer: Boeing (Anaheim, CA)
CEA Developer: Harris Corporation (Rochester, NY)
Waveform Developer: Raytheon (Fort Wayne, IN)
Waveform Developer: Assurance Technology Corporation (ATC) (Melbourne, FL)
CIA Developer: General Dynamics (Scottsdale, AZ)

INVESTMENT COMPONENT

Modernization

ACQUISITION PHASE

System Development and Demonstration