

TENCAP OVERVIEW

The Marine Corps Tactical Exploitation of National Capabilities Program (TENCAP) is a research and development (R&D) activity within the Intelligence Department, Intelligence Plans and Policy (IPP) Branch.

TENCAP is designated by the Director of Intelligence to lead the integration of current and emerging national system capabilities into the tactical decision making process. TENCAP integration is coordinated throughout all intelligence disciplines and represents capabilities provided by each of the Combat Support Agencies (CSA).

USMC TENCAP office involvement in National Systems Exploitation can be broken into two major programs: the congressionally mandated program which allocates resources and manpower to research and develop innovative intelligence projects specifically tailored for the Marine Corps and the Military Exploitation of Reconnaissance and Intelligence Technology (MERIT) program. Through the MERIT process, the TENCAP office leverages Joint funded R&D efforts, which will provide the operating forces with better access to national systems or products derived from those systems. TENCAP pursues R&D initiatives in concert with the Marine Corps Combat Development Command (MCCDC) capabilities development process. TENCAP solutions to validated capabilities are provided to Marine Corps Systems Command (MarCorSysCom) for inclusion in existing programs of record, the Marine Corps Warfighting Lab (MCWL) for testing in limited objected experiments, or directly to the operating forces for field user evaluations (FUE). The primary purpose of TENCAP is to exploit current and future national intelligence capabilities and integrate these capabilities into the tactical decision making process as rapidly and at as low an echelon of command as possible.

TENCAP SUCCESSES

Over the years, TENCAP has provided the Marine Corps with many successful projects that have been transitioned into successful programs of record and are currently enabling and improving intelligence support to military operations worldwide. Examples include:

- **Embedded National Tactical Receiver (ENTR) / Data Hawk** — Miniaturized Intelligence Broadcast Receiver capability for supporting tactical situational awareness / analysis for SIGINT requirements.
- **Leatherneck PELT** — Provides increased reporting of short-on-time / high interest emitters, which normally evade current processor techniques.
- **Mini Transmitter (MTX)** — Blue force tracking (BFT) Man-portable mobile device which aids in preventing friendly force fire incidences by reporting unit locational data and user-defined information for the common operational picture.
- **DEMONS** — Provides highly accurate 3D models for mission planning requiring very precise fly-through representations.
- **EGA System** — Incorporates a GPS receiver and GIS software in a handheld computer.
- **OCEAN-TIDES** — Assists with search for imagery collected at user defined tidal conditions.



TENCAP FY07

Marine Corps TENCAP rapidly exploits the tactical potential of current and future national space systems and integrates these capabilities into the tactical decision making process. In order to accomplish this expeditiously, the Marine Corps TENCAP program is constantly researching and developing new technologies with national agencies which will allow the tactical commander to have access to the data and new technologies as they develop and evolve. USMC TENCAP may sponsor the following initiatives as R&D efforts during fiscal year 2007:

- **Disturbed Soil Finder** — Provides a means for imagery analyst to more easily identify local terrain disturbances as indicators of human activity.
- **Right Angle** — Develops a web-based tool that will provide tactical users the ability to generate orthorectified imagery within a few minutes, and the ability to receive the created products over available theater communications for use in tactical planning.
- **Enhanced Integrated Broadcast Services (IBS) Filter** — Will develop a simplified software tool to filter IBS data by operational requirements, thus enabling the data to be more fully understood and utilized by a wider operational audience without extensive, specialized electronic intelligence MOS training.
- **Montage** — Will develop a web-based capability to allow bandwidth-disadvantaged users the ability to create and disseminate custom imagery and advanced Geospatial Intelligence products “on demand”.



INTELLIGENCE PLANS & POLICY/TACTICAL EXPLOITATION OF NATIONAL CAPABILITIES (TENCAP) BRANCH

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INTELLIGENCE PLANS & POLICY/ TACTICAL EXPLOITATION OF NATIONAL CAPABILITIES (TENCAP) BRANCH



Tactical Exploitation of National Capabilities (TENCAP)





MARINE CORPS TENCAP PROJECTS

DATA HAWK EMBEDDED NATIONAL TACTICAL RECEIVER (ENTR)/ LAPTOP INTEGRATION

- Integrated Broadcast Service (IBS) receive suite with robust Tactical Data Processor and parser (currently uses Gale-Lite and TRS-C).
- ENTR card integrated into unique cooling expansion chassis.
- Provides same capability as Commander's Tactical Terminal (CTT) with a drastically smaller footprint and power requirement.



- Data Hawk is currently being used by national agencies and Combatant Commands.

PRECISION EMITTER LOCATION AND TARGETING (PELT)



- Enhanced processor capability for targeting high interest emitters.
- Web-based Graphic User Interface (GUI) via SIPRNET.
- PELT I was operational for OIF I and was successful in locating high interest enemy emitters.
- Benefits targeting and threat warning for air crews.

- Transitioned to a National Agency.



MTX BLUE FORCE TRACKING (BFT) DEVICES

- Blue Force Tracking (BFT) handheld mobile device which helps prevent friendly force fire incidences by reporting unit location data along with user defined brevity code information for the common operational picture (COP).
- USMC TENCAP purchased (200) MTX BFT devices and provided initial training to the operating forces.
- Also provides training on how to receive the Low Probability of Intercept (LPI) information for injection into the COP/CIP.
- USMC TENCAP remains engaged in various projects exploring line-of-sight (LOS) methods using MTX.
- Allows more realistic training that does not require tasking of national systems.
- Transitioned to MarCorSysCom.



DIGITAL ELEVATION MODELS OF NATIONAL SYSTEMS (DEMONS)

- Provides highly accurate 3D models for mission planning, which requires very precise fly-through representations.
- Provides ability to chip segments of Digital Elevation Models in order to avoid network congestion due to product file size.
- Will provide imagery exploitation ability through a web application interface.
- Several models already built by MCIA and used by the operating forces in Iraq.
- Will transition to NGA in FY06.
- Follow-on project will incorporate further data on vertical obstructions for addition to the 3D models.
- Working transition issues with MCIA and operating forces.
- Funded by the MERIT program.



EXPEDITIONARY GEOSPATIAL ANALYSIS (EGA) SYSTEM

- Provides an integrated GIS/Imagery handheld device that assists in providing better situational awareness and analysis capabilities.
- Provides capability to perform detailed geospatial-oriented data collection by reconnaissance units.
- Users can mark GPS coordinates on GIS products loaded into ArcPad software with preformatted reports.
- Current development tailored to war in Iraq (OIF II and beyond).
- Patrol can mark a GIS product with a grid coordinate and add names, tribal affiliation, etc.
- Store digital photograph of targets.
- New TENCAP R&D effort.



OVERHEAD COASTAL ENVIRONMENTAL ANALYSIS FROM TIDAL INTEGRATED DATA ELEMENTS (OCEAN-TIDES)

- OCEAN-TIDES assists analysts searching for imagery collected at user defined tidal conditions.
- Decreases the time it takes to search for images - from over 5 hours to approximately 10 minutes.
- Transitioned to NGA.
- OCEAN-TIDES II will provide increased tidal data, as well as allowing for a web-based access to the imagery that meets user criteria.
- TENCAP developed this project using primarily NRO provided funds under the MERIT program.

