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SITREP

"To dissuade and defeat threats as early and as far from U.S. borders as possible."

MDP Research Group Sponsors New Project:
Coalition Operating Area Surveillance and Targeting System

The MDP Research Group is the initial sponsor of an innovative new research project known as the Coalition Operating Area Surveillance and Targeting System (COASTS).

This new NPS program creates a mobile field test bed environment for research and development, integration, operational testing, and field validation using Unmanned Aerial Vehicles, manned and unmanned air/ground sensors (i.e. soldiers equipped with handheld (PDA) technology), and emerging wireless network technologies to display Command and Control information to a local/emote or mobile tactical and network operations

Altus ST

center. The COASTS program experiments with individual and small unit network-capable communication and threat warning technologies. The COASTS topology uses an open, plug-and-play architecture, is user-configurable, and enables U.S. and coalition partners to implement a common operating picture (Situational Awareness) via a self-forming, self-authenticating, autonomous network.

This research will allow U.S. military commands, including NPS, to collaborate with coalition partners and allies to support War on Terror

Royal Thai Army UAV

objectives and requirements, using the latest wireless networking technologies, tools, tactics, and techniques. NPS and Thailand are the initial team members that will integrate the proposed equipment and technology into a system to facilitate surveillance and monitoring of "areas of interest." The Singapore Ministry of Defense is considering becoming involved in this project.

The COASTS concept is modeled after the Surveillance and Target Acquisition Network (STAN) project, an NPS-driven research endeavor. STAN was initiated to meet the need to integrate emerging WLAN technologies with surveillance and targeting hardware/software systems. STAN has been very successful and has grown significantly since inception.

COASTS will directly support organizing, training, and equipping U.S. military forces and the Thailand (and possibly Singapore) Defense Forces in seven principal mission areas: Direct Action; Tactical Reconnaissance; Foreign Internal Defense; Combating Terrorism; Civil Affairs; Counter-proliferation of Weapons of Mass Destruction; and Information Operations.

Handheld Device

Make a Note of It!

The Maritime Domain Protection Task Force has changed its name and will now be known as the Maritime Domain Protection Research Group (MDP RG)

Systems Engineering and Integration Team Releases "As Is" MDP Report

The MDP Research Group's Systems Engineering and Integration (SE&I) Team recently completed an initial summary of findings on the current status of MDP.

The SE&I team was tasked with providing focus to the numerous efforts of government agencies and organizations involved in MDP.

The goal is to determine what functional capabilities and system architecture would best meet the nation's need for a nationally integrated MDP system.

The process involves assessing current MDP capabilities, comparing those capabilities to the notional MDP structure, and identifying how the two can be brought together to establish a more complete and effective system.

The SE&I team has prepared a summary of findings to date, the *"As Is" National Maritime Domain Protection System* report. "Our research was very illuminating," stated SE&I team member Mr. Mark Stevens, P.E., "we have a much better idea about where to focus our efforts and how to maximize limited resources."
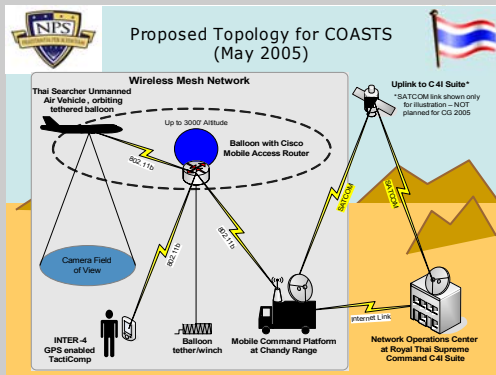
This report has been designated For Official Use Only (FOUO). For further details, please contact Mr. Stevens at mstevens@nps.edu.

New Research Initiative (cont'd from page 1)

The COASTS project hopes to address three primary concerns:

- Does COASTS provide threat warning information as part of a wireless LAN/WAN?
- Does COASTS meet performance requirements when deployed to Thailand (ground/jungle scenario - such as the 2500 kilometer Thailand/Myanmar border region)?
- Does COASTS meet performance requirements when deployed to Singapore (water scenario - such as Straits of Malacca and/or Singapore Straits)?

Proposed Topology for COASTS (May 2005)

Organizations involved in this project include: U.S. Pacific Command (USPACOM); U.S. Joint Information Operations Command; Royal Thai Air Force (RTAF); Royal Thai Army (RTA); and the Naval Postgraduate School's MDP Research Group. The National University of Singapore and Temasek Labs, and Singapore's Defense Science and Technology Agency (DSTA) are considering becoming involved.

For additional information on the COASTS project, please contact Mr. Brian Steckler (steckler@nps.edu) or Mr. James Ehlert (jfehlert@nps.edu).

Automating Institutional Knowledge for Maritime Domain Awareness

Background: A National Academy Press reference for C4I states that "access to more data may actually inhibit, rather than support, better decision making unless this data is fused into reliable knowledge." Maritime Domain Awareness (MDA) is hindered by data overload, and watchstanders at NMIC, MIFCs, and SCCs face information starvation situations every day.

Readers may recall the January 2003 *USNI Proceedings* article written by LCDR Studemann, USN, in which he referenced two challenges which are germane to the issue of better decision making and to the theme of this article: 1) "turn raw shards of data into . . . windows of understanding," and 2) "Do not neglect the mundane processing, exploitation, sifting, and compiling of data for mid- to long-term purposes."

Situation: Automated Tasking, Production, Exploitation and Dissemination (TPED) processes can enhance Common Intelligence Pictures for global maritime awareness by coupling three technologies: Agent-based Automation and Database Visualization/Query; Multi-Intelligence Fusion Techniques; and Web- and Service-based Collaboration.

Leveraging these information technologies from funded S&T efforts helps provide a speed to capability for Sea SHIELD missions and maritime domain protection.

A loosely coupled decision support system is suggested as a useful construct to automate institutional knowledge and demonstrate "windows of understanding" with a persistent and accurate Common Intelligence Picture. Human systems interfacing of this Intelligence Fusion System and its on-line help/training features offer Commanders the capability and training required for mission success.

Steps: The Naval Postgraduate School and Orincon Defense plan to host a loosely coupled Intelligence Fusion System to capitalize on live/historical "INTEL" data feeds and evaluate key performance parameters for maritime domain protection.

> "Commanders must have the ability and the training to query the 'fused' picture to get the understanding they need to carry out their particular piece of the mission."
>
> *National Academy Press*

Submitted by Dave Frost (david.frost@lmco.com), Orincon Defense, a wholly owned subsidiary of Lockheed Martin Corporation

MDP Graduate Intern Elected President of International Law Enforcement Association

Lt. Bruce Martin, graduate intern with the MDP Research Group and a police officer with the Department of Public Safety in Marina, California, was recently elected President of the International Association of Asian Crime Investigators (IAACI). Since 1987, the IAACI has been dedicated to developing enforcement and investigative strategies and tactics for combating Asian organized crime. The Association counts among its members law enforcement, educators, researchers, criminal justice students, and members of the private sector with associated concerns.

Planning is currently underway for the 2005 IAACI Conference, which will bring together hundreds of law enforcement, intelligence, private sector, and possibly military personnel interested in gaining an understanding of the strategies and tactics needed to address different aspects of crime. Conference speakers are drawn from interdisciplinary lines and will offer participants a unique perspective and useful information. For further details, please contact Lt. Martin at iaaci_center@hotmail.com or visit the Association web site at www.iaaci.com.

Membership in the Association offers many benefits, including access to a network of investigators and research specialists in the field of Asian criminality; workshops, conferences and training seminars; and research and consulting assistance in investigative endeavors.