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### TALKING POINTS Visit of Defense Science Study Group 9 June 2006

#### Background:

The Defense Science Study Group (DSSG) selects young professors from many of the nation's top universities, as well as non-university affiliated men and women, all of whom have been nominated by senior academic officials, DSSG alumni and various government agencies to take part a two year program. The DSSG program focuses on defense policy, related research and development, and the systems, missions, and operations of the armed forces.

#### Mission:

The mission of the DSSG is to convey to members an understanding of the technical dimensions of national security issues and an appreciation for the people and operations involved.

#### Conference Agenda:

The conference will present three briefings to the DSSG:

- a. The Command Overview: This is an unclassified over view of CENTCOM's history, command relationships, essential tasks, forces deployed in the AOR, breakdown of coalition forces, strategy, mission and threat analysis. (COL (b)(6) )
- b. Advance Concepts and Technology Demonstrations: Discusses the ACTD/JCTD program under the J8-Science and Technology Division. The program is designed to answer a Combatant Command capability gap or shortfall currently not being addressed by a Service program of record. The program was designed to provide a jump start to the acquisition process and provide a residual capability to the Combatant Commander while the technologies are integrated into Service programs of record. (Mr. (b)(6) )
- c. Counter-Improvised Explosive Device: Discusses the threat of working in the CENTCOM AOR, and other IED infested environments. Presents information on the Commander's Counter-IED (C-IED) Guidance and an overview of the CENTCOM C-IED Campaign Plan. (COL (b)(6)

APPROVED BY: //Signed//  
Heidi H. Grant  
SES  
Director, Resources &  
Assessment

PREPARED BY: //Signed//  
(b)(6)  
MAJ, USA  
Science and Technology  
Division  
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~~\*\* SECRET//NOFORN \*\*~~*History of USCENTCOM, January – December 2005***INTELLIGENCE BRIEFINGS TO VERY IMPORTANT PERSONS (VIPs) AND SENIOR OFFICERS (U)**

(U) January – Congressman Jim Davis, Florida 11<sup>th</sup> District Representative, United States Congress; Vice Admiral (Retired) John McConnell, Vice President, Booz Allen Hamilton; Major General (Retired) Leroy Barnidge, Deputy General Manager Northrup Grumman Melbourne; Lieutenant General H. Steven Blum, ANG, Chief, National Guard Bureau; Dynamics of Strategic Leadership Group, National Geospatial-Intelligence Agency; Mr. (b)(6) Booz Allen Hamilton, Principal Manager; Mr. Porter Goss, Director of Central Intelligence; Dr. Stephen Cambone, Under Secretary of Defense for Intelligence; Lieutenant General William Boykin, USA, Deputy Undersecretary of Defense for Intelligence and Warfighting Support; Major General Richard Quirk, USA, Director Signals Intelligence, National Security Agency; Mr. Mark Wheat, Staff Director and Chief Council, House Government Reform Committee, United States House of Representatives; His Excellency Jean-David Levitte, French Ambassador to the United States; Air Commodore Pieter Cobelens, Director of Operations, Netherlands Military Defense; Major General Charles E. Wilson, USAR, Deputy Commander, U.S. Army Reserve Command; Tampa Community Civic Leader Group; Dr. Michael Doran, Assistant Professor, Department of Near Eastern Studies, Princeton University; Brigadier General Brett D. Cairns, Director General, Military Plans and Operations, Canadian Defense Forces; Lieutenant General Harry Radeugue, USAF, Director, Defense Information Systems Agency; Ambassador Baktybek Abdrisaev, Kyrgyzstan Ambassador to United States; His Excellency Ilko Dimotrov, Deputy Minister of Defense, Bulgaria; Ms Janice Gardner, Deputy Assistant Secretary for Intelligence and Analysis, Department of Treasury; Naval Staff College; Brigadier General Joseph Votel, USA, Director Joint Improvised Explosive Devices Defeat Task Force and CAPSTONE Class 05-01.

(U) February – Mr. Lorenzo S. Hiponia, SES, Director Center for External and International Programs, Joint Military Intelligence College; Lieutenant General Hans Sonneveld, Deputy to Chief of Defense Staff, Royal Netherlands Defense Forces; Tampa Connection; Honorable Michael L. Dominguez, Assistant Secretary of the Air Force for Manpower and Reserve Affairs; Joint Chiefs of Staff and Office of the Secretary of Defense U.S. Army Interns; Brigadier General Daniel Wright, USA, Assistant Judge Advocate General for Military Law and Operations; Industrial College of the Armed Forces; Lieutenant General Duncan J. McNabb, USAF, Director for Logistics, Joint

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~~\*\*SECRET//NOFORN\*\*~~*Chapter II Joint Planning, Operations, and Training*

Staff; Mr. Tom Friedman, New York Times Columnist; Brigadier General Charles Neeley, USAF, and Air Commodore David Pietsch, Director General of Interoperability, Royal Australian Air Force, Australian/ United States Combined Interoperability Team.

(U) March – Mr. Roy Apseloff, SES, Acting Director of National Media Exploitation Center; U.S. Army War College Policy Fellows Program; Mr. Avon Adams, SES, General Counsel for the Army; Mr. George Pierce, SES, General Counsel, Defense Intelligence Agency; Mr. Leonard Jefferson, SES, Joint Material Command and Army Field Support Command Executive Leadership Program; Lieutenant General (Retired) John J. Cusick, USA, Rapid Deployment Joint Task Force Senior 25<sup>th</sup> Reunion; Honorable Pete Hoekstra, Chairman, House Permanent Select Committee on Intelligence, United States Congress; Naval Command College (International Fellows); Dr. Linton Wells, II, Assistant Secretary of Defense for Networks and Information Integration; Joint Capabilities Board; Major General (P) Eikenberry, USA, Incoming Combined Forces Command-Afghanistan Commander; Ambassador David Litt, Political/Military Counselor to Baghdad Iraq; Major General Miteb Wseiwes Fahed Alzaben, Vice Chairman, Joint Chiefs of Staff, Jordanian Armed Forces; Senior Executive Service APEX 20; Western Hemisphere Institute for Security Cooperation and General Staff Officers Course; Naval Staff College (International Fellows); Mr. Michael Braun, SES, Chief of Operations; Drug Enforcement Agency; Major General Bahadur Gurung, Chief Quartermaster Department, Nepal Army; Major General Valdas Tutkus, Commander, Lithuanian Armed Forces; Mr. Bill McGinnis, Staff Delegate, House Appropriations Survey and Investigations Committee; Dr. Marc Sageman, MD, Ph.D., Clinical Assistant Professor, University of Pennsylvania; Air Force Science Advisory Board; and Major General John T. Brennan, USAF, Incoming Chief, Office of Military Cooperation-Afghanistan (OMC-A).

(U) April – Lieutenant General Edward Hanlon, Jr., USA, U.S. Military Representative to NATO Committee; Lieutenant General Walter E. Buchanan III, USAF, Commander, U.S. Central Command Air Forces (CENTAF); Major General Frank R. Faykes, USAF, Director of Financial Management and Comptroller, Headquarters Air Force Material Command, Foreign Defense Attache Operations Delegation; Brigadier General Annette L. Sobel, ANG, Director of Intelligence, National Guard Bureau; (b)(6) (b)(6), Ph.D., Kennedy School of Government, Harvard; Mr. Newt Gingrich, Former Speaker of the House and U.S. Representative; General Colonel Serhiy Olekansandrovych Kyrychenko, Chief of General Staff, Armed Forces of Ukraine; U.S. Council on Foreign Relations Delegation; Clearwater Community Civic Leader Group;

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Central Intelligence Agency Career Analyst Class; General Ray Henault, Canadian Defense Forces, Chairman (Designate) Military Committee of NATO; Mr. Dobie McArthur, Special Assistant to Deputy Secretary of Defense; Brigadier General David Capewell, United Kingdom Chief of Defense Liaison Officer to the Joint Chief of Staff; Ms. Sue Payton, SES, Deputy Under Secretary of Defenses Advance Systems and Concepts; Mr. Douglas J. Feith, Under Secretary of Defense for Policy; Major General Timothy F. Ghormley, USMC, Incoming Commander, Combined Joint Task Force, Horn of Africa; Ms. Marina Pendes, Bosnia Deputy Minister of Defense for Resources; CAPSTONE 05-0; Mr. Frederic W. Maerkle, POLAD (designate) to Combined Joint Task Force, Horn of Africa; Netherlands Advance Defense Course; and Colonel (P) James E. Moentmann, USA, Incoming Chief of Staff for Coalition Forces Command – Afghanistan.

(U) May – Foreign Operations Committee, U. S. Senate; Mr. Jose Bono, Minister of Defense for Spain; Dr. (b)(6), SIS, Chairperson, Army Science Board; Marine Corps War College; Mr. Forest Farley, Director James A. Haley Veterans Hospital; Mr. (b)(6), Defense Intelligence Senior Leader, National Air and Space Intelligence Center; Major General James A. Kelley, USA, Chief of Staff, U.S. Army Reserve Command; Mr. Mark Greer, SES, Vice Deputy for Information Management and Chief Information Officer, Defense Intelligence Agency; Brigadier General Essa Al-Mazrouei, Director of Intelligence, United Arab Emirates Ministry of Defense; General D. L. Berlijn, Chief of Defense Staff, Royal Netherlands Defense Force, Armed Forces of the Kingdom of Netherlands; Vice Admiral John Morgan, USN, Deputy Chief of Naval Operations for Information, Plans, and Strategy; Brigadier General Armin Hasenpusch, Director of Military Intelligence, Minister of Defense, Bonn, Germany; Brigadier Paul Newton, Assistant Chief of Staff, Directorate of Intelligence, Permanent Joint Headquarters, United Kingdom; Ms Carol Haave, SES, Deputy Under Secretary of Defense for Counter Intelligence and Security; Dr. Jeffrey Starr, SES, Office of Secretary of Defense for Special Operations and Low Intensity Conflict; Major General John T. Brennan, USA, Security Coordinator and Chief, Office of Military Cooperation-Afghanistan; Brigadier General Joseph L. Votel, USA, Director Joint Improvised Explosive Device Defeat Task Force; Mr. Bard Glad Pedersen, Deputy Minister of Defense, Norway; Admiral Giampaola Di Paola, Chief of the Italian Defense General Staff; Ms. Monica Shephard, Director, Joint Prototype Pathway, U.S. Joint Forces Command; Vice Admiral John Morgan, USN, Deputy Chief of Naval Operations for Information, Plans and Strategy; and the House of Representatives Permanent Select Committee on Intelligence.

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~~\*\* SECRET//NOFORN \*\*~~*Chapter II Joint Planning, Operations, and Training*

(U) June – Lieutenant General (Retired) James R. Clapper, USA, Director, National Geospatial-Intelligence Agency; Mr. John P. Walters, SES, Director of White House Office of National Drug Control Policy; Major General Carlos Eduardo Caceres Flores, Chief of Joint General Staff, El Salvador; Mr. Bruce Miller, SES, New Zealand Signals Intelligence Liaison Officer and National Cryptologic Representative (Afghanistan), National Security Agency; Brigadier General John M. Perryman, USA, incoming Chief of Training Mission, Afghanistan; Brigadier General Robert L. Caslen, Jr, USA, Deputy Director for War On Terrorism, Joint Staff; Mr. Tom Friedman, Foreign Affairs Columnist, New York Times; Major General Hamad Al-Attiyah, Chief of Staff, Qatar Armed Forces; Brigadier General Michael D. Jones, USA, Deputy Director, Politico-Military Affairs for Middle East, Joint Staff; Major General Benoit Puga, Commander of French Special Operations Command; Honorable Richard Cheney, Vice President of United States; Mr. Bob Hite, News Anchor, Channel WFLA, Mr. (b)(6), Deputy Director, Office of Military Affairs, Central Intelligence Agency; Honorable Carlos Westendorp y Cabeza, Spanish Ambassador to United States; Brigadier Simon Porter, British Army, Assistant Chief of Staff for Plans and Policy-SHAPE, Brigadier General Kathleen Gainey, USA, Director of Force Projection and Distribution, Office of Deputy Chief of Staff for the Army; Mr. Tadamichi Yamamoto, Minister, Plenipotentiary and Deputy Chief of Mission, Embassy of Japan, Washington D.C.; Mr. Mike Evenson, SES, Director of Combat Support, Defense Threat Reduction Agency; Mr. Brad Hanson, Incoming Deputy Chief of Mission, U.S. Embassy, Uzbekistan; Brigadier General Gary M. Jones, Commander United States Army Special Forces Command; Major General Michael J.C.M. Gauthier, Canadian Chief of Defense Intelligence; Mr. Erik Abjomson, SES, Office of Iraqi Analysis, National Security Group; and Mr. Marius Balu, Secretary of State, Romania.

(U) July – Senator Alan Ferguson, Liberal Party, Chairman Joint Standing Committee on Foreign Affairs and Trade and Leader Australian Defense Sub-Committee; Brigadier General James R. Myles, USA, Commanding General, US Army Test and Evaluation Command; Brigadier General Joseph L. Votel, USA, Director IED Task Force; Brigadier General Rhett A. Hernandez, USA, Director, Officer Personnel Management Directorate; Lieutenant General John F. Sattler, USMC, Commanding General, First Marine Expeditionary Force (I-MEF); Ambassador David C. Litt, Incoming Political Military Advisor to Baghdad; Media Blitz “Move America Forward”, Radio Anchor personnel; Major General Conrad W. Ponder, USA, Deputy G-6, Department of the Army; General Michael V. Hayden, USAF, Principal Deputy Director,

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National Security Agency and Chief of Central Security Service; Mr. Michael S. Dell, Chairman, Board of Directors, Dell Corporation; Mr. Richard Norland, Incoming Deputy Chief of Mission, U.S. Embassy in Afghanistan; His Excellency Jerzy Szmajdzinski, Minister of Defense, Poland; CAPSTONE Class 05-3; Lieutenant General Charles E. Croom, USAF, Director, Defense Information Systems Agency; Colonel General Ahmed Arara, Moroccan Defense Attache to U.S.; General Carlos Ospina Ovalle, Commander, Military Forces, Colombia; Ms. Frances Fragos Townsend, Assistant to the President for Homeland Security; Mr. Jeff Castelli, SES, Central Intelligence Agency; Mr. Richard Christensen, SES, Deputy Chief of Staff, G2, USA; Major General Richard J. Quirk, USA, Director Signals Intelligence, and Mr. (b)(6) DISL, National Security Agency; Brigadier General Dany Van De Ven, Belgian Defense Attache to U.S.; and General Gerhard Back, Commander, NATO Joint Force Command Headquarters.

(U) August – Mr. Ken Olsen, Attorney; Mr. Mark Greer, SES, Vice Deputy for Information Management, Defense Intelligence Agency; Major General Ahmed Mokhtar, Chief Egyptian Training Authority; Honorable Mel Martinez, Republican-Florida, United States Senator; Ms. Beth Larson, Majority Staff Member, House Permanent Committee on Intelligence; Admiral (Retired) Dennis Blair, President and CEO, Institute for Defense Analysis; Nashville Committee on Foreign Relations; Mr. Stephen Norton, SES, Chief Defense Human Intelligence Management Office; Mr. Jack Mathews, SES, Chief, Joint Communications Security Monitoring Activity, National Security Agency; Command and Staff College, German Armed Forces; Brigadier General Marek Dukaczewski, Chief Defense Intelligence, Polish Ministry of Defense; Major General Mark A. Welsh, USAF, Deputy Commander, Joint Functional Component Command for Intelligence, Surveillance and Reconnaissance, U.S. Strategic Command; General (Retired) Barry McCaffrey, USA, Adjunct Professor, United States Military Academy; Assistant Secretary David Welch, Bureau of Near Eastern Affairs, State Department; General Gerhard Back, Commander, NATO Joint Forces Command Headquarters and Ambassador Eric S. Edelman, United States Ambassador to Republic of Turkey.

(U) September – General Henri Bentegeat, Chief of the Armed Forces General Staff, Republic of France; Major General Raza Muhammad Khan, Director of Operations, Plans and Services, Pakistan Army; Colonel General Jaroslav Gofjar, Deputy Director, Slovak Republic Military Intelligence Service; His Excellency General Pervez Musharraf, President of Pakistan; Admiral Edmund P. Giambastiani, Jr, Vice Chairman, US Joint Chiefs of Staff; Brigadier General Sandy Davidson, USA, Incoming Chief, Office of Defense Representative, Pakistan; His Excellency Martin Fedor, State Under

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*Chapter II Joint Planning, Operations, and Training*

Secretary, Ministry of Defense, Slovak Republic; Senior Executive Service, APEX 21 Orientation; Dr. Richard Gault, SES, Chief, Office for Critical Infrastructure Protection and Homeland Security, Defense Intelligence Agency; and Turkish Distinguished Visitors Orientation Program Tour.

(U) October – Brigadier General Mark Solo, USAF, incoming Chief, Office of Military Cooperation, Kuwait; CAPSTONE 06-1; Brigadier General Stephen Layfield, USA, Deputy Chief of Staff for Operations with Allied Rapid Reaction Corps; Honorable Donald Rumsfeld, US Secretary of Defense; Dr. Thomas P.M. Barnett, Author New York Times Best Seller, “The Pentagon’s New Map;” Brigadier General Joseph L. Votel, USA, Director, Joint Improvised Explosive Device Defeat Task Force, Office of Deputy Chief of Staff of USA; Ambassador James Larocco, Multinational Force and Observers Director General; NATO Reporting Tour 2005; General Sir Richard Dannatt, Commander in Chief Land Command, United Kingdom; Lieutenant General (Retired) Claude Kicklighter, USA, Special Assistant to Secretary of Defense for Transformation of Afghanistan and Iraq; Honorable Serzh Sargsyan, Minister of Defense, Republic of Armenia; Mr. Larry Hollingsworth, SES, Head 4.5 Aircraft Division Operations, Corps of Foreign Naval Attaches; and Joint Capabilities Board.

(U) November – Major General Benoit Puga, Commander French Special Operations Command; Mr. Daniel J. Dell’Orto, Principal Deputy General Counsel, Department of Defense; Lieutenant General Johann Georg Dora, Deputy Chief of Defense Staff, Germany; Mr. Pierre Kraehenbuehl, Director of Operations for International Committee of the Red Cross; Mr. Robert J. Olson, Interim Director, Near East South East Asia Center, Department of Defense, General Intelligence Training Council; Rear Admiral Richard Hunt, USN, Prospective Commander, Combined Joint Task Force, Horn of Africa; Mr. Dick Vitale, American Sports Caster, Notable Blitz Program; General Norton A. Schwartz, USAF, Commander, U.S. Transportation Command; Dr. John P. Rose, Director, George C. Marshall European Center for Security Studies, Garmisch-Partenkirchen; General (Retired) Gary E. Luck, USAF Senior Advisor to Joint Forces Command; Mr. Neils Henrik Hedegaard, Assistant Director, Danish Defence Intelligence Service; Major General Jack D. Gardner, USA, Deputy Commanding General of Detainee Operations and Commanding General Task Force 134, Multi-National Force Iraq; Lieutenant General Claude V. Christenson, USA, Director of Logistics, Joint Staff; Dr. Fareed Zakaria, Commander Action Group, Guest Speaker; Lieutenant General (Retired) Daniel Christman, USA, Senior Vice President, International Affairs to the U.S. Chamber of Commerce; Mr. (b)(6) National Security Agency Representative to

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Department of Defense; Brigadier General Markku Koli, Deputy Chief of Operations, Finish Defense Forces; Mr. Grant Schneider, SES, Chief of Enterprise Infrastructure Services Group, Directorate for Information Management and Chief Information Officer; Mr. Thomas Gimble, SES, Action Inspector General, Department of Defense; Lieutenant General Ken Gillespie, Vice Chief of Defense Forces and Chief of Joint Operations, Australia; Honorable Stephen A. Cambone, Under Secretary of Defense for Intelligence; Mr. (b)(6), President, Foundation for the Defense of Democracies; Honorable John Young, Director of Defense Research and Engineering; Commodore George Zambellas, Commander Amphibious Task Force Group, Royal Air Force, United Kingdom; Brigadier General Gary S. Connor, USAF, Commander, Electronic Systems Center, Hanscom Air Force Base; and Mr. Paul Van Son, Director for Bureau of International Security and Nonproliferation Office of Export Controls, Department of State.

(U) December – Joint Advanced Warfighting School, Class 2005; Brigadier General Joseph L. Votel, USA, Director Joint Improvised Explosive Device Defeat Task Force; Rear Admiral Anthony Winns, USN, Vice Director Of Operations, Joint Staff; Mr. Steve Norton, SES, Director National Human Intelligence Management Office; Major General Benjamin Freakley, USA, Commanding General, 10<sup>th</sup> Mountain Divison; Mr. Dennis Richardson, Australian Ambassador to the United States; Business Executives for National Security; Major General Robert E. Durbin, USA, Incoming Chief of Security Cooperation – Afghanistan; Naval Staff College (International Class of 2006); Honorable Friis Arne Petersen, Danish Ambassador to the United States; Brigadier General Michael Worden, USAF, Director of Operational Plans and Joint Matters, Headquarters, United States Air Force; Mr. Chuck Alsup, SES, and Mr. Daniel Sheehan, SES, Deputy Director and Associate Director of National Intelligence for Military Support; Mr. Kenneth Pollack, Director of the Saban Center for Middle East Studies at Brookings Institution; Mr. (b)(6) Assistant Administrator for Democracy Conflict and Humanitarian Assistance; Brigadier General Darren W. McDew, USA, Incoming Director of Mobility Forces; and Brigadier General James M. Mungenast, USAF, Mobilization Assistant to the Director of the Defense Intelligence Agency.

**CCJ2-JC: Collection Management Division (U)**

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from requirements to the Joint Staff to sourcing solution back to USCENTCOM, allowing for automated orders writing and requirements tracking.<sup>467</sup>

(U) In a major effort to rewrite DOD deployment doctrine, the branch hosted three 2006-08 planning conferences (January, February and a resubmission conference in July), establishing over 1400 CENTCOM requirements. Branch officials prepared for three global force management boards and a number of Joint Staff and JFCOM sourcing events. Members were integral in defining force requirements for earthquake relief efforts in support of Pakistan. The branch processed more than 150 requests for forces (RFFs) from components, which included landmark programs such as the Iraq Transition Teams and the Afghanistan embedded training teams. It released 46 Redeployment Orders (REDEPODs), closing out for requirements for units ranging in size from a dog handler and do to entire brigade combat teams (BCTs) in Iraq and Afghanistan. The branch also released over 50 USCENTCOM deployment order (DEPOD) modifications in response to more than 60 JCS actions.<sup>468</sup>

**AOR/Counter Terrorism Branch (J3P-AOR/CT (U))**

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(U) The branch was also involved in other OPTs, including AOR Strategy, AOR Command and Control, the Regional War on Terror, and the Combatting Terrorist Weapons of Mass Destruction. Branch personnel reviewed numerous strategic documents such as the Joint Strategic Capabilities Plan (JSCP) and the Contingency Planning Guidance (CGP), along with numerous joint publications and theater war plans.

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<sup>467</sup> Input (U), CCJ3P-FM, CY 2005 Annual History.

<sup>468</sup> Ibid.

(b)(1)1.4a, (b)(1)1.4g

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Aside from reviewing documents, AOR & CT also produced numerous documents, not the least of which was a number of high-profile briefings that enabled the Commander, USCENTCOM to tell of the grave threat emanating from our theater of war. The Commander presented these briefs to a number of dignitaries and academics both at home and abroad (e.g., Dr. Pollack, Dr. Friedman, the Chairman of the Joint Chiefs of Staff, President Musharraf, Prime Minister Blair, Vice President Cheney, and President Bush).<sup>470</sup>

**Strategic Deployment Division (U)**

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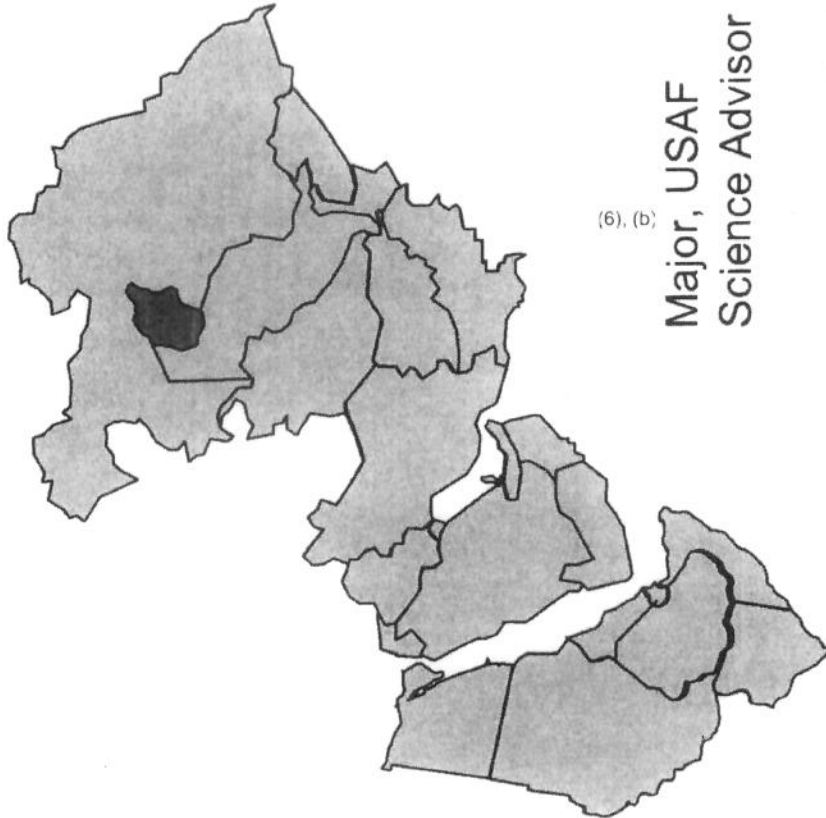
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<sup>470</sup> Input (S), CCJ3P-CT, CY 2005 Annual History, info used (U).

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# USCENTCOM ACTD Overview Briefing



(6), (b)

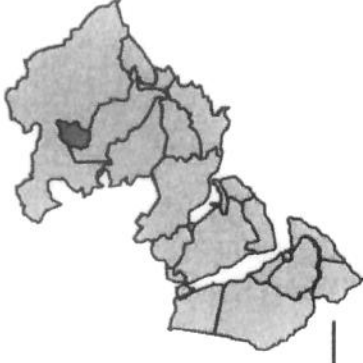
Major, USAF  
Science Advisor

Document approved for  
release by U.S. Central  
Command. See FOIA  
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## What are ACTDs?



An ACTD is an opportunity to evaluate mature technology from either civilian or military communities to solve existing military shortfalls in a cost effective and accelerated manner.

Key Elements of an ACTD are:

- o CINC Sponsored, Joint in scope.
- o 2 phase programs
  - Demonstration phase (2-4 years in length)
  - Residual phase (1-2 years in length)
- o DUSD and Service funded

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# ACTD vs. ACQUISITION

*An ACTD is Intended to Answer the Question  
 "Can Existing Technology Satisfy This Need?"*

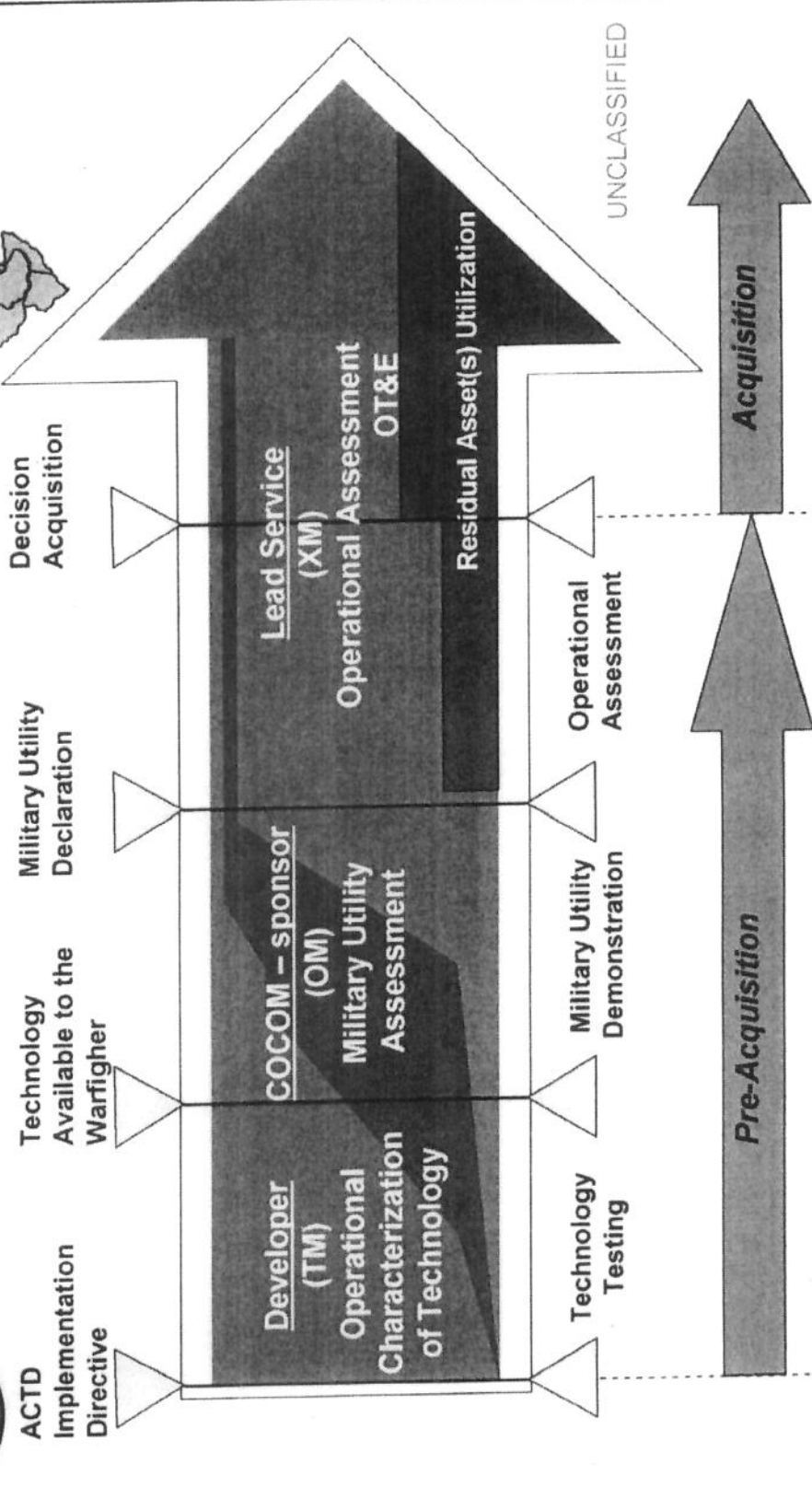


	Operational Requirement Document	Need
Requirements	Milestone Review	OSD/JS JROC Reviews
Approval Mechanism	MDA	DUSD (AS&C)
Approval Authority	Yes	No
Commitment to Acquire	Yes	No
Acquisition Funding	Yes	No
Analysis of Alternatives	As Required	Currently Available
Technology Level	DoD 5000.2R	As Appropriate
Development Process	Performance vs.. Requirement	Military Utility
Test Objective	12-18 Years	2-4 Years
Typical Timeframe		

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# ACTD Streamlined Acquisition Cycle



Developer
  COCOM - Sponsor/Operational Mgr
  Lead Service
  Residuals left for COCOM use



# USCENTOM ACTD Oversight Team



## Government

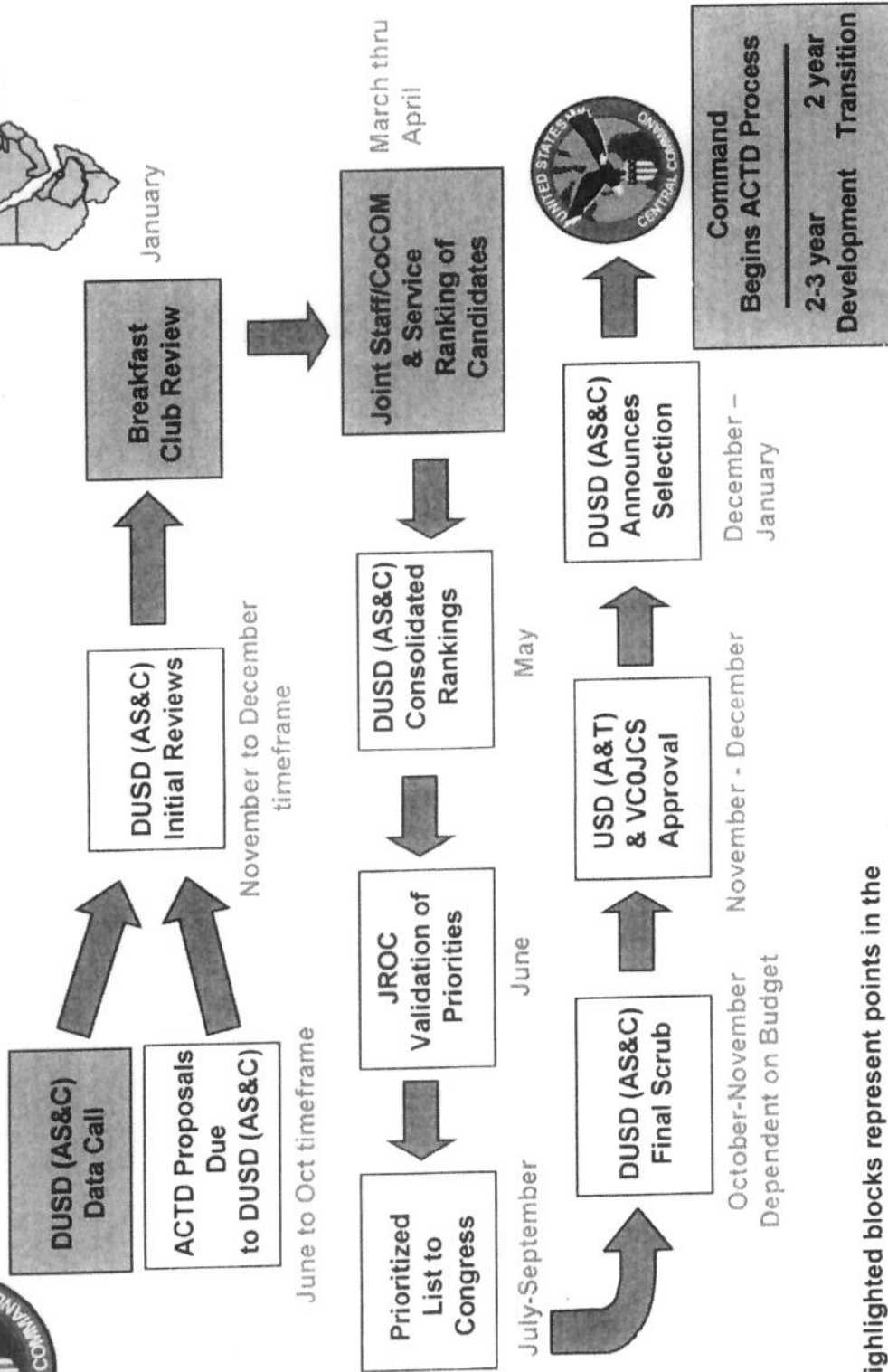
Major (b)(6) Science Advisor O-4 (USAF)

## ACTD Contractor Support

Mr (b)(6)	Lockheed Martin (Team Leader)	Retired USA
Mr (b)(6)	Lockheed Martin	Retired USAF
Mr (b)(6)	Lockheed Martin	Retired USA

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# ACTD Selection Process with USCENTCOM Involvement Points



\* Highlighted blocks represent points in the process where USCENTCOM has involvement.

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# Current USCENTCOM ACTDs



<b>ADVANCED CONCEPT TECHNOLOGY DEMONSTRATION</b>	<b>DIRECTORATE</b>
<u>Agent Defeat Warhead (ADW)</u>	CCJ3
<u>Advanced Tactical Targeting Technology (AT3)</u>	CCJ3
<u>Computerized Operational MASINT Weather (COMWX)</u>	CCJ3
<u>Contamination Avoidance for Sea Ports of Debarcation (CASPOD)</u>	CCJ8
<u>GRIDLOCK</u>	CCJ2
<u>Hyperspectral Collection and Analysis System (HvCAS)</u>	CCJ2
<u>Joint Intelligence, Surveillance, Reconnaissance (JISR)</u>	CCJ2
<u>Line-of-Sight Anti-Tank (LOSAT)</u>	CCJ8
<u>Network-Centric Collaborative Targeting (NCCT)</u>	CCJ3
<u>MAGNUM</u>	CCJ2
<u>Theater Support Vessel (TSV)</u>	CCJ4



# USCENTCOM Complete ACTDs



- o Airbase/ Port Biological Detection with Chemical Add-On (Portal Shield)
- o Battle Damage Assessment for Joint Targeting Toolbox (BDA)
- o Coastal Area Protection System (CAPS)
- o Information Operations Planning Tool (IOP)
- o Unattended Ground Sensor (UGS)

The Science Advisor's Office acts as the Command point of contact for these programs following the technology transition within the Services.

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# DUSD AS&C

## Candidate FY05 ACTDs

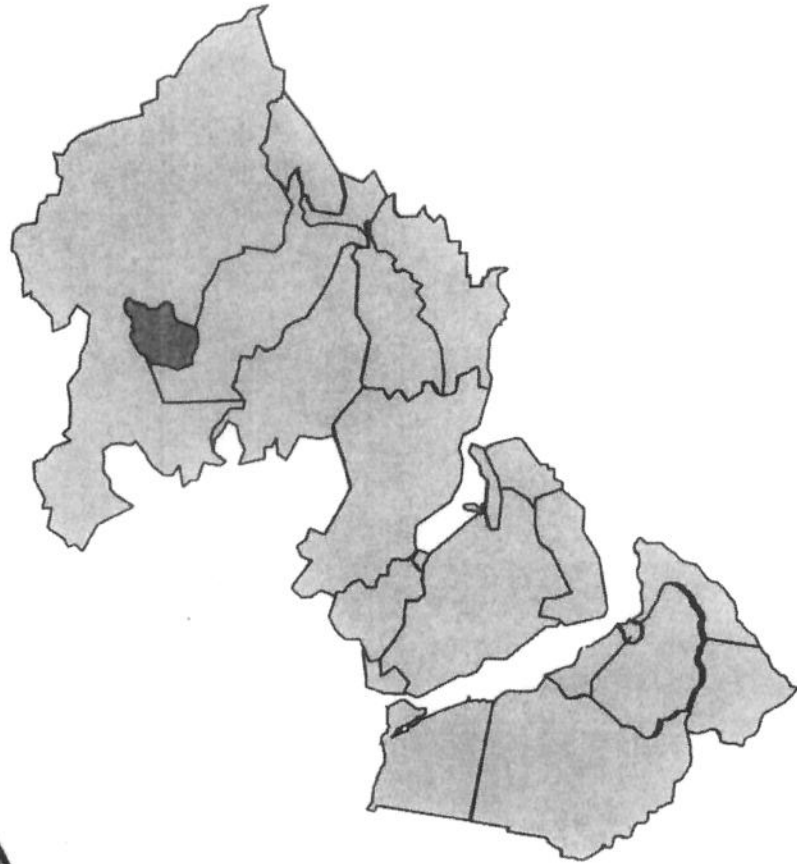
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- Explosive Resistant Coating (ERC)
- Epidemic Outbreak Surveillance (EOS)
- Coalition Secure Management and Operations Systems (COSMOS)
- Large Data (LD)
- Interactive Command Environment (ICE)
- CBRN Unmanned Ground Reconnaissance (CUGR)



# QUESTIONS?



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# Agent Defeat



## OBJECTIVES

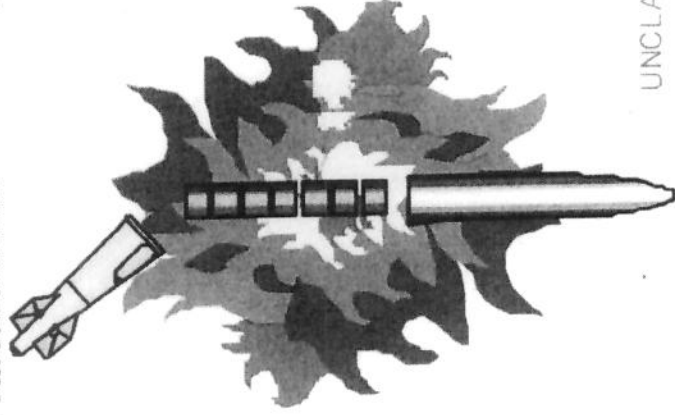
- Demonstrate a weapon system that can destroy biological and chemical agents contained with storage and manufacturing facilities with minimal collateral damage effects
- Produce 20 residual assets
- Agent kill will be provided by a High Temperature Thermal Radiator (HTTR) material known as Vulcan Fire.
- Low collateral damage effects due to very low overpressure.
- The HTTR differs from High Temperature Incendiary (HTIs). HTIs produce flame, heat, or combination thereof, produced by a chemical reaction of a substance.
- HTTR's produce lower pressure but much higher heat and thermal radiation than HTIs. This combination of low pressure and high heat/thermal radiation enhances agent defeat and minimizes agent dispersal.
- Agents not completely destroyed by the weapon will be rendered unuseable by hostile forces.

## TECHNICAL CHALLENGES

- Integration of the successfully demonstrated sub-components
- Programmable ejection system development
- Fuze and safe/arm development
- Bomblet development

## MAJOR MILESTONES

- Live Biological Lethality Assessment 2Q FY03
- Live Chemical Lethality Assessment 4Q FY03
- Sled Test demonstration 3Q FY04
- Flight Test demonstration 1Q FY05



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# ADVANCED TACTICAL TARGETING TECHNOLOGY (AT3)



## AT3 is a new FY04 ACTD

- Problem: Timely destruction of anti-access radar guided air defense systems can't be accomplished with current low-density/high-demand aircraft/systems



- Technologies

- Digital receivers capable of precise, timely geolocation, modified to coordinate/execute net-centric attack with non-ARM weapons
- Inexpensive distributed digital processing to bring decision-making forward to sensor/striker
- Builds on existing DARPA program, basic technology proven, TRL6 by 3Q FY03
- Exploit precise and stable TDOA and FDOA measurements by networked digital sensors

- Objectives:

- Reduce timeline for destruction of anti-access threats to less than 10 minutes after they emit
- Derive target location to less than 50 meter CEP
- Derive target location from greater than 50NM
- Derive target location in less than 10 seconds

- Residuals

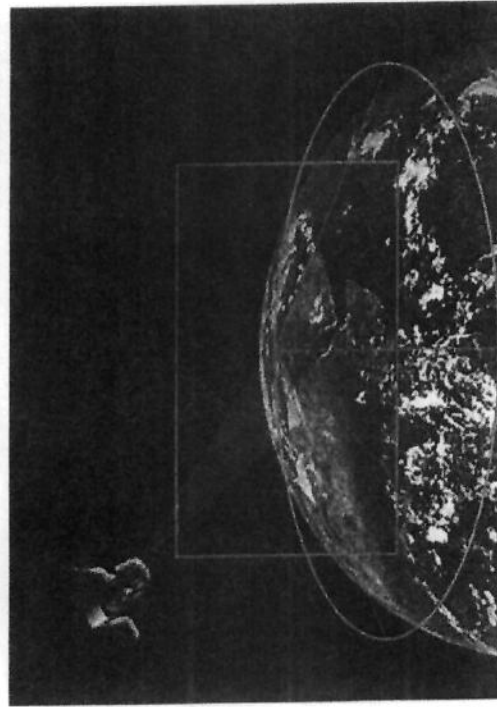
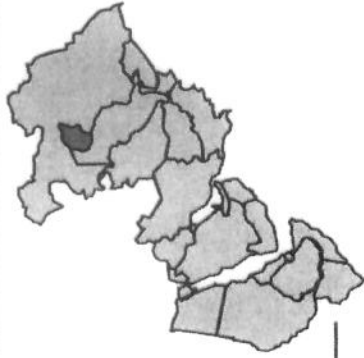
- Digital equipped, AT3 capable (ALR-69U RWR systems) F-16's in FY06

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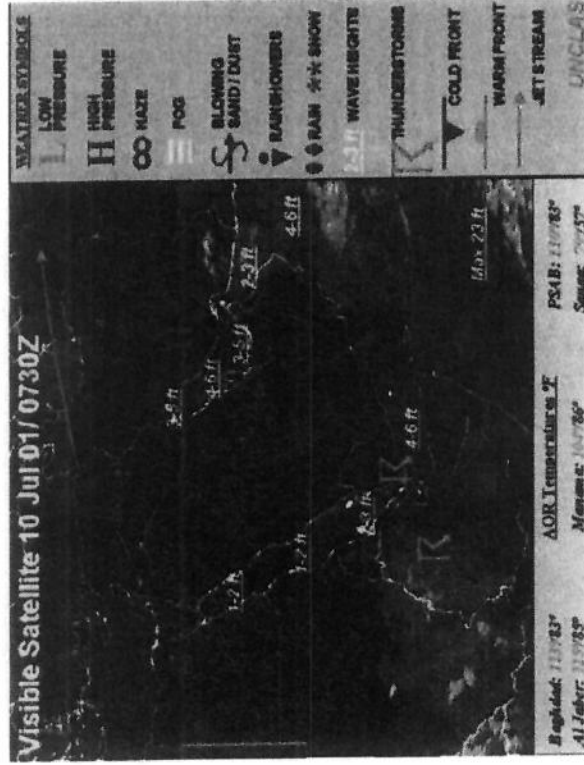
# Computerized Operational MASINT Weather (COMWX)



The COMWX ACTD will provide space based MASINT sensor weather data products using upgraded communications links in near-real-time.

The concept for the ACTD was driven by the lack of METSATS to perform certain requirements:

- Geo-stationary METSAT refresh rates greater than 15 mins
- PolarSATS revisit at best very 4 hours
- Foreign METSAT data does not provide adequate resolution (4 Km)
- Lack of 3-D depiction of clouds & cloud forecasts
- Lack of near-real-time quick looks



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# Contamination Avoidance for Sea Ports of Debarkation (CASPOD)



## Why have the CASPOD ACTD?

- Vulnerability of SPOD / APODs outlined in Desert Breeze Study
- Restoration of Operations for Fixed Sites (RestOps) ACTD did not address SPODs
- Two General Accounting Office reports 98/00 stating poor APOD / SPOD CB Defense Plans

USCENTCOM DCINC: *"I'm glad that this is moving forward it is something that is desperately needed."*



Purpose: To identify and provide those technologies, capabilities, and improvements to doctrine, concepts of operations, concept of employment, and associated tactics techniques, and procedures that can be utilized prior to, during, and after an attack or release, to mitigate the effects of a chemical-biological agent, toxic industrial chemical and material (TIC/TIM) on force flow and operational tempo during the initial stages of power projection operations at SPODs in immature theaters with limited US presence.

End State: The CASPOD ACTD will increase operational warfighting capabilities (improve CONOPS/TTPs and equipment) through improved warning, detection, protection, and decontamination capabilities that will minimize the impact of a chemical - biological attack or TIC/TIM release, on SPOD throughput.

Bottom Line: Bring Clean Forces to the Fight as Rapidly as Possible.

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# GRIDLOCK



GRIDLOCK will provide JTF Commanders with accurate geolocational information from tactical UAV sensors

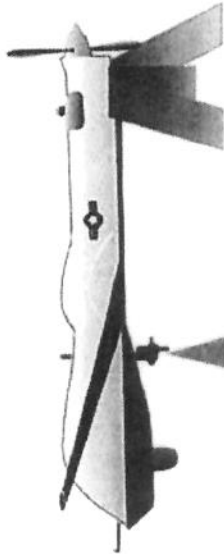
- By registering motion imagery frames to reference still imagery, it will become possible to extract 'target-quality' coordinates

- Goal is to provide a 10 foot CEP within 10 minutes.

- Participants include:

- \* NIMA Motion Imagery Program Office
- \* NIMA Chief Photogrammatrist
- \* USAF Predator Program Office
- \* US Central Command

- Technology is rated as having a 'Low Risk'. Effort will focus on integration and evaluation

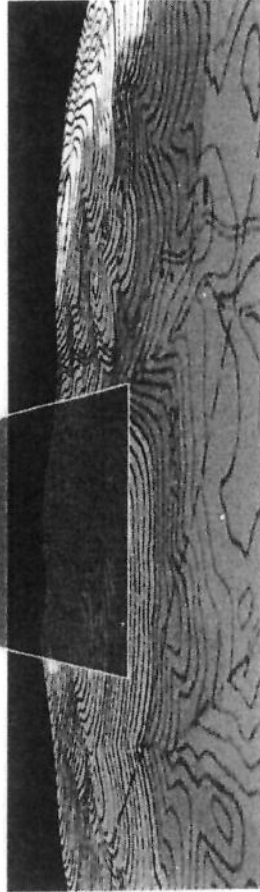


- Funding:

- \* Phase I - 15M - FY02
- \* Phase II - 10M - FY03
- 10M - FY04
- 5M - FY05

- Schedule:

- \* Phase I - Improve metadata and register imagery with appropriate databases
- \* Phase II - Integrate solution into UAV systems service exercises, development of improved sensor models.

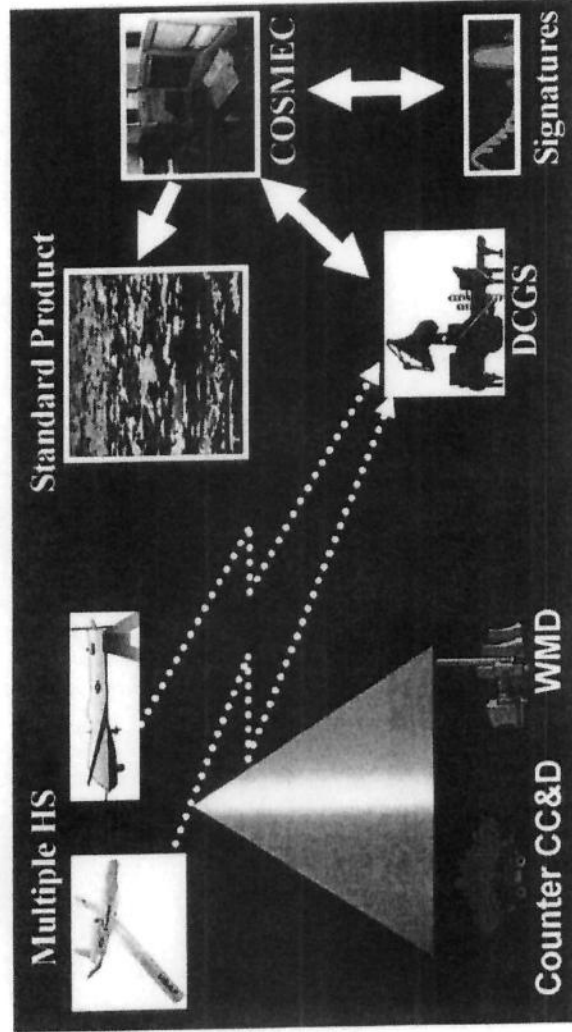


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# Hyperspectral Collection and Analysis System (HycAS)



HycAS ACTD will provide the warfighter with end-to-end hyperspectral capability.

The ACTD will demonstrate:

- several hyperspectral sensors
- military utility that can be integrated onto different operational platforms
- incorporation into existing tasking, processing, exploitation and dissemination (TPED) architecture.



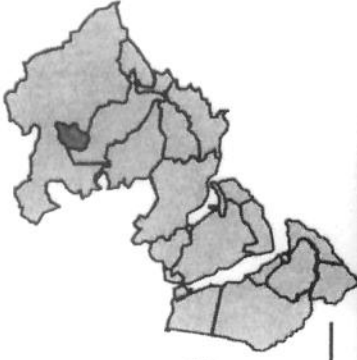
HycAS ACTD will demonstrate military capability to:

- detect and identify targets using CC&D techniques
- support Search and Rescue
- support Tagging and Tracking
- perform Intelligence Preparation of the Battlespace (IPB) –terrain analysis (water content, soil type, trafficability)
- detect and identify processes used in the development and deployment of WMD

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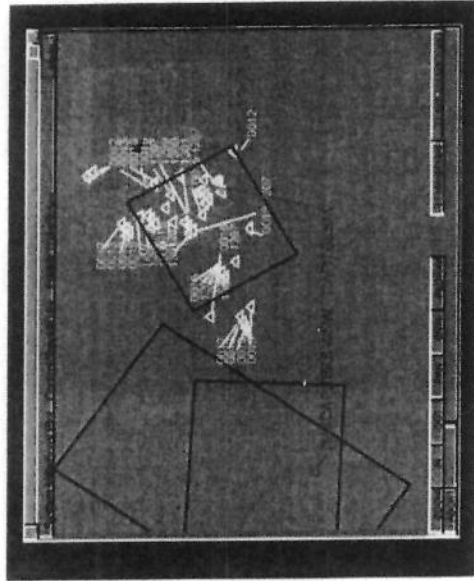
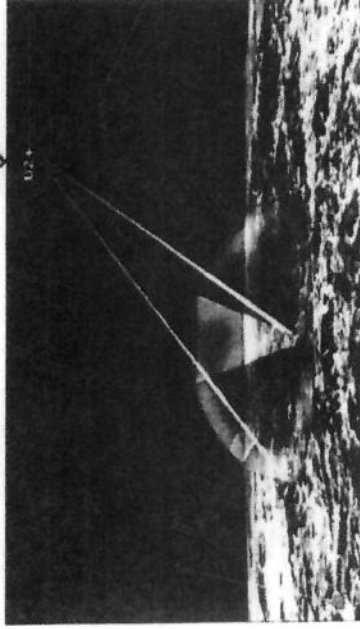


# Joint Intelligence, Surveillance & Reconnaissance (JISR)



JISR provides Early Entry Forces with Improved Situational Awareness through:

- Near Real Time Access to Traditional & Nontraditional Sensor Data
- Fused/Correlated Intelligence Products
- Sensor Tasking and Collection Plan

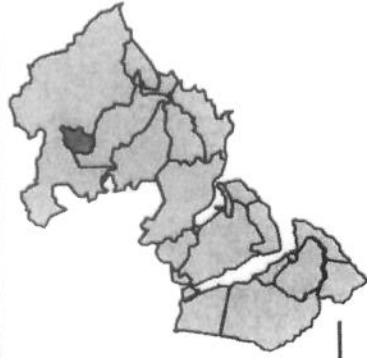


JISR will use a Web-Based Architecture working on existing C4ISR workstations within existing Communications Architectures

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# Line-of-Sight Antitank (LOSAT)



The LOSAT ACTD was designed to improve the operational capability of light forces against armored weapons systems

LOSAT is a HMMWV mounted Hypervelocity Kinetic Energy Missile, which provides a greater kinetic kill than the M1 Main Battle Tank (Greater than 1500 M/Sec Velocity).



The LOSAT residual will be comprised of one operational LOSAT Company with 144 missiles. The LOSAT Company will be part of the XVIII Airborne Corps located at Fort Bragg.

LOSAT is a critical piece of the Army Reformation. Providing greater kill capability to a smaller force.

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# Network-Centric Collaborative Targeting (NCCT)



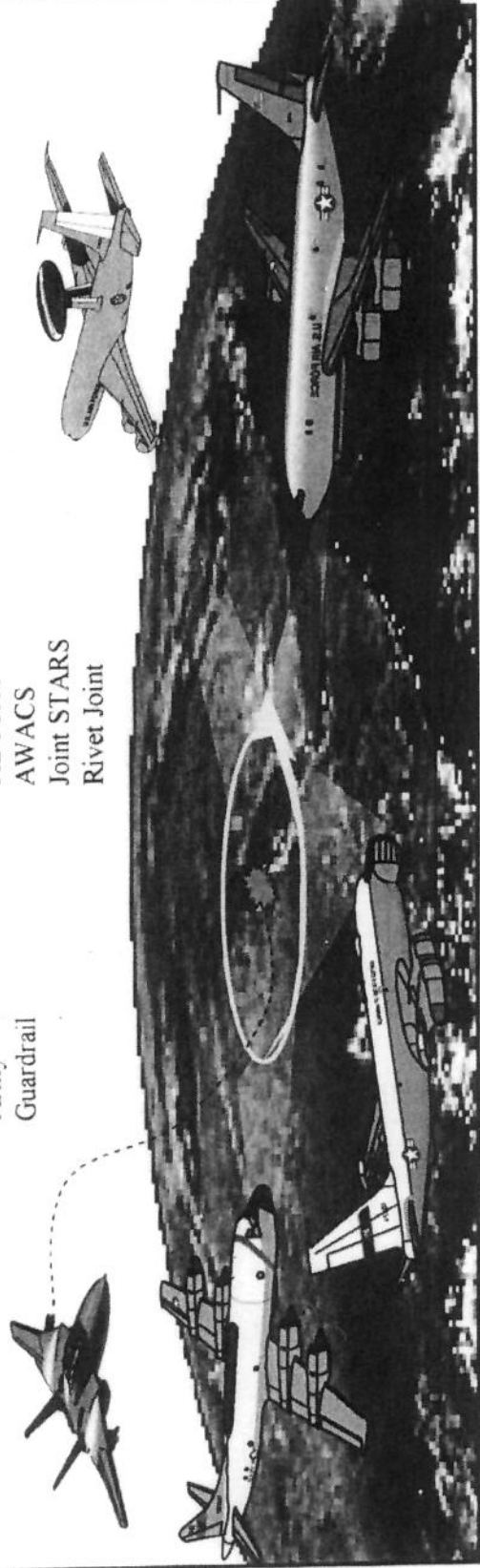
NCCT is designed to address a requirement to enhance our current capability to engage Time Critical Targets

The central position of NCCT revolves around shortening the timeline to Find, Fix, Target, Track, Engage, and Assess time critical targets on the current and future battlefield

NCCT will provide the communications architecture, CONOPS, and TTPs to link Air Force and Army air assets in order to provide enroute asset redirection to a time critical target

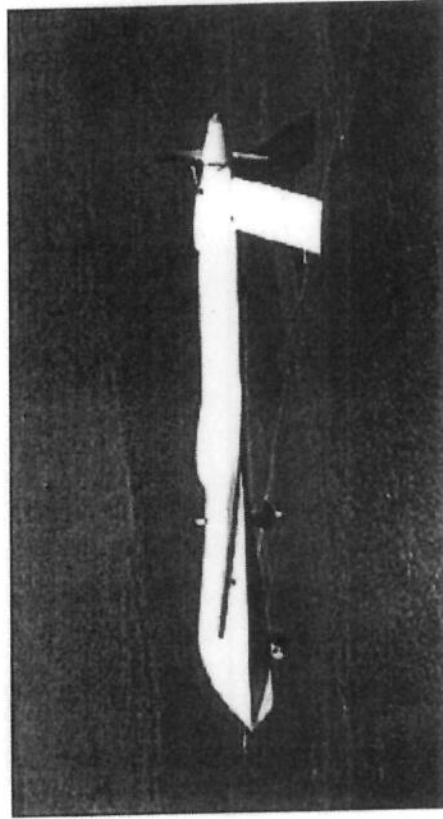
Assets being integrated into the NCCT architecture are:

- Army  
Guardrail
- Air Force  
AWACS  
Joint STARS  
Rivet Joint





# MAGNUM



## Key Mission Areas

- Stand-off Surveillance
- Support Targeting and Battle Damage Assessment
- Support Targeting of Time Critical Targets
- Intelligence Preparation of the Battlefield
- Situational Awareness for the Battle Field Commander

## Goals & Objectives

Develop and insert a video rate using classified capability - visible and IR - into aerial platforms

Reduced image interpretation time and improved target recognition.

Demonstration focus will be:

- Time-sensitive targeting
- Real-time target cueing/detection
- Bomb Damage Assessment (BDA)
- Camouflage, Concealment, and Denial (CCD) defeat

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# Theater Support Vessel (TSV)



TSV ACTD will support operational movement, repositioning and sustainment of combat forces. TSV gives the warfighter a high-speed, intra-theater, roll-on / roll-off, sealift capability.

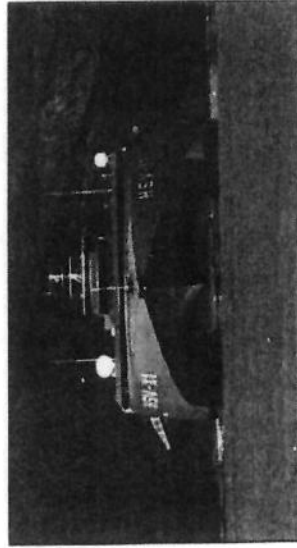
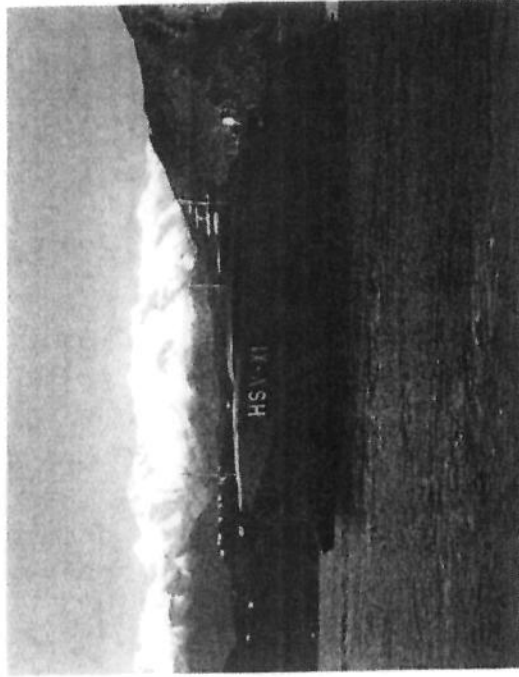
TSV will provide the capability to rapidly re-position a Brigade Combat Team up to 400 nm (equivalent to 245 C-17 sorties).

TSV will allow for enroute mission planning and rehearsal providing the commander with the capability to choose multiple points of entry.

TSV will have tele-logistic technology for asset visibility and movement tracking.

TSV ACTD will demonstrate military capability to:

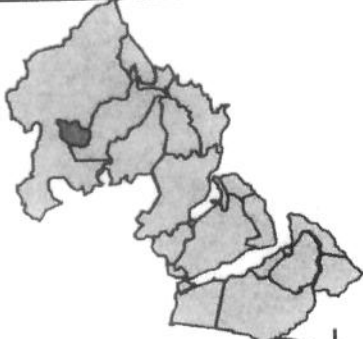
- self-deploy, carry 600 short tons of cargo, at 40+ knots and have a fully loaded range of 4,500 nautical miles on trans-oceanic crossings
- operationally move and maneuver combat ready unit sets from staging sites into forward areas
- provide follow-on sustainment through degraded and minor ports, inland waterways, Logistics Over The Shore (LOTS), and augment Amphibious Operations.



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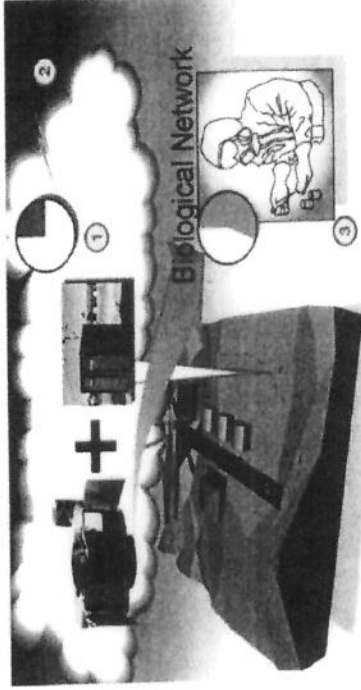
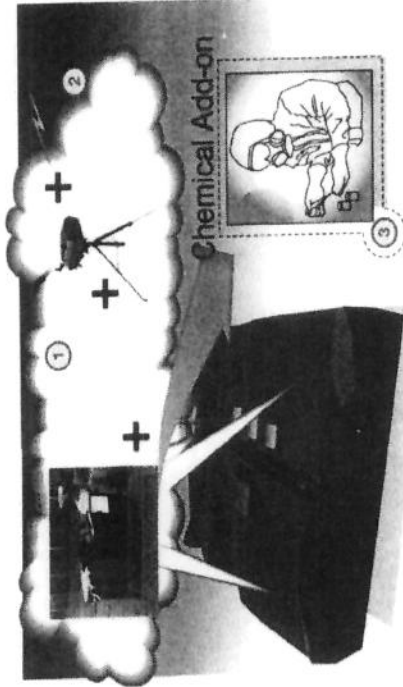


# Air Base / Port Biological Detection with Chemical Add-on (Portal Shield)



The purpose of the ACTD was to design a biological point defense networked system with the ability to integrate existing Chemical Alarms into the network

The Portal Shield networked system consists, in most cases, of the Mark III Bio-detection carousel and a sheltered control center.



The Portal Shield Mark III carousel can perform up to 500 separate tests for eight agents

Portal Shield Chemical add-on allows direct interface with:

- M21 Remote Sensing Chemical Agent Alarm (RSCAAL)
- M22 Automatic Chemical Agent Detector Alarm (ACADA)

Portal Shield is currently deployed in 4 countries and is a primary piece of the RESTOPS ACTD

Portal Shield continues to undergo enhancements improving the overall sensitivity and response time

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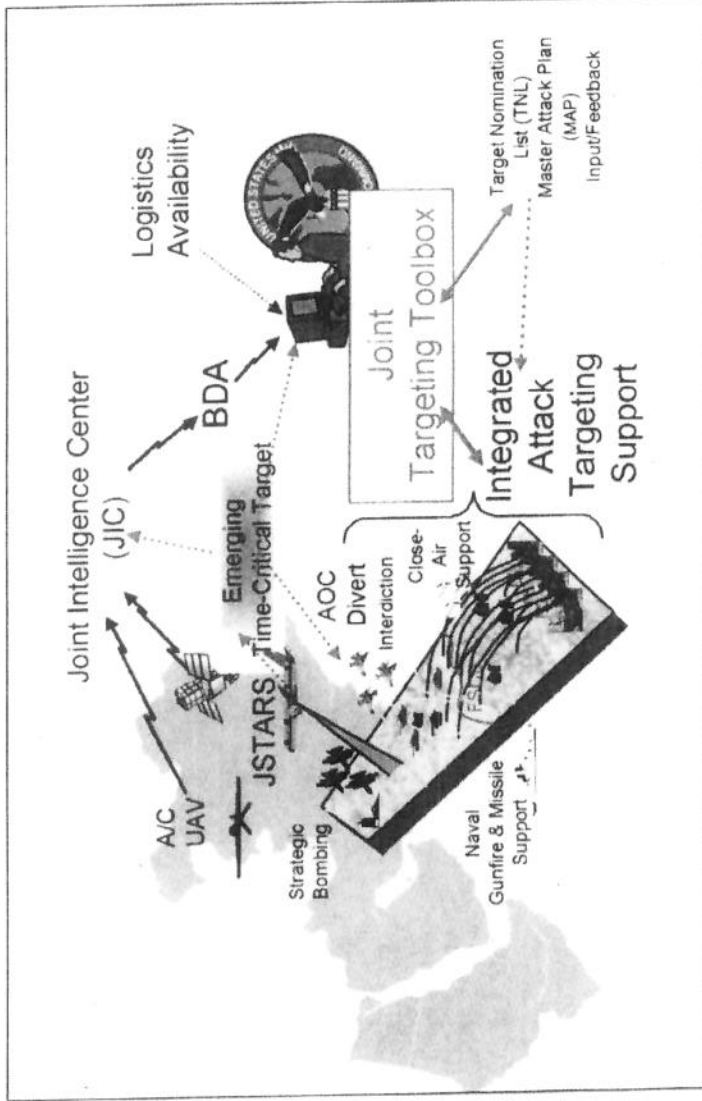




# Battle Damage Assessment



The BDA ACTD is a software package which will be integrated into the Joint Targeting Toolbox (JTT)



The BDA ACTD will :

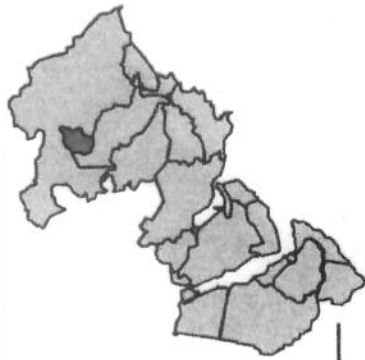
- Develop Automated Tools to Assist in Functional Damage Assessment
- Provide Synergistic Capability to Conduct Functional BDA

The ACTD Residual will be fielded through the JTT software package on the Theater Battle Management Core System (TBMCS)

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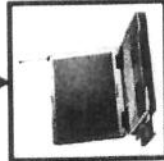
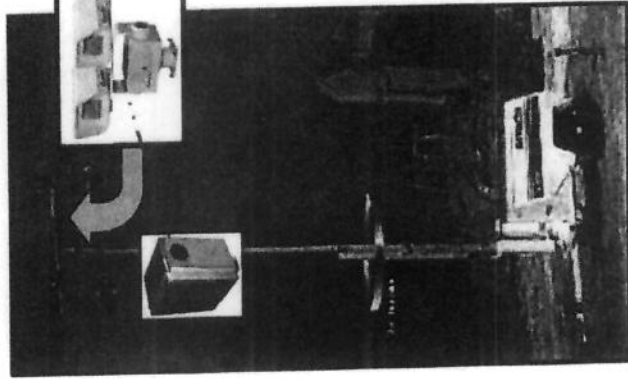
# Coastal Area Protection (CAPS)



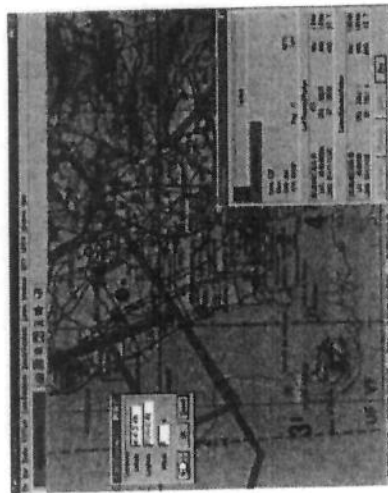
The CAPS focus is on the integration of existing components, decision and control logic, tactical procedures, and doctrinal concepts. The CAPS system will be capable of observing a wide range of activities in a coastal environment, forming an integrated tactical picture, aiding decisions on force employment, and providing non-lethal weapons options to the command authority.

The highly mobile configuration allows for rapid deployment of the selected CAPS components as dictated by geography, expected threat activity, and local political constraints.

The CAPS ACTD Residual equipment is currently deployed and operating in Bahrain and a US Naval Facility in Puerto Rico. Portions of the CAPS ACTD are currently, being deployed through out U.S. facilities with waterfront.



ISAT (Sensor Computer)



Thermal Imager and Head-Mounted Camera



Hand-Held Display

Watch Stander's Kit

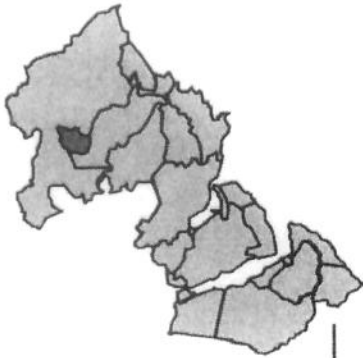
The CAPS ACTD solution is formulated to allow great flexibility of configuration and to be unobtrusive to our host nations.

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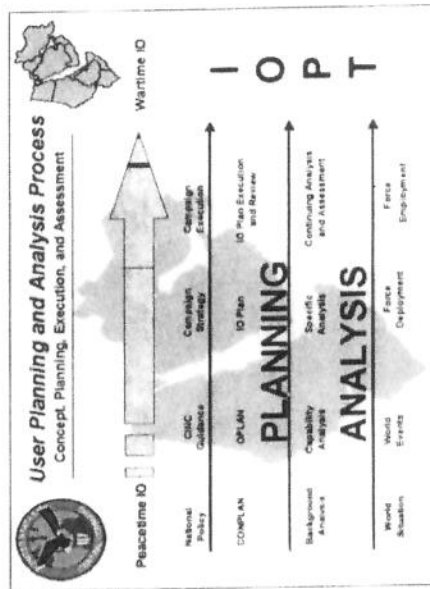
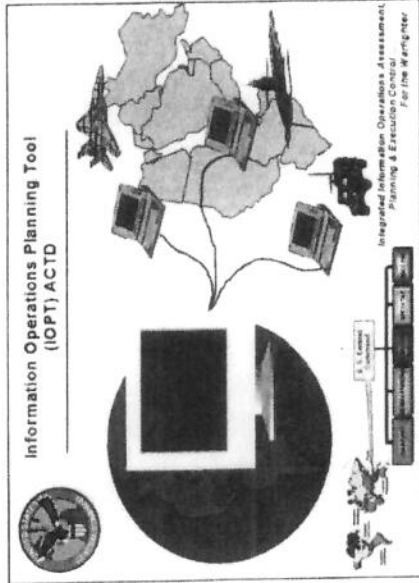
# Information Operations Planning Tool (IOPT)



IOPT is a complete system (Hardware/Software) that allows the CCJ3 the ability to plan, develop, synchronize, deconflict and manage an integrated IO campaign.

IOPT has three major pieces:

- Planning Tool
- Interactive Collaboration Tool
- An IO Attack Tool



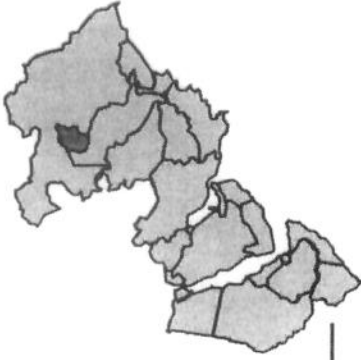
IOPT completed its demonstration phase in Mar 01 with the signing of the Military Utility Assessment by Gen Franks, USCENTCOM CDR.

The IOPT ACTD in the end did not meet the overall operational need. Several software applications did show promise and may be used in future development of IO applications.

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# Unattended Ground Sensors (UGS)

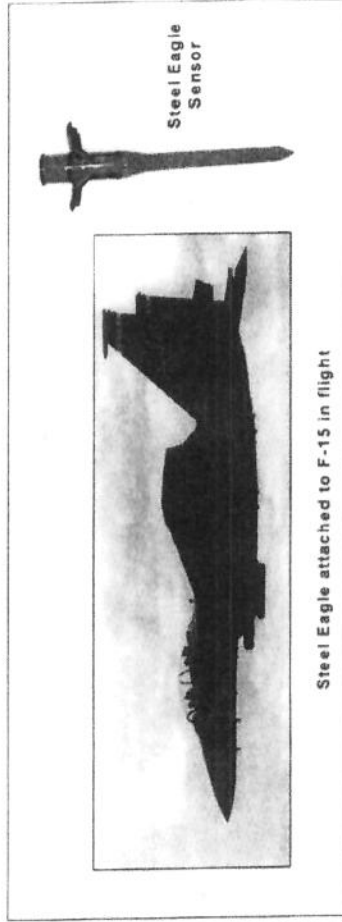


The UGS ACTD consists of two parts:

- Unattended MASINT Sensor (UMS)
- Remote Miniature Weather Station (RMWS)

The UMS program is designed to provide acoustic, seismic, and thermal imaging of threat vehicles.

- There are two UMS systems
  - \* Steel Rattler (Man-inserted)
  - \* Steel Eagle (Air-dropped)



The RMWS system is designed to detect temperature, humidity, wind direction/speed, visibility, cloud ceiling height, and barometric pressure.

Both the RMWS and MASINT Sensors were used during OEF and OIF

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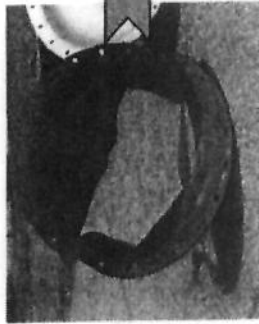
FY04 ACTD  
Candidate

# Explosion Resistant Coatings

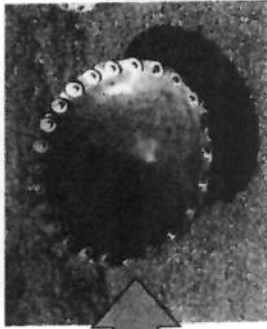


## Problem

An affordable, effective means to improve military platform and structure survivability is needed.



No coating



Coating

## Plans & Schedule

Air Blast Test  
 Mechanical Properties & M&S  
 Ballistic Capability  
 Fire, Smoke, Toxicity, Acoustic  
 Full Scale Test Prep thru Report  
 Prepare Design Guide

	FY05	FY06	FY07	Total
Total	4,391	6,041	3,041	13,042
OSD	1,318	1,812	912	4,042
Army/USMC	266	266	266	800
AF	275	275	275	825
Navy	2,532	3,687	1,587	7,806

1<sup>st</sup>-2<sup>nd</sup> Qtr FY05  
 1<sup>ST</sup> Qtr FY05 – 2<sup>nd</sup> Qtr FY07  
 1<sup>st</sup> – 3<sup>rd</sup> Qtr FY05  
 2<sup>nd</sup> – 4<sup>th</sup> Qtr FY05  
 1<sup>st</sup> Qtr FY05 – 2<sup>ND</sup> Qtr FY07  
 3<sup>RD</sup> Qtr FY07

## Objectives

- Demonstrate effectiveness of explosion resistant coatings
- Optimize coatings for protection and fire suppression
- Develop a Use and Application Handbook

## Technologies

- Explosive & ballistic resistance of platforms
- Dynamic (explosion & ballistic) properties of polymers
- Fire resistance, smoke & toxicity of polymers
- Explosion damage

## Residuals

- Use and Application Guide / Handbook
- Platforms with explosion resistant coatings

## Participants

Operational: CFFC, PACFLT, SURFPAC, USA, USAF  
 Technical: ONR, NAVSEA, NSWC-CD, ATC  
 Transition: NAVSEA, USA, USMC and USAF

## Comments

- Navy is lead service
- Effort extends Army & AF developments
- Technology is low to moderate risk



# Epidemic Outbreak Surveillance ACTD

FY05 ACTD  
Candidate

<p><b>Problem:</b></p> <ul style="list-style-type: none"> <li>•COCOMs need biosurveillance to detect attacks in real time</li> <li>•Current technologies, CONOPS, and TTPs all lack the required advanced technologies</li> </ul> <p><b>Objective:</b></p> <ul style="list-style-type: none"> <li>• Develop an advanced diagnostic capability for biodefense in response to natural and hostile pathogens</li> <li>• Develop a data fusion capability to transform large data arrays into decision quality information</li> <li>• Provide a comprehensive Joint Employment Concept of Operations</li> <li>• Enhance operational readiness and mission execution</li> </ul> <p><b>Participants:</b></p> <ul style="list-style-type: none"> <li>•COCOM/Operational Manager: USJFCOM</li> <li>•Technical Manager: USAF SGR (Modernization)</li> <li>•Lead Service: USAF and Transition Manager: USAF/AETC</li> <li>•Other: JRO, Capability Initiative Improvement Team (CIIT) for COCOM Biofusion Cells, NRL/NHRC, et al.</li> </ul> <p><b>Schedule:</b></p> <ul style="list-style-type: none"> <li>•FY05- Develop CONOPS/TT&amp;P/Assessment Plans Develop EOS Bioinformatics and IT Hub.Integrate microarray technologies.</li> <li>•FY06- Establish Testbeds at Lackland AFB, DC (USA), and Afloat Units (USN).</li> <li>•FY07- Continue assessment, system refinement and plan transition</li> <li>•FY08/09: Transition to USAF, USN and USA POR.</li> </ul>	<p><b>Technologies:</b></p> <ul style="list-style-type: none"> <li>•Respiratory Pathogen Microarray (RPM) for common and biowarfare pathogens (zebra chip)</li> <li>- High Density DNA Microarrays</li> <li>•Data fusion capabilities compatible with legacy and migration Force Protection systems.</li> </ul> <p><b>Residuals:</b></p> <ul style="list-style-type: none"> <li>•Comprehensive medical surveillance system to facilitate epidemic containment; maximize warrior readiness.</li> <li>•Advanced Diagnostic Capabilities; diagnosis within 2 hours.</li> <li>•Info Tech: Data Fusion Capability supporting Decision Making</li> <li>•CONOPS: Joint employment concepts, ROE, Info Assur, Security; ELSI- Protocols, Regulations, Agreements.</li> </ul> <p><b>Comments:</b></p> <ul style="list-style-type: none"> <li>•Provides near real-time respiratory pathogen ID for natural and hostile agents.</li> <li>•First ever ability to evaluate host's exposure prior to symptoms.</li> <li>•Forensic culpability in near real time.</li> <li>•Commander decision-making in near real time.</li> <li>•Overall low risk.for dual use capability (operational and clinical).</li> </ul>
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# COSMOS

## (Coalition Secure Management and Operations System)



### Problem:

- Data overload during collaborative planning and monitoring execution of large scale coalition operations.
- Translation and redundant data.
- Physically separate networks for coalition members are slow to set-up or change when roles change and require "tennis shoe" interfaces

### Objectives:

- Rapid and secure release and protection of critical information to and among coalition partners based upon their roles.
- Rapid reconfiguration of network communities based upon changing coalition roles
- Information tailored to the user's role and user-defined needs.

### Participants:

- PACOM, MARFORPAC, DISA, IDA, MCCDC.
- Coalition: Australia, Canada, UK & regional partners

### Schedule:

- FY 05 Spiral 1. Develop data model and trusted server, survey & integrate smart agents & portals. System high.
- FY 06 Spiral 2; Migrate FY 05 products to existing programs of record. Add regional partners.
- FY 07 Spiral 3; MUA; Upgrade agents; Rollout software in JC2/DJC2
- FY 08-09 Transition & Maintenance

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### Technologies:

- Standard data model (C2IEDM)
- Trusted Servers
- Portals & Agents

### Residuals (Products)

- Three Software Spiral Prototypes
- Global Enterprise Services (GES) Multinational Standards and Procedures for Coalition Networks
- JC2 & DJC2 Products and Assured Delivery Service for larger GES environment

### Comments

- ✓ Current coalition information architectures contain massive information which easily overloads users. Emerging technologies can be used to help ensure critical information is focused to the right person
- ✓ Trusted, automatic controls on information release are needed to replace a manual, time consuming processes.
- ✓ Will use mature information-based technologies to create the information-based interoperability for joint and coalition forces as specified in DoD Data Strategy to meet GIG's primary goal and purpose: end-to-end interoperability.

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# Large Data ACTD

FY05 ACTD  
Candidate

## OPERATIONAL CHALLENGE:

- Reduce Latency to Post, Access and Analyze Very Large Data Sets: Imagery, Video, MASint, SIGint, etc...
  - Currently 2-3+ days may be required to Access, Transfer, Process and Analyze Big Data" sets (Example: OIF lessons learned, accessing archived 5k x 5k clips)
  - Problem becomes increasingly difficult as data volumes increase as projected (Future Imagery: Architecture, Higher Resolution Video [HDTV, NGA mandate], 100x UAV's, More MASINT Products, Multiple Distributed Analysis both in/out theater, realtime response... 40K x 40K clips)

## OBJECTIVES:

- Provide users simple, intuitive means to interact with **massive amounts** (petabytes to exabytes) of data through large-scale storage and on-line computing capabilities
- Handle both **stored and real time data** and permit their rapid combination (data fusion) through expansions to the DoD communications systems such as **GiG-BE, TCS, JTRS, etc.**
- Contain multiple redundancies and **extensive information assurance features** through emerging and new security and protection capabilities

## TECHNOLOGIES:

- *Advanced Networking* leveraging latest commercial standards for efficient routing (BGP+, IS-IS, OSPF, GMPLS), IPv6/MPLS, End-to-End Quality of Service/Class of Service, Session Initiation Protocol Control Plane, Network Management and Testing Tools
- *Storage Area Networks:* Serial ATA, FibreChannel, Redundant Array of Independent Nodes (RAIN), Linux CXFS for Common Operational Picture
- *Services/Applications:* Vertical and Horizontal Fusion, Peer-peer data group metadata search & discovery, intelligent caching for multi-terabyte data, Zoomable User Interface, High Resolution geo-temporal displays scalable from immersive (3-D), ubiquitous (desktops) down to pervasive (PDAs), Collaborative Large Data conferencing. APIs to extend capabilities to other commercial (Keyhole, Edge) and GOT's applications (GCCS, DCGS, etc.)

## RESIDUALS:

Provide three large scale storage, processing, visualization and security provisioned nodes with training (system trainable in few minutes at 85% utility level). Leave behind for at least one year support for end-to end operation (two years depending on funding and transition plan).

**PARTICIPANTS :** NGA (IB, GIAT, etc.), NRL Center for Computational Science, PACOM, ARL/PSU, ARDA, Horiz Fusion, High Performance Computing Centers, IDC-Net participants, etc.

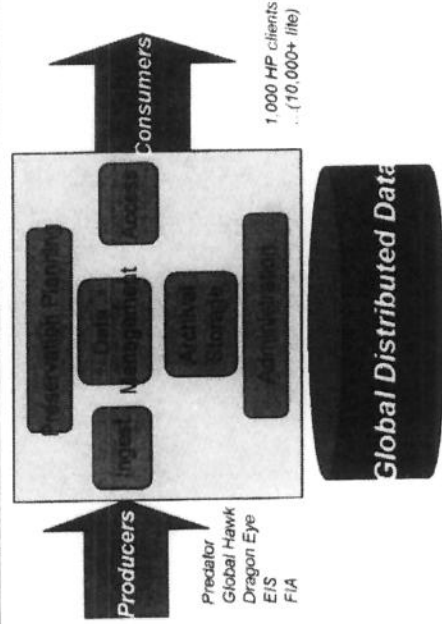
## SCHEDULE:

- Year 1: Initialize ACTD
- Year 2: Demo at Beta sites; Refurbish, re-test at Beta sites
- Year 3: Go to higher level config.; Demo at Beta sites
- Year 4: Initiate transitions; Provide support in operational environment

## COMMENTS :

- NGA funding secured at 27% and asking DoD AS&C funding at 25%. Seeking additional sponsors within OSD and IC. Strong COCOM support (PAC, JF)
- Requires enormous collaboration throughout DoD (and the Intelligence Community) to do correctly, especially due to pace of developing IT, protocols, new mandates (such as IPv6) increasing sensor data loads intended to stream over IP. DoDs (and IC's) unique needs that are not being addressed by the market

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*For Official Use Only (FOUO)*  
 FY05 Advanced Concept Technology Demonstration Proposal  
**Interactive Command Environment (ICE)**  
 (formerly Multi-Modality Command and Control (M2C2))

<p><b>Technologies:</b></p> <ul style="list-style-type: none"> <li>Multi-modality software and associated peripherals</li> </ul> <p><b>Transition Path:</b></p> <ul style="list-style-type: none"> <li>Two multi-modality enhanced Starlight suites with licenses and maintenance support for two years</li> </ul>	<p><b>Problem Statement:</b></p> <ul style="list-style-type: none"> <li>The Global War on Terrorism (GWOT) requires improved decision-making tools</li> <li>Command and Control (C2) systems human-machine interfaces (HMI) are limited in functionality to keyboards and mouse</li> </ul> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>Allow users to interact with GWOT tools and C2 Systems using a combination of entry and data retrieval techniques (voice, keyboard, mouse, etc) to improve responsiveness and reduce training requirements</li> </ul>						
<p><b>Comments:</b></p> <ul style="list-style-type: none"> <li>User-Sponsor: U.S. European Command</li> <li>Lead Service: U.S. Navy (P)</li> <li>Program Manager: Office of Naval Research</li> <li>Operations Manager: COMUSNAVEUR</li> <li>Technical Manager: USA INSCOM</li> <li>Transition Manager: USA INSCOM</li> </ul> <p><b>Risk:</b></p> <ul style="list-style-type: none"> <li>Technical/Integration/Schedule Risk: Low</li> <li>Funding Risk: Moderate</li> </ul> <p>USN; Tel (DSN): (b)(6) email: (b)(6)</p>	<p><b>Participants:</b></p> <ul style="list-style-type: none"> <li>USEUCOM, COMUSNAVEUR, Army (INSCOM G3, International Cooperative Programs), Navy (ONRG), Pacific Northwest National Lab (PNNL)</li> </ul> <p><b>Schedule:</b></p> <table border="0"> <tr> <td>Testing &amp; Evaluation</td> <td>FY05-06</td> </tr> <tr> <td>Demonstrations 1 and 2</td> <td>FY06</td> </tr> <tr> <td>Residual Support and Transition</td> <td>FY07</td> </tr> </table> <p>1 Navy POC: Captain</p>	Testing & Evaluation	FY05-06	Demonstrations 1 and 2	FY06	Residual Support and Transition	FY07
Testing & Evaluation	FY05-06						
Demonstrations 1 and 2	FY06						
Residual Support and Transition	FY07						

# CBRN Unmanned Ground Reconnaissance (CUGR) ACTD

FY05 ACTD Candidate

**Problem:** CBRN reconnaissance can not be performed at the speed of the maneuver force. OIF units could not wait for recon and crossed over in full MOPP. CBRN Reconnaissance in urban terrain required dismounted patrols placing Warfighters at risk. Warfighter needs a reliable near real time detection and identification technology for manned reconnaissance platforms and a small and nimble platform for NBC point surveys with an Unmanned Ground Vehicle

**Objectives:** Provide an advanced sensor suite for near real time CBRN detection, sampling and identification for manned and unmanned platforms. Introduce Raman surface contamination detection in manned recon vehicles to detect CWAs, TICs/TIMs and NTAs. Integrate on-the-move bio-sampling and detection. Provide unmanned CBRN detection capabilities to recon urban terrain, to keep crew and Recon platforms out of contamination and direct fire areas and to integrate CBRN detection Mission Specific

**Participants**

- DTRA CBD, JRO CBRN Defense, JPEO CBD
- PACOM, USARPAC, USACMLS
- RDECOM, PM NBC CA, PM UGV
- ATEC

	FY04*	FY05	FY06	FY07	FY08
CUGR	Risk Reduction CONOPS			Demo 1 MS C	Demo 2 MS B
				CONOPS, Systems Integration Acquisition, Transition & Test Plans	NAVY Residual Support

\*NOTE: FY 04 Efforts fully funded under DTO and DTRA

**Technologies:**

- Raman Spectroscopy (laser interrogation of all surface agents)
- SAW and IMS technology (vapor point detection)
- Fourier Transfer Infrared (FTIR) (aerosol stand-off detection)
- UV Fluorescence (biological aerosol detection)
- UGV (unmanned platform for NBC Sensors)
- Telemetry (Automatic indication of sensing results to NBC operators)

**Residuals:**

- 3 CSD equipped Reconnaissance Vehicles
- 4 CUGV's complete with CB Sensor Modules
- Revised CONOPS/ITP
- Contractor Logistic Support for CSD in JSLNBCRS and UGV

**Comments:** Provides Full-Dimensional Protection, addresses Dominant Maneuver in WMD/TIM environment and supports the future force.

