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# NORAD/CONR/SEADS



# AMALGAM VIRGO 01

1-2 JUNE 2001

## Exercise Staff Working Papers Final Copy

This document is to be used by exercise planners for situational awareness purposes. This document is NOT intended to be used as operational guidance for NORAD units. Exercise participants will use real-world doctrine, plans, checklists, phone lists, LOAs, TTPs, CONOPS, exercise SPINS and Intelligence to react to exercise threats.

NCT0060400

MEMORANDUM FOR PARTICIPANTS OF AMALGAM VIRGO 01 (AV 01)

FROM: SEADS/CDEL  
164 Alabama Ave  
Tyndall AFB, FL 32403-5015

SUBJECT: AMALGAM VIRGO 01 Exercise Staff Working Papers

1. The attached working papers contain important information concerning the design and execution of AV 01. This exercise will bring together a new level of training for NORAD with the incorporation of new participants into the live-fly exercise infrastructure. The primary goal of AV 01 is to exercise contingency operations within NORAD's area of operations, specifically the Southeast Air Defense Sector (SEADS) and CONUS NORAD region (CONR). AV 01 will provide HQ NORAD, Cheyenne Mountain Operations Center (CMOC), CONR, and SEADS the opportunity to train together with the services, appropriate unified commands, combat support agencies, and U.S. federal civil departments and agencies in the execution of an anti-airborne terrorism/cruise missile defense (CMD) scenario.
2. Additional AV 01 exercise information can be obtained on the 1AF website at <https://mildomain.1staf.tyndall.af.mil/ig/IGX/IGXL/Virgo/Virgo01.htm>. This document is intended as a supplement to the AV 01 Exercise Plan (EXPLAN) and Control Staff Instructions (COSIN). The EXPLAN and COSIN are NORAD official exercise guidance. This document is an unofficial exercise planner's reference guide. *The information in the document is for exercise planning purposes only and should not be used as written guidance for official interagency operations.*
3. The 1AF Area Cruise Missile Defense (ACMD) Advanced Concept Technology Demonstration (ACTD) Demo 1 - Joint Based Expeditionary Connectivity/Control Center (JBECC) Sensor Integration will run concurrently with the AV 01 exercise. The ACMD ACTD demo will run from 20 May 01 until 6 Jun 01. All ACMD ACTD demo 1 assets will run in a passive mode during the AV 01 exercise (1-2 Jun 01). Additional ACMD ACTD demo 1 - JBECC Sensor Integration information can be obtained on the 1AF website at <https://mildomain.1staf.tyndall.af.mil/ig/IGR/igr.htm>.
4. This document is **not** classified or considered to be a trusted agent document. Please bring any additions or inaccuracies concerning this document to the attention of Major Steve Boe, DSN 523-5684. Thank you.

STEVE BOE, Major, FLANG  
Chief of Live Exercises, SEADS

NCT0060401

**AMALGAM VIRGO 01**  
**Exercise Staff Working Papers Table of Contents**

Executive Summary.....	1
Participants and Objectives.....	2
AV 01 POC Listing.....	9
Exercise CONOPS.....	22
Tactical Comm/ATO Distro/Frequency Request.....	30
Air Defense Artillary and AEGIS air defense CONOPS .....	39
Exercise SPINS (Special Instructions).....	43
Suspenses/Milestones.....	61
Target Information.....	63
Blue Force Information.....	67
Analysis Information.....	79
Weather Back-up and FAA Airspace Control Plan.....	80
Cruise Missile Air Defense Warning Experiment.....	82
Exercise Observers/Security Clearances.....	86
Simulation Architecture for SEADS.....	88
Maritime Task Group Information.....	91
Public Affairs.....	94
ACTD Description.....	96
Acronyms.....	100
AV Briefing PPT Slides.....	112
Notes Pages.....	121

## **AMALGAM VIRGO 01**

### **EXECUTIVE SUMMARY**

Guidance for planning and conducting NORAD field training exercises (FTXs) is contained in NORAD Instruction 10-45 (4 Aug 98). The CINCNORAD FTX program focuses on the air sovereignty and air defense missions. It operationally tests detection and prosecution of the air-breathing threat, connectivity with battle staffs and the deployment and employment capabilities of NORAD-assigned and gained units. Specific exercise objectives are developed for each exercise to ensure exercise participants are aware of the exercise focus.

**AV 01 EXERCISE DESCRIPTION:** AV 01 is a CINCNORAD sponsored, CJCS coordinated exercise involving HQ NORAD, select NORAD regions/sectors, Cheyenne Mountain Operations Center (CMOC), and supporting units. AV 01 is a field training exercise (FTX) scheduled for 1-2 June 2001. The primary goal of AV 01 is to exercise contingency operations within NORAD's area of operations, specifically the Southeast Air Defense Sector (SEADS) and CONUS NORAD region (CONR). AV 01 will provide HQ NORAD, CMOC, CONR, and SEADS the opportunity to train together with the services, appropriate unified commands, combat support agencies, and U.S. federal civil departments and agencies in the execution of an anti-airborne terrorism/cruise missile defense (CMD) scenario.

**AV 01 SCENARIO DESCRIPTION:** The AV 01 scenario will focus on counter-terrorism. The primary threat to SEADS/CONR/NORAD for this exercise will be a notional terrorist group that has acquired cruise missiles and unmanned aerial vehicles (UAV's) to attack the United States (specifically northwest Florida). The notional terrorist group will use a surface vessel to launch the weapons platforms. A real-world surface vessel will be used as a target platform and NORAD in conjunction with the USN and US Coast Guard (USCG) will detect, identify, and prosecute the surrogate maritime surface threat. The MQM-107 (subscale drone) and BD-5Js (UAV surrogates) will be used as air-breathing target threats. SEADS will synergize with GTACS, AWACS, NORAD C2 units, NORAD air defense fighter wings, Army ADA (Avenger), USN assets (P-3 and AEGIS) and the USCG to counter the terrorist threat. Target support will be provided from the 53 WEG (MQM-107's), Aerial Productions Intl Inc (BD-5Js) and the Civil Air Patrol (CAP) with multi-engine aircraft.

The 1AF Area Cruise Missile Defense (ACMD) Advanced Concept Technology Demonstration (ACTD) Demo 1 - Joint Based Expeditionary Command and Control Center (JBECC) Sensor Integration will run concurrently with the AV 01 exercise. The ACMD ACTD demo will run from 20 May 01 until 6 Jun 01. All ACMD ACTD demo 1 assets will run in a passive mode during the AV 01 exercise (1-2 Jun 01). Additional ACMD ACTD demo 1 - JBECC Sensor Integration information can be obtained on the 1AF website at <https://mildomain.1staf.tyndall.af.mil/ig/IGR/igr.htm>.

Additional AV 01 information can be found on the NORAD SIPERNET homepage. Please discard all previously published AV 01 working paper documents.

**AMALGAM VIRGO 01**  
**PARTICIPANTS AND OBJECTIVES**

<b>RGO 01 Participants</b>			
<b>Blue Forces Participants</b>			
<b>Organization</b>	<b>Home Station</b>	<b>AV 01 Playing Location</b>	<b>Assets</b>
NORAD	Peterson AFB, CO	CMOC Colorado Springs, CO	C2, JSS, JTF Leadership
CONR	Tyndall AFB, FL	RAOC Tyndall AFB, FL	C2, JSS (operational level)
SEADS	Tyndall AFB, FL	SOCC Tyndall AFB, FL	C2, JSS (tactical level)
SOUTHCOM	Miami, FL	Tyndall AFB, FL	Sim Cell LNO
728 ACS	Eglin AFB, FL	Eglin AFB, FL	GTACS (GMR)
USCG HQ	Washington DC	Washington DC	NRC, Sim Cell LNO
USCG Sta Panama City	Panama City, FL	GOMEX	USCG 87 ft Cutter (COHO)
ATC Mobile	Mobile, AL	Mobile, AL	HU-25
Eighth District HQ	New Orleans, LA	D8 HQ New Orleans, LA	RCC
53 WEG	Tyndall AFB, FL	Tyndall AFB, FL	1 x E-9
125 FW	Jacksonville, FL	Jacksonville IAP, FL	6 x F-15
3 WG	Elmendorf, AK	Tyndall AFB, FL	4 x F-15
325 FW	Tyndall AFB, FL	Tyndall AFB, FL	4 x F-15
177 FW	Atlantic City, NJ	Tyndall AFB, FL	2 X F-16 (SADL/EPLRS)
148 FW Det 1	Tyndall AFB, FL	Tyndall AFB, FL	2 x ADF-16
VP-45	NAS JAX, FL	NAS JAX, FL	1 x P-3
VAW-77	Atlanta, GA	Tyndall AFB, FL	1 x E-2
147 FW (alert aircraft)	Ellington Field, TX	Ellington Field, TX	2 x F-16
970 AACCS	Tinker AFB, FL	Tyndall AFB, FL	1 x E-3 AWACS
32 AAMDC	Orlando, FL	Tyndall AFB, FL	ADAFCO (ADA LNO)
1-204th ADA	Newton, MS	Tyndall AFB, FL	AVENGER/Sentinel ADA
325 FW Command Post	Tyndall AFB, FL	Tyndall AFB, FL	Scramble Node
305 AMW/60 AMW	McGuire/Travis	Eglin AFB, FL	2 x KC-10
107 ARW	Niagara Falls	Eglin AFB, FL	1 x KC135
USS Yorktown DESRON6	Pascagoula, MS	Gulf of Mexico	AEGIS Cruiser Ticonderoga
FBI (federal)	Washington DC	Washington DC(Hoover Bldg)	Sim Cell LNO
FBI (state)	Jacksonville, FL	Tyndall AFB, FL	Sim Cell LNO
FBI (local)	Panama City, FL	Tyndall AFB, FL	Sim Cell LNO
<b>Red Forces Participants</b>			
<b>Organization</b>	<b>Home Station</b>	<b>AV 01 Playing Location</b>	<b>Assets</b>
53 WEG	Tyndall AFB, FL	Tyndall AFB, FL	8 x MQM-107 drones
53 WEG	Tyndall AFB, FL	Tyndall AFB, FL	2 x drone boats
Civil Air Patrol	Southeast Region	MacDill AFB, FL	Multiple twin engine aircraft
Aerial Productions Intl Inc.	Aguila, AZ	Tyndall AFB, FL	2 x BD-5J
First Air	Tyndall AFB, FL	Tyndall AFB, FL	4 x MU-2 (drone relay)
434 Squadron	Greenwood, Newf	Tyndall AFB, FL	2 x T-33
1-204th ADA	Newton, MS	Tyndall AFB, FL	Stinger Man Pad
<b>First Air Force Advanced Programs (CMDI) Participants</b>			
<b>Organization</b>	<b>Home Station</b>	<b>AV 01 Playing Location</b>	<b>Assets</b>
1 AF/IGR	Tyndall AFB, FL	Tyndall AFB, FL	ACMD ACTD Management

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JFCOM TAMDI	Norfolk, VA	Tyndall AFB, FL	P-3, Rosseta, ATW
SHORAD PMO	Huntsville, AL	Tyndall AFB, FL	A-3, Sentinel, Avenger
SMDC Battle Lab	Huntsville, AL	Tyndall AFB, FL	JBECC (Future Ops Center)
MARCOR SYSCOM	Quantico, VA	Cape San Blas, FL	JBECC x 2 (Hitchhiker)
MACS 2	Cherry Point, NC	Tyndall AFB, FL	TPS-59
AMDCCS	Huntsville, AL	Tyndall AFB, FL	ABMOC

#### **Cruise Missile Attack Warning Experiment (CMAWX) Connectivity Drill Participants**

Organization	Home Station	AV 01 Playing Location	Assets
NORAD	Peterson AFB, CO	CMOC Colorado Springs, CO	JTF, C2, JS, AWC, CC
CONR	Tyndall AFB, FL	RAOC Tyndall AFB, FL	C2, JSS (operational level)
SEADS	Tyndall AFB, FL	SOCC Tyndall AFB, FL	C2, JSS (tactical level)
FEMA (National)	Berryville, VA	FEMA Ops Center (FOC)	NAWAS
FL Div of Emergency Mgt	Tallahassee, FL	FL EOC (Tallahassee)	EOC, EAS
Bay County EOC	Panama City, FL	Bay County EOC	EOC, EAS

### **Unit Objectives**

#### **NORAD**

- Exercise Integrated Tactical Warning and Attack Assessment (ITW&AA).
- Exercise command interface with higher and lateral headquarters.
- Exercise intelligence, logistics and personnel functions.
- Exercise command, control and communications systems and procedures.
- Exercise NORAD Headquarters, region and sector joint binational battle staffs.
- Exercise crisis action planning, deployment planning, and CONPLAN execution.
- Exercise regeneration, NBC and battlestaff support operations and test concepts.
- Exercise contingency operations (including Cruise Missile Defense).
- Exercise air sovereignty and air defense missions.
- Exercise the counterdrug mission.

#### **CONR**

- Exercise Region Headquarters, Sectors and Unit Air Operations Centers, Battlestaffs, and Crisis Action Teams as appropriate.
- Exercise command and control procedures, MOUs and LOAs with joint service and DOD organizations.
- Exercise intelligence gathering and dissemination functions.
- Exercise command, control and communications systems and procedures.
- Exercise crisis action planning and implementation processes.
- Exercise air sovereignty.
- Exercise contingency operations.
- Exercise counterdrug mission.

### **SEADS**

- Exercise low observable threat defense connectivity (sensor to decision maker to shooter).
- Exercise intelligence and sensor systems to detect and report air defense events (J-sites/aerostats, AWACS, E-9, TPS-75 and Avenger ADA).
- Train with realistic target platforms (i.e. MQM-107 as a terrorist RPV).
- Develop interoperable relationship between SEADS and USCG, 728 ACS (GTACS), 53 WEG (E-9), and 263 ADA (Avenger).
- Short-notice development of C2 architecture to defend against low observable terrorist attack.
- Identify future areas of synergy with local authorities (325FW/Bay County Emergency Operations Center) in the area of full spectrum threat response.
- Evaluate counterdrug procedures within a robust terrorist threat environment.
- Give the Warfighter experience and confidence in the operation of their combat systems.
- Determine the effectiveness and readiness of the Warfighter and their combat systems.
- Identify weaknesses in the DoD systems and determine an action plan to remove deficiencies.
- Assess interoperability of the various Service systems.
- Evaluate and provide recommendations on improvements in Joint technical and operational concepts.
- Identify and address threat vulnerabilities.
- Integration and coordination of interagency operations and systems.
- Allocation/Coordination of resources.
- Assist in joint interagency development of tactics and training.

### **728 ACS**

- Seamlessly integrate GTACS system into NORAD existing NORAD structure.
- Effective Aerospace control as assigned by AADC.
- Establish and maintain effective communication with all players.
- 100% Accurate, reliable air picture to higher headquarters via datalink forwarding

### **U.S. COAST GUARD**

- Exercise and continue developing homeland security interoperability with NORAD and other agencies to prevent and counter threat either air or waterborne from the maritime domain. This may be accomplished through exercise, (TTX, FTX, CPX) or development of common sops.

### **53 WEG**

- Develop CONOPS for 53 WEG/SEADS MOU (dated 24 Dec 98).
- Baseline communications (voice and data) connectivity between E-9, USCG, and SEADS.

**1-204th ADA**

- Integrate and exercise link architecture to provide effective targeting and tracking.
- Baseline communications within command and control.
- To receive portable UHF radio.

**148 FW Det 1**

- Establish optimal combat air patrol patterns to counter low observable threats.
- Optimize radar search patterns to counter a low observable threat platform.
- Master intercept procedures, targeting, and weapons considerations in the prosecution of a low observable threat platform.

**3 WG**

- Establish optimal combat air patrol patterns to counter low observable threats.
- Optimize radar search patterns to counter a low observable threat platform.
- Master intercept procedures, targeting, and weapons considerations in the prosecution of a low observable threat platform.

**125 FW**

- Establish optimal combat air patrol patterns to counter low observable threats.
- Optimize radar search patterns to counter a low observable threat platform.
- Master intercept procedures, targeting, and weapons considerations in the prosecution of a low observable threat platform.

**325 FW**

- Establish optimal combat air patrol patterns to counter low observable threats.
- Optimize radar search patterns to counter a low observable threat platform.
- Master intercept procedures, targeting, and weapons considerations in the prosecution of a low observable threat platform.

**147 FW**

- Establish optimal combat air patrol design to counter low observable threats.
- Optimize radar search patterns to counter a low observable threat platform.
- Master intercept procedures, targeting, and weapons considerations in the prosecution of a low observable threat platform.

**DESRON 6 - USS Yorktown**

- Execute a plan of action for interoperability in a joint environment
- 100% Detect, Identify, Prosecute all air and surface contacts within AV 01 areas
  - Provide an accurate, recognizable air and surface picture to HHQ and AV participants
- Flex response to both CJS ROE and any special ROE modifications
- No blue on blue or blue on white engagements

- Develop SPY and weapons doctrine optimized against short notice, low RCS targets

#### **VP-45**

- Detect, identify and prosecute all surface contacts within AV 01 operations area
- Flexible response to both CJCS ROE and any special ROE modifications
- Obtain ASUW readiness points

#### **VAW-77**

- 100% recognizable air picture to higher headquarters & AV 01 participants
- Effectively locate, identify, track, & prosecute air breathing threats
- Effective battle management & aerospace control
  - 100% Effective fighter CAP management/asset control
  - Effective engagement zone orchestration (positive handoff of leakers)
- Seamless command & control station changeover

#### **32 AAMDC**

- ADAFCO support to SEADS and ADA LNO to JFACC (1 AF/CC)

#### **970 AACB**

- 100% recognizable air picture to higher headquarters & AV 01 participants
- Effectively locate, identify, track, & prosecute air breathing threats
- Effective battle management & aerospace control
  - 100% Effective fighter CAP management/asset control
  - Effective engagement zone orchestration (positive handoff of leakers)
- Seamless command & control station changeover

#### **325 FW Command Post**

- React to all incoming exercise information.
- Maintain an exercise events log.
- Process appropriate checklists, prepare and simulate transmission of appropriate reports, and simulate all outgoing notifications.
- Scramble alert aircraft stationed on the Tyndall aerodrome (148<sup>th</sup>/2FS/3WG).

#### **NAIC/TAAS**

- To provide detailed and accurate technical descriptions and characteristics of potential threat land attack cruise missiles and weaponized unmanned aerial vehicles

#### **SOUTHCOM**

- Training in crisis action planning procedures related to Amalgam Virgo scenario

#### **FLORIDA DIVISION OF EMERGENCY MANAGEMENT**

- Test communication procedures between state emergency operation center (SEOC) and FEMA.
- Test communication with/between SEOC and Bay County, FL (add panhandle counties later).
- Test and evaluate state warning point (SWP) notification procedures.

**FBI (National, State, Local)**

- Familiarize with NORAD CMD CONOPS
- Provide FBI expertise and feedback to NORAD exercise control cells

**Adversaries**

**Civil Air Patrol**

- Provide realistic and reliable target platforms. (civilian multi-engine aircraft)

**434 Squadron**

- Provide realistic and reliable target platforms. (CT-33s)

**Aerial Production Intl Inc.**

- Provide realistic and reliable target platforms. (BD-5Js)

**53 WEG**

- Provide realistic and reliable target platforms. (MQM-107 drones and drone boats)

**1-204 ADA**

- Provide Stinger man pad platforms for surrogate terrorist (drone) boat.

**First Air - MU-2**

- Provide a reliable drone control relay platform. (MU-2s)

**Cruise Missile Attack Warning Experiment (CMAWX) Objectives**

- Identify all warning nodes within the military and civilian missile warning and civil defense infrastructure.
- Develop a test plan to validate warning connectivity
- Develop MSEL's to exercise missile warning.
- Determine what agencies should be incorporated and briefed on the CMAWX.
- Determine who is best suited to provide NORAD's air defense sectors DIRLAUTH concerning CM warning.
- Determine lead agency to enhance NORAD CM warning to civil authorities connectivity.
- Determine secondary/contingency warning methods.

**ACMD ACTD Demo 1 - JBECC Sensor Integration (20 May 01- 4 Jun 01)**

- Support the Area Cruise Missile Defense (ACMD) Advanced Concept Technology Demonstration (ACTD) by demonstrating how emerging correlation and fusion technology can improve the integrated air picture.

Passively participate and correlate data from available networks and sensors to include: Link 11, Link 16, ARSR-4, TSP-75, Sentinel, TIBS, TPS-63

- Demonstrate how correlation technology can enhance detection, tracking, interception and identification of low altitude, small signature aerial vehicles.

Analyze and compare the "correlation/fusion" of augmenting sensors and C2 systems verses the "overlaying" of stovepipe systems using instrumented and non-instrumented cruise missile surrogates

- Investigate how evolving Joint Composite Tracking Network (JCTN) capabilities can improve current tactics, techniques and procedures (TTPs) against land attack cruise missile threats.
- Demonstrate an advanced tactical display for the battle commander and/or operators to improve planning, execution, and data reduction of CMD events.

Provide SEADS Battle Commander and /or operators an advanced display to demonstrate improved capability of the integrated air picture

**AMALGAM VIRGO 01 POC LISTING  
BY NAME (ALPHABETICAL ORDER)**

Organization	NAME (last, first name)	RAN K	SERV	AV 01 EXERCISE RESPONSIBILITY	E-mail	DSN	COMMERCIAL	MAILING ADDRESS	MSG PLAD
Army AFKA-P	Shields, Kelly	Mr	CIV	DOD CM Integration for 1 Army		797-7360			
AD/CANR	Butcher, David	Maj	CAF	CT-33 Targets Scheduler	[REDACTED]	257-5617	(204) 833-2500 ext 5617		
03D ADA	Sheffer, Gary	LTC	ARNG	Patriot Battalion Commander AL ARNG		771-1167			
03D ADA	Thrower, Jeff	Maj	AL ARNG	Patriot Battalion Operations Officer	jeffrey.thrower@al.ngb.army.mil	771-1167			
04 <sup>TH</sup> ADA	May, Jerry	Maj	MS ANG	MS ARNG Avenger Battalion Operations Officer	gerald.may@ms.ngb.army.mil	778-9666		PO. Box 149 Newton, MS 39345	
04 <sup>TH</sup> ADA	Thomas, Robert	Lt Col	MS ARNG	MS ARNG Avenger Battalion Commander		778-9666			
5 FW	Black, "Homer"	Capt	USAF	Exercise OPR	john.black@fjack.ang.af.mil	641-7175			
5 FW	Eifert, Jim	Lt Col	ANG	Jacksonville Operations Officer (F-15s)	james.eifert@fjack.ang.af.mil	641-7140			
5 FW	Said, Sammy	Maj	ANG	Jacksonville Weapons Officer (F-15s)	sammy.said@fjack.ang.af.mil	641-7112			
-S NG)	Ward, Scott	Capt	USAF	12 FS (F-15) POC	scott.ward@elmendorf.af.mil	552-3264			
7 FW	Winkler, "Buster"	Maj	ANG	Ellington TX ANG Scheduling (F-16s)	terence.winkler@txelli.ang.af.mil	954-2391			
3 DET 1	Mudge, Tom	Maj	ANG	Tyndall Det 1 Operations Officer (F-16s)	thomas.mudge@tyndall.af.mil	523-5283			

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**AMALGAM VIRGO 01 POC LISTING  
BY NAME (ALPHABETICAL ORDER)**

Organization	NAME (last, first name)	RAN K	SERV	AV 01 EXERCISE RESPONSIBILITY	E-mail	DSN	COMMERCIAL	MAILING ADDRESS	MSG PLAD
Army AFKA-P	Shields, Kelly	Mr	CIV	DOD CM Integration for 1 Army		797-7360			
AD/CANR	Butcher, David	Maj	CAF	CT-33 Targets Scheduler	[REDACTED]	257-5617	(204) 833-2500 ext 5617		
03D ADA	Sheffer, Gary	LTC	ARNG	Patriot Battalion Commander AL ARNG		771-1167			
03D ADA	Thrower, Jeff	Maj	AL ARNG	Patriot Battalion Operations Officer	jeffrey.thrower@al.ngb.army.mil	771-1167			
04 <sup>TH</sup> ADA	May, Jerry	Maj	MS ANG	MS ARNG Avenger Battalion Operations Officer	gerald.may@ms.ngb.army.mil	778-9666		PO. Box 149 Newton, MS 39345	
04 <sup>TH</sup> ADA	Thomas, Robert	Lt Col	MS ARNG	MS ARNG Avenger Battalion Commander		778-9666			
3 FW	Black, "Homer"	Capt	USAF	Exercise OPR	john.black@fjack.ang.af.mil	641-7175			
3 FW	Eifert, Jim	Lt Col	ANG	Jacksonville Operations Officer (F-15s)	james.eifert@fjack.ang.af.mil	641-7140			
3 FW	Said, Sammy	Maj	ANG	Jacksonville Weapons Officer (F-15s)	sammy.said@fjack.ang.af.mil	641-7112			
3 S NG	Ward, Scott	Capt	USAF	12 FS (F-15) POC	scott.ward@elmendorf.af.mil	552-3264			
3 FW	Winkler, "Buster"	Maj	ANG	Ellington TX ANG Scheduling (F-16s)	terence.winkler@txelli.ang.af.mil	954-2391			
3 DET 1	Mudge, Tom	Maj	ANG	Tyndall Det 1 Operations Officer (F-16s)	thomas.mudge@tyndall.af.mil	523-5283			

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FS 3 WG	Fesler, DM	Cap	USAF	B WEG	Daniel.fesler@elmend orf.af.mil	(317) 552-3990		10571 Slammer Ave Elmendorf, AFB, AK 99506
F/CONR	Mackay, Glen	Maj			glen.mackay@1staf.ty ndall.af.mil	523-3789		
F/DOT	Henderson, Earl	Lt Col			earl.henderson@1staf. tyndall.af.mil	523-4195		
F/DOXJ	Pizza, Mike	Maj	USAF	HQ 1 AF	pizzam@1staf.tyndall. af.mil	523-8030		501 Illinois Ave Tyndall AFB FL 32403
F/DOXS	Childers, Bill				william.childers@1staf. tyndall.af.mil	523-8654		
F/IG	Hansen, Don	Col			donald.hansen@1staf. tyndall.af.mil	523-8694		
F/IGR	Haazen, John	Maj			haazenj@1staf.tyndall. af.mil	523-8697		
F/IGR	Rogers, "Buck"	Lt Col	USAF	ACMD ACTD Demo 1 - JBECC Sensor Integration	clark.rogers@1staf.tyn dall.af.mil	523-8696		
F/IGRP	Zeltins, Brian	Maj	USAF	ACMD ACTD Demo 1 - JBECC Sensor Integration	brian.zeltins@1staf.ty ndall.af.mil	523-8408		
F/IGRX	Ackerman, John	Maj	USAF	ACMD ACTD Demo 1 - JBECC Sensor Integration	john.ackerman@1staf.t yndall.af.mil	523-2996		
F/IGXL	Shaffer, Stephen	Maj	ANG	1 AF Live-Exercise Chief	stephen.shaffer@1staf. .tyndall.af.mil	523-4906		
F/IGXS	Roulston, John	Maj			john.roulston@1staf.ty ndall.af.mil	523-8698		
F/LGXX	Boucher, Randy Maj				randy.boucher@1staf.ty ndall.af.mil	523-3653		
F/LGXX	Love, Andy	Maj			andrew.love@1staf.tyn dall.af.mil	523-3743		

9/14 Personal Privacy

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F/PA	Arias, Don	Capt	USAF	1 AF Public Affairs	donald.arias@1staf.tyndall.af.mil	523-8657		
S/SSE	McMurray, Robert (Boomer)	Capt	USAF	2FS (F-15) POC		523-2951		
63D ADA	Butts, Sammy	Lt	ARNG	SC ARNG (AVENGER)	buttsws@sc-arng.ngb.army.mil	583-1355		
63D ADA	Lewis	MSgt	SC ARNG	SC ARNG (AVENGER)		583-1356		
AAMDC	Beasley, John	Capt	FL ARNG	ADAFCO POC	beasleyj@fl-arng.ngb.army.mil	791-4637		
5 CS/SCXF	Pruitt, Davis	SSgt	USAF	Tyndall Frequency Manager		523-3731		
5 FW CP	Racine, Donna	MSgt	USAF	Superintendent C2 for CP at 325 FW	donna.racine@tyndall.af.mil	523-8531		
5 S/OSAA - se Ops	Treadway, Harold	MSgt	USAF	Tyndall Beddown POC	harold.treadway@tyndall.af.mil	523-3212		
5 OSS/OSO	Granducci, Guido	Capt	USAF	325FW Scheduling	joseph.granducci@tyndall.af.mil	523-3402		
SS/OSK	Sweeny, Tony	Capt	USAF	Alaska F-15 Liaison (weapons) 19FS/12FS	anthony.sweeny@elmdendorf.af.mil	317 552-0299		
OG/OGB	Kennedy, Steve	GS	Mr	Eglin Range Scheduler	Kennedys@eglin.af.mil	872-4087 ext 2616		
TW/OG	Whitener, Sally	Lt Col	USAF	Eglin Range OPR	Sally.whitener@eglin.af.mil	872-3955		
WEG	Bacchieri, Roger	Capt	USAF	82 ATRS Subscale Drone OPR	roger.bacchieri@tyndall.af.mil	523-3808		
WEG	Brown, Greg	TSgt	USAF	WETSTONE (GCI) Drone Safety	gregory.brown@tyndall.af.mil	523-2863		

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PO Box 620728  
Orlando, FL  
32862

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D AACS	Miller, Greg	Capt			greg.miller@tinker.af.mil			
5th AACS	Simmons, Tommy	MSgt	USAF R	Communications (E-3)	Tommy.simmons@tinker.af.mil	884-6517		
IICC	Salinas, Ed	Maj	USAF	Drug Interdiction Center AMICC	edgar.salinas@march.af.mil	947-3830		US Customs Service 1355 Customs Wy Bldg 605 PO Box 6363, March ARB, CA 92518
IRDEC/AMM	Hammett, Jeff				jeff.hammett@rdec.redstone.army.mil	746-4922		
G/DOX	Gload, Ted	Capt	ANG	ANG Programmer		278-7126		
Bay County	Bowen, Mark	Mr	CIV	Emergency Management for Bay County	mbowen@co.bay.fl.us			
Bay County	Majka, Bob	Mr	CIV	Director EOC for Bay County				
P	Clement, Charlie	Mr	Civ	Civil Air Patrol (Target Scheduler)				
S6 N3B	Schmitt, Eugene	ENS	USN	USS Yorktown POC	erschmitt@cds6.navy.mil	358-3389		
IOC/J5/7	Hamilton, Milt	WO			milton.hamilton@cheyennemountain.af.mil	474-2609		
IOC/J7Z	DeVore, Tom	Capt			thomas.devore@cheyennemountain.af.mil	268-4630		
IOC/J7Z	Holland, Rena	TSgt			rena.holland@cheyennemountain.af.mil	268-4621		
INR/A30BN	Christian, Patrick	LTC			patrick.christian@1staf.tyndall.af.mil	523-4538		
SRON 6	Breden, Mark	LCDR	USN	Operations Officer (FFG)	mrbreeden@cds6.navy.mil	358-2140		COMDESRON SIX

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A (JAX)	Draughon, Rob	Mr	Civ	JAX ARTCC Liaison	Robert.draughon@faa.gov	434-3744	
I	Tierney, Joseph	Speci al Agent		JTF Structure			
I (Florida)	Evereitt, Hank			Florida (Jacksonville) FBI	heverett@leo.gov		
I (National)	Chase, Chip	Maj	Army	FBI DOD liaison	wchase@fbihq.adnet.s gov.gov		
I (National)	Kyzar, Don	Mr	Civ	FBI connectivity OPR			
I (National)	McMullen, Steve	Mr	Civ	FBI comm OPR			
I (National)	Olshack, Dave	SSA	Civ	FBI WMD Countermeasures			
MA ditional)	Hersko, Ralph	Mr	Civ	CMAWX	ralph.hersko@fema.go v	380-6214	
MA Alt Ops	Bell, Kevin	Civ	Civ	FEMA (GA) POC	Kevin.bell@fema.gov		
MA Ops tr	Sweetser, Ken	Civ			fema.operations.center @fema.gov	380-6100	
Div of ergency Mgmt	Jibril, Mona				mona.Jibril@dca.state. fl.us		
Div of ergency nagement	Delorenzo, Mike	Mr	Civ	CMAWX for the state of Florida	michael.delorenzo@dc a.state.fl.us		
B 1/204 ABN	Madison	SFC	USA		Thomas.madison@ms. ngb.army.mil	778-9666	
DC/DOX	Brian W. McLean	Lt Col	USAF	AF Doctrine Center Liaison	brian.mclean@doctrine. .af.mil	493-1658	

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10 Aviation Ave Hilliard, FL 32406	
5323 W. Hwy 98 PC, FL 32401	
935 Penn Ave NW Wash DC 20535	
935 Penn Ave NW Rm 11741 Wash DC 20535	
935 Penn Ave NW Rm 11741 Wash DC 20535	
P.O. Box 129 Berryville, VA 22611	
HQ FEMA PO Box 129 Berryville, VA 22611	
2555 Shumard Oak BLVD Tallahassee, FL 32399-2100	
PO Box 149 Newton, MS 39345	

DC/DOX	McLean, Bingo	Lt Col			brian.mclean@doctrine.af.mil	493-3128
RAD/J38X	Nolte, Steve				stephen.Nolte@Peters.on.af.mil	692-3697
IET	Penfold, Duane	LT	USN	JCMD Augmentee	Duanc.penfold@eglin.af.mil	872-3404 x 213
MD	Millet, Roger	Civ		CM Defense	Roger.millet@eglin.af.mil	872-5010 x112
COMFCJ77JW3	Degnon	Lt Col	USA	Joint Training	degnan@wfc.jficom.mil	668-7437
COMJ611	Mosk, Bill	CDR	USN	TAMDI ACTD Manager P-3 POCTWS Rossetta	mosk@jficom.mil	836-5869
NS	Heckman, Lee	Civ		JLENS Observer	Lee.heckman@smdc.army.mil	645-2621
AMDO	Don, Howard	Civ	Contr	Observer	Howard.don@js.pentagon.mil	332-3632
AMDO	Swensen, Keith	Maj	USAF	Observer	keith.swensen@js.pentagon.mil	664-3366
-CS	Ditch	Col	USAF	J5	ditch@jficom.mil	680-6166
-CS	Gabriel, Pete	Mr	Civ	Joint Task Force - Civil Support OPR	gabriel@jficom.mil	680-6187
-CS	Hadrick, George	Maj	USA	JTF-CS J5 shop	hadrick@jficom.mil	680-6642
SL (PCC)	Cibuzar, Paul	Civ	PCC	USMC Det		
SL	Studebaker, Robert	LCDR	USCG	HO 125/Command Ctr	Rstudebaker.m2/g.uscg.mil	

NCT0060418

ARNG	Brewer, John	Capt	MS ARNG	1-204 <sup>th</sup> ADA	john.brewer@ms.ngb.army.mil	778-9666
ARNG	May, Gerald				gerald.may@ms.ngb.army.mil	778-9666
I-2s	Rhodes, Jim	Mr	CIV	Drone Control Relay (MU-2s)		
IC/TAAS	Watson, Charles	Mr	Civ	CM Threat Intelligence	cnow564@naic.wpafb.af.mil	4180 Watson Way Wright-Patterson AFB, OH 45433
IC/TASS	Layne, Tom	Capt	USAF	CM Threat Intelligence	tri373@naic.wpafb.af.mil	4180 Watson Way Wright-Patterson AFB, OH 45433
yy PMS-465	Blincoe, Jonathan					
TSI Det 2	Wessman, Dan	LCDR	USN	Tadil Interface	wessman@nctsi.navy.mil	DIC NCTSI DET 2 1911 "D" Ave Norfolk, VA 23511
ADS	Cleveland, Neal	Maj			cleveland@neads.ang.af.mil	NCTSI Det Two Norfolk VA
ADS/ XL	Nagel, Brian	Capt (CF)			nagelb@neads.ang.af.mil	
ADS/ XL	Palmer, Michael	Tsgt			palmerM@neads.ang.af.mil	
:B	Baisden, Bill	Lt Col	USAF	MSCA	william.baisden@ngb.army.mil	587-6146
RAD (gicon)	Carbone, Nick	Mr	Civ	White Ship Tracking NCMD		327-1855
RAD ;Z	Garrett, Tom	Ssgt	USAF	Intel build/WEBMASTER		268-2227
RAD ;Z	Skaarup, Hal	Maj	CF	Intel build/scenario build		268-2150

**NCT0060419**

RAD J2SZ	Mayfield, Debra	Lt (CF)	CF	AV 01 Scenario Architect	debra.mayfield@cheyenmemountain.af.mil	268-2297		
RAD J38	Goddard, Paul	Maj	CAF	Exercise Director	paul.goddard@peterso n.af.mil	692-3130		HQ NORAD PETERSON AFB CO/J38//
RAD J38	Nolte, Steve	Mr	Civ	Airspace	stephen.nolte@peters on.af.mil	692-3697		HQ NORAD PETERSON AFB CO/J38//
RAD J38	Postgate, "Woody"	Lt Col	USAF	Chief of Exercises	postgatem@norad.cas .spacecom.af.mil	692-3686		HQ NORAD PETERSON AFB CO/J38//
RAD J38	Thingier, Chuck	Maj	USAF	Readiness	thingerc@norad.cas.sp acecom.af.mil	692-9761		HQ NORAD PETERSON AFB CO/J38//
RAD J38T	Ashborne, Dave	LCDR	CF	Combined Air Sea Planner (NORAD surface warfare officer)	dave.ashbourne@pete rson.af.mil	692-2683		
RAD J5	Armstrong, Steve	Lt Col	USAF	NORAD C2 Relationships Validation		692-5415		
RAD J7Z	DeVore, Tom	Capt	USAF	CMOC Exercises		268-4621		
RAD/J3	Mott, "Biff"	Maj	USAF	Plans POC		692-5470		
RAD/J330	Jaensch, Michael	Lt Col				692-3665		
RAD/J38X	Cecil, Tom	Lt	USN		cecil@norad.cas.spac ecom.af.mil	692-9649		
RAD/J5	Byrd, Ken	Lt Col			kenneth.bryd@peterso n.af.mil	692-2642		
RADIUSSP ECOM ALYSIS	Santiago, John	Col	USAF	Analysis	john.santiago@peterso n.af.mil	692-9767		
RAD J2SZ	Garrett, Tom	SSgt			thomas.Garrett@Chey enneMountain.af.mil	268-2227		

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D/JCMD	Fuller, Brandon	1LT	USAF	Chief, Data Analysis	Brandon.fuller@eglin.a f.mil	872- 4661x11 7		207 W D. Ave, Ste 128 Eglin, AFB, FL 32542-5490
SHORAD/ COM	Bridges, Don				don.Bridges@redstone. .Army.Mil	746-1910		
Rtheon	Procter, Dave			ACMD ACTD				50 Apple Hill Dr Tewksbury, MA, 01876
Rtheon	Sadeghi, Tom	Civ	Civ	Ratheon				
YTHEON	Watts, Kenny	Mr	Civ	JBECC Integration				
Rtheon St e	Chester, Mike	Civ						
ADS	Bauer, Steve	Lt Col	USAF	SEADS AV Analysis Chief	steven.bauer@1staf.ty ndall.af.mil	523-5445		164 Alabama Ave Tyndall AFB, FL 32403-5015
ADS	Boe, Steven	Maj	USAF	SEADS Exercise Director	steven.boe@1staf.tynd all.af.mil	523-5684		SE AD SECTOR TYNDALL AFB FL//CDE//
ADS	Breitmann, Todd	Capt	USAF	SEADS AV 01 CONOPS	todd.breitmann@1staf. tyndall.af.mil	523-5179		164 Alabama Ave Tyndall AFB, FL 32403-5015
ADS	Glynn, Pat	MSgt	USAF	NCOIC SEADS Live Exercises	james.glynn@1staf.tyn dall.af.mil	523-5683		SE AD SECTOR TYNDALL AFB FL//CDE//
ADS	Koo, Tom	Maj	USAF	Red GCI Chief	thomas.koo@1staf.tyn dall.af.mil	523-5589		164 Alabama Ave Tyndall AFB, FL 32403-5015
ADS	Moore, Mike	MSgt	USAF	SEADS Scenario Builder	michael.moore@1staf.t yndall.af.mil	523-5441		
ADS A Liaison	Proue, Paul	Civ	FAA	SEADS FAA Liaison	prouep@1staf.tyndall.a f.mil	523-5526		164 Alabama Ave Tyndall AFB, FL 32403-5015
ADS	Schwend, Steve	Lt	USN	AV 01 Connectivity Chief	steven.schwend@1sta f.tyndall.af.mil	523-5259		SE AD SECTOR TYNDALL AFB FL//DOS//

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ADS/DOS	Hicks, Jim			james.hicks@1staf.tyndall.af.mil	523-5825	
ADS/EBS	Taylor, Ron	2Lt		ronald.taylor@tyndall.af.mil	523-5195	
ADS/OPS	Lasecki, Walt	Capt		walter.lasecki@1staf.tyndall.af.mil	523-5210	
ORAD	Adams, Jerry			jeremy.adams@redstone.army.Mil	746-0319	
DBL	Long, Donald	Civ	Army	JBECC	Don.long@smdc.army.mil	876-2755
DC/DBL	Woodruff, Darren				darren.woodruff@smdc.army.mil	645-1839
UTHCOM	Angel	LT	USN		Angela@hq.southcom.mil	567-2560
UTHCOM	Plewes, Rich	Lt Col	USAF	SOUTHCOM Exercises	uscj34@hq.southcom.mil	567-3046
UTHCOM	Knightly, Bill	GS14	Civ	SOUTHCOM POC	Knightlyw@hq.southcom.mil	567-3042
Iahassee ergency agement	Myers, Joe	Mr	Civ	FL EOC OPR		
NORAD	Howell, Carl	Civ	Civ	Technical Studies & Analysis Corp	howellc@norad.cas.spacem.com.af.mil	834-6729
ARMY/ IDBL	Miller, Curtis	Civ			curtis.miller@smdc.army.mil	645-1010
Customs	Raines, Doyle	Mr	Civ	Exercise POC		
CG	Henderson, Bob	Lt	USCG	Kodiak Island POC/USCG Cutter		

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CG	Hinote, Cris	CPO	USCG	Station PC POC			
CG	Janzen, Jeff	Lt	USCG	Group Mobile POC/HU-25			
CG	Jones, Larry	CDR	USCG	D8 POC/Exercise POC			
CG NTAREA	Reim, Charlene	CDR	USCG	LANTAREA Exercise POC	CReim@LANTD5.usc g.mil		
CG Mobile	Barr, Matt	CDR	USCG	HU-25 Ops	mbarr@atc.uscg.mil		
CG HQ G- F-3	Cubbon, Jane	LCDR	USCG	USCG Exercise Planning	Jcubbon@comdt.uscg. mil	COMMANDANT (G- OPF-3) 2100 2 <sup>nd</sup> ST SW WASHINGTON, DC 20593-0001	
CG/COMD ;OPF	Marchese, Jim	LCDR	USCG	USCG Exercises	jmarchese@comdt.usc g.mil	2100 2 <sup>nd</sup> St SW Washington DC 20593 (Rm 3215)	
JFCOM	Dorris, John	Civ	JFCOM		dorris@jfc.com.mil	(757) 836-5881	
N/US town Comms	Bussell, Delmek	E-7	USN		zea@sals.icpphil.navy. mil	358-2458	
S Yorktown	Green, Tracy	Lt		Training/TAO		761-2259	
S Yorktown	Ray, Paul	Lt	USN	AEGIS POC		358-7053	
SFCOM /ZUS	Yanni		Civ	Rosetta			
SOUTHCO	Drago, Joe	Maj	USAF	J2		567-4731	
W-77	Balzon, Bill	LCDR	USNR	E-2 Operations Officer (Atlanta, GA)		925-6882 ext1202	1000 Halsey Ave NAS Atlanta Marietta GA 30060
							CARAEWRONS EVENSEVEN

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## **AMALGAM VIRGO 01**

### **EXERCISE CONCEPT OF OPERATIONS (CONOPS)**

The primary **goal** of the AV 01 exercise is to **train NORAD Warriors** in a terrorist environment, strengthening their warrior skills and improving their mission readiness status.

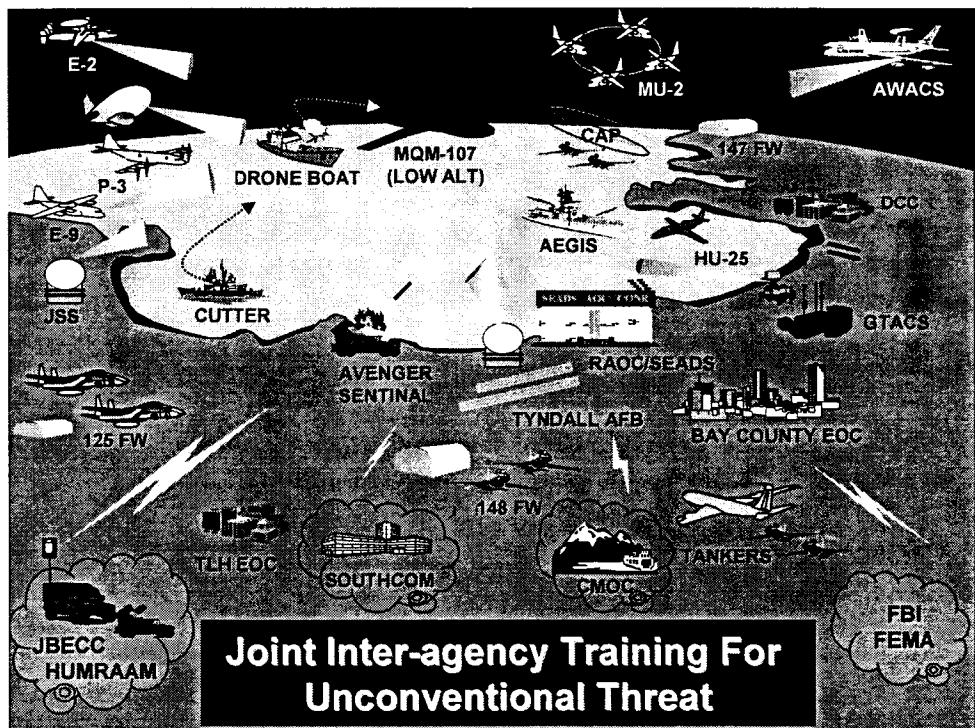
For years NORAD simulation exercise controllers have imitated agencies and organizations that typically do not participate in NORAD live-fly exercises. The AV 01 will exercise several (live) organizations commonly simulated by exercise control cells during these NORAD exercises. The intent of the exercise is to validate CONOPs that are notionally played out by these control cells during NORAD/CONR/Sector simulation exercises. The exercise infrastructure sets the foundation for a "new level of training" in the NORAD live-fly exercise program. The exercise framework presents the opportunity to combine the operational levels of war with the tactical levels of war. The majority of the exercise scenario stimulates tactical play versus operational play. Short of war, it is virtually impossible to work (exercise) with all agencies that would take part in a national crisis scenario. Realism and fidelity are the focus of this robust live-fly contingency exercise.

The AV 01 scenario is skewed to provide vigorous training to certain audiences of the NORAD air defense community. Some exercise participants will not be as challenged as others due to the nature of the scenario. Exercise artificiality's are recognized by the planners and are accepted as "tradeoff" in an effort to maximize certain training objectives.

The AV 01 exercise scenario will focus on counter-terrorism. The primary threat to SEADS/CONR/NORAD for this exercise will be a notional terrorist group that has acquired cruise missiles and unmanned aerial vehicles (UAV's) to attack the United States (specifically northwest Florida). The notional terrorist group will use a surface vessel to launch the weapons platforms. A real-world surface vessel will be used as a target platform and SEADS in conjunction with the US Coast Guard will detect, identify, and prosecute the surrogate surface threat. The MQM-107 (subscale drone) and BD-5j's (UAV surrogates) will be used as air-breathing target threats. SEADS will synergize with GTACS, AWACS, NORAD C2 units, NORAD air defense fighter wings, Army ADA and the USCG to counter the terrorist threat.

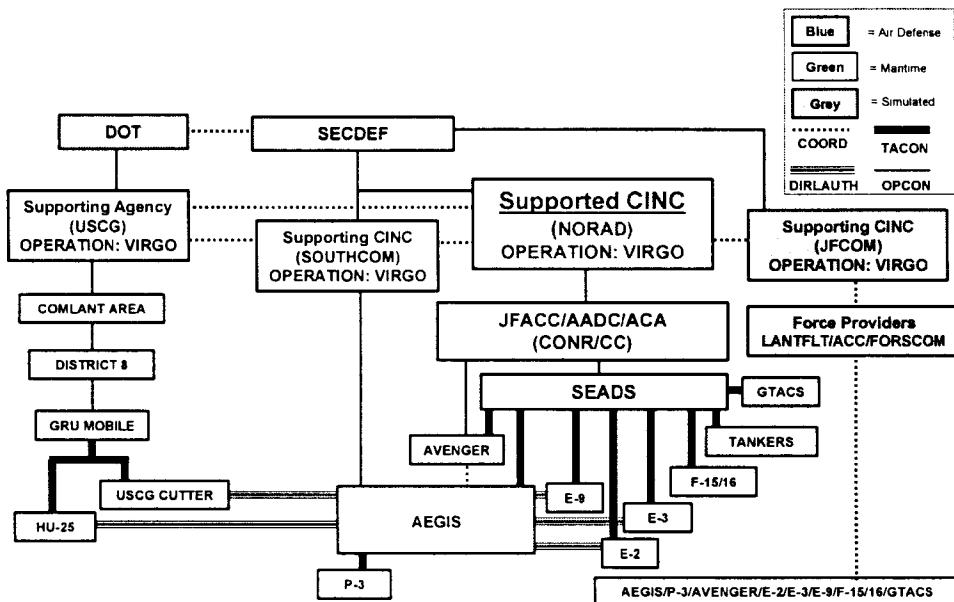
On the following pages are some illustrations that baseline planning considerations for the exercise architects. Keep in mind the command and control structure slide and intelligence scenario slide are information slides (not guidance). AV 01 is a fluid exercise and actual chain of command guidance and scenario reactions are contingent upon blue force decision making. Several new concepts are being tested within this exercise. Please remain flexible as new ideas are being validated.

## Exercise Picture



### OPERATION: VIRGO (Possible C2 Relationships)

If Primary Mission (SECDEF determined): Aerospace Defense

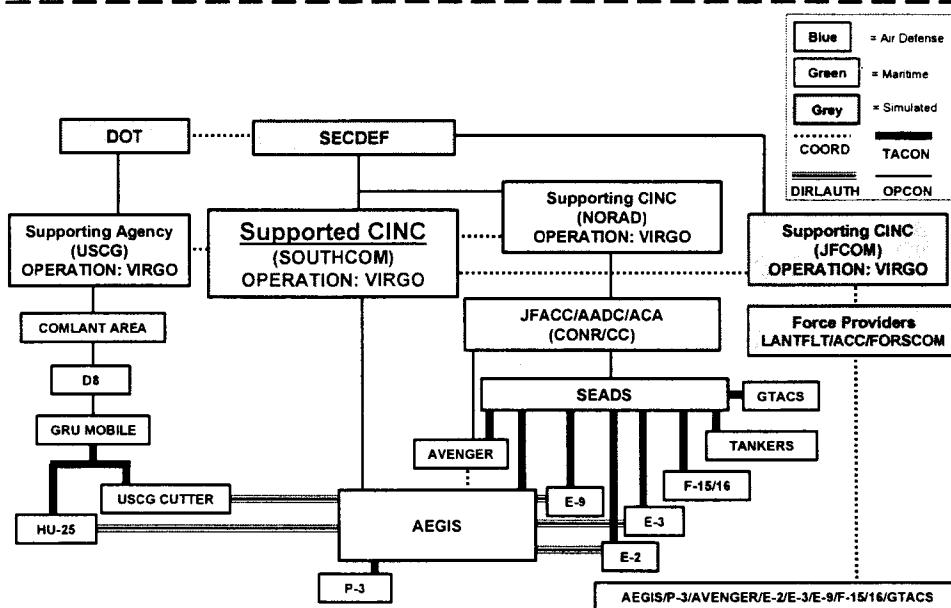


**C2 Structure (Baseline):**  
(Structure contingent upon exercise reactions and decisions of NORAD/SOUTHCOM)

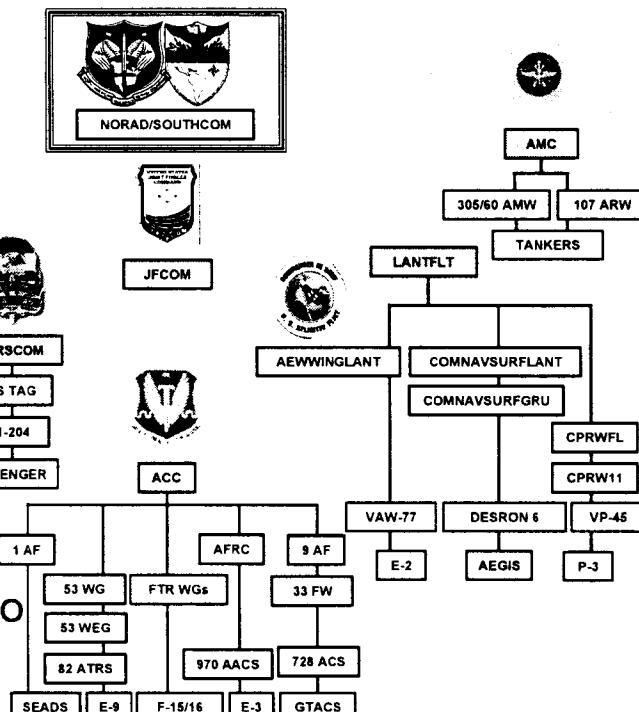


## OPERATION: VIRGO (Possible C2 Relationships)

If Primary Mission (SECDEF determined): Maritime Prosecution

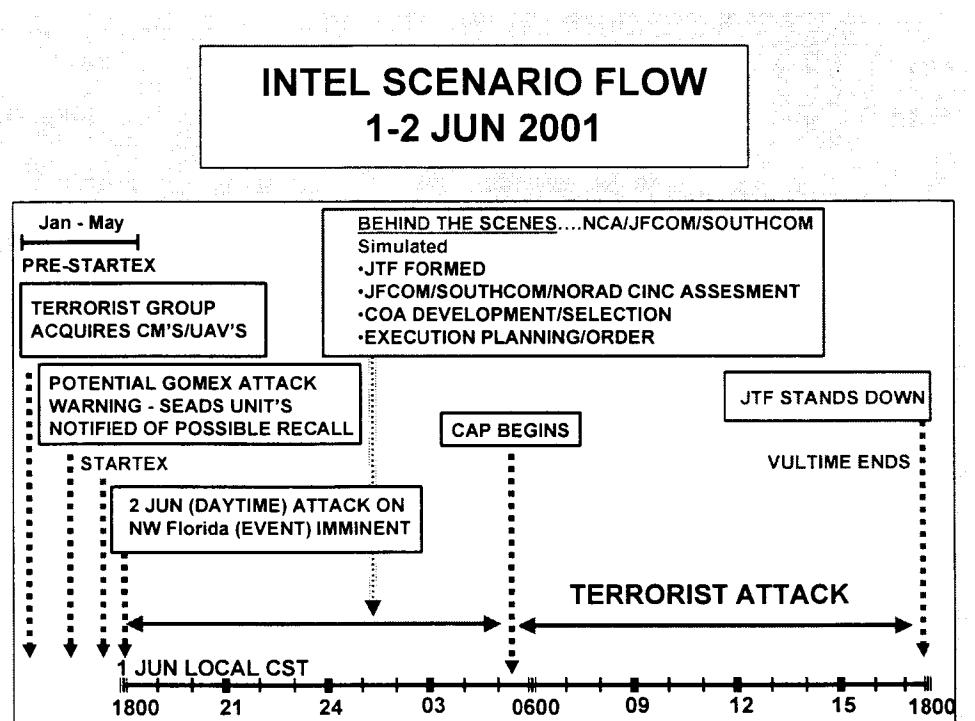


## OPERATION: VIRGO Force Providers

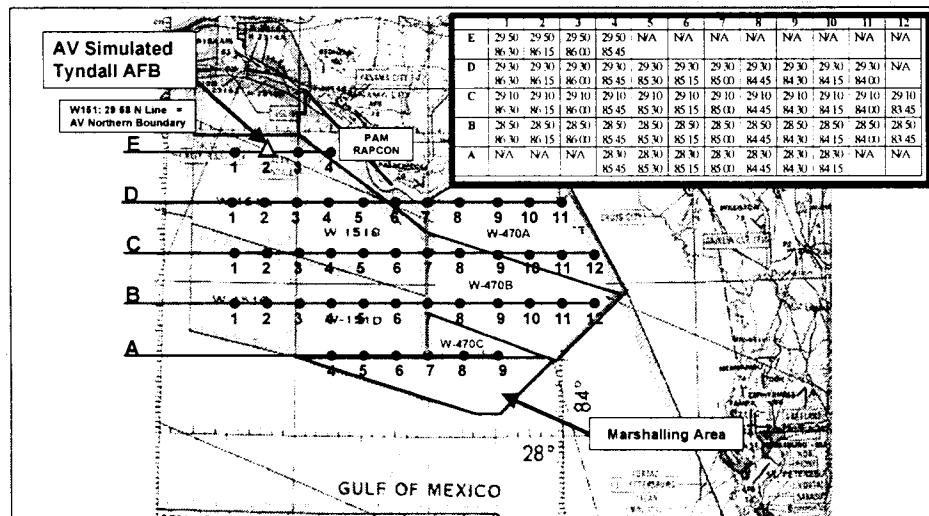


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## Intel Scenario Flow (proposed)



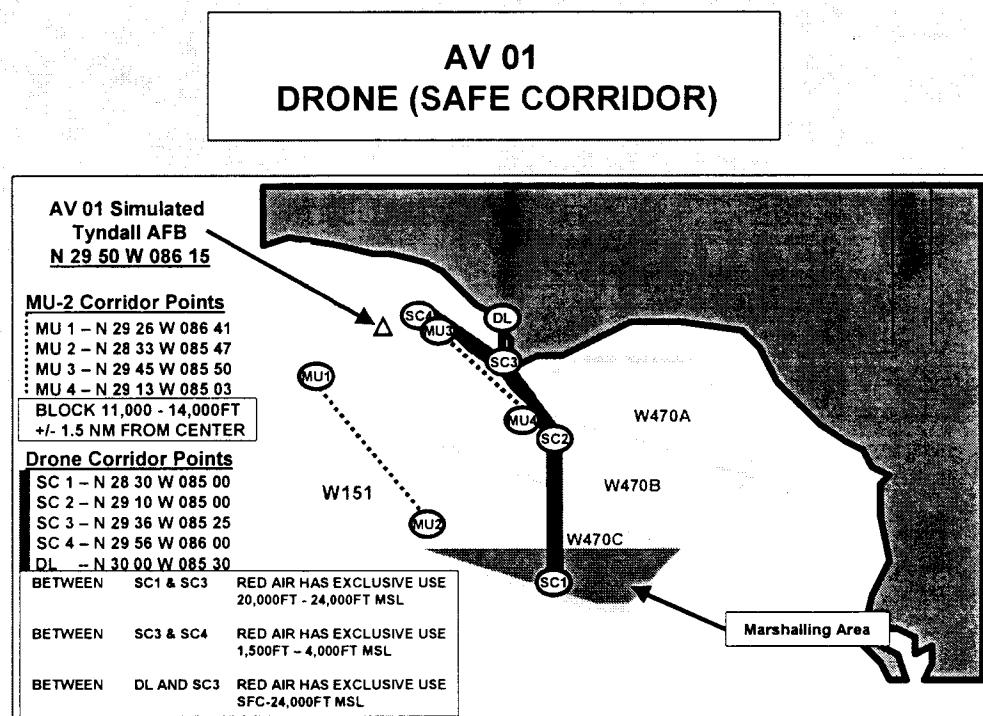
## AV 01 AIRSPACE



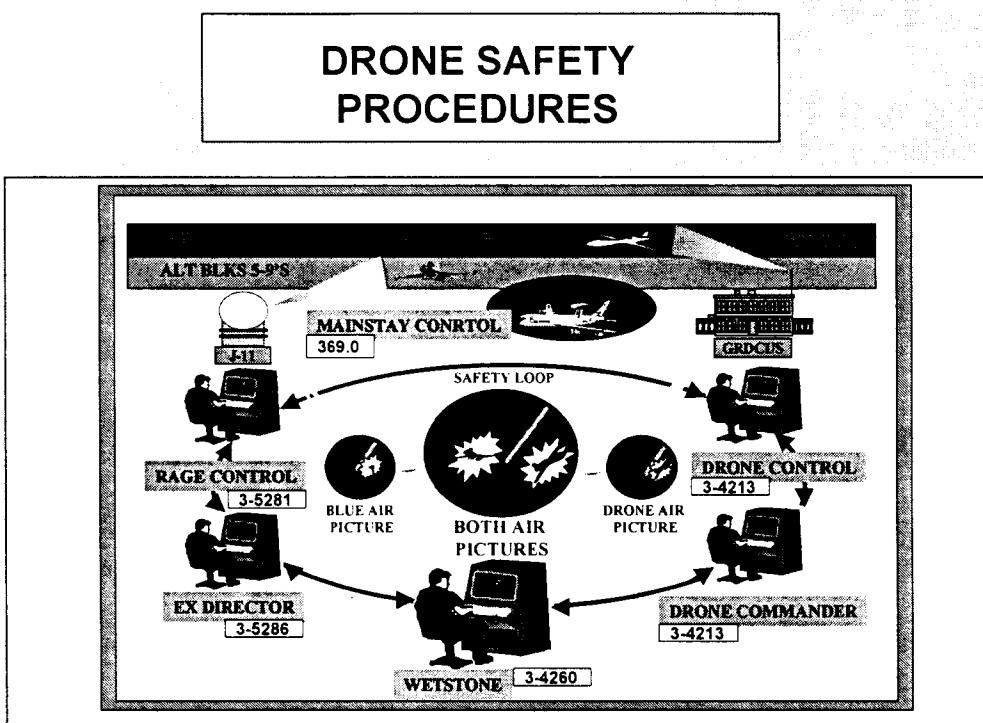
AV 01 Airspace

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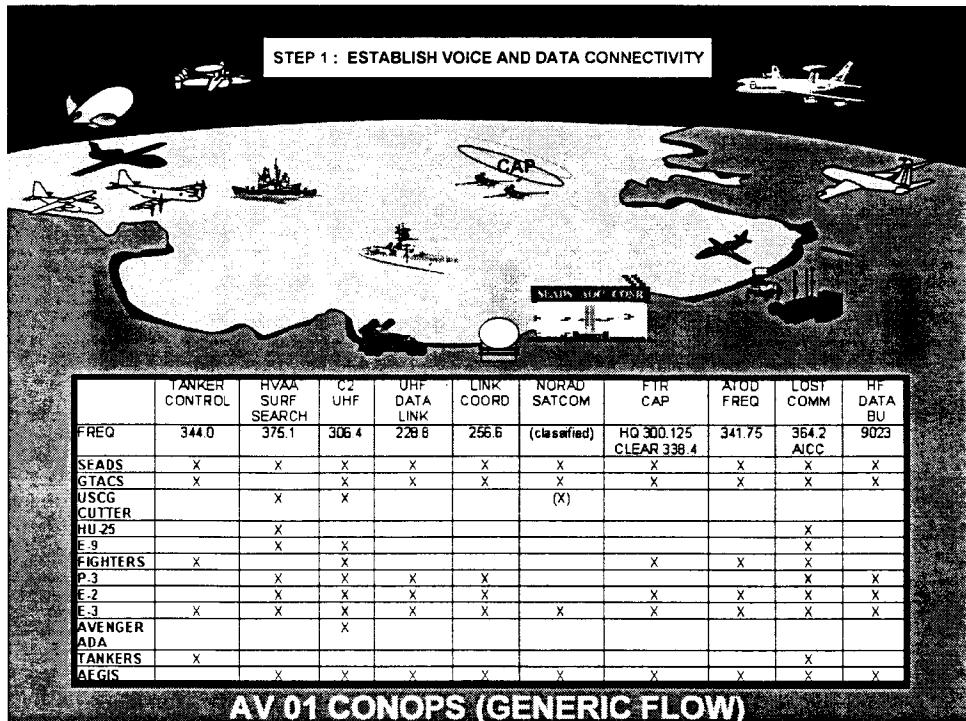
## Target Corridor



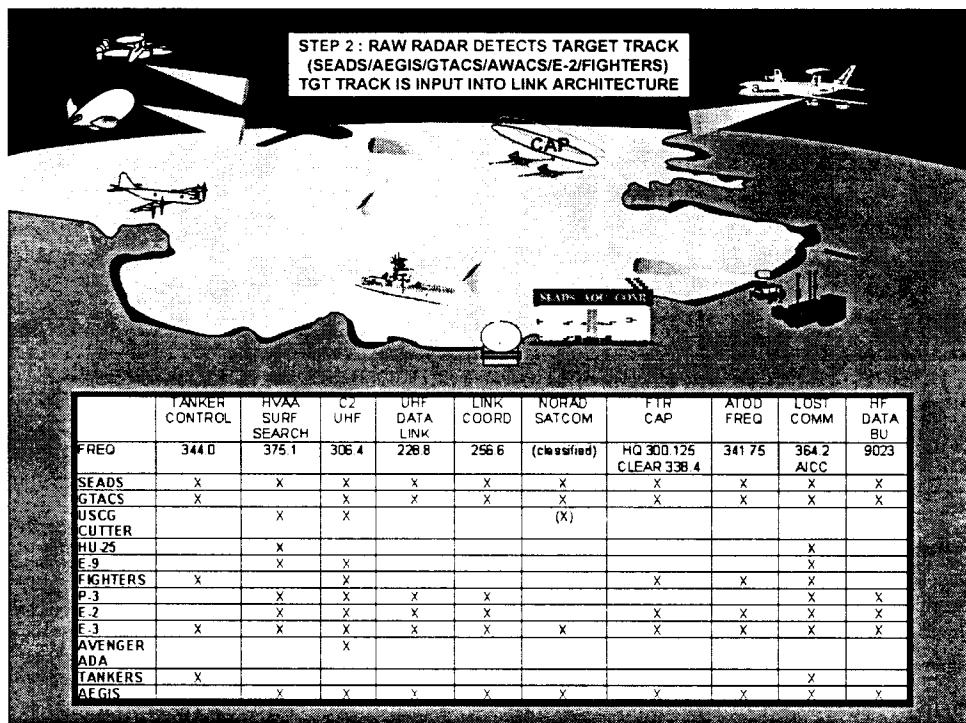
## White Cell Safety Net



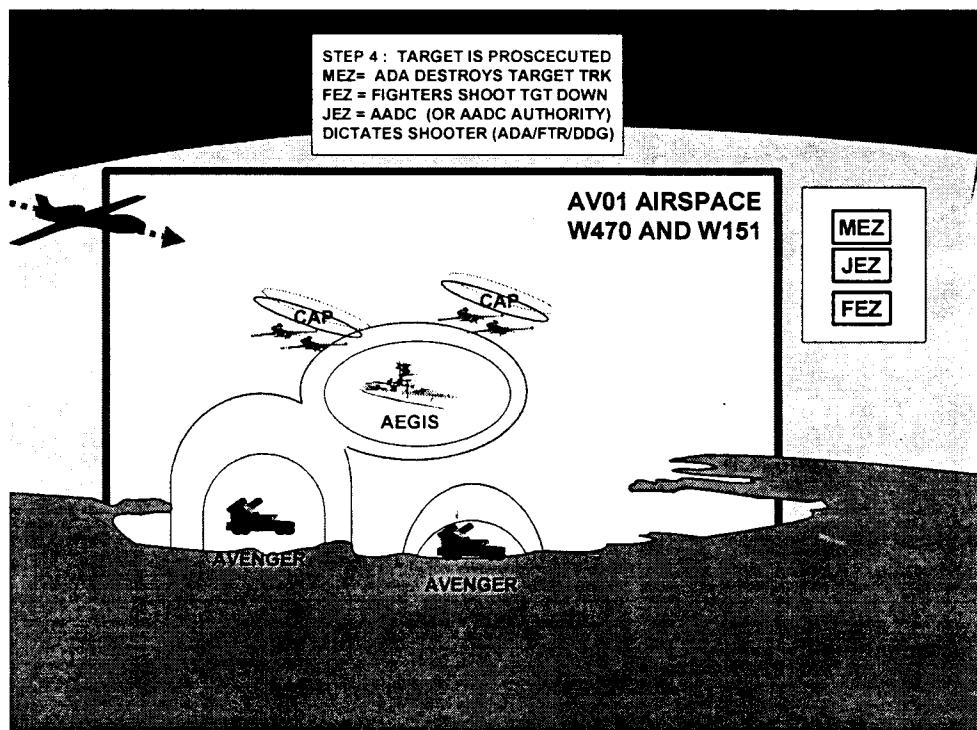
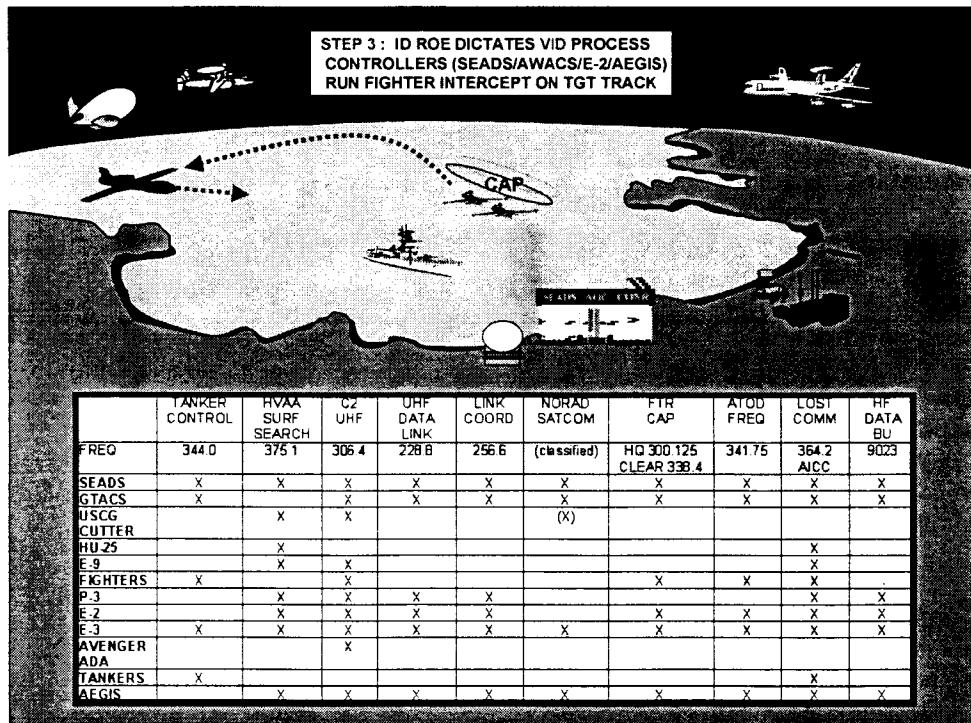
NCT0060429



\*\*Use ATO for frequency assignment (not this chart)\*\*



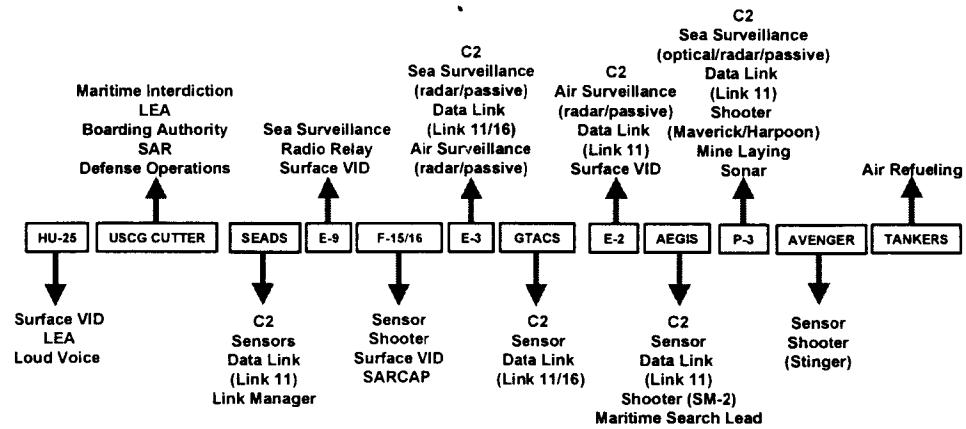
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NCT0060431

# **OPERATION: VIRGO**

## **Tactical Unit Potential Roles and Missions**



NCT0060432

**AMALGAM VIRGO O1**  
**EXERCISE PLANNER'S COMM OPTIONS (Tactical Units)**

	SEADS (Tyndall AFB, FL)	DISTRICT 8 (New Orleans, LA)	GRU Mobile (Mobile, AL)	USCG PC STA OPS (COHO) (Panama City, FL)	HU-25 ATC MOBILE (Airborne GOMEX)
Commercial Phone	(850) 283-5205/5210	(504) 589-6225	(334) 441-6215	(850) 234-2031	(334) 441-6861 ext 6426
DSN Phone	523-5205/5210				
Secure Phone	9/11 Agency Internal Matters				
FAX Unclassified	(850) 283-5469 523-5469	(504) 589-2148	(334) 441-6216	(850) 235-0451	(334) 441-6435
HF					
UHF					
VHF	9/11 Agency Internal Matters				
SATCOM					
Cellular Phone					
FAX Secure					
E-mail	Call Comm #	D8cc@d8.uscg.mil	jjanszen@grumobile.uscg.mil	pzado@cgccoh.o.uscg.mil	mbarr@atc.usc.g.mil
Message PLAD	9/11 Agency Internal Matters				
Comm Center					

NCT0060433

	<b>E-9</b> (Airborne GOMEX)	<b>728 ACS (GTACS)</b> (Eglin AFB, FL)	<b>E-3 (AWACS)</b> (Airborne GOMEX)	<b>E-2</b> (Airborne GOMEX)	<b>CG 48</b> (Yorktown) (Sea GOMEX)
Commercial Phone	(850) 283-4580	(850) 883-4727	405-734-6781 Ops Desk 884-7641 Command Post	(770) 919-6882 ext 202	(228) 761-2457/2452 Underway IMARSAT 011-871-151-3611
DSN Phone	523-4580	875-4485	884-6781 Ops 884-4474 Sqd CC x4800 Grp CC	925-6882/6784 ext 202	358-2458
Secure Phone			9/11 Agency Internal Matters		
FAX Unclassified	(850) 283-4465	DSN 875-4499 (Orderly Room)	884-3543 Sqd	925-6882	
HF					
UHF					
VHF					
SATCOM	9/11 Agency Internal Matters				
Cellular Phone					
FAX Secure					
E-mail		david.robison@egl.in.af.mil david.parker@egl.in.af.mil	timothy.benoit@inker.af.mil		Underwayops@yorktown.navy.mil
Message PLAD	9/11 Agency Internal Matters				
Comm Center					

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	<b>AVENGER (SHORAD) (Tyndall AFB, FL)</b>	<b>PATRIOT TBD (ADA) (Eglin AFB, FL)</b>	<b>F-15 JAX (Airborne GOMEX)</b>	<b>F-16 EFD (Airborne GOMEX)</b>	<b>ANR F-15 PAM (Tyndall WEG)</b>
<b>Commercial Phone</b>	(601) 683-3837	Not participating this year		(281) 929-2142	(850) 283-3294
<b>DSN Phone</b>	778-9666		641-7140 Ops	954-2124	523-3294
<b>Secure Phone</b>			9/11 Agency Internal Matters		
<b>FAX Unclassified</b>	(601) 683-7545		641-7199	954-2862	
<b>HF</b>					
<b>UHF</b>					
<b>VHF</b>					
<b>SATCOM</b>					
<b>Cellular Phone</b>					
<b>FAX Secure</b>					
<b>E-mail</b>	john.brewer@ms _arng.army.mil		John.black@fljac k.ang.af.mil		
<b>Message PLAD</b>					
<b>Comm Center</b>					

NCT0060435

	P-3 (NAS JAX, FL)	F-15 PAM 325 FW/2 FS	F-16ADF PAM 148 Det 1		
Commercial Phone	(904) 542-3584	(850) 283-2951	(850) 283-5283		
DSN Phone	942-3584	523-2951	523-5283		
Secure Phone	9/11 Agency Internal Matters				
FAX Unclassified	942-3583	523-3191	523-2576		
HF	9/11 Agency Internal Matters				
UHF					
VHF					
SATCOM					
Cellular Phone					
FAX Secure					
E-mail	klavonb@tsc-jax.navy.smil.mi	robert.mcmurry@tyndall.af.mil	148.det1@tyndall.af.smil.mil		
Message PLAD	9/11 Agency Internal Matters				
Comm Center					

NCT0060436

**AMALGAM VIRGO 01**  
**ATO/ACO Distribution List**

**Blue Players**

UNIT	ATO RECEIPT POC	ATO RECEIPT PHONE NUMBER	MEANS 1. Primary 2. Secondary 3. Tertiary	E-mail Addresses Websites Phone Numbers Runners (MESSAGE PLAD)
SEADS Tyndall AFB Sector Ops	Lt Col Don Jones (fighter officer)	DSN 523-5205/7		
125 FW Det 1 Homestead Command Post (F-15s)	Duty Controller	DSN 791-6578		
VP-45 Jacksonville, FL (P-3s)	LCDR Brent Klavon	DSN 942-3589		
147FW Ellington, TX Command Post (F-16s)	Duty Controller	DSN 954-2716		
148FW Det 1 Tyndall AFB (F-16s)	Maj Tom Mudge	DSN 523-5283		9/11 Agency Internal Matters
325 FW Command Post Tyndall AFB	Duty Controller	DSN 523-2155		
NORAD Petersen AFB, CO	inherent	Inherent		
CONR Tyndall AFB, FL	inherent	Inherent		
SOUTHCOM Tyndall AFB, FL sim-cell				

NCT0060437

728 ACS <b>GTACS</b> Eglin AFB	Maj Doc Robinson	875-4502
USCG HQ Washington DC	LCDR Jim Marchese	(202) 267-2103
USCG D8	Duty Controller	(504) 589-6225
USCG ATC Mobile (HU-25)	CDR Matt Barr	(334) 441-6861 ext 6426
53 WEG Tyndall AFB (E-9)	Maj Dave Burke (trusted agent)	DSN 523-4576
125 FW Jacksonville FA (F-15s)	Duty Controller	DSN 641-7125
970 AACs Diverted from Tinker AFB, OK (E-3)	Capt Louis Fournier	DSN 884-6781
1-204 ADA Tyndall AFB <b>Avenger ADA</b> Hm: Newton MS	ADA Operations	(601) 479-5888 (601) 594-0795 cell phones
305 AMW Deployed to Eglin AFB Hm: McGuire (KC-10)	Duty Controller	DSN 875-4020
107 ARW Deployed to Eglin AFB Hm: Niagara Falls (KC-135)	Duty Controller	DSN 875-4020

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NCT0060438

60 AMW Deployed to Eglin AFB Hm:Travis AFB (KC-10)	Duty Controller	DSN 875-4020	
USS Yorktown Underway in GOMEX (AEGIS)			
VAW-77 Atlanta, GA (E-2)	LCDR Batson	DSN: 925-6382 Ext202	9/11 Agency Internal Matters
3 WG (AK F-15) @ Tyndall	Duty Officer	DSN 523-3294	
2 FS Tyndall AFB (F-15s)	Duty Officer	DSN 523-2951	

### SIMULATION (WHITE) CELLS

UNIT	ATO RECEIPT POC	ATO RECEIPT PHONE NUMBER	MEANS 4. Primary 2. Secondary 3. Tertiary	E-mail Addresses Websites Phone Numbers Runners
NORAD Sim cell	Exercise Director	DSN 692-3130		
CONR Sim cell	Exercise Director	DSN 523-5290		
SEADS Sim cell	Exercise Director	DSN 523-5285		
USCG Sim cell	LCDR Jim Marchese	(202) 267-2103		9/11 Agency Internal Matters
728 ACS Sim cell	Maj Doc Robinson	DSN 875-4502		
USS Yorktown Sim cell	Lt Steve Schwend			

NCT0060439

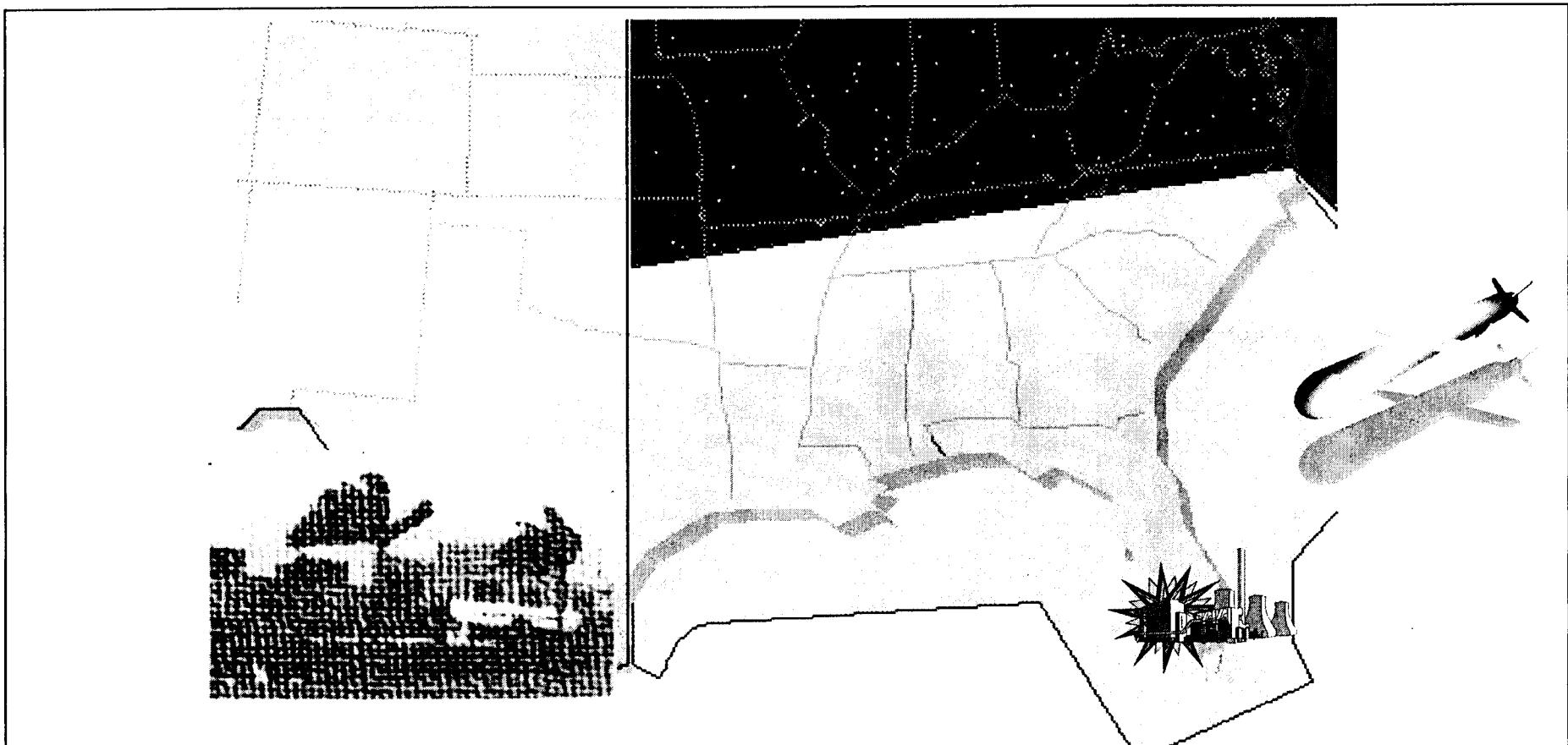
SOUTHCOM  
Sim cell

9/11 Agency Internal Matters

NCT0060440

# Cruise Missile Attack Warning Experiment

NCI006041



1. *Anytown USA is attacked by rouge cruise missile (CM).*

# Cruise Missile Attack Warning Experiment

NCT0060442

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# **Cruise Missile Attack Warning Experiment**

NCT0060443

9/11 Agency Internal Matters

# Cruise Missile Attack Warning Experiment

NCT0060444

9/11 Agency Internal Matters

# **Cruise Missile Attack Warning Experiment**

NCT0060445

9/11 Agency Internal Matters

# **Cruise Missile Attack Warning Experiment**

9/11 Agency Internal Matters

**NCT0060446**

# Cruise Missile Attack Warning Experiment

NCT0060447

9/11 Agency Internal Matters

# Cruise Missile Attack Warning Experiment

9/11 Agency Internal Matters

NCT0060448

## **CMAWX Objectives**

- Validate Military/Civilian CMD Connectivity
- Identify Potential “Areas of Improvement”
- Learn From Each Other
- One Step Closer To “Seamless Collaboration”  
In A Dynamic Battle Management Situation



# AMALGAM VIRGO 01

## Overview Briefing



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# SCENARIO: “Cold Start” CMD COUNTER TERRORISM 1-2 JUN 2001



NCT0060450

Joint Inter-Agency Training Against Unconventional Threat



# NORAD MISSION

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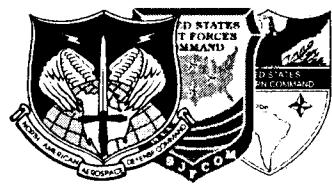
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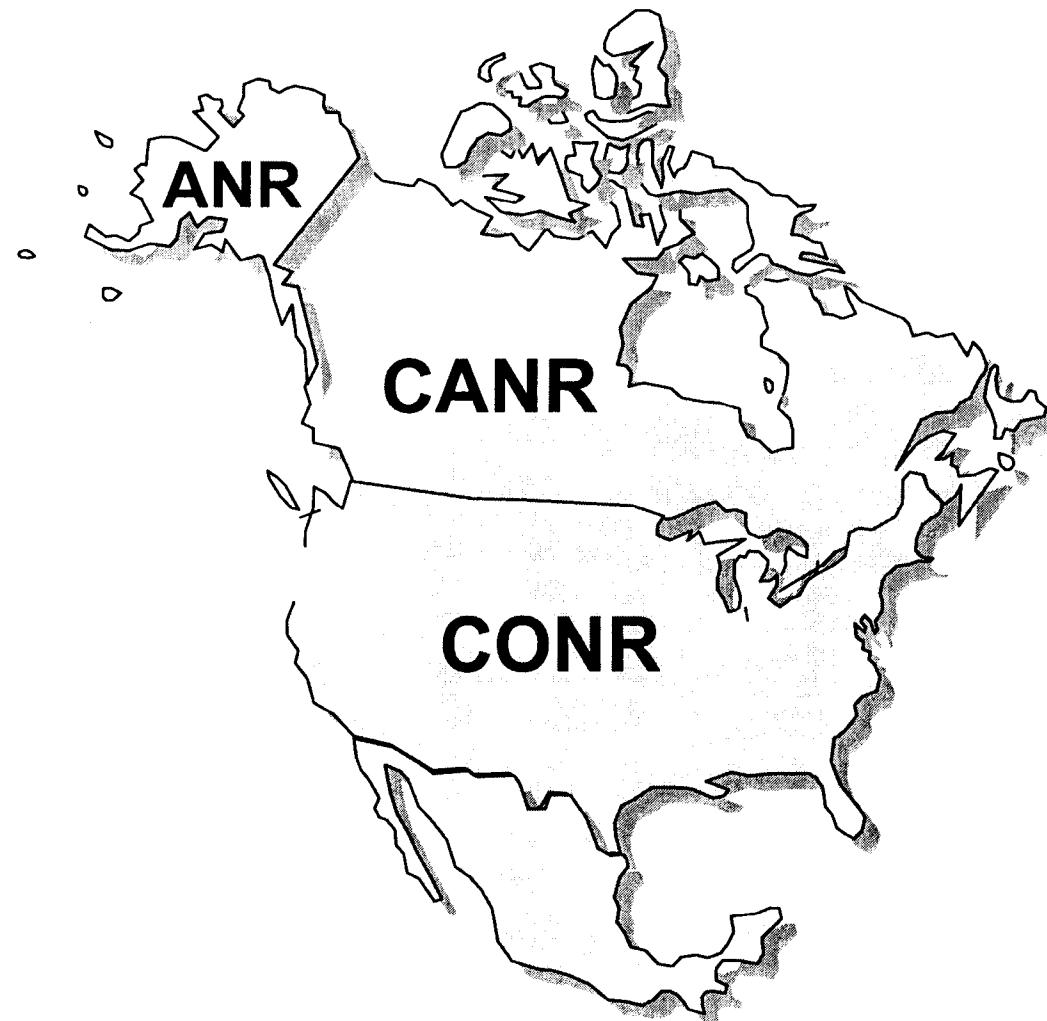
***... Continuously Provide Warning Of An Aerospace Attack On North America And Maintain Continental Aerospace Control To Include Peacetime Air Sovereignty And Appropriate Aerospace Defense Measures In Response To Hostile Actions Against North America***

NCT0060451





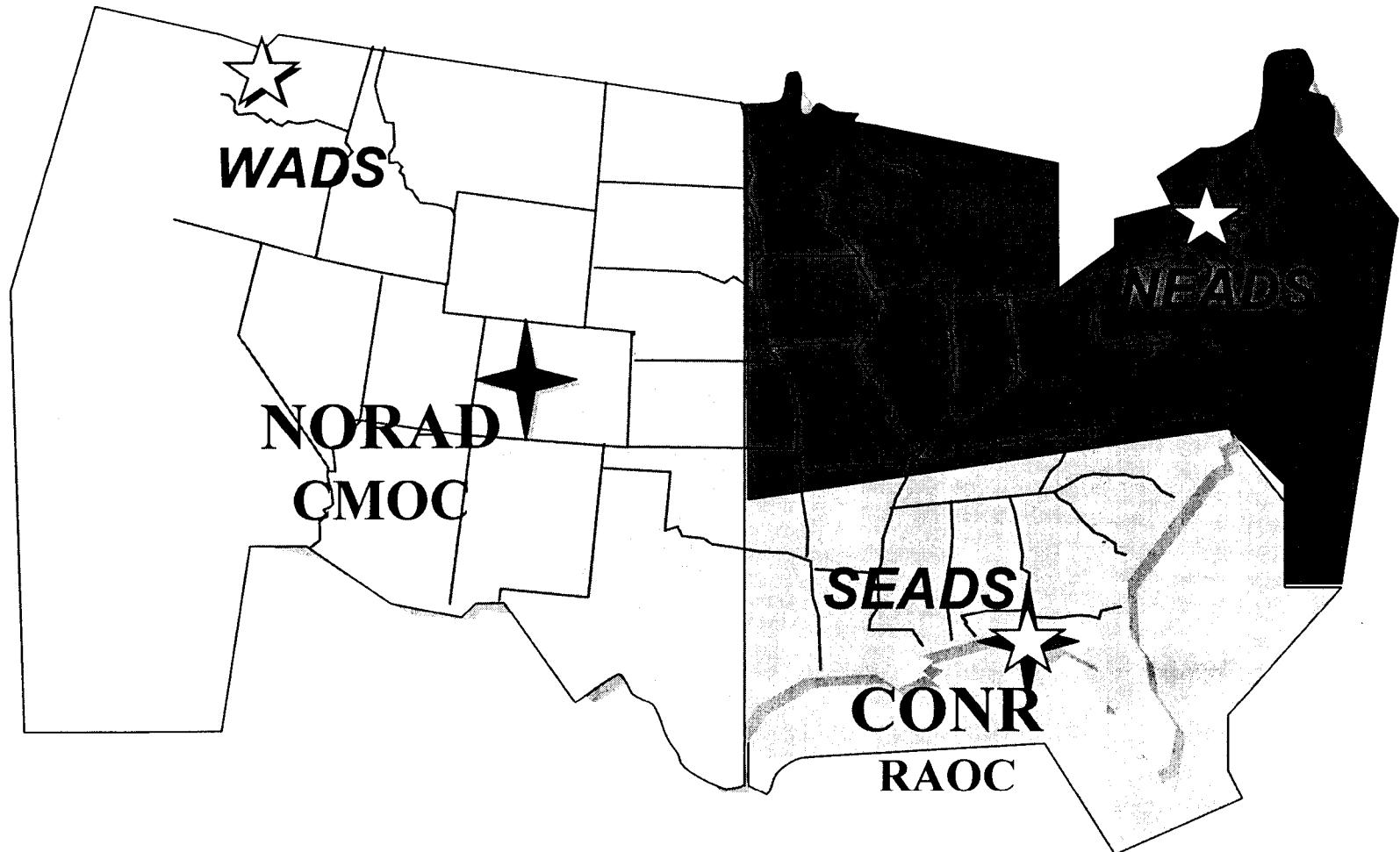
# NORAD STRUCTURE



NCT0060452



# CONUS NORAD *Region*

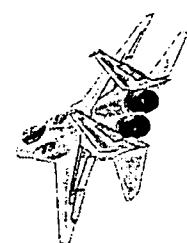
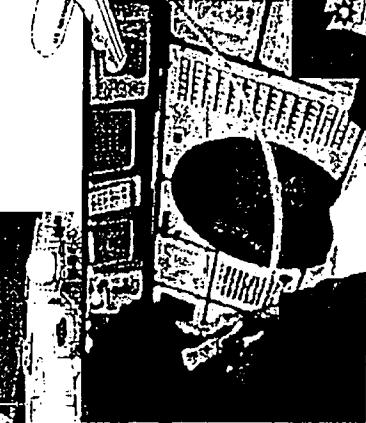
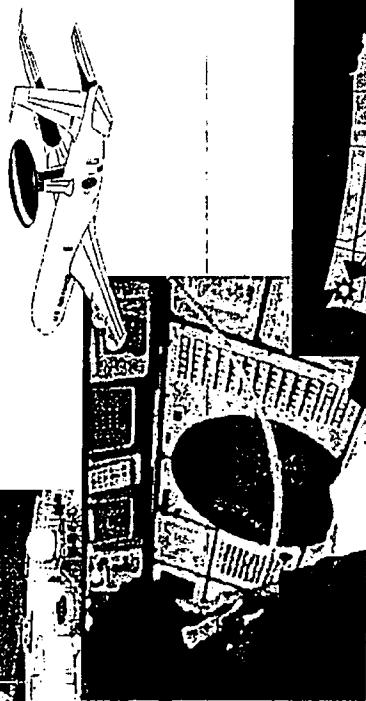
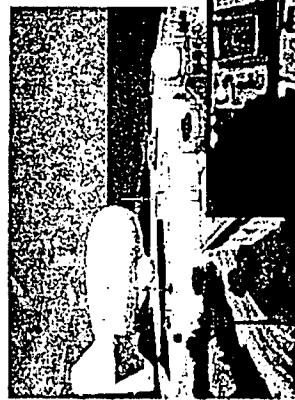


NCT0060453

# ASSETS



9/11 Agency Internal Matters



- C<sup>2</sup> Structure

- NORAD, CONR, Sectors

- **Fighters**

- F-15

- F-16

NCT0060454



# *Current IAF Sensors*

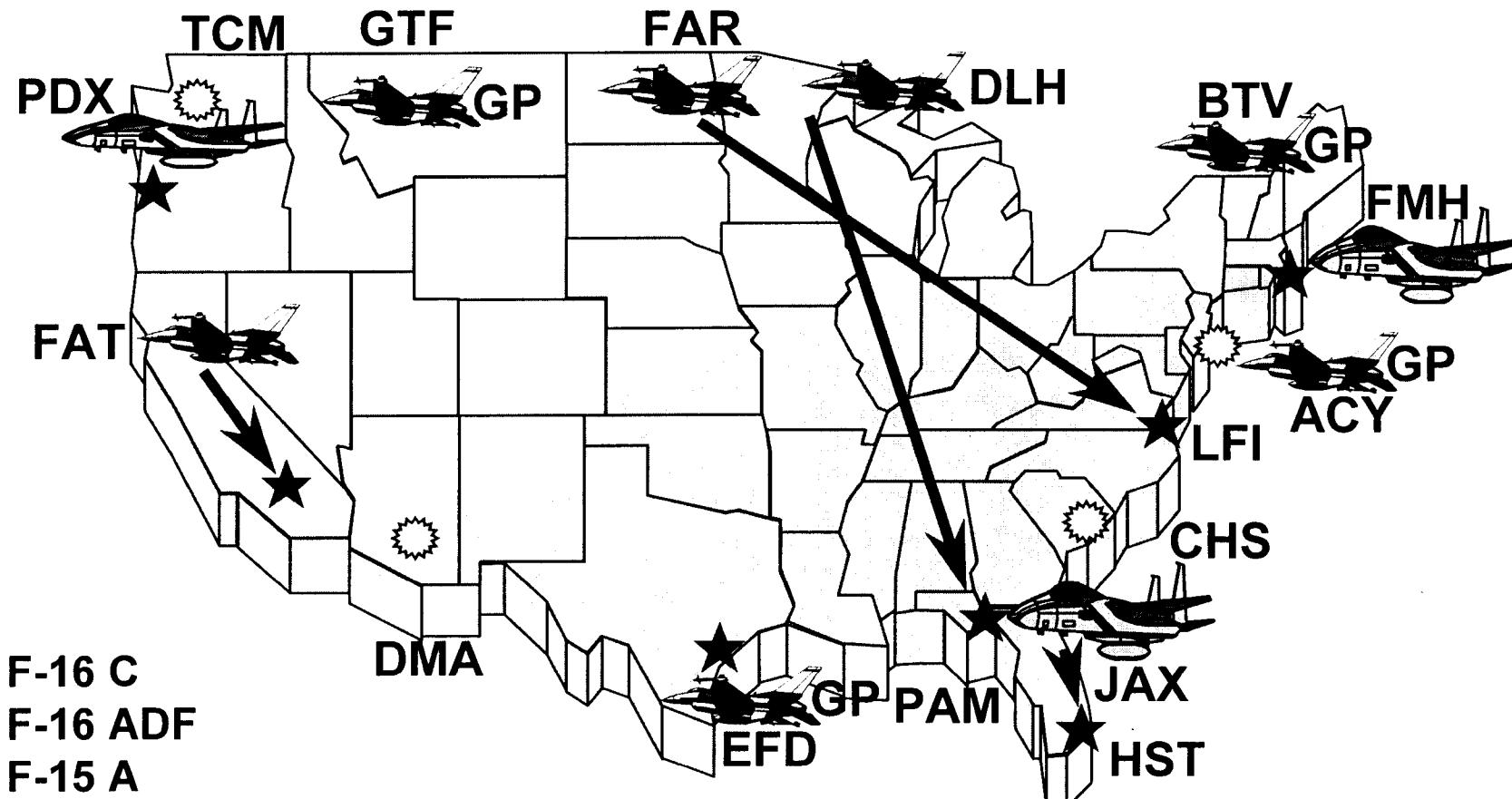


9/11 Agency Internal Matters

NCT0060455



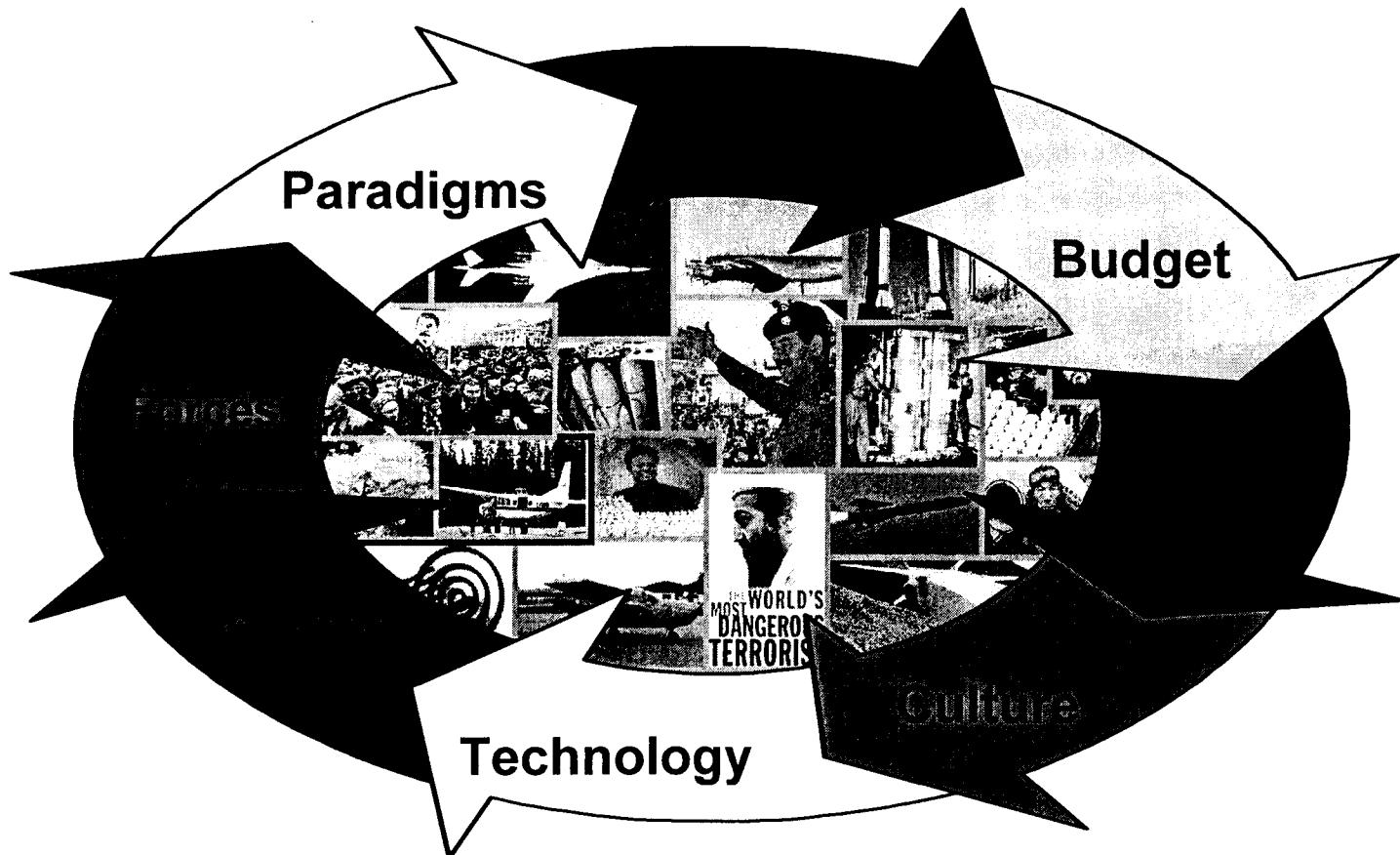
# CURRENT AIR SOVEREIGNTY FIGHTERS



NCT0060456



# Change-Change-Change



NCT0060457

**The Way We (NORAD) Train Needs To Change**



# WORDS FROM THE TOP

**"Missile technology is proliferating into the hands of rogue nations and terrorist organizations. As a nation we must research and develop options to combat these emerging threats."**



STATEMENT OF

**GENERAL RALPH E. EBERHART, USAF  
COMMANDER IN CHIEF**

**NORTH AMERICAN AEROSPACE DEFENSE COMMAND**

**AND UNITED STATES SPACE COMMAND**

**BEFORE THE UNITED STATES SENATE ARMED SERVICES COMMITTEE  
STRATEGIC SUBCOMMITTEE**

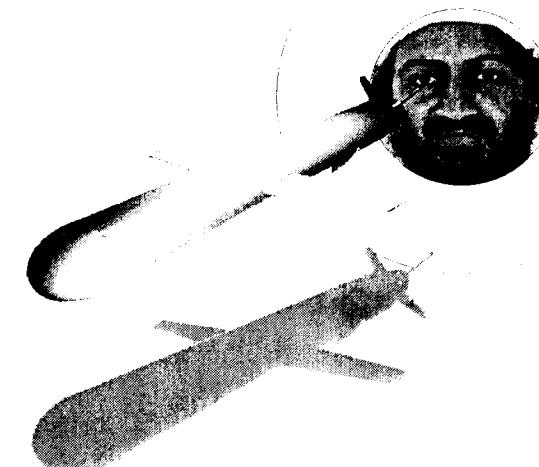
**8 March 2000**



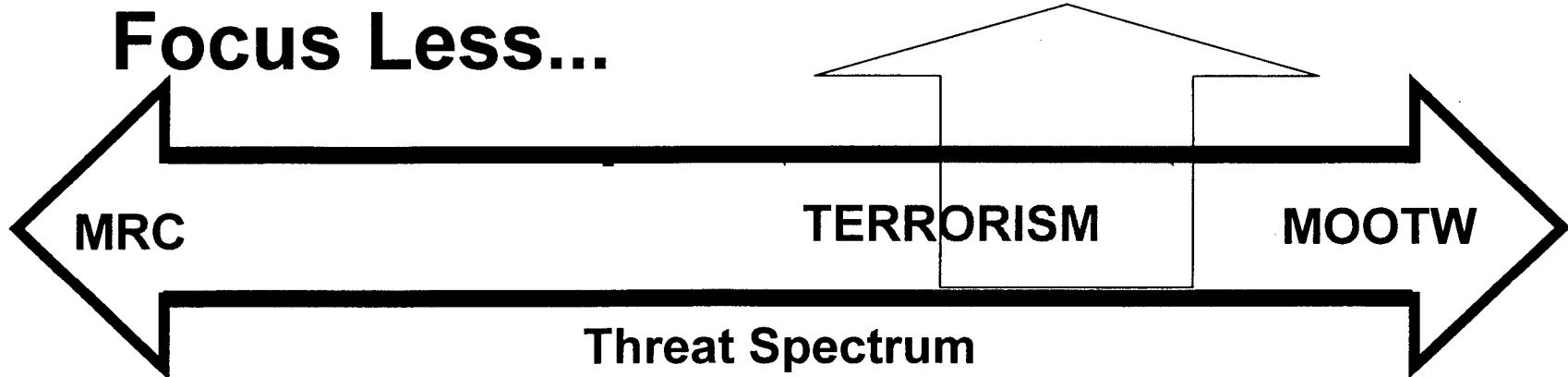
# Air Defense Exercise FOCUS



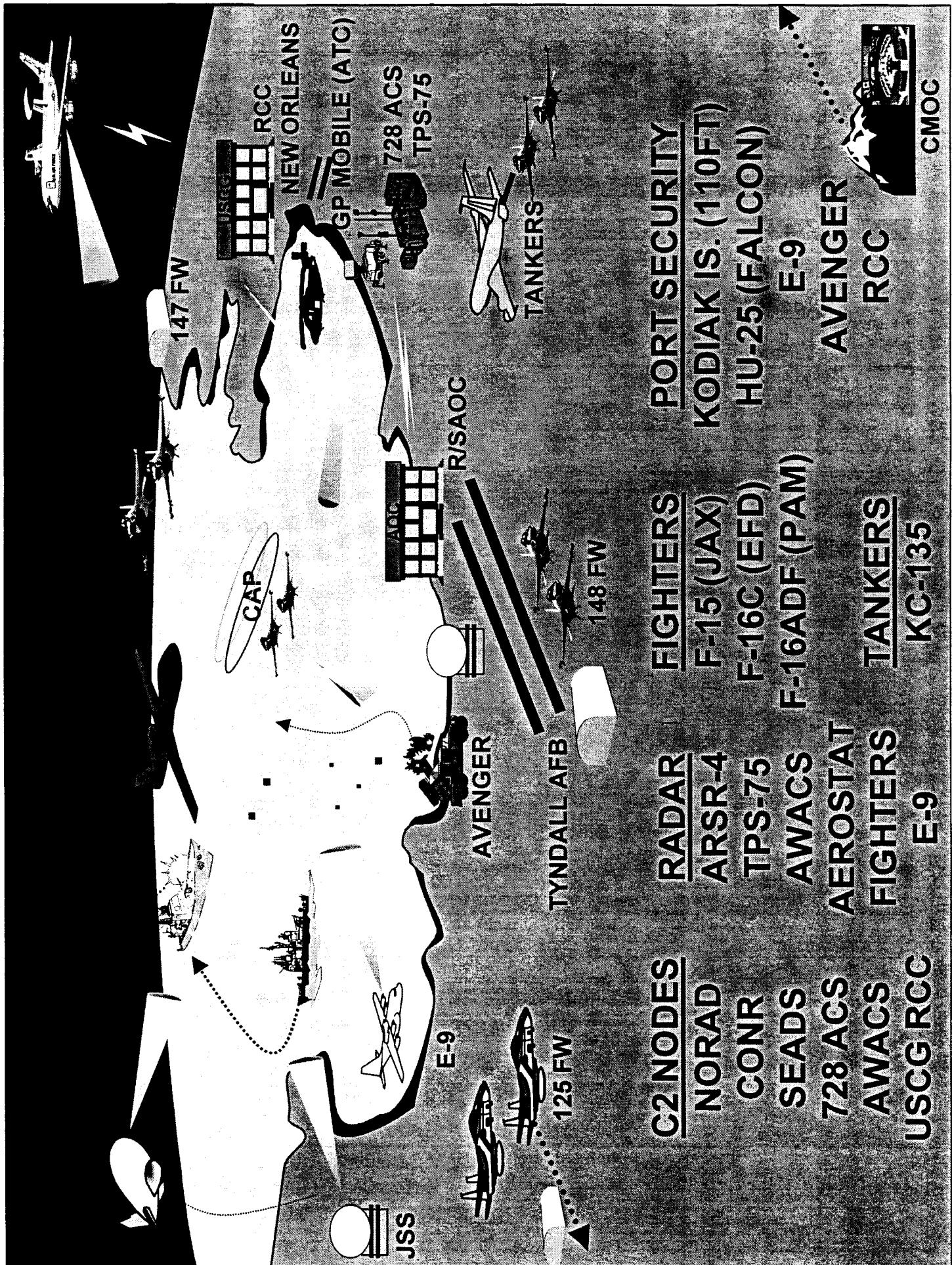
**Focus Less...**



**Focus More...**



NCT0060459



NCT0060460



# WORLD AOR's 101



9/11 Agency Internal Matters

NCT0060461

9/11 Agency Internal Matters

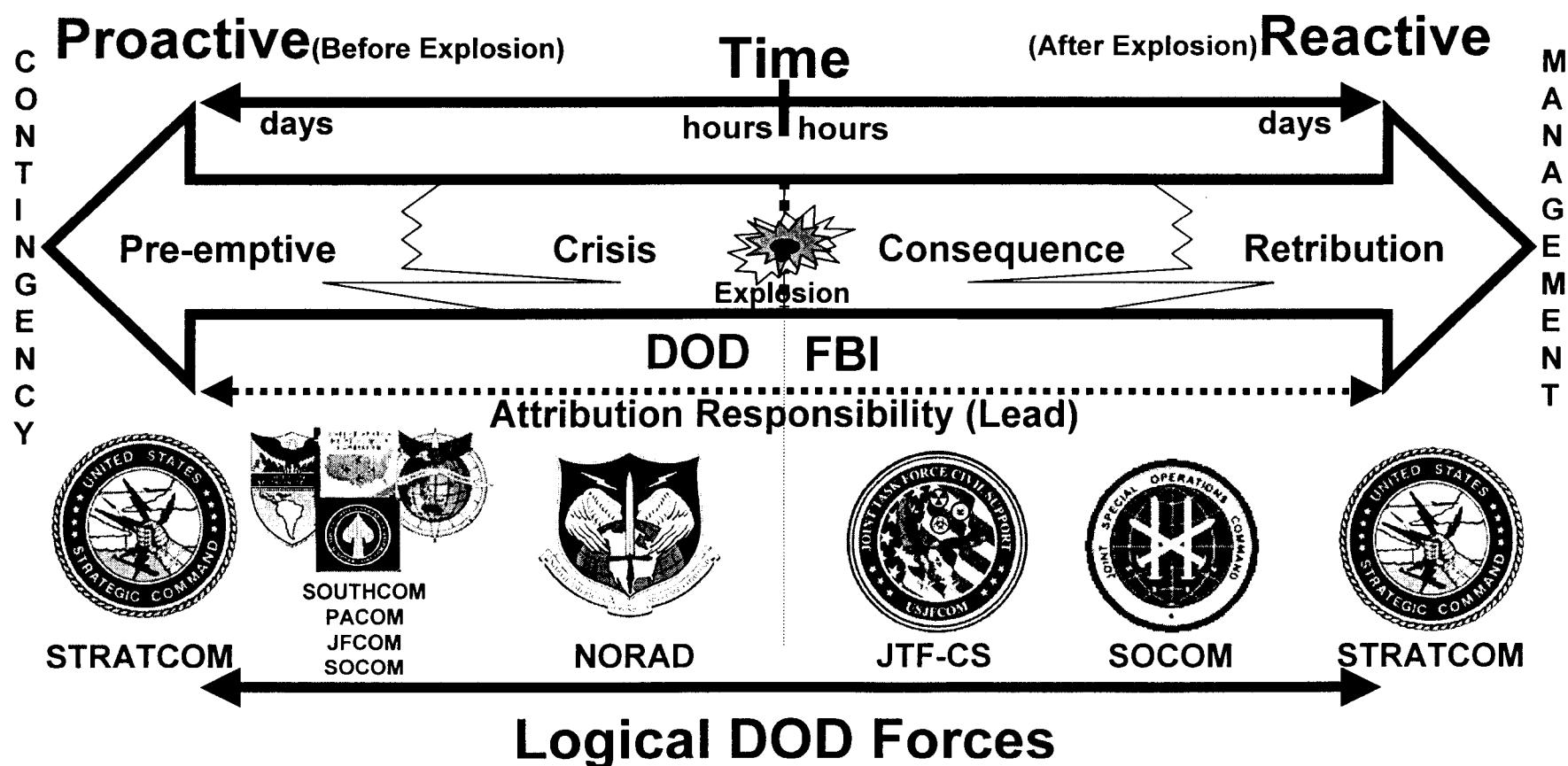
NCT0060462



# NCMD Fluid Environment (DOD Perspective)

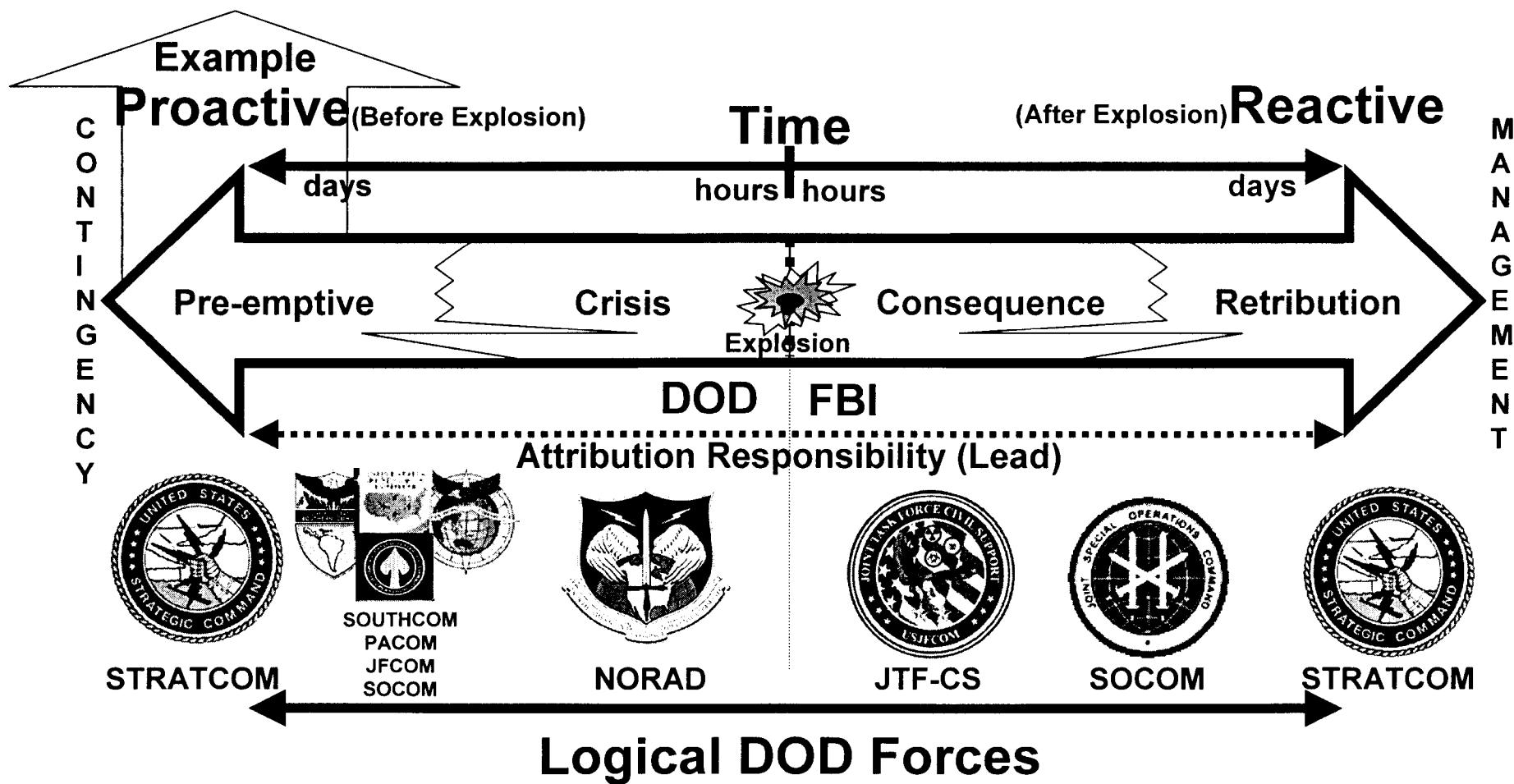


NCT0060463



# NCMD Fluid Environment (DOD Perspective)

Two Month Cue On UAV/CM  
Attack From Foreign Soil  
(B-2's/ALCM attack on foreign soil)

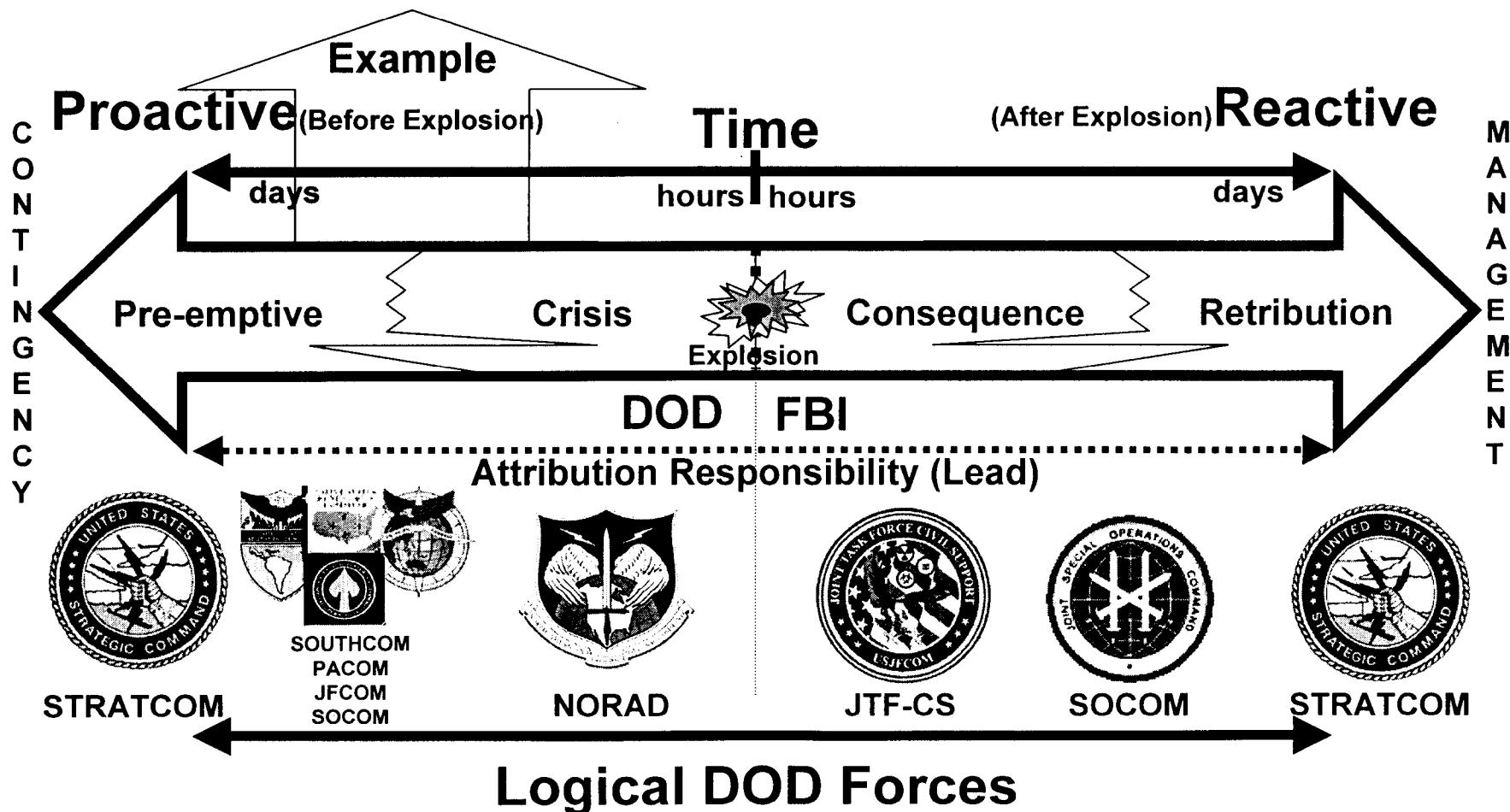




# NCMD Fluid Environment (DOD Perspective)

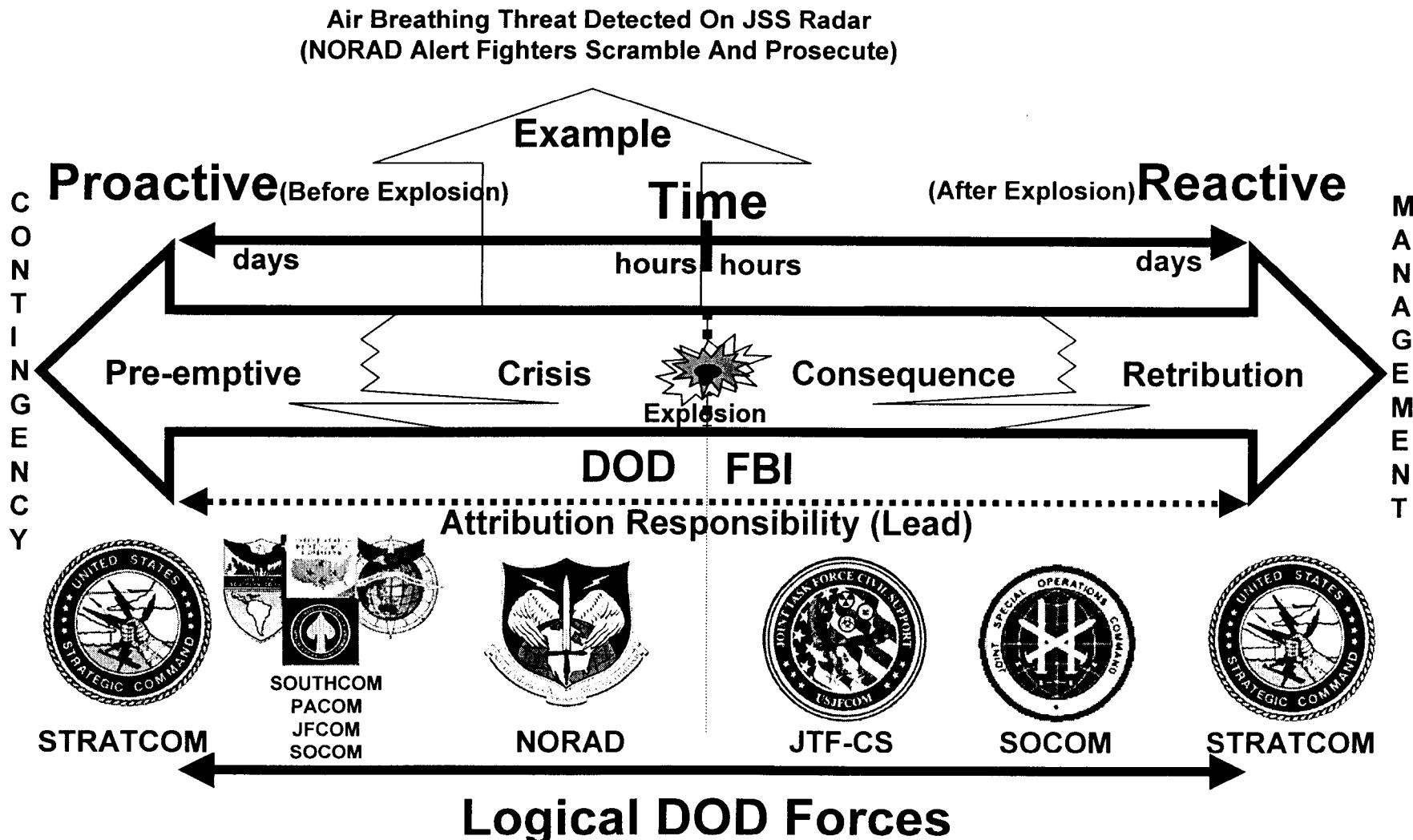


Two Day Cue Of CM Attack From Rogue Vessel  
(JSOC SEAL Team Assault)





# NCMD Fluid Environment (DOD Perspective)



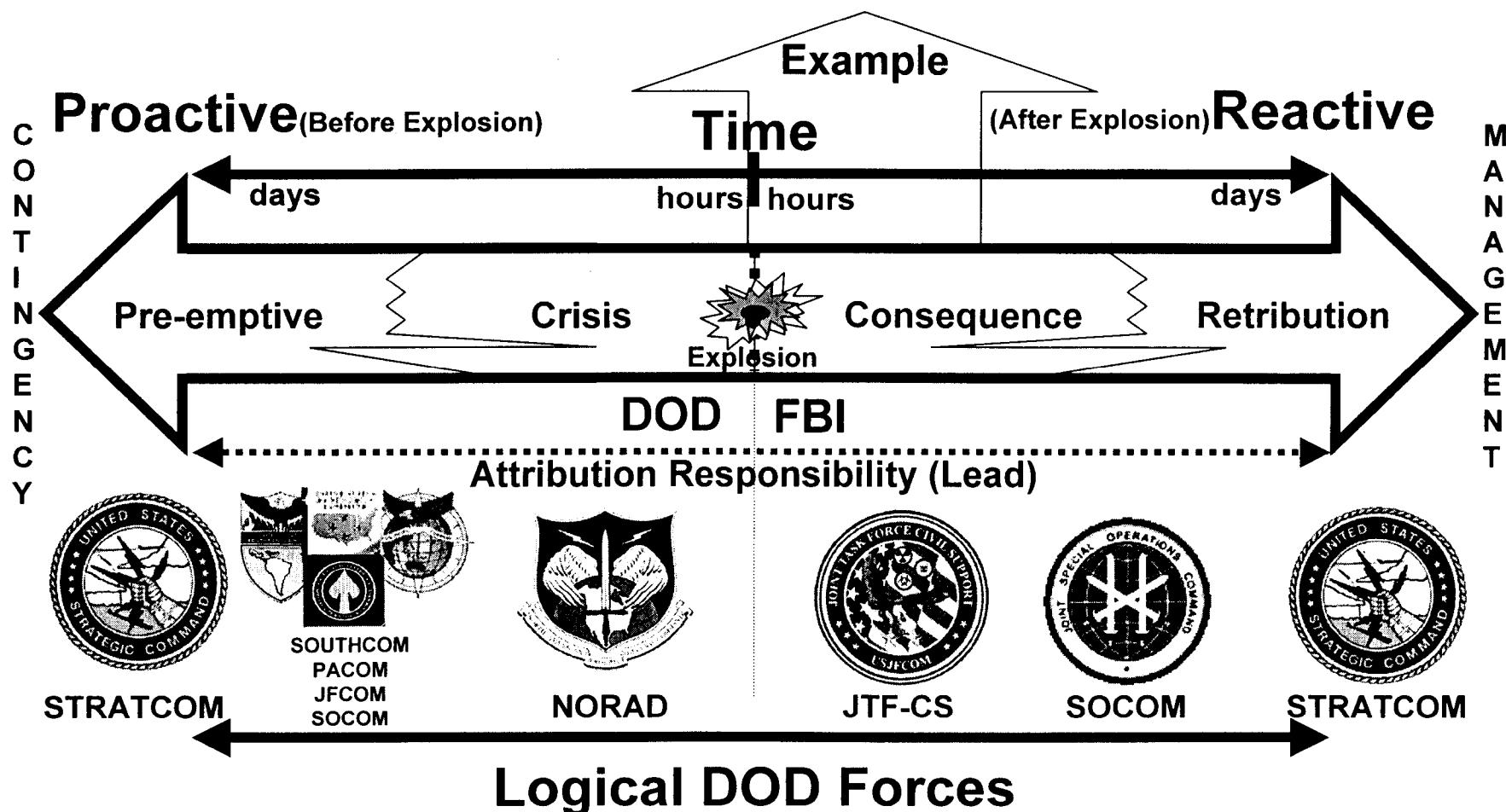
NCT0060466



# NCMD Fluid Environment (DOD Perspective)

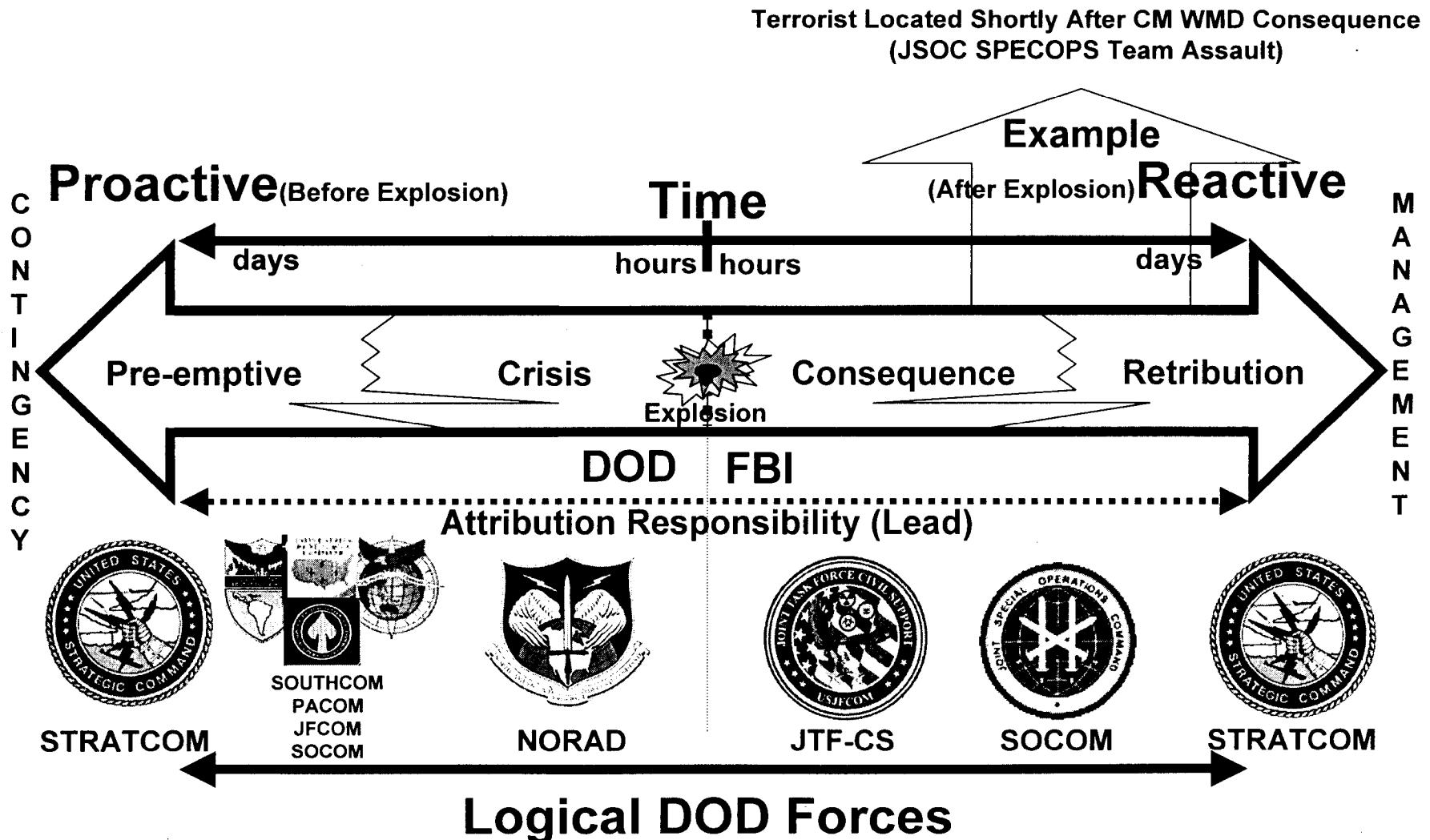


WMD Event Occurs (i.e. CM Attack Goes Undetected)  
(JTF-CS clean-up and Investigation Leads To CM Attack Theory)





# NCMD Fluid Environment (DOD Perspective)



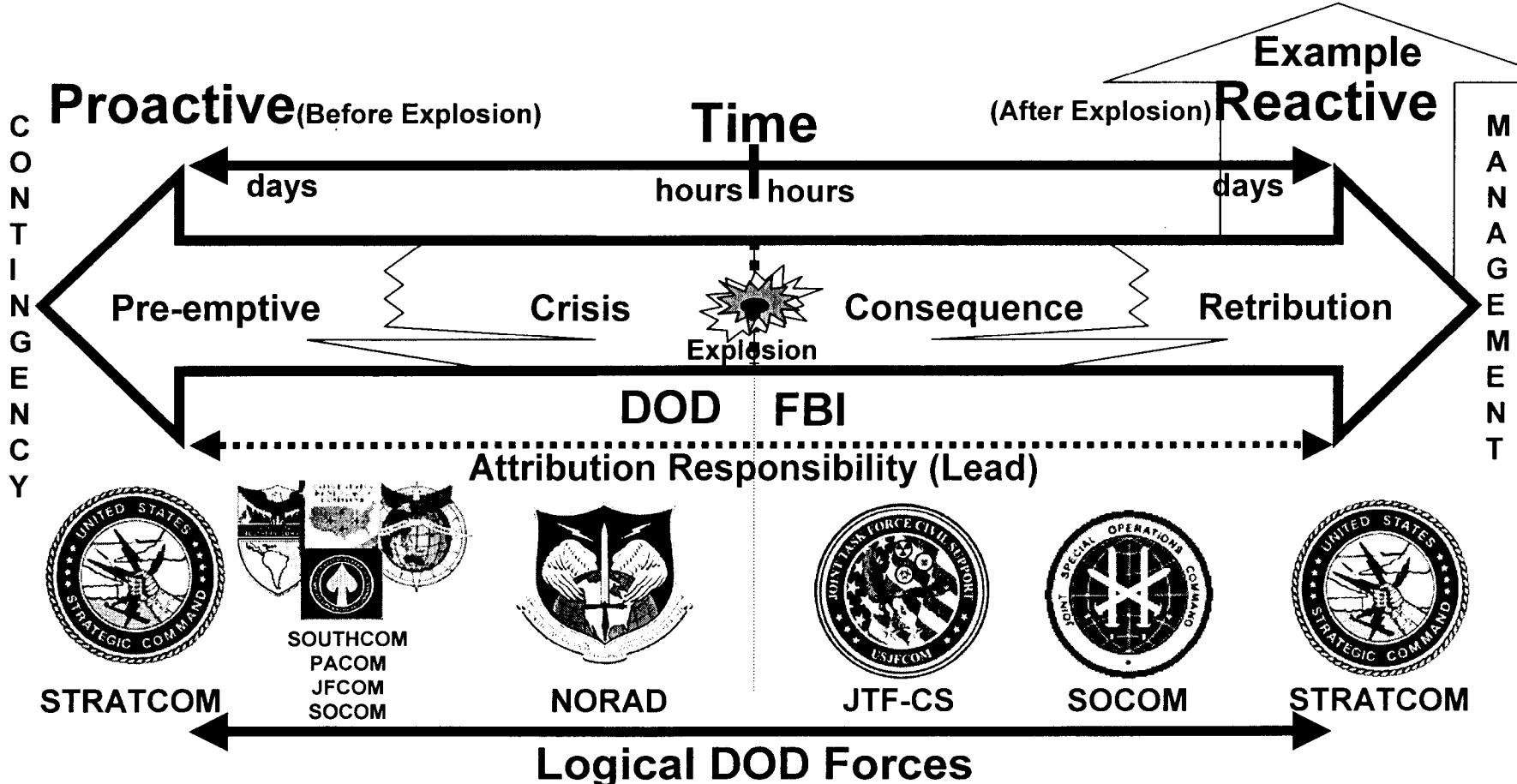


# NCMD Fluid Environment (DOD Perspective)



NCT0060469

FBI Investigation Identifies  
Terrorist Attackers On Foreign Soil  
(B-2/ALCM Attack On Foreign Soil)



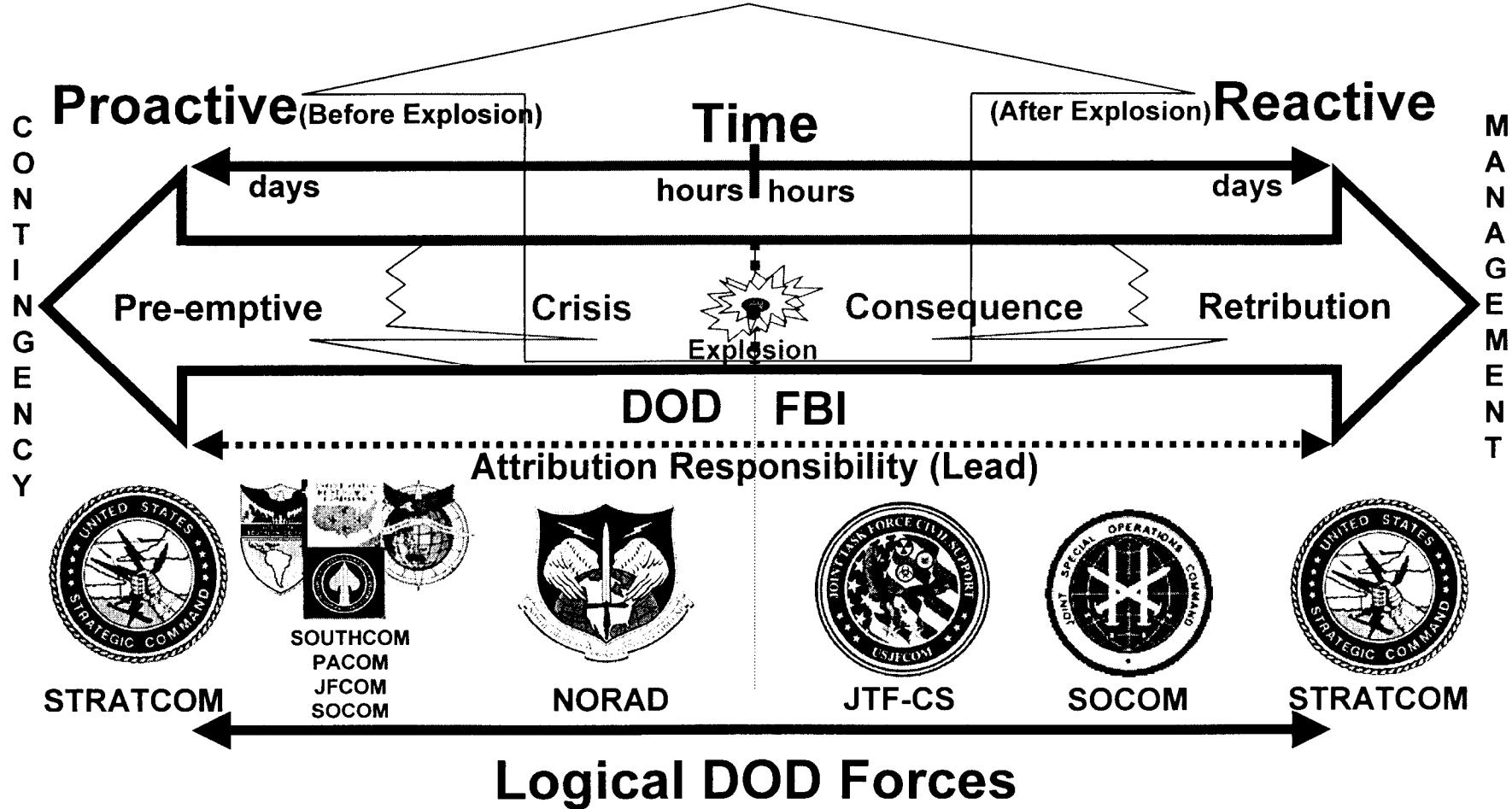


# NCMD Fluid Environment (DOD Perspective)



NCT0060470

## AV 01 Scenario Possibilities



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NCT0060471

9/11 Agency Internal Matters

**NCT0060472**

9/11 Agency Internal Matters

NCT0060473

9/11 Agency Internal Matters

NCT0060474

9/11 Agency Internal Matters

**NCT0060475**

9/11 Agency Internal Matters

NCT0060476



# INTEL SCENARIO FLOW

## 1-2 JUN 2001



Jan - May  
PRE-STARTEX

TERRORIST GROUP  
ACQUIRES CM'S/UAV'S

BEHIND THE SCENES....NCA/JFCOM/SOUTHCOM  
Simulated  
•JTF FORMED  
•JFCOM/SOUTHCOM/NORAD CINC ASSESSMENT  
•COA DEVELOPMENT/SELECTION  
•EXECUTION PLANNING/ORDER

POTENTIAL GOMEX ATTACK  
WARNING - SEADS UNIT'S  
NOTIFIED OF POSSIBLE RECALL

STARTEX

1 JUN (DAYTIME) ATTACK ON  
TYNDALL (EVENT) IMMINENT

CAP BEGINS

JTF STANDS DOWN

VULTIME ENDS

TERRORIST ATTACK

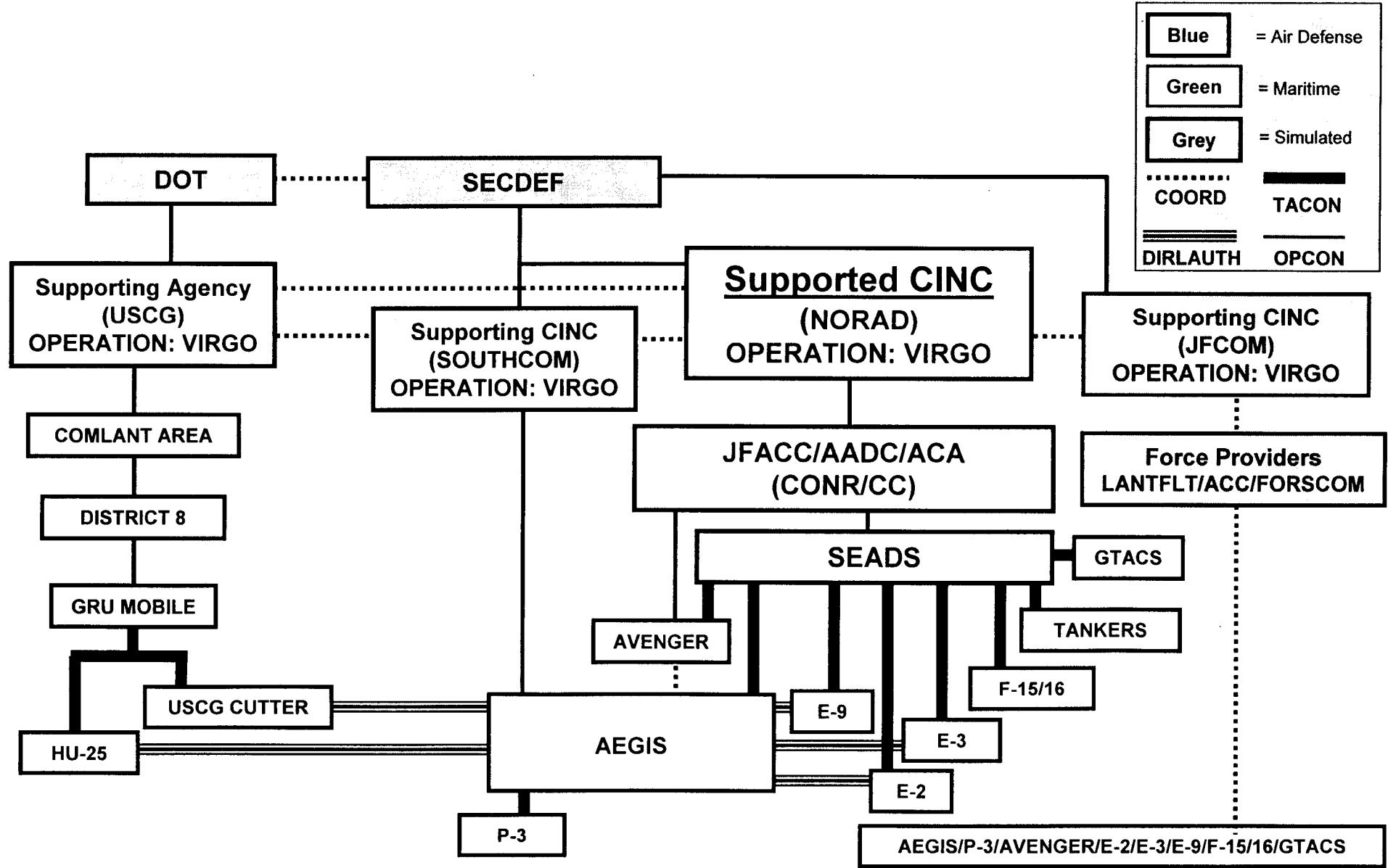
2300Z 02 05 08 11 14 17 20 2300Z  
1800 21 24 03 0600 09 12 15 1800  
CDT CDT CDT CDT CDT CDT CDT CDT CDT

NCT0060477



# OPERATION: VIRGO (Possible C2 Relationships)

If Primary Mission (SECDEF determined): Aerospace Defense

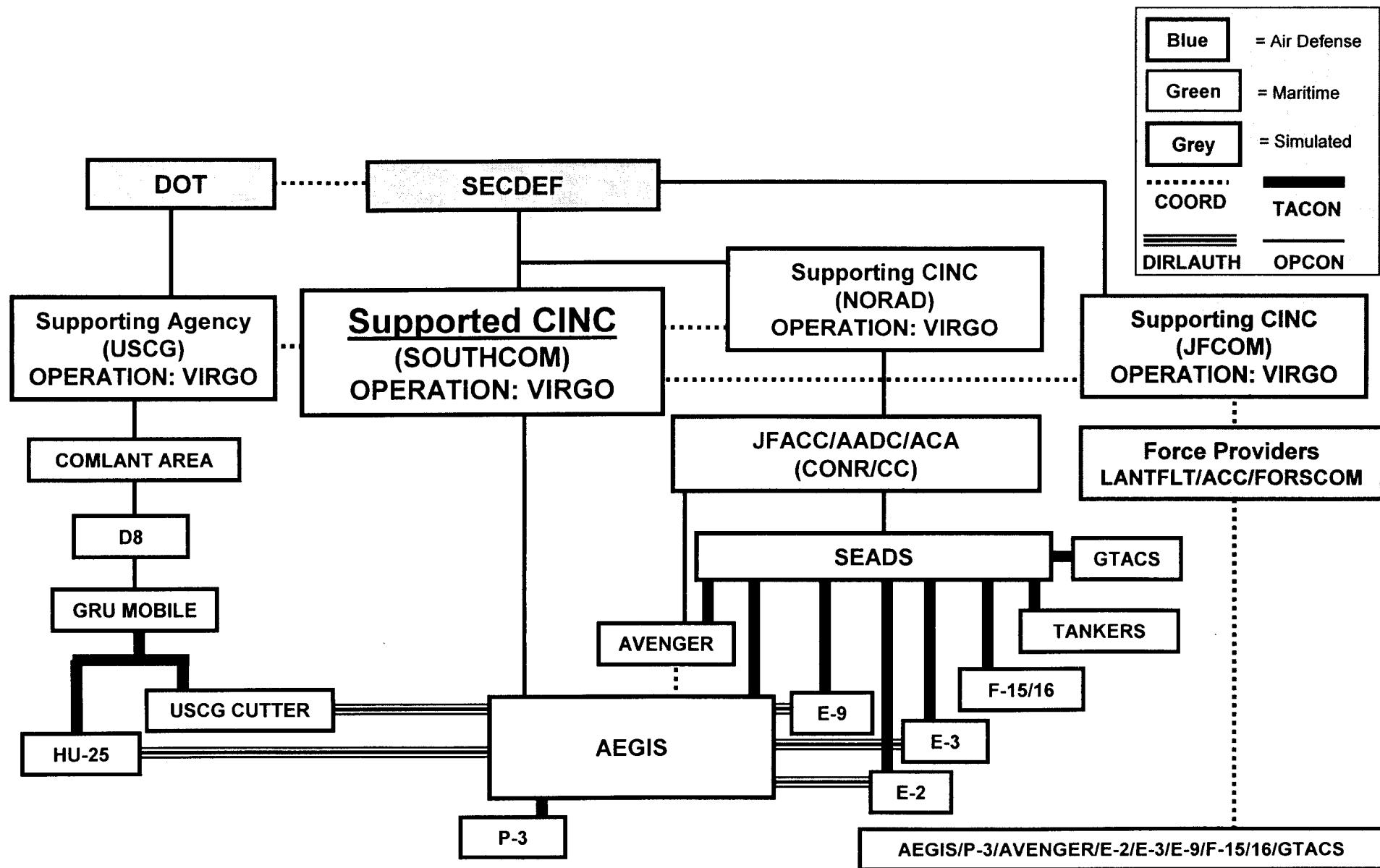


NCT0060478



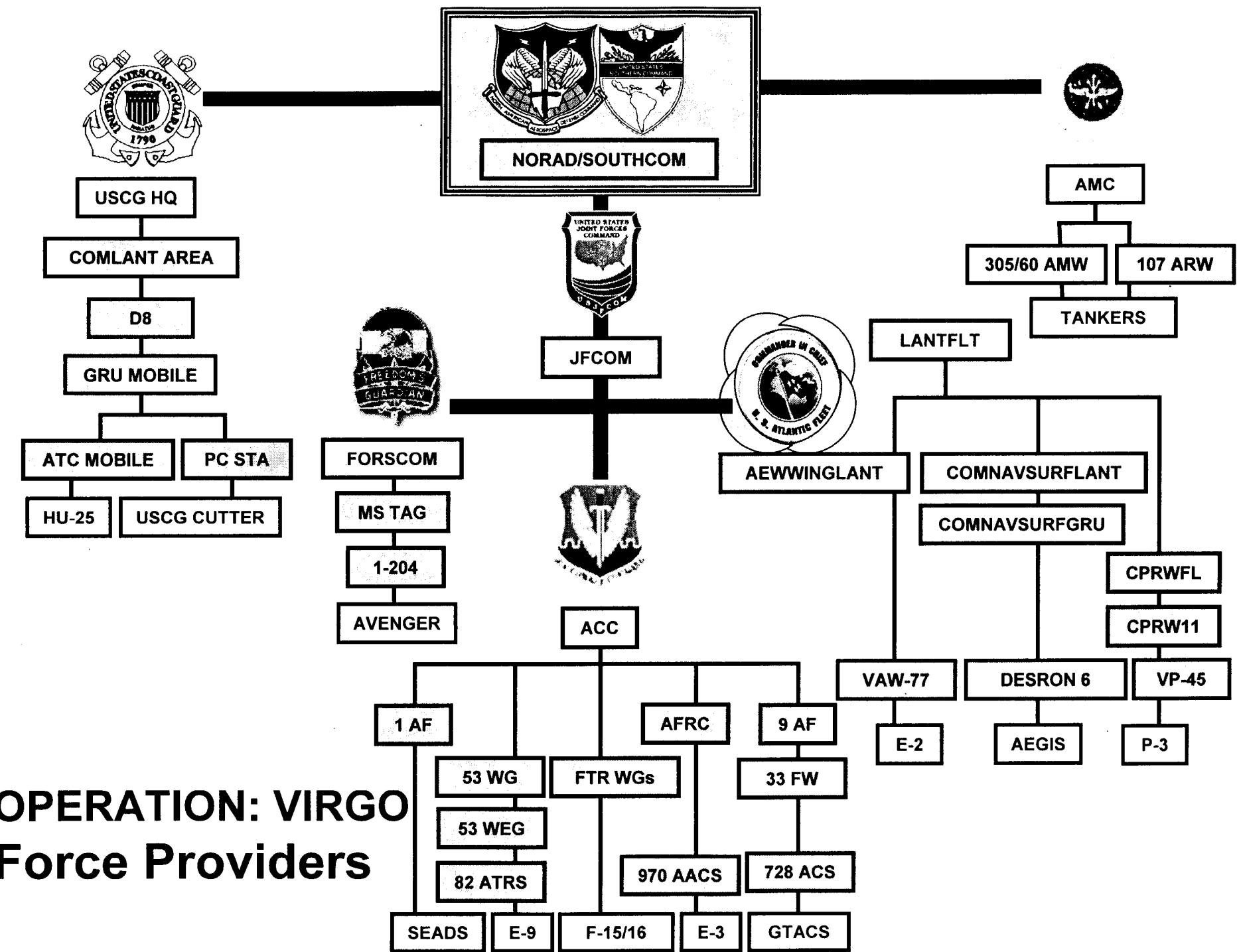
# OPERATION: VIRGO (Possible C2 Relationships)

If Primary Mission (SECDEF determined): Maritime Prosecution



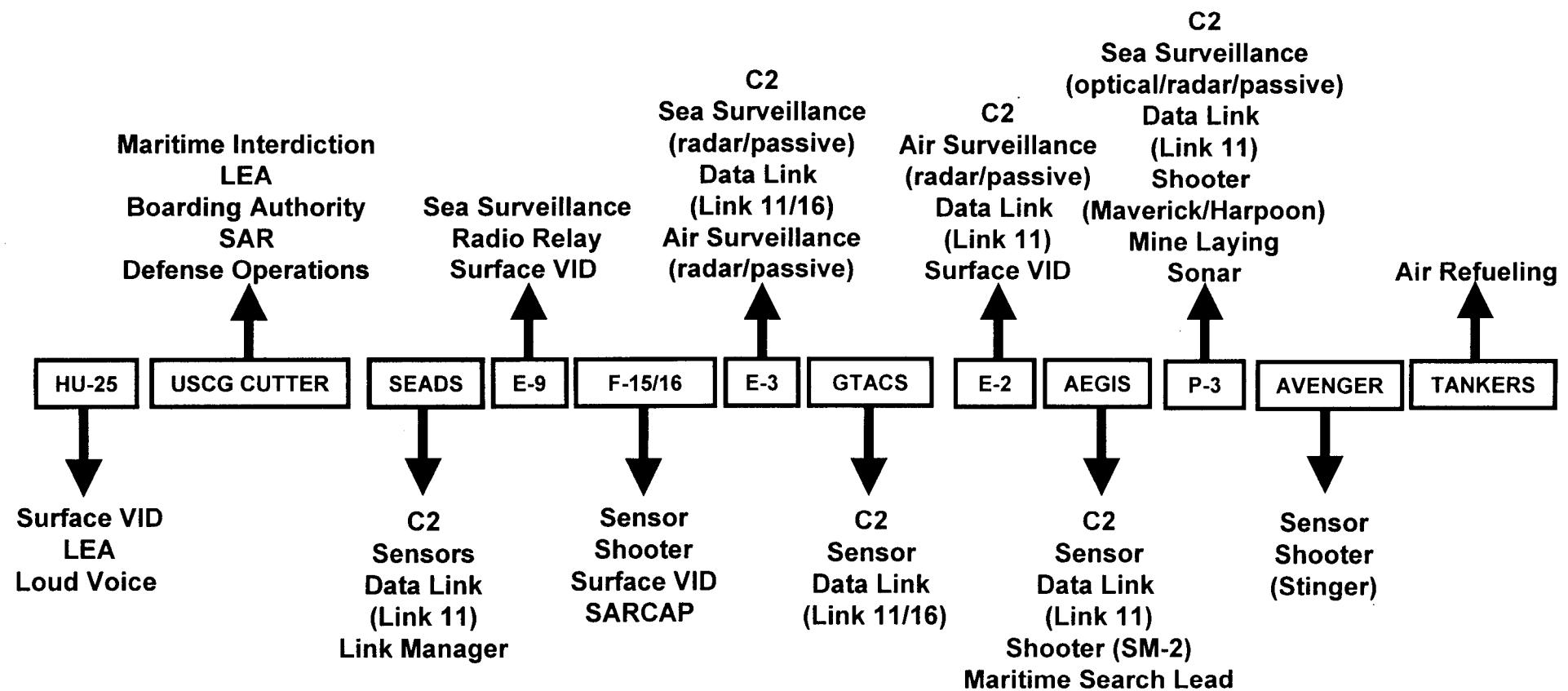
NCT0060479

NCT0060480



# OPERATION: VIRGO

## Tactical Unit Potential Roles and Missions



NCT0060481



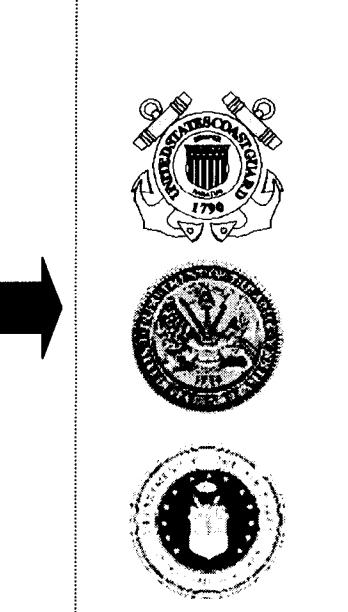
# INITIAL INVOLVEMENT WITH CONSEQUENCE MANAGEMENT



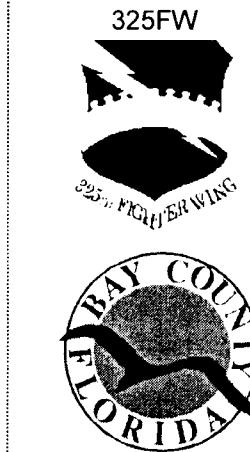
## NORAD UNITS



## OTHER MILITARY



## LOCAL ORGS



DEPARTMENT OF  
EMERGENCY  
MANAGEMENT

## AV ADDITIONS





# Cruise Missile Attack Warning Experiment



1. *Anytown USA* is attacked by rouge cruise missile (CM).

NCT0060483



# Cruise Missile Attack Warning Experiment



NCT0060484



# Cruise Missile Attack Warning Experiment



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NCT0060485



# Cruise Missile Attack Warning Experiment



9/11 Agency Internal Matters

NCT0060486



# Cruise Missile Attack Warning Experiment



9/11 Agency Internal Matters

NCT0060487



# Cruise Missile Attack Warning Experiment



9/11 Agency Internal Matters

NCT0060488



# Cruise Missile Attack Warning Experiment



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NCT0060489



# Cruise Missile Attack Warning Experiment



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NCT0060490



**AMALGAM VIRGO 01**  
**BLUE PLAYERS**



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# AMALGAM VIRGO 01

## RED PLAYERS



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NCT0060492



# AMALGAM VIRGO 01

## ACMD ACTD



9/11 Agency Internal Matters

NCT0060493



# AMALGAM VIRGO 01

## CIVIL SUPPORT EXPERIMENT

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NCT0060494

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# THREAT FORMULA

Dr. Lani Kass (National War College)

NCT0060495



# CM Statistic and UAV Programs and Platforms SAMPLE



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NCT0060496

9/11 Agency Internal Matters

NCT0060497



# "A Scary Thought"

## 16 AUG 99



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NCI0060498

9/11 Agency Internal Matters

NCT0060499



AV 01

9/11 Agency Internal Matters



# AMALGAM VIRGO 01 ALTITUDE BLOCKS

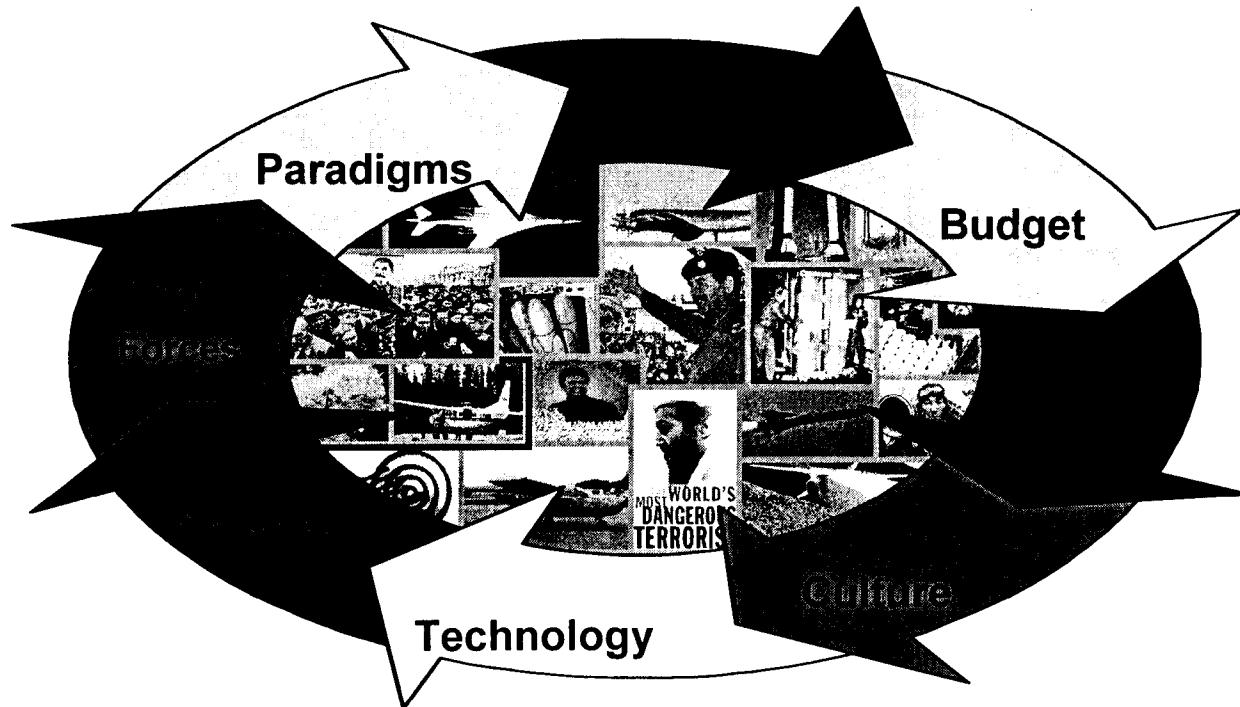
9/11 Agency Internal Matters

NCT0060501



# Summation

**"A Proactive Approach To A Dangerous Emerging Threat"**



**Realism + Fidelity = Train Like You Fight =  
Enhanced Mission Readiness**