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AS OF: 11 May 01

NORAD/CONR/SEADS



AV 01
 Final Blue
 14003

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.

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
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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 CINCNOAD 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 CINCNOAD 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**

As of: 11 Mar 2001		RGO 01 Participants	
Blue Forces Participants			
Organization	Home Station	AV 01 Playing Location	Assets
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 AACs	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/Sentinal 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
Red Forces Participants			
Organization	Home Station	AV 01 Playing Location	Assets
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
First Air Force Advanced Programs (CMDI) Participants			
Organization	Home Station	AV 01 Playing Location	Assets
1 AF/IGR	Tyndall AFB, FL	Tyndall AFB, FL	ACMD ACTD Management

JFCOM TAMDI	Norfolk, VA	Tyndall AFB, FL	P-3, Rosseta, ATW
SHORAD PMO	Huntsville, AL	Tyndall AFB, FL	A-3, Sentinal, 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 AACS

- 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 (148th/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)	RANK	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		257-5617	(204) 833-2500 ext 5617		
03D ADA	Sheffer, Gary	LTC	ARNG	Patriot Battalion Commander AL ARNG		771-1167	9/11 Personal Privacy		
03D ADA	Thrower, Jeff	Maj	AL ARNG	Patriot Battalion Operations Officer	jeffrey.thrower@al.ngb .army.mil	771-1167			
04 TH ADA	May, Jerry	Maj	MS ANG	MS ARNG Avenger Battalion Operations Officer	gerald.may@ms.ngb.a rmy.mil	778-9666		PO. Box 149 Newton, MS 39345	
04 TH 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.an g.af.mil	641-7140			
5 FW	Said, Sammy	Maj	ANG	Jacksonville Weapons Officer (F-15s)	sammy.said@fjack.an g.af.mil	641-7112			
12 S ANG	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@tyndal l.af.mil	523-5283			

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

Organization	NAME (last, first name)	RANK	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		257-5617	(204) 833-2500 ext 5617		
03D ADA	Sheffer, Gary	LTC	ARNG	Patriot Battalion Commander AL ARNG		771-1167	9/11 Personal Privacy		
03D ADA	Thrower, Jeff	Maj	AL ARNG	Patriot Battalion Operations Officer	jeffrey.thrower@al.ngb .army.mil	771-1167			
04 TH ADA	May, Jerry	Maj	MS ANG	MS ARNG Avenger Battalion Operations Officer	gerald.may@ms.ngb.a rmy.mil	778-9666		PO. Box 149 Newton, MS 39345	
04 TH ADA	Thomas, Robert	Lt Col	MS ARNG	MS ARNG Avenger Battalion Commander		778-9666			
FW	Black, "Homer"	Capt	USAF	Exercise OPR	john.black@fljack.ang. af.mil	641-7175			
FW	Eifert, Jim	Lt Col	ANG	Jacksonville Operations Officer (F-15s)	james.eifert@fljack.ang. af.mil	641-7140			
FW	Said, Sammy	Maj	ANG	Jacksonville Weapons Officer (F-15s)	sammy.said@fljack.ang. af.mil	641-7112			
FS (NG)	Ward, Scott	Capt	USAF	12 FS (F-15) POC	scott.ward@elmendorf. af.mil	552-3264			
FW	Winkler, "Buster"	Maj	ANG	Ellington TX ANG Scheduling (F-16s)	terence.winkler@txelli. ang.af.mil	954-2391			
DET 1	Mudge, Tom	Maj	ANG	Tyndall Det 1 Operations Officer (F-16s)	thomas.mudge@tyndall. af.mil	523-5283			

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F/S 3 WG	Fesler, DM	Cap	USAF	B WEG	Daniel.fesler@elmendorf.af.mil	(317) 552-3990	9/11 Personal Privacy	10571 Slammer Ave Elmendorf, AFB, AK 99506	
F/CONR	Mackay, Glen	Maj			glen.mackay@1staf.tyndall.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.tyndall.af.mil	523-8696			
F/IGRP	Zeltins, Brian	Maj	USAF	ACMD ACTD Demo 1 - JBECC Sensor Integration	brian.zeltins@1staf.tyndall.af.mil	523-8408			
F/IGRX	Ackerman, John	Maj	USAF	ACMD ACTD Demo 1 - JBECC Sensor Integration	john.ackerman@1staf.tyndall.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.tyndall.af.mil	523-8698			
F/LGXX	Boucher, Randy Maj				randy.boucher@1staf.tyndall.af.mil	523-3653			
F/LGXX	Love, Andy	Maj			andrew.love@1staf.tyndall.af.mil	523-3743			

NCT0060413

WEG	Burke, Dave	Maj	USAF	82 ATRS/DO (Drone Squadron)	david.burke@tyndall.af.mil	523-4576
WEG	Gordey, Mike	Mr	Civ	Drone Boat OPR	[REDACTED]	523-4640
WEG	Hatcher, Trent	Maj	USAF	82 nd ATRS E-9 POC		523-4602
WEG	Sutliff, Paul	Lt Col	USAF	53 WEG Ops/Scheduling	paul.sutliff@tyndall.af.mil	523-3015
WEG	Wolff, Mahi	Mrs	Civ	GRDCUS Drone Control/GRDCUS TSPI	mahi.wolff@tyndall.af.mil	523-2273
3 ACS	Robinson, "Doc"	Maj	USAF	728 ACS Weapons (GTACS)	david.robinson@eglin.af.mil	875-4502
3 ACS	Parker, David	MSGT	USAF	GTACS POC	david.parker@eglin.af.mil	875-4514
3 ACS/DOS	Allen, Scott	MSGT	USAF		scott.allen@eglin.af.mil	875-4507
3 ACS/LGC	Waynick, Bill				waynick@eglin.af.mil	875-4517
TSS	Jones, Cris	Capt	USAF	Drone/MU-2 Safety Net Wetstone	christopher.jones@tyndall.af.mil	523-4014
ATRS	Losensky, Ron	Maj	USAF	E-9 Liaison	Ronald.Losensky@tyndall.af.mil	523-4176
RADES	Franklin, John	MSGT	USAF	ARSR-4 Data Reduction	john.franklin@1staf.tyndall.af.mil	523-5594
LG District	Van Horn	LCDR	USCG		K.vanhorn@d8.uscg.mil	
JAACS	Benoit, "Gumby"	Maj	AFRE S	970 AACCS Weapons & Tactics (AWACS)	timothy.benoit@tinker.af.mil	884-4323

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101 Demon Way, Eglin AFB, FL 32542

101 Demon Way, Eglin AFB, FL 32542

7500 Reserve Rd Bldg 10565ie B01 Tinker AFB, OK 73145

728 ACS EGLIN AFB/DO/DOW//

728 ACS EGLIN AFB/DO/DOW//

970 AACCS Tinker AFB OK/DO

0 AACS	Miller, Greg	Capt			greg.miller@tinker.af.mil				
5 th AACS	Simmons, Tommy	MSgt	USAF R	Communications (E-3)	Tommy.simmons@tinker.af.mil	884-6517			
11CC	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/AM M	Hammett, Jeff				jeff.hammett@rdec.redstone.army.mil	746-4922			
G/DOX	Gload, Ted	Capt	ANG	ANG Programmer		278-7126			
y County C	Bowen, Mark	Mr	CIV	Emergency Management for Bay County	mbowen@co.bay.fl.us				
y County C	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			
NR/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	9/11 Personal Privacy	10 Aviation Ave Hilliard, FL 32406	
	Tierney, Joseph	Special Agent		JTF Structure				5323 W. Hwy 98 PC, FL 32401	
I (Florida)	Everett, Hank			Florida (Jacksonville) FBI	heverett@leo.gov			935 Penn Ave NW Wash DC 20535	
I (National)	Chase, Chip	Maj	Army	FBI DOD liaison	wchase@fbihq.adnet.s gov.gov			935 Penn Ave NW Rm 11741 Wash DC 20535	
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				935 Penn Ave NW Rm 11741 Wash DC 20535	
MA ditional)	Hersko, Ralph	Mr	Civ	CMAWX	ralph.hersko@fema.gov	380-6214		P.O. Box 129 Berryville, VA 22611	
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			HQ FEMA PO Box 129 Berryville, VA 22611
Div of erg Mgmt	Jibril, Mona				mona.Jibril@dca.state. fl.us				
Div of ergency agement	Delorenzo, Mike	Mr	Civ	CMAWX for the state of Florida	michael.delorenzo@dca. state.fl.us			2555 Shumard Oak BLVD Tallahassee, FL 32399-2100	
B 1/204 ABN	Madison	SFC	USA		Thomas.madison@ms. ngb.army.mil	778-9666		PO Box 149 Newton, MS 39345	
DC/DOX	Brian W. McLean	Lt Col	USAF	AF Doctrine Center Liaison	brian.mclean@doctrine. .af.mil	493-1658			

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DC/DOX	McLean, Bingo	Lt Col				brian.mclean@doctrine.af.mil	493-3128		
AD/AD/38X	Nolle, Steve					stephen.nolle@Peterson.af.mil	692-3697		
IET	Penfold, Duane	LT	USN	JCMD Augmentee		Duane.penfold@eglin.af.mil	872-3404 x 213	JCEIT 104 Biscayne Rd Bldg 637, Eglin AFB FL 32542	
VID	Millet, Roger	Civ		CM Defense		Roger.millet@eglin.af.mil	872-5010 x112	207 West Dave Ste 128 Eglin AFB, FL 32542-5490	
COM/FC/J7/JW3	Degnon	Lt Col	USA	Joint Training		degnon@jwfc.jfcom.mil	668-7437		
COM/J611	Mosk, Bill	CDR	USN	TAMD/ACTD Manager P-3 POC/TWS/Rossetta		mosk@jfcom.mil	836-5869		
ENS	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	PO Box 1500 Huntsville, AL 35807	Don, Howard
AMDO	Swensen, Keith	Maj	USAF	Observer		keith.swensen@js.pentagon.mil	664-3366	Joint Staff/J-8 JTAMDO 1931 Jefferson Davis Crystal Mall 3, Ste 511 Arlington, VA 22202	JOINTSTAFF WASH DC// J8/JTAMDO
J-CS	Ditch	Col	USAF	J5		ditch@jfcom.mil	680-5166	380 Fenwick Rd Ft Monroe, VA 23651	
J-CS	Gabriel, Pete	Mr	Civ	Joint Task Force - Civil Support OPR		gabriel@jfcom.mil	680-5187	380 Fenwick Rd Ft Monroe, VA 23651	
J-CS	Hadrick, George	Maj	USA	JTF-CS J5 shop		hadrick@jfcom.mil	680-6642	380 Fenwick Rd Ft Monroe, VA 23651	
SL (PCC)	Cibuzar, Paul	Civ	PCC	USMC Det					
IL	Studebaker, Robert	LCDR	USCG	HO 125/Command Ctr		Rstudebaker.m2g.uscg.mil		10578 LR 77 W	

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ARNG	Brewer, John	Capt	MS ARNG	1-204 th 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	cww564@naic.wpafb.af.mil	787-3042	4180 Watson Way Wright-Patterson AFB, OH 45433		
IC/TASS	Layne, Tom	Capt	USAF	CM Threat Intelligence	trf373@naic.wpafb.af.mil	787-3286	4180 Watson Way Wright-Patterson AFB, OH 45433		
vy PMS-465	Blincoe, Jonathan								
TSI Det 2	Wessman, Dan	LCDR	USN	Tadil Interface	wessman@nctsi.navy.mil	564-5509			NCTSI Det TWO Norfolk VA
ADS	Cleveland, Neal	Maj			cleveland@Neads.af.mil				
ADS/ XL	Nagel, Brian	Capt (CF)			nagelb@neads.af.mil	587-6752			
ADS/ XL	Palmer, Michael	TSgt			palmerM@neads.af.mil	587-6146			
I-B	Baisden, Bill	Lt Col	USAF	MSCA	william.baisden@ngb.army.mil	327-1855			
I-RAD (gicon)	Carbone, Nick	Mr	Civ	White Ship Tracking NCMD					
I-RAD SZ	Garrett, Tom	SSgt	USAF	Intel build/WEBMASTER		268-2227			
I-RAD SZ	Skaarup, Hal	Maj	CF	Intel build/scenario build		268-2150			

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RAD J2SZ	Mayfield, Debra	Lt (CF)	CF	AV 01 Scenario Architect	debra.mayfield@cheyenneMountain.af.mil	268-2297			
RAD J38	Goddard, Paul	Maj	CAF	Exercise Director	paul.goddard@peterson.af.mil	692-3130			HQ NORAD PETERSON AFB CO//J38//
RAD J38	Noite, Steve	Mr	Civ	Airspace	stephen.noite@peterson.af.mil	692-3697			HQ NORAD PETERSON AFB CO//J38//
RAD J38	Postgate, "Woody"	Lt Col	USAF	Chief of Exercises	postgate@norad.spacecom.af.mil	692-3686			HQ NORAD PETERSON AFB CO//J38//
RAD J38	Thinger, Chuck	Maj	USAF	Readiness	thinger@norad.spacecom.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.ashborne@peterson.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.spacecom.af.mil	692-9649			
RAD/J5	Byrd, Ken	Lt Col			kenneth.byrd@peterson.af.mil	692-2642			
RAD/USSP ECOM ALYSIS SPJ2SZ	Santiago, John Garrett, Tom	Col SSgt	USAF	Analysis	john.santiago@peterson.af.mil thomas.Garrett@CheyenneMountain.af.mil	692-9767 268-2227			

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D/JCMD	Fuller, Brandon	1LT	USAF	Chief, Data Analysis	Brandon.fuller@eglin.af.mil	872-4661x117	9/11 Personal Privacy	207 W D. Ave, Ste 128 Eglin, AFB, FL 32542-5490		
SHORAD/COM	Bridges, Don				don.Bridges@redstone.Army.Mil	746-1910				
/theon	Procter, Dave			ACMD ACTD					50 Apple Hill Dr Tewksbury, MA, 01876	
/theon	Sadeghi, Tom	Civ	Civ	Ratheon						
YTHEON	Watts, Kenny	Mr	Civ	JBECC Integration						
/theon St e	Chester, Mike	Civ								
ADS	Bauer, Steve	Lt Col	USAF	SEADS AV Analysis Chief	steven.bauer@1staf.tyndall.af.mil	523-5445			164 Alabama Ave Tyndall AFB, FL 32403-5015	SE AD SECTOR TYNDALL AFB FL//CDE//
ADS	Boe, Steven	Maj	USAF	SEADS Exercise Director	steven.boe@1staf.tyndall.af.mil	523-5684			164 Alabama Ave Tyndall AFB, FL 32403-5015	SE AD SECTOR TYNDALL AFB FL//CDE//
ADS	Breitmann, Todd	Capt	USAF	SEADS AV 01 CONOPS	todd.breitmann@1staf.tyndall.af.mil	523-5179				
ADS	Glynn, Pat	MSgt	USAF	NCOIC SEADS Live Exercises	james.glynn@1staf.tyndall.af.mil	523-5683			164 Alabama Ave Tyndall AFB, FL 32403-5015	SE AD SECTOR TYNDALL AFB FL//CDE//
ADS	Koo, Tom	Maj	USAF	Red GCI Chief	thomas.koo@1staf.tyndall.af.mil	523-5589				
ADS	Moore, Mike	MSgt	USAF	SEADS Scenario Builder	michael.moore@1staf.tyndall.af.mil	523-5441				
ADS A Liaison	Proue, Paul	Civ	FAA	SEADS FAA Liaison	prouep@1staf.tyndall.af.mil	523-5526		164 Alabama Ave Tyndall AFB, FL 32403-5015	SE AD SECTOR TYNDALL AFB FL//DOS//	
ADS	Schwend, Steve	Lt	USN	AV 01 Connectivity Chief	steven.schwend@1staf.tyndall.af.mil	523-5259				

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ADS/DOS	Hicks, Jim					james.hicks@1staf.tyndall.af.mil	523-5525					
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					jerry.adams@redstone.army.mil	746-0319					
D BL	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		Angel.a@hq.southcom.smil.mil	567-2560					
UTHCOM	Plewes, Rich	Lt Col		USAF	SOUTHCOM Exercises	uscj34@hq.southcom.mil	567-3046				3511 NW 91 st Ave Miami, FL 33172	USCINCSO MIAMI FL/SCJ32/SCJ33/SCJ34//
UTHCOM	Knightly, Bill	GS14		Civ	SOUTHCOM POC	Knighltyw@hq.southcom.smil.mil	567-3042					
Fla. Army/IDBL	Myers, Joe	Mr		Civ	FL EOC OPR							
4/NORAD	Howell, Carl	Civ		Civ	Technical Studies & Analysis Corp	howellc@norad.cas.af.mil	834-6729				4297 AustinBluffs Suite 201 Colorado Springs, CO 80918-2929	
ARMY/IDBL	Miller, Curtis	Civ		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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NCT0060422

W-77	Hanna, Scott	LT	USN	AOPS, Tactics (E-2)	[Redacted]	925-6882 ext203	(770) 919-6382 ext203	1000 Halsey Ave NAS Atlanta Marietta GA 30060	CARAEWIRONS EVENSEVEN
W-77	Thornton, Ron	Lt	USN			925-6382			
45	Klavon	LCDR	USN	P-3	Klavoner@vp45.navy. mil	942-3589	[Redacted]	TSC Jacksonville FL	PATRON FOUR FIVE
IDS/CVX	Olis, Mike	Maj	CF		Mike.olis@wads.mcch ord.af.mil	382-4697			Western Air Defense Sector McChord AFB//cvx/cvxl
IDS/CVXL	Delo, Dave	Maj			Dave.delo@wads.mcc hord.af.mil	382-4783		852 Lincoln Blvd MCCChord AFB WA 98438	

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.

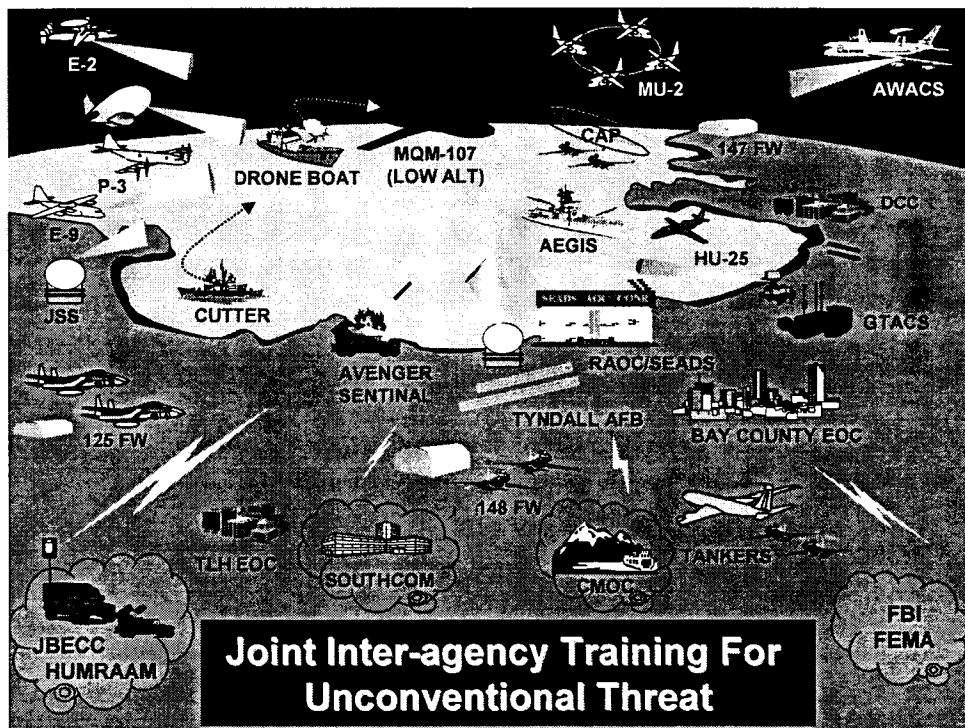
For years NORAD simulation exercise controllers have imitated agencies and organizations that typically do not participate in NORAD live-fly exercises. The AV 01 will exercise several (live) organizations commonly simulated by exercise control cells during these NORAD exercises. The intent of the exercise 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.

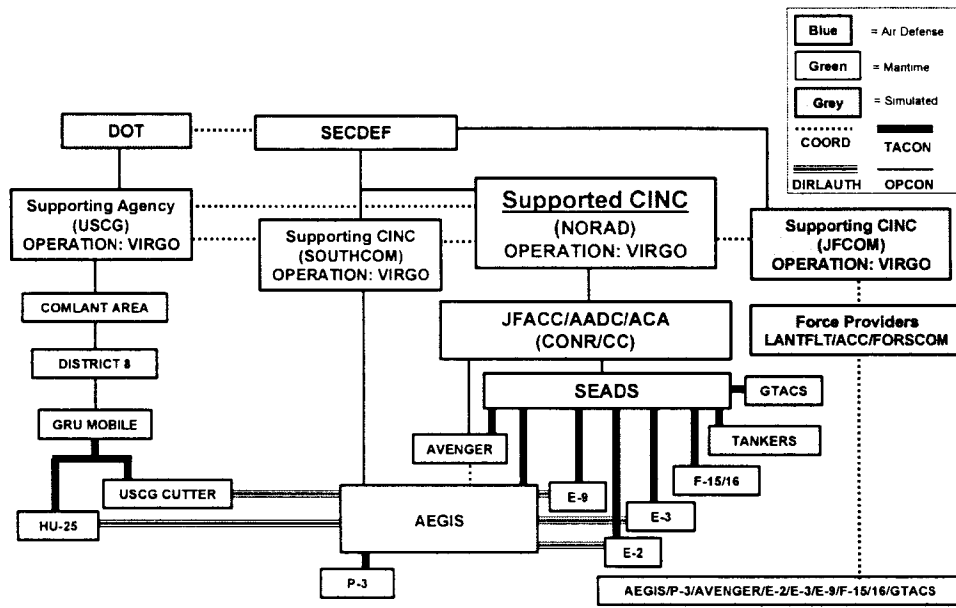
The AV 01 exercise scenario will focus on counter-terrorism. The primary threat to SEADS/CONR/NORAD for this exercise will be a notional terrorist group that has acquired cruise missiles and unmanned aerial vehicles (UAV's) to attack the United States (specifically northwest Florida). The notional terrorist 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



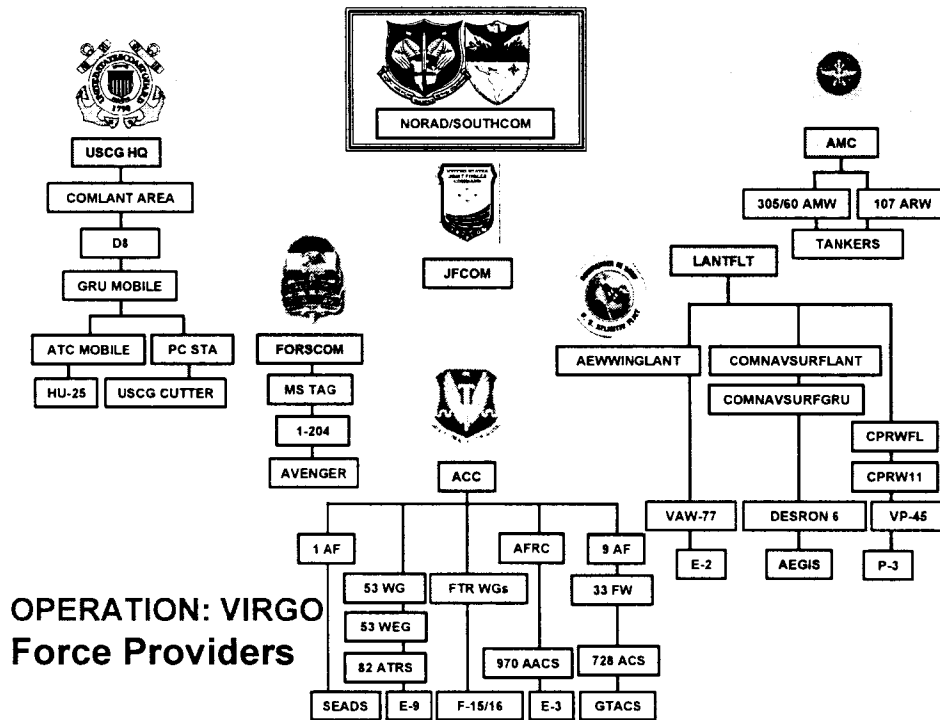
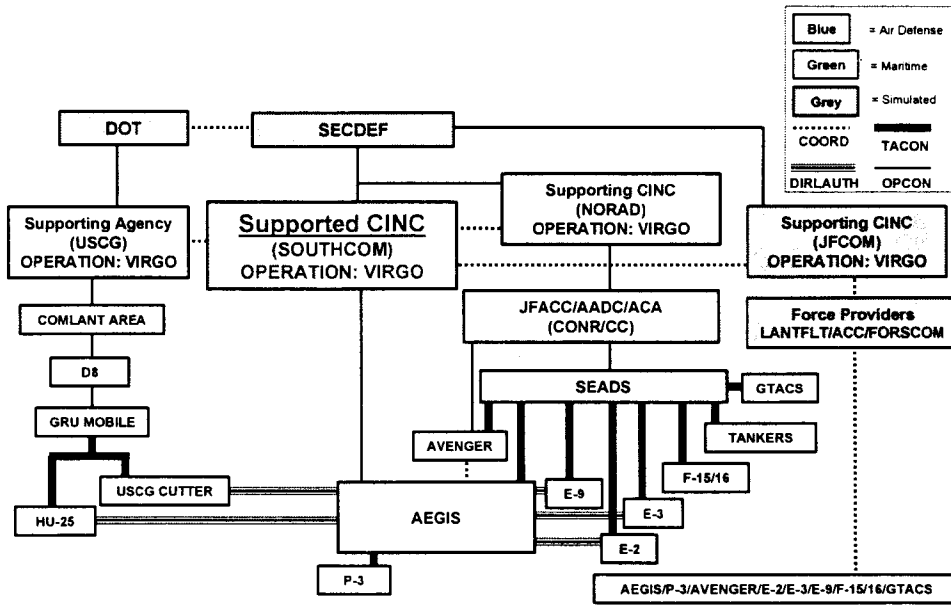
OPERATION: VIRGO (Possible C2 Relationships)
 If Primary Mission (SECDEF determined): Aerospace Defense



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

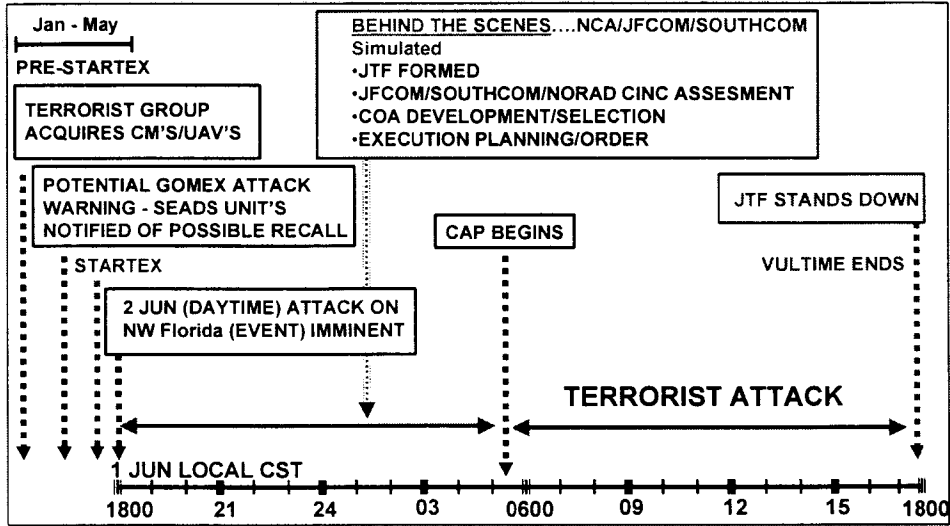


OPERATION: VIRGO (Possible C2 Relationships)
 If Primary Mission (SECDEF determined): Maritime Prosecution

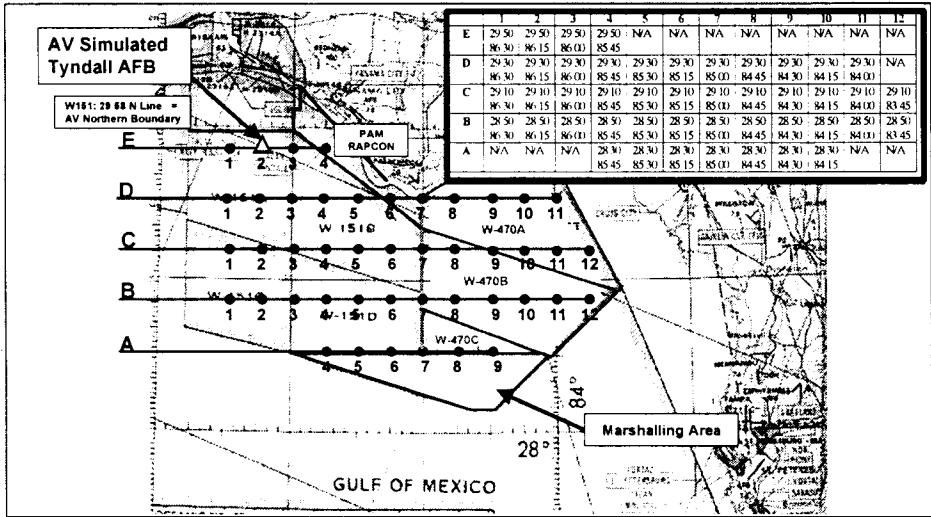


Intel Scenario Flow (proposed)

**INTEL SCENARIO FLOW
1-2 JUN 2001**



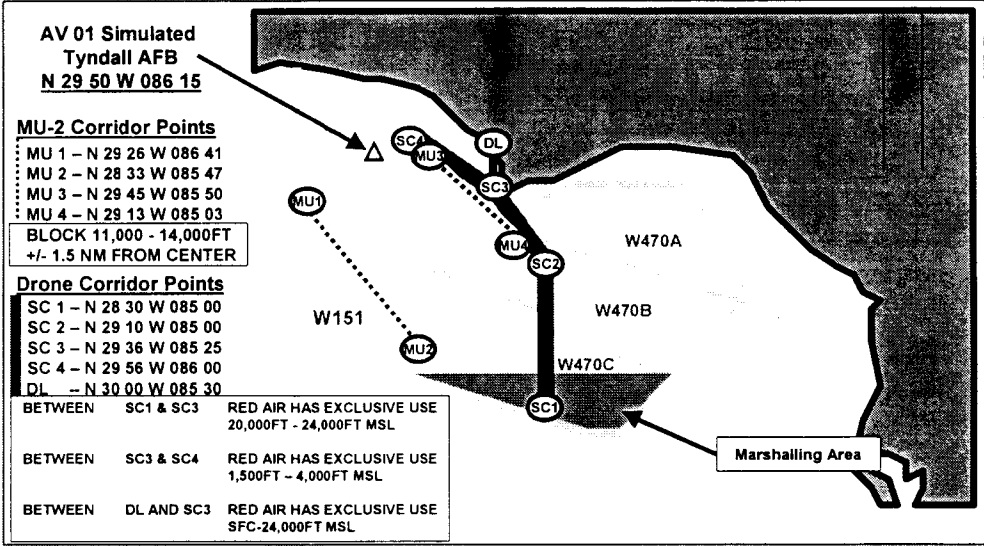
AV 01 AIRSPACE



AV 01 Airspace

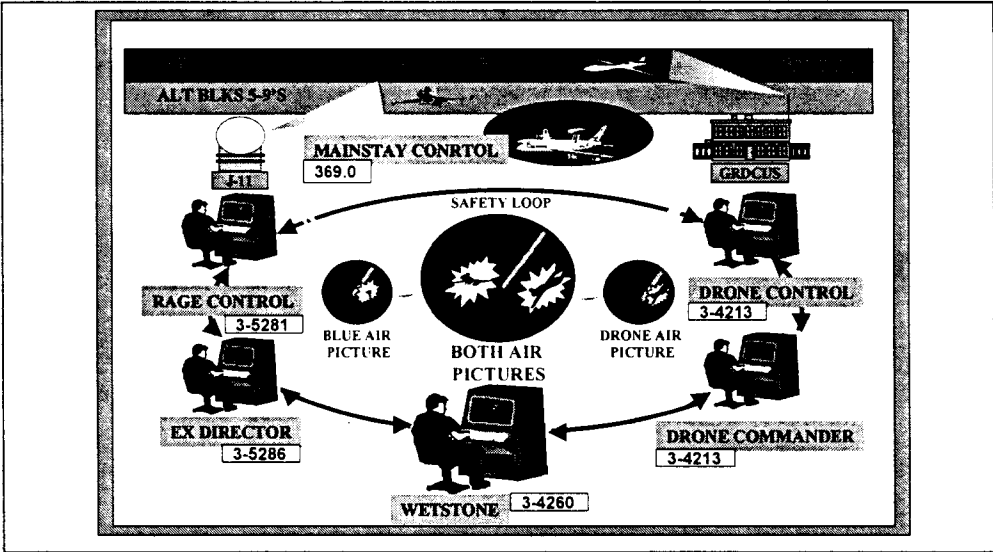
Target Corridor

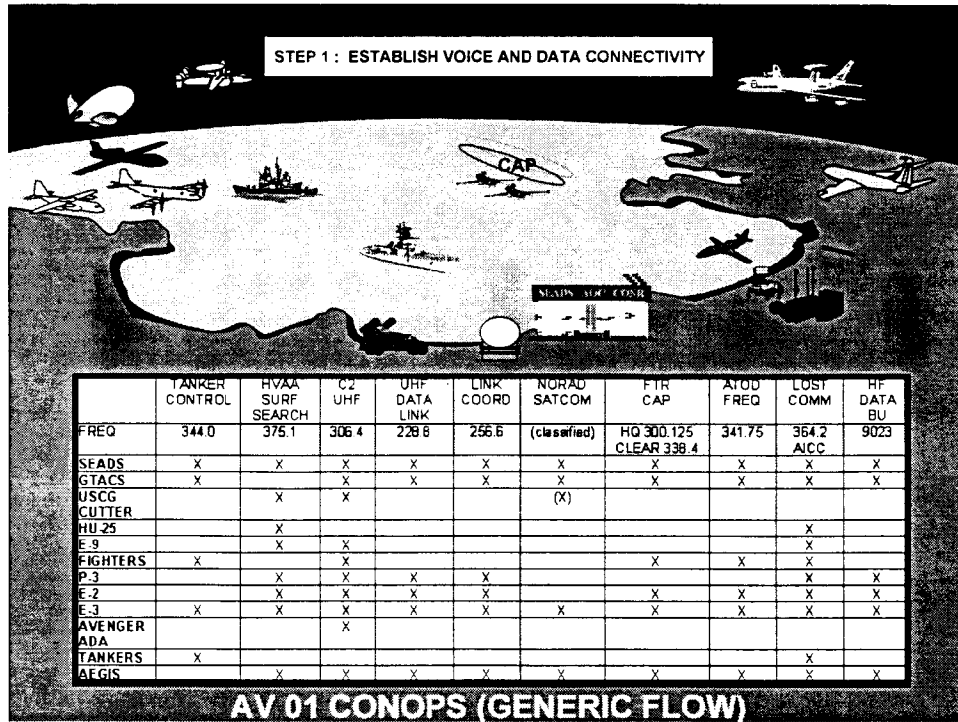
AV 01 DRONE (SAFE CORRIDOR)



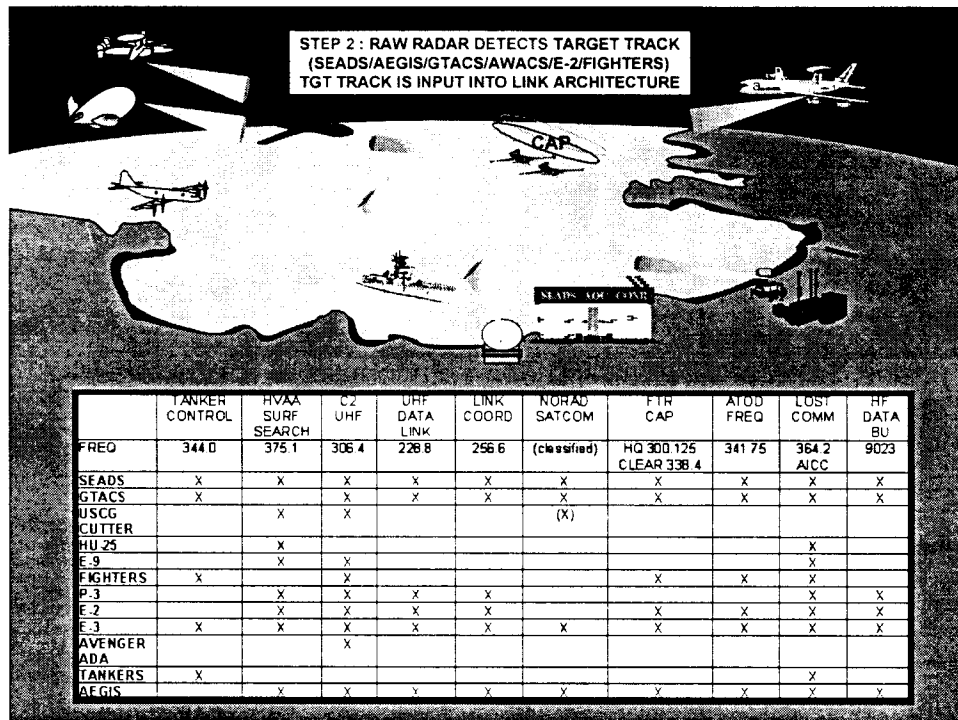
White Cell Safety Net

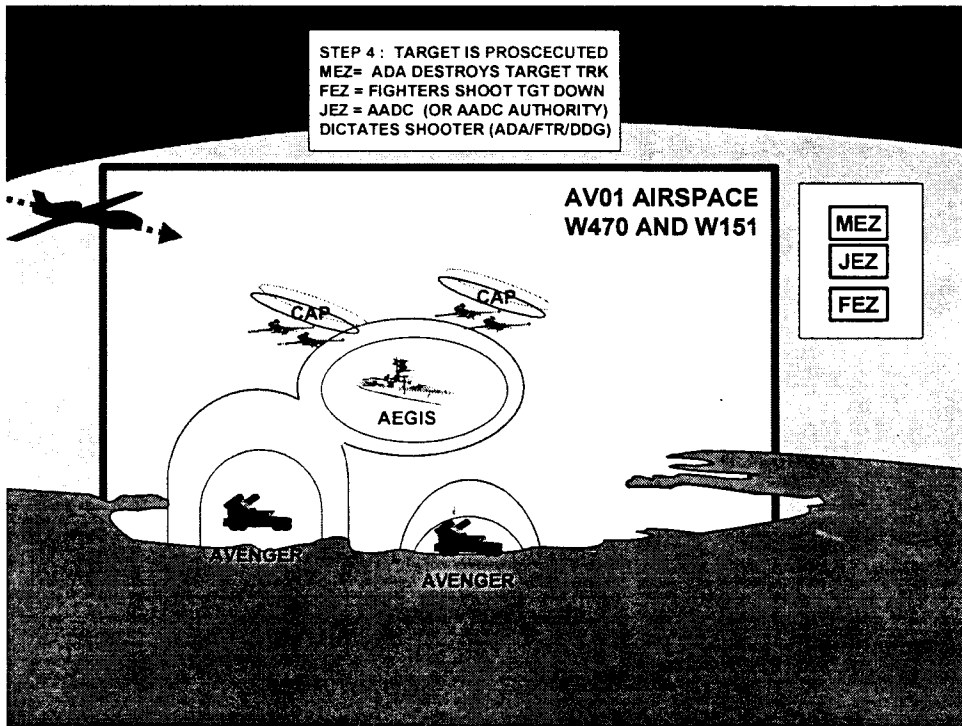
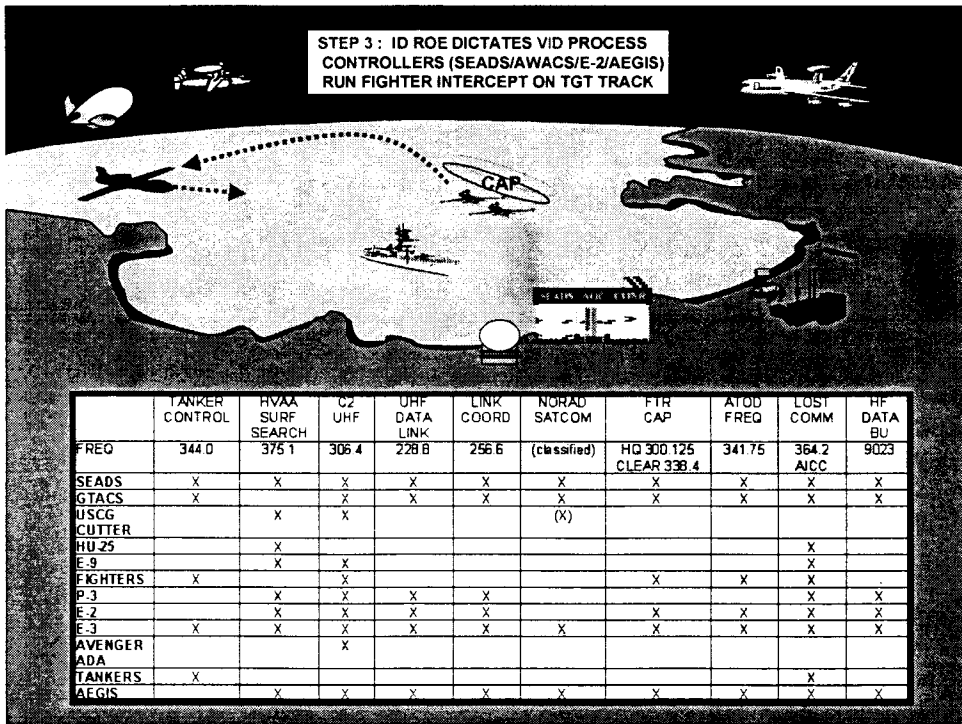
DRONE SAFETY PROCEDURES





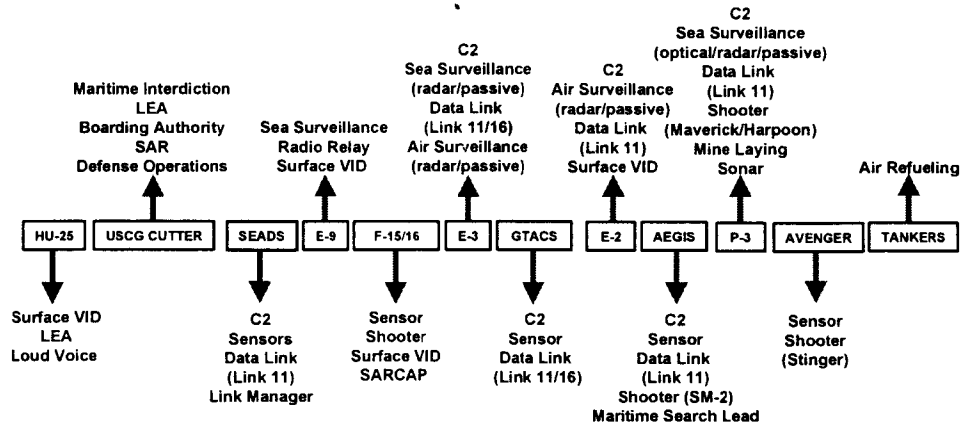
Use ATO for frequency assignment (not this chart)





OPERATION: VIRGO

Tactical Unit Potential Roles and Missions



**AMALGAM VIRGO 01
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	9/11 Agency Internal Matters				
UHF					
VHF					
SATCOM					
Cellular Phone					
FAX Secure					
E-mail	Call Comm #	D8cc@d8.uscg.mil	jjanszen@grumobile.uscg.mil	pzado@cgccohead.uscg.mil	mbarr@atc.uscg.mil
Message PLAD	9/11 Agency Internal Matters				
Comm Center	9/11 Agency Internal Matters				

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	E-9 (Airborne GOMEX)	728 ACS (GTACS) (Eglin AFB, FL)	E-3 (AWACS) (Airborne GOMEX)	E-2 (Airborne GOMEX)	CG 48 (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 ext202	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	9/11 Agency Internal Matters				
UHF					
VHF					
SATCOM					
Cellular Phone					
FAX Secure					
E-mail		david.robison@eglin.af.mil david.parker@eglin.af.mil	timothy.benoit@tinker.af.mil		Underwayops@yorktown.navy.mil
Message PLAD	9/11 Agency Internal Matters				
Comm Center					

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NCT0060434

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

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@tynd all.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		
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				

9/11 Agency Internal Matters

NCT0060437

728 ACS GTACS 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 Avenger ADA 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:NiagraFalls (KC-135)	Duty Controller	DSN 875-4020

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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
3 WG (AK F-15) @ Tyndall	Duty Officer	DSN 523-3294
2 FS Tyndall AFB (F-15s)	Duty Officer	DSN 523-2951

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SIMULATION (WHITE) CELLS

UNIT	ATO RECEIPT POC	ATO RECEIPT PHONE NUMBER
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
728 ACS Sim cell	Maj Doc Robinson	DSN 875-4502
USS Yorktown Sim cell	Lt Steve Schwend	

MEANS	E-mail Addresses
4. Primary	Websites
2. Secondary	Phone Numbers
3. Tertiary	Runners
9/11 Agency Internal Matters	

SOUTHCOM Sim cell			9/11 Agency Internal Matters
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NCT0060440

Cruise Missile Attack Warning Experiment



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

NCT0060441

Cruise Missile Attack Warning Experiment

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NCT0060442

Cruise Missile Attack Warning Experiment

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NCT0060443

Cruise Missile Attack Warning Experiment

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NCT0060444

Cruise Missile Attack Warning Experiment

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NCT0060445

Cruise Missile Attack Warning Experiment

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NCT0060446

Cruise Missile Attack Warning Experiment

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NCT0060447

Cruise Missile Attack Warning Experiment

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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



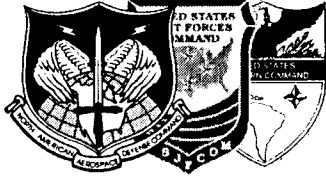
SCENARIO:

"Cold Start" CMD COUNTER TERRORISM

1-2 JUN 2001



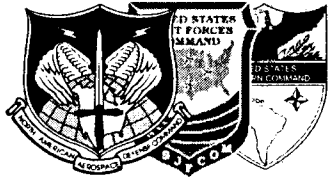
Joint Inter-Agency Training Against Unconventional Threat



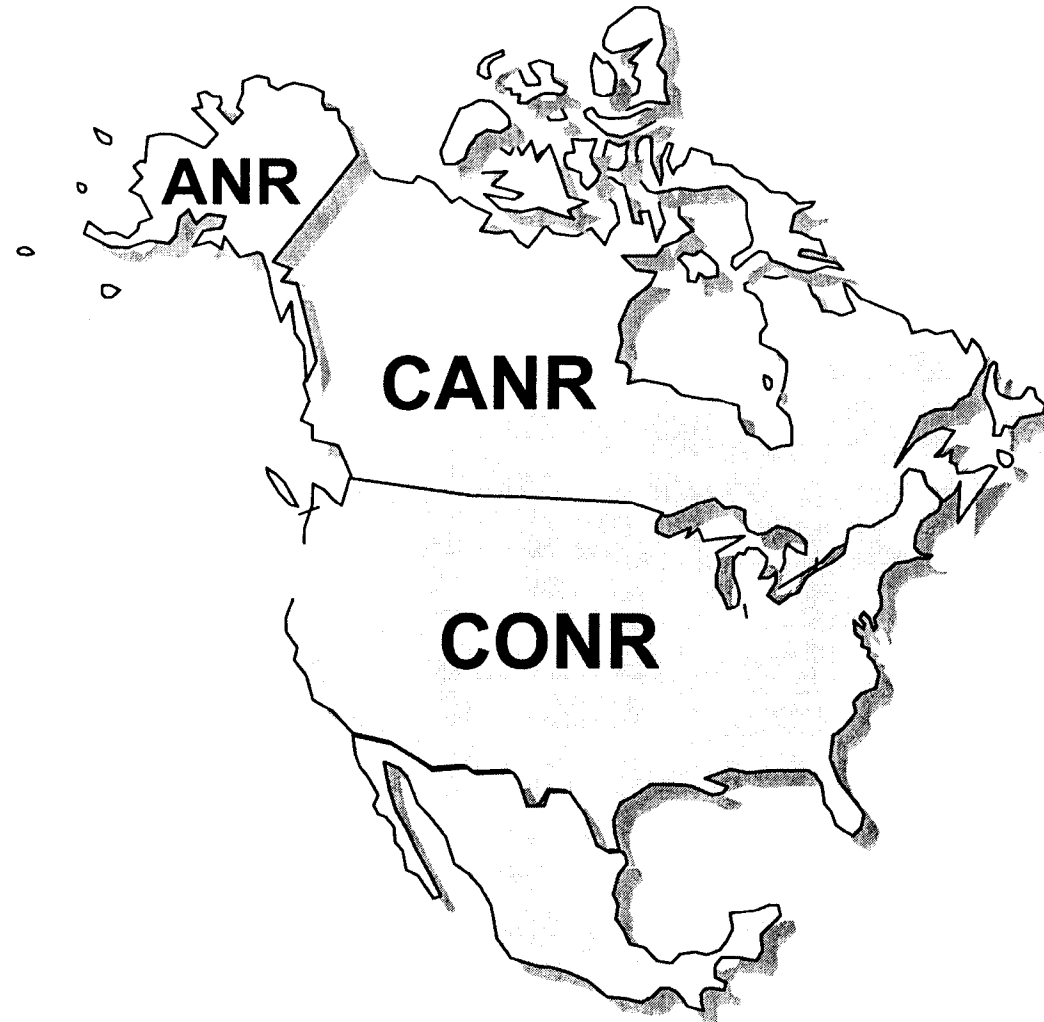
NORAD MISSION

... 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





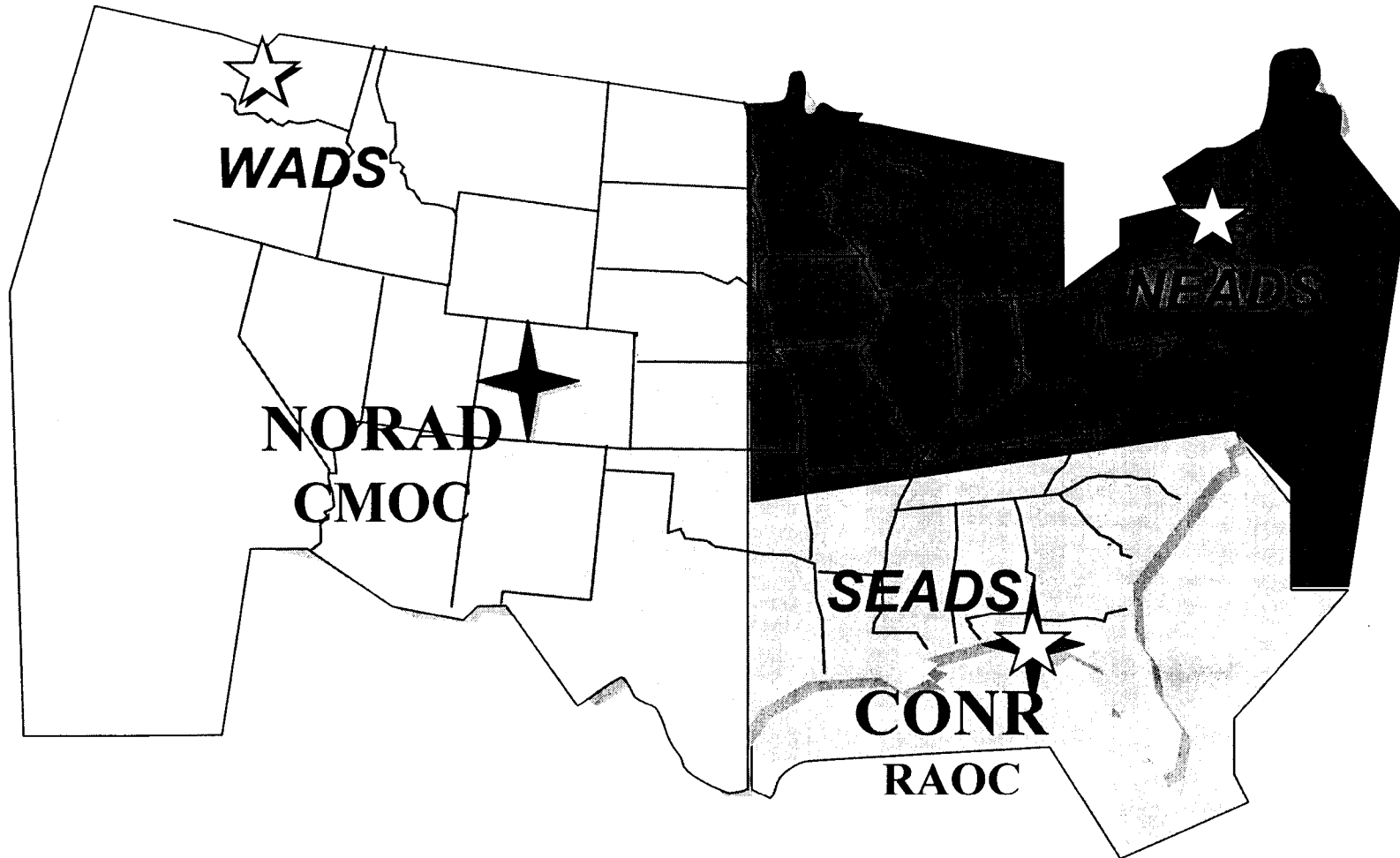
NORAD STRUCTURE



NCT0060452



CONUS NORAD *Region*



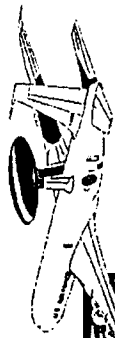
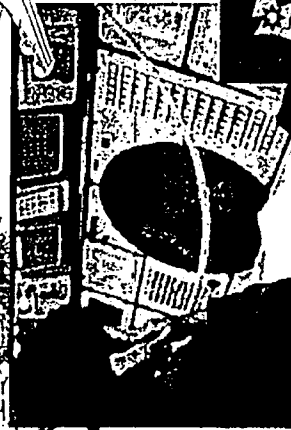
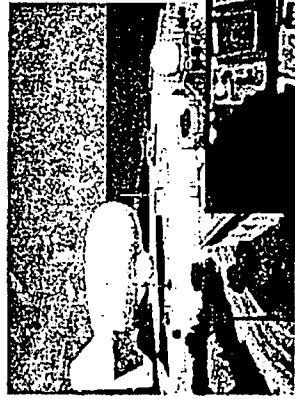
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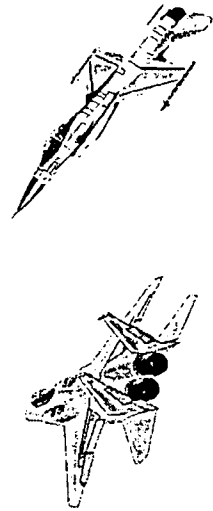
ASSETS



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- C² Structure
 - NORAD, CONR, Sectors
- Fighters
 - F-15
 - F-16





Current IAF Sensors

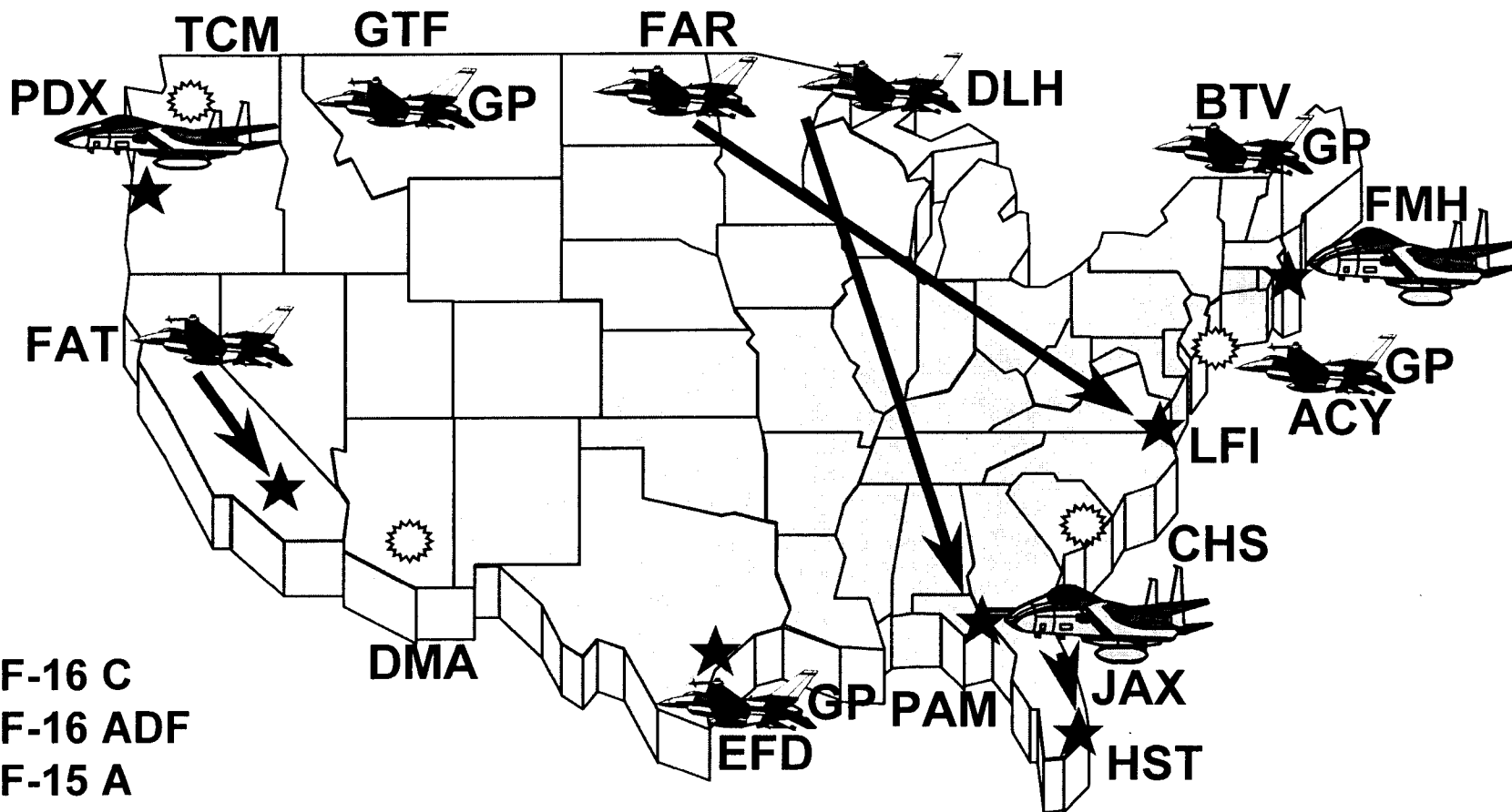


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NCT0060455



CURRENT AIR SOVEREIGNTY FIGHTERS



NCJ0060456



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**

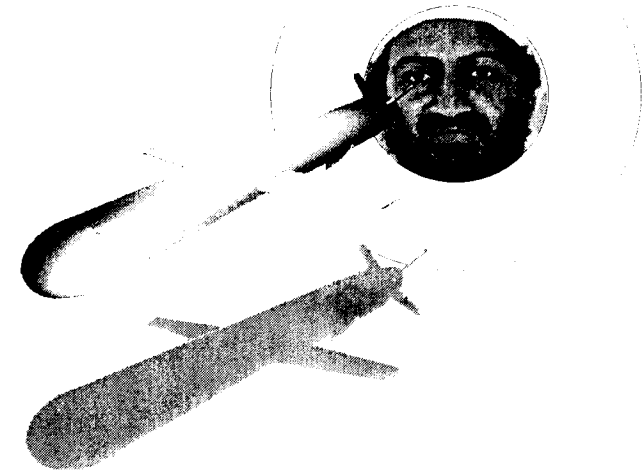
NCT0060458



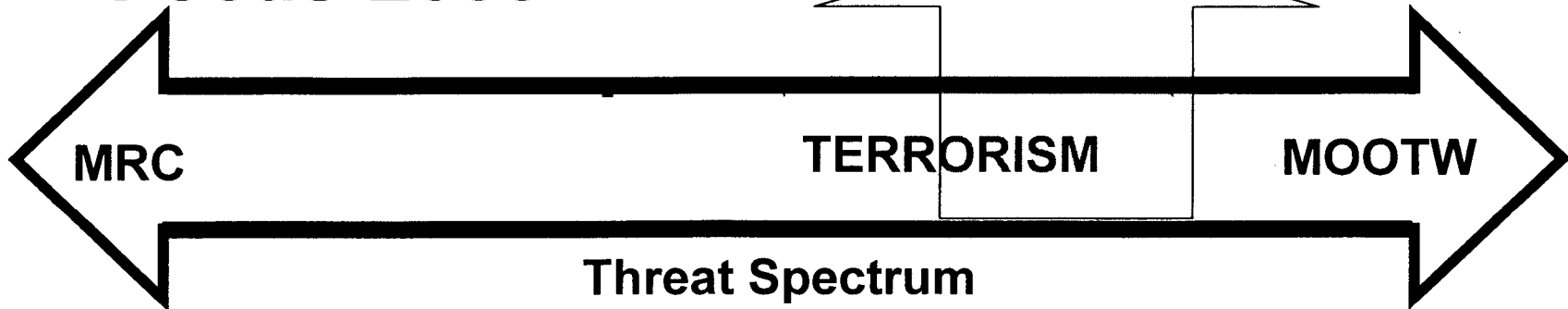
Air Defense Exercise FOCUS



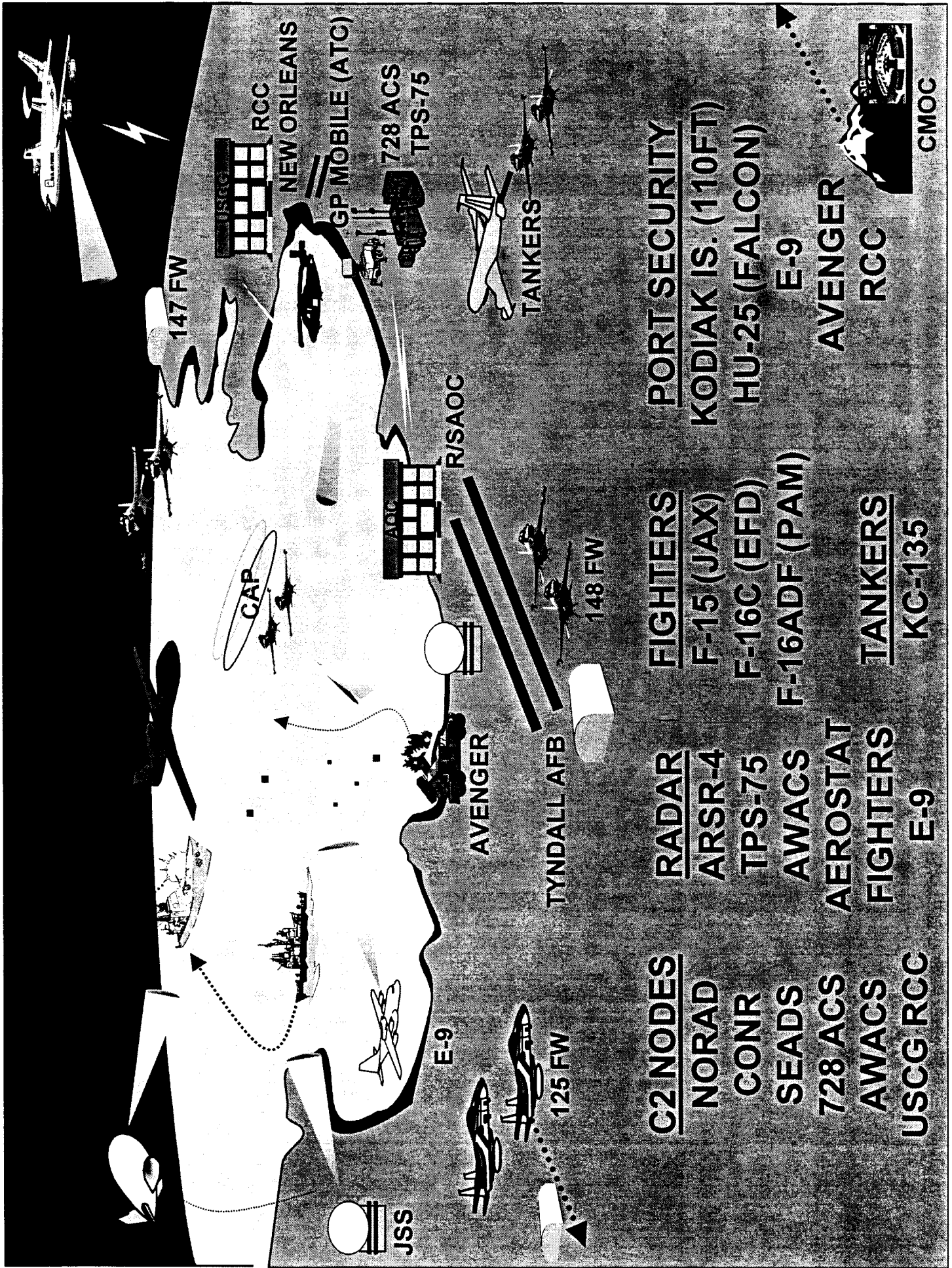
Focus Less...



Focus More...



NCT0060459





WORLD AOR'S 101



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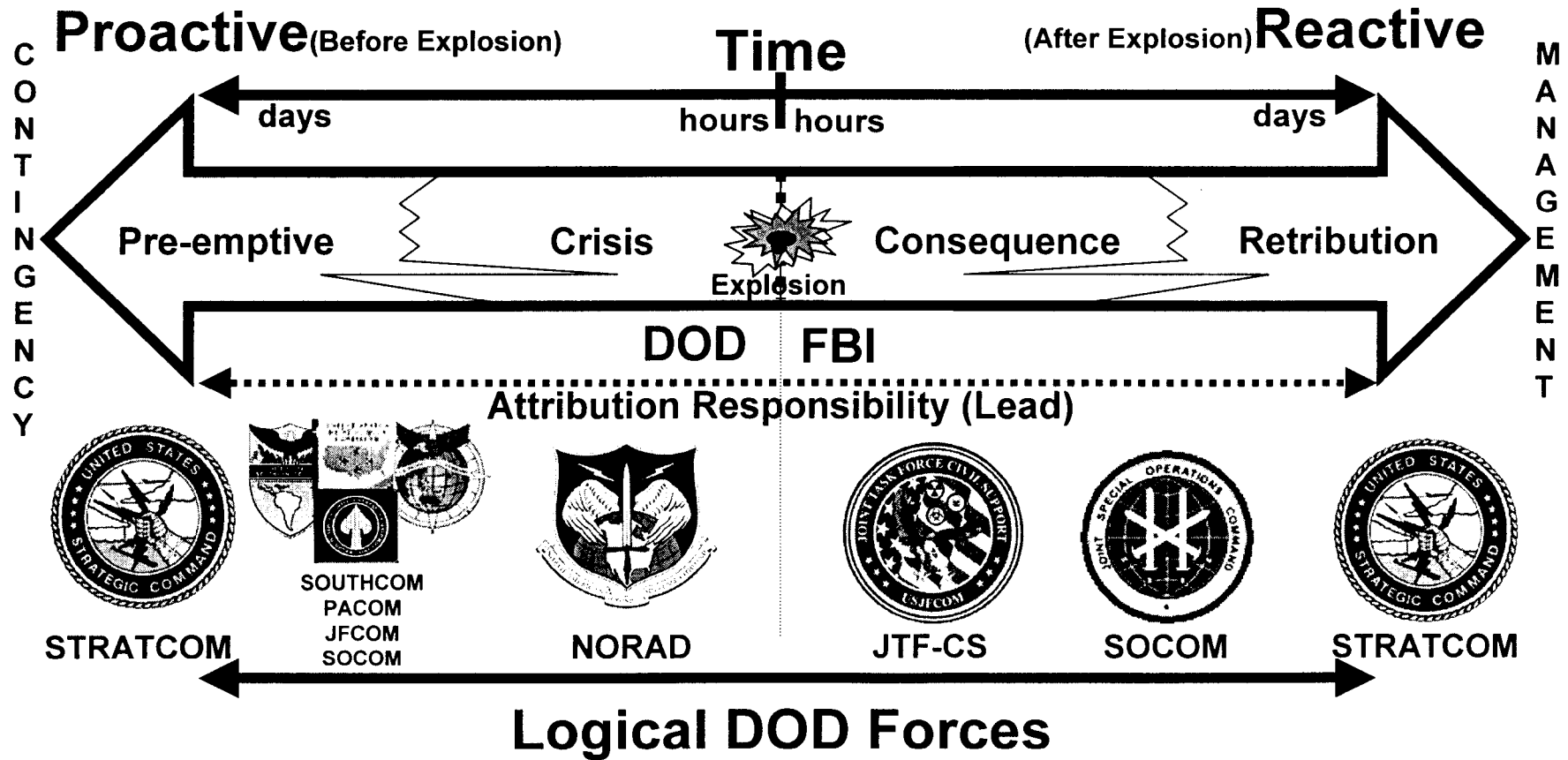
NCT0060461

9/11 Agency Internal Matters

NCT0060462

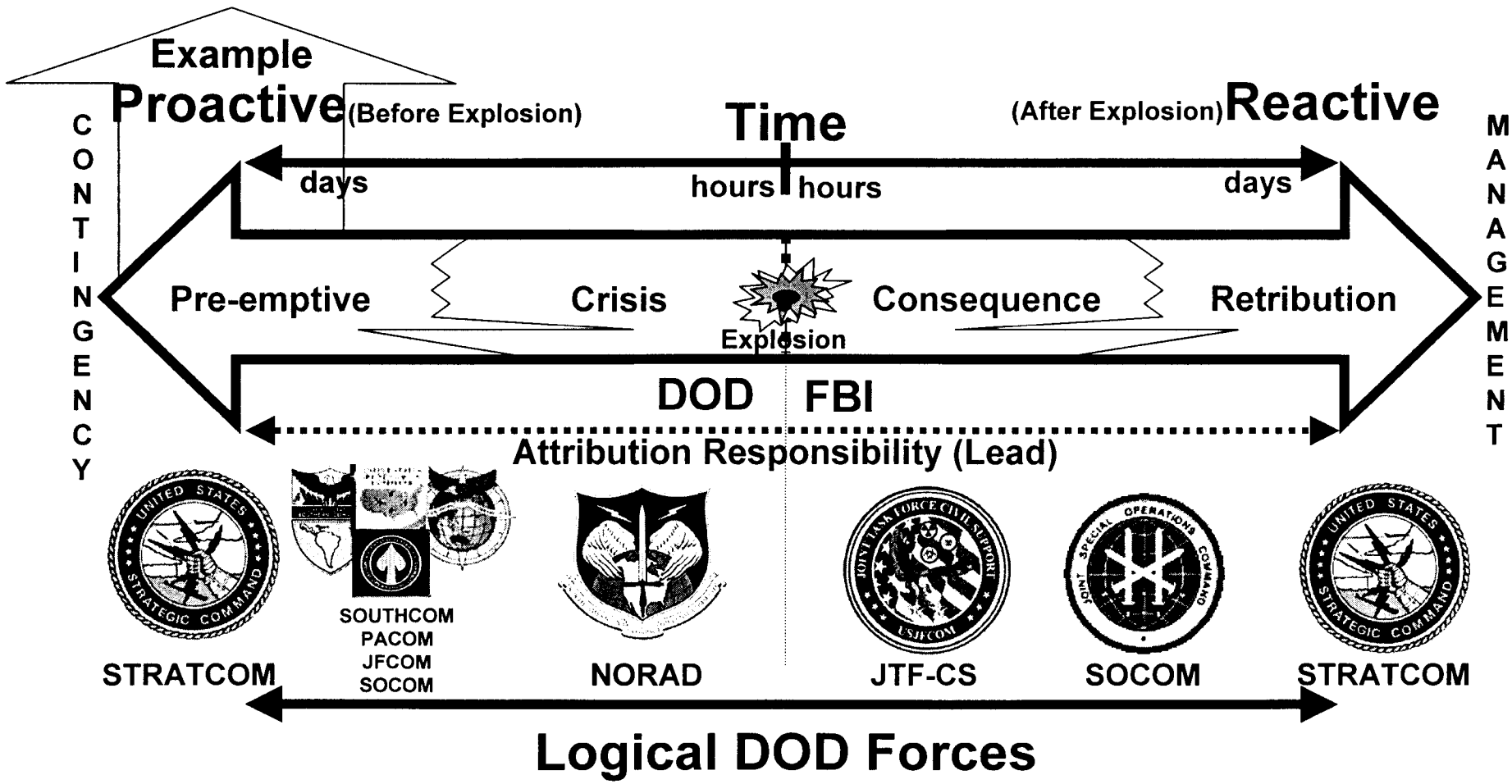


NCMD Fluid Environment (DOD Perspective)



NCMD Fluid Environment (DOD Perspective)

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



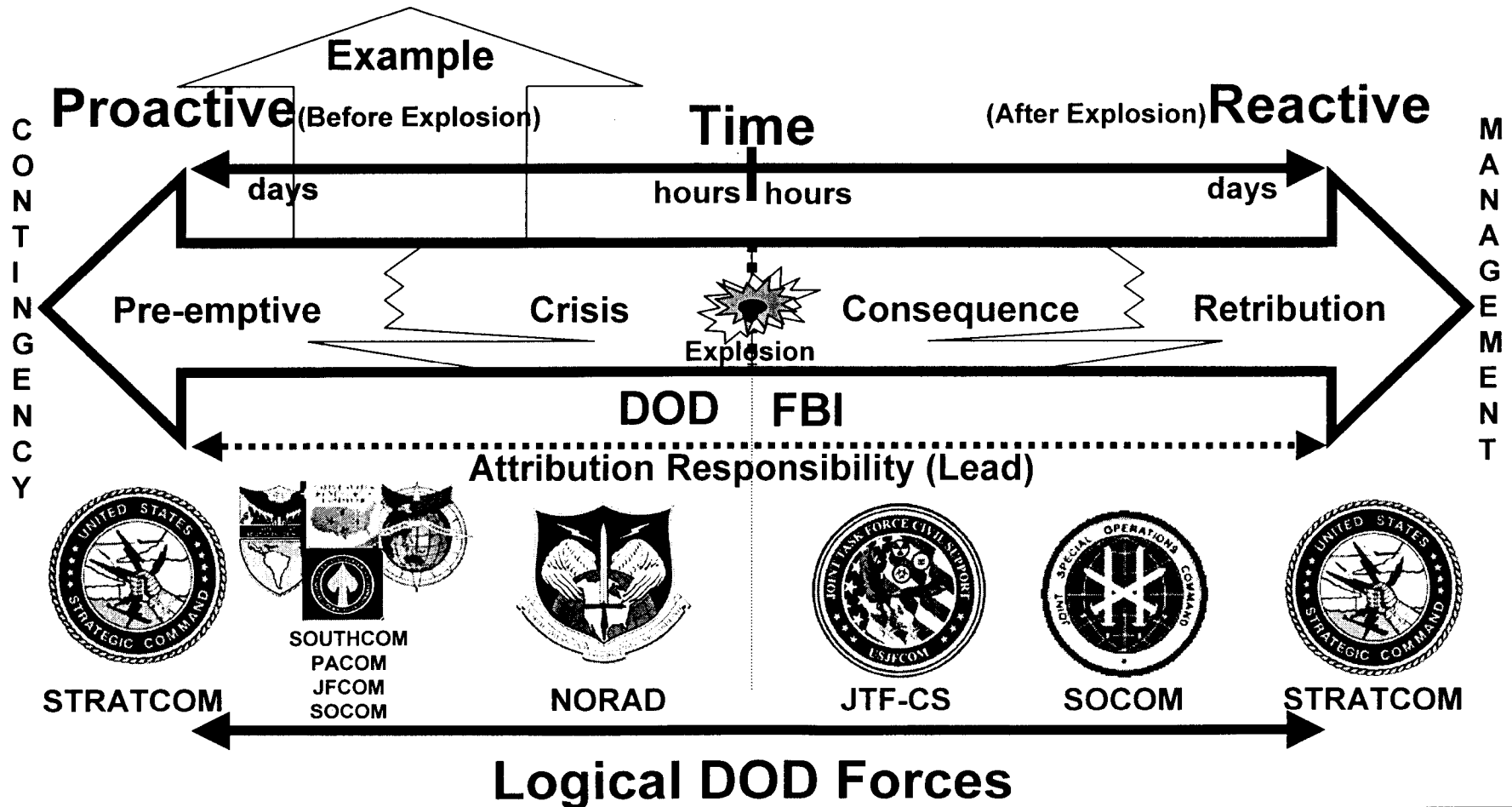
NCT0060464



NCMD Fluid Environment (DOD Perspective)



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

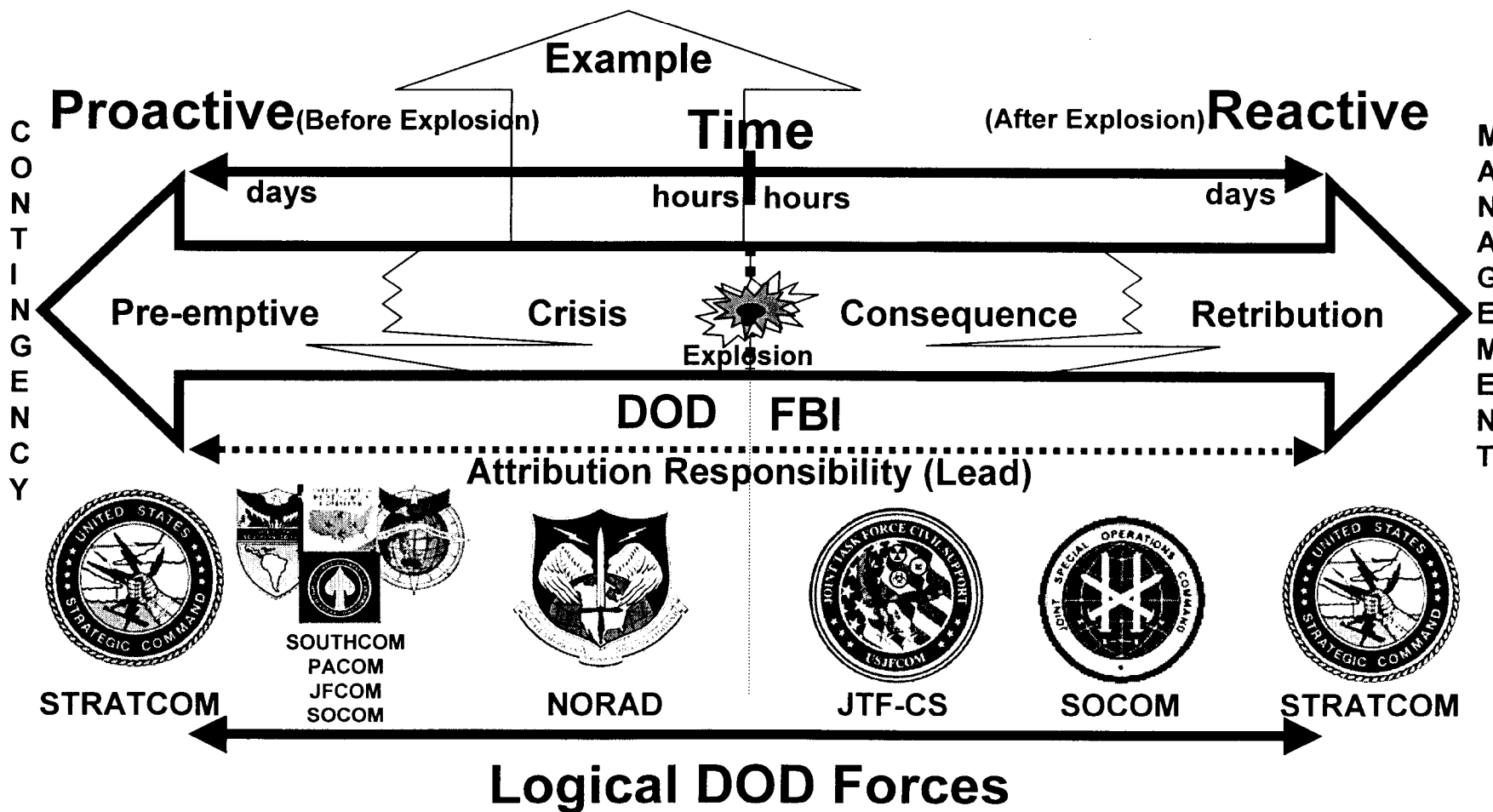




NCMD Fluid Environment (DOD Perspective)



Air Breathing Threat Detected On JSS Radar
(NORAD Alert Fighters Scramble And Prosecute)

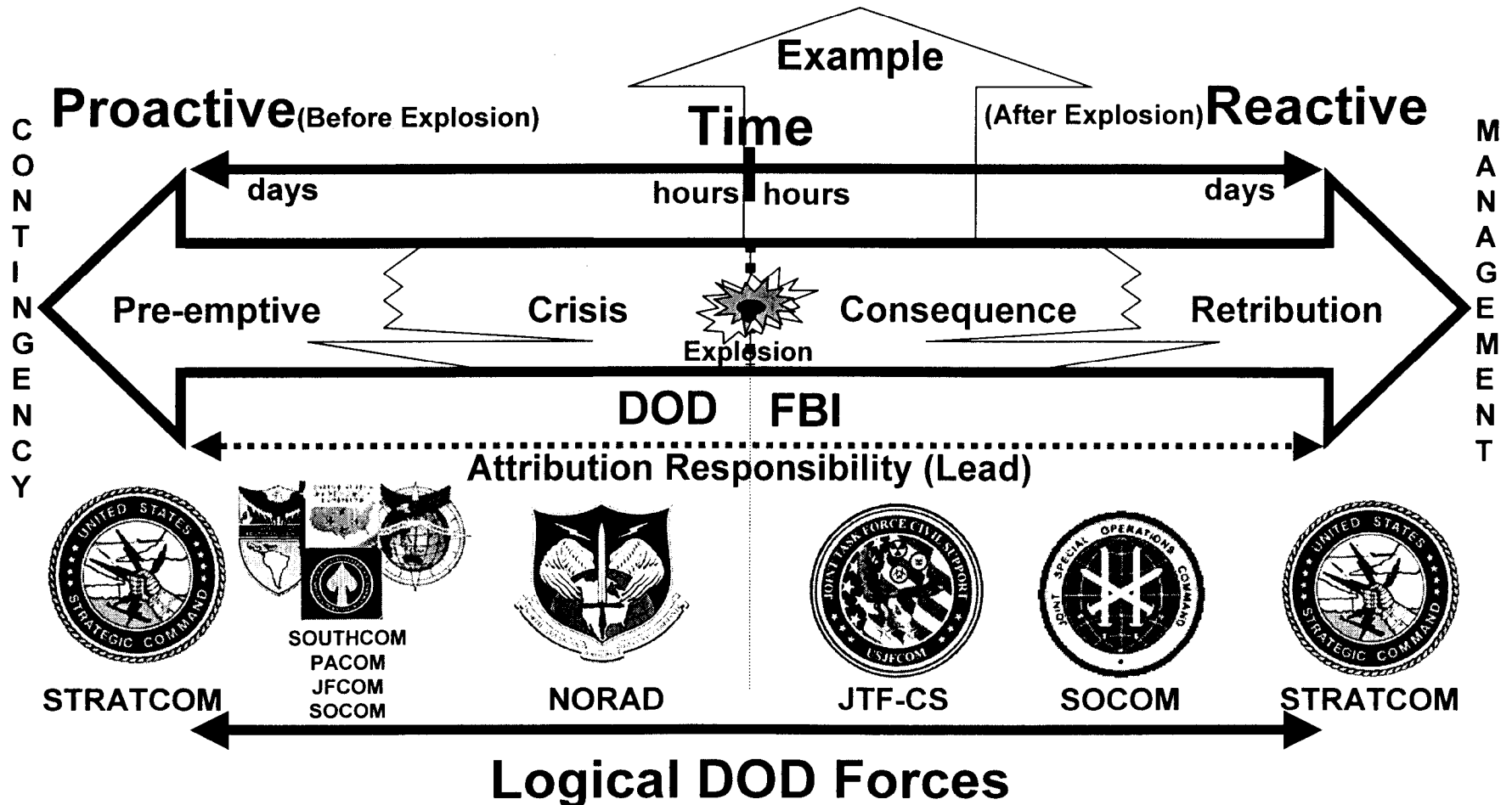




NCMD Fluid Environment (DOD Perspective)



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

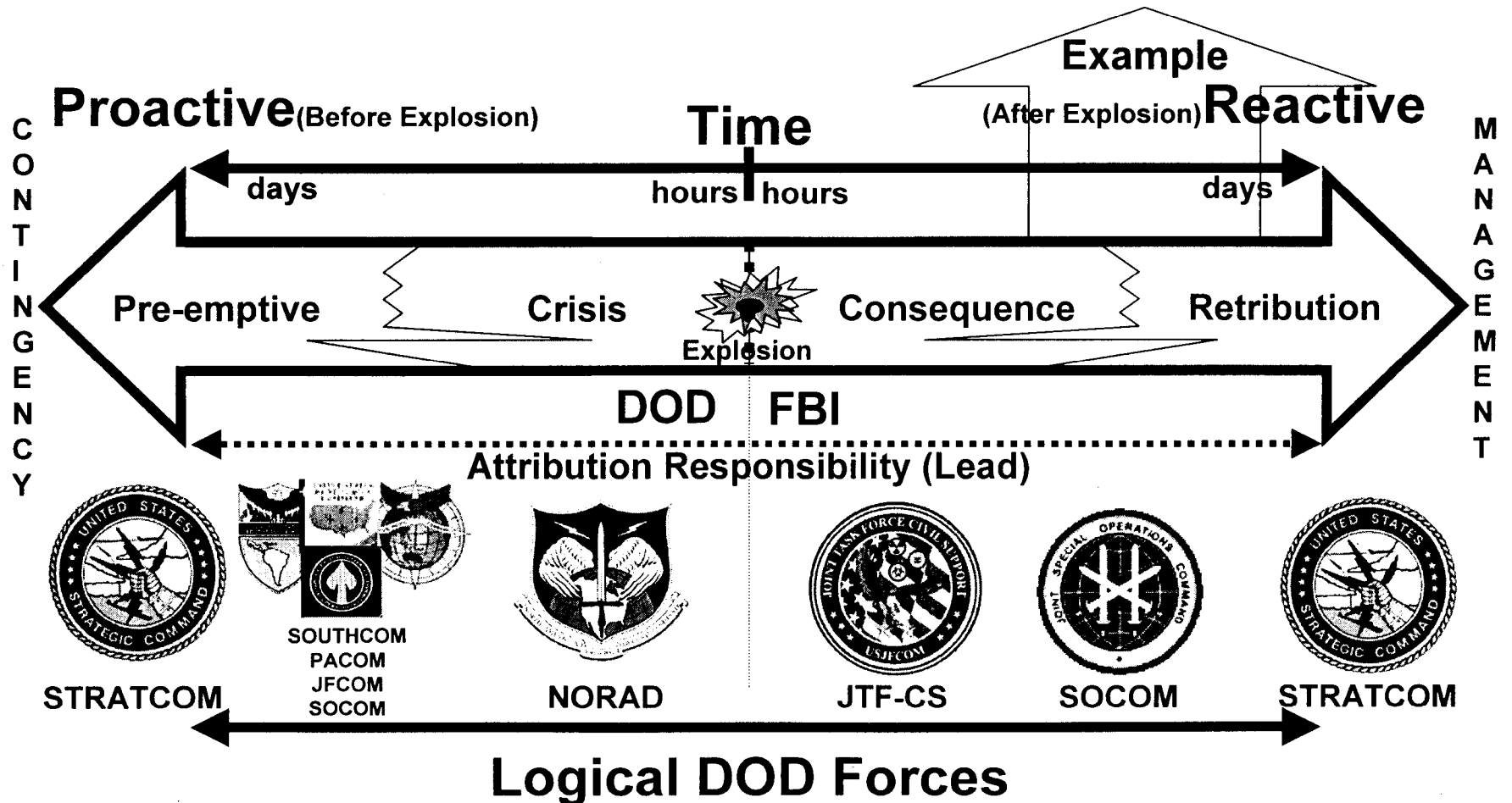




NCMD Fluid Environment (DOD Perspective)



Terrorist Located Shortly After CM WMD Consequence
(JSOC SPECOPS Team Assault)

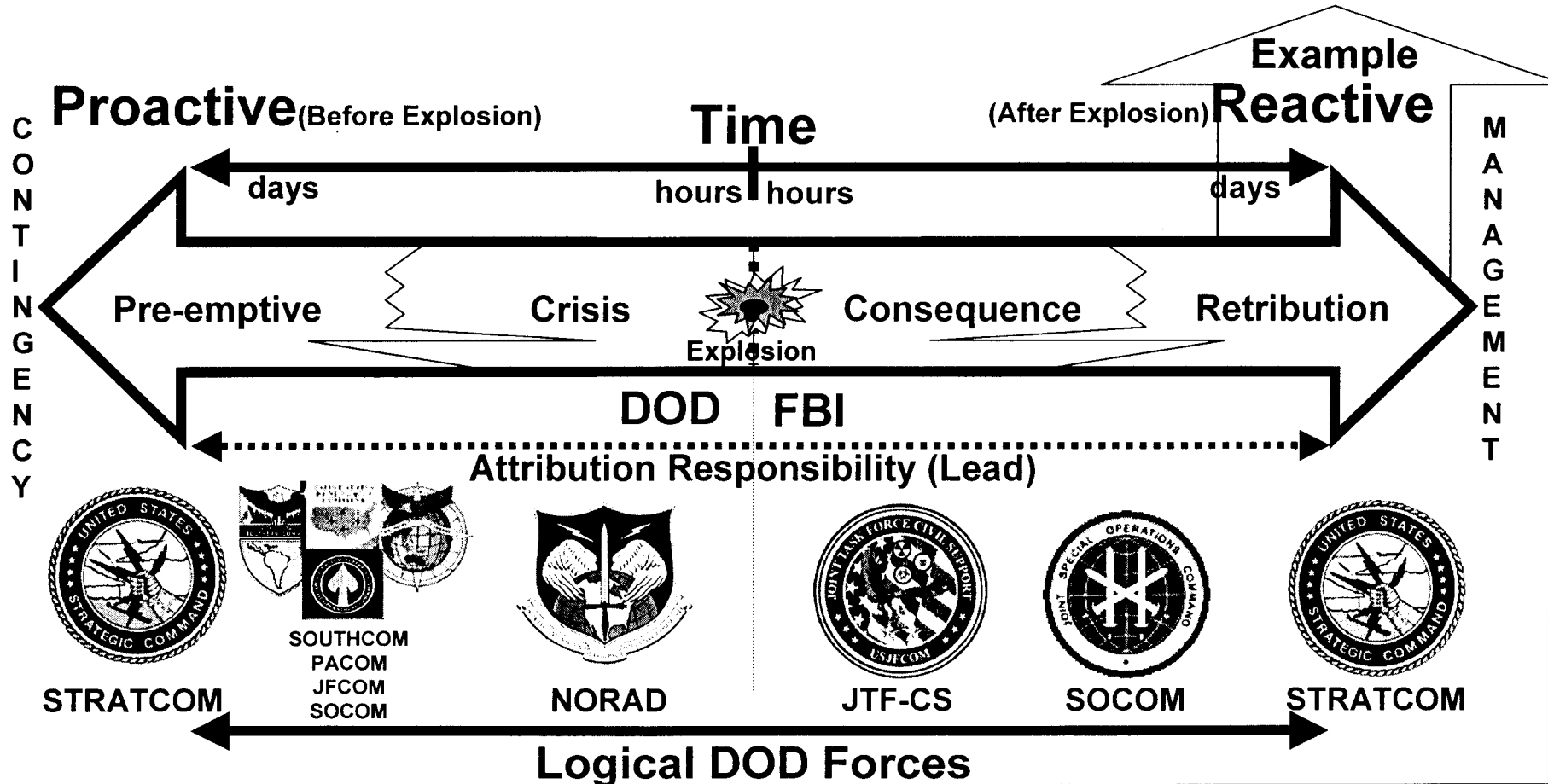




NCMD Fluid Environment (DOD Perspective)



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



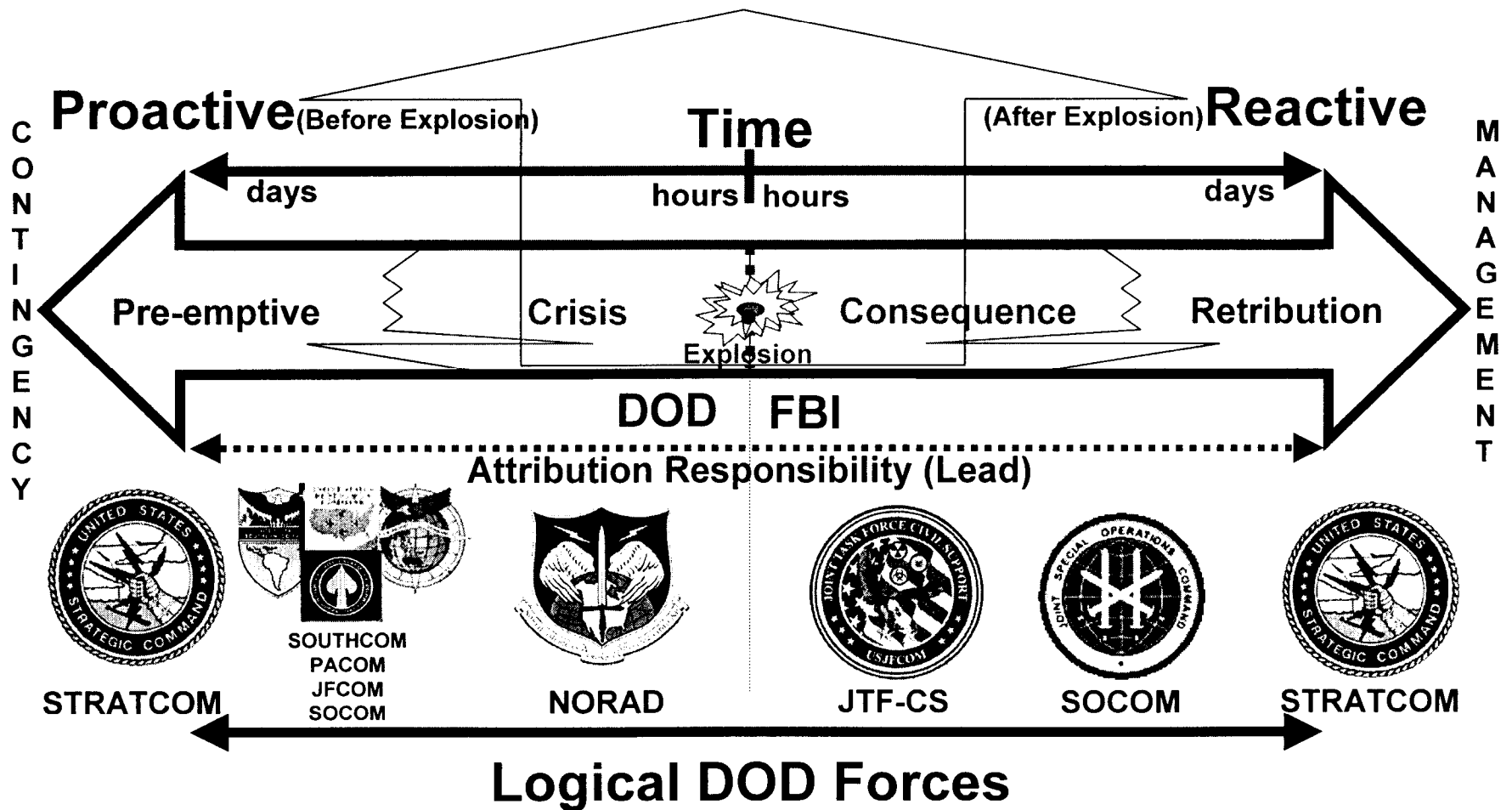
NCT0060469



NCMD Fluid Environment (DOD Perspective)



AV 01 Scenario Possibilities



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NCT0060472

9/11 Agency Internal Matters

NCT0060473

9/11 Agency Internal Matters

NCT0060474

9/11 Agency Internal Matters

NCT0060475

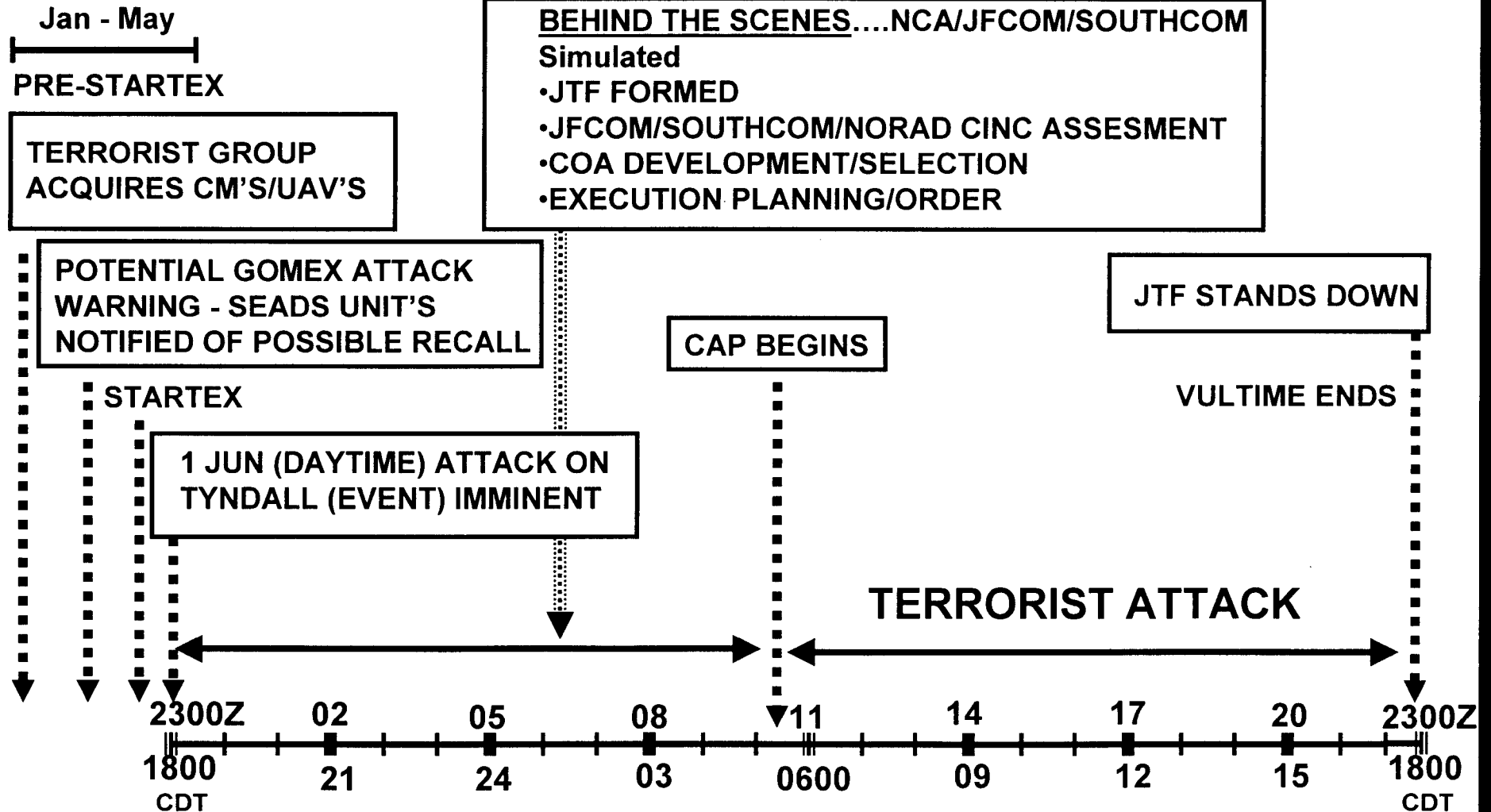
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NCT0060476



INTEL SCENARIO FLOW

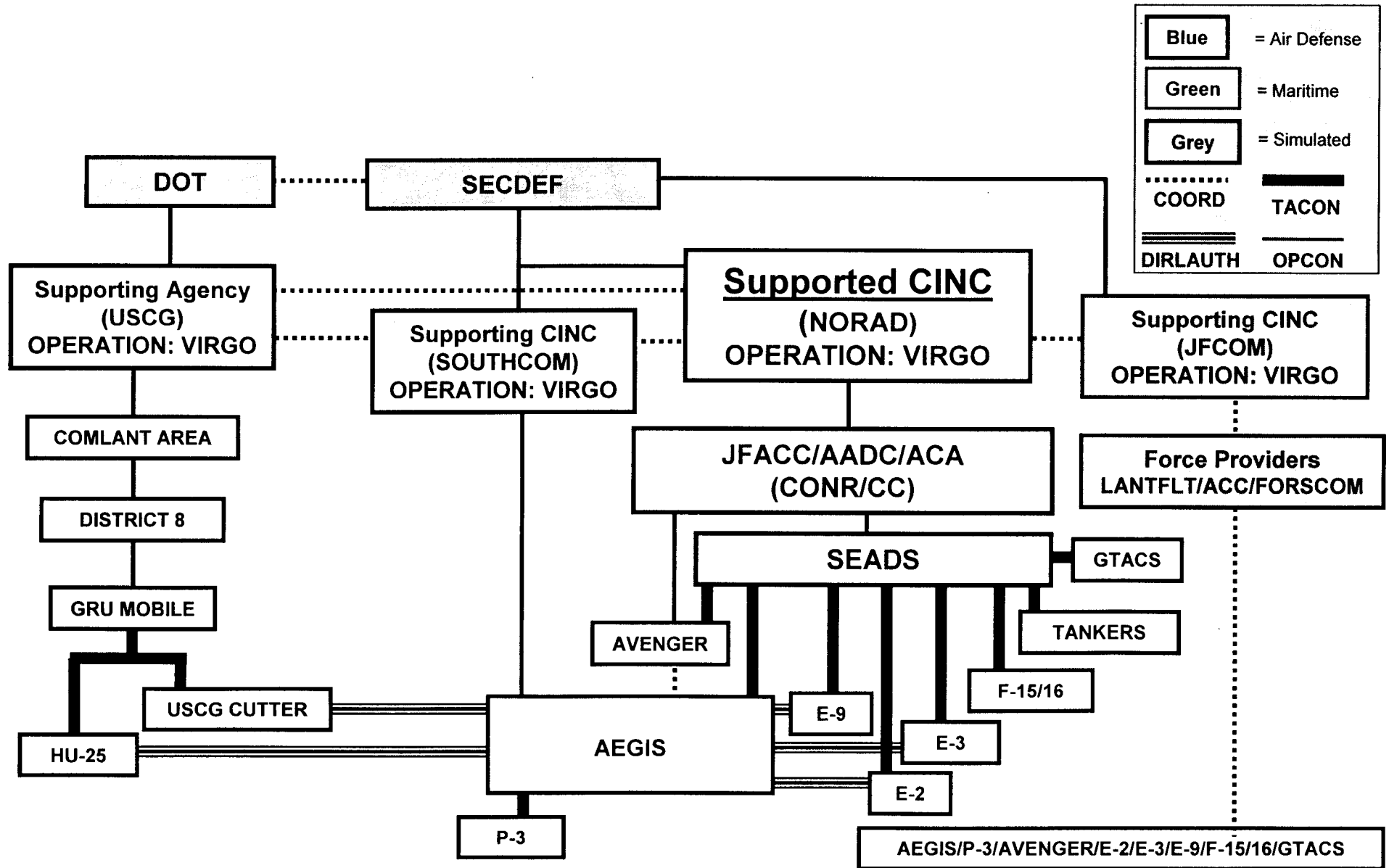
1-2 JUN 2001





OPERATION: VIRGO (Possible C2 Relationships)

If Primary Mission (SECDEF determined): Aerospace Defense



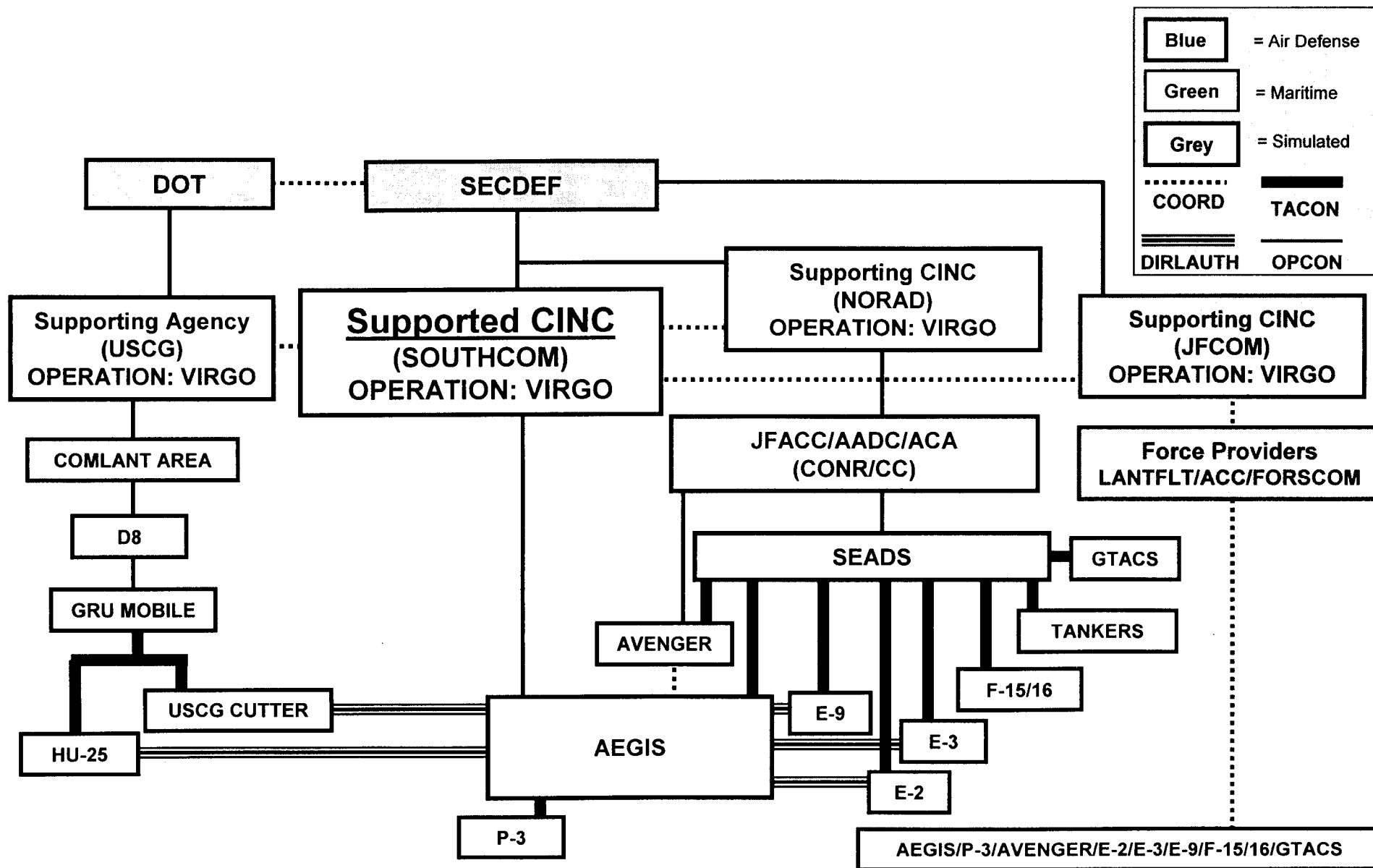
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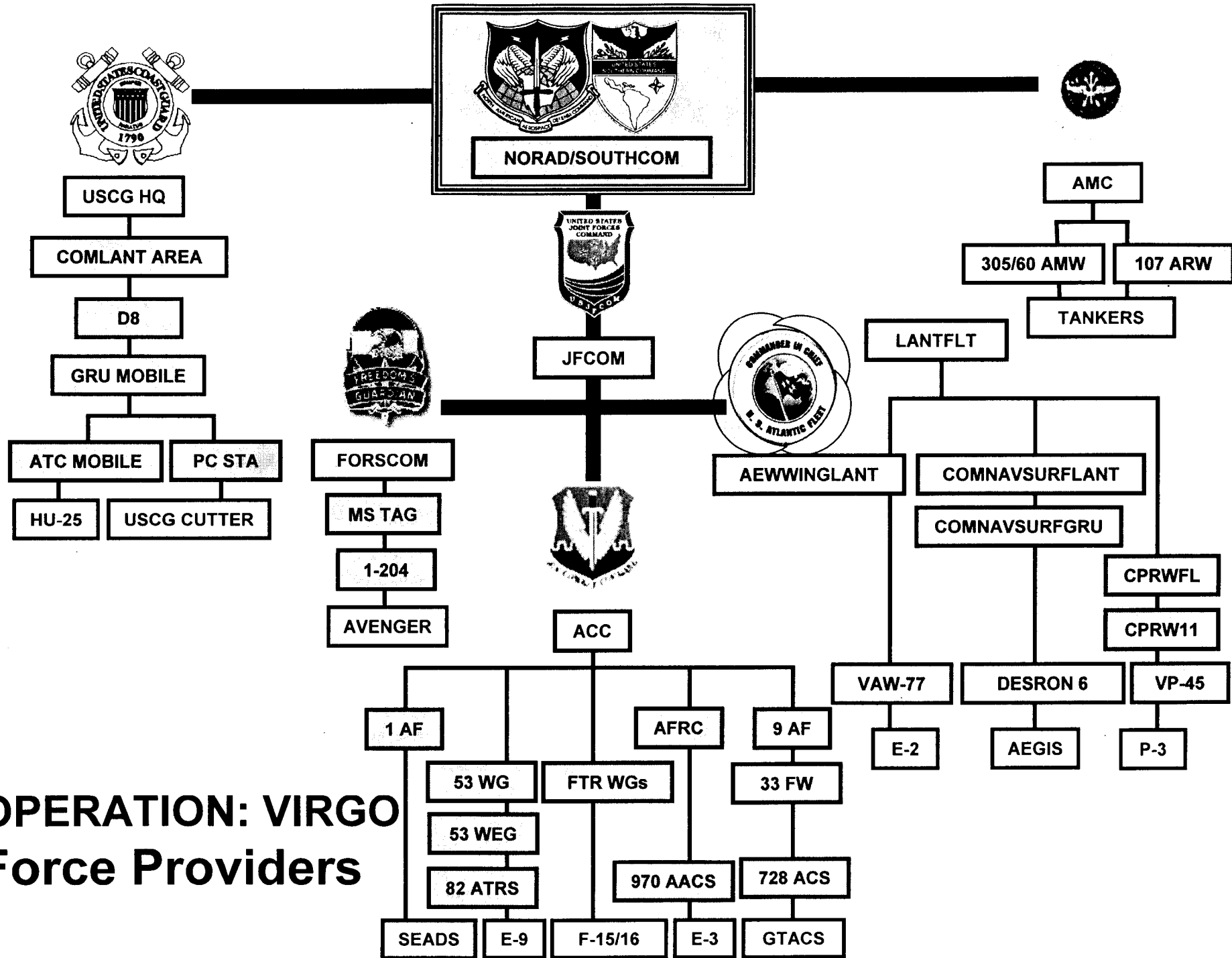
OPERATION: VIRGO

(Possible C2 Relationships)

If Primary Mission (SECDEF determined): Maritime Prosecution



NCT0060479

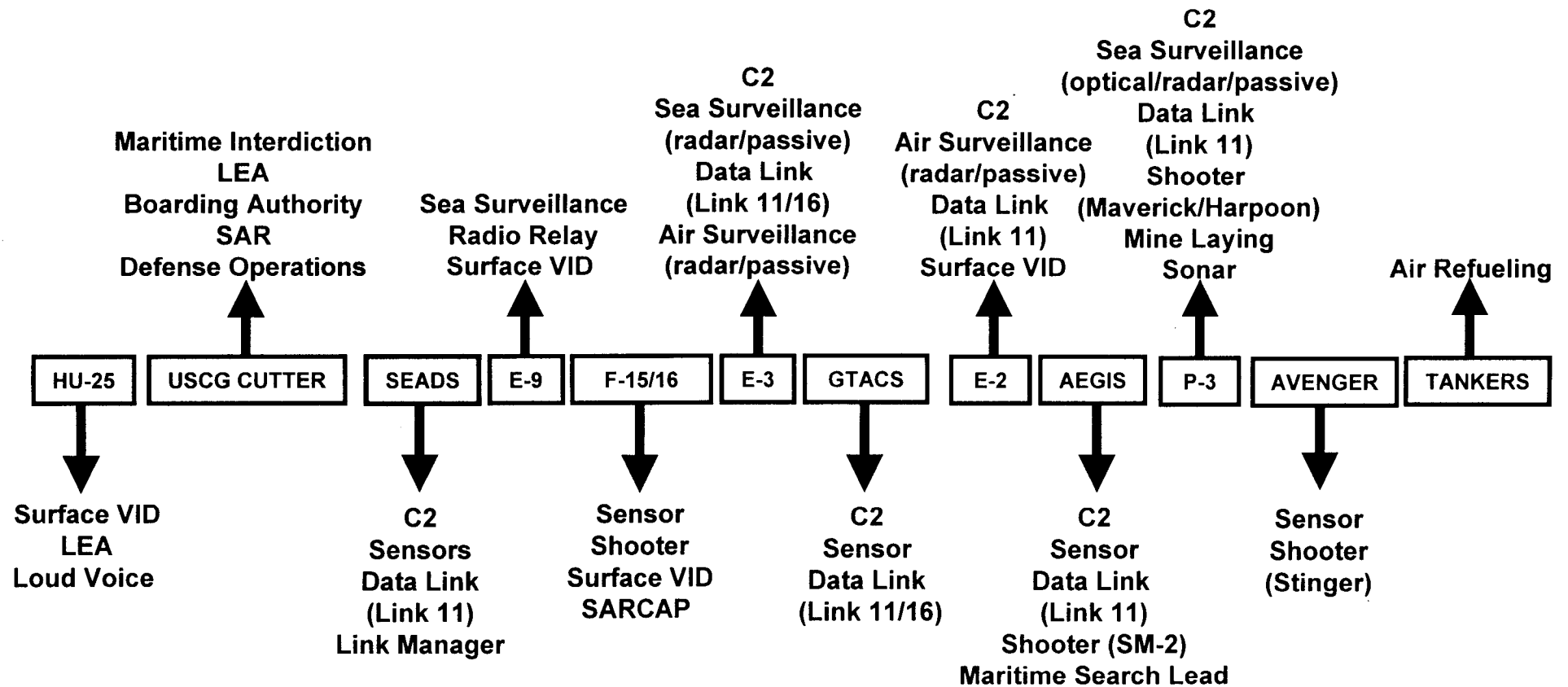


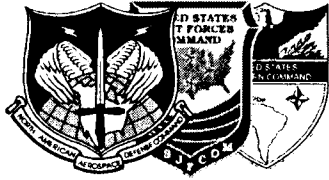
**OPERATION: VIRGO
Force Providers**

NCT0060480

OPERATION: VIRGO

Tactical Unit Potential Roles and Missions





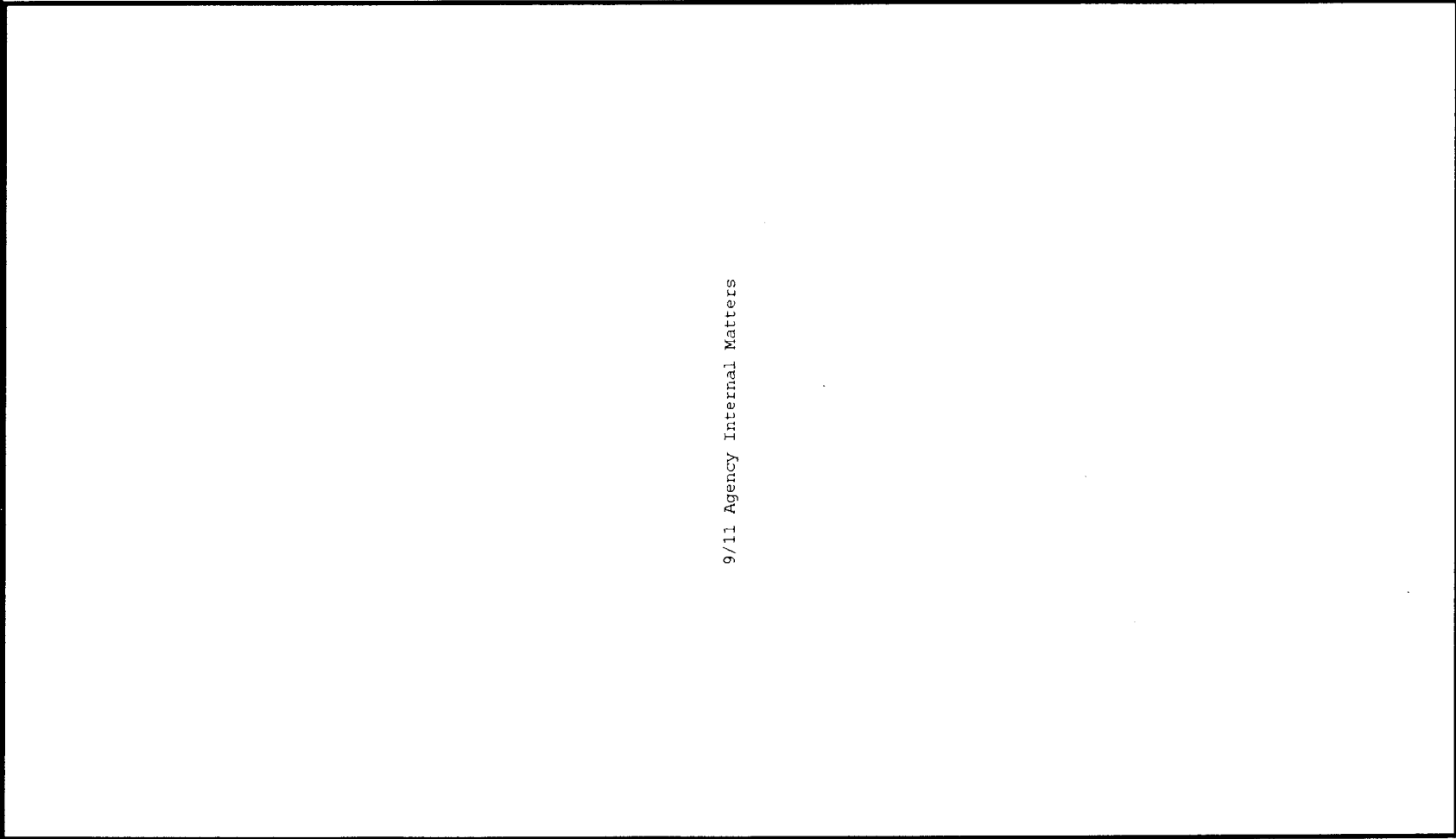
Cruise Missile Attack Warning Experiment



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



Cruise Missile Attack Warning Experiment



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Cruise Missile Attack Warning Experiment



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NCT0060485



Cruise Missile Attack Warning Experiment



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NCT0060486



Cruise Missile Attack Warning Experiment



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NCT0060487



Cruise Missile Attack Warning Experiment



9/11 Agency Internal Matters

NCT0060488



Cruise Missile Attack Warning Experiment



9/11 Agency Internal Matters

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



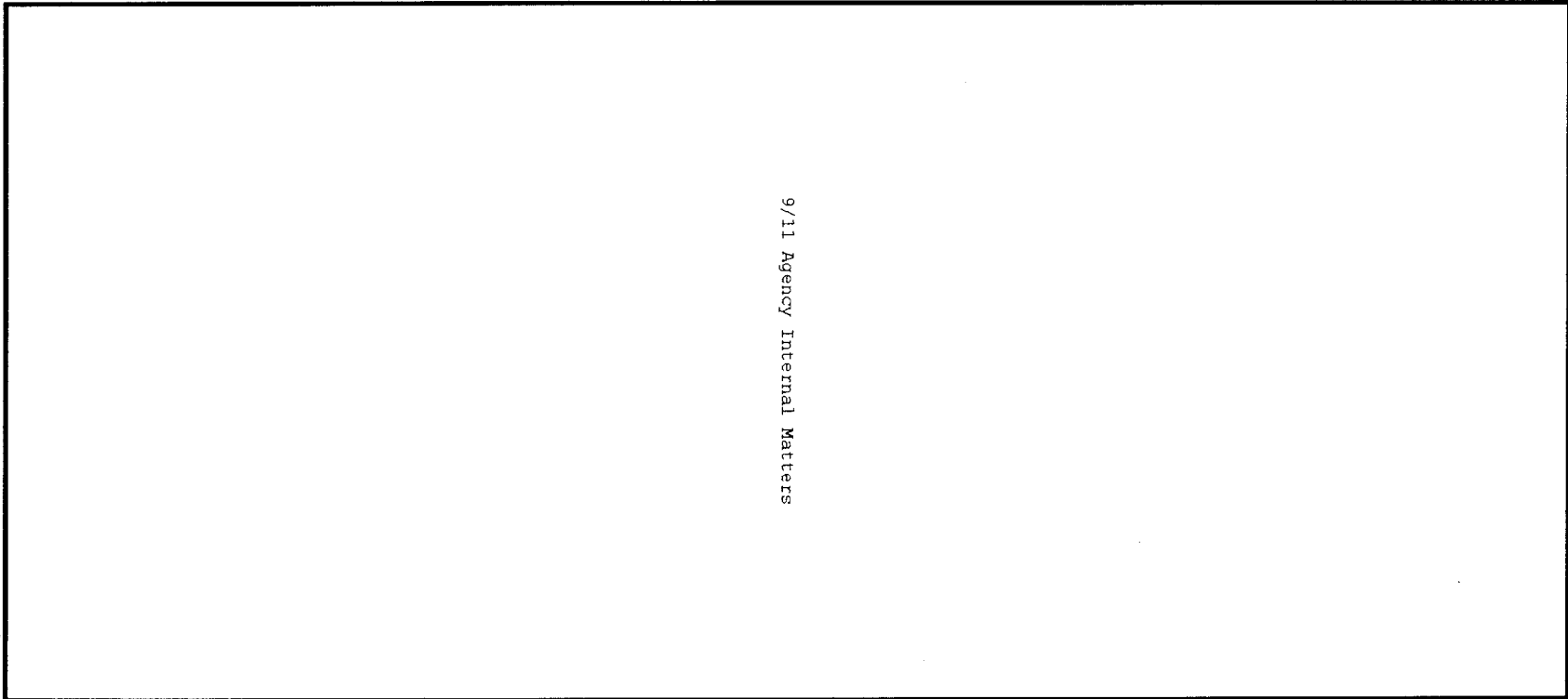
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NCT0060493



AMALGAM VIRGO 01

CIVIL SUPPORT EXPERIMENT



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NCT0060494



THREAT FORMULA

Dr. Lani Kass (National War College)

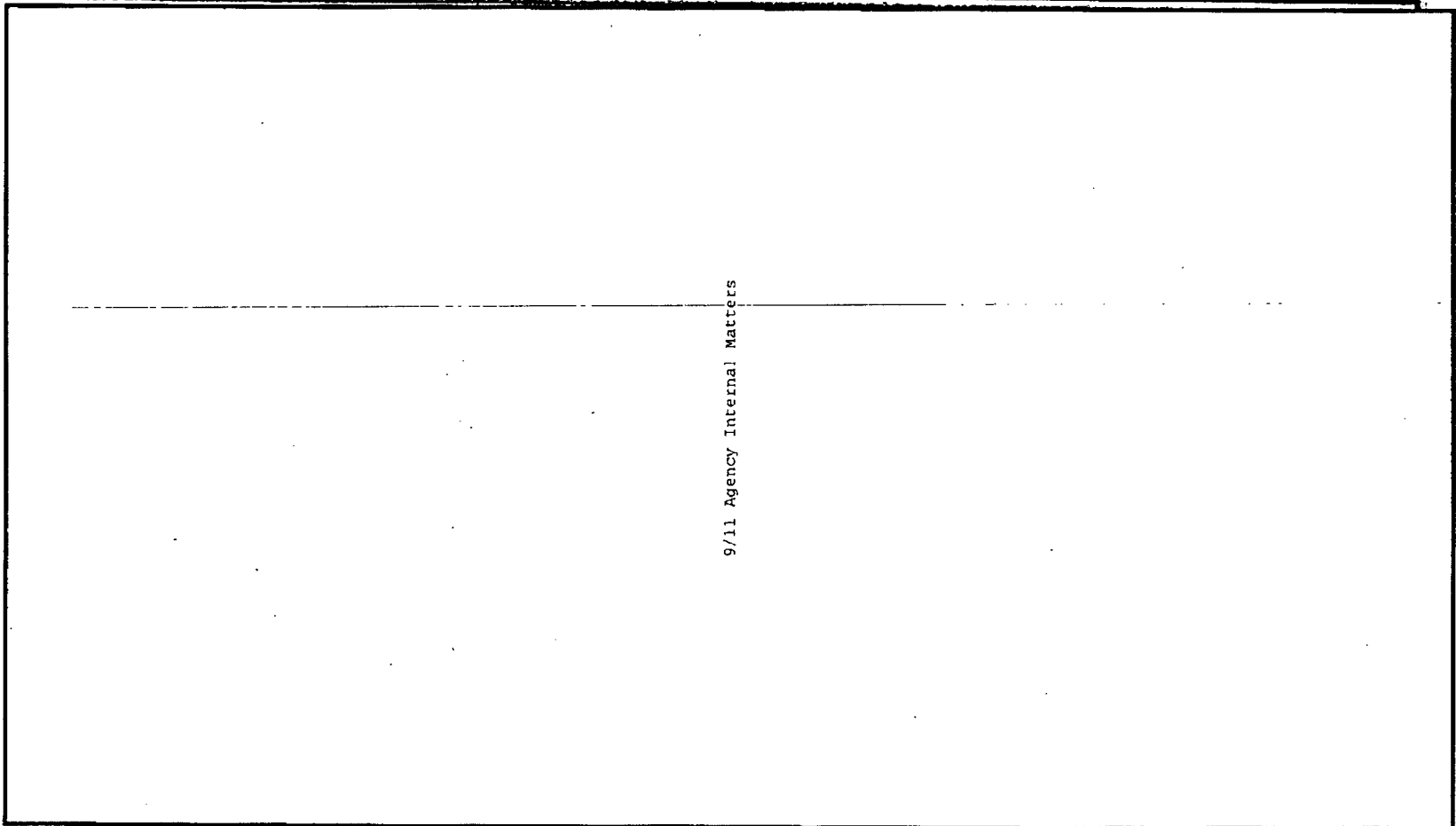


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CM Statistic and UAV Programs and Platforms SAMPLE



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NCT0060497



"A Scary Thought"

16 AUG 99



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AV 01



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AMALGAM VIRGO 01 ALTITUDE BLOCKS

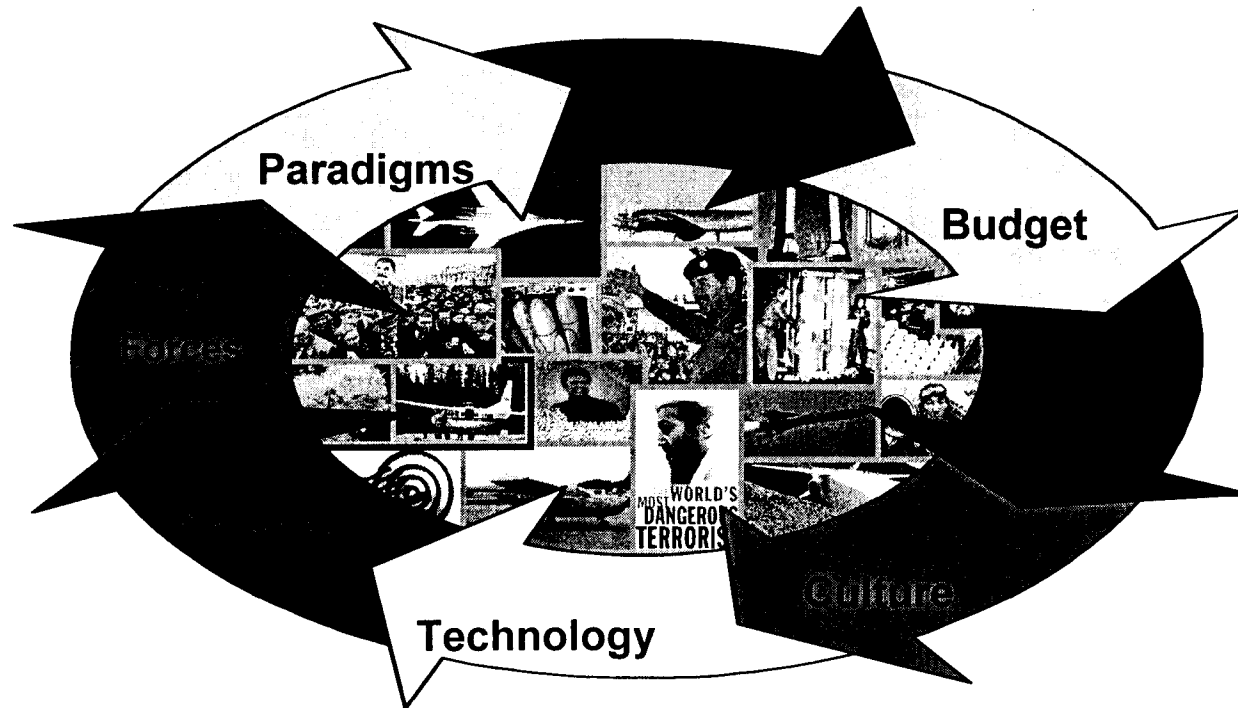
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NCT0000501



Summation

“A Proactive Approach To A Dangerous Emerging Threat”



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