NAVAL AVIATION SYSTEMS TEAM

Naval Aviation Interoperability Assurance Office

STREAMLINING ACQUISITION THROUGH COLLABORATIVE ENGINEERING

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10/06/00

Naval Aviation Interoperability Assurance Office
(AIR-4.0E & SEA-53N)

Mission

Lead Naval Aviation System Command efforts to achieve effective, interoperable and affordable Network Centric systems

Function

- NAVAIR's **point of entry** / NCW **representative** to OPNAV, ASN RDA, SPAWAR, NAVSEA, and FLEET
- **Analyses** of Requirements and Architectures
- **Evaluation** of current and developmental systems
- **"Program office" with cross-system coordination responsibility**
- Coordinate NAVAIR's participation in **Fleet experiments & exercises**
- Promote and Focus NAVAIR NCW **S&T**

NAIAO
Integrated Product Teams

NAVAL AVIATION SYSTEMS TEAM

Naval Aviation Interoperability Assurance Office

Director: CAPT Bud Jewett
Deputy Director: Dave Janiec

Integrated Product Teams

Interoperability Engineering
Scott Millett
Dave Narkevicius

Battle Force Interoperability
Andy Miller

Fleet Experiments
Doug Savage

Cooperative Initiatives
Bob Harriman

C4ISR Standards & Policies
Bob Bailey

RDT&E Network Infrastructure
Eileen Shibley

Interoperability Research
Barbara Vaughn

JFCOM: Rob Weber
JFCOM: Ken Goad
SPAWAR: Bill Clark
CHENG: Bob Schwartz
CHENG: John Gulley
NWDC: Wayne Willhite
SIAP: Joe Notaro
NAIAO IPTs

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NAIAO Initiatives

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- **TODAY-Interoperability Assurance**
  - **D –30 processes**
    - **Distributed Engineering Plant (DEP)**

- **TOMORROW-Interoperable Network Centric Warfare**
  - **RDT&E netted infrastructure for life cycle development & support**
  - **Fleet Battle Experiments**
  - **Time Critical Strike focus area**
  - **Future Naval Capabilities (FNC) Science & Technology**

Proposed BG Deployment Schedule

NAVSEA
NAVAL SEA SYSTEMS COMMAND

Month / Year = D-minus-30

CLF | CPF | FDNF | I = IBR F = FBR | Stars denote BGIT Dates | Red Dot denotes established TCD Date

Rev: 7 APR 00

2000: M A M J J A S O N D
2001: J F M A M J J A S O N D
2002: J F M A M J J A S O N D
2003: J F M A M J J A S O N D J F

D-3	GW BG / SPN ARG	CDR RON SINGER (757) 492-7415 SINGERRL@NSWCPHDN.NAVY.MIL	
D-5	LIN BG / TAR ARG	LCDR BOBBY MULLINS (805)228-5524 MULLINSBR@PHDNSWC.NAVY.MIL	
D-8	HST BG / NAS ARG	CDR NED ASH (757)492-7286 ASHWE@NSWCPHDN.NAVY.MIL	
D-12	CON BG / BOX ARG	CDR FRANK VALENTE (619) 553-7647 VALENTEFE@ICSTF.NAVY.MIL	* CPF Message 302254Z DEC 99
D-13	ENT BG / KSG ARG	LCDR ALLISON NORRIS (757)492-8362 NORRISAG@NSWCPHDN.NAVY.MIL	
D-15	VIN BG / PEL ARG	LCDR BOBBY MULLINS (805)228-5524 MULLINSBR@PHDNSWC.NAVY.MIL	* CPF Messages 302341/2Z DEC 99
D-18	TR BG / BAT ARG	CDR RON SINGER (757) 492-7415 SINGERRL@NSWCPHDN.NAVY.MIL	* CLF Message 301311Z NOV 99
D-22	JCS BG / BHR ARG	LCDR FRANK THORNGREN (805)228-6807 THORNGRENFR@PHDNSWC.NAVY.MIL	
D-23	JFK BG / WSP ARG	CDR NED ASH (757)492-7286 ASHWE@NSWCPHDN.NAVY.MIL	
D-27	LIN BG / BWD ARG	LCDR BOBBY MULLINS (805)228-5524 MULLINSBR@PHDNSWC.NAVY.MIL	
1	GW '02		
1	HST '02		
1	NIM '03		
1	ENT '03		
1	TR '03		

FDNF CY 2000 — I — F — LCDR F THORNGREN (805)228-6807 THORNGRENFR@PHDNSWC.NAVY.MIL

FDNF CY 2001 — I — F — LCDR F THORNGREN (805)228-6807 THORNGRENFR@PHDNSWC.NAVY.MIL

FDNF CY 2002 — I — F — LCDR F THORNGREN (805)228-6807 THORNGRENFR@PHDNSWC.NAVY.MIL

FDNF CY 2003 — I — F

FOR OFFICIAL USE ONLY

* POST BRB BGs UNDER CONFIGURATION CONTROL - eCCB REQUIRED

1 NOTIONAL: BG COMP NOT ESTABLISHED

D-30 Process: Overview

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FLEET CINCs
Battle Force Composition Established
D-30

INITIAL BASELINE REVIEW
Initial Baseline Configuration Defined
D-28

IBR

PRE-DEPLOYMENT PLANNING CONFERENCE
Presentation of DRAFT Deployment Baseline
D-25

DEPLOYMENT PLANNING CONFERENCE
Final Baseline Configuration Promulgated
D-24

BRB

BATTLE FORCE INTEROPERABILITY TESTING (BFIT)
Distributed Engineering Plant Testing
D-12

PRE-TCD CONFERENCE
Battle Force Briefs Final Configuration
D-10

PRELIMINARY BATTLE FFORCE CERTIFICATION
Baseline Hardware & Software Installed get Preliminary Certification
D-7

FINAL BATTLE FORCE CERTIFICATION
Final Baseline Hardware/ Software Certification
D-1

ELECTRONIC CHANGE CONTROL BOARD (eCCB)
D-24 to D-0

TCD

Battle Force Centric

Increased Readiness of Deploying Battle Forces Through Disciplined Process

*** Draft CINCLANTFLT/CINCPACFLT Instruction 4720.3A (CLF signed 2 FEB 00, CPF signed 27 APR 00)**

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Distributed Engineering Plant (DEP) IKE BG Configuration

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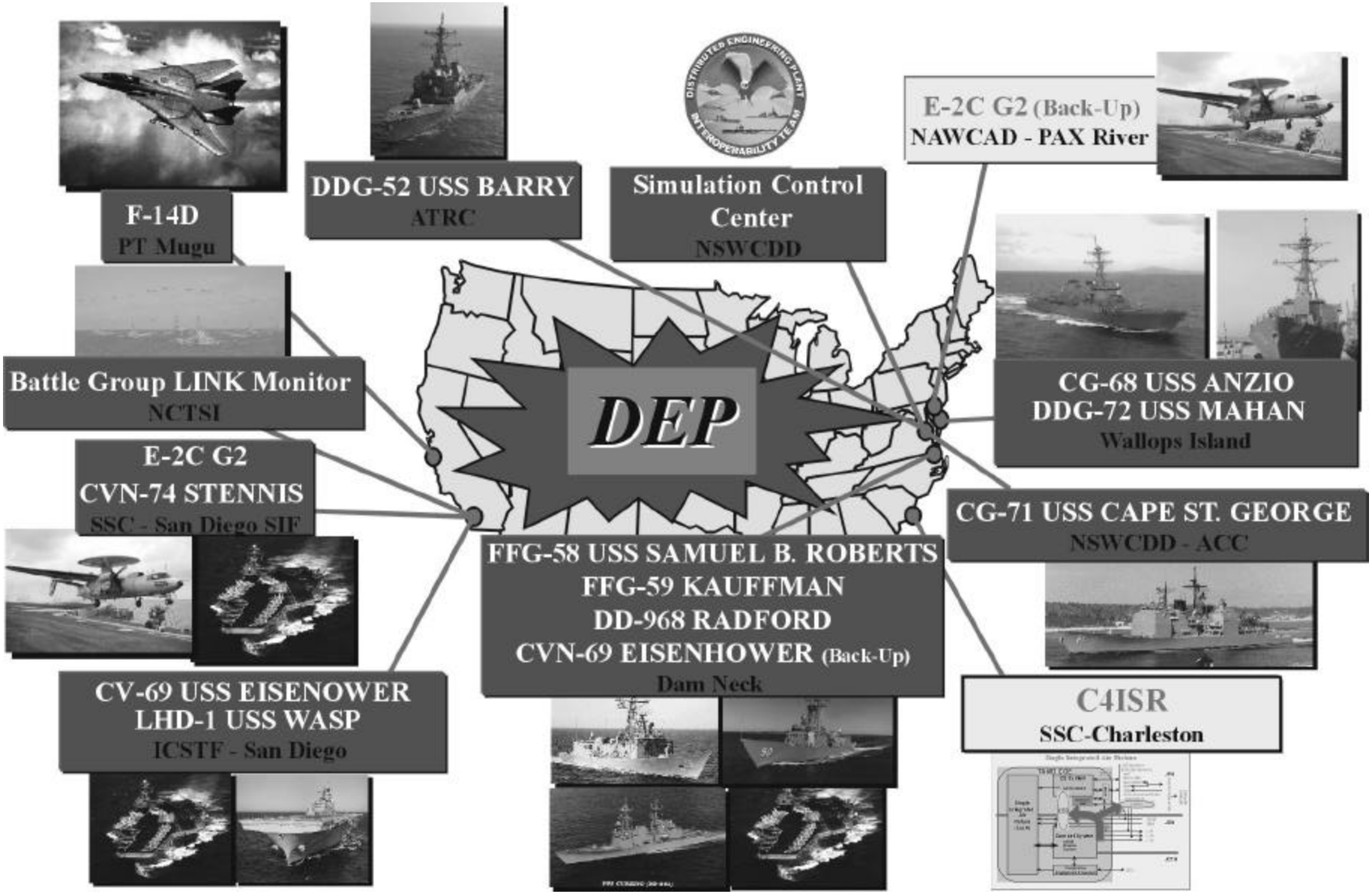

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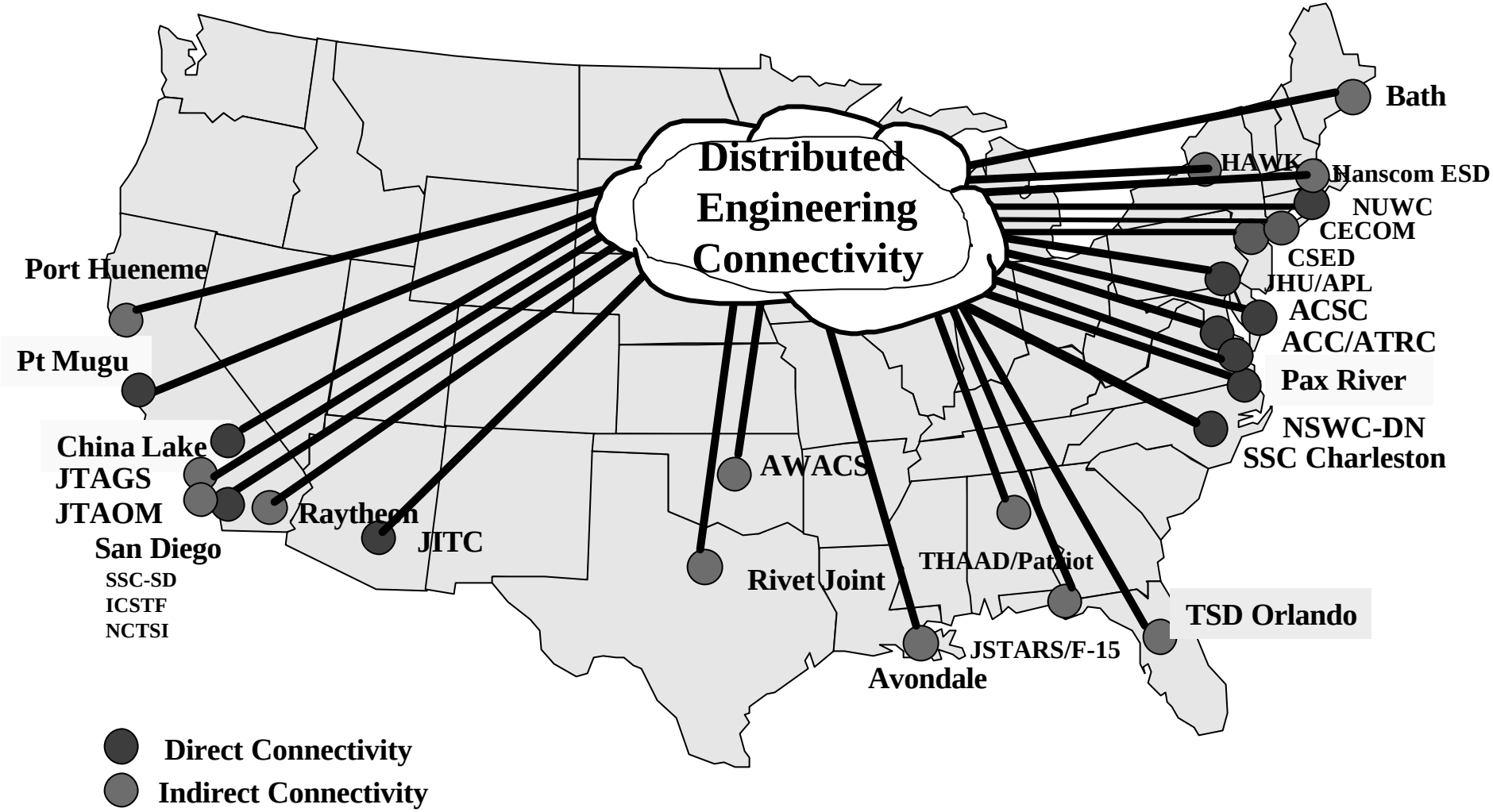
Joint Distributed Engineering Plant



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Use of Real-Time Modeling & Simulation for full scale RDT&E

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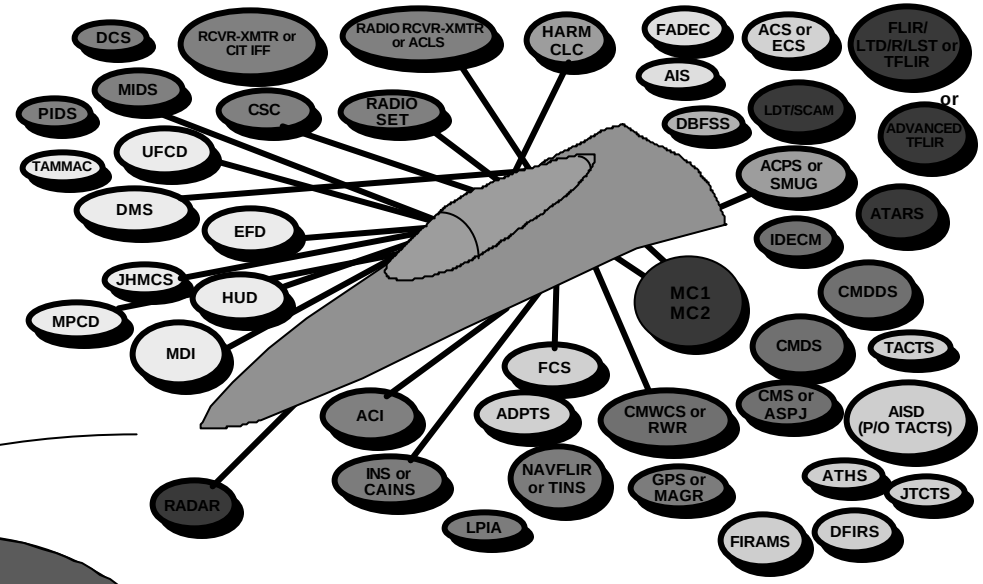
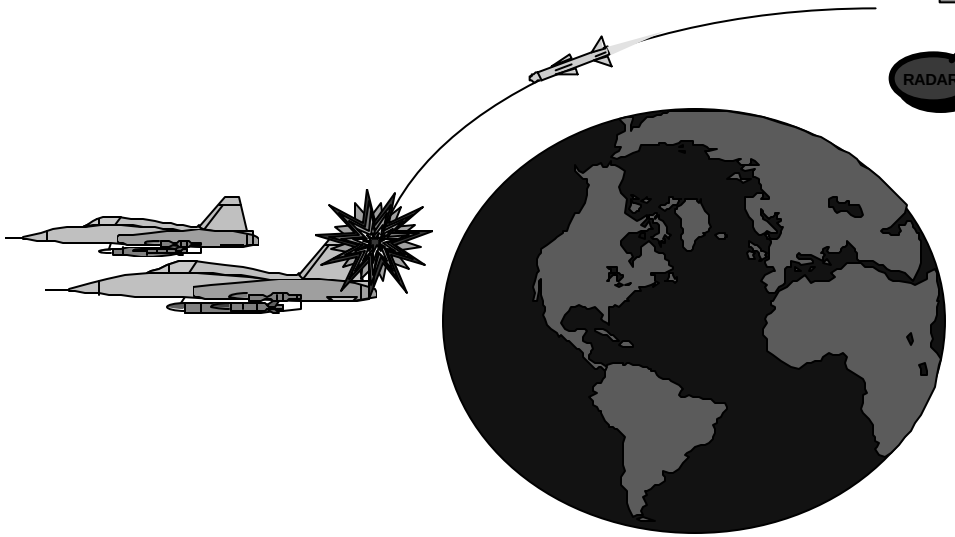
To Provide a Test Environment that makes the Weapon System "think" it's Flying Real Missions





F/A-18 Lab SIMULATION

- *Aircraft Dynamics*
- *Earth & Atmosphere*
- *Threat Environment*
- *Weapons*
- *Selected Avionics*

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NAVAIR NCW RDT&E
Network Initiative - Baseline

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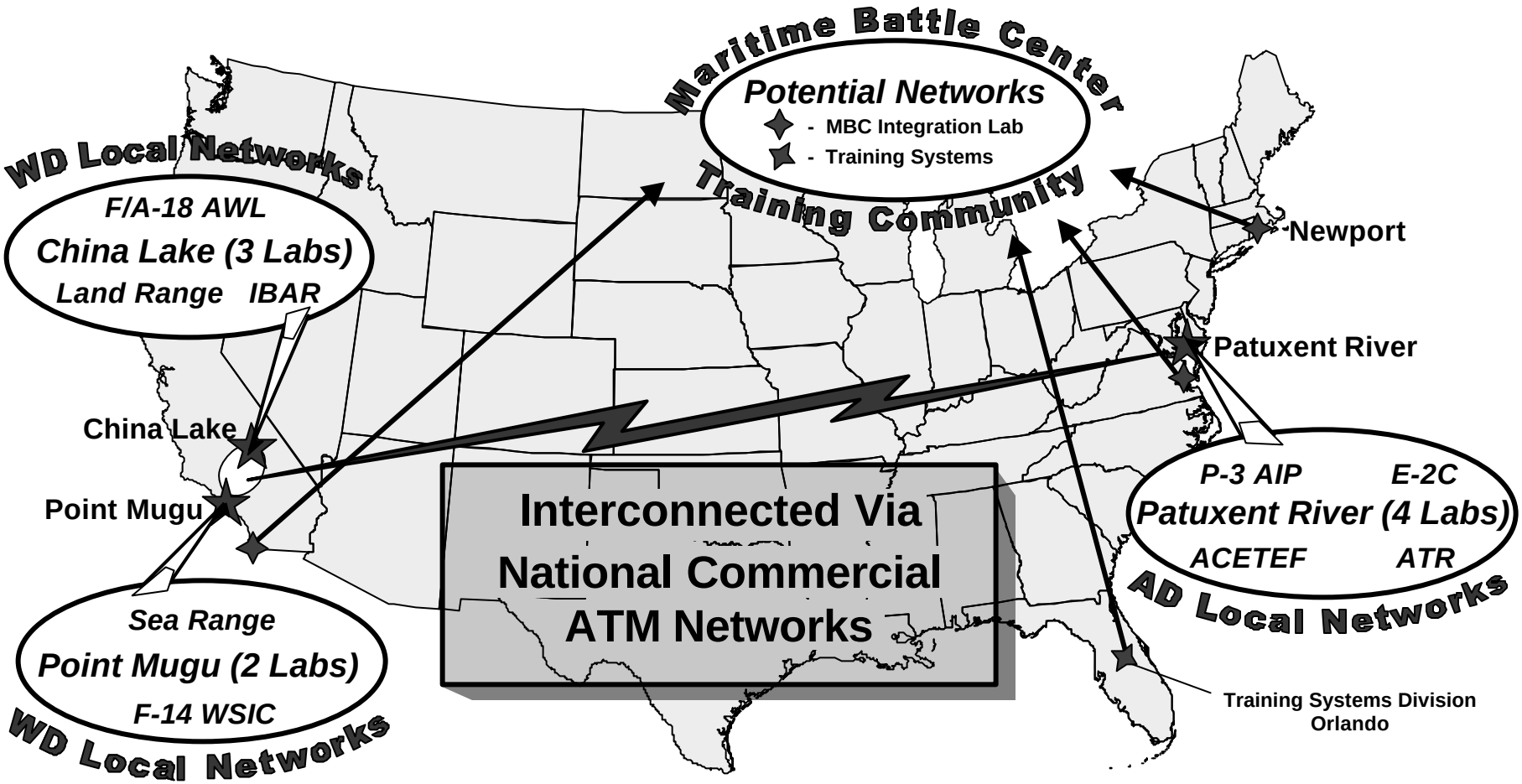

AWL - Advanced Weapons Laboratory
IBAR - Integrated Battlespace ARena
WSIC - Weapons System Integration Center

ACETEF - Air Combat Environment Test & Evaluation Facility
AIP - Anti Surface Warfare Improvement Program
ATR - Atlantic Test Range

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TCS Tactical Mission Timeline

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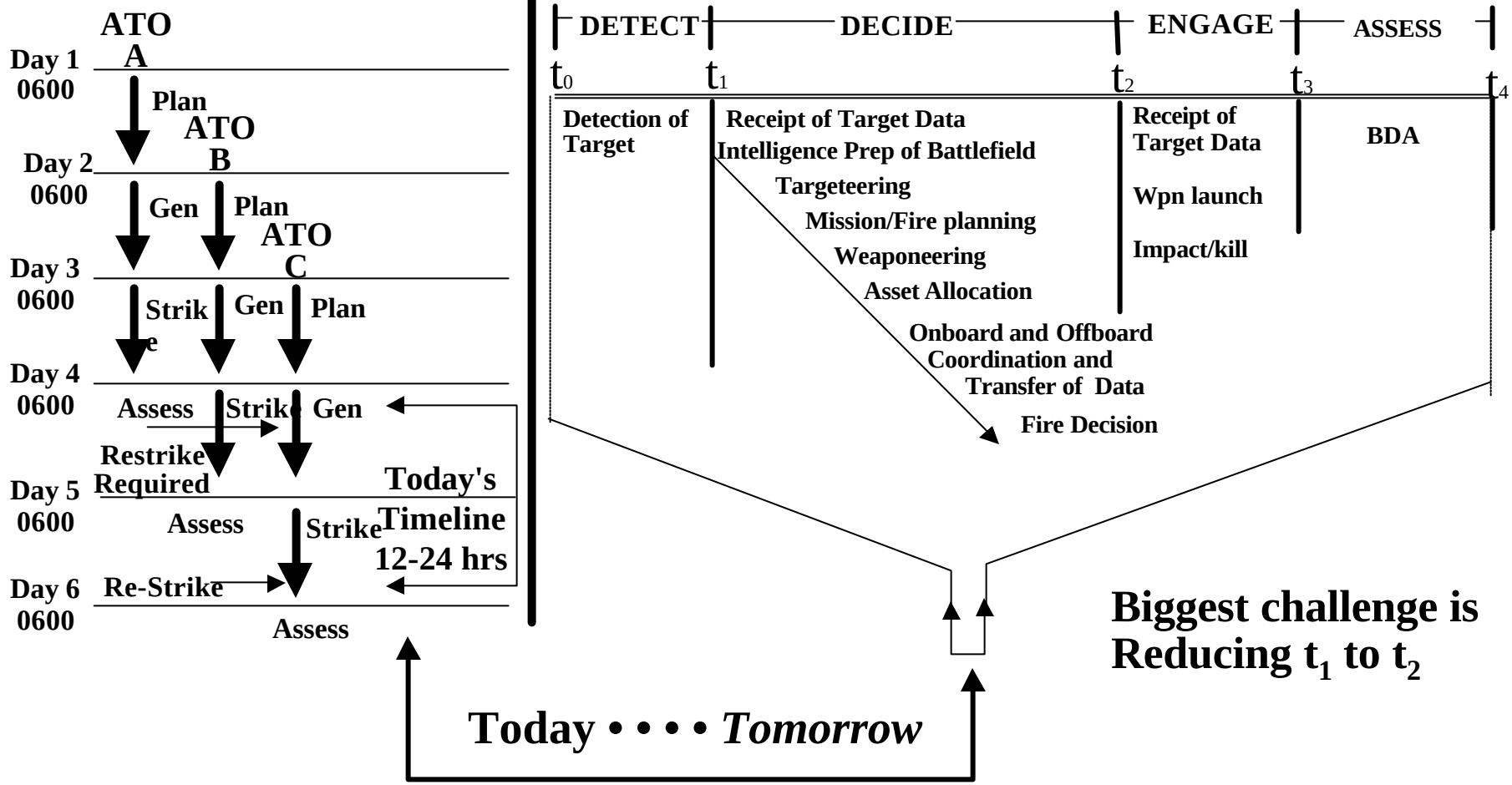
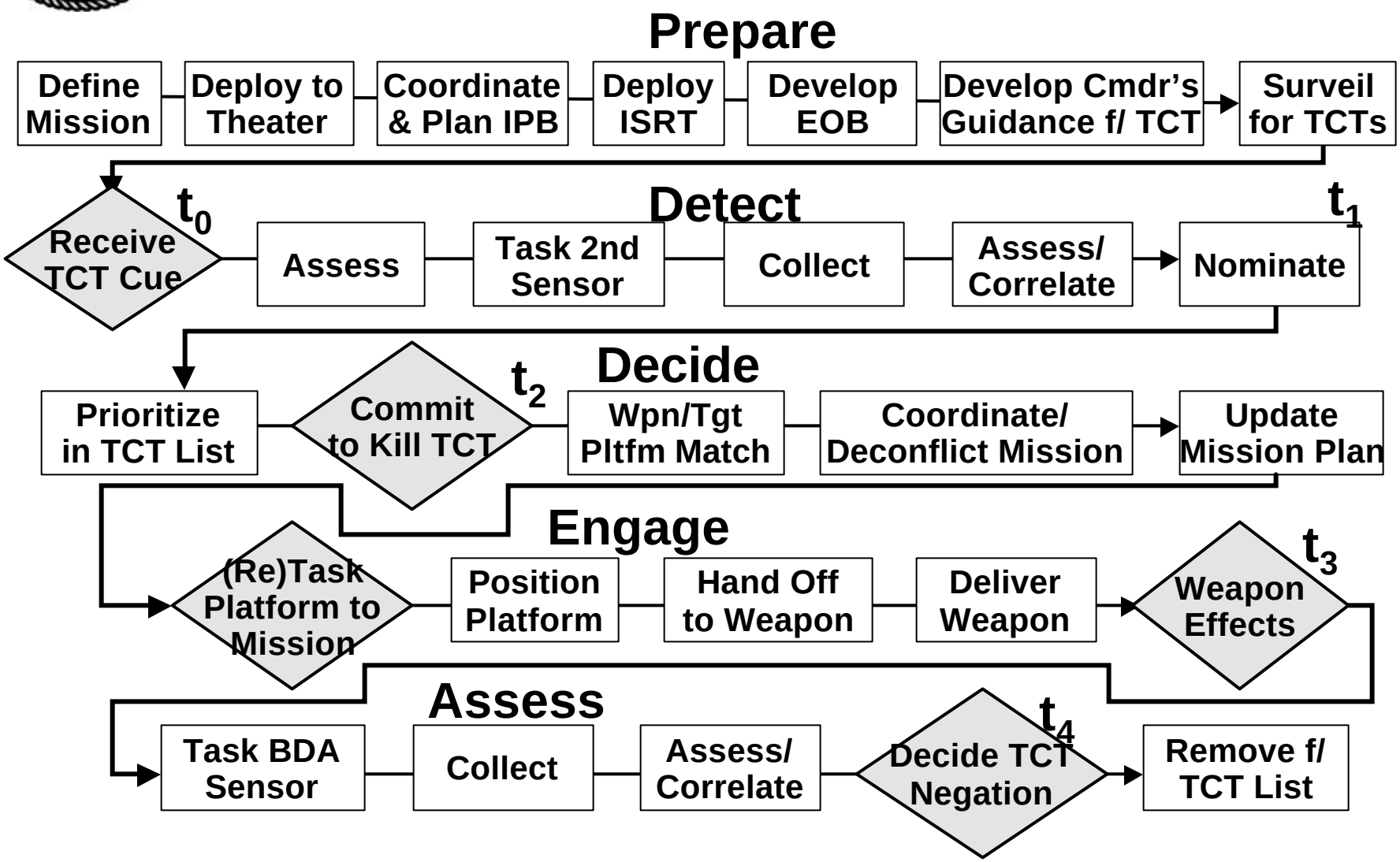


Basic Strike Functional Decomposition Tasks & Events

RDA CHIEF ENGINEER



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FUTURE NAVAL CAPABILTIES

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- Information Distribution
  - (includes ELB-ACTD)
- <u>Time Critical Strike</u>
- Decision Support System
- Autonomous Operations
- Littoral ASW
- Total Ownership Cost
- Missile Defense
- Platform Protection
- Expeditionary Logistics
- Warfighter Protection
- Capable Manpower

SUMMARY

We believe that acquisition “streamlining” is achieved through collaborative systems engineering

-transform from platform-centric to mission areas

e.g Time Critical Strike

-complementary and integrated engineering across SYSCOMs including current operational and future systems