Joint Datalink Information Combat Execution

JDICE JT&E

Test Technology Symposium

Lt Col Jim Gilstrap, USAF

Director

28 April 2004

UNCLASSIFIED

OUTLINE

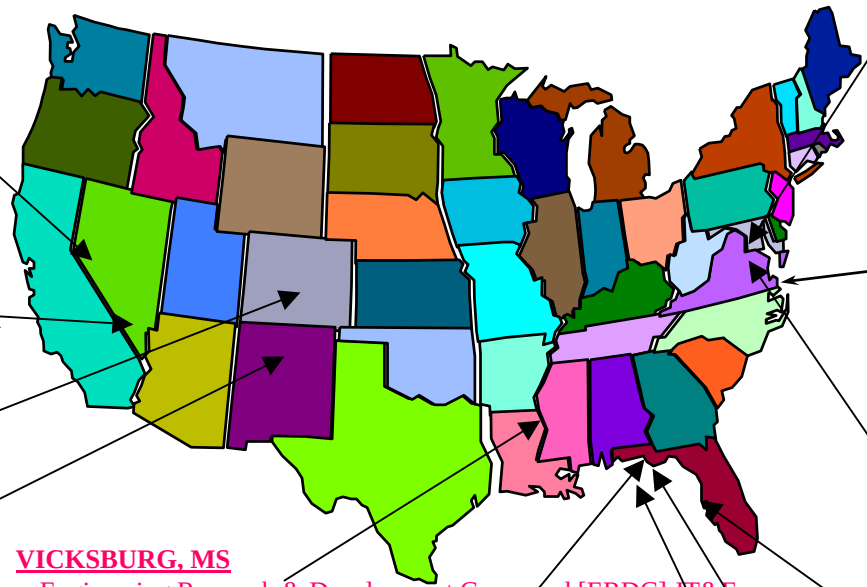
- Program Review
- Test Approach/Methodology
- Schedule
- Resource Plan
- Test Products
- Current JDICE Impact

OSD/DOT&E
Joint Test and Evaluation

- ***Chartered in March 2003***
  - ***First test to achieve an early Charter***
- ***Owned by OSD/DOT&E***
  - ***Part of OSD re-engineering***
- ***OSD Funded***
- ***Committed to getting information to the warfighter as soon as possible***

Current JT&E Locations

10 Tests, 1 QRT, 9 Test Locations



ABERDEEN PROVING GROUND, MD
- Joint Logistics Planning Enhancements [JLOG-PE] (Army)

NAS FALLON
- Joint UAV for Time Sensitive Operations [JUAV-TSO] (Navy)

SUFFOLK, VA
- Joint Battle Damage Assessment [JBDA] (Army)
- Joint Methodology to Assess C4ISR Architecture [JMACA] (Navy)
- ***Joint Survivability [JSURV] QRT (Army)***
- JT&E JFCOM Liaison

NELLIS AFB, NV
- *Joint Data Link Information Combat Execution [JDICE] (USAF)*

SCHRIEVER AFB, CO
- *Joint Space Control Operations-Negation [JSCO-N] (USAF)*

KIRTLAND AFB
- Joint GPS Combat Effectiveness [JGPSCE] (USAF)

VICKSBURG, MS
- Engineering Research & Development Command [ERDC] JT&E Support

ALEXANDRIA VA
- JT&E Program Office

HURLBURT FIELD
- Joint Command and Control, Intelligence, Surveillance and Reconnaissance [JC2ISR] (USAF)

TAMPA, FL
- *Joint Integration and Interoperability of Special Operations [JIISO] (USSOCOM/USMC/USJFCOM)*

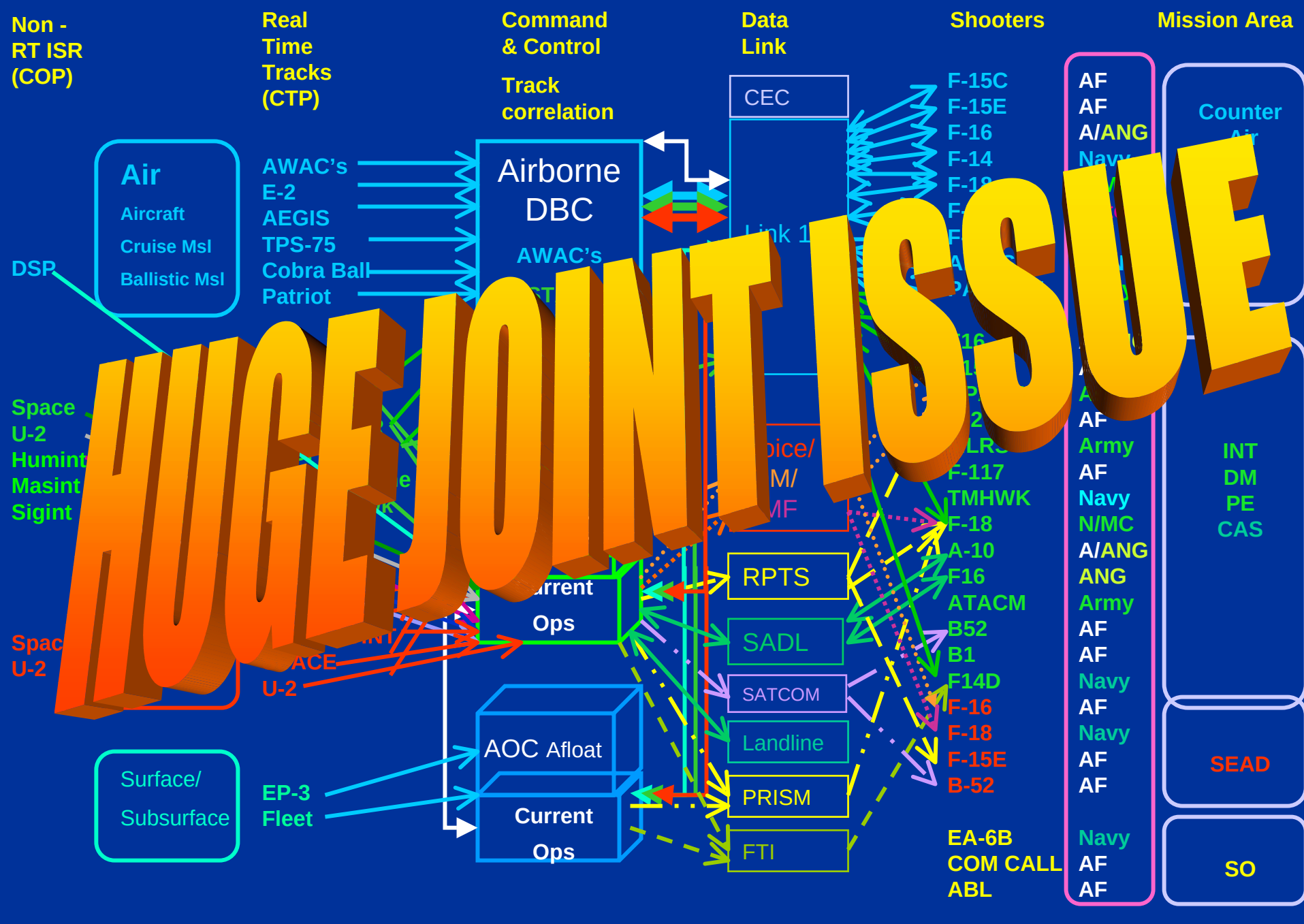
FT. WALTON BEACH, FL
- JT&E Support Center

EGLIN AFB
Joint Cruise Missile Defense [JCMD] (USAF)

Legend:
- Joint Test
- ***Quick Reaction Test***
- *JT&E Program Office Support*

Jan 04

Current JDN Participants



Joint Lessons Learned

OAF: Kosovo

- Critical Tactical datalinks not interoperable - F-18/F-16/RJ/AWAC's — CENT
- CID - Combat ID solutions need to feed into Link 16 and GCCS/TBMCS — JF,PA,CE,EU
- Too many nonintegrated PPLI solutions and no match to JSTAR's GMTI — JF,CENT
- **Classification firewalls** & non-integrated data-linked info prevents critical Coalition coordination for most mission areas — JS,OSD,JF,EU, CENT
- Need to establish a JCTN or equivalent level of air track resolution for air defense — JFCOM
- **Army Maneuver Control System and USMC Tactical Combat Operations System** cannot exchange positional information — JF,EU,CENT
- **Stove piped national and service systems** are not interoperable and impede the exchange and access of information to tactical users. — CENT
- ADSI has major configuration difficulties in feeding tracks to TBMCS. — CENT

OEF: Afghanistan

- Air surveillance picture adequate; **ground surveillance picture non-existent** — CENT

OIF: Iraq

- **Link 16 is capable beyond the limits of AWACS, RJ and any other C2 node** — OIF LL
- **Information Required:**
  - **Threat Position**
  - **Friendly Positions with emphasis on moving forces**
  - **Specific high payoff targets**

Problem Statement

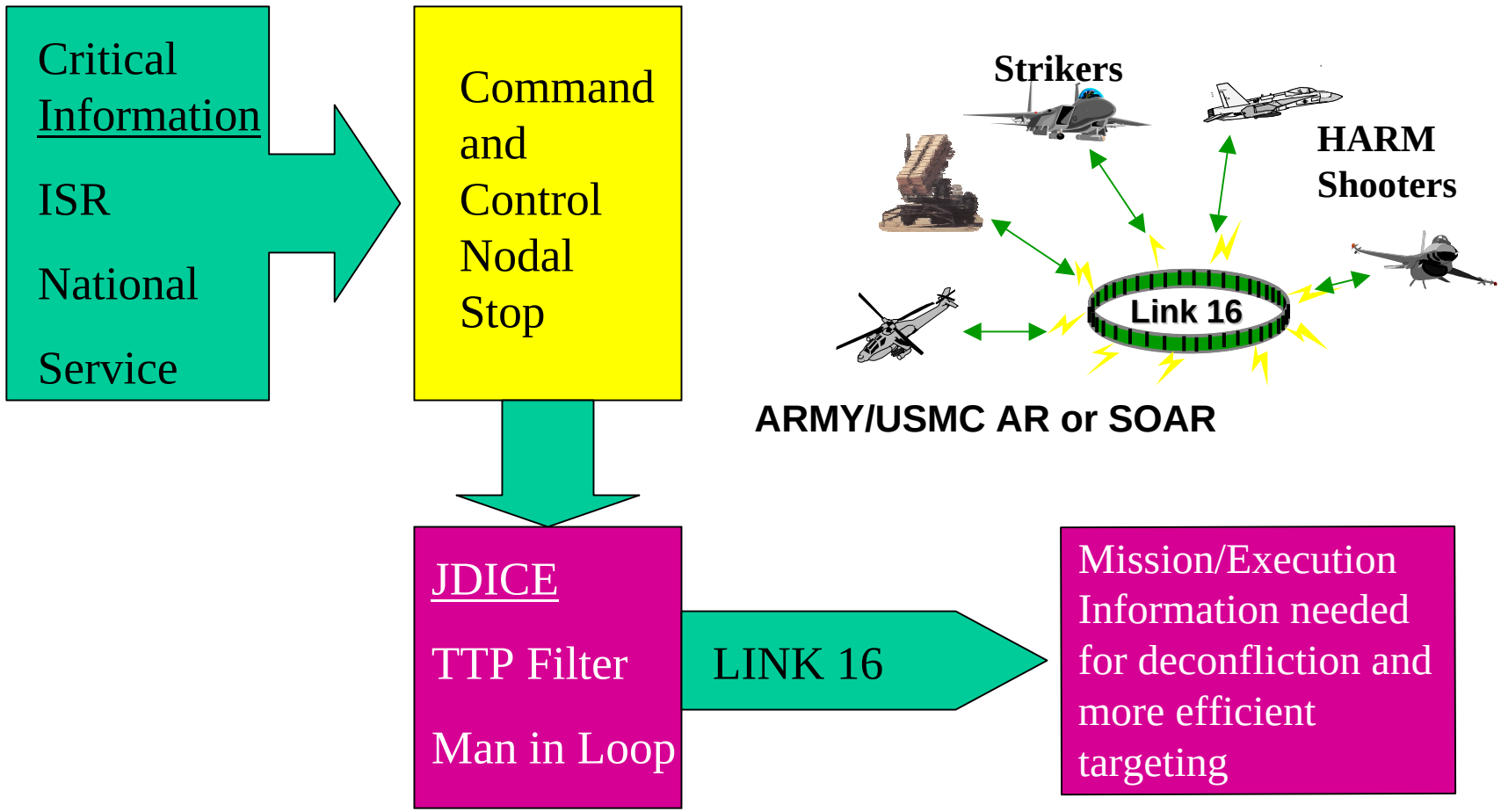
Current Joint and Service TTP's are inadequate to provide critical mission information across multi-platform, fielded, tactical data links. The development and enhancement of these TTPs is critical to improve combat actions based on Joint Battlespace situational awareness.

Solution Statement

(Hypothesis)

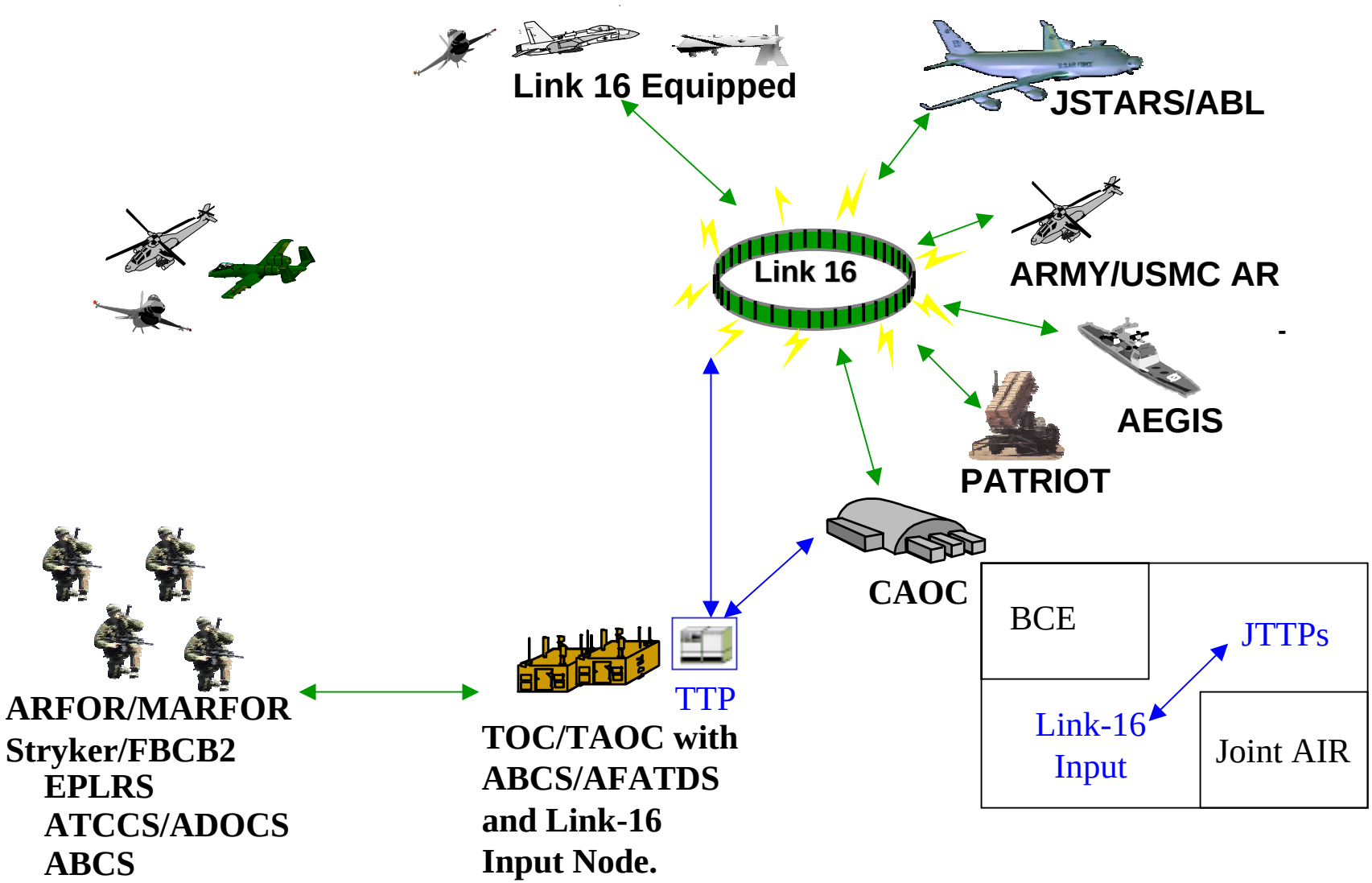
Link-16 operational architecture modifications (Non-material solution) supported by new JTTPs will improve situational awareness in terms of effects on tactical deconfliction and targeting.

JDICE- Big Picture

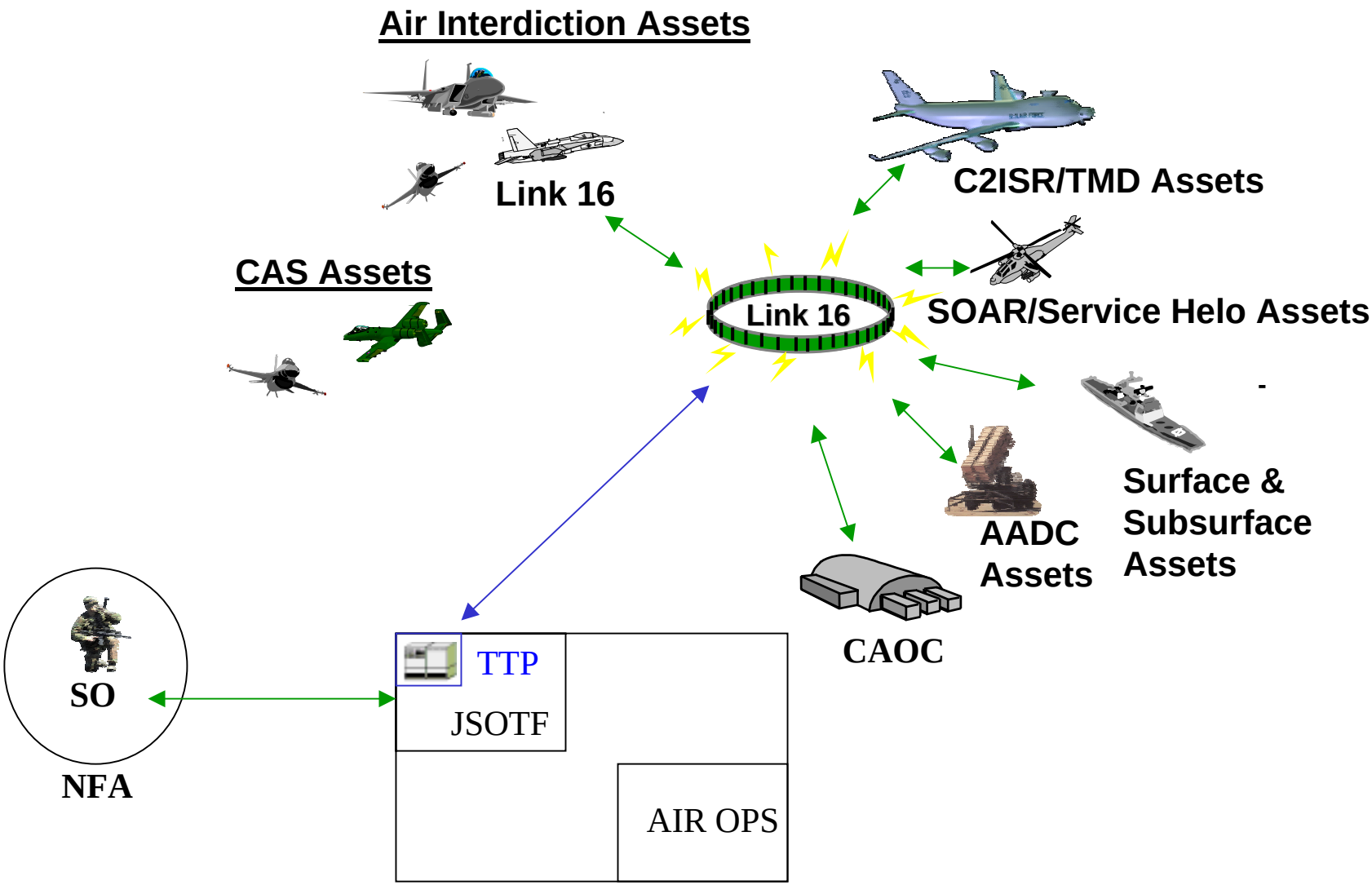


Critical Info..to..TTP filter with Man in the Loop (non-material solution)..result: actionable data to Shooter or tactical action level!

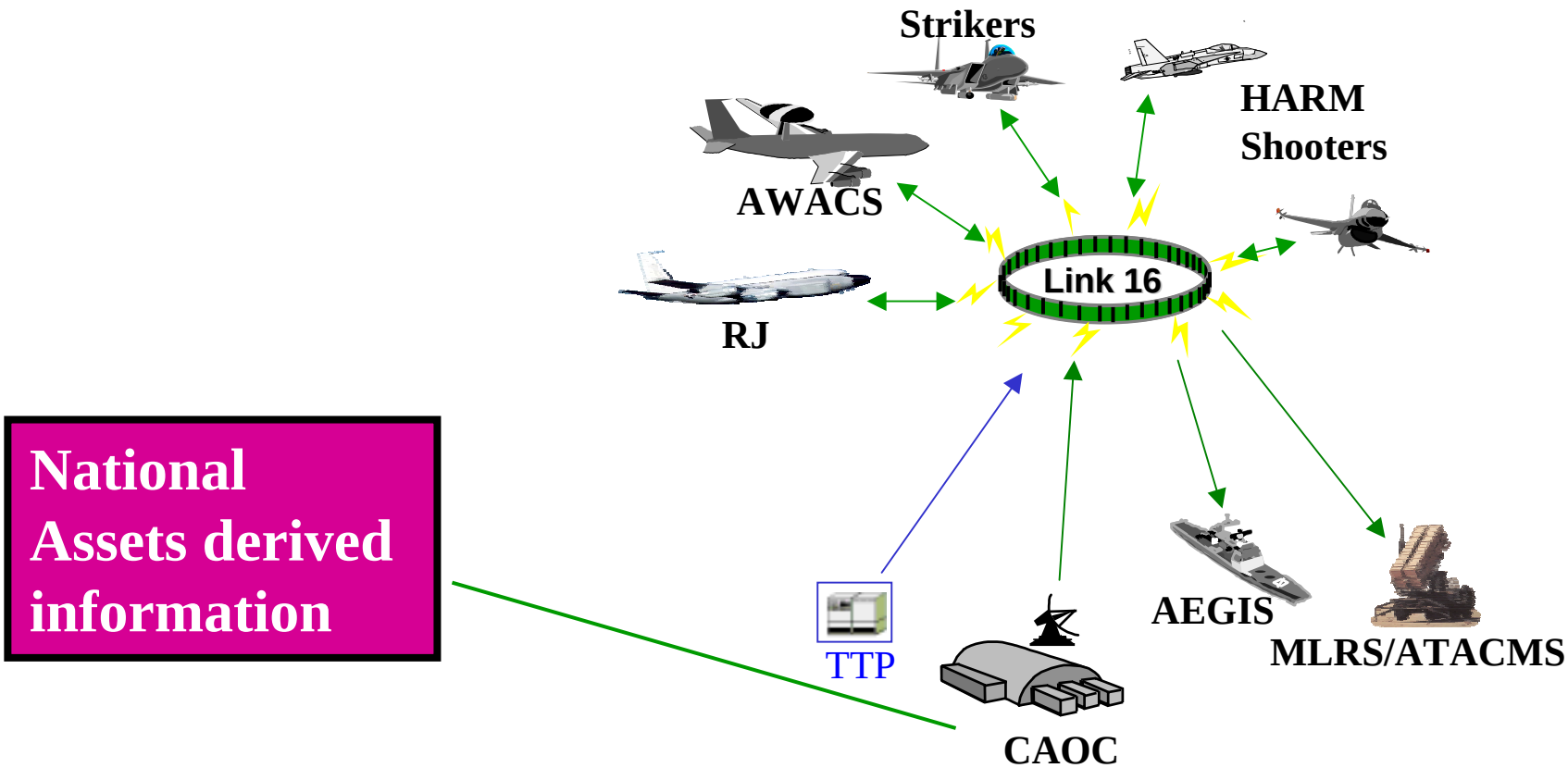
Mini-Test A: ARFOR/MARFOR



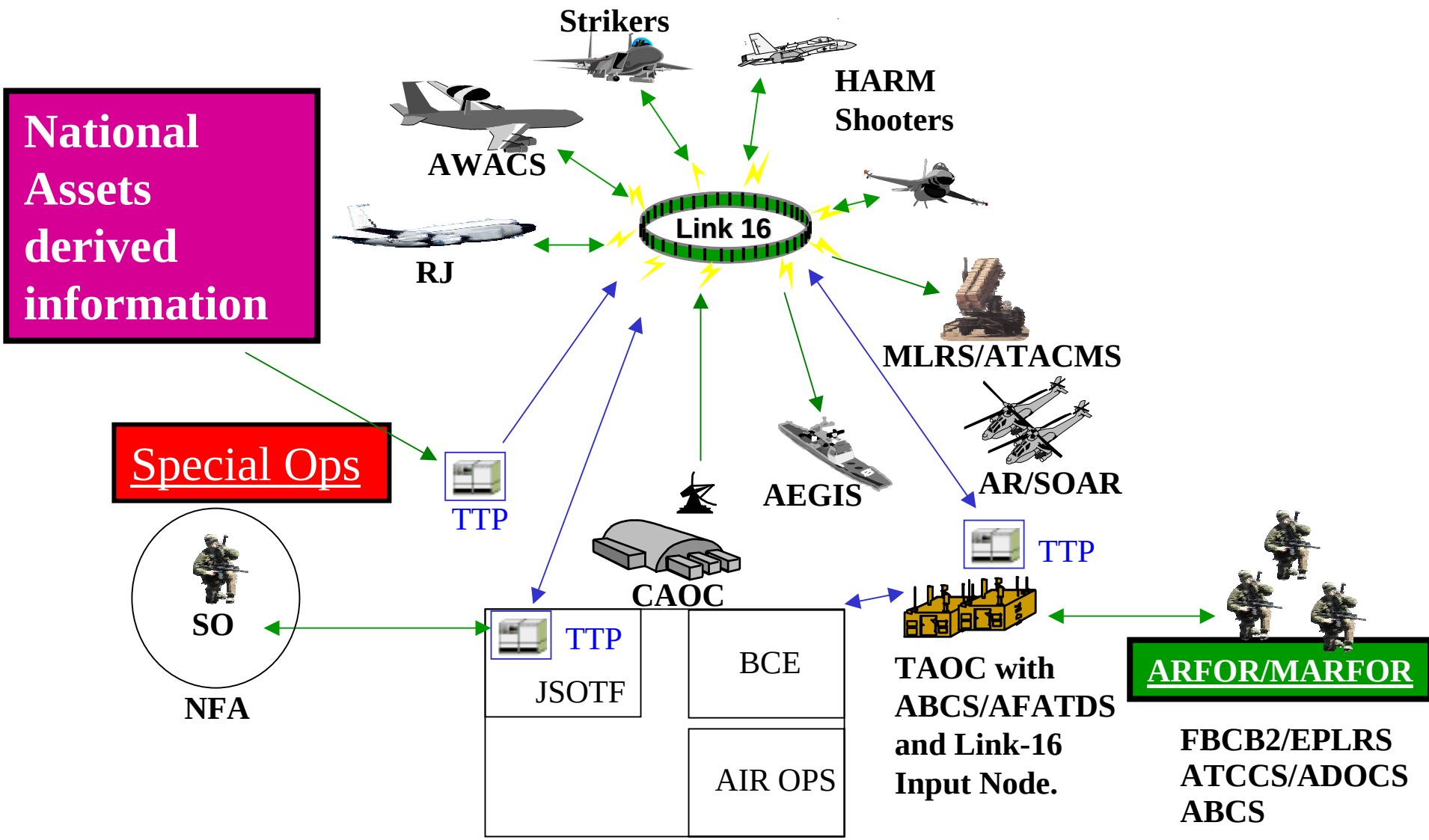
Mini-Test B: SO



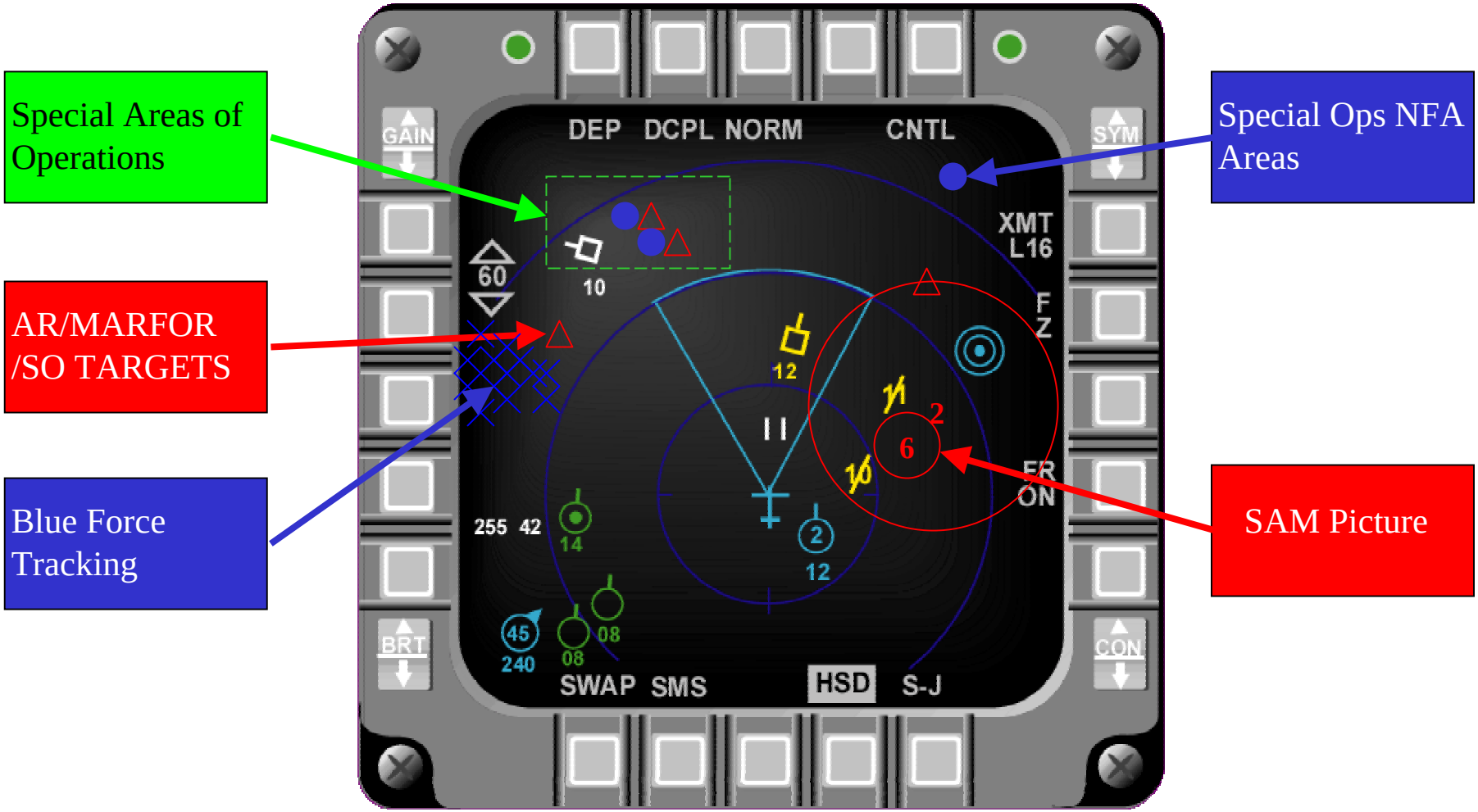
Mini-Test C: National Assets



Field Test


Strikers
HARM
Shooters
AWACS
RJ
Link 16
MLRS/ATACMS
AR/SOAR
AEGIS
National
Assets
derived
information
Special Ops
TTP
TTP
TTP
CAOC
SO
NFA
JSOTF
BCE
AIR OPS
TAOC with
ABCS/AFATDS
and Link-16
Input Node.
ARFOR/MARFOR
FBCB2/EPLRS
ATCCS/ADOCS
ABCS

Link 16 Display



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Methodology
JTTP Development

Joint Pub 3-*

JP 3-01.4 JTTP for Joint Suppression of Enemy Air Defenses

JP 3-01.6 JTTP for Joint Air Defense Operations

JP 3-05.1 JTTP for Special Operations Task Force Operations

JP 3-05.2 JTTP for Special Operations Targeting and Mission Planning

JP 3-07.5 JTTP for Noncombatant Evacuation Operations

JP 3-09.3 JTTP for Close Air Support

JP 3-50.21 JTTP for Combat Search and Rescue

Methodology
JTTP Development

Joint Pub 3-*

↓

JWAG

Joint: ALSA, ASD/C3I, JCAS, JCMD, JFCOM/JI&I, JC2ISR, JMACA, JITC/JTE, JT&E PO, JUAV, Selected ACTDs

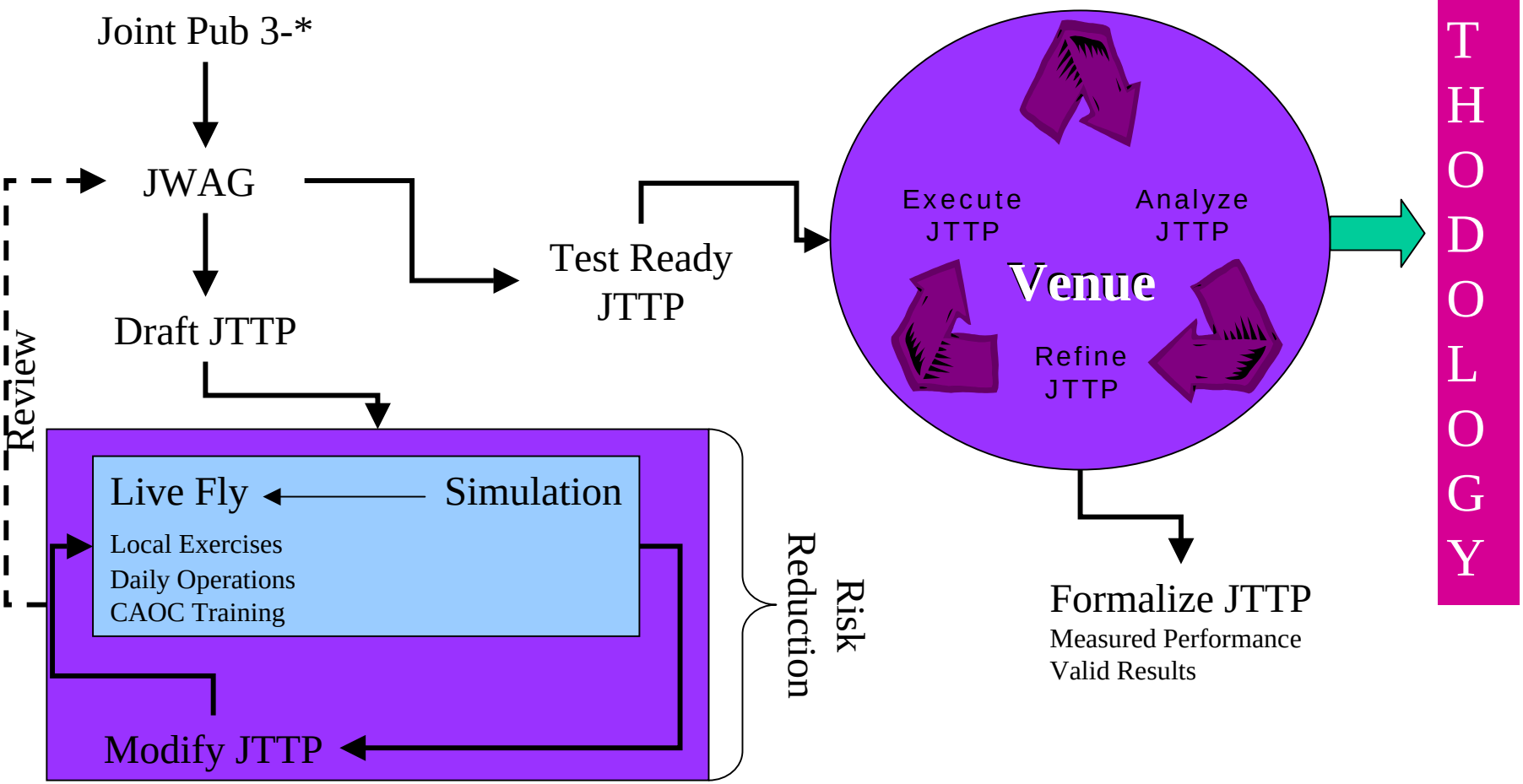
USA: 4th ID (G-3), 4th ID (FSE), 4th ID (G-2), 12SOAR, FORSCOM G3/5/7, USASFC, USA ADA

USAF: 11ASOS/DOC, 93 ACW, 116 OSS, 343 RS, 422 TES, CAOC-N, 552 ACW, C2TIG, 612 AIS/NR, AATC, ACC/DOY, AFC2ISRC/C2FT, AFWC/DO, SWC/TCS, USAF/XI, 18 FTS (AFSOC)

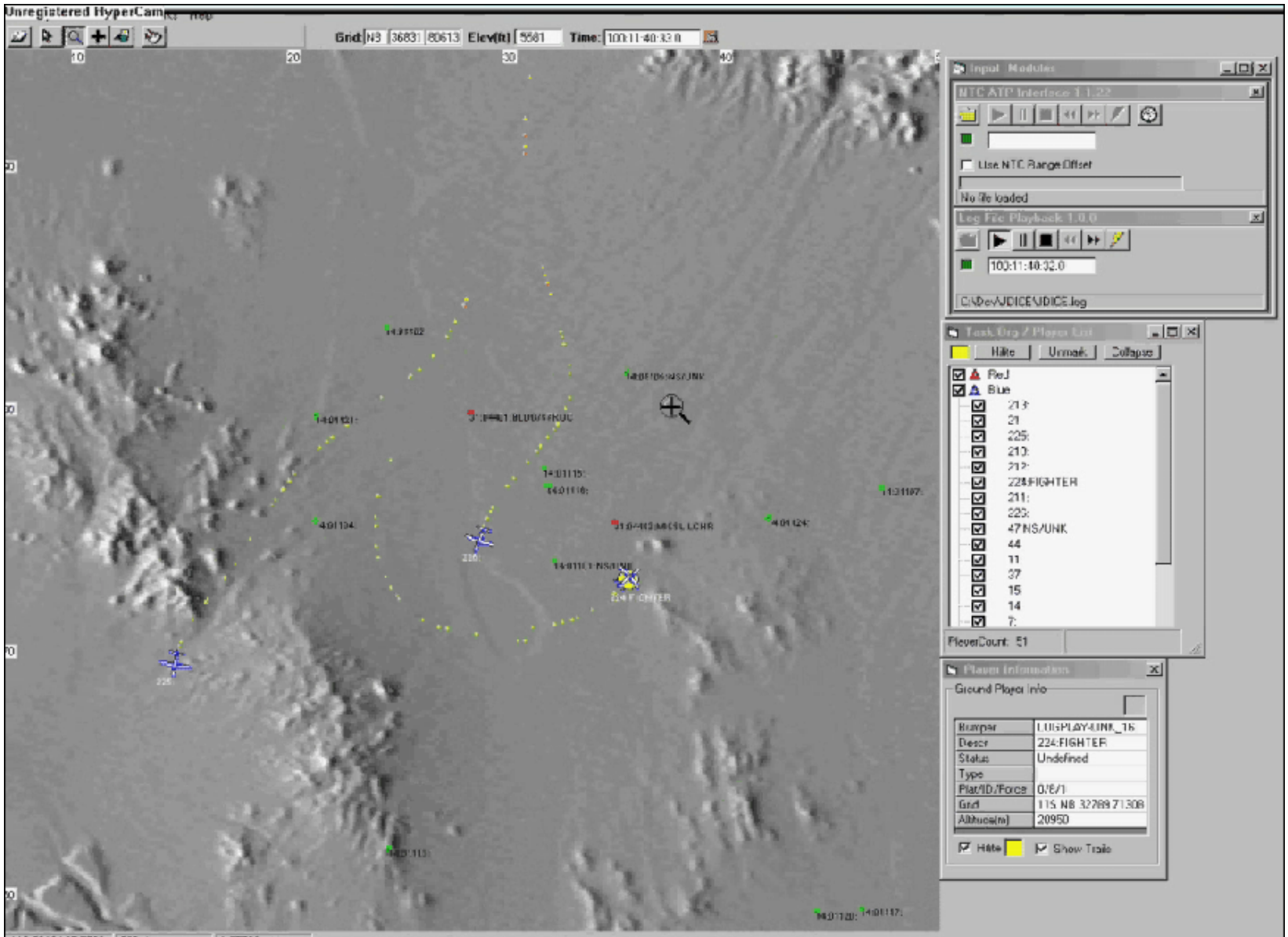
USN: AGF-11, CNO (N62), NAWC, NSAWC N6, SPAWAR, TACTRAGRUPAC, (PMW 101/159)

USMC: MAWTS-1, MCCDC (EFDC)

Methodology
JTTP Development

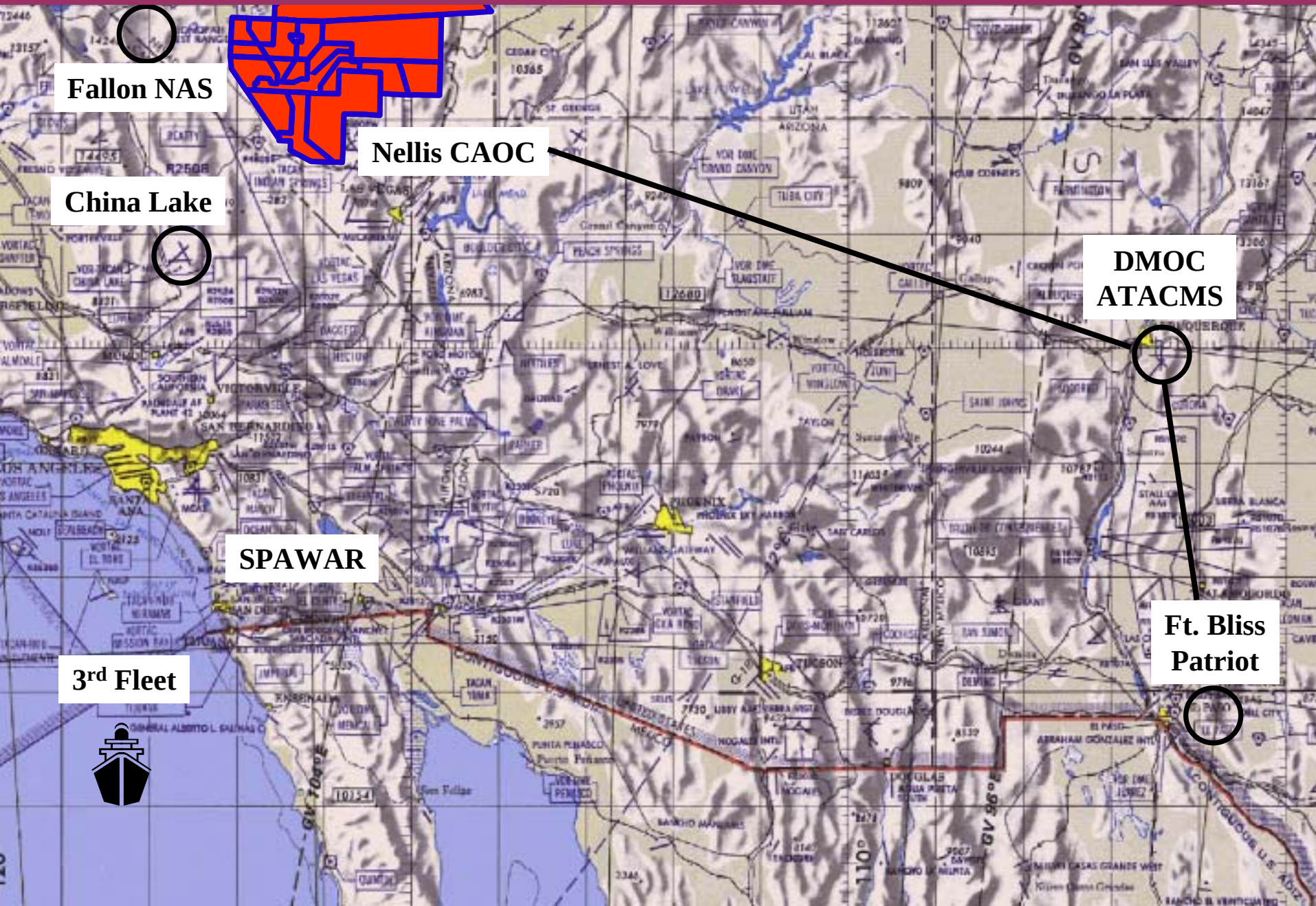


COMBAT Tool



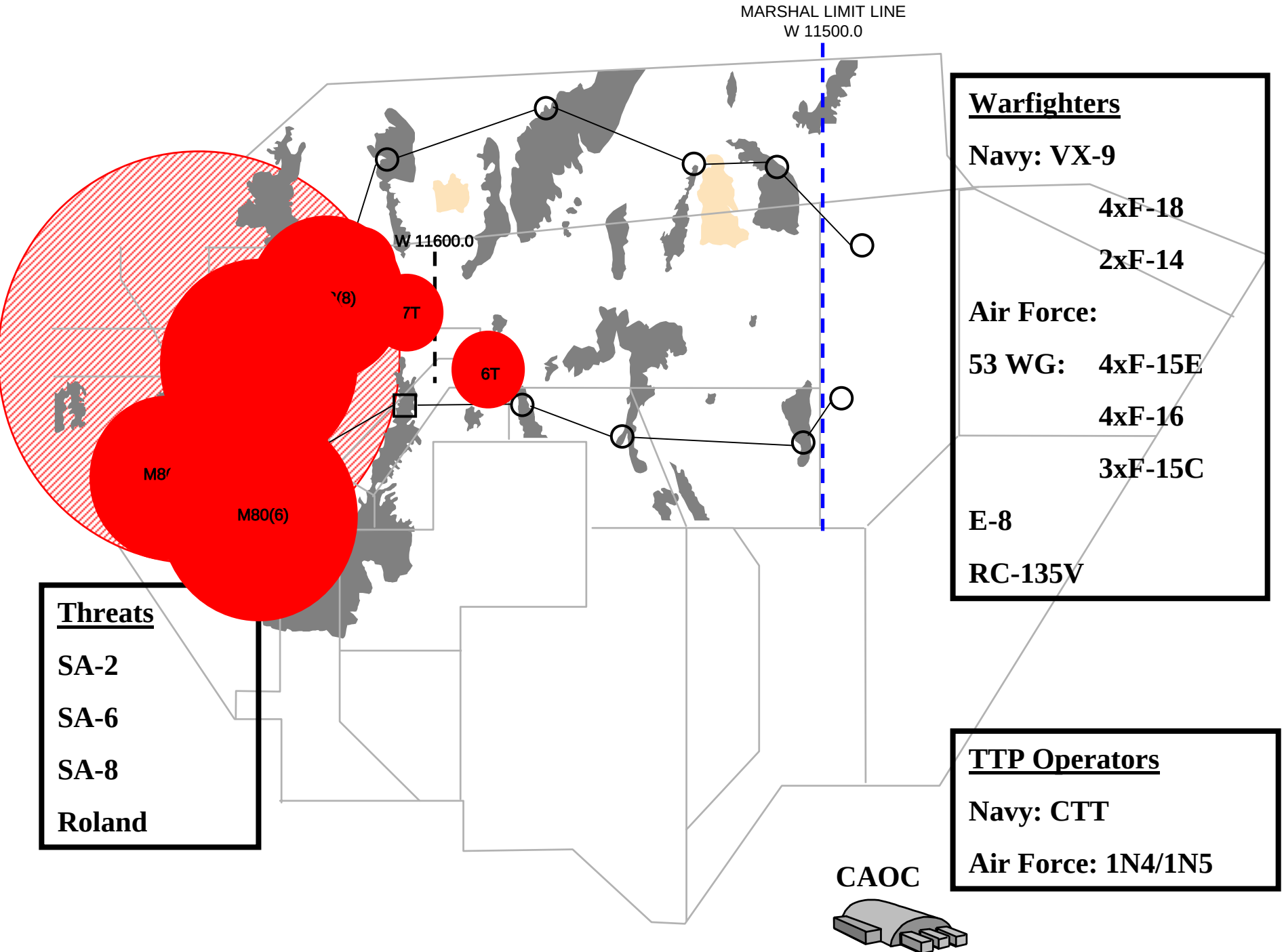
combatvideo

Mini-Test C Support Locations



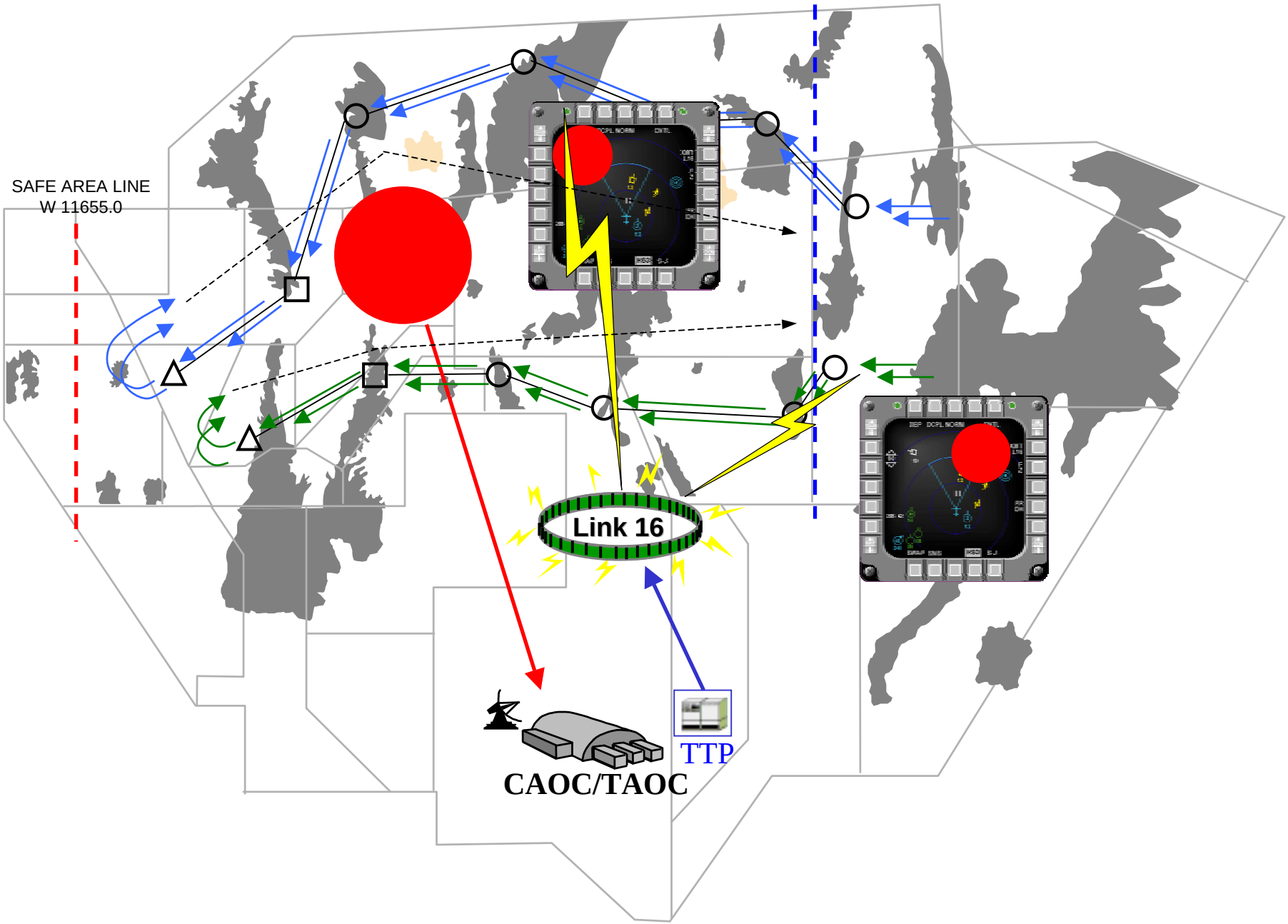
Red Flag 04-1 Participants

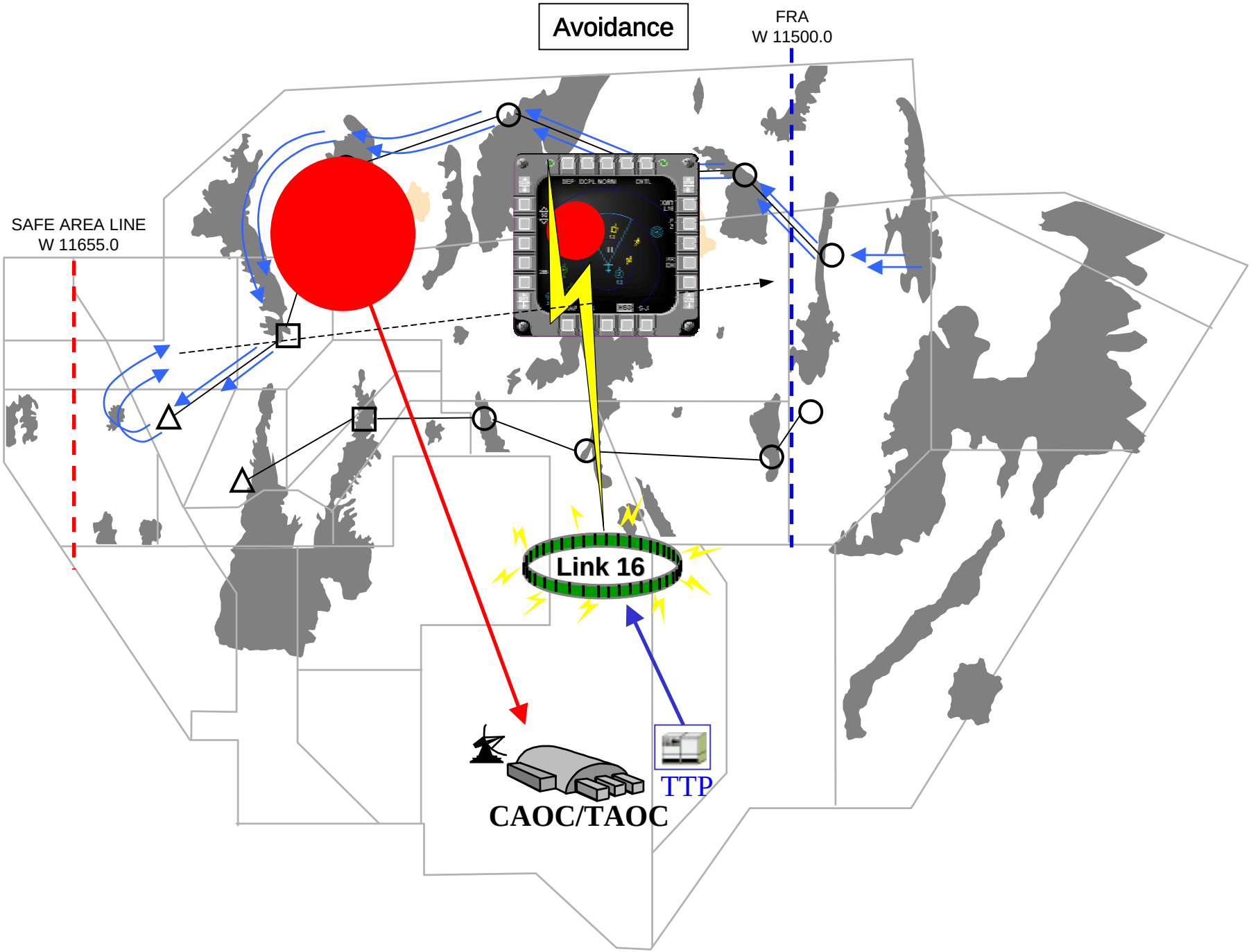
Unit	Base	Type	# AC	Role
57WG/414CTS	Nellis AFB NV	F-16C	6	DCA
27FW/522FS	Cannon AFB NM	F-16CJ	12	SEAD/INT
53WG/422TES	Eglin AFB FL	F-15E	4	INT/CAS
53WG/422TES	Eglin AFB FL	F-16CJ	4	SEAD
509BW/393BS	Whiteman AFB MO	B-2A	4	INT
28BW/34BS	Ellsworth AFB SD	B-1B	4	INT
1WG/94FS	Langley AFB VA	F-15C	12	OCA
USN/VX-9	China Lake NAWS CA	F-18	5	OCA/INT
122FS/163FS	Ft Wayne IN	F-16CG	6	INT
180FW/112FS	Toledo OH	F-16CG	8	INT
49FW/9FS	Holloman AFB NM	F-117	8	INT
USN/VAQ-134	NAS Whidbey Island WA	EA-6B	4	SEAD
55WG/51ECS	Davis-Monthan AFB, AZ	EC-130	2	SEAD
55WG/38RS	Offutt AFB NE	RC-135	2	REC
116ACW/16ACCS	Robins AFB GA	E-8	2	INT
552ACW/960/970AACS	Tinker AFB OK	E-3	2	C2
347WG/71RQS	Moody AFB GA	HC-130	3	CSAR
347WG/41RQS	Moody AFB GA	HH-60	4	CSAR
57WG/15RS	Nellis AFB NV	RQ-1A	1	REC
909/911 ARS	TBD	KC-135	4	AAR
187FW/160FS	Dannelly Fld ANGB AL	F-16C	6	DCA

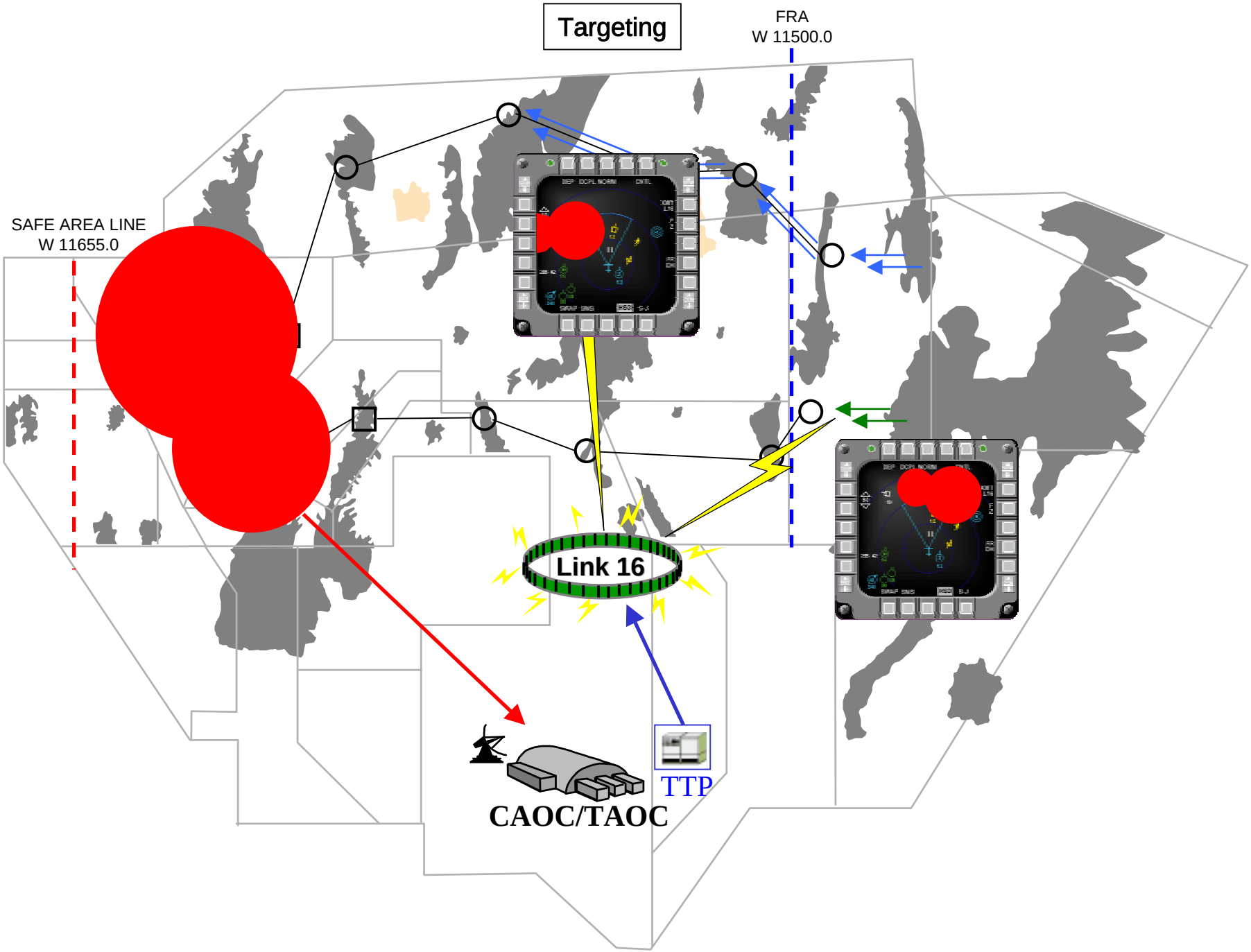

MARSHAL LIMIT LINE
W 11500.0
W 11600.0
7T
6T
M80(6)
Warfighters
Navy: VX-9
4xF-18
2xF-14
Air Force:
53 WG: 4xF-15E
4xF-16
3xF-15C
E-8
RC-135V
Threats
SA-2
SA-6
SA-8
Roland
TTP Operators
Navy: CTT
Air Force: 1N4/1N5
CAOC

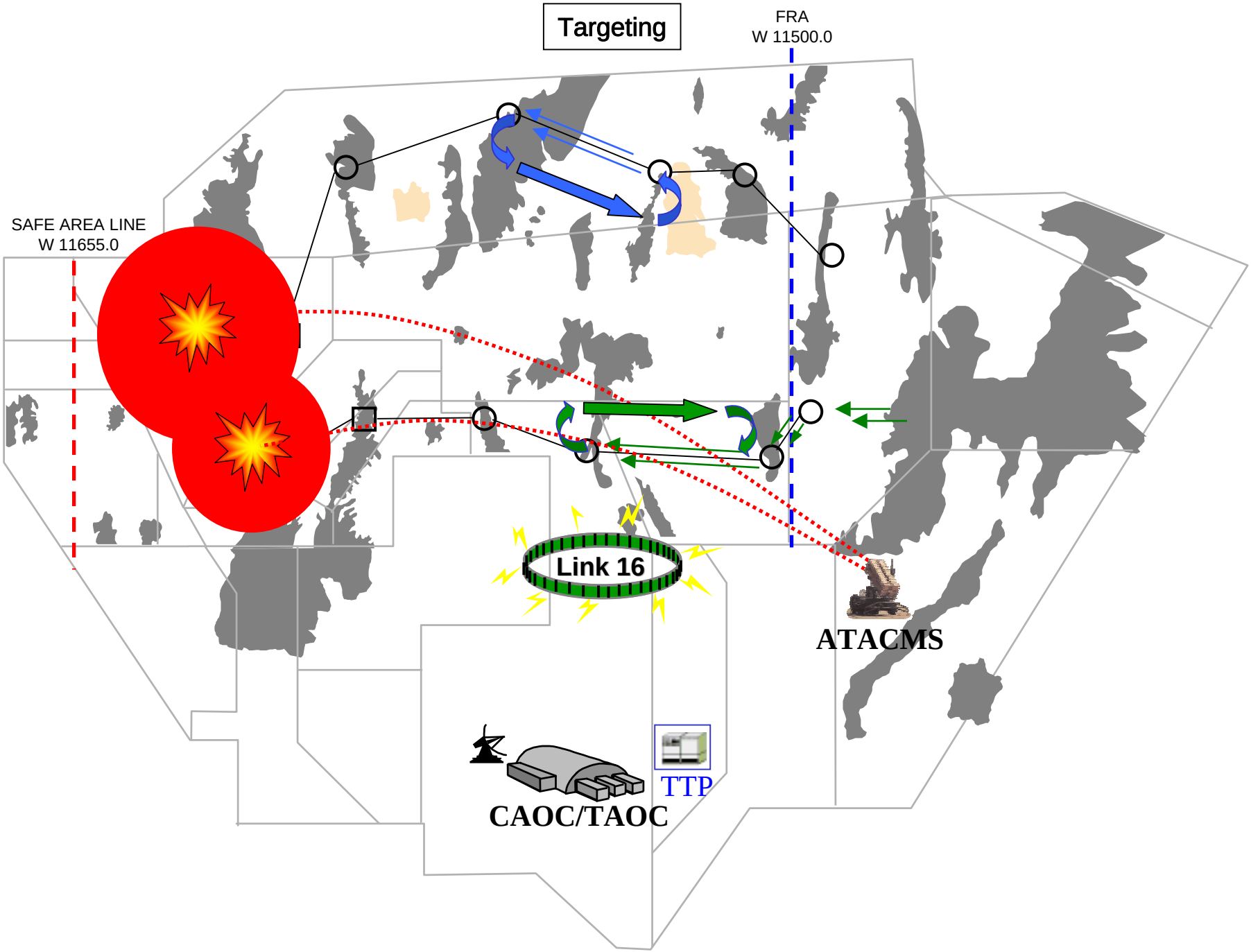
Situational Awareness

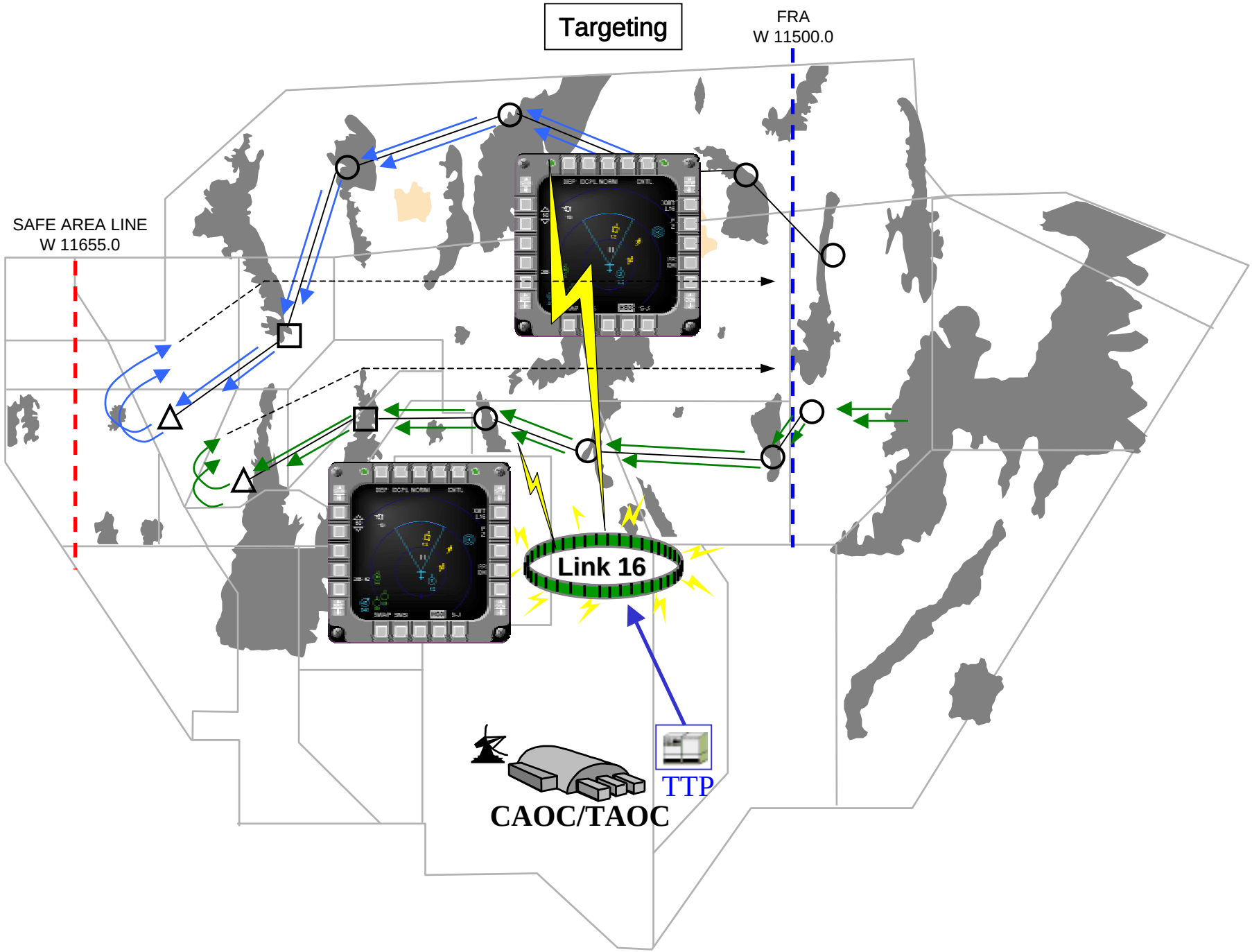
FRA




Avoidance
FRA
W 11500.0
SAFE AREA LINE
W 11655.0
Link 16
TTP
CAOC/TAOC


Targeting
FRA
W 11500.0
SAFE AREA LINE
W 11655.0
Link 16
TTP
CAOC/TAOC


Targeting
FRA
W 11500.0
SAFE AREA LINE
W 11655.0
Link 16
ATACMS
TTP
CAOC/TAOC


Targeting
FRA
W 11500.0
SAFE AREA LINE
W 11655.0
Link 16
TTP
CAOC/TAOC

Test Observations

- JTTPs rapidly understood and correctly applied
  - Clear organization of tasks by duty location
- JTTPs provided accurate, complete and timely information

Accuracy	Completeness	Timeliness
100% of tracks met 40NM criteria	100% of tracks met threat longitude, latitude and elevation criteria*	98% of tracks met 15 minute criteria

* Identified OFP Link 16 implementation limitations/shortfalls

Aircrew Comments

- “..added huge SA on deconfliction and station keeping..”
- “..ability to hook the designation & determine range to the SAM..” enabled “threat Rx decisions based on SA”
- “JDICE info was initially used in order to avoid threats enroute to target area. We were able to WEZ deny... afterwards the info was used to direct the radar and targeting pod in order to designate the threats as targets”
- With JDICE info, “literally performed SEAD/DEAD using the link and conventional ordnance…we would have been able to destroy every threat put on the link within minutes of the emissions”

Warfighter Applications

- Future systems such as JTRS and beyond
  - Scoped to Link 16 based on CJCS statement **"LINK 16 is the backbone data link for the joint multi-TADIL network…"**
  - AF will fully field Link 16 by 2012
  - JDICE JTTPs are translatable to any link system
- TST Operations
  - TST cell is organized, manned and has the expertise to direct TST/dynamic targeting
  - JTTP crew chief will provide actionable target information into the TST process
- Joint Operations
  - All Service platforms able to receive link data now and in the future will benefit from the JDICE JTTPs
  - Synchronized data link information and integrating platforms provide true Joint interoperability

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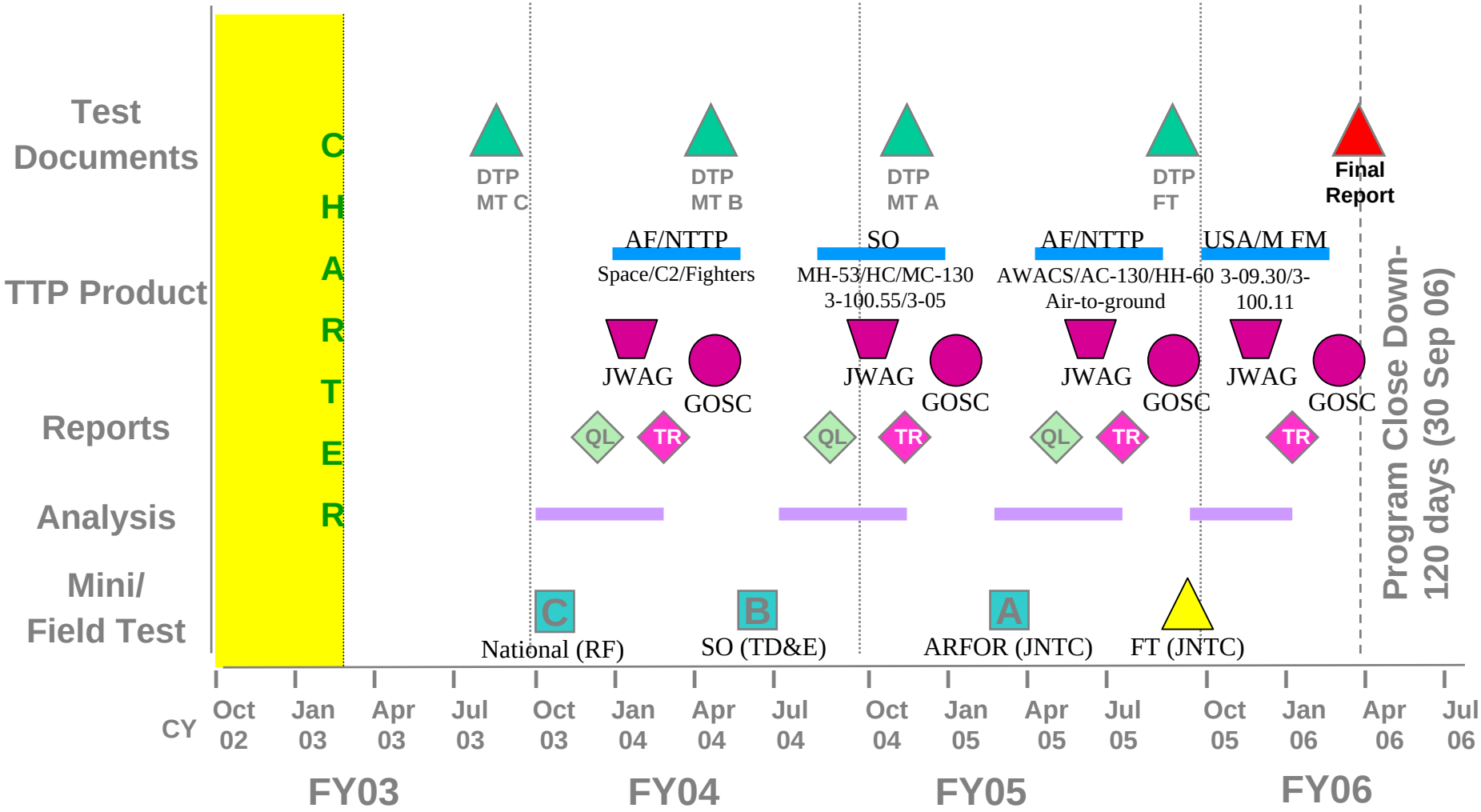
JDICE

Schedule



DTP = Detailed Test Plan GOSC= General Officer Steering Committee
JWAG= Joint Warfighter Advisory Group FT = Field Test QL = Quick Look Report TR = Test Report

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Resources - Organization

Service Personnel:

USAF: 11

USA: 4

USN: 2

USMC: 2

JDICE Test Director
Col (S) Gilstrap

Technical Director
GS-14/15 (TBD)
Brett McCann
Tech Advisor

Office Manager
Helen Presser

Security Specialist
GS-9/11 (TBD)
Pete Patera

Contractor Support
Task Manager

Deputy, Test Operations
Lt Col Jim Ellefson

Paul Baxter (Test Manager)
Joe Rehm (Test Manager)
Barb Bennett (Test Planner)
Mike Morgan (Ops Analysis)
Perry Koger (Sys Analyst)
Bob Taylor (Ops Analyst)
Don Sexton (SME)
Kurt Reynolds (Ops Analyst)

SME's
Ops Analysts (Inc JICO)
Intel Analysts/Engineers
Exercise Coordination
Scheduling
Test Reporting
Mod/Sim
Test Product Transition

Deputy, Test Mgmt
O-5 (TBD)

Jerome Patterson (ORSA)
Robert Thomas (DB Mgr)
Charlton Stewardson (LAN)
Paul Glazier (LAN)

ORSAs
Data Management
Instrumentation
Database Design
Database Management
Configuration Control
Programmers
Web Site
LAN Administration

Deputy, Test Support
O-5 (TBD)

Tony Rino (Fin Analyst)
Sarah McCreary (Supply)
Sue Boozer (Tech Writer)
MSgt Lisa Davis (IM)

Resource Management
Personnel
Logistics/Supply
Technical Editing
Administration
Information Management
Comms
Research Services

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Products for Warfighters

- Increased integration of deconfliction and targeting information to the joint shooters/activity assets
  - Joint tactics, techniques and procedures to define deconfliction and targeting data to distribute on the updated Link 16 network
  - Network design to optimize use of updated JTTPs
  - Benchmarks to be used in joint exercises and joint training, potential for service alignment
- Increased Combat Capability via increased and filtered critical information flow over C2 networks
  - Selected JTTPs validated and codified
  - Selected network modifications validated and codified

Products for Warfighters (cont)

- Validated Joint tactics, techniques and procedure development methodology and documented network design
- Joint TTPs and network design that can translate into acquisition strategy
- Test-based knowledge provided to decision makers:
  - Doctrine community to address JTTP integration
  - Training communities to design exercise and training environment structures

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Current Impact

- JTTP WG developed prioritized common Joint objectives for future TDL requirements
- Integrated TDL Roadmap for 06 POM
  - Core member for future Working Group's
  - Ground breaking Capstone Requirements Document
  - Joint participation for Capability Development Document
- JFIRES/WARNET
- OIF Lessons Learned for TDL Network Design
- OSD Re-engineering Lessons Learned
- Continuing to overcome "Tribal" mindsets
- TTPs in theater

JDICE Outreach

- Mini-Test C TTPs in use in Al Udeid CAOC
- Redstone Arsenal, Fort Bliss
- NORAD, NORTHCOM, Homeland Defense
- Navy Top Gun Journal
- AWFC Fighting Focus (CINCs/Services/Warfighters)
- ACC Weapons and Tactics Conference 2004
  - Link 16/Dynamic Tgting/SEAD/DEAD/Mass Audience
- JDICE invited to the TOP 3 Tests on the ACC TPL
- USAF Weapons Instructor Course Paper on JDICE
- AFTTP/NTTP 3-1 Conferences
- OSD Quarterly News Letter
- Symposiums
  - ATEC, National Fires

"…we'll study how we can incorporate this capability into our current situation and future planning. I'm glad pros like you are in the warfighting business."

BGen (S) Rew, CENTAF AUAB (Al Udeid CAOC/CC)

QUESTIONS

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