



Modernized Test & Training Ranges Are Key to Readiness & Transformation

NDIA T&T Symposium
20 Aug 02





Thesis

- **Coherent range modernization is essential if we are to achieve transformation objectives**



Outline

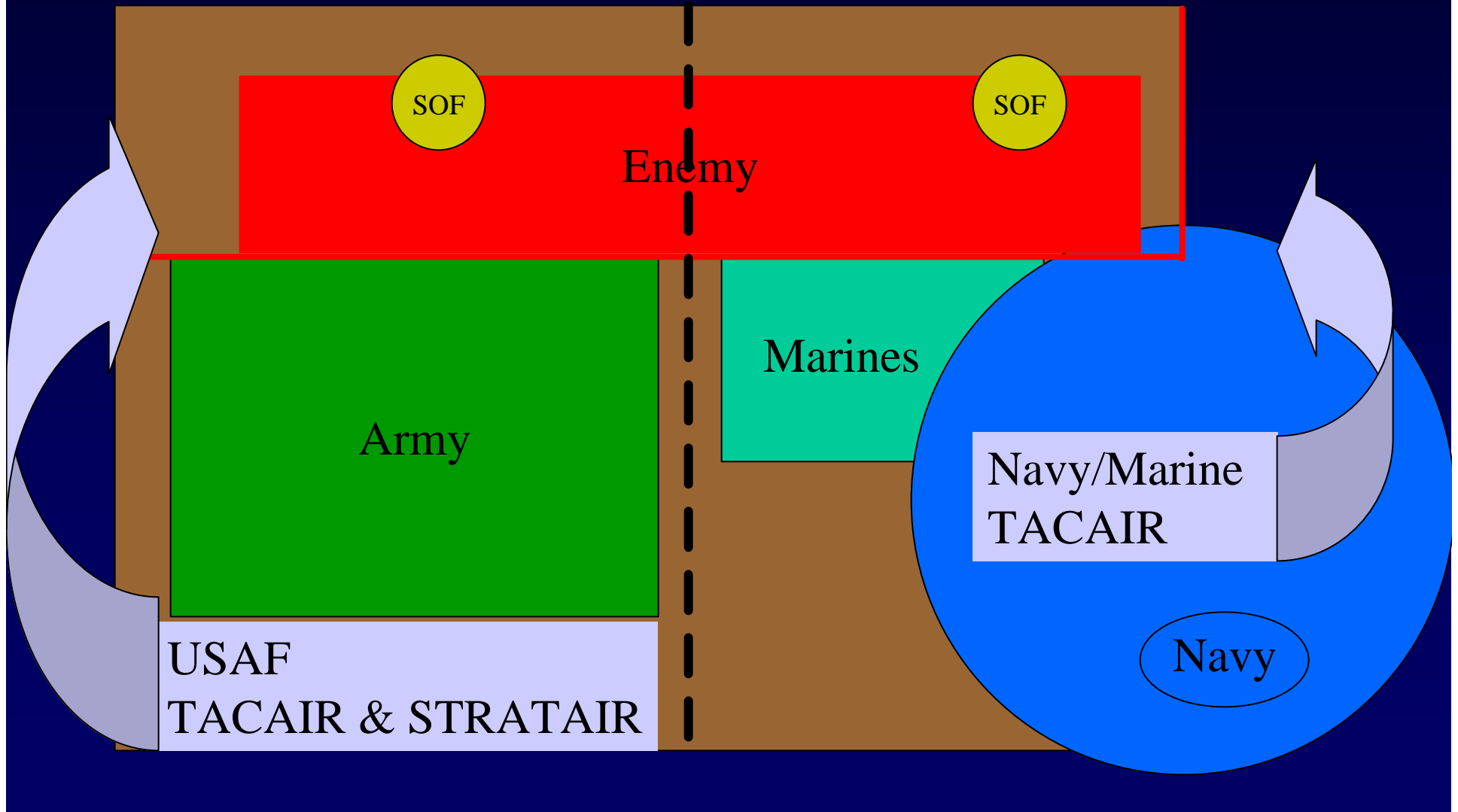
- **Joint Operations, Training Transformation**
- **Recent Joint Events**
- **Range Modernization Imperatives**
- **Range Modernization Initiatives**



Joint Operations, Training Transformation

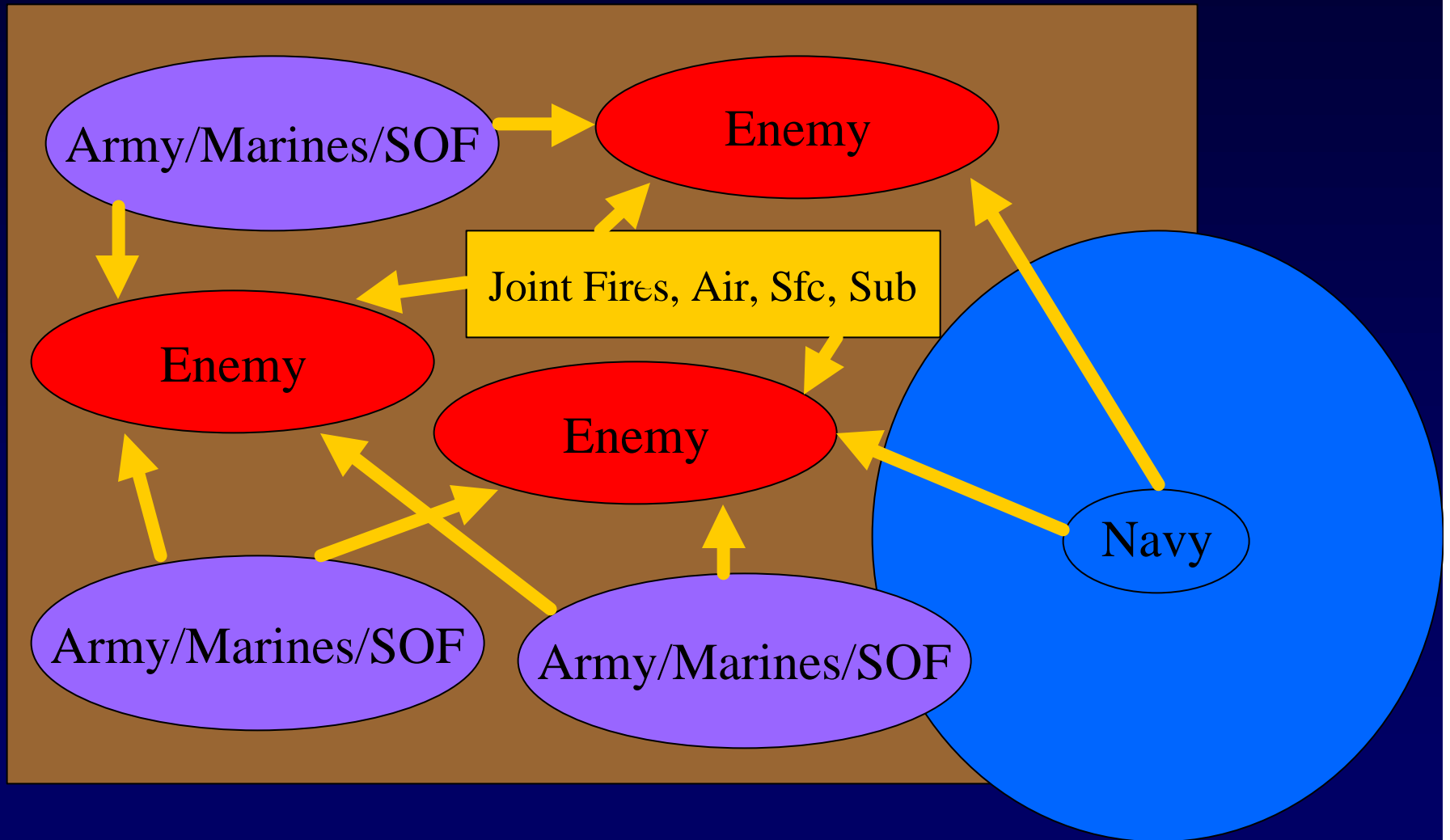


Old "Joint" Operations: Linear, De-conflicted





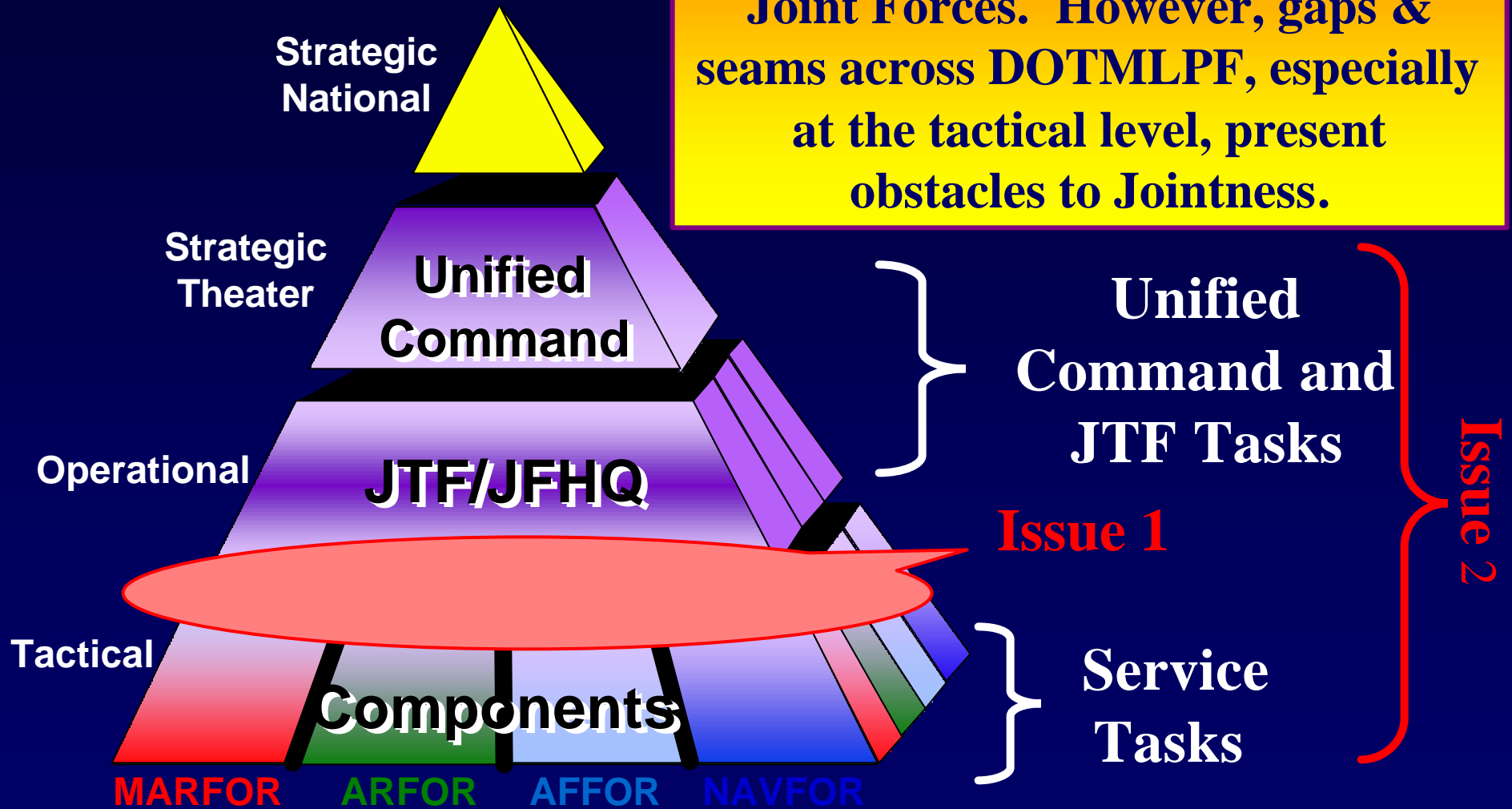
New Joint Operations: Non-Linear, Integrated Capabilities





Interoperability Issues

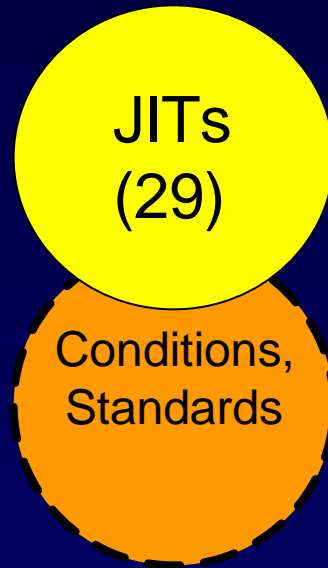
Combatant Commanders employ Joint Forces. However, gaps & seams across DOTMLPF, especially at the tactical level, present obstacles to Jointness.





JFCOM CAT II Program

CINC &
Component
Interoperability
Req'ts



Forced Entry &
TST

JTFEX
15 JIITs

At Sea
Atlantic
or
Gulf of Mexico

JTAMDO

Roving Sands
9 JIITs

White
Sands

JTAO & CAS

Red Flag
6 JIITs

Nellis AFB
&
NTC

*JFCOM concept accepted in principle
by component CINCs, Aug '01*

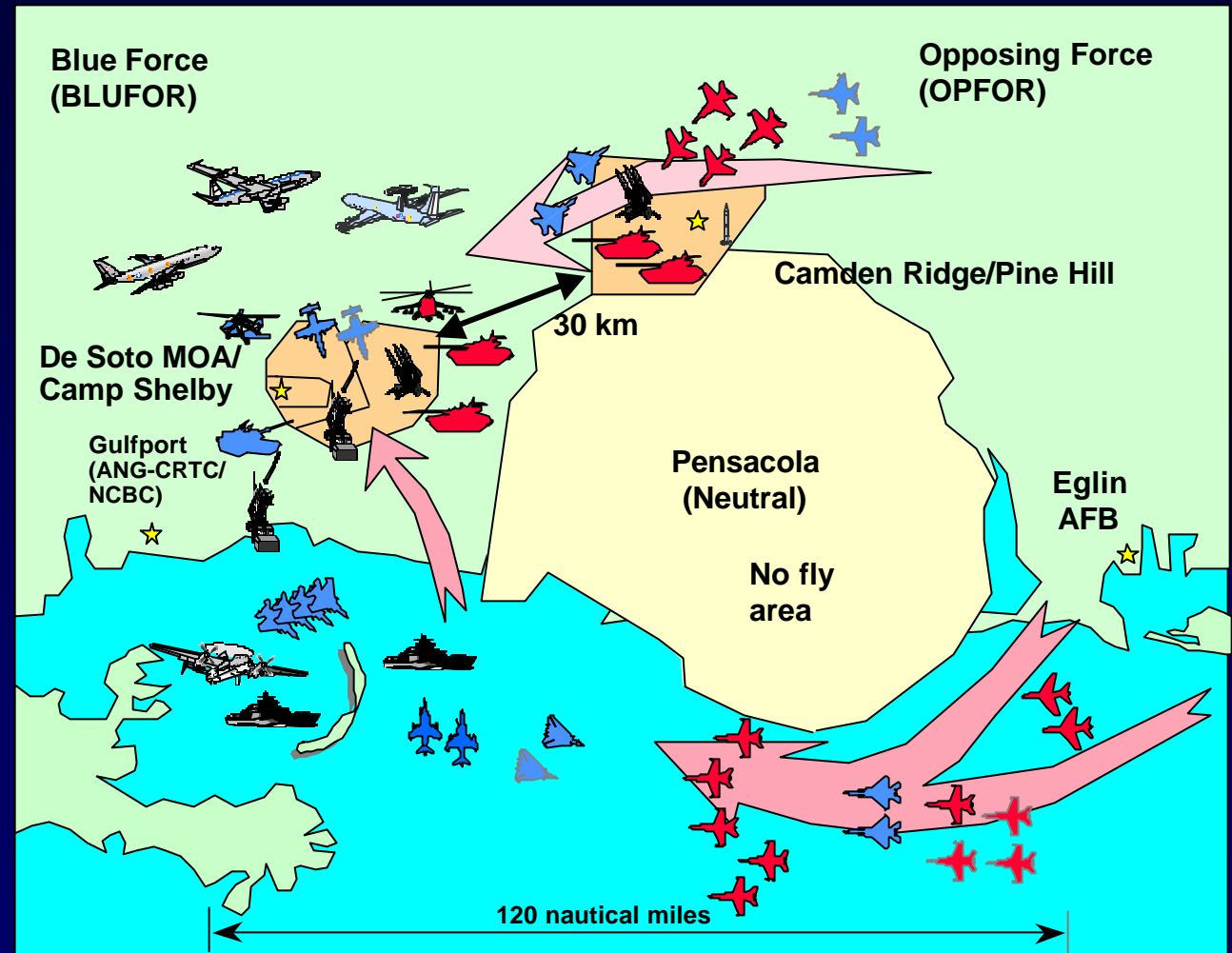


Recent Joint Events



JCIET 2002 Evaluation

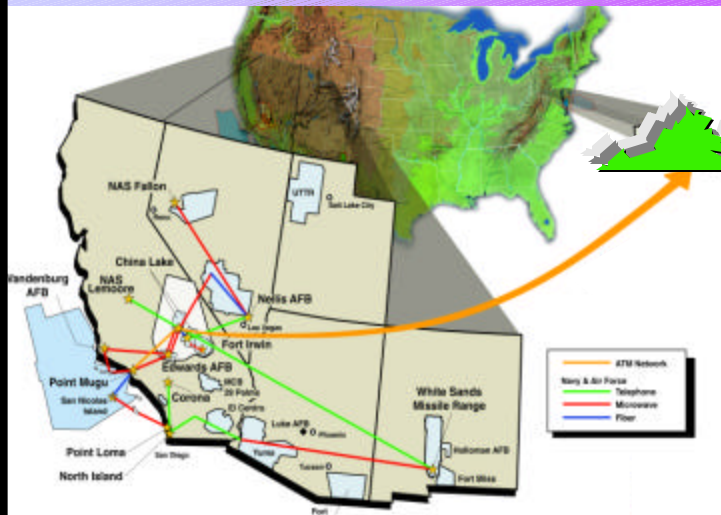
- Air defense/
air-to-surface
mission areas
- Supports objectives
 - USAF
 - USN
 - USA
 - USMC
 - SIAP-SE
 - JCMD
 - JC2ISR
 - U.K.





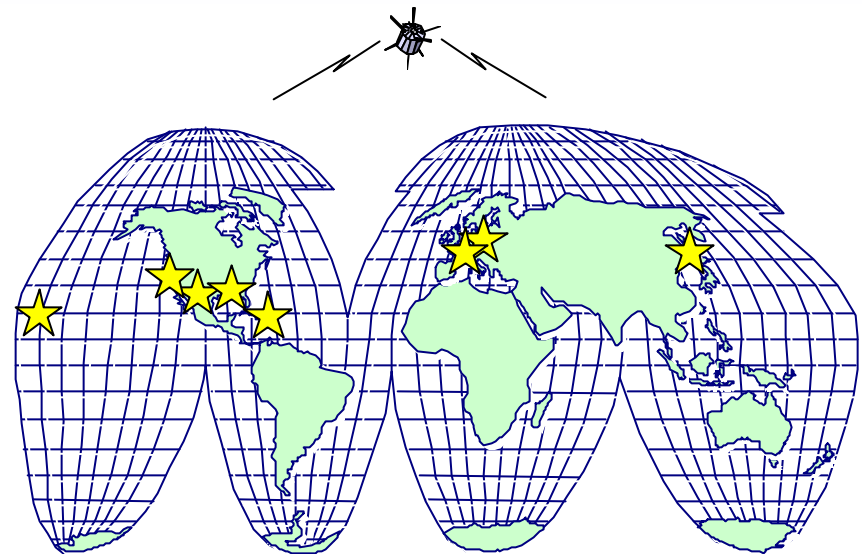
Millennium Challenge 02

Today's MC02 range integration successes...



- ✓ Distributed Ground Truth
- ✓ Fused Track Data
- ✓ Video & Telemetry Feeds
- ✓ Linked Ranges
- ✓ Common Display
- ✓ Composite Picture

...are the technical enablers for tomorrow's integrated network of Joint National Training Centers





Argument

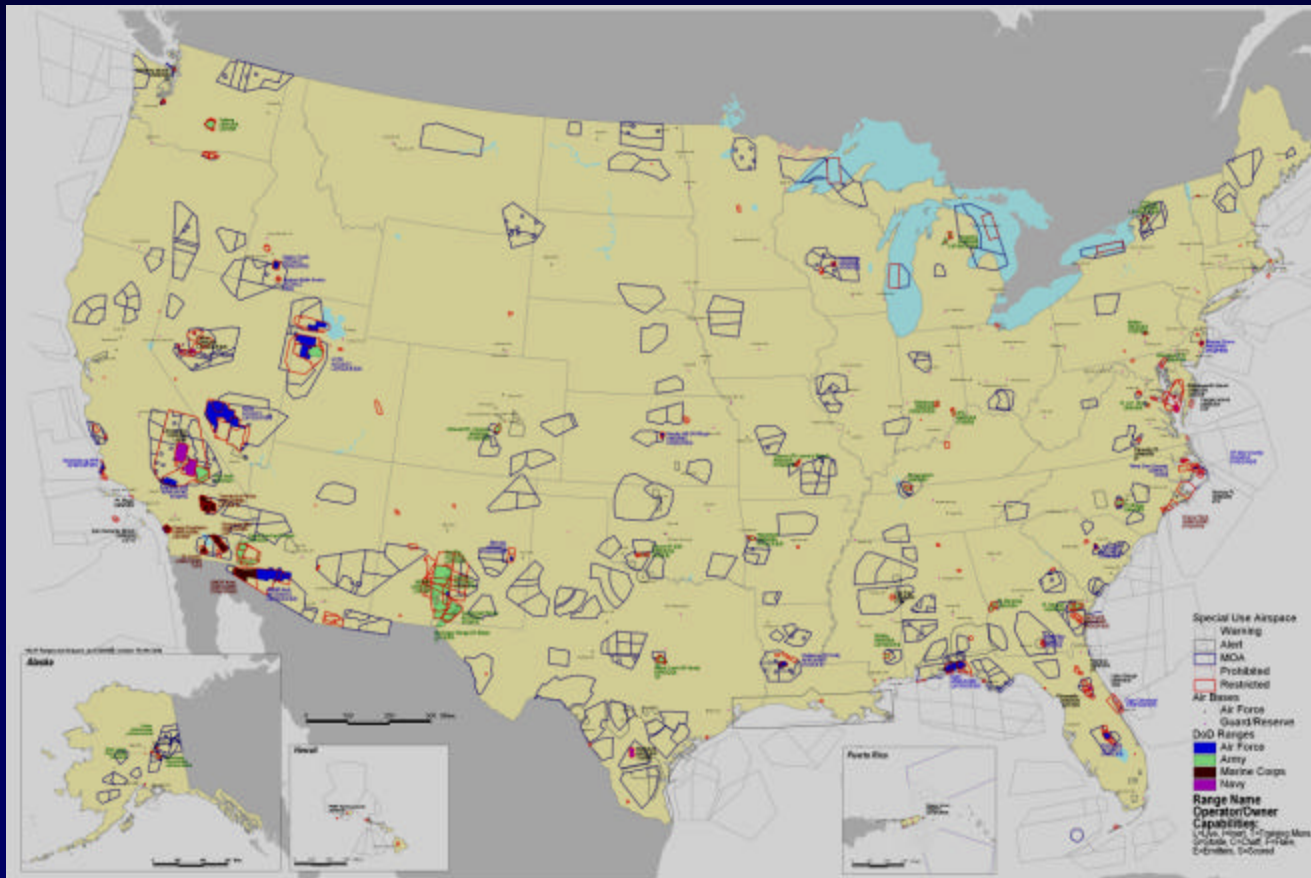
- **Complex Families of Systems are the future of joint and coalition warfare**
- **Combinations of live and computer simulations must be used for testing and training**
- **Interoperability assurance depends on “live slices”**



Range Modernization Imperatives



DoD Ranges, Airspace, and AF Bases



- Too Small
- Dispersed
- Stovepiped
- Land-centric
- Air-centric
- Maritime-centric
- Different
- Rules
- Costs
- Instrumentation
- Encroachment



Modernization Imperatives

- **Interoperable, Tetherless Instrumentation**
- **Persistent Connectivity**
- **Live, Virtual, Constructive Sim Integration**
- **Professional Live OPFOR**
- **Range Infrastructure**
 - **Live fire targets – including very long range weapons**
 - **Threat systems**
 - **Urban environments**
 - **UAV airspace**
 - **Attackable Mil/Civ Information Infrastructure**
- **Encroachment Protection**
- **Regional Approach**
 - **(Access for East/West CONUS Forces)**

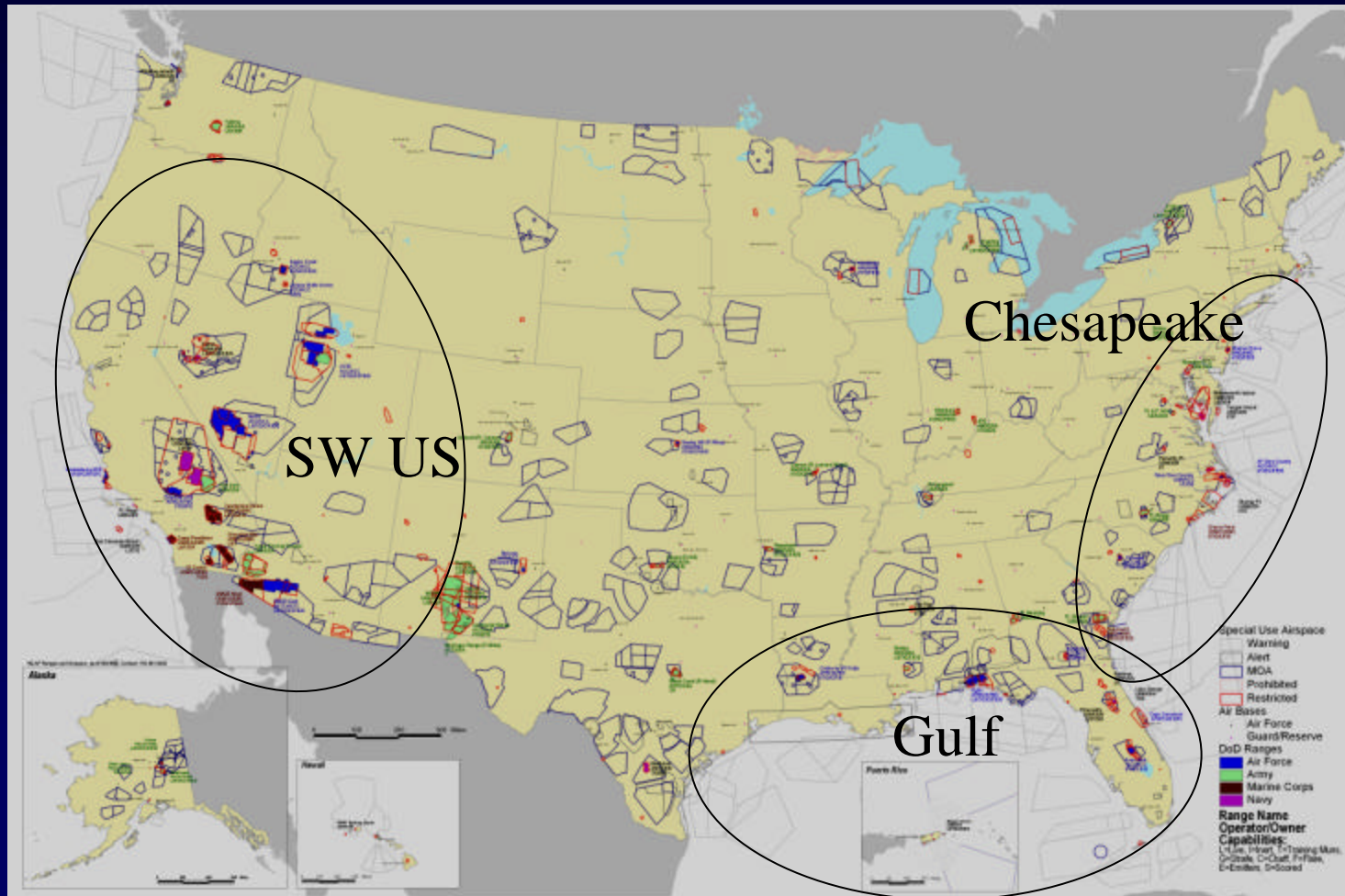


Major Initiatives

- **OSD (P&R) Training Transformation**
 - **OSD (T&E) Enterprise**
 - TENA
 - JTTR
 - **JFCOM Joint National Training Centers**
 - Millennium Challenge 02
 - Roving Sands 03
 - JTFEX 04-2
 - Red Flag
 - **JFCOM Joint Program Office**
- Stepping Stones



Regional Range Linkage Initiatives





Summary

- **Joint readiness depends on joint training**
- **Transformation depends on testing & training in new ways with new technologies**
- **Range modernization must be realized**
 - OSD (P&R, T&E)
 - JFCOM
- **Opportunities for industry**