



Electronic Systems Center



U.S. AIR FORCE

Delivering Capabilities to the Tactical Networking Environment

**Lieutenant General CR Davis
Commander
AFPEO for C3I and Networks**

Integrity ★ Service ★ Excellence



Electronic Systems Center



Use of Data Links to deliver Synchronized Tactical Joint Force Operations The Art of the Possible

**ESC is delivering the Art of the Possible
Today not only Data Links but across our
Portfolio**



Fully Engaged in Networking Environments



STRATEGIC APPS



DCAPES



ISPAN



CCIC2S



SEWS

OPS APPS



DCGS



AOC



AFWSS



TBMCS



MPS



TDC



GBS



624th OC



AF-IPPS



DEAMS



ECSS

TACTICAL APPS



CNS/ATM



BCS-F



CRC & 3DELRR



AWACS



JSTARS



TACP



IBDSS

BUSINESS SYSTEMS

NETWORK CORE



AFNET



GCCS-AF



GCSS-AF



CRYPTO



TDL



JTRS



CSEL



BACN

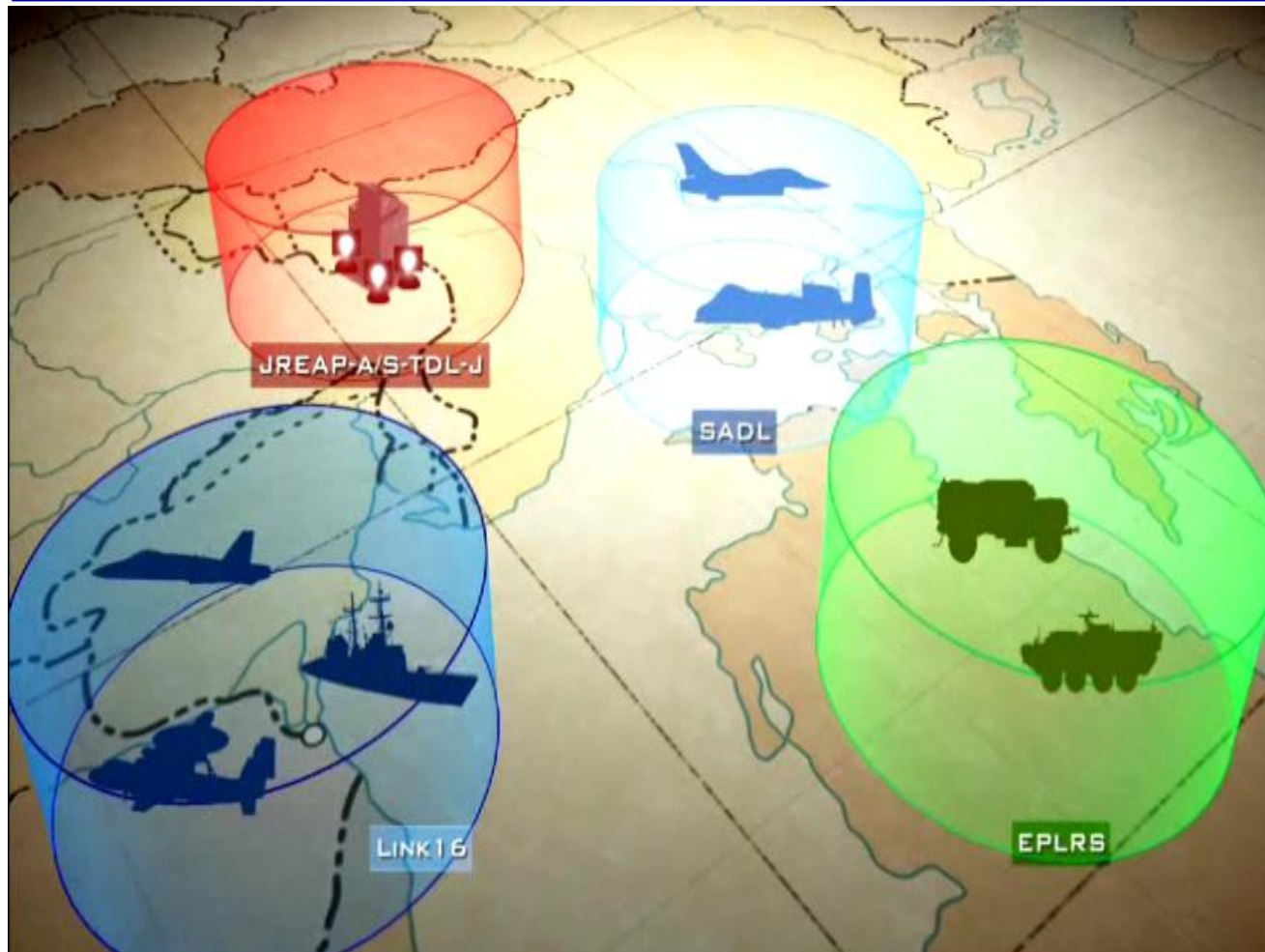


FAB-T





Data Link Reality



- Over time radio and data links evolved over different sensors and platforms
- Some Not linked together and not interoperable
- Need to tie network together



Challenges



- Battlefield Airborne Communication Node (BACN) is the ultimate example of both
Data – Link success and failure
- No simple paths to combat connectivity
- Took 4 years to pick data link to connect F-22 and F-35
- Decision not implemented
- No one sets and enforces comm and data standards and architecture as systems evolve
- Complete integration costs are almost never considered
- Coalition data sharing is often a challenge





Warfighter Support



- Battlefield Airborne Communication Node (BACN) - Over 2,200 Missions & 17,000 Flight Hours
- Combat Survivor Evader Locator (CSEL) - 50K radios fielded – credited with 42+ Combat saves
- Tactical Air Control Party (TACP)
 - Fielded over 1,000 units of dismounted equipment, shortens kill chain, increases target accuracy, improves situational awareness and reduces fratricide
 - Integrated TACP Comm Suite into MRAP vehicles, allows imbedded TACPs to provide Close Air Support (CAS) to Army Ground Force
- Crypto Modernization Black Data Distribution System (BDDS)
 - Fielding in 7 Locations revolutionized key distribution in operational environment
 - Net-Centric key delivery
 - Remote capability



Warfighter Support



- Eagle Vision - DoD only fully deployable commercial satellite imagery downlink/processing downlink – used extensively in natural disaster situations (Japan' Tsunami, Hurricane Irene, Texas Wildfires etc.)
- Integrated Strategic Planning and Analysis Network (ISPAN) - Global adaptive Planning Collaborative Information Environment (GAP CIE)
 - Joint Warfighter, DoD Force Multiplier
 - Net Enable: access anywhere, anytime
 - Rapid Delivery Increment Acquisition
 - Major capability delivery every 3-4 months
- Theater Deployable Communications (TDC) – Provides flexible, lightweight, modular, secure and integrated communications equipment with access to the Defense Switched Network (DSN), Non-Secure Internet Protocol Network (NIPRNet), and Secure Internet Protocol Network (SIPERNet)
 - Used to support 2008 California Wildfire Response by local Air National Guard



Delivering Future Capability



- Imperative we follow a set of standards
 - Additional waveforms gets out of sync
 - Challenges Coalition Interoperability
- Incremental capabilities - success path with tight budgets
 - Delivers to Warfighter sooner
- Must consider the full system link – intel to mission planning to AOC mission employment to weapon impact
- We are good at crisis system delivery -- ROVER, BACN -- must get better at the normal process
- Connectivity could soon be limited by aging crypto systems—we must start working this now