Mission Partner Environment & Bold Quest
Mission Partner Environment - What does the Commander need?

Communicate Commander’s Intent

Build trust

Create unity of effort

Possess speed of command

Operate in the information environment

…not just share information

“Our capabilities, tactics, techniques, procedures and terminology must be able to translate across the services, the interagency and with our mission partners”

(Chairman’s 2nd Term Strategic Direction to the Force)
MPE Range of Military Operations

What is the CDRs intent?
What information needs to be shared?

What is the mission?

Who are the partners?
What classification level(s) do you need to operate in?

UNCLASSIFIED NETWORKS

Classified Releasable FEDERATED MISSION NETWORKS

MAX OMB

UNCLASSIFIED

LOW TO HIGH
MPE Operational Metrics

MPE “So What”

- Clearly Communicates Commander’s intent and provides speed of command for desired operational effects with all mission partners
- Allows for US and non-US formations, information, and data to operate in the same battlespace (physical and non-physical)
- Leverages key US SIPRnet enablers (Joint Fires, Intel, Logistics, etc.)
- Flexibility in task organizing formations to fight more effectively
- Achieves a CCMD standard for consistency with allies and mission partners
- US and partners fight with the equipment they own and train with
- Addresses CCMD persistent info sharing requirements and JTF episodic events
- Elevates mission partners to peers and recognizes their sovereignty
- Defines the level of trust & addresses cyber vulnerabilities upfront
**MPE Operational Imperative**

- **CCMDs 15 Star Memo to CIO:**
  - Isolated mission network moves ops off of SIPRnet
  - Common mission network across all CCMDs is a critical operational need
  - Accelerate fielding a mission network under purview of ongoing MPE and JIE efforts

- **CIO response to CCMDs:** Lead an expedited assessment to determine the feasibility of a single fully operational MPE NLT the end FY16. Request CCMDs:
  - Identify existing network and information sharing initiatives supporting near-term MPE objectives
  - Describe how your Service Components are training and equipping to operate in a MPE
  - List activities which synchronize MPE efforts with your respective mission partners

- **CIO Update to DepSecDef:**
  - Info sharing capability for US and mission partners with common core services; connect networks via an MPE security gateway with commercially available security, vice US provided equipment
  - Shares common core services; allows for rapid provisioning of "network" for emerging ops; improves info sharing between partners; segmented security for specific op; partner brings own network to the fight

- **DoD CIO Capability Planning Guidance:**
  - MPE: DISA resource the sustainment of the existing mission partner mission based interoperability compliance and assessment (aka CIAV) core capability
  - FY 16 Funding undetermined
**Bold Quest 15.2: Interoperability**

**Coalition ISR**
- Joint and coalition partnership to share intelligence from multiple ground and air sources
- Drive operations and target engagement across multiple initiatives and throughout the common JFEO scenario

**Joint Fire Support**
- Joint and coalition digital interoperability end-to-end from JFO/JTAC to CJTF
- 13 nations participating with 27 distinct system types exercising multiple cross-service and nation threads
- JFOs from 7 nations demonstrating digital interoperability in a live fire event with U.S. and Norwegian howitzers (155mm) and U.S. HIMARS

**Integrated Air and Missile Defense**
- Exercising engagement authority and procedures in a robust BLUFOR/OPFOR, live and simulated sorties
- Air-air; surface-air; air-surface engagements in a complex air and surface environment

**Bold Quest Participants**

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<th>AUS</th>
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<th>DEU</th>
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Personnel Summary:
- Partner Nation: 715*
- USA Deployed: 347*
- USA Home Station: 200
*Registered for access to date

**Digitally Aided Close Air Support**
- Digital interoperability among joint terminal attack controllers (JTAC), aircrew and C2 nodes
- 12 nations, 70+ JTACs, conventional and SOF
- Concurrent credit toward individual JTAC annual sustainment training

**Friendly Force Tracking and Ground-Air Situational Awareness**
- Demonstrating shared SA between US and Coalition hand-held FFT systems
- Developing NATO Interoperability standards with 9 nations and NATO HQ
- Provide ground tracks to fixed wing aircrew conducting CAS for SA and fratricide avoidance

**Coalition Network (Mission Partner Environment)**
- Federated environment encompassing national networks/systems
- Each nation follows their own national policies and operates their own mission command systems and core services for collaboration
- Guided by collaboratively developed Joining Membership and Exit Instructions

**NIE/AWA**
- Focus: Modernization & Force Development

**MND Training Exercise**
- Focus: Readiness

**Bold Quest**
- Focus: Interoperability

**Bold Quest Participants**

- CAN
- DNK
- DEU
- NLD
- SWE
- USA
- BEL
- FIN
- GBR
- NOR
- NATO HQs
- CAN
- FRA
- ITA
- POL
Network Integration Evaluation 16.1/Bold Quest 15.2 (NIE/BQ) Sep-Oct 15

- Addressed Modernization, Interoperability and Training Readiness – equal priorities, shared resources
  - Service, multi-national and joint interoperability are essential tasks
  - Event guided by a Joint Exercise Directive endorsed by Senior Leaders

- Build upon NIE/BQ 14.2 Proof of Concept from the first NIE by expanding Joint/Multi-national interoperability assessment
  - Establish a coalition mission network
  - Mission partners use organic mission command systems on their network
  - Mission partners integrate core services (Email, Chat, VoIP, GAL) suite

- Joint Forcible Entry Operation (JFEO) scenario provides a realistic Service, Joint and Multi-national training opportunity
  - Integration of BQ vignettes into scenario created opportunities
  - Opportunity to meet Joint/Service objectives in a cost effective way

“We need to reassess what capabilities we need most, rethink how we develop the Joint Force, and reconsider how we fight together.” (GEN Dempsey, CJCS)
**Bold Quest Mission Network**

**Where Did We Begin?**

- **Reference Models:**
  - Afghan Mission Network
  - NATO Federated Mission Networking
  - Mission Partner Environment

- **Documents:**
  - DoD Joining Instructions for Episodic Mission Partner Environments

- **Premise of the BQ 15.2 MPE:**
  - Secret Releasable Environment
  - Afford Partner Nations the opportunity to “Play as they fight”
    - Federate 3rd Stack, host own Core Services & Mission Command Systems from their enclave
    - Partner Nations co-author Joining, Membership, and Exit Instructions (JMEIs), the “how to”, with J6
  - Core Services (VoIP, Chat, Email with Global Address List Synch, Shared Drive)
  - Phased Risk Reduction Events a MUST
**BQ/NIE Mission Network – The Big Picture**

**BQ Mission Network (Secret REL BQ)**

- Ft. Bliss, TX
- MND
  - UK NCMP
  - FRA NCMP
  - DNK NCMP
  - NOR NCMP
- Holloman, NM

**BQ UNCLAS Network (UNCLAS REL BQ)**

- Ft. Bliss, TX
- Holloman AFB
- WSMR, NM
- Hurlburt AFB, FL
- Colorado
- WSMR, NM
- CDS
- Canada
- Norway
- Suffolk, VA

- Eglin AFB, FL
- APG/JOIN/AO-OD
- Suffolk, VA

**Joining, Membership and Exit Instructions**
**BQMN Implementation Timeline**

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<th>Build</th>
<th>Implement</th>
<th>Feedback</th>
<th>Actions/Outcomes</th>
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**JMEI Initial Build**

**BQMN Risk Reduction**
- (JMEI core services, infrastructure, policy, mission command systems)

**Phase 1**
- CV2E
- Validate core svcs: chat, VoIP, email w/ attachments, GAL sharing/ Ft. Hood/NOR/UK
- Apr 2015

**Phase 2**
- BQMN
- Validate network infrastructure and policy/ J6/MND(CERDEC/APG)
- Jun 2015

**Phase 3**
- BQMN
- Infrastructure/core services – J6, MND(CERDEC/APG)
- Jun 2015

**Phase 4**
- BQMN
- Infrastructure/core services – Level 1 -2: J6, MND(CERDEC/APG), FRA
- Jul 2015

**Phase 5**
- BQMN
- NIE VALEX/COMMEX; Infrastructure/core services – Level 1 -2; Level 2-3: J6, MND(1AD), UK
- Aug 2015

**BQMN Implementation as a Multi-National Team**

**BQMN/JMEI Observation & Feedback**

**Plan for Next Event**

**Inform Senior Joint/Service Forums**

**Inform DoD Joining Instructions**
How do you know when you arrive?

Coalition Interoperability Assurance and Validation (CIAV)

- Improve global interoperability
- Implement and execute:
  - Coalition focused, mission based process
  - Persistent Environment
    - Experimentation
    - Support Development and Operational Assessments
- Train as we “Partner”
- Proactive vice Crisis Management
**Bold Quest Mission Network -- So What?**

**What we did do:**
- Focused on human-to-human collaboration; Core Services.
- Provided the network fabric allowing Partner Nations to federate and operate their own networks, core services, Mission Command systems.

*Did the BQMN (MPE) support the sponsors’ intent to maximize information sharing, interoperability and mission success?*

**How well did we do this?**
- Coordinated MPE Assessment of Operational and NETOPS centers during execution (DNK, FRA, GBR, NOR, USA (1AD))
  - Objectives: Addressed BQMN effectiveness, core services usage, JMEI utility
  - MPE Assessment mutually supported Army Mission Command 2020 Focused End State 4.0
- MPE Assessment End State: BQ JMEI baseline, inform senior leaders (service, agency, joint forums) and DoD Joining Instructions for Episodic MPE
**BLUF MPE Observations**

- Stable and Robust MPE supported NIE/BQ event facilitating Mission Partner Objectives
- Speed of Command/Situational Awareness affected when US/Coalition mission command systems are not interoperable
- MPE design complicated by multiple events occurring in the same time and space with separate command structures and mission objectives
- Core Services were used extensively by all mission partners – include Web Services
- Critical to the success of an MPE are thorough and valid Pre-Exercise Mission Rehearsals
- Successful Network Connection Approval Team process for joining mission partner networks
- JMEIs were detailed and effective when developed for all echelons, read and implemented
**Bold Quest Mission Network – Way Ahead**

**What’s next:**

- Focus on machine to machine data capture (Mission Command systems)
- Offer Partner Nations the opportunity to connect their National networks utilizing Cross Domain Solutions.
  - Challenges exist; must understand and address strategic/policy concerns for governing bodies (Defense IA/Security Accreditation Working Group, Designated Approving Authorities, etc.) – *define an acceptable level of risk*
- Points for continued education and exploration
  - MPE fundamentals and big picture (congruence w/ NATO Future Mission Network)
  - How to operate outside of SIPR and NIPR?
    - Finding right balance of mission command systems to operate on an MPE and parallel U.S. networks
  - Tetragraphs for Episodic MPE’s – multi-month process
  - DDL for Mission Command systems operating in Episodic MPEs – process and cost
  - Focus on developing common protocols with Partner Nations