Common Operating Environment, Interoperability, and Command Post Modernization (LOEs 2, 3, and 4)
## CSA’s Principles, Characteristics and Requirements

<table>
<thead>
<tr>
<th>Principles (Why)</th>
<th>Warfighting Requirements</th>
<th>Characteristics of the Network</th>
<th>Technical Network Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mission: The Army must fight and win wars against adversaries…</td>
<td>- Able to fight, shoot, move, communicate, protect, and sustain</td>
<td>- Simple and Intuitive, single mission command suite (Single COP), installed, operated and maintained by Soldiers</td>
<td>- Must be capable of adequate secure communications, provides voice, data, video in all environments</td>
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<tr>
<td>1st Principles: The Army network must enable:</td>
<td>- Reliably communicate anywhere, anytime, in all domains, in all environments, against any foe</td>
<td>- Available, Reliable and Resilient with the ability to operate in all operational environments against any enemy</td>
<td>- Capable of providing situational awareness down to Platoon level</td>
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<tr>
<td>1. Conduct of War: Execution of expeditionary, world-wide, Unified Land Operations (ULO) to shape, prevent, and win as a part of Unified Action in all domains and all environments (Note 1/2/3/4)</td>
<td></td>
<td>- Expeditionary and Mobile, voice, data, and video on the move</td>
<td>- Device works anywhere in the world; installed, operated and maintained by Soldiers</td>
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<td>2. Preparation for War: Execution of Title 10 responsibilities to man, train, and equip the force, and to build and sustain readiness.</td>
<td></td>
<td>- Standards-based, protected, and dynamic network that is upgradeable over time</td>
<td>- Standardized: Runs on a COE, common graphics, applications, and integrated data</td>
</tr>
</tbody>
</table>

Note 1: Unified Actions Partners – Consisting of Joint, Interagency, Intergovernmental, and Multi-National (JIIM) partners
Note 2: Domains – Land, maritime, air, space, cyber
Note 3: Environments – Permissive, non-permissive, contested, denied
Note 4: ULO – Simultaneous offense, defense, and stability or defense support of civil authorities tasks to seize, retain, and exploit the initiative and consolidate gains to prevent conflict, shape the operational environment and win our nations wars as part of unified action
Mission Command Systems

Current
- Different User Interfaces
- Different Maps
- Different Training
- Different Hardware

Future
- Common User Interface
- Single Shareable Geospatial Foundation
- Transferable Training
- Common Hardware
CPCE will provide an intuitive user experience for Movement and Maneuver Applications while setting conditions for additional Warfighting Functions to converge from stovepipped systems to integrated applications.
Command Post Improvements

Unit Initiatives

Future CP Characteristics

- Hosts COE Applications
- Expeditionary
- Agile
- Scalable
- Integrated Designs
- Reduced Footprint
- Mobile
- Energy Efficient
- Formation Appropriate
- Survivable

Current Program of Record

CPI2 Objective
The Multiple Layers to Interoperability Challenges

Levels of Interoperability

- **Deconflicted**: Aligned capabilities and procedures, no interaction
- **Compatible**: Effective interaction and complimentary processes
- **Integrated**: Network enabled full interoperability

Types of Partners?

- **Joint**: USAF, USMC, USN, SOF
- **Allies/Partners/Others**: ABCANZ, ROK, NATO, Others
- **Inter-Org**: USG IA, MN GOV, HN GOV, NGOs

At Echelons?

- Theater Army
- Corps
- **Division**
- Brigade
- Battalion

Across the Range of Military Operations (ROMO)

- Mil. Engagement/Security Coop./Deterrence
- Crisis Response/Limited Contingency
- Large Scale Combat Operations (LSCO)

Interoperability across the various Warfighting Functions?

- Mission Command
- Movement & Maneuver
- Fires
- Intelligence
- Sustainment
- Protection

Priorities? Non-negotiable Areas? Forcing Functions?

ABCANZ goal is an integrated 2-star HQ for LSCO NLT 2020

At what level is the information protected?

Top Secret
- Secret
- SEC//REL
- Secure UNCLASS
- Unclassified
Path Forward

Key Interoperability Opportunity Events (Campaign of Learning)

- WFX 18.4
- JWA 18.1
- USAREUR Saber Strike
- All things Pacific
- CTC Rotations
- JWA 19.1

All things Pacific

Determining Levels of Interoperability (Prioritized 1-N List)

- Cross Functional Teams
  - CONUS MPE
  - Digital Fires
  - ISR/Intelligence Fusion
  - Secure Tactical Voice
  - Key Sustainment Capabilities

Decision Drivers

- MC Interoperability White Paper
- Interoperability Proponent
- Governance/Framework
- Full DOTMLPF-P Analysis

Objectives

- MPE Digital COP
- MPE Core Services
- Digital Fires
- ISR/Intel Fusion
- Secure Tactical Voice
- Key Sustainment Capabilities

Conus MPE

CTC Rotations

Army, Joint, Combined Exercises

Informs longer term efforts

Integrated

Deconflicted

Compatible
Start with Software Development Kits (SDK), they describe:

• CPCE/MCE architecture and components for infrastructure, core utilities and MC applications. Data strategy and the ways to extend it.
• The strategy to achieve common look and feel with specific examples.
• How 3rd party developers can work convergence including Data Architecture, User Interface, Geospatial and HW perspective.
• Command Post solutions in support of CSA principles, characteristics, and requirements.
• Interoperability solutions that increase Unified Partner access to Mission Command Systems.