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# Installation Information Infrastructure Modernization Program (I3MP)

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# When You Behave as an Enterprise – You Architect as an Enterprise – and You Create an Infrastructure that is Inherently Less Vulnerable, More Efficient and More Effective

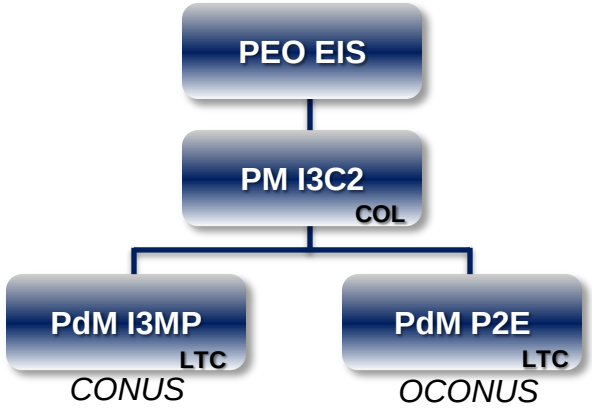
*- LTG Susan Lawrence, former Army CIO/G-6*

# Mission

Enable the Warfighter through information technology infrastructure modernization and life cycle management of the Army's CONUS Installation Campus Area (Voice, Video & Data) Networks and Strategic Command Centers across the Army

# Mission Tasks

- **Installation Campus Area Network (ICAN) Modernization**
  - Data Network (Core, Distribution, and Access Layers)
  - Facility Infrastructure (Power, HVAC, Grounding)
  - Voice Networks
- **Secure Infrastructure Modernization**
  - Legacy Top Level Architecture (TLA) Stacks
  - DRSN
- **Strategic Command Center Modernization**
  - Worldwide mission
  - Fully executing all CONUS sites
  - Partnering with PdM Power Project Enablers (P2E) for OCONUS Sites




Current Workload: 44 ongoing projects valued at over $550M

I3C2 - Installation Information Infrastructure Communication and Capabilities
P2E – Power Projection Enablers

# Network Modernization

| Network 2020 & Beyond Lines of Effort | 1. Network Capacity | 2. Enterprise Services | 3. Network Operations (NetOps) & Security |
|---|---|---|---|
| | CONNECT & OPERATE | SHARE | ACCESS & DEFEND |

- Single, Secure, Standards-Based Network
  - Created in partnership with DISA – build single Architecture for Army and beyond
  - Using carrier class standards-based technologies
  - Built-in Security across the entire enterprise
- Enable Global Collaboration
  - Architecture built with Joint Service, Interagency, and Intergovernmental environment in mind
  - Bringing synergy to multiple communities of interest
- Access at the Point of Need
  - Facilitating Digital Training on any platform, anywhere, anytime
  - Enabling Installation as a Docking Station and Live Virtual Constructive Training
- Capable, Reliable, and Trusted
  - Providing a solid network infrastructure that is Always On, Always Connected
  - Maintaining Business/Mission Command applications and services on the Net

# Network Modernization - Objectives

- Bandwidth should no longer be an issue when Soldier needs new capability
  - Upgrade Core Routers to 10Gb/s (capable of supporting 100 Gb/s)
  - 10 Gb/s across B/P/C/S: DISA router to End User Building
- Reduce number of Entry/Exit points to NIPRNET
  - From 435 points in CONUS to less than 20 Globally
  - Enable capabilities such as IP-to-IP VTC
- Move to Single Network - Collapse 30+ Army networks
- Standardize configuration of Army Installation Campus Area Networks
- Centralize data – approx. 80% of Army data is user files
- Improve Content Management
  - Emplace behind security stacks
  - Reduce malware and malicious code

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# Network Modernization (NETMOD)

## … It Is a TEAM SPORT!

# NETMOD Lines of Effort

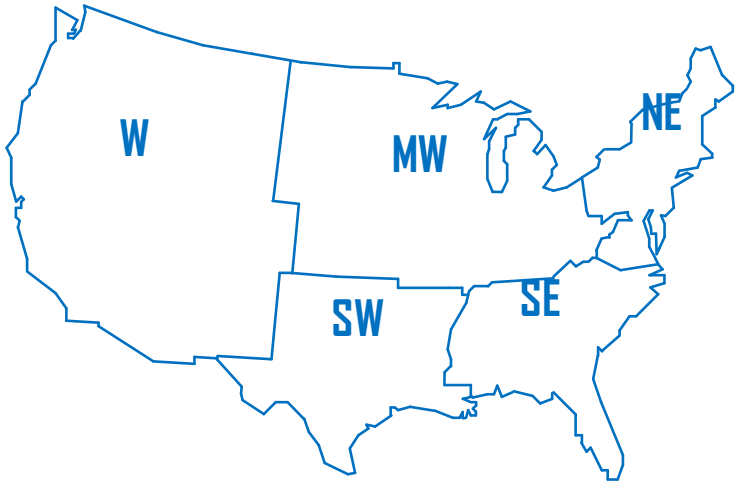
| Line of Effort (LOE) | Description |
|---|---|
| DISN Optical Upgrade | DISA upgrade of aging DISN Infrastructure |
| Joint Regional Security Stacks (JRSS) | DISA procurement/installation of 11 regionalized security stacks in CONUS |
| Physical Diversity to DISN | Connection of Army B/P/C/S to the DISN via two physically diverse routes |
| Core Routers (E-PE) | DISA installation of new DISN Core Routers at Army B/P/C/S |
| Joint Network Management | End-to-End network visibility with common views between DISA and Services |
| ICAN ACS/EAS Upgrades | Army upgrade ICAN Ethernet switches |

- Set conditions for future success
- Improve foundational network elements
- Pave the way for CIO/G-6 Installation Capability Sets

DISN – Defense Information Systems Network
E-PE – Enterprise Provider Edge
B/P/C/S - Base/Post/Camp/Station
ACS – Area Core Switch
EAS – Edge Access Switch
ICAN – Installation Campus Area Network
ISP – Inside Plant
OSP – Outside plant
SC(T) – Theater Signal Command

# NETMOD Execution Approach

- **Build strong partnerships (Teammates)**
  - 7th Signal Command (Theater), NETCOM
  - DISA
  - Army Information Systems Engineering Command (ISEC)
  - Tobyhanna Army Depot
  - Industry Partners
- **Economy of scale hardware procurements**
- **Prioritize by Regions**
  - Currently focused on SW and SE
- **PM function as the Lead System Integrator for switch modernization**
- **Leverage the Army organic skills… "harness the power within"**
  - Owner/operator - buy in
  - Improves training
- **Establish/refine processes… then build velocity**
- **Work lines of effort simultaneously whenever possible on a B/P/C/S and/or Region**
  - 7th SC(T)'s two Brigades and DISA to build and/or modernize network capacity



# Installation Capability Sets

- **Army CIO/G-6 description of network modernization initiatives**
- **Foundational Installation Capability Set includes:**
  - NETMOD
  - Outside Plant Modernization
    - Multi-mode to single-mode fiber upgrades
    - Ensuring appropriate high availability connections to C2 Users
    - End user building connections to Area Core Switches
  - Facility infrastructure upgrades
  - Voice network modernization
    - Conversion of B/P/C/S voice circuits to Internet Protocol (IP)
    - Transition from Time Distance Multiplexing (TDM) to Voice-Over-IP (VoIP) technology
    - Connection to DISA's Enterprise VoIP architecture
    - Cloud-based voice services: Automatic Call Distribution, Conferencing, etc.
- **PdM I3MP voice end-point focus is on users requiring hardware based phones and legacy phones not able to convert to VoIP**
- **Foundational Installation Capability Set paves the way for future technologies**

# PdM I3MP Path Forward

- **Paradigm Shift**
  - OLD Method: Extended surveys, serial execution, post specific solutions, project durations of 24-36 months
  - NEW Method: Standardize, build efficiency, simultaneous operations, leverage organic Army resources and Industry for Subject Matter Expertise
- **NETMOD is building velocity in SW and SE (#1 Priority)**
- **ISEC conducting surveys for Installation Capability Set requirements**
  - Working in conjunction with the NETMOD survey teams
  - Priority is Outside Plant requirements
- **Developing TDM-to-VoIP strategies with PEO EIS, NETCOM, DISA, and Air Force**
- **Partnered with DISA on fielding Enterprise Session Controllers in FY14/15**
- **Standardizing technology solutions for Strategic Command Centers**
- **Refining organizational structure of PdM I3MP to build efficiency**

# Summary

**Together – As a Team – We Will Achieve A Single, Secure, Standards-Based Joint Network that Powers America's Army, Making it the Most Capable Force in History.**

*- LTG Lawrence, former Army CIO/G-6*

- **Network Modernization is a TEAM SPORT**
- **The scope of CONUS Installation Capability Set Modernizations is massive and complex**
- **Switch upgrades is only one piece of NETMOD and Installation Capability Sets, there is much work to be done!**
- **The Army cannot accomplish these tasks without the support of our great information infrastructure Industry Partners**

# Thank You!

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# Questions and Comments