CIOG6.ARMY.MIL

The Army's Network Modernization Strategy

14th Annual AFCEA NOVA Army IT Day

CIO/G-6

ENABLING SUCCESS

For Today and Tomorrow

LTG Robert Ferrell

Chief Information Officer/G-6

February 4, 2015

2015 Strategic Leader Direction

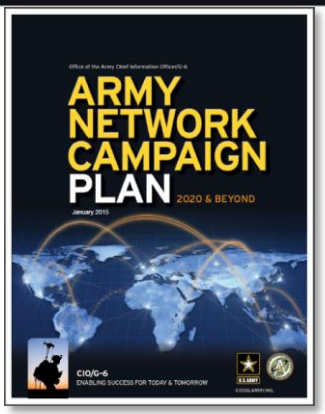
"**No foreign nation, no hacker, should be able to shut down our networks,** steal our trade secrets, or invade the privacy of American families, especially our kids…we're making sure our government integrates intelligence to combat cyber threats, just as we have done to combat terrorism."

~ Barak Obama, President of the United States
State of the Union Address, 1/20/2015

"**How do we integrate different concepts,** manned and unmanned capabilities, cyber, information operations, how do we increase mobility and lethality? How do we do it with smaller footprints? Those are the challenges we have to address."

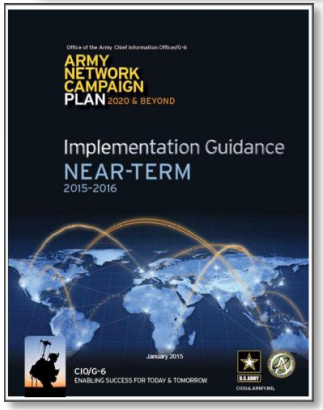
~ Gen Odierno, Chief of Staff of the Army
AUSA ILW Breakfast, 1/22/2015

Army Network Strategy Documents



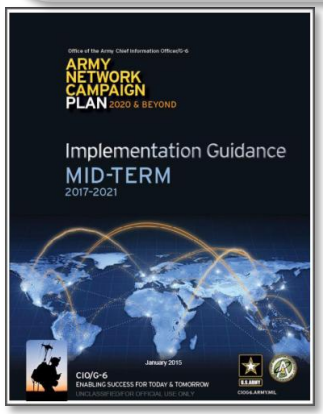
Army Network Campaign Plan 2020 and Beyond

- Links Army & DoD Strategies
- Describes network related end states at a high level and outlines the LOEs



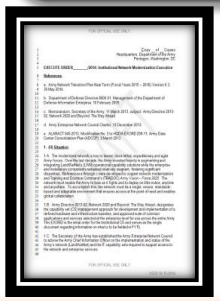
Implementation Guidance Near-Term (2015 - 2016)

- Describes activities in year of execution
- Reflects acquisition, resource and mission reality
- Guides design & development of the next network capability



Implementation Guidance Mid-Term (2017 - 2021)

- Focuses on network capabilities
- Influences program resource planning within Program Objective Memorandum (POM)

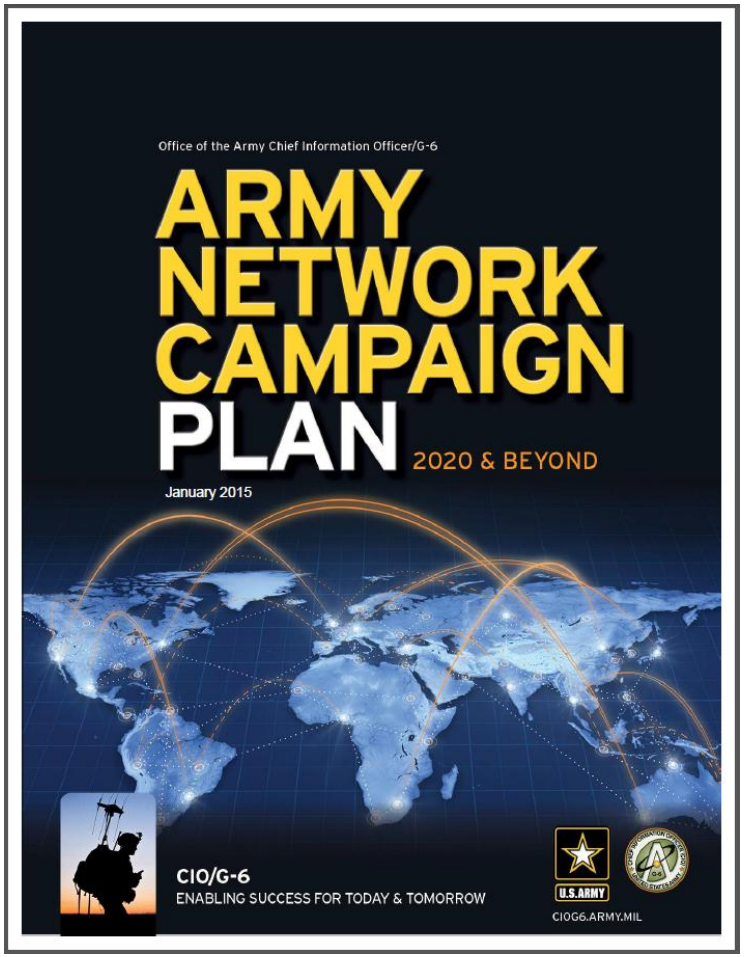


NetMod EXORD

(Published 28 Feb 2015)

- Provides network related capability set execution guidance, role and responsibilities

Army Network Campaign Plan



Purpose

- Defines CIO/G-6's Vision, Mission and Role's for the Army Network
- Clarifies Strategic Environment Facing the Army
- Introduces CIO/G-6 Lines of Effort (LOE), Desired End States and Supporting Objectives
- Provides an Army Network Initiatives Roadmap

Vision, Mission, Role

Network Vision

A secure, integrated, standards-based environment that ensures uninterrupted global access and enables collaboration and decisive action throughout all operational phases across all environments.

CIO/G-6 Mission

CIO/G-6 Leads Army network modernization to deliver timely, trusted and shared information for the Army and its mission partners.

CIO/G-6 Role

CIO/G-6 Defines overall Army network modernization plans and recommends priorities for the resourcing of network modernization activities.

Enabling Success For Today and Tomorrow

Lines of Effort

Provide Signal Capabilities to the Force

- 1.1 Align force structure
- 1.2 Equip force
- 1.3 Update doctrine
- 1.4 Align training and training support capability

Enhance Cyber Security Capabilities

- 2.1 Minimize attack surface, establish physical path diversity, strengthen data defense
- 2.2 Deploy passive & active cyberspace defense capabilities
- 2.3 Improve cyber-sensing infrastructure, harness big data & increase info sharing

Increase Network Throughput and Ensure Sufficient Computing Infrastructure

- 3.1 Implement End-to-end transport infrastructure
- 3.2 Transition from disparate data processing
- 3.3 Standardize suite of centrally managed EUDs
- 3.4 Sync deployable & fixed network

Deliver IT Services to the Edge

- 4.1 Plan for global Unified Capabilities
- 4.2 Transition to Unified Capabilities
- 4.3 Integrate into tactical network

Strengthen Network Operations (NetOps)

- 5.1 Converge to single IT enterprise, reduce complexity
- 5.2 Define spectrum analytic reqts
- 5.3 Centralize oversight of critical assets, integrate mgmt/ execution decisions
- 5.4 Enhance & extend incident response, audit, cybersecurity mgmt & SA services
- 5.5 Develop CONOPS

INTEGRATED NETWORK

COMMON OPERATING ENVIRONMENT

SIMPLIFIED, PROTECTED AND INTEROPERABLE NETWORK

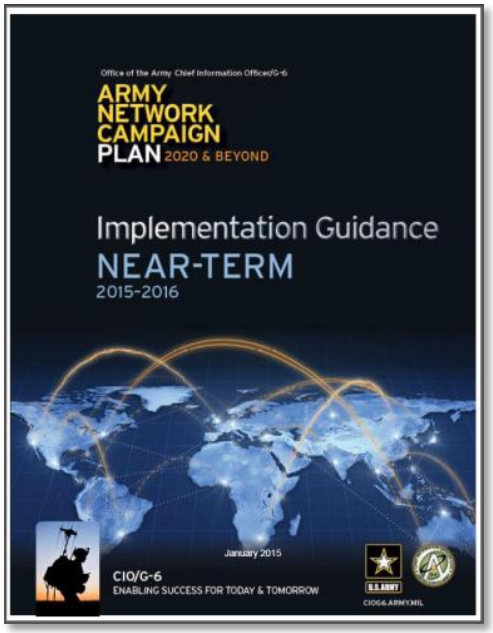
AGILE EXPEDITIONARY COMMAND POSTS

ENHANCED HOME STATION, TRAINING & READINESS

Near Term (2015-2016)

NETWORK NEAR-TERM CAPABILITIES

- Common Operating Environment (COE)
- Infrastructure Modernization & Network Consolidation (MPLS)
- Cyber Attack Surface Reduction (JRSS)
- Single Service Management System (JMS)
- Data Center Consolidation & Application Rationalization/Migration
- Unified Capabilities (UC) RFP
- Government/Commercial Cloud
- Refine the Role of Cyber Workforce
- En Route and Early Entry Command Post
- Command Post Computing Environment (CP CE)
- Distributed Mission Command

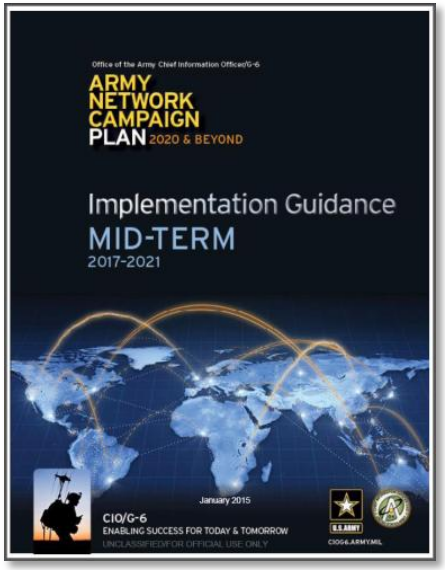


BIG IDEAS

- **Common Operating Environment:** standardization across computing environment with simplified user experience
- **Cloud**-based collaboration
- **Bandwidth** to meet the demand of the current and future Army
- **Extending Enterprise Services** into the Tactical Edge

Mid Term (2017-2021)

NETWORK MID-TERM CAPABILITIES



- Unified Capabilities as a Service (UCaaS)
- Secure Mobile Solutions / 4G LTE and Wireless (WIFI)
- Leverage Big Data Analytics
- Mission Partner Environment
- Transportable Tactical Command Communications (T2C2)
- Data radios to support Company and below key leaders
- Command Post Computing Environment v2 and v3
- Mounted CE with a common software foundation and development kit for COE v3 with interoperable apps and widgets
- Synchronize and integrate continuous monitoring solutions
- Access management based on user identity attribute size cryptology capabilities

BIG IDEAS

- **Wireless** networks and Bring Your Own Device
- **Unified Capabilities** (single device delivering voice, video, and computing capabilities)
- **Collaborate with unified action partners** on any trusted device globally

Army Network of Tomorrow

Vision

A network that is secure, integrated, standards-based, which ensures uninterrupted global access and enables collaboration and decisive action throughout all operational phases across all environments

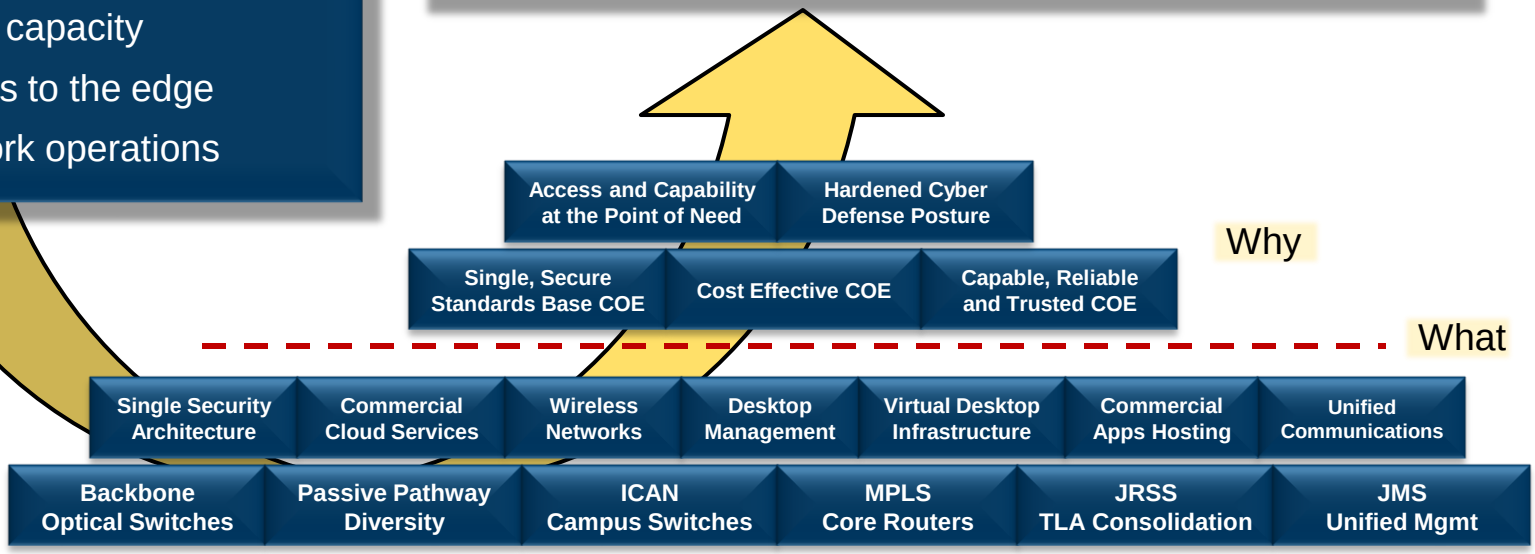
Lines of Effort

- Provide signal capabilities to the force
- Enhance cyber security capabilities
- Increase network capacity
- Deliver IT services to the edge
- Strengthen network operations

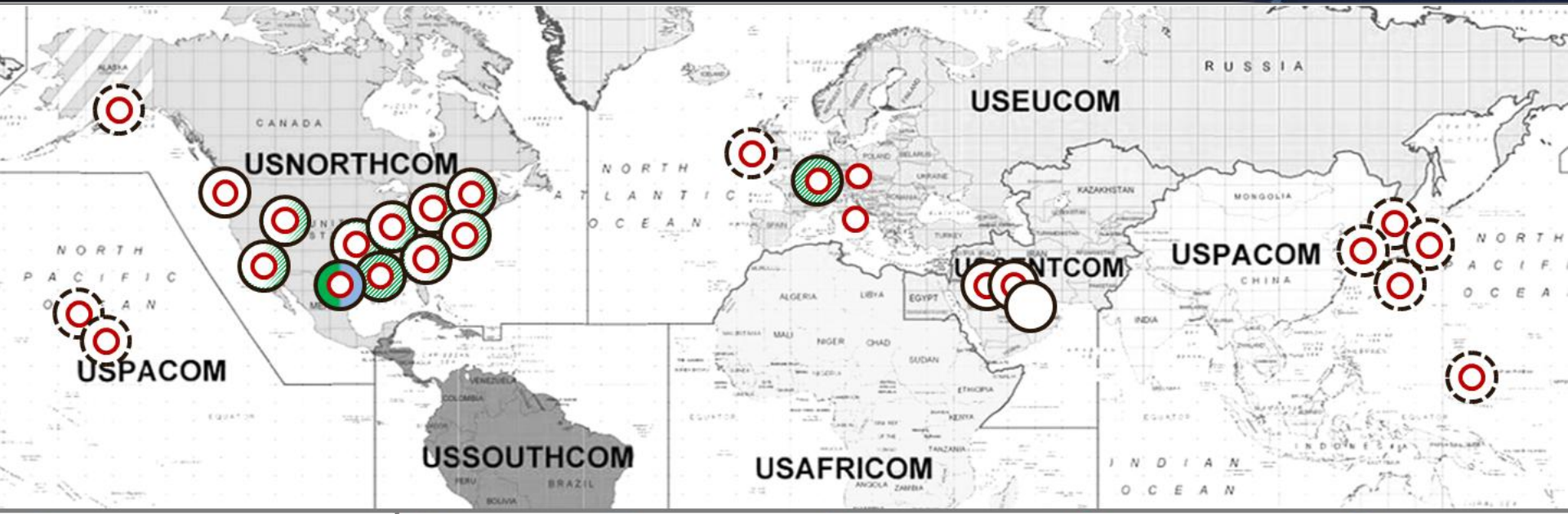
Operational Outcomes

- Joint capable – regionally aligned, globally responsive
- Distributed, uninterrupted Mission Command
- Assured services to the user – anywhere, anytime
- Maximized security
- Resource efficient, Scalable
- Live/Virtual/Constructive training
- Institutional and operational synergy
- Effective Land Cyber operations

Key Network Initiatives



JRSS Global Overview



NIPR JRSS | SIPR JRSS | PLANNED | PROCURED | INSTALLED (Equipment racked and cabled) | ACTIVATED (Baselined, STIGed, ready for traffic) | MIGRATED (Passing operational traffic)

CONUS	EUROPE	SWA	PACIFIC
Texas	Germany – 2	Kuwait	Korea – 2
Oklahoma	United Kingdom	Bahrain	Japan – 2
Pennsylvania	Italy	Qatar	Hawaii – 2
North Carolina			Alaska
Alabama			Guam
Washington			
Missouri			
Ohio			
Utah			
California			
Virginia			

JRSS: Joint Regional Security Stack
Gbps: Gigabits per second (1Gbps=1,000,000,000 bits/second)

Innovation Pilots

JBSA Security / Capacity

- First site with security & capacity upgrades – JRSS/MPLS/Optical Switches
- Informs DoD build-out of the global joint security architecture
- Europe is next for JRSS: 4QFY15 decisions to avoid lifecycle replacement costs of current systems

Redstone Core Data Center

- Modernize, move, kill, sustain applications
- Informs Army-wide data center consolidation & application migration
- Final report due 2QFY15 leading to Phase 2 "Implement" decision

Commercial Cloud

- Two commercial cloud pilots
- Designed to establish cost baseline for services and security models
- First pilot for public facing websites
- Second pilot for NIPRNET-level services

Mobility

- Four tablet & phone pilots
- Sign/encrypt without a Common Access Card
- Access DoD data from public domain
- Classified phone development

Unified Capabilities

- Integrates multiple applications into a single user interface
- FORSCOM pilot for ~400K users
- Replace non-standard, expensive VTC suites
- Request For Proposal 4QFY16

Distributed Mission Command

DoD Information Network

LandWarNet

Home Station Mission Command Centers (HSMCC)

- Continuous situational awareness
- Uninterrupted mission command through all operational phases

Enroute Mission Command (EMC)

- Near-real-time situational awareness

Processing Exploitation and Dissemination (PED)

- Tailored, worldwide aerial Intelligence Surveillance Reconnaissance (ISR)
- Full-spectrum Geospatial Intelligence (GEOINT)
- Full-spectrum Signals Intelligence (SIGINT)

Deployed AOR

Scalable Command Posts

Early Entry Command Post (EECP)

- Exercise effective combat leadership through personal presence

Where We Need Your Help

- Cloud Technologies with Military Utility
- Distributed Cloud Nodes in the Tactical Edge
- Cloud Enabled Training
- Secure Mobile Solutions
- Intelligent / Autonomous Systems
- Appreciate Your Partnership and Teaming!

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