

CISCO IN DEFENSE NETWORK CENTRIC SOLUTIONS & TRENDS

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AGENDA

Challenges

Network Centric Operations (NCO/NEC)

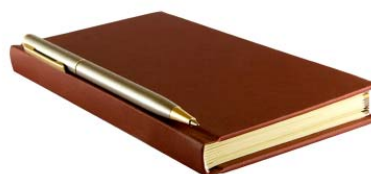
Technical Approach

IP Brigade – an architecture blueprint

Benefits

Conclusion

Case Studies



CHALLENGES

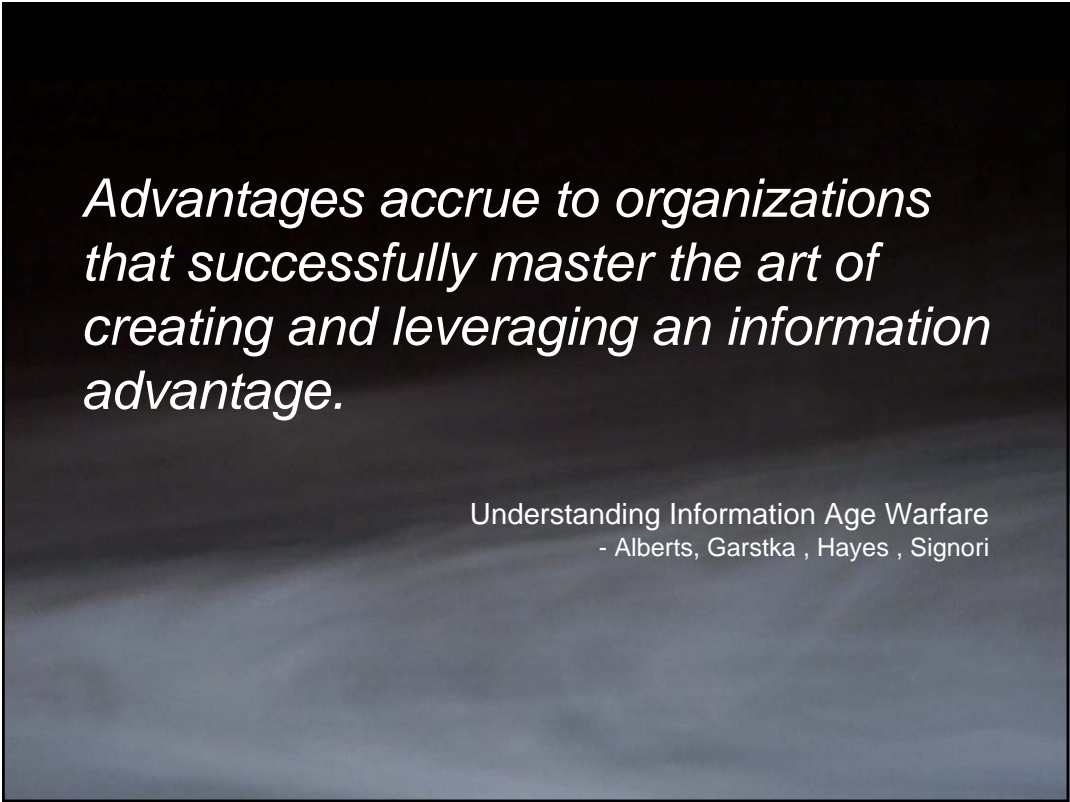
asymmetric
WARFARE

Non-state actors

Non-Traditional warfare

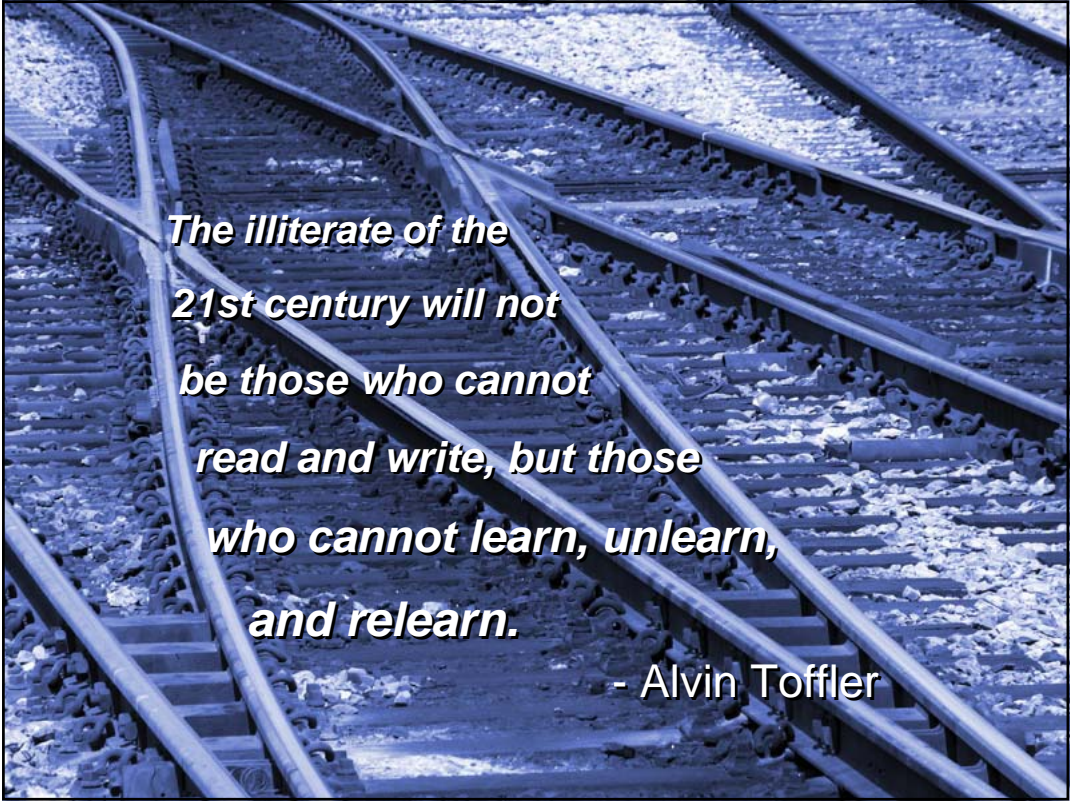
Technological advances





*Advantages accrue to organizations
that successfully master the art of
creating and leveraging an information
advantage.*

Understanding Information Age Warfare
- Alberts, Garstka , Hayes , Signori



*The illiterate of the
21st century will not
be those who cannot
read and write, but those
who cannot learn, unlearn,
and relearn.*

- Alvin Toffler



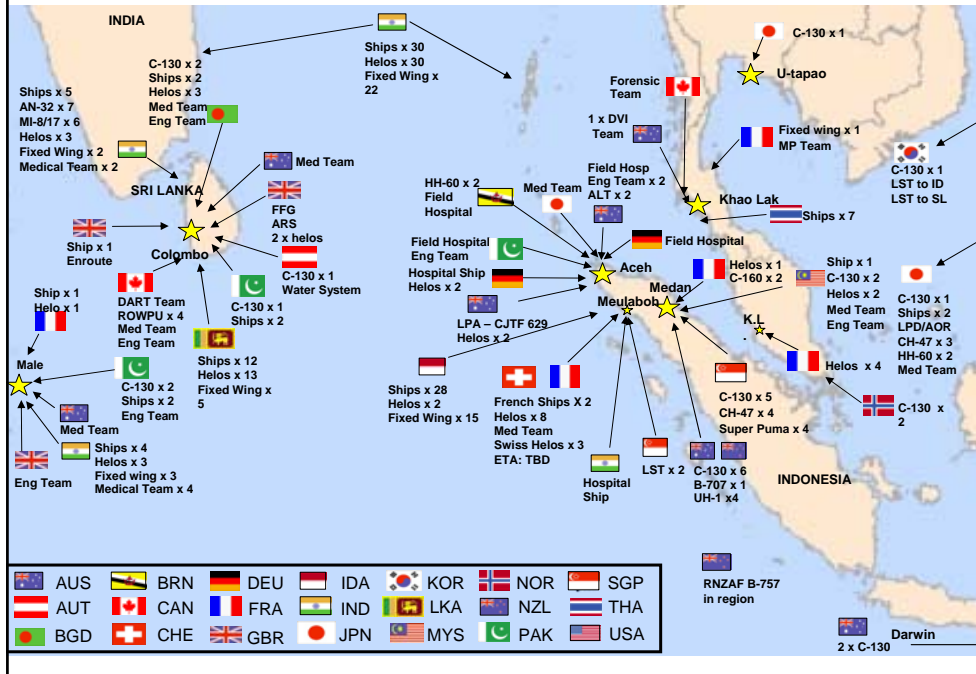
***In every war zone that
I've been in, there has been a reality
and then there has been the public perception
of why the war was being fought. - John le Carre***

WHAT MILITARIES DO

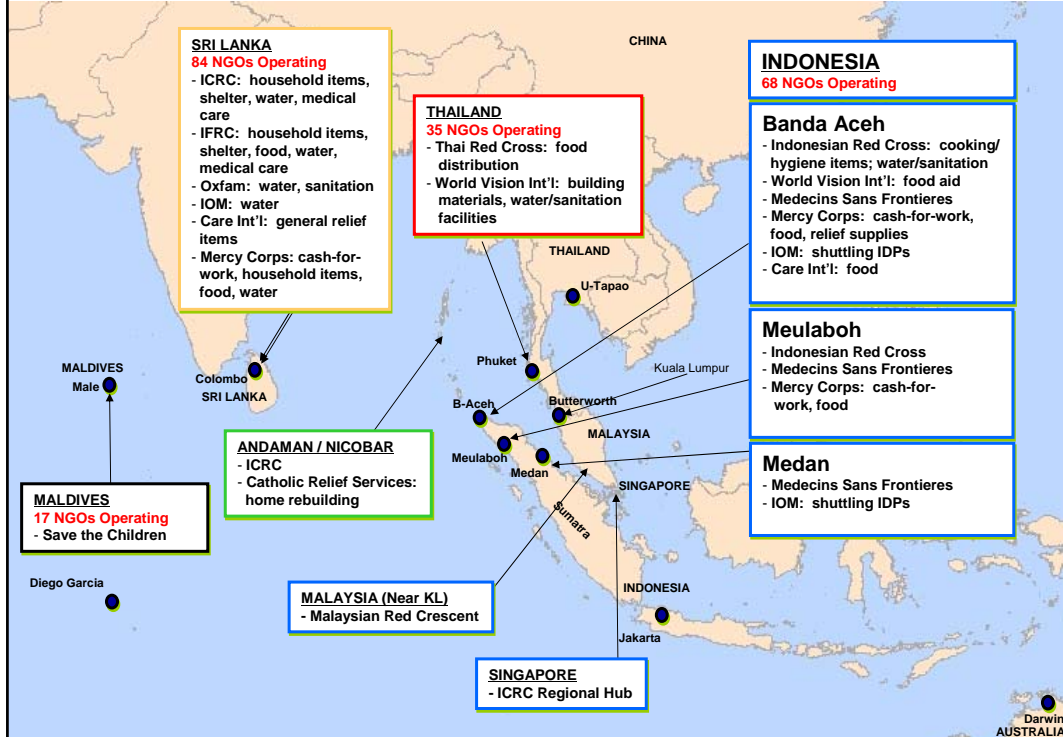
- Warfighting
- Humanitarian
- Peacekeeping
- Evacuation
- Homeland Security



TSUNAMI RELIEF – PARTICIPATING NATION MILITARIES



CIVILIAN RELIEF ORGANIZATIONS

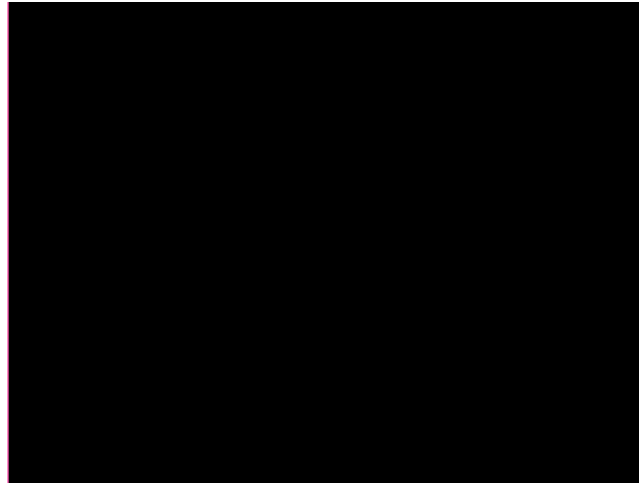


Military IT Challenges & Imperatives

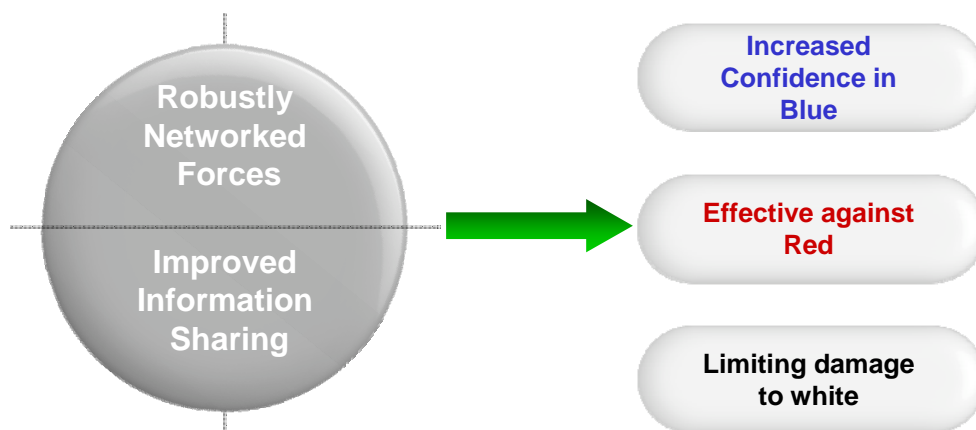


New Services
Phased Migration
Legacy Integration
Interoperability
Cost Effectiveness

**Network Centric
Operations**



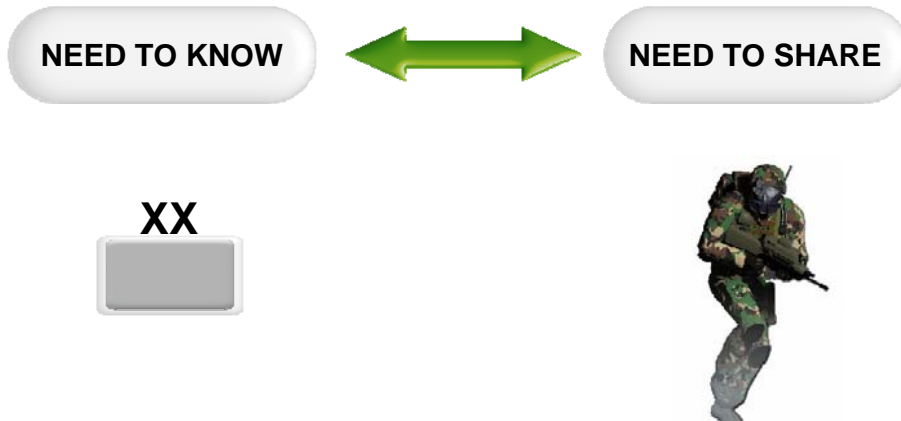
NETWORK CENTRIC OPERATIONS



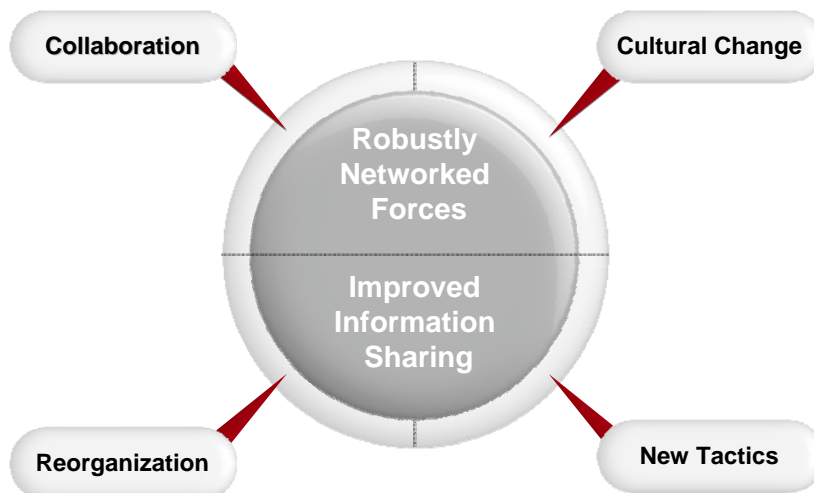
Getting the **right information** to the **right people** at the **right time** for the **desired effects**.

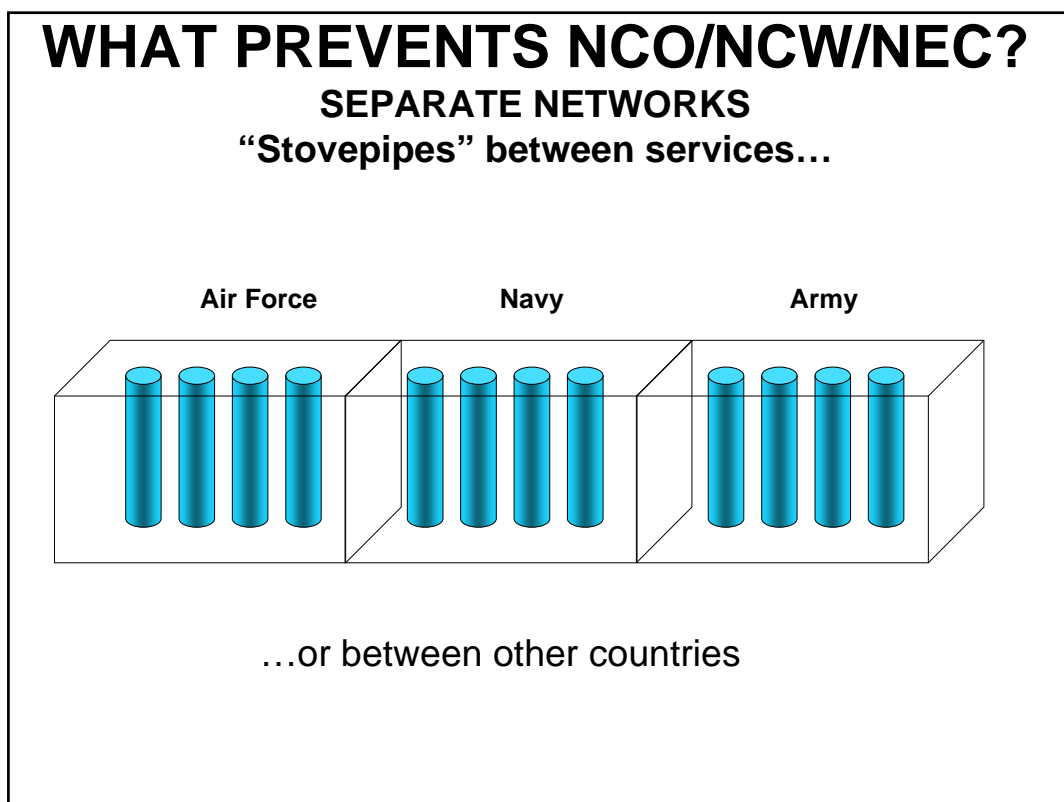
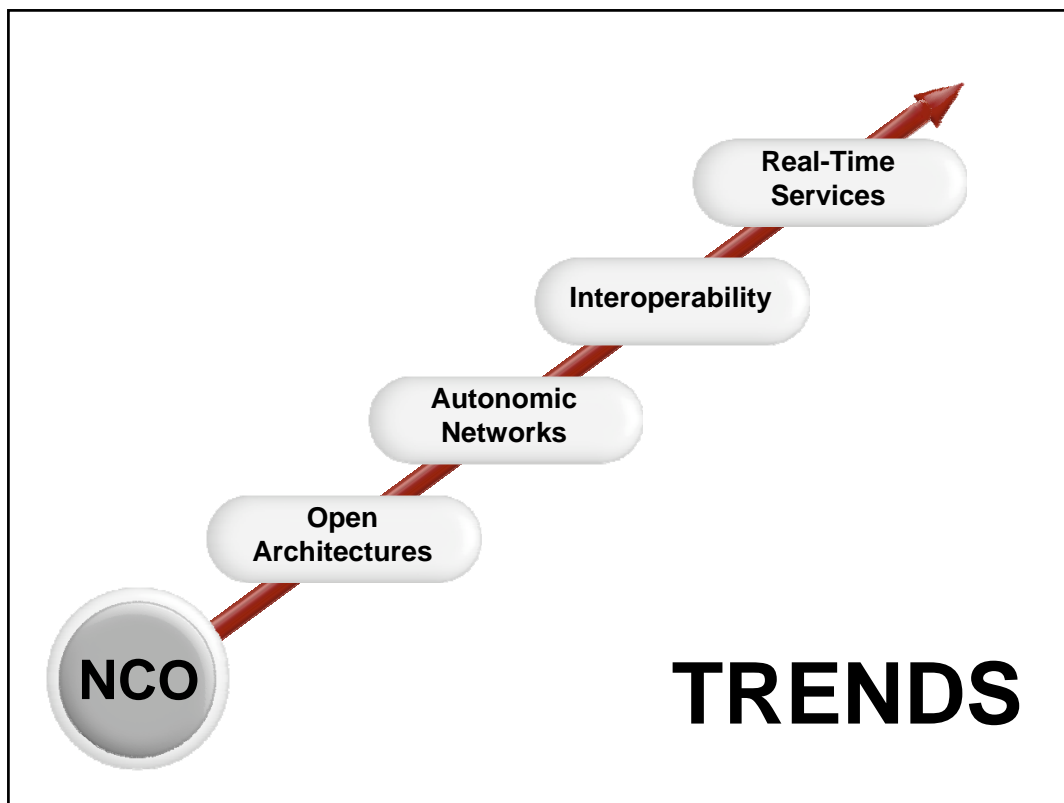
NETWORK CENTRIC OPERATIONS

Information Sharing



NETWORK CENTRIC OPERATIONS

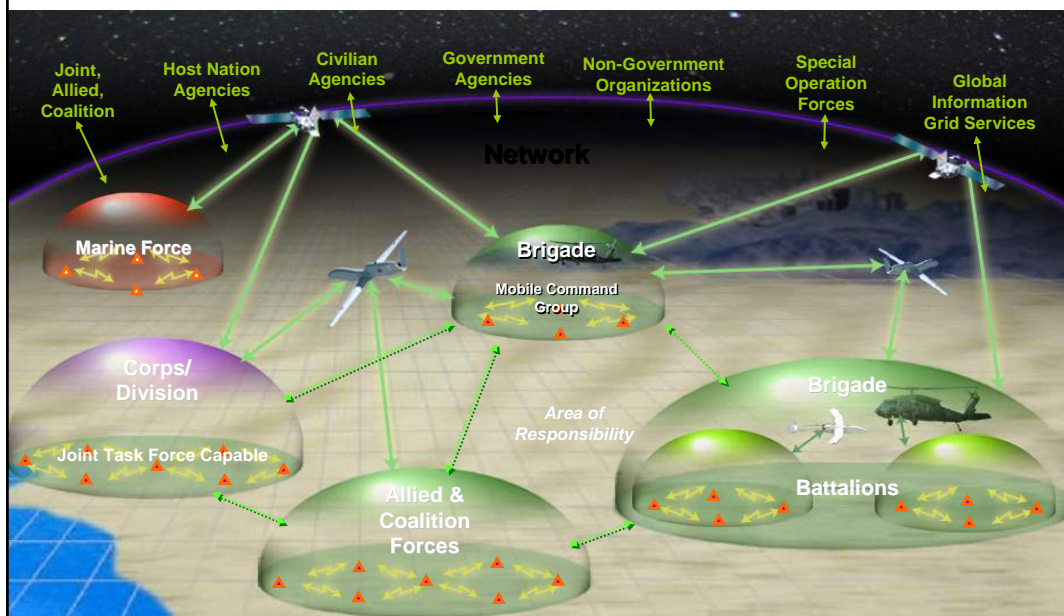




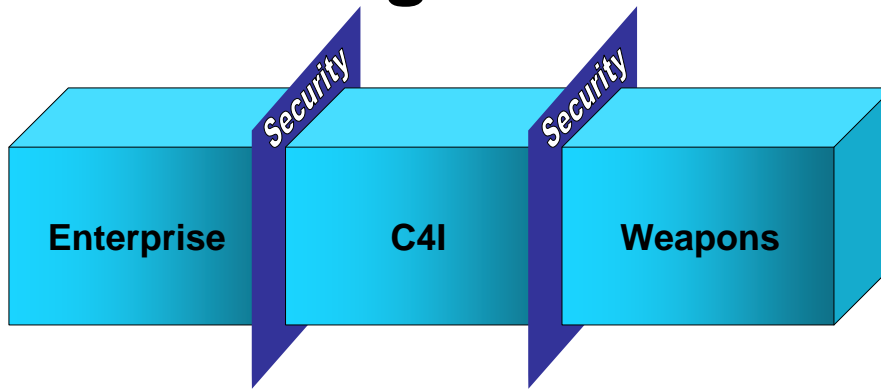
POLICY CHALLENGES

- Communicators – must be recognized
- Doctrine – Commanders must take a leadership role
- Technology – Pace & Proliferation
- Managing Information
- Competing Weapon Systems

IP-Enabled Collaboration



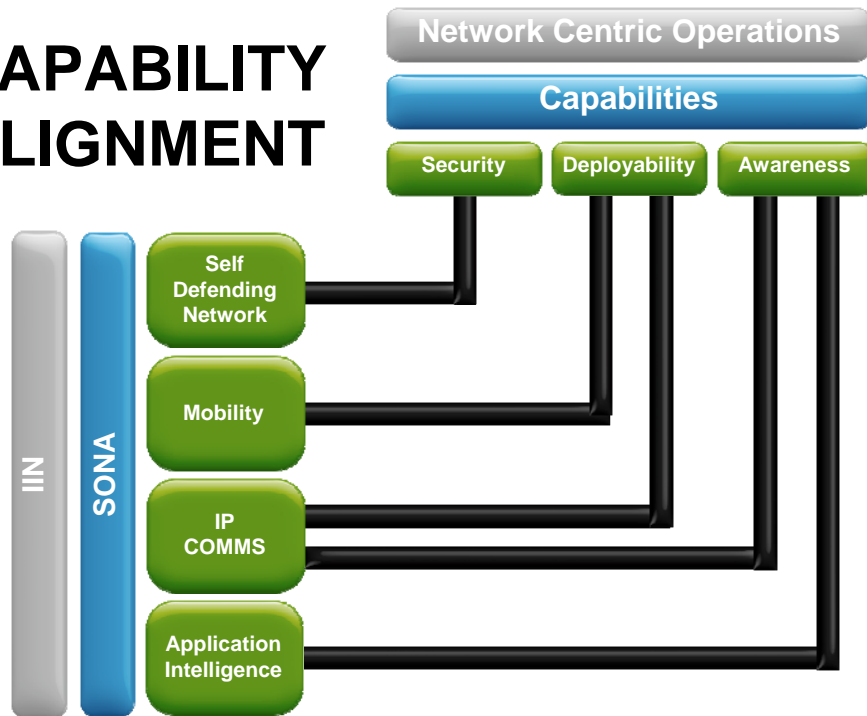
Desired End State - Integration



- The Ideal Situation!

Technical
Approach

CAPABILITY ALIGNMENT



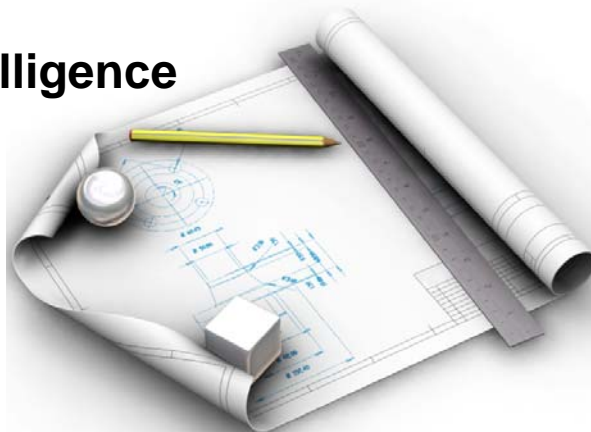
ARCHITECTURE

Modularity

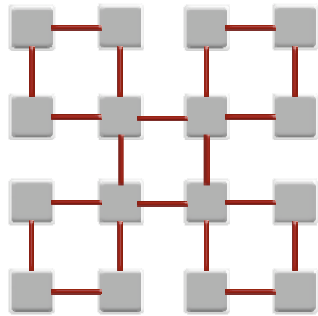
Commonality

Application Intelligence

Security



MODULARITY



Deployable

Plug-n-play

Reusable

COMMONALITY



Interoperability

Convergence

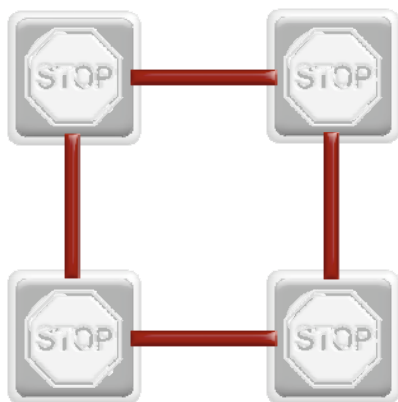
APPLICATION INTELLIGENCE



Prioritization

Virtualization

SECURITY

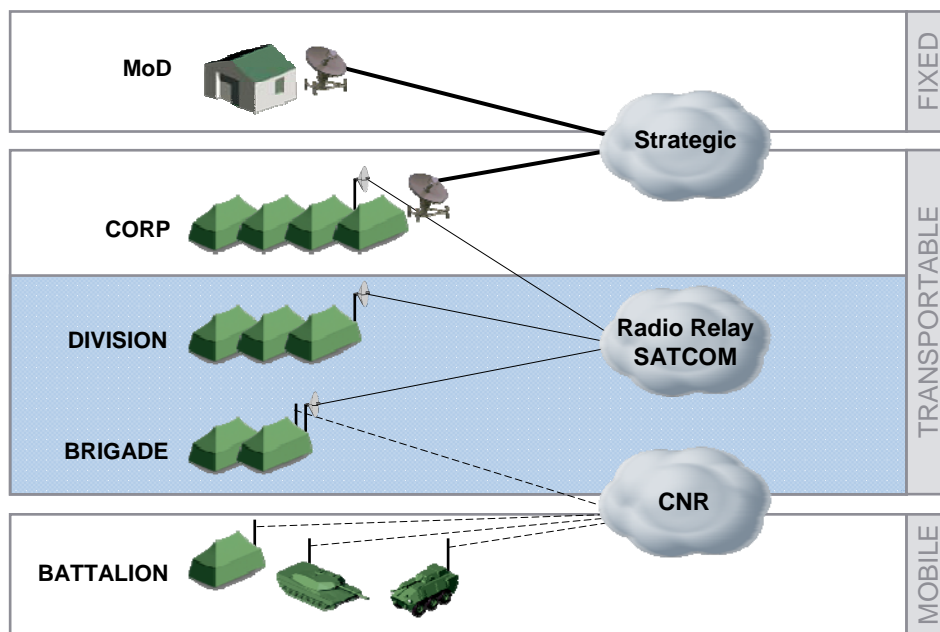


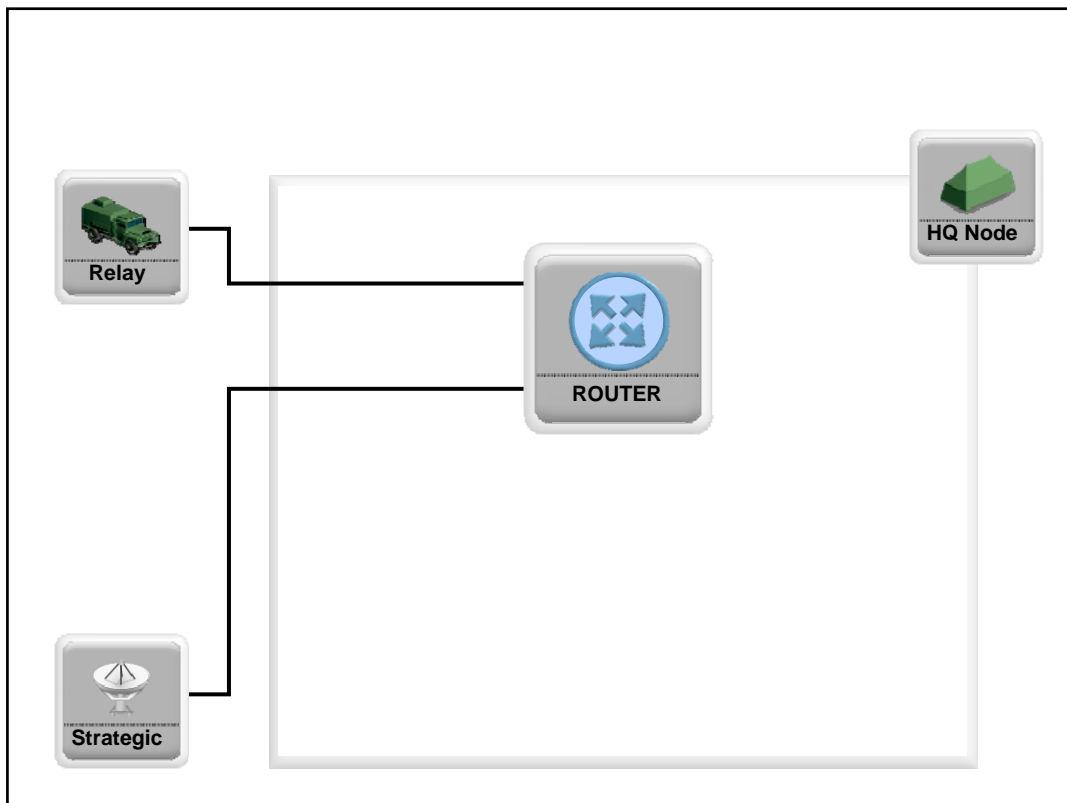
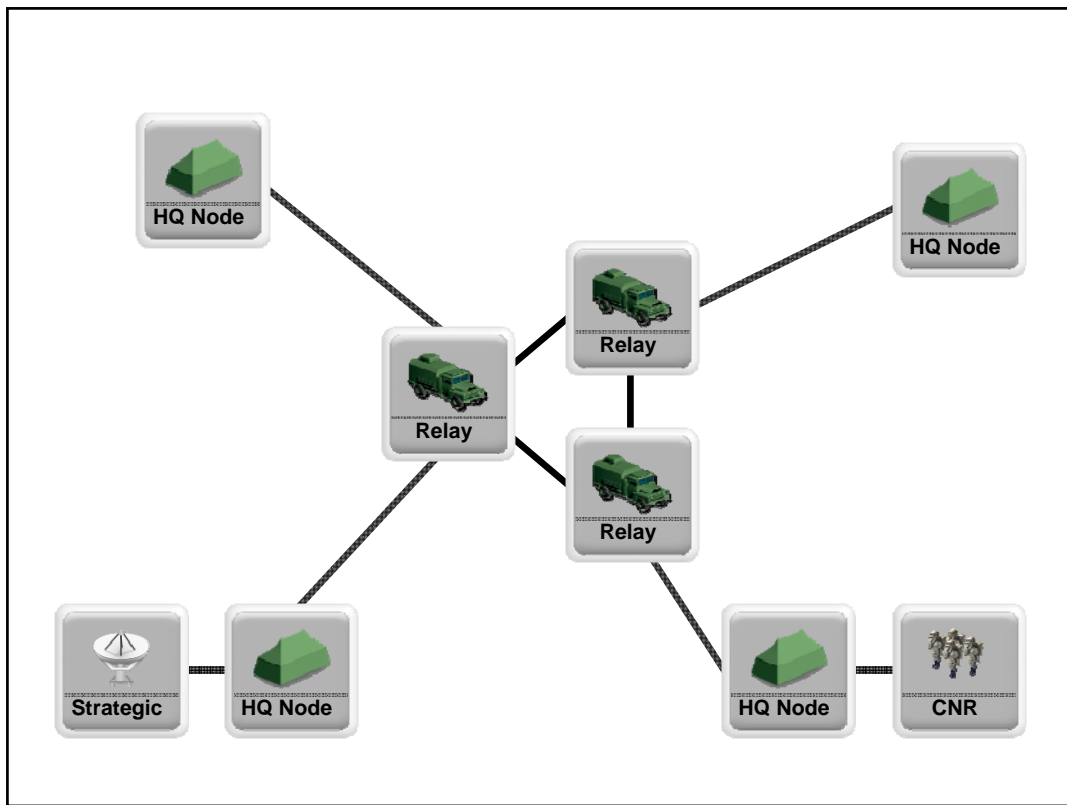
Infrastructural

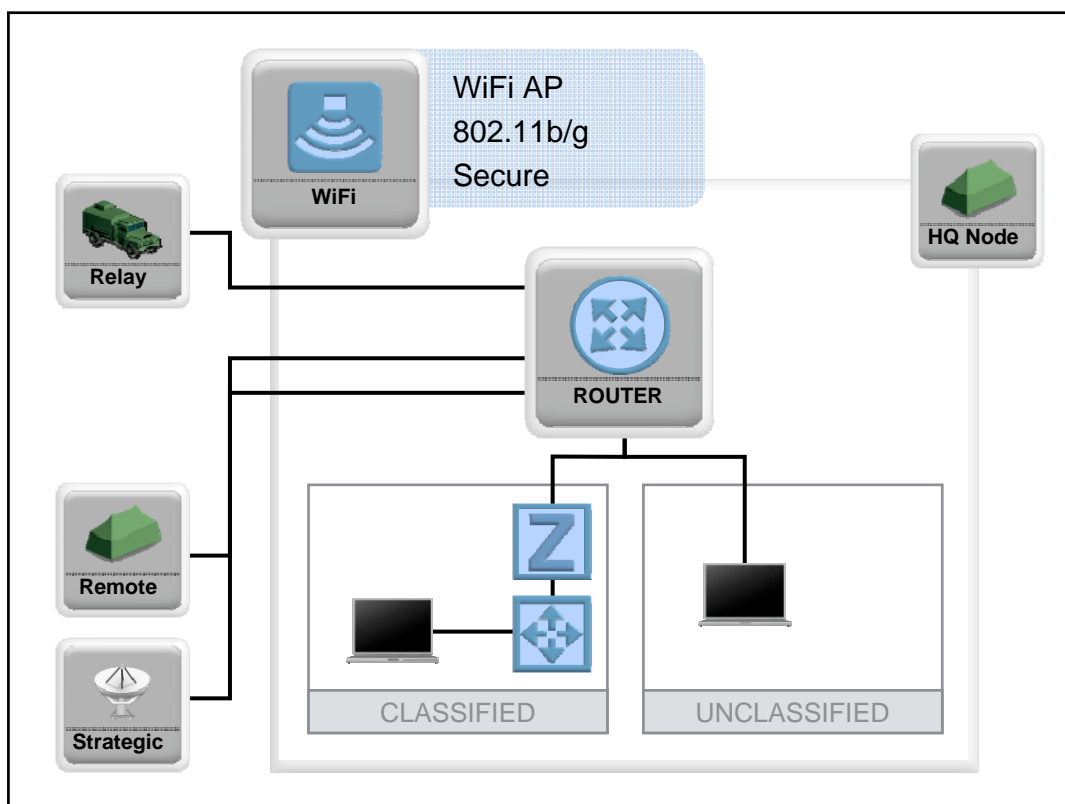
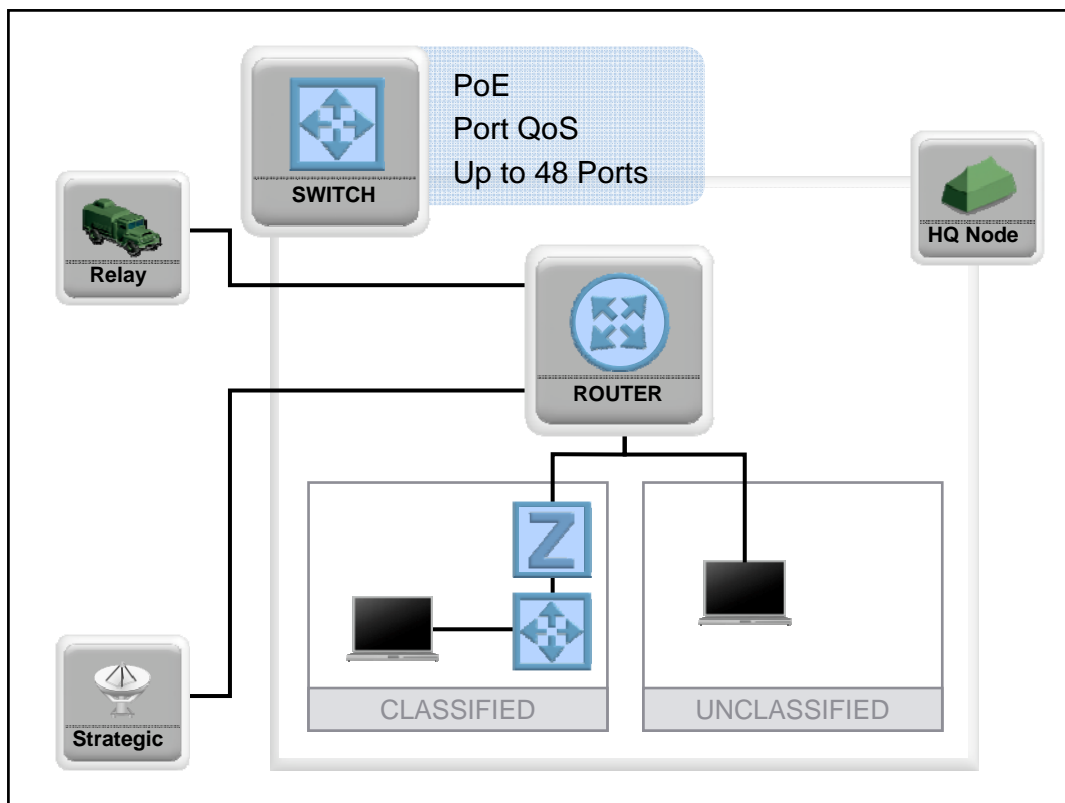
Self-Defending

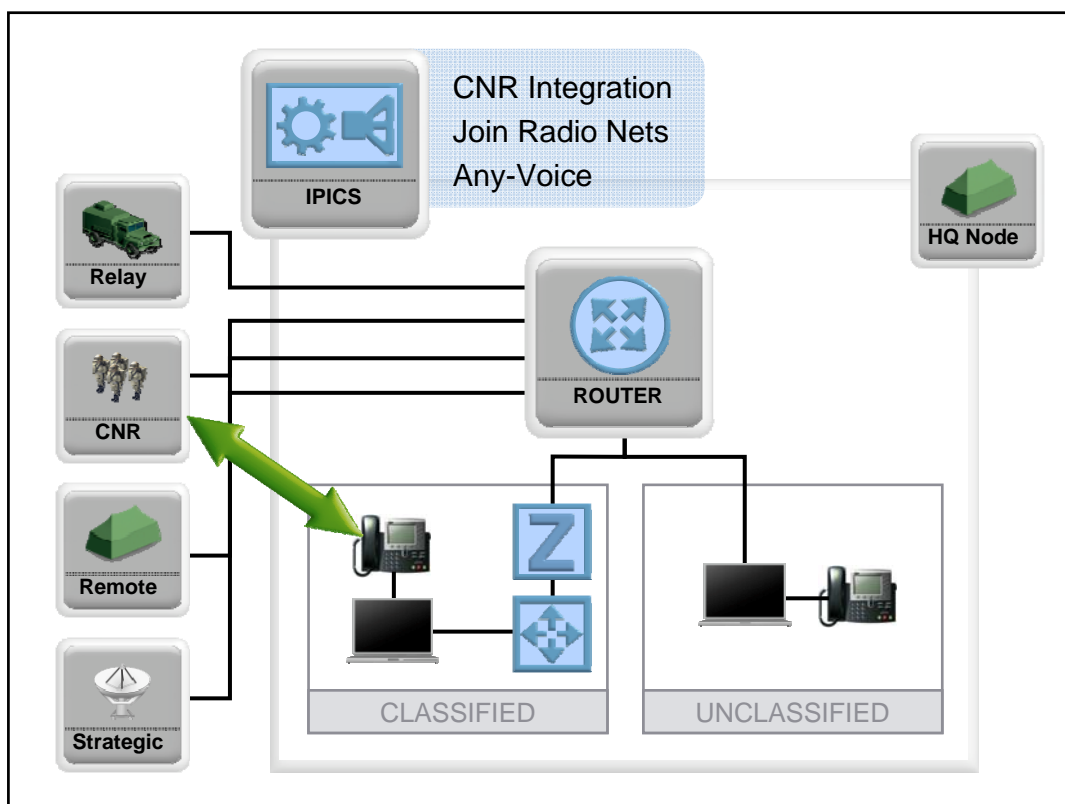
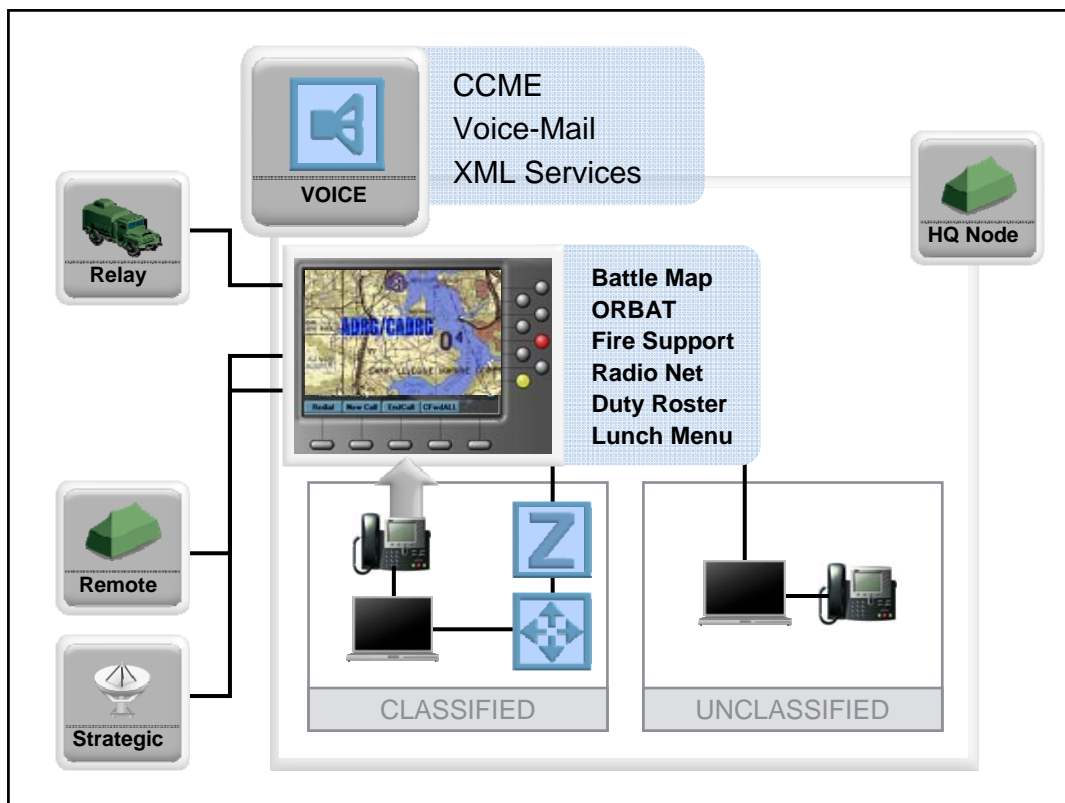
Mobile Brigade – Cisco Defense Solution

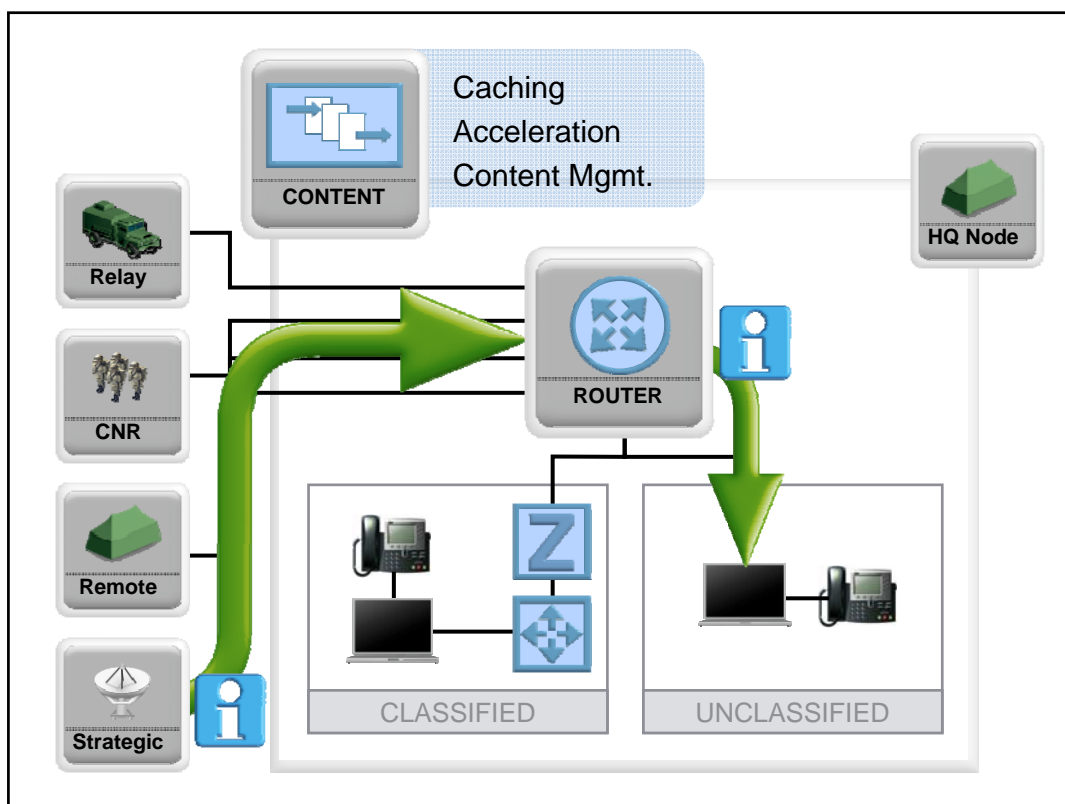
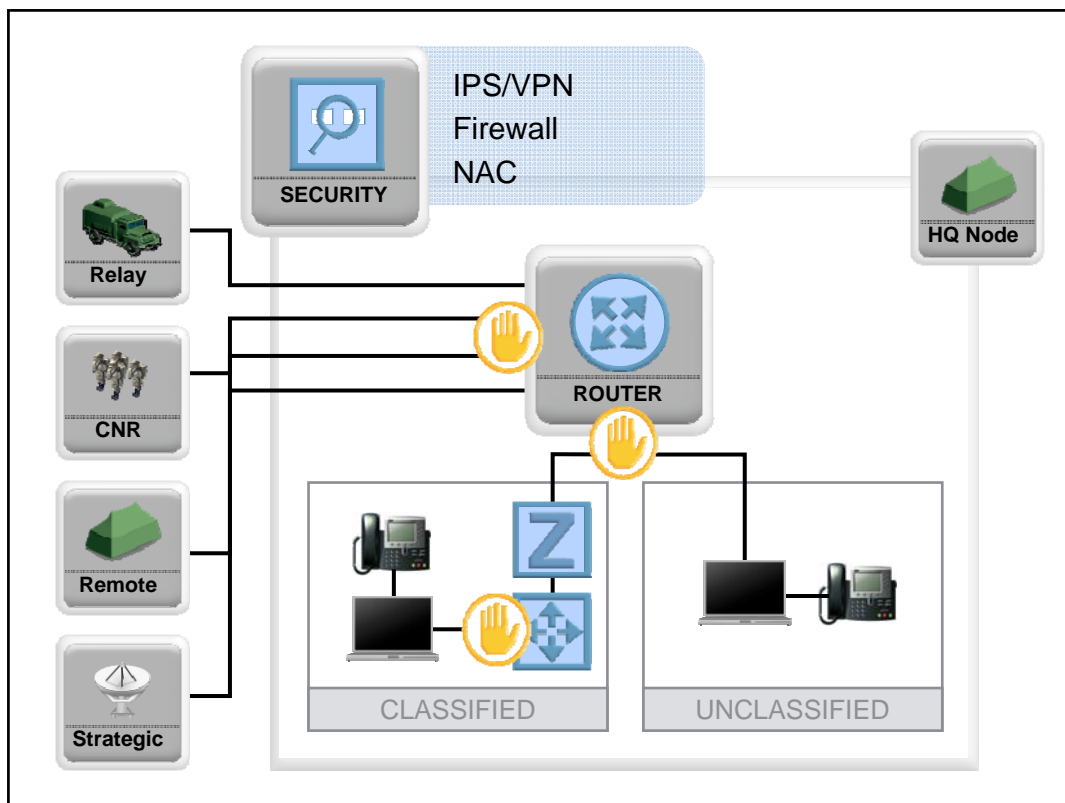
IP BRIGADE

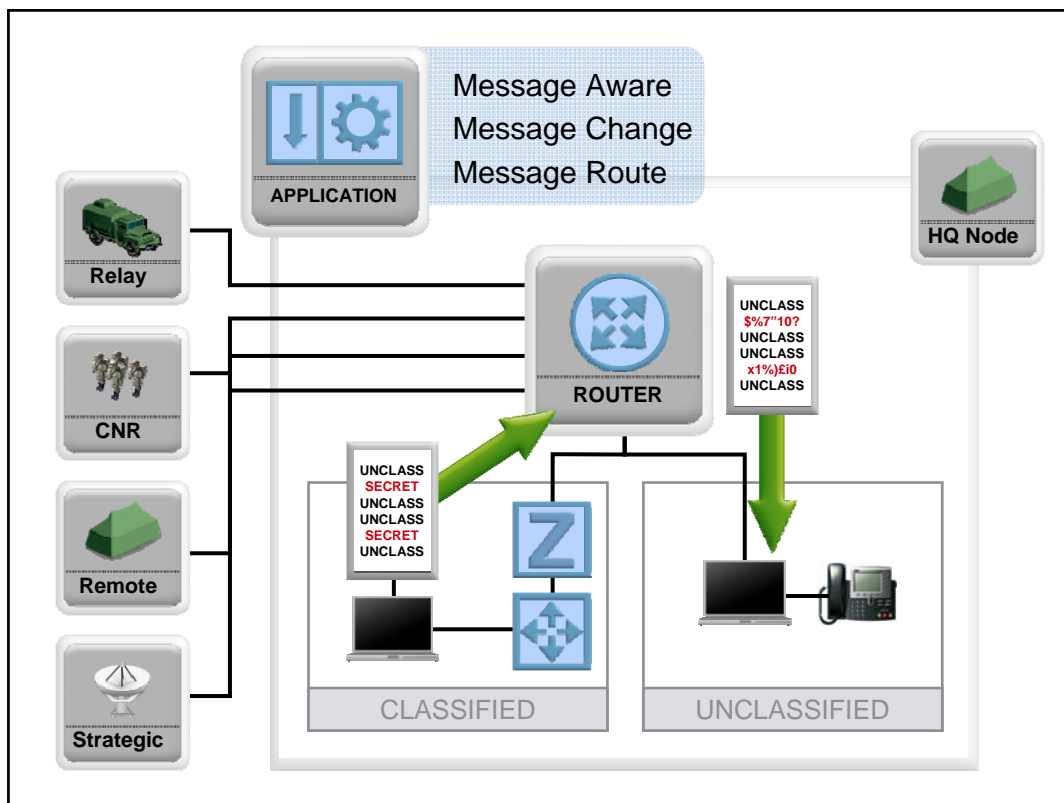






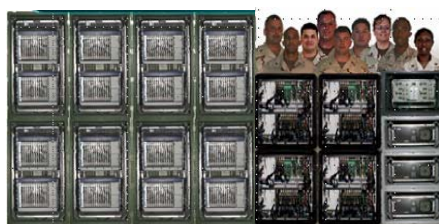






Benefits

Benefit of IP COTS: Joint Communication Support Element



Circuit Based



All IP

Improvement

7.1 m³

998 kg

\$1.9M

9 Personnel

95%

87%

86%

66%

0.3 m³

132 kg

\$270K

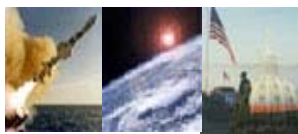
3 Personnel

Conclusion

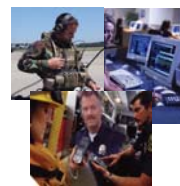
CISCO DEFENSE SUPPORT



Government Advanced Technologies



Global Defense Space and Security



Civilian, Armed Forces, National Programs



Pre-Sales Engineering, Post Sales Engineering, and Government Mission Support



Critical Infrastructure Assurance



System Integrator and Government Partnerships

What Governments Can do..

- Use IP for horizontal integration
- Use the right IP – international standards, RFCs, etc
- Fund what you say you want
- The network is a mission system
- Buy – don't build
- Think Enterprise – not one piece at a time



Case Studies

Theatre Independent Tactical Army and Air Force Network (TITAAN) Solution deployed with the Royal Netherlands Army



Theatre Independent Tactical Army and Air Force Network (TITAAN) Solution deployed with the Royal Netherlands Army



TCTS Voice Endpoints & IP Phone Services



All tactical network services except MLPP



Speed Dials:
Operator
Helpdesk

IP Phone Services:
Affiliation
Alarm State
Information
Public Announcement

Browsable Directory
Service Numbering Plan
is ST5046 & 4214
compliant

Convergence in AUS HQ Project

“This new building will be a world’s best practice in delivery of NCW and C4ISR capabilities using convergence and the worlds best partners and vendors”



**Cisco Phones in
Current HQ Ops
Centre**

Capability

Voice over Secure IP
Video (Telepresence & Video Conference)
On Site and off Site Data Centre
Collaborative Tools

Technology

DMS scoped (TP being inserted)
Meeting Place express - being considered

6500 in Core with 3560/4500's in the
distribution/edge on the unclassified LAN

The classified networks have a similar
breakout, just on a smaller scale

Security - ASA, CSM and current MARS

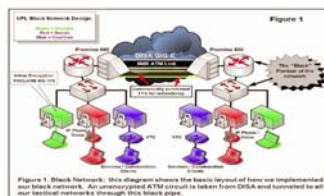
Storage - MDS 9500's, 9216's

VoSIP – large number of IP Phones

Transforming the Military: Allied Interoperability – Korea/USA

“III Corps in Korea deploy for UFL using Cisco Unified Communications and Collaboration Tools”

**Black Network proves its mettle
during Ulchi Focus Lens 2005**



More Effective

Exploit non used Bandwidth
Less technical staff required to maintain
Improved Interoperability
Easy to use Directory Systems
Vxmail, Messaging, Collaboration
Improved Situational Awareness
Access to real time conferencing
Collaboration in multiple domains

“...the Corps implemented and Everything Over IP (EoIP Strategy) For VOIP, VTC and Collaboration Tools to enable planning and collaboration between the Joint Forces and Combined HQ ” Signal Magazine Winter 2006

Cisco Gear in Current Operations



"Your stuff was caked in sand
but still worked"

