



Scalable Architecture for Multi-level Security

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Agenda

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- **Market Overview**
- **Multi-level Security Challenges**
- **Prototype architecture**
 - Performance
 - Features

Market Overview

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High Speed Cross Domain Architecture



Cyber Security Market Forecast

- Classified and unclassified spending
- \$14.6 billion in fiscal 2009
- \$25.5 billion per year by fiscal 2013
- Forecast annual growth is 15 percent for the next few years
- Classified spending estimated to be roughly equal to unclassified amount for fiscal 2009

Report by Bank of America / Merrill Lynch

Bank of America



REUTERS 

Market Overview

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High Speed Cross Domain Architecture

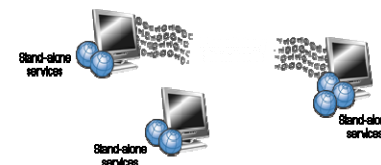


Customer Requirements

- Fully collaborative, net-centric C2
- Interoperability with USSTRATCOM (other JFCCs & subordinate units), Combatant
- DoD near-real-time shared awareness, integrated decision aids

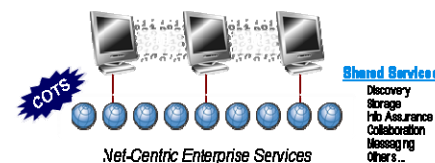
End Proprietary Approaches

- Limited interoperability...
Stove-piped solutions
- High development costs...
Applications use stand-alone services



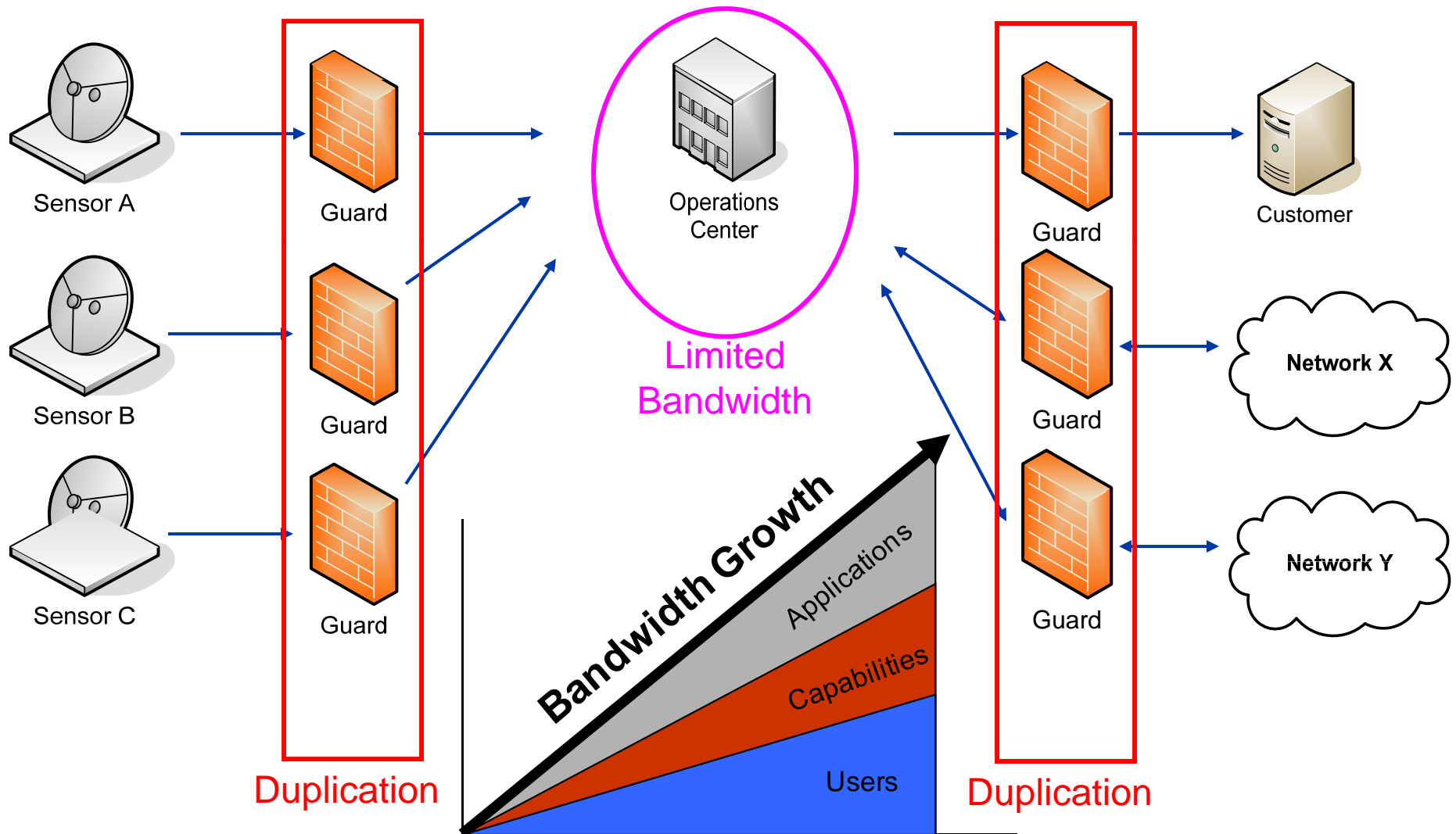
Field Open, Scalable Solutions

- Greater interoperability...
Common data standards (e.g. XML)
- Reduce costs...
Share & reuse...build once use many
Service based vs. system based



Current Approach to MLS

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Multi-level Security Challenges

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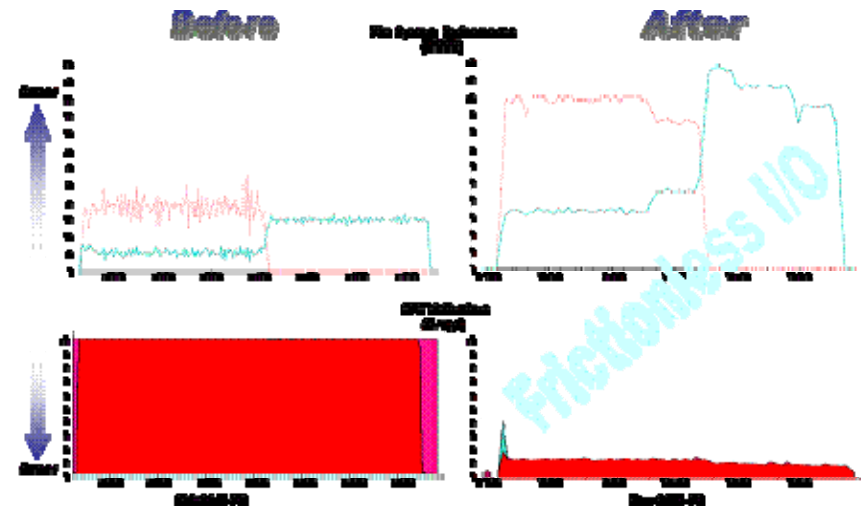
- **Data throughput for TCP/IP based MLS systems often suffer from 50% bandwidth utilization and scale poorly. Slow speed in information transports impact timely data dissemination to the war fighter.**
- **Data at rest is not secure in advent of mishandling, theft, acts of God, acts of violence, or inadvertent disclosures. For example a lost or misplaced disk drive can create a significant security impact.**
- **Existing TCP/IP based solutions do not scale well (cheaply or efficiently) in the 100 Gbs to 1 Tbs range.**



Secure Information Sharing Environment

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- **Built architecture prototype in 2008 & 2009**
 - Demonstrated secure high speed data transfer and real time video
- **Architecture features**
 - Open architecture
 - 98% COTS
 - SOA compatible
 - Accredited at PL2
 - Capable of PL4/5 accreditation
 - Integrates with legacy systems
 - Reliability 99.999
 - Scales in Speed
 - Increases bandwidth efficacy
 - Encryption
 - Multi-level security video, HD VTC & desk top sharing



World first: 2009 demonstrated of secure 80 Gbps transfer speed with 35 ms of latency in a single rack