PUBLIC & PRIVATE NETWORK INTEROPERABILITY
Public & Private Networks
Completely Isolated

Secure Interconnection
Public & Private Networks
Completely Isolated
Network Isolation

Interoperability
Isolated Networks
Restricted Services

Secure Connection

Basecamp
Elbonia

Private Network

DISA
USA

Public Mobile
Operator
Elbonia

Public Network

Public & Private Networks

Secure Connection
Back end and overlay’s required for each technology utilized: LMR, WiMax, Cellular, IP, Mesh, etc.
PUBLIC & PRIVATE NETWORKS

Interoperability Issues

- Service access controlled by operator
- Device & Provisioning issues
- Separate Datacenters for each Public Mobile Operator

**Basecamp**
- Private Network

**AT&T**
- Public Network

**DISA**
- Back end services
- Prov, Profiles, Apps

**AT&T**
- Datacenter
- Prov, Billing, Profiles, Apps

**Individualized Coverage**

**Isolated Networks**
Disaster Scenario: 9/11, New York City

- Lack of Interoperability
- Isolated Networks
  - LMR, Cellular, WiMax, Mesh, WiFi, etc.
Base camp
Elbonia

Security Risk
Unsecured comms on public networks

Secure Interconnection

Private Network

DISA
USA

Public Mobile Operator
Elbonia

Public Network

Registration & Authentication Denied
PUBLIC & PRIVATE NETWORKS
Interoperability & Security Issues – First Attempt – Move towards IP

- Security Issues still reside
- Public Operator Controls Session
PUBLIC & PRIVATE NETWORKS

Interoperability & Security Solution – Render Transport Layer Irrelevant w/Encrypted Media Sessions

Seamless Comms
Full services across private and public networks

Secure Comms
Voice & Data across private and public networks
### MVNO Issue

**Traditional MVNO**

- **AT&T (DISA Branded)**
  - Public Network

- **AT&T**
  - Datacenter
  - Back end services

- **DISA**
  - Apps

#### Operational Cost
- Management
- Control
- Security
Hybryd MVNO

AT&T (DISA Branded)

PUBLIC & PRIVATE NETWORKS

MVNO Issue

- Operational Cost
- Skill Set
- Management
- Security
PUBLIC & PRIVATE NETWORKS

Leverage Existing Networks – Complement with Cellular Hotspots

Utilize Private Network as primary and Public Network when no private network is available.
Public & Private Networks

Cellular Hot Spots – Need for Deployable Comms

Large portion of the world will remain uncovered and private network coverage will be required to augment public network operator coverage while on military missions.

Building a parallel government network in the US is highly unlikely which leaves coverage gaps and the need for cellular hotspots.
Testing to be conducted
- Interoperability
- Encrypted Media
- Seamless Mobility
- IP Based Migration
- Cellular Hotspot
- Application Performance

Knowledge Gained
- Skill Set Requirements
- Deployment Architecture
- Application Development
- Device Development
- Network Limitations
- Standards Implementation

In Theatre Simulation
How will the mobile react?
Thank you

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