15th ICCRTS

"The Evolution of C2"

Paper 001: On Facilitating Stability Operations: A Net-Centric, Federated Approach to Information Sharing

Topics:
1. Information Sharing and Collaboration Processes and Behaviors
2. C2 Architectures and Technologies

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UNCLASSIFIED

Agenda

- Organization, Vision, Mission
- Roles/Mission and DoD policy
- Actions underway to improve unclassified information
- Next Steps for implementation and experimentation
- Conclusions and challenges

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  - **IT Team**
  - **Acquisition Policy & Oversight Support Team**

DEPUTY TO THE ASD (NII) / DoD CIO FOR NATIONAL AND NUCLEAR LEADERSHIP COMMAND CAPABILITIES
Don Diggs

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- **Dir., Research** Dr. Dave Alberts
- **Dir., Strategic Integration and Outreach** Patti Benner

* Denotes dual-hatted

Cheryl J Roby

Chart approved 6 November 2009

IIS Vision

A DoD enterprise that enables rapid, agile, and persistent sharing of civil-military information and situational awareness to facilitate coordination and cooperation with the interagency and external mission participants across the full range of irregular warfare and stability operations.

IIS Mission Statement

Develops and oversees policy that shapes ICT enablement of irregular warfare, stability operations, and theater security cooperation. IIS identifies ICT gaps, recommends solutions, and assesses the Department's progress towards **improved information sharing and more effective civil-military coordination**, situational awareness, and decision making. IIS engages with the Joint Staff, Interagency, and external organizations to facilitate resolution of COCOM and Service contingency operation ICT support issues.

Data and Information Policy Guidance

- **DoD Directive 8320.02 Data Sharing in a Net-Centric Department of Defense; Certified Current as of April 23, 2007**

  4.1 Data is an essential enabler of network-centric warfare (NCW) and shall be made visible, accessible, and understandable to any potential user

  4.2 Data assets shall be made visible by creating and associating metadata ("tagging"). All metadata shall be discoverable, searchable, and retrievable using DoD-wide capabilities.

- **DoD Instruction 8220.02 Information and Communications Technology (ICT) Capabilities for Support of Stabilization and Reconstruction, Disaster Relief, and Humanitarian and Civic Assistance Operations, April 30, 2009**

  4.a. To the extent authorized by law, …..information-sharing activities that facilitate coordination and cooperation between DoD and non-DoD partners will be established to enable common understanding of the stabilization and reconstruction, disaster relief, and humanitarian and civic assistance environment; and to support an integrated Whole-of-Government response capability.

Leveraging the Interagency

“But for all the improvements of recent years, the United States’ interagency tool kit is still a hodgepodge of jury-rigged arrangements constrained by a dated and complex patchwork of authorities, persistent shortfalls in resources, and unwieldy processes.”

Gates, R. M. (2010, May/June). Helping Others Defend Themselves. *Foreign Affairs, 89*(3).

The Interagency Mission Statements: DOS, S/CRS, USAID and OFDA

- **DOS** – To create a more secure, democratic, and prosperous world for the benefit of the American people and the international community.

- **S/CRS** - To lead, coordinate and institutionalize U.S. Government civilian capacity to prevent or prepare for post-conflict situations, and to help stabilize and reconstruct societies in transition from conflict or civil strife so they can reach a sustainable path towards peace, **democracy and a market economy**. The office, created in July 2004, is composed of an 88 member interagency staff, including 11 Active members of the Civilian Response Corps. This whole-of-government planning framework utilizes the Essential Task Matrix and compiles best practices for **Reconstruction and Stabilization** (R&S), developing common R&S training for civilians and the military.

- **USAID** – (An independent federal government agency that receives overall foreign policy guidance from the Secretary of State) To support long-term and equitable economic growth and advances U.S. foreign policy objectives by supporting:
  - economic growth, agriculture and trade;
  - global health; and,
  - **democracy, conflict prevention and humanitarian assistance.**

- **OFDA** - The Office of U.S. Foreign Disaster Assistance is the office within USAID responsible for facilitating and coordinating U.S. Govt emergency assistance overseas. As part of USAID's Bureau for Democracy, Conflict, and Humanitarian Assistance (DCHA), OFDA provides **humanitarian assistance to save lives, alleviate human suffering**, and reduce the social and economic impact of humanitarian emergencies worldwide.

DoD Information Sharing Implementation Plan

Focus Area 6

Develop an enterprise approach that enables sharing of unclassified DoD information in support of civil support and Stability Operations

Current Efforts

- •Federal Law
- •Executive Orders
- • Asia Pacific Area Network v.4
- • HarmonieWeb
- • inRelief.org
- • Stability Operations Community of Interest
- • OUSD(I) Efforts
- •HD & ASA Efforts
- • Inter Agency Efforts
- •JCTDs
- •LOEs

ISIP Focus Area 6 and Associated Actions

Analysis
Patnerships
Collaboration
Staffing

Planned Outcomes

Policy, Technology and Cultural Change that leads to enhanced information sharing for both Civ Mil and Stab Ops missions

Enable Processes with Information

Enablers

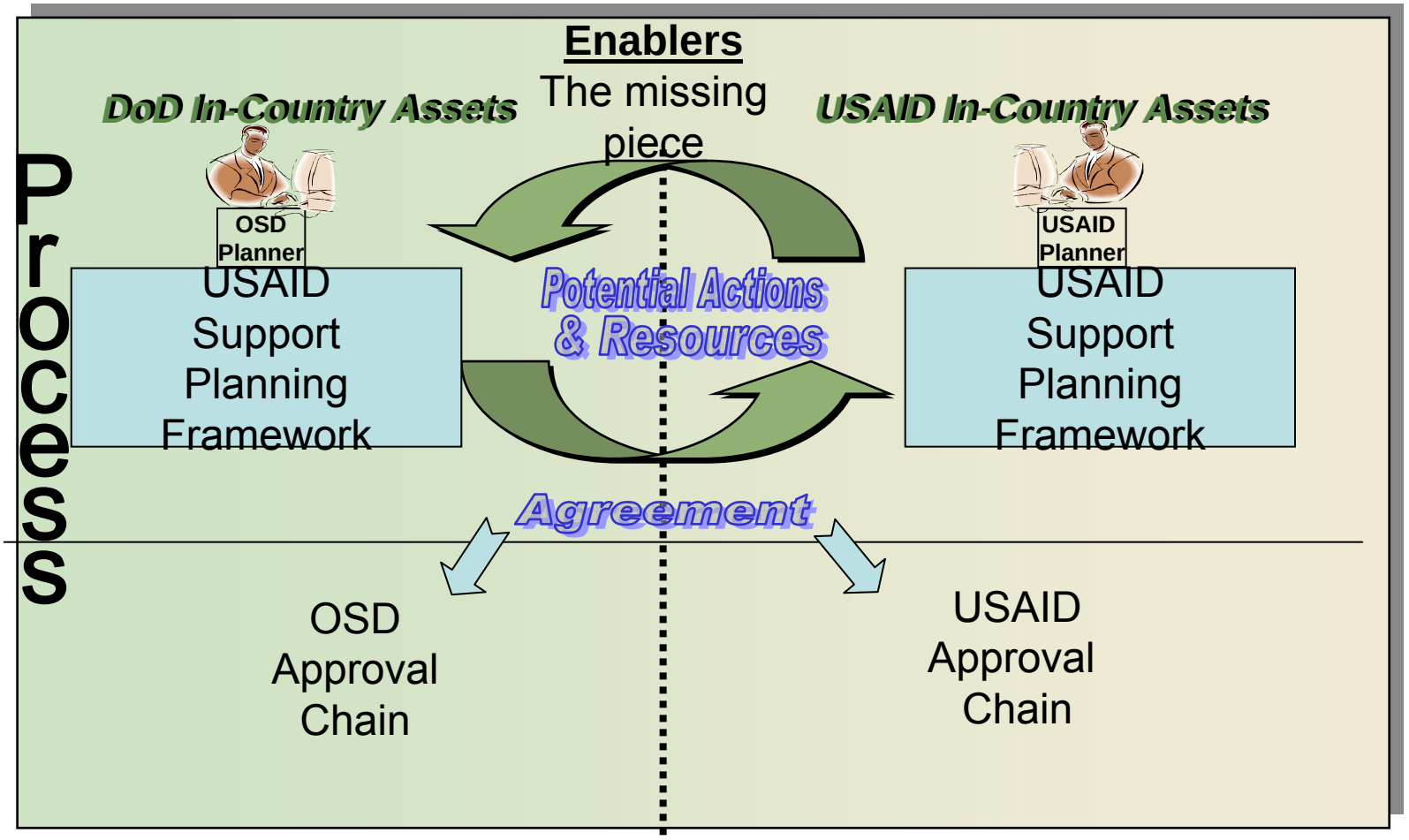
Provide Web Enabled Forms

Use Web to Coordinate

Forward for approvals

Provide Document Manager For staffing

Provide repository For archiving



HOW:

1. Expose Data and expose services
2. Use Open System Standards

The Problem Set: What Information is Common to All Responders?

Key Information Requirements

- Imagery
- Assessments
- Incident Reports
- Maps
- Org Charts
- Foreign Disclosure guidance
- Situational Awareness
- Ops/Intel Fusion
- Access to SMEs
- In Depth Country Knowledge
- High Level Contacts

Relevance to Key Consumers

- Assess what is going on
  - Situation
  - Possible actions
  - Actions of others
  - Resources needed
  - Resources available
- Decide on possible actions
- Self-identify my interest, intended actions, and resources
- Network
- Collaborate
- Synchronize Actions

What Information is Common to All Responders

Key Information Re **to Key Consumers**

- **What is happening?**
- **Do I care?**
- **What do I care about?**
- **What can I do about it?**
- **What can't I do? Why?**
- **What do I want to happen?**
- **Who agrees with me?**
- **Can I help/work with others who share my goals and objectives?**
- **Can someone help me with my gaps?**
- **How do I find them?**
- **How do they find me?**
- **How can we work together?**

• In Dep

• High Level C **ronize Actions**

JFCOM Interagency Shared Situational Awareness (IASSA) LOE - Jul 09

anizations that
outside the firewall

egend:
that expose
sources

Publish Services

HSIN

VEIC

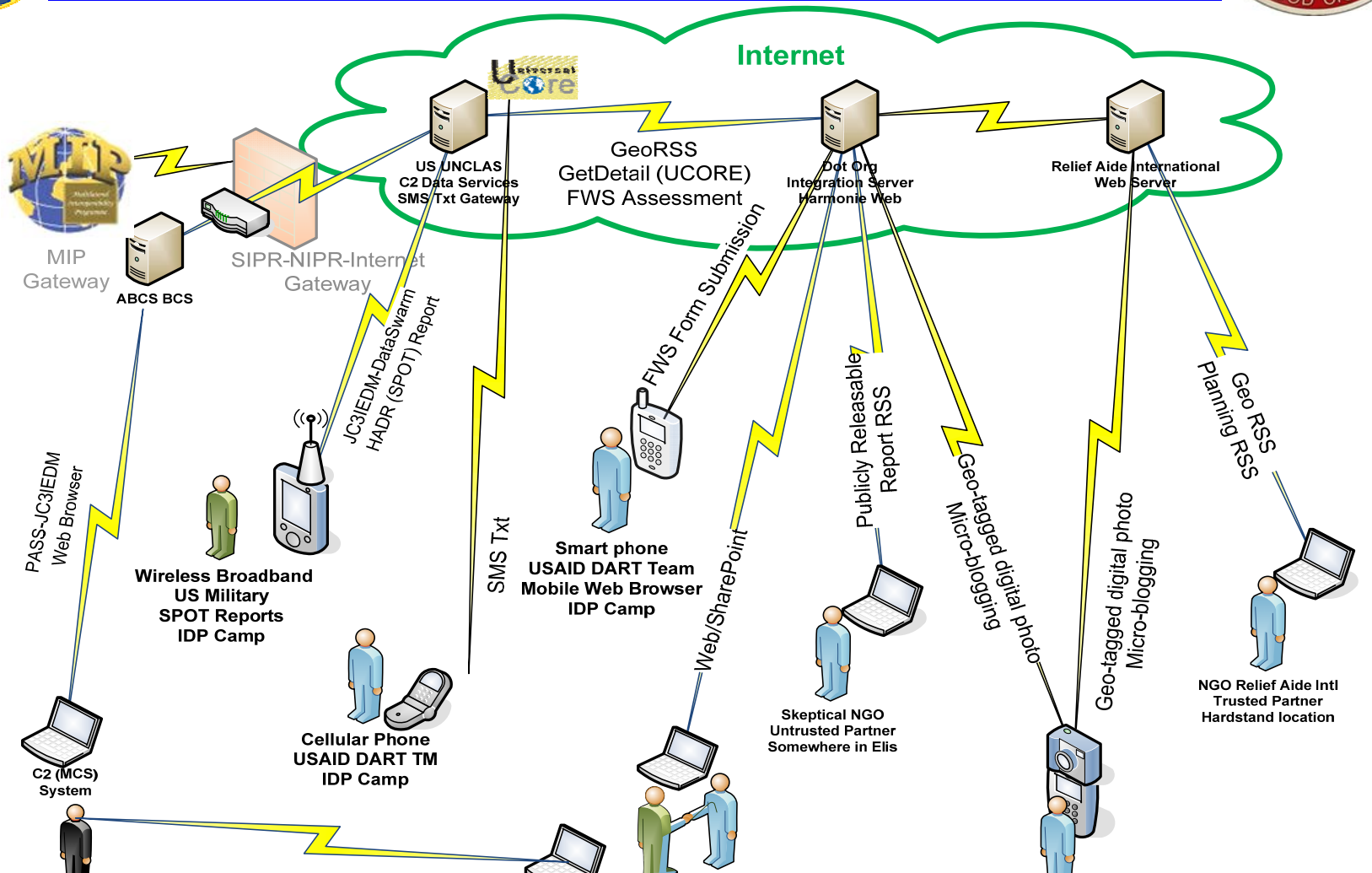
Organizations that DO NOT expose their data sources outside the firewall

For this experiment, a location was provided for these organizations to Publish outside the firewall

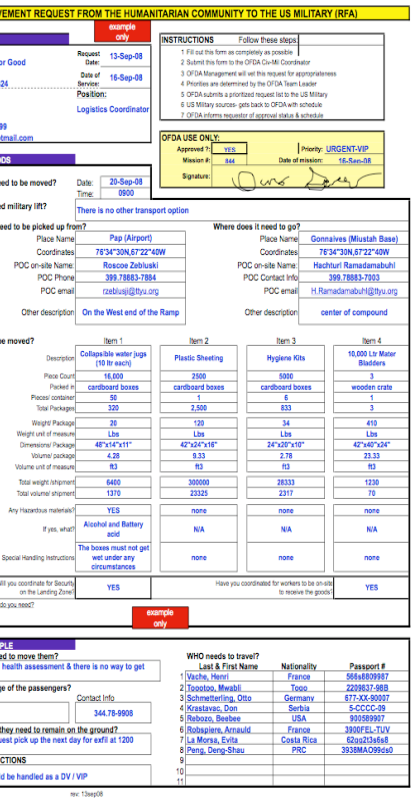
Hosted on APAN or HarmonieWeb

Facilitates Development of user defined, Focused Views

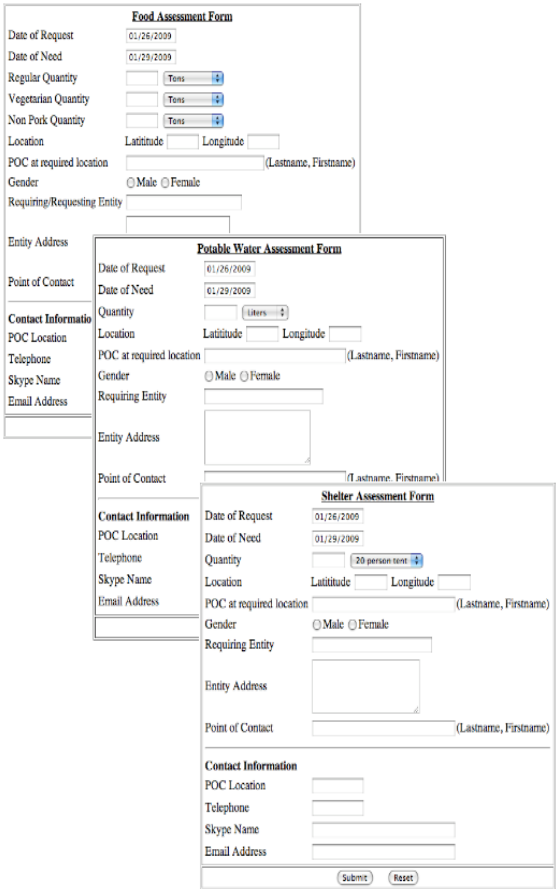
OASD(NII) Stab Ops Pilot
Operational View Architecture

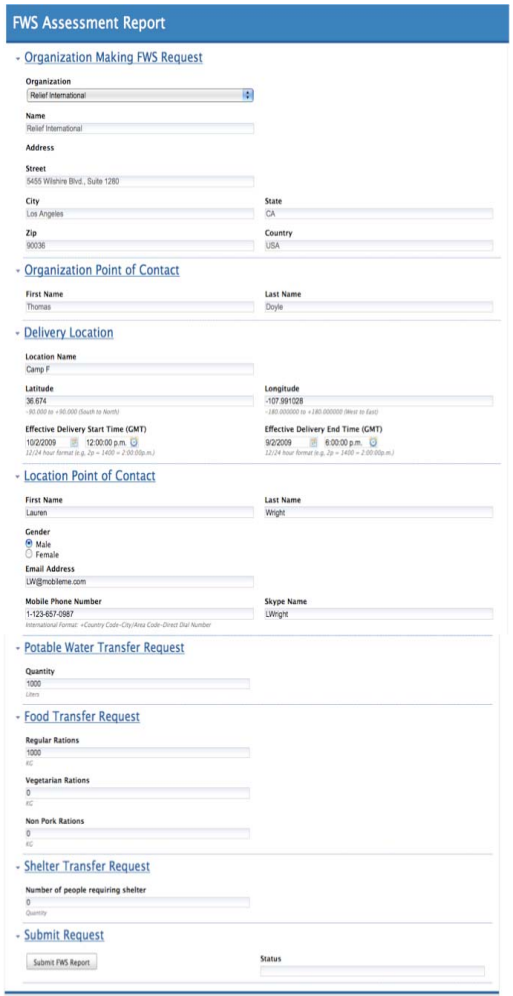


Paper to Net-Enabled Processes



OFDA/OLU FORM 82





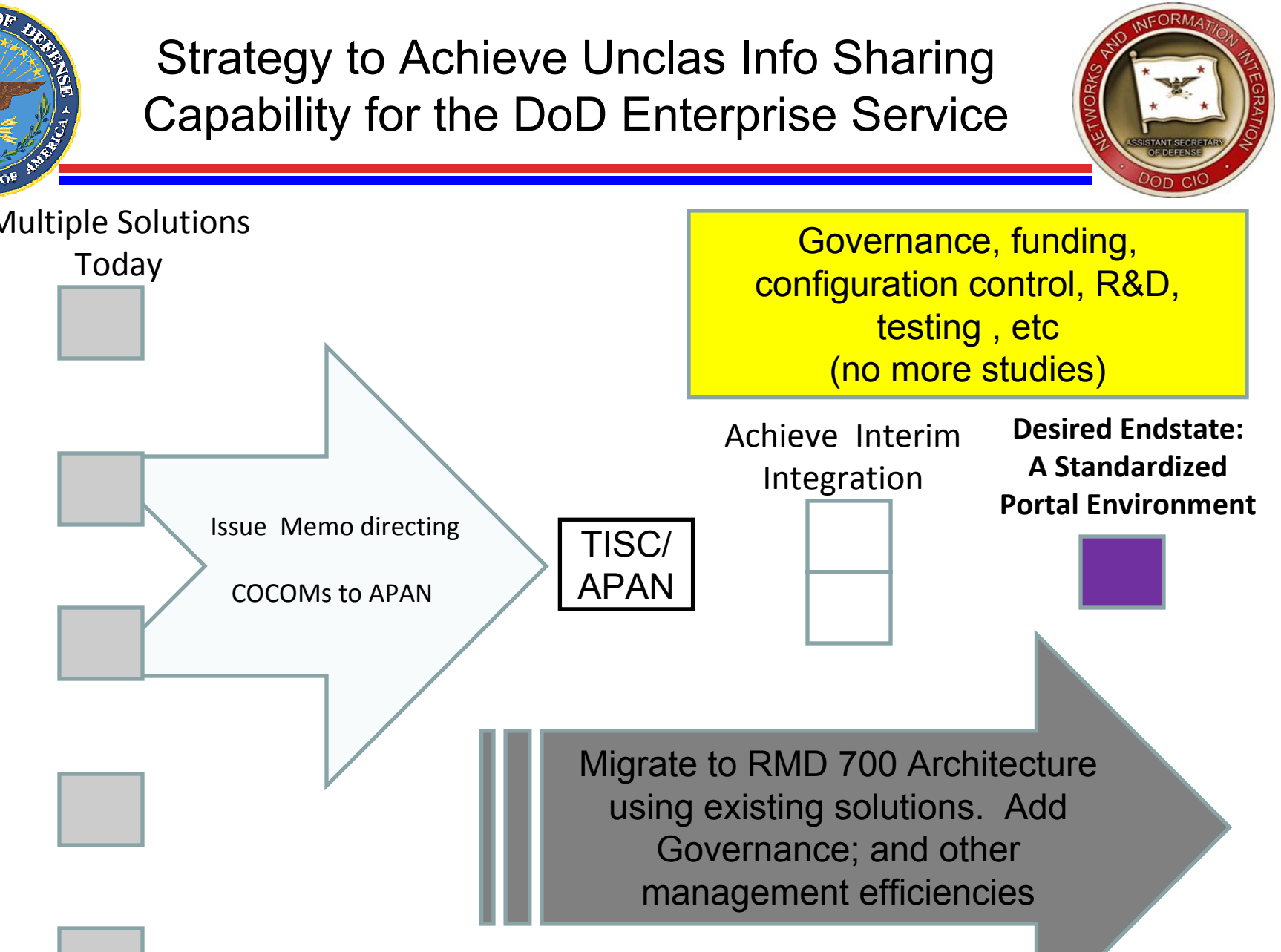
USD(AT&L) TISC JCTD in Support of Operation Unified Response (Haiti Earthquake)

13 Jan 2010:
SOUTHCOM directs use of APAN Web 2.0 Group for all DoD unclas info sharing in support of the response.

17 Feb 2010:
United Nations OCHA rep states US DoD level of information sharing surpassed all expectations – resulting in reduced loss of life.

Next Steps:
- RSS Feed to UN (oneresponse.org)
- RSS Feed to WHO (Strategic Health Operations Center)

Strategy to Achieve Unclas Info Sharing Capability for the DoD Enterprise Service



Standardized Assessment Areas

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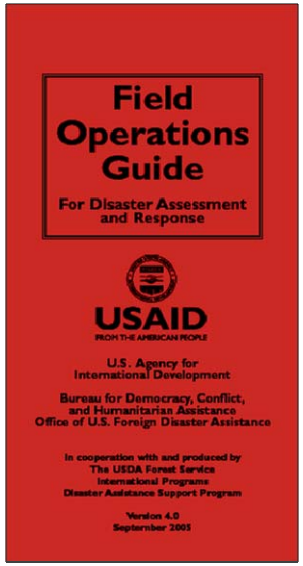
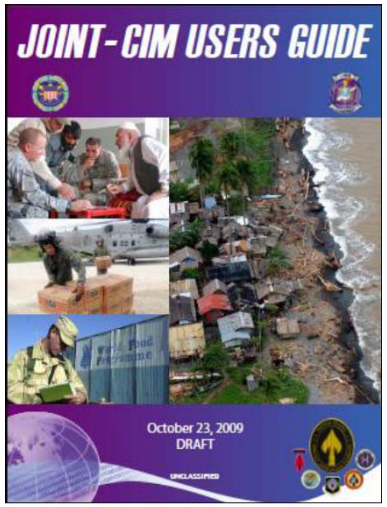




Farm
Veterinary-local
Veterinary-National
Airport
Ports and Harbors
Railway
Router
Roads
Market/Store
School
Historical Cultural Religious site
Police station
Fire Station
Fuel Point
Building
Village
Warehouse
Police and Security Forces
Contractor
Arts and Monuments Storage
TCAPF-Tactical Conflict Assessment Planning Framework
Village Health
Hospital/Clinic
Sewage System
Trash
Civilian Engagement

Integrate Standardized Collection Tools

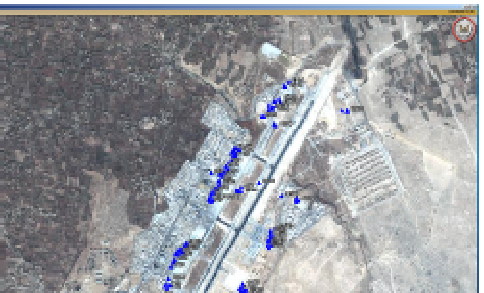
Mobile GATER

Desktop GATER

Online GATER

WCID Centralized Geodatabase

Graphic Visualization



Tabular Visualization

Enablers

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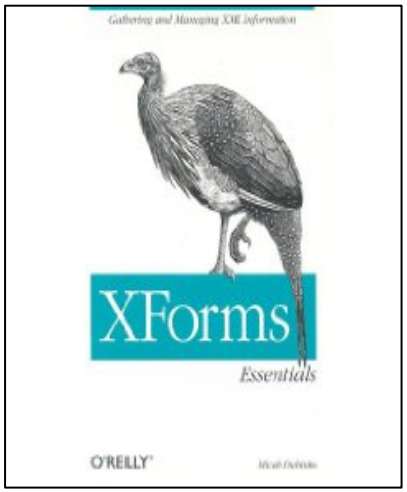


Enablers

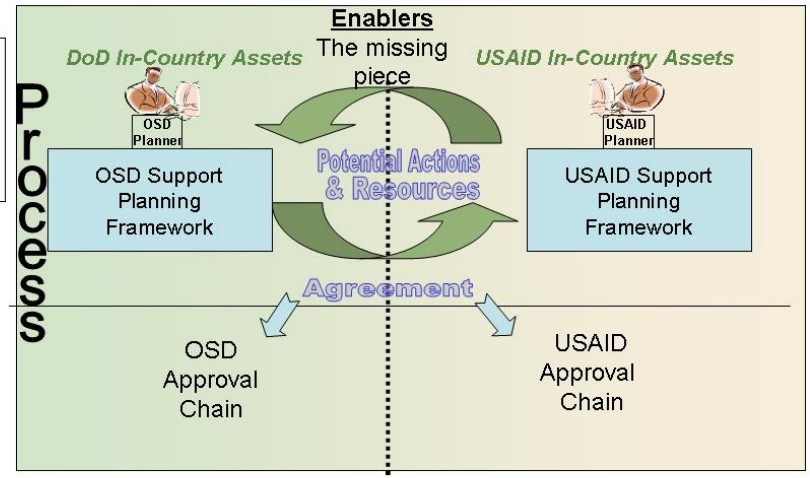
Provide Web Enabled Forms

Use Web to Coordinate

Forward for approvals

Provide Document Manager For staffing

Provide repository For archiving



HOW:

1. Expose Data and expose services
2. Use Open System Standards

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DSPACE

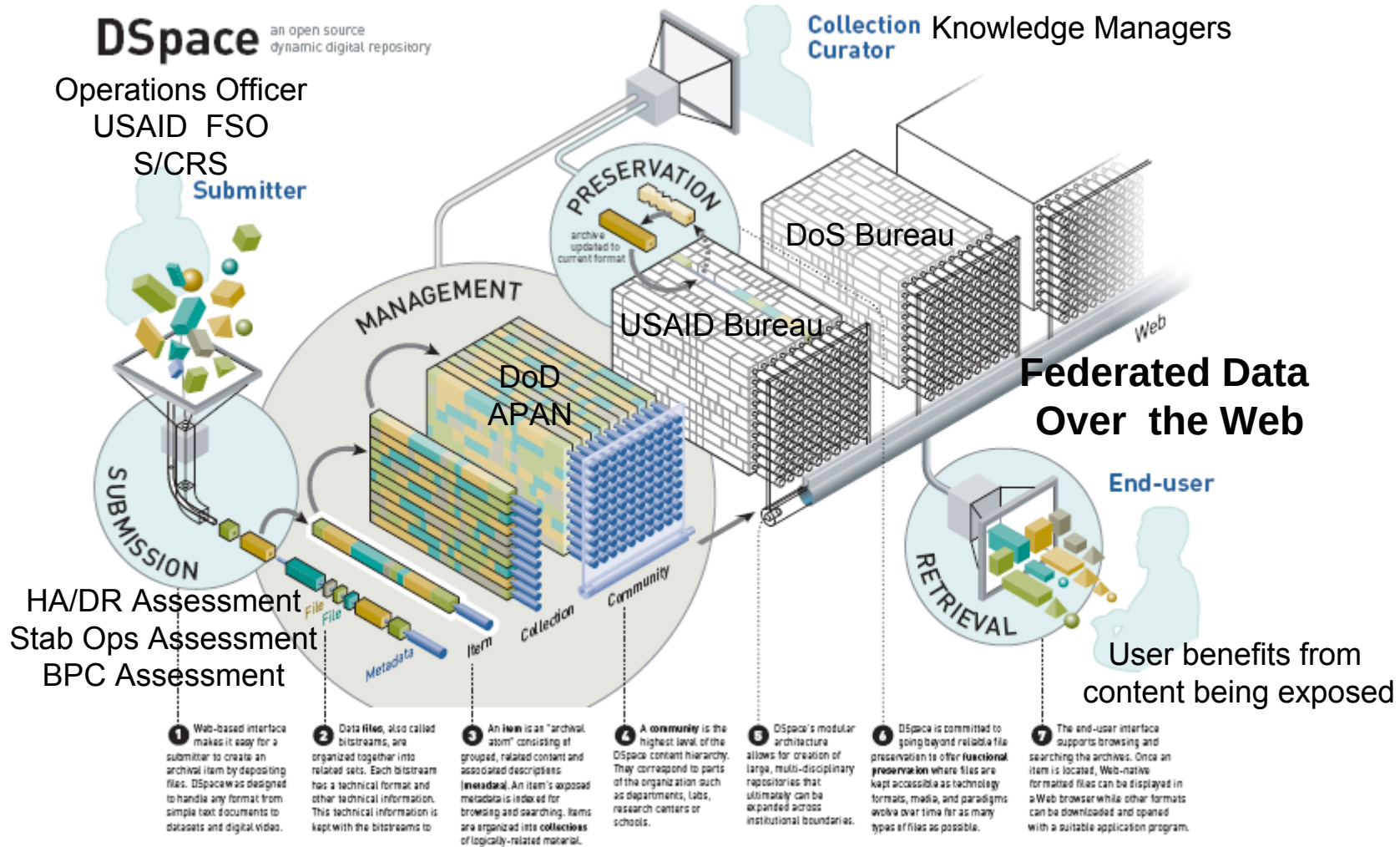
[click logo for video]

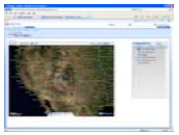
Powerful Archive

Content Management

Diverse content and formats across 5 sectors to form an extensive knowledge base

Repository Services





Coalition MIL

MIP DEM MEM

MIL

CIV -MIL

CIV

eo-Referenced Spot Assessments Shared SA

Geo-Referenced Spot
Handheld UMPC
CA Assessments
USACE Assessments
Shared SA

Geo-Referenced Assessment
OFDA RFA
SMS Text MMS photo
Mobile Web Cell , Smart Ph
Social Media – Microblog
Shared SA

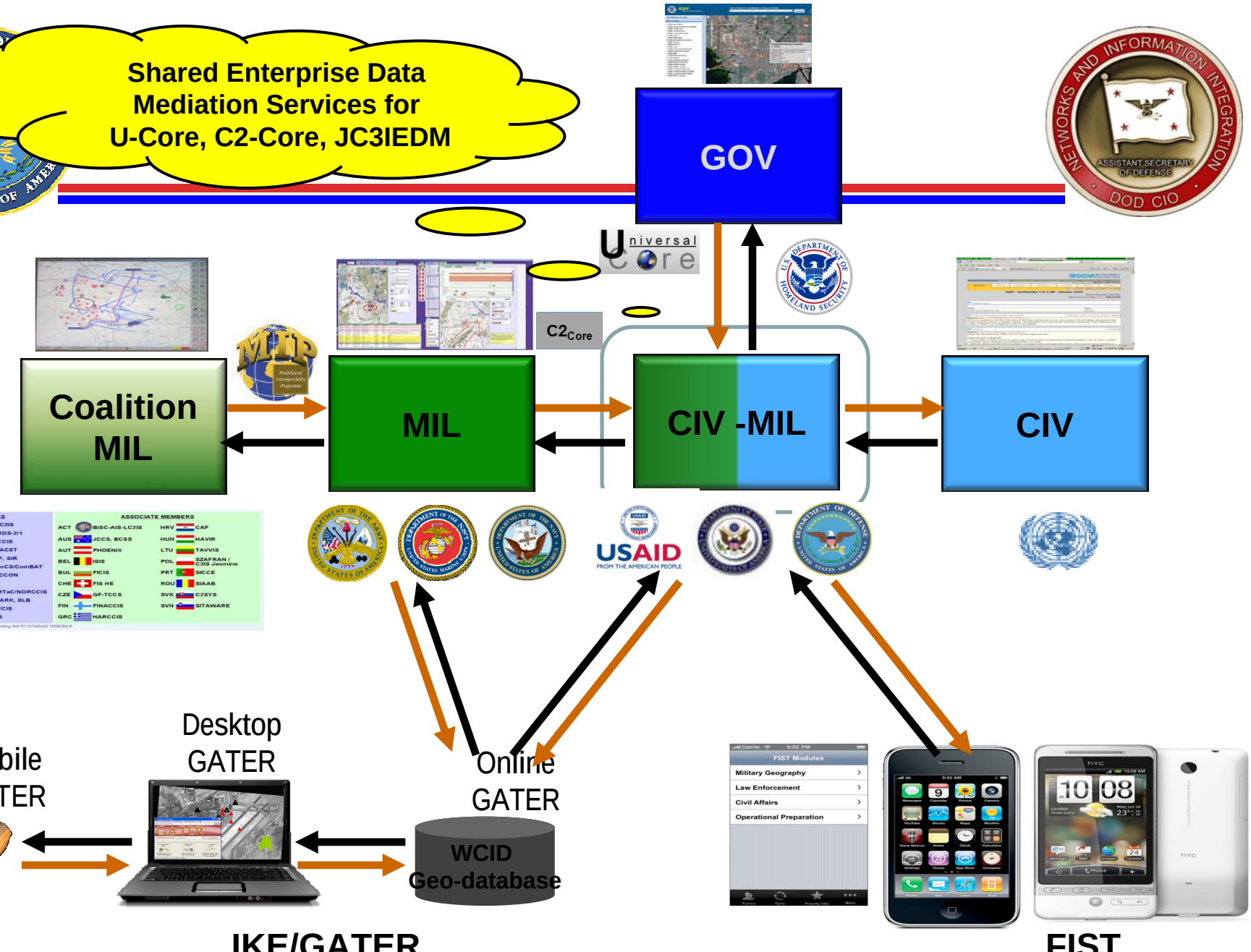
Geo-Referenced planning
Shared SA

ecting the Dots: Who are the Stakeholders and how are they working this?

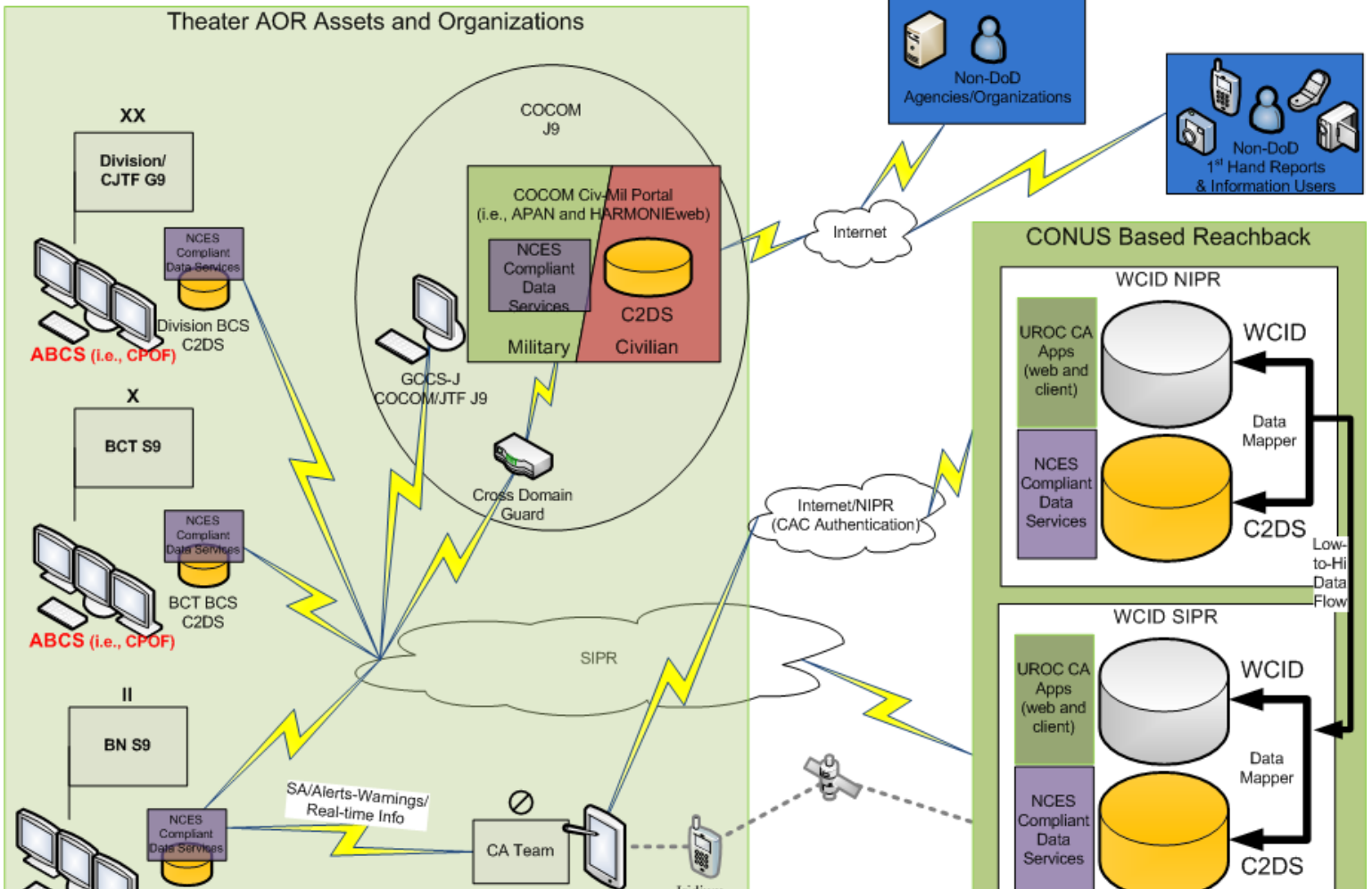
OASD(NII) - Stab Ops COI WG Pilot

JFCOM Warfighter Challenge

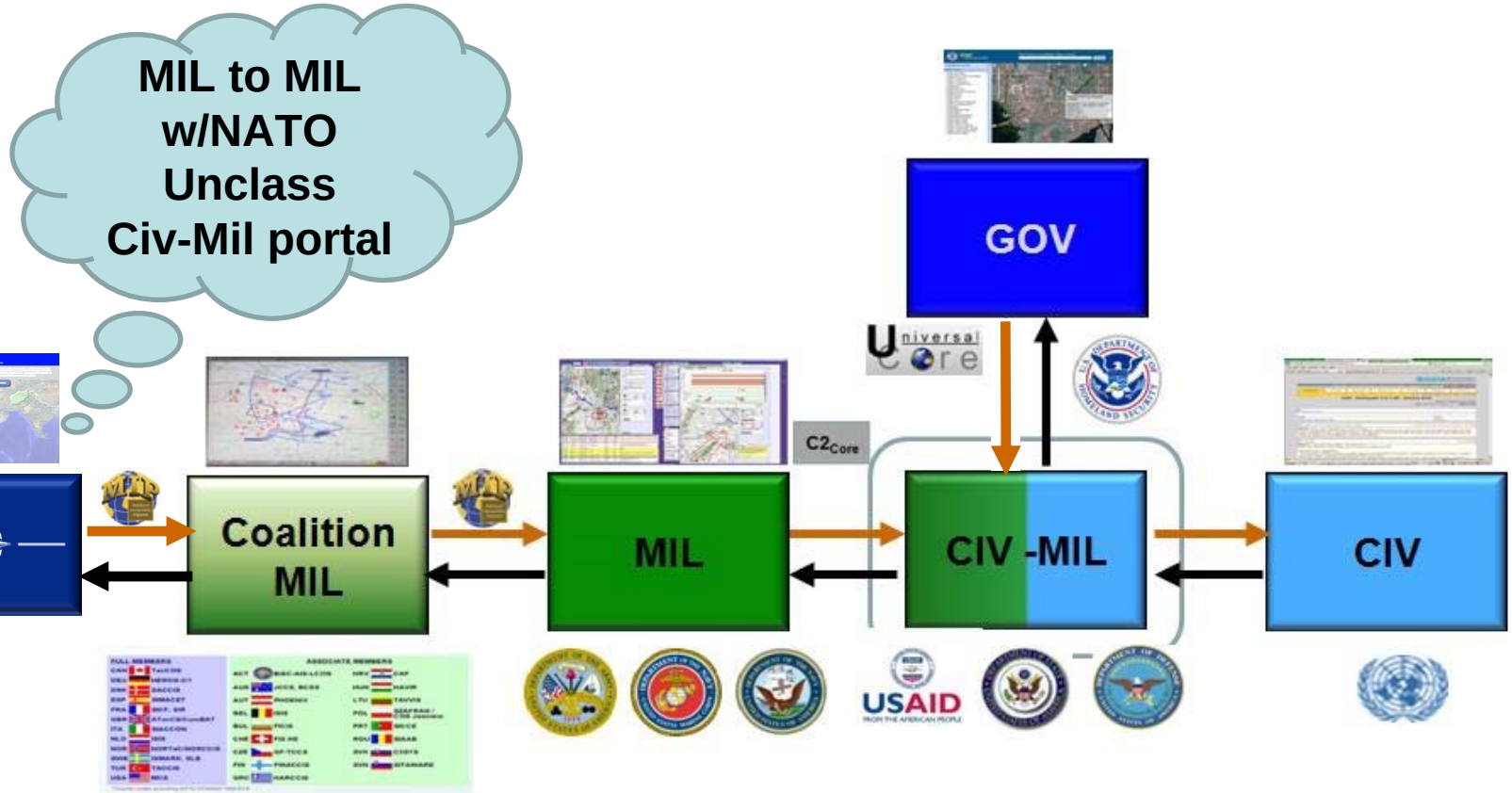
PM BC - MIP WG	• DDR&E - Common Ground JCTD • DDR&E- TEDS JCTD • USACE- IKE/GATER • 95th CA BDE- WCID/CAOS • DOT&E- J-CIM Test	• DDR&E ProvIDES JCTD • DDR&E - TISC JCTD • DDR&E- CSE JCTD • JFCOM- CABP LOE	• UN OCHA • DoS HIU • InterAction • World Health Organization


Shared Enterprise Data
Mediation Services for
U-Core, C2-Core, JC3IEDM
GOV
NETWORKS AND INFORMATION INTEGRATION
ASSISTANT SECRETARY OF DEFENSE
DOD CIO
Universal Core
C2Core
Coalition MIL
MIL
CIV -MIL
CIV
USAID
FROM THE AMERICAN PEOPLE
Desktop GATER
Online GATER
WCID Geo-database
FIST Modules
Military Geography
Law Enforcement
Civil Affairs
Operational Preparation
IKE/GATER
FIST

Conceptual System View



MIP-Based Concept for Future Research



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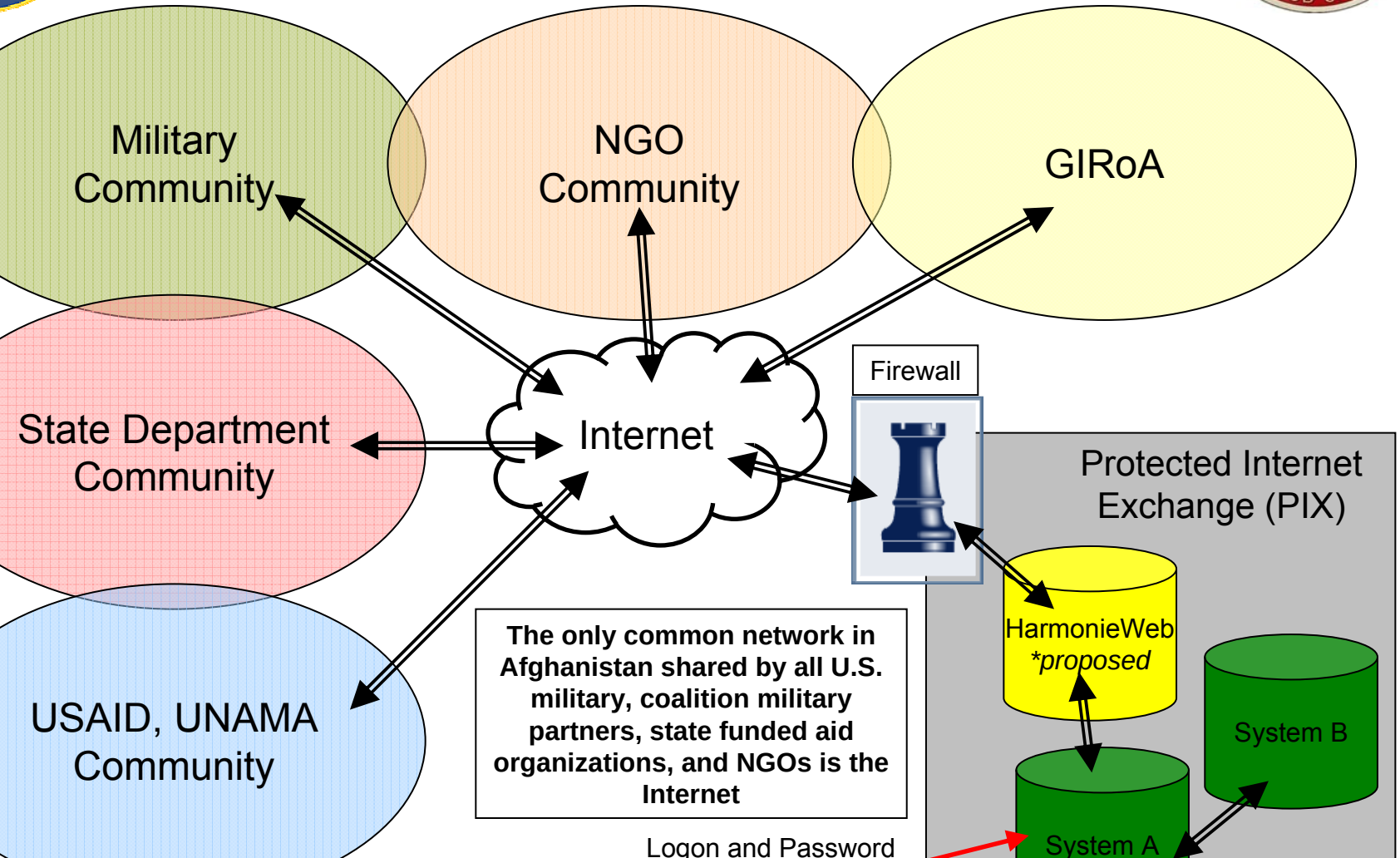
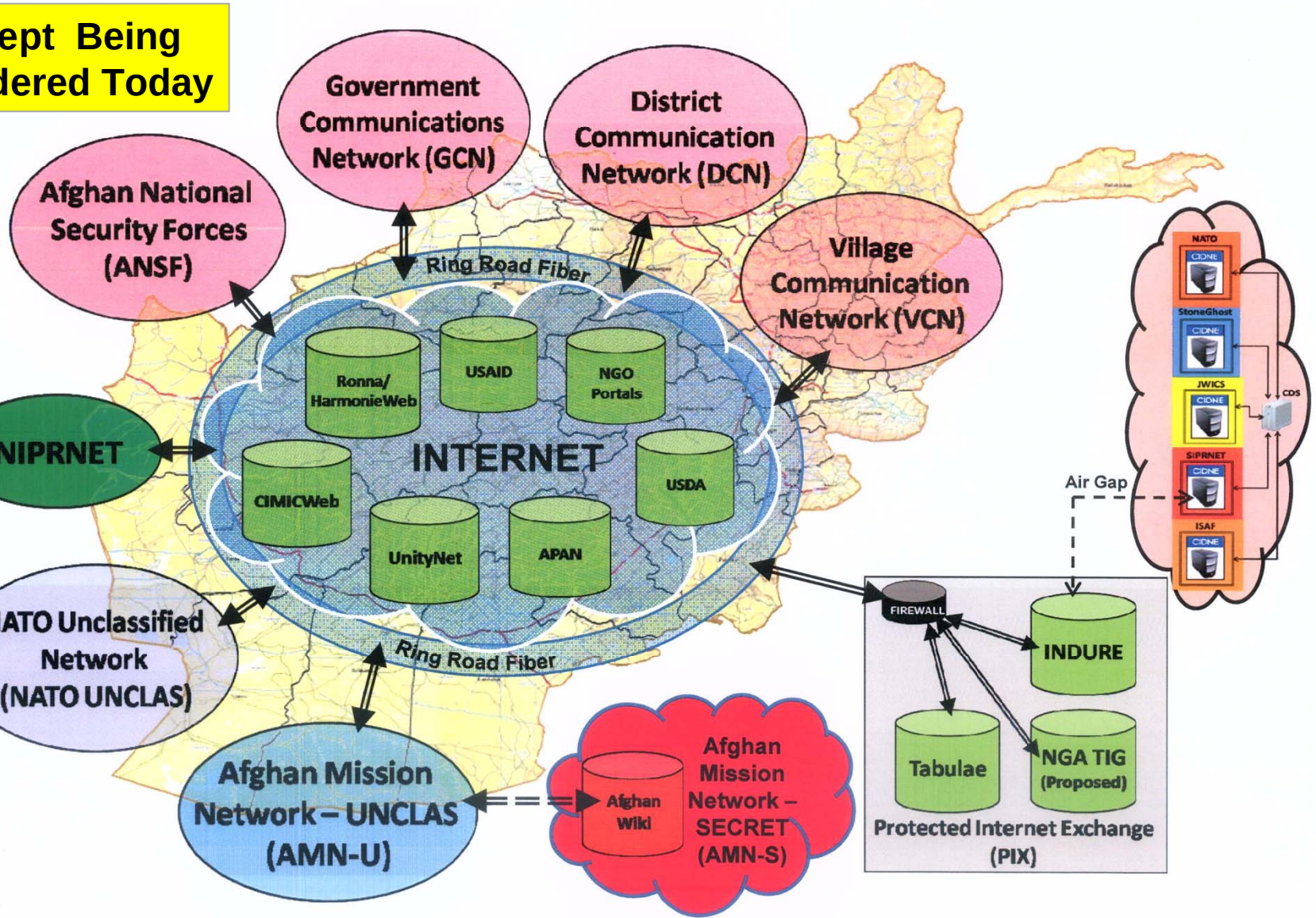
AFPAK TF:
Focus on Unclassified Information Sharing
Initial Concept 2009

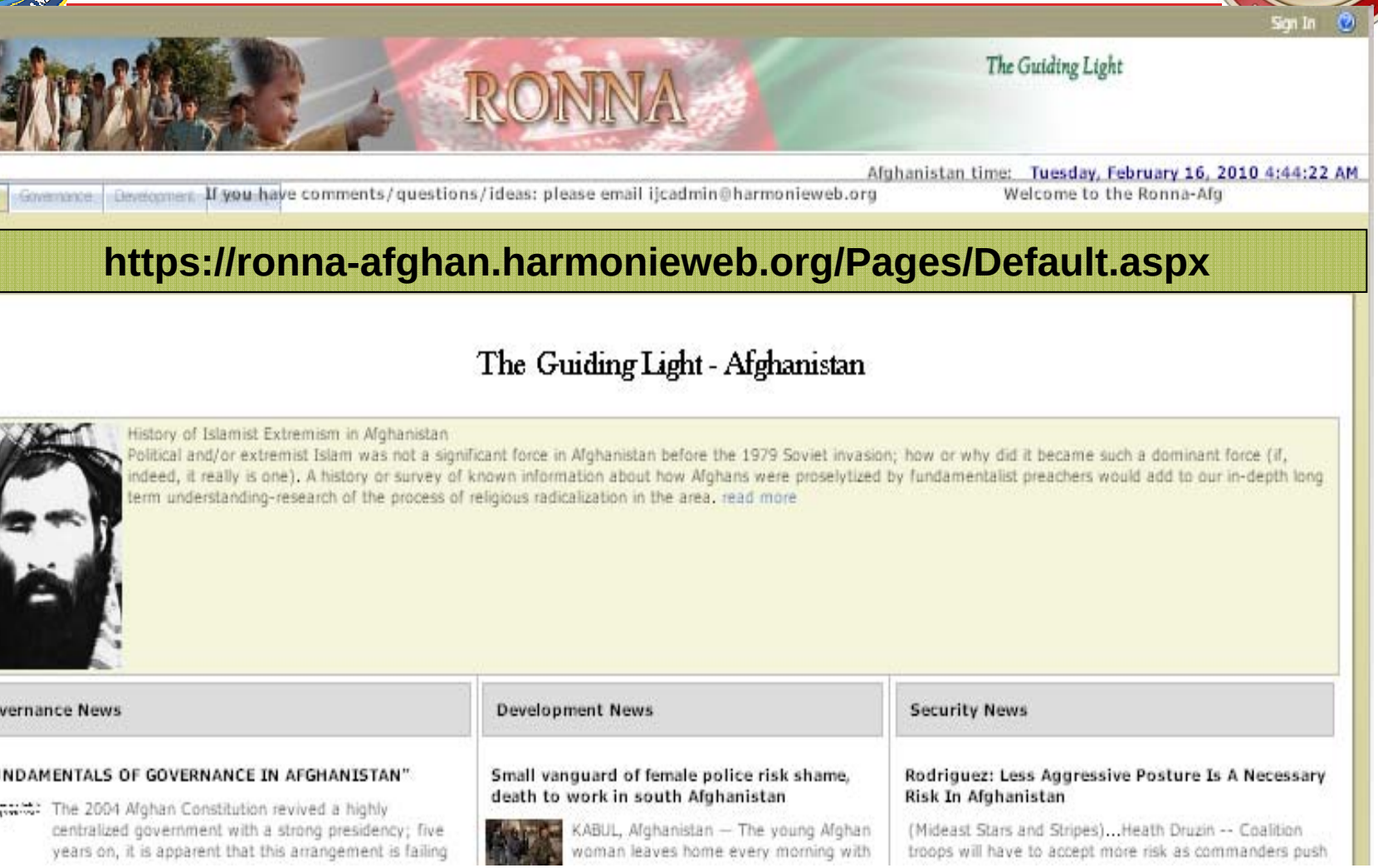


UNCLASSIFIED

Afghanistan Unclassified Networks



“Ronna” Harmonieweb Screenshot



Next Steps 1 of 2

- Implement Standardized Assessments developed by J-CIM Joint Test
- Implement Shared Enterprise Service (TISC/APAN)
- Develop data mediation services to support MIP, U-Core, C2-Core data standards to/from the dot org to/from the dot mil
- Integrate civ-mil data sources beginning with IKE/GATER tool used by Army Civ Affairs
- Publish civ-mil data to C2 systems

IIS Next Steps 2 of 2

- Consider strong repository services to aid in discoverability and collection federation
- Leverage JFCOM Warfighter Challenge, JCTDs, Exercises to assess then close gaps
- Complete ISIP FA 6 POA&M and submit recommendations to ISIP lead

Conclusions / Challenges

- Not build new systems - Integrated, non stove-piped data must be the focus for interoperability
  - Visible, discoverable, searchable, accessible, retrievable, and understandable
- DoD is moving forward with implementing an enterprise level service for unclassified external sharing
- Resourcing solutions that meet guidance and IPLs
- Successful transition of solutions for long term sustainment – where does it belong

Potential Next Steps for Collaboration with NATO

Recommend a partnership between NC3A, NATO ACT and OASD(NII) to:

1. Develop a proposal for a net-centric unclassified information sharing demonstration at one or more of the following:
   - CWID
   - Combined Endeavor
   - MIP – Greding
   - Other?

2. Once demonstrated, resource production quality capability

3. Develop a plan to field, train, and maintain the capability

Contact Information

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