



Managing Dynamic Collaborative Action Teams in a Net-Centric Environment

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Objectives For This Presentation

- **Vision for Command and Control of the Future**
- **What's DCAT?**
 - **DCAT Examples**
 - **DCAT Framework**
 - **Key Concepts**
- **Evolutionary or Revolutionary?**
- **C2 Policy Matters**
- **Status of Current Prototype**
- **Summary**



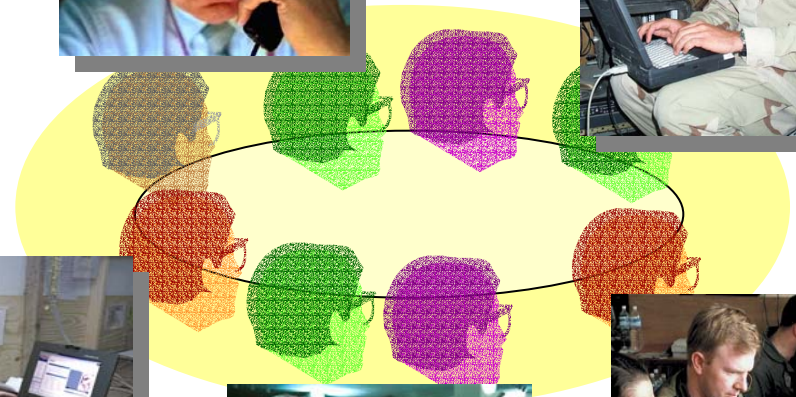
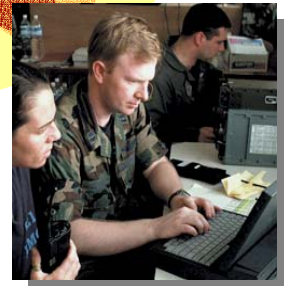
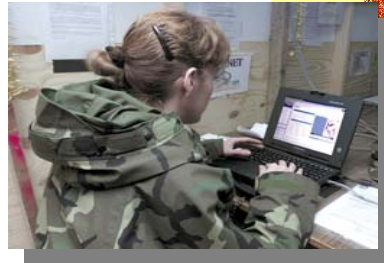
Vision for Command and Control of the Future

“Collaborative C2 functions give Joint C2 in 2015 its agility and the ability to support any command and control method that may be implemented.”

“The collaborative C2 functions allow teams...to be formed quickly from across the echelons and functions to work on specific issues.”

Joint Command and Control Functional Concept, 2003
Joint Chiefs of Staff

(also non-DoD organizations and other partners)



DCAT is an integral component of command in control in an operational environment empowered by the Global Information Grid.



What's DCAT?

D-CAT

Pronunciation: d-cat

Function: action-oriented noun

1 : dynamic collaborative action team: a dynamic grouping of dispersed organizations and personnel, spanning command echelons, activated for a specific mission or operational task. A DCAT's dynamic nature allows it to adapt to operational needs.

2 : (DCAT) : a **framework for managing the activities of dynamic collaborative action teams in a net-centric environment**

DCAT Pattern refers to the structure used to characterize the key processes, people, data, and technology (resources) used to quickly instantiate a specific dynamic collaborative action team and support the functions performed by the team.



DCAT Examples

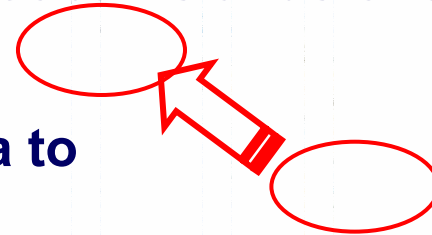
- Undersea Warfare Operations -



**US DDG operating in
Singapore area**

Tasking to DDG CO designated as Officer in Charge:

- Intelligence indicates a foreign government is conducting an out of area submarine deployment to the Nicobar Islands or the Maldives**
- Proceed to that area to locate and observe operations**
- Additional support: P3s from Diego Garcia and an SSN**





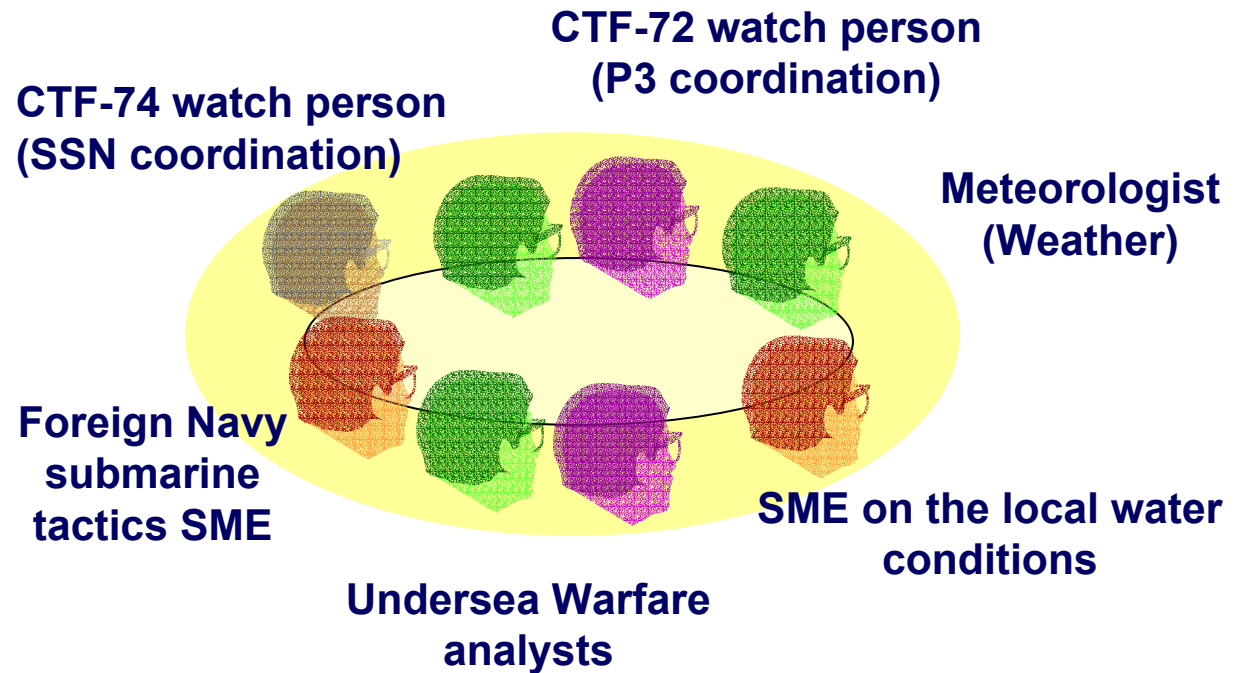
DCAT Examples

- Undersea Warfare Operations -



**US DDG operating in
Singapore area**

**DDG CO needs to augment expertise and
operational experience available on-
board:**



A dynamic collaborative action team is formed.



DCAT Examples

- Weapon of Mass Effects Crisis -



Indications are that Country A, which has ties to terrorist organizations, has engaged North Korea about the purchase of a WME.

Tasking to PACOM J3:

Formulate Courses of Action for this potential crisis.

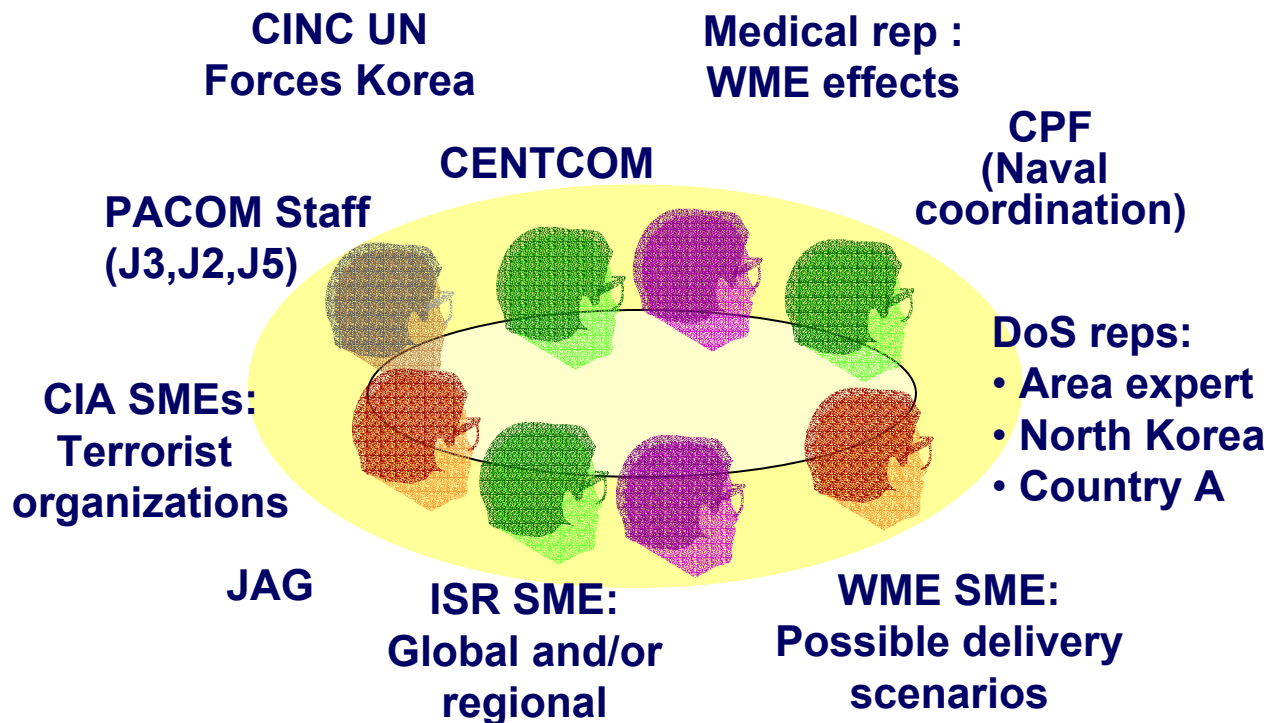




DCAT Examples

- Weapon of Mass Effects Crisis -

The PACOM J3 Action Officer tasked by Officer in Charge to activate a Crisis Action Team needs to augment expertise and operational experience of PACOM staff with:

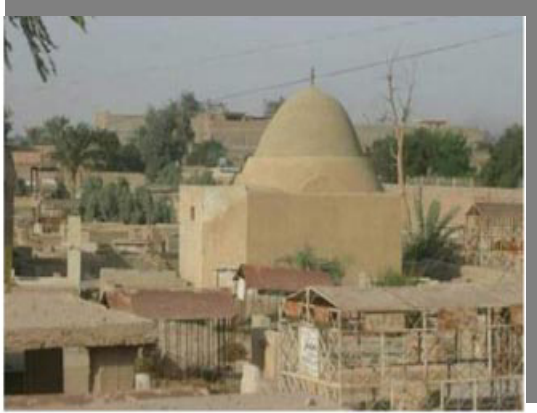


A dynamic collaborative action team is formed.



DCAT Examples

- Small Town Somewhere in Iraq -



Small town in Iraq has recently sustained damage due to insurgent violence, including roadside bombings. Stabilization of the town has been identified as critical to local operations in an Army Brigade's Area of Responsibility.

Tasking to Company Commander designated as Officer in Charge:

- **Support stabilization of the town**
- **Neutralize activities of local insurgents**

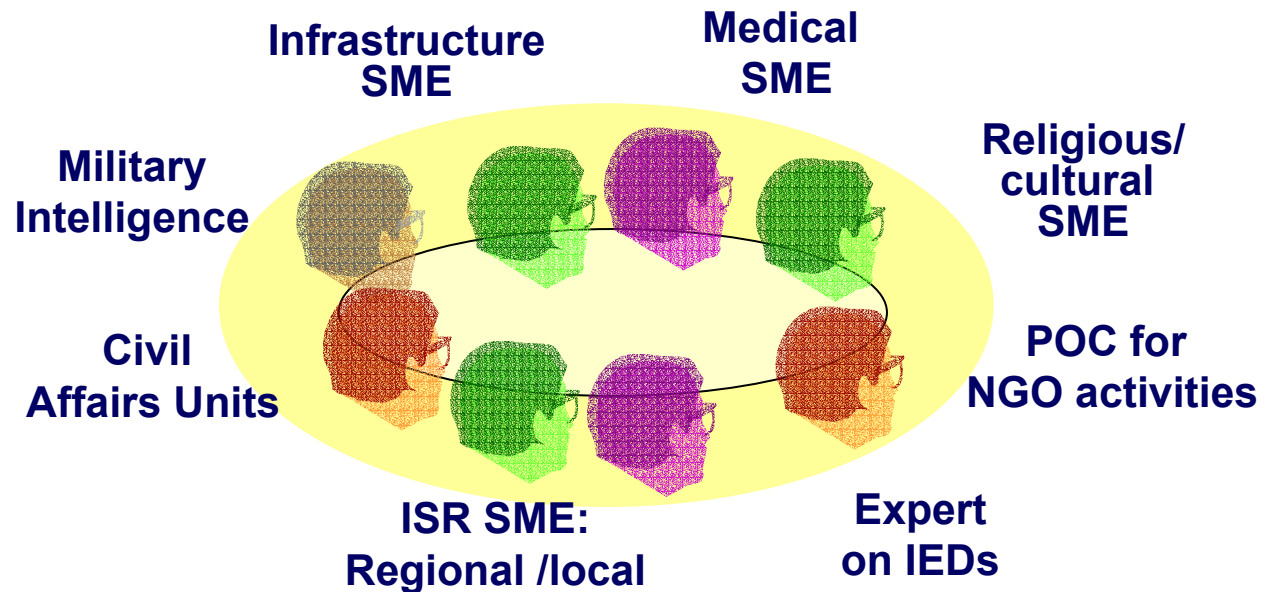




DCAT Examples

- Small Town Somewhere in Iraq -

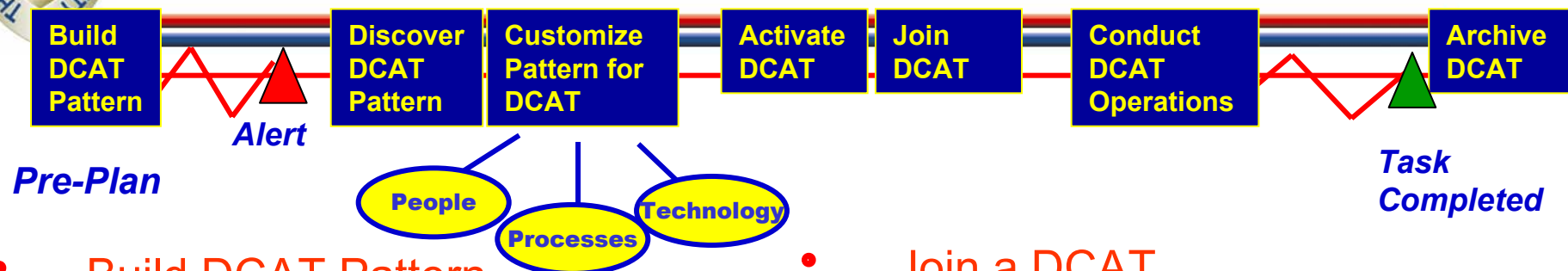
As he deploys, the Company Commander leverages elements of an existing Brigade DCAT to assist with pre-employment planning for initial stabilization activities. The Company Commander matures those elements into a DCAT with a focus on his Area of Operations for the duration of the mission.



A dynamic collaborative action team is formed.



DCAT Framework



- **Build DCAT Pattern**
Pre-plan DCAT (80% solution)
 - ▶ Membership by Role & Organization
 - ▶ Resources (tools, data, services)
 - ▶ Business Rules (TTPs)
- **Discover DCAT Pattern**
 - ▶ Search by situation (geographic, event, etc)
- **Customize Pattern**
 - ▶ Fill out the portal tools & resources
 - ▶ Fill out the team (by role & name)
 - ▶ Populate mission/task specifics
- **Activate DCAT**
 - ▶ Populate membership
 - ▶ Dynamically instantiate & provision workspace
 - ▶ Advertise/register existence
- **Join a DCAT**
 - ▶ Receive Notice to Participate; accept per assigned role
 - ▶ Discover DCAT; request participation
- **Conduct DCAT Operations**
 - **Conduct Mission**
 - ▶ *Post/pull information*
 - ▶ *React to information*
 - ▶ *Generate products*
 - **Manage Collaboration**
 - ▶ *Assign roles; security privileges*
 - ▶ *Monitor user activity, DCAT status*
 - ▶ *Manage resources, Tasking*
- **Archive & Stand down**
 - ▶ Lessons learned
 - ▶ Debrief, Review



Key DCAT Concepts

Dynamic Mapping of Roles to Individuals

- Heterogeneous data sources
- Includes perishable and intangible skills

DCAT Characterization

- DCAT patterns
- Discoverable DCAT Presence
- DCAT Health and Status

Dynamic Provisioning of Workspace

- Dynamically configuring collaborative workspace
- Managing member privileges and roles

Incorporating TTPs into the Collaborative Environment

- Orchestration of business rules

- **Service-oriented Architecture**
- **Interoperable Collaboration**



Global Services for Management of DCATs



DCAT Portal

Create New
DCAT Pattern

Search for
DCAT Pattern

View and Customize
DCAT Pattern

Activate DCAT

Discover
Active DCATs

Document Library

DCAT Best Practices

View and Customize DCAT Pattern

DCAT Pattern :

Mission Template

Mission Objectives

Membership: Billets, Criteria

Team Structure

Battle Rhythm

Mission TTPs

Tools, Data Sources

Document Libraries

Operational Pictures

Products

Task Management

Event Management

CCIR, CIR Management

Collaboration Environment

Synchronous Collaboration

Asynchronous Collaboration

Collaboration Management Template

Admin

Member Roles

Health and Status

Collaboration TTPs

DCAT Pattern

History

Build
DCATa
ttern

Search
for DCAT
Pattern

Customize
DCAT
Pattern

Activate
DCAT

Join
DCAT

Conduct
DCAT
Operations

Archive
DCAT



Evolutionary or Revolutionary?

- DCAT (the framework) can support a spectrum of *dcats* (operational entities)
 - Improve current C2 processes
 - *Augment collaborative C2 processes*
 - Allow current processes to evolve and adapt quickly
 - *Extend collaborative C2 processes*
 - Revolutionize the C2 processes into leaner, more agile capabilities
 - *Re-define collaborative C2 processes*
- Determining factors: Policy and doctrine in addition to technology



C2 Policy Matters

- **Information sharing - “new” data providers**
- **Flexible tasking of personnel**
- **TTPs for the collaborative environment**
- **Trust between collaborative partners**
- **Interoperable Collaboration - “come as you are”**
- **Security**



Status of Phase I DCAT Prototype

- **Proof of concept**
 - **Phase I completed 5/31/05**
 - **Focus: Activate DCAT**
 - **Service-Oriented Architecture (SOA) strategy**
 - **Ready to engage synergistic initiatives**
 - **Goal : leverage other work in data models and web services**
- **Service-oriented Architecture**
 - **Interoperable Collaboration**



Activate DCAT

**Dynamically Provision
DCAT Workspace**

Build DCAT Membership

- Map Roles to Individuals
- Notices to Participate

**Register Active DCAT &
Establish DCAT Feed**

Accessible from
warfighter's
workspace

DCAT
Services
Portal

COCOM Headquarters

Build
DCATP
attern

Search
for DCAT
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Customize
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Activate
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Join
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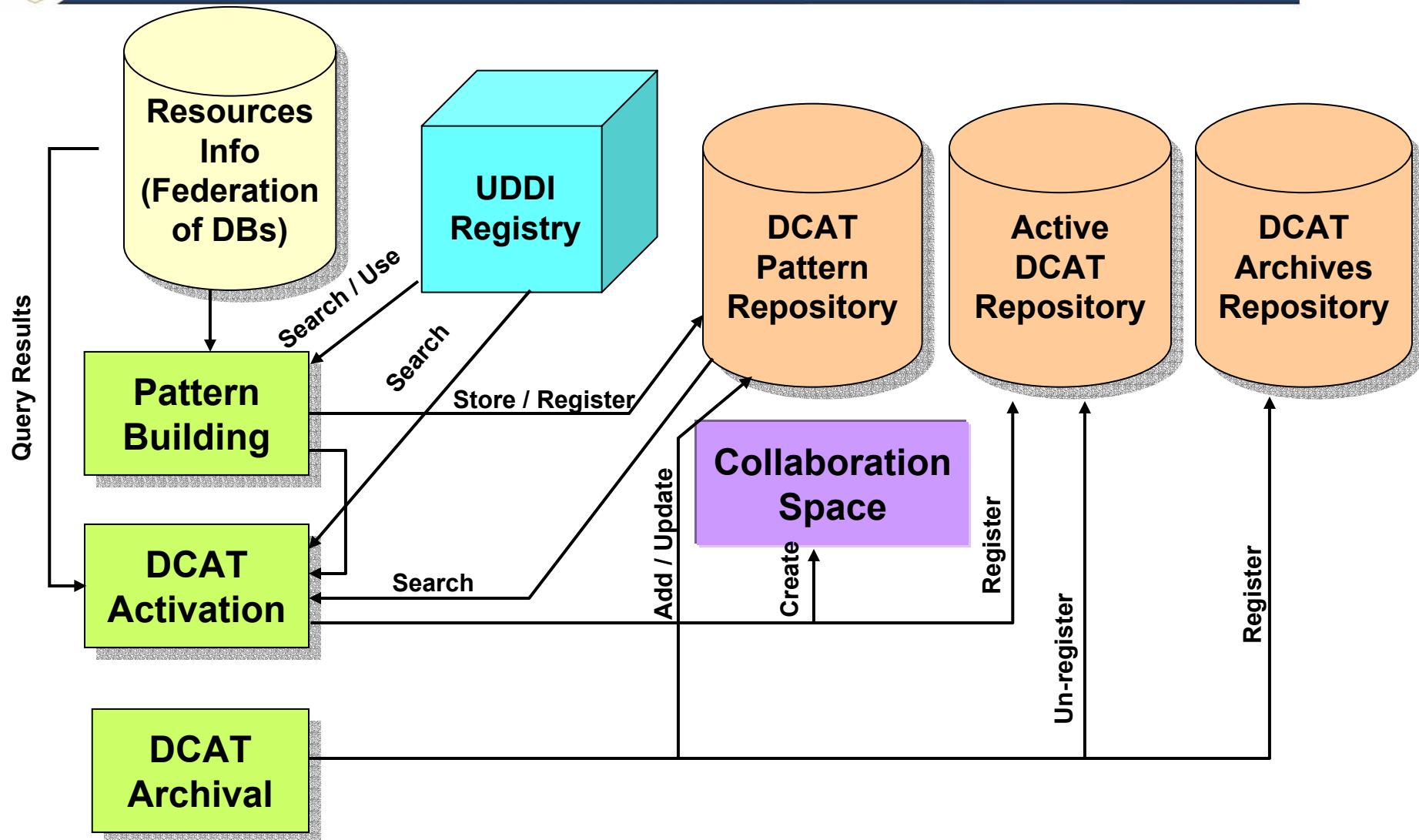
Conduct
DCAT
Operations

Archive
DCAT



DCAT System Diagram

- Assumed in Phase I DCAT Prototype -





Summary

- **Dynamic collaborative action teams (DCATs) will potentially have a revolutionary (not just evolutionary) impact on Command and Control.**
 - Policy and doctrine are critical to making **dynamic collaborative action teams** a revolutionary concept.
- **Structure is critical to enabling the concept and making it viable.**
 - The objective of the DCAT framework is to provide a common structure that will make dynamic collaborative action teams feasible across a broad range of operational environments.