



Distributed Common Ground/Surface System (DCGS) Enterprise

# DCGS Enterprise Overview

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**5 December 2011**

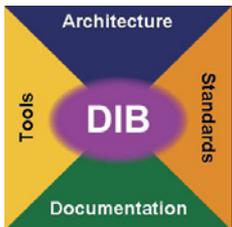


# The DIB Story



Original problem was data sharing among several PORs.

JPO wouldn't work because PORs did different missions.



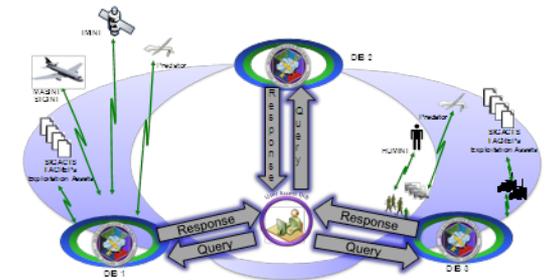
DIB created as a common product with shared costs.

DIB alone wasn't enough. Governance was needed.



Process forged a community around the DIB.

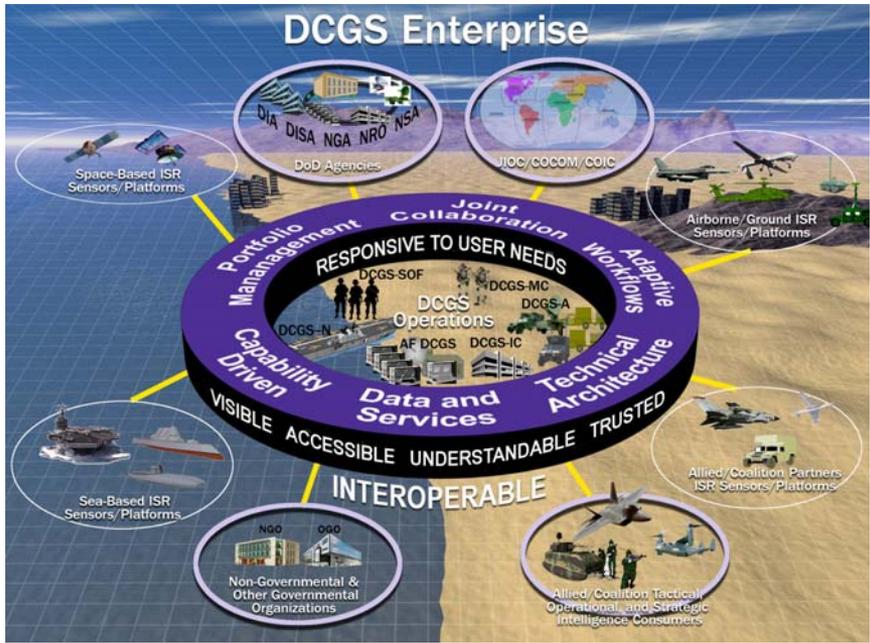
DIB is now so successful others have joined.



***DCGS Enterprise is leveraging the DIB community***



# What is DCGS Enterprise?



## **Unity of Effort**

Login and access from anywhere

## **Survivable**

Works when disconnected

## **Affordable**

Components: Adopt, Buy, Create

## **Agile**

Rapidly deployable & configurable

## **Intelligent**

Supports advanced analytics

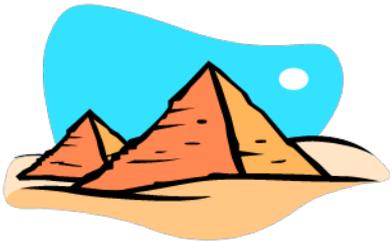
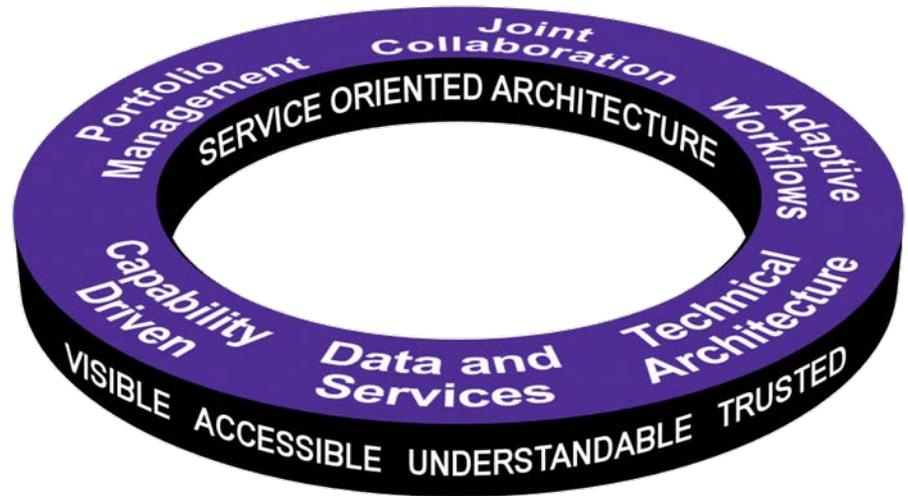
*An enduring set of ISR interoperability standards deployed world-wide from CONUS data centers to tactical handhelds across the GIG.*

- Who*      *JTF and below*
- What*    *ISR Information Technology standards*
- When*    *Lifetime of the GIG/SIPRnet*
- Where*   *World-wide*
- Why*     *Interoperable data, services & applications*



# Enduring Standards

***DCGS Enterprise is a set of standards and specifications.***



***Web standards provide stability over the drumbeat of technical change.***



Lifetime: Target: 10 years  
Goal: **20+ years**

***Patterned on the W3C web standards (HTML, CSS, etc.)***

***ASCII has been around since 1963 – 48 years and still going strong!***



# To the Tactical Edge



*It's not just here,*



*it's here,*



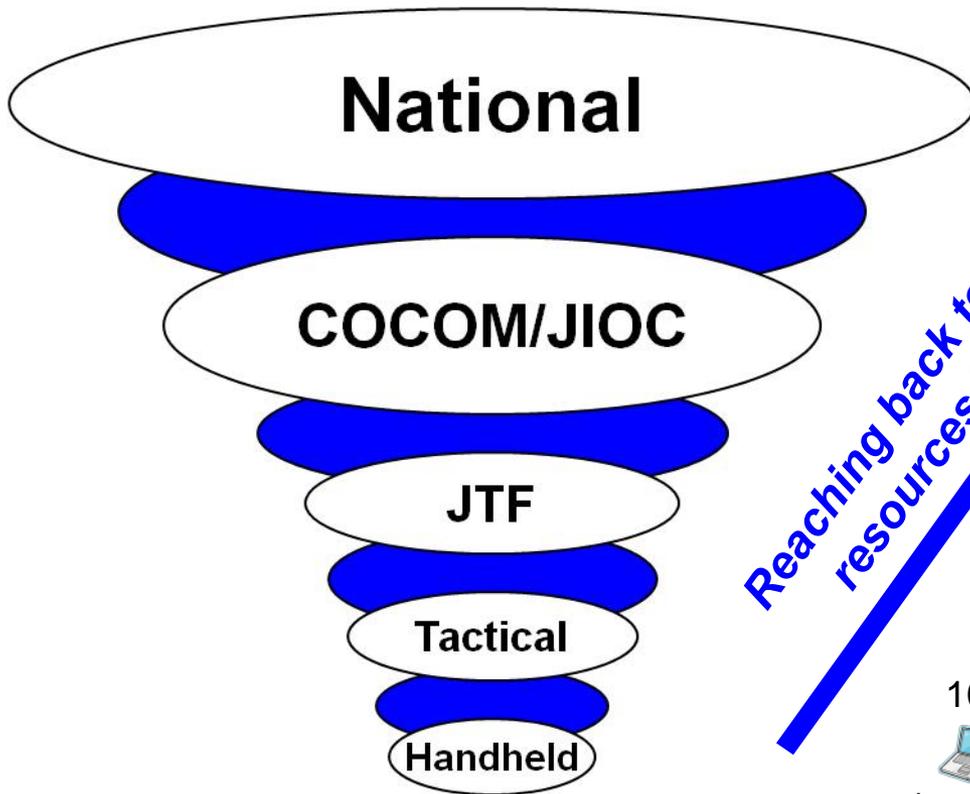
*here,*



*and here.*



# Do No Harm



*Reaching back to better resources is good*

100,000+ users

10,000+ users

1,000+ users

100+ users

1 user

*Reaching forward may overwhelm limited resources*

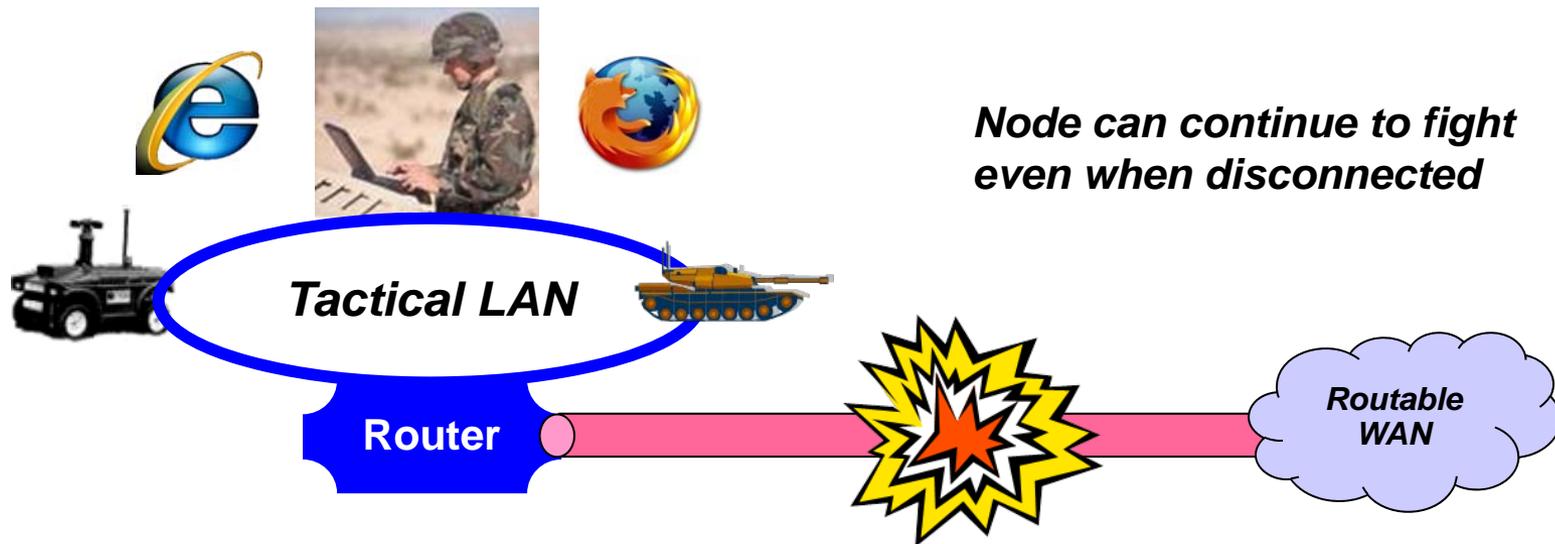
*Infrastructure is sized to anticipated community*

*Comms are neither unlimited or free.  
Hardware is neither unlimited or free.*

**Don't overwhelm lower echelons**



# Disconnectable Nodes



**Denied:** *Enemy attacked communications*

**Disconnected:** *Commander disconnected communications*

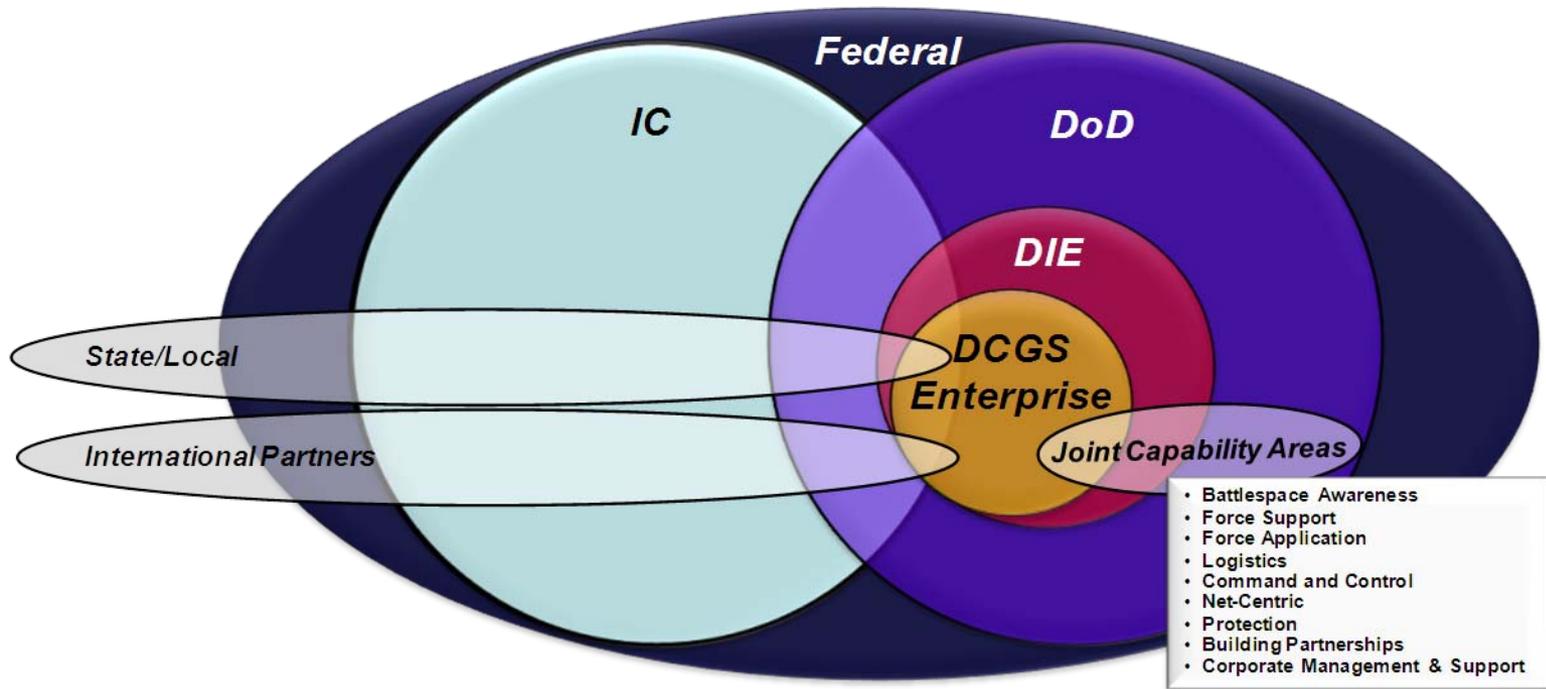
**Intermittent:** *Physical gaps in communications*

**Limited:** *More data than bandwidth*

**DCGS Enterprise grade services must work when disconnected**



# Unbounded Enterprise



***No matter how big you scope your Enterprise, others will want play...***

***Homeland Security***

***State and Local Governments***

***Disaster Relief***

***Non Government Organizations***

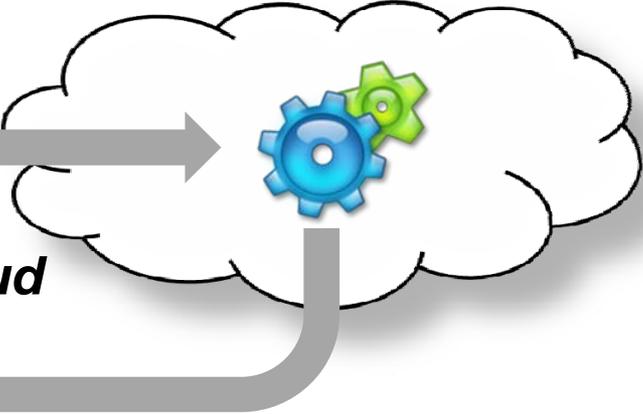
***DCGS Enterprise does **not** depend on a single global user directory***



# Components provide Services

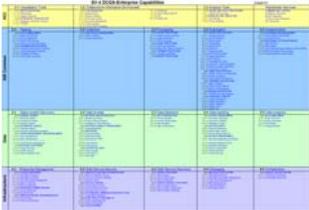


*Service endpoint points into the cloud*



*Software component does work and returns result*

***Capability = Service + Software + Hardware***



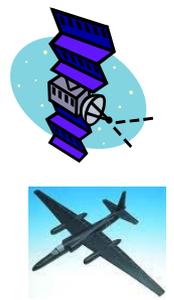
*Service = standards at an endpoint  
(HTML web page at [www.google.com](http://www.google.com))*



*Software components are easy to deploy software configurations which can run on different hardware*



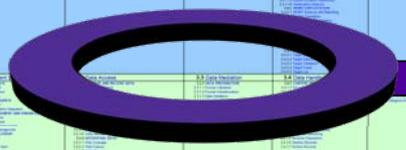
# DCGS Enterprise Architecture



**GIG**



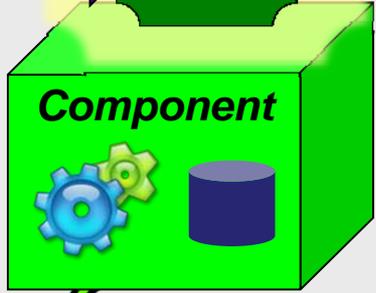
SV-4 DCGS-Enterprise Capabilities			
NOI	1.1.1.1	1.1.1.2	1.1.1.3
IMR Capabilities	1.1.1.1.1	1.1.1.1.2	1.1.1.1.3
	1.1.1.1.4	1.1.1.1.5	1.1.1.1.6
Data	1.1.1.2.1	1.1.1.2.2	1.1.1.2.3
	1.1.1.2.4	1.1.1.2.5	1.1.1.2.6
Infrastructure	1.1.1.3.1	1.1.1.3.2	1.1.1.3.3
	1.1.1.3.4	1.1.1.3.5	1.1.1.3.6



**Standards and Specifications**



**Web**



**Component**



**Backed by a Reference Implementation**

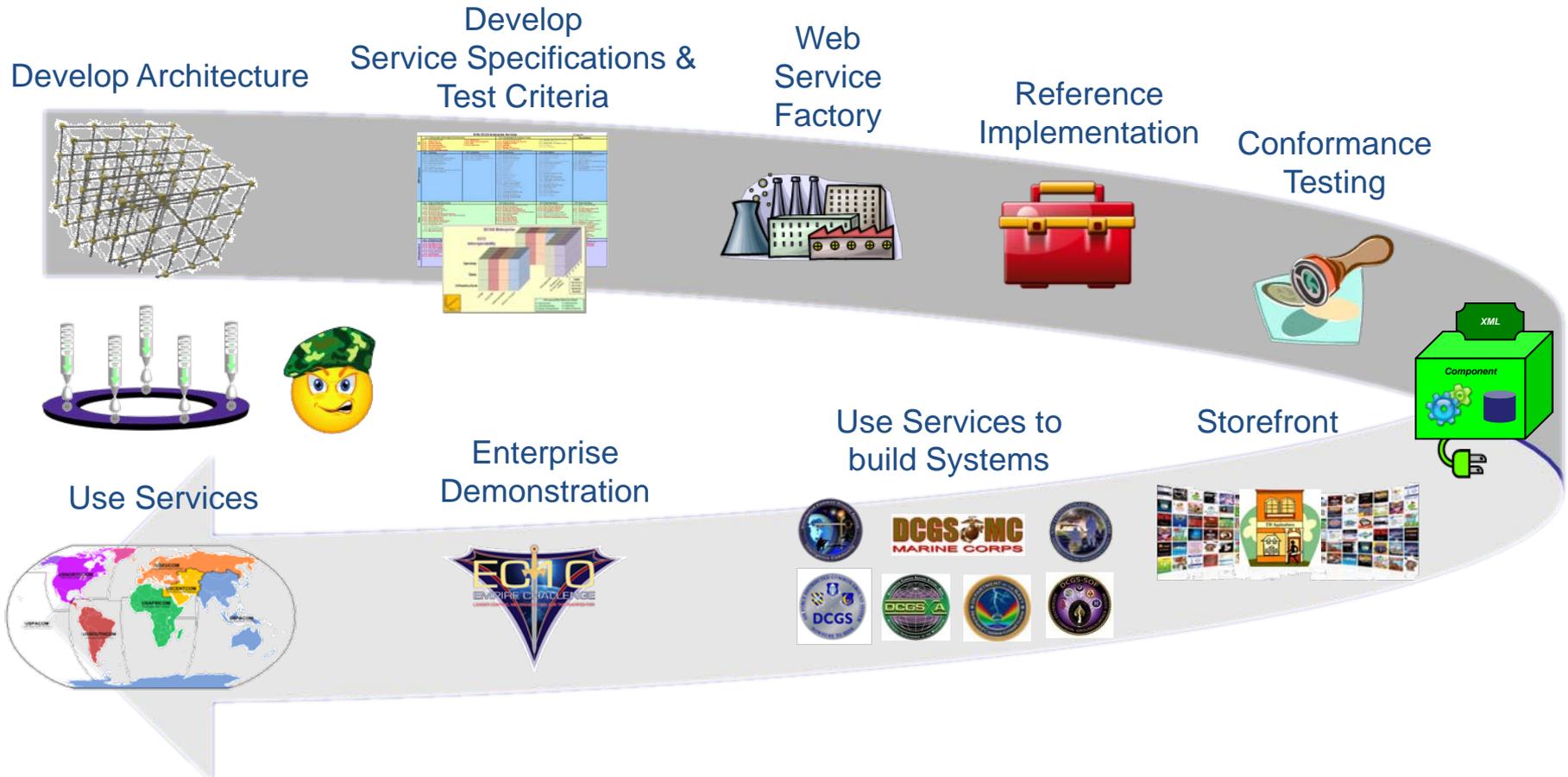


*XML web service provide stability over the drumbeat of technical change.*



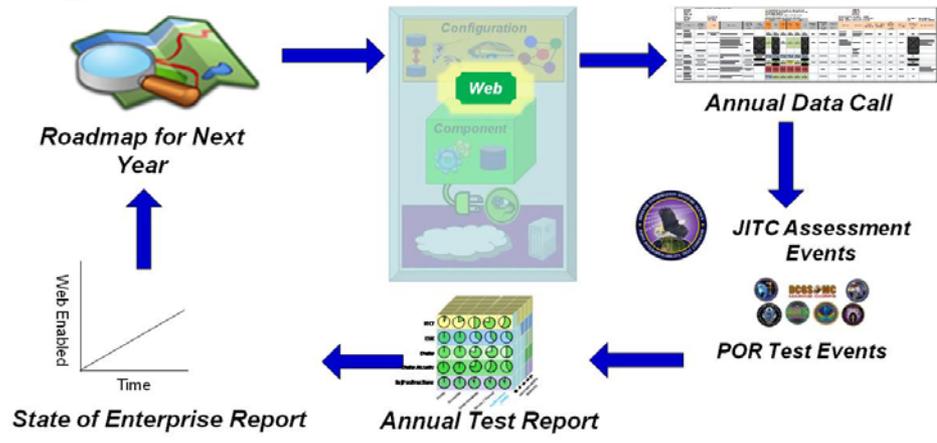


# DCGS Enterprise Acquisition Concept





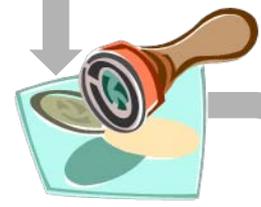
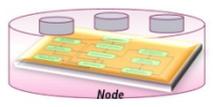
# Enforceable



## Annual Reporting Cycle



**Test Kit backed by Reference Implementation**



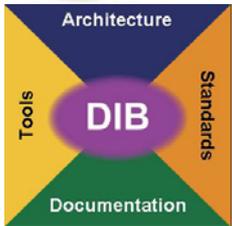
**Component Certification**



# Integration through Reporting



# Can It Work?



DIB started as proprietary software carved out of DCGS-AF



DMO took over maintenance of DIB for the DCGS community



DMO converted DIB to GOSS software



DMO created **standards** and a **conformance test kit** using DIB as a **reference implementation**



Now...

Other COTS and GOTS solutions are available!

**Standards based components enable competition & agility**



# Newbie's Guide

**Visible! Accessible! Understandable!**  
**Secure! Interoperable!**

**2011 EDITION**

## DCGS Enterprise for Newbie's

**Agile! Survivable! Affordable!**

**Making Enterprise Standards Work for You!**





### DCGS Enterprise Newbie's Guide

*An Introduction to the DCGS Enterprise*



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**Background**

Distributed Common Ground/Service System (DCGS) Enterprise is the Defense Department's core effort to effectively implement intelligence information sharing relationships within the DCGS community, and to the intelligence agencies and other mission partners. The core of the DCGS Enterprise community consists of the five DoD military service Programs of Record (PoRs), which comprise the DCGS Family of Systems (FoS). They include: DCGS-A (Army), DCGS-N (Navy), DCGS-AF (Air Force), DCGS-MC (Marine Corps), and DCGS-SOPF (Special Operations Force). In addition to the DCGS FoS, the DCGS Enterprise community also includes the DCGS-IC (Intelligence Community).

The DCGS FoS was established to remedy shortfalls in sharing Intelligence, Surveillance, and Reconnaissance data identified in the First Gulf War. Each DCGS is designed to convert sensor data and ISR reports into actionable intelligence for the Warfighter. Essentially, each DCGS processes sensor data to provide meaningful information to Command and Control (C2) systems. This process has traditionally been known as Task, Collect, Process, Exploit, Disseminate (TCPED). The PED portion has more recently been described as Processing, Exploitation, Analysis, Production and Dissemination (PEAP-D).

DCGS uses a FoS approach because both the nature of the processing done and the operational environments vary significantly across the family. For example, DCGS-AF is concentrated on processing raw imagery at five large CONUS-based fixed sites with roughly 1,000 analysts each. In contrast, the Army is focused on forward-deployed exploitation including significant text based intelligence at over 3,000 nodes with approximately 12,000 direct users.

An Acquisition Decision Memorandum (ADM) dated 24 October 2003 described "a net-centric DOD ISR enterprise [that] will enable the Services to operate more effectively in a Joint environment... [All] Services must pursue a common path based on a set of common enterprise services consistent with the Department's net-centric vision while enabling the flexibility to support the full range of the Warfighter's missions." The ADM directed OUSD(I)<sup>1</sup> to lead an effort to develop a governance structure for evolving the ISR net-centric enterprise.<sup>2</sup> The ADM also directed "the Army, Navy, and Marine Corps to incorporate the Air Force Block 10.2 DCGS Integrated Backbone (DIB) interoperability standards and commit to the DIB architecture as the migration path to the common

<sup>1</sup> In coordination with OCSRD/NSI, the Joint Staff, JPCoM, and the military services.  
<sup>2</sup> The objective structure should provide the ability to:

- a. Determine appropriate ISR applications for independent/joint interoperability;
- b. Validate which applications become part of the ISR enterprise;
- c. Verify that core applications are net-centric;
- d. Determine the minimum essential ISR enterprise services and ensure that they are compatible with other Network Capabilities of Interest;
- e. Ensure data interoperability;
- f. Ensure supporting communications plans and the ISR enterprise are compliant with the Global Information Grid (GIG) architecture.

**Search Intelink for:  
DCGS Enterprise Newbie's Guide**



# Questions?

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**Back Up Materials Follow...**