



**Defense Information Systems Agency**

Department of Defense

# **DoD Discovery Metadata Specification (“DDMS”) *Overview***

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# DoD Discovery Metadata Specification (DDMS)

<https://metadata.ces.mil/mdr/irs/DDMS>

- **Purpose**
  - Provides a uniform set of metadata to promote visibility of data assets across the Department of Defense.
- **Key Facts**
  - Called out in DoDD 8320.02, “Data Sharing in a Net-Centric Department of Defense”
  - Endorsed by E.O. 13388, “Further Strengthening The Sharing Of Terrorism Information To Protect Americans”
  - Uses IC Information Security Markings (IC-ISM) for security markings on elements that may contain sensitive data.
  - Used by Federated Search, Enterprise Catalog, DoD Metadata Registry, ...
  - Employed by numerous COIs to facilitate discovery of data assets across the DoD enterprise
  - Adopted both within and outside of the DoD
  - Extensibility supports specialized discovery requirements
- **Primary Benefits**
  - Common vocabulary for discovery data
  - Managed through the DoD Metadata Working Group
  - Leverages well established standards (Dublin Core, GML, Xlink, ISO 8601, ...)
- **Primary Audience**
  - COIs, DoD Capability Developers, DoD Data Providers



**“The Department of Defense Discovery Metadata Specification (DDMS) defines discovery metadata elements for resources posted to the community and organizational shared spaces.”**

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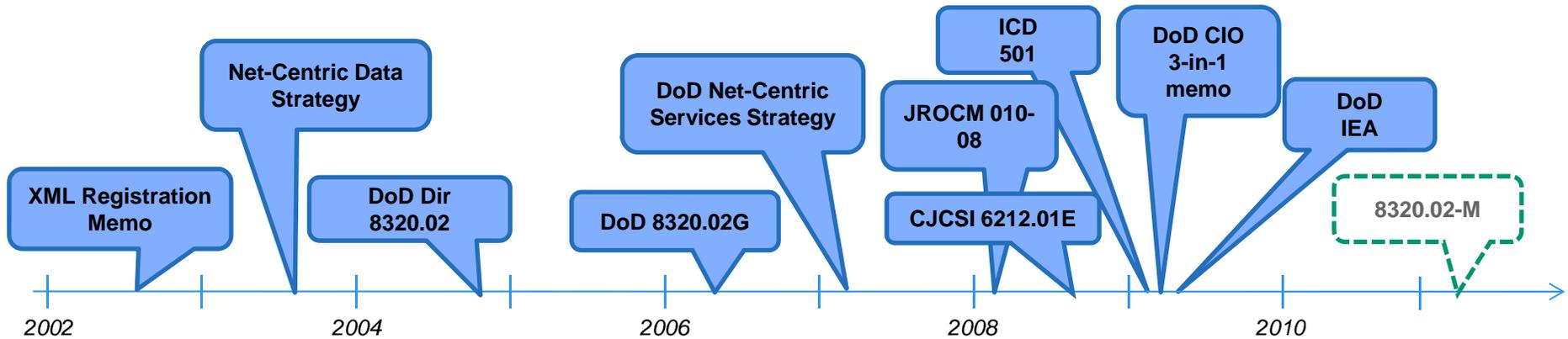
## DDMS & The DoD Net-Centric Data Strategy

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- “The DDMS is the common set of descriptive metadata elements that are to be associated with each data asset that is made visible to the Enterprise Discovery capability...” [DDMS]
- “...’Enterprise’ refers to the Department of Defense, its organizations and related agencies.” [DDMS]
- “*The DoD Net-Centric Data Strategy* defines a data asset as any entity that is composed of data. For example, a database is a data asset that contains data records; e.g., system or application output files, databases, documents, or web pages.” [DDMS]
- “The term ‘data asset’ also refers to services that provide access to data.” [DDMS] (emphasis added)

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# DISA Net-Centric Guidance and Mandates and the Data Services Environment



All These Policies and Memorandums Have The Objective of making Data and Services



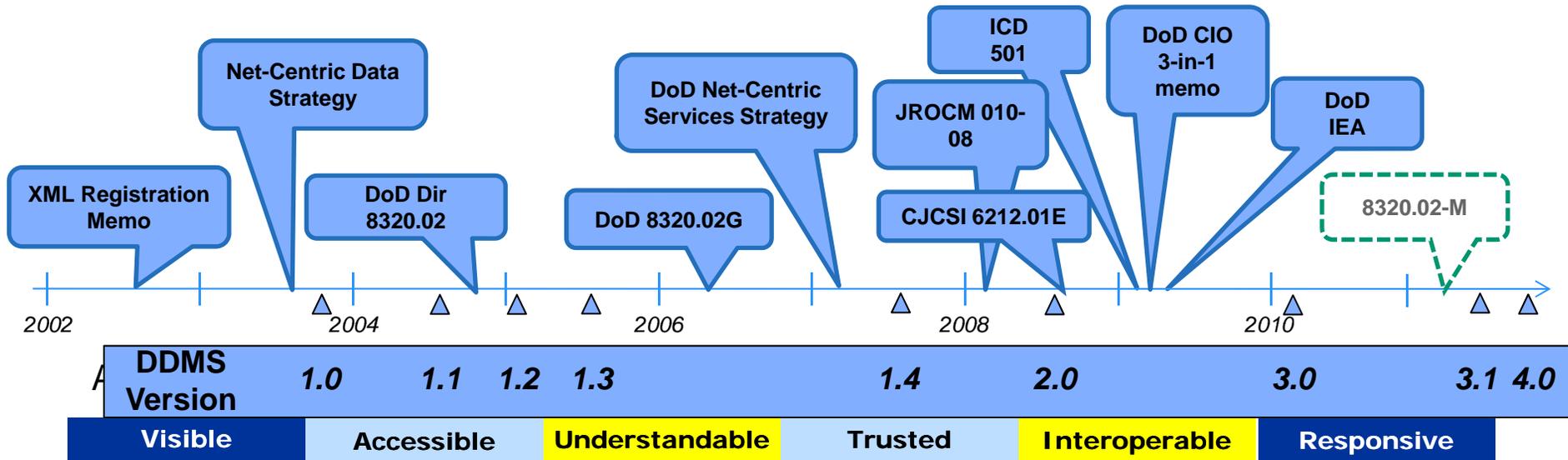
DSE Metadata Capabilities Directly Support These Net-Centric Objectives

DSE Capabilities	Visible	Accessible	Understandable	Trusted	Interoperable	Responsive
Service Discovery (SD)	X	X	X	X		X
Net-Centric Publisher (NCP)	X			X		X
Metadata Registry (MDR)	X	X	X	X	X	X
Enterprise Authoritative Data Source Registry (EADS)	X		X	X		X
DoD Discovery Metadata Specification (DDMS)	X	X	X	X		X

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# DDMS Releases

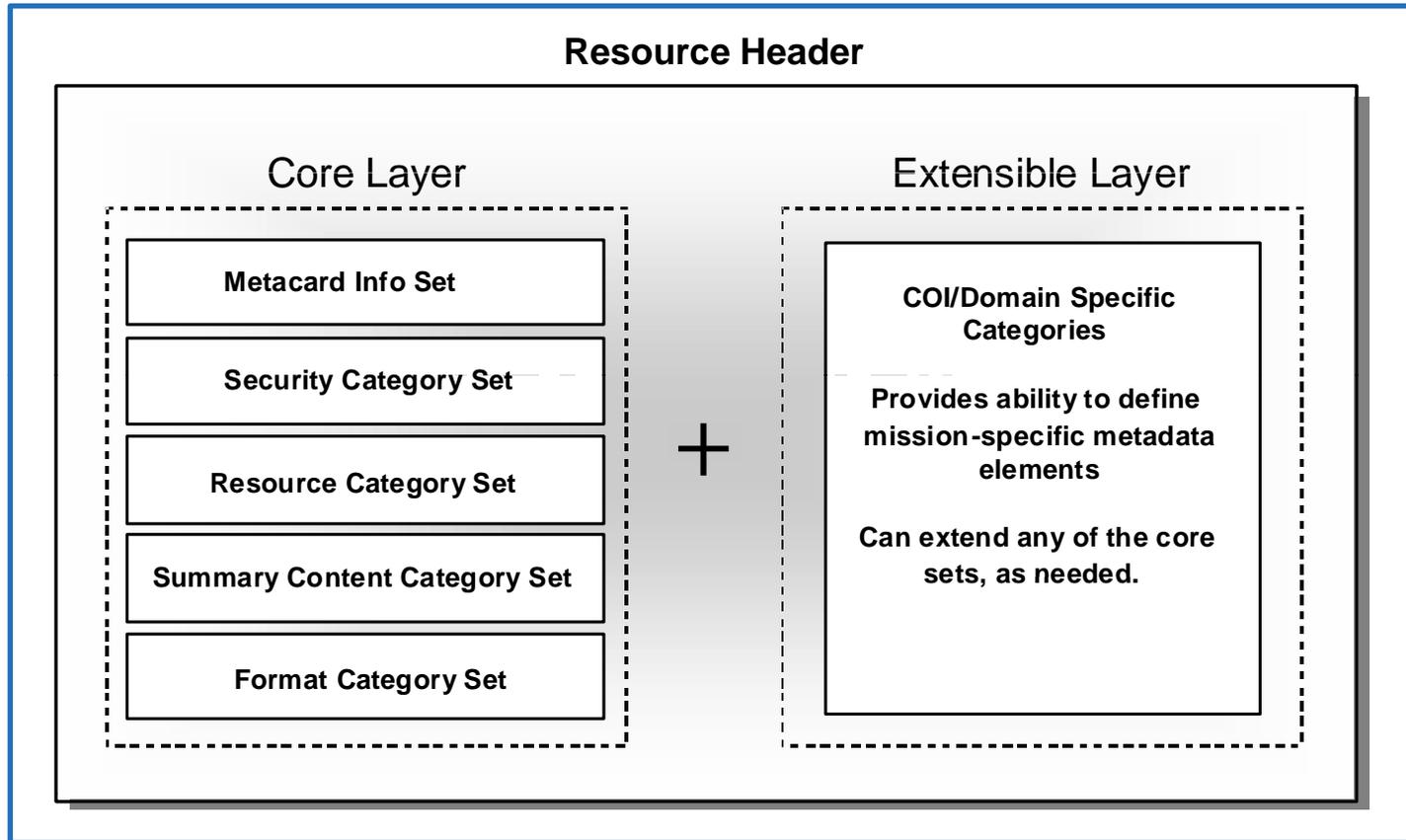


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Net-Centric Publisher (NCP)	X			X		X
Metadata Registry (MDR)	X	X	X	X	X	X
Enterprise Authoritative Data Source Registry (EADS)	X		X	X		X
DoD Discovery Metadata Specification (DDMS)	X	X	X	X		X

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# DDMS Extensibility

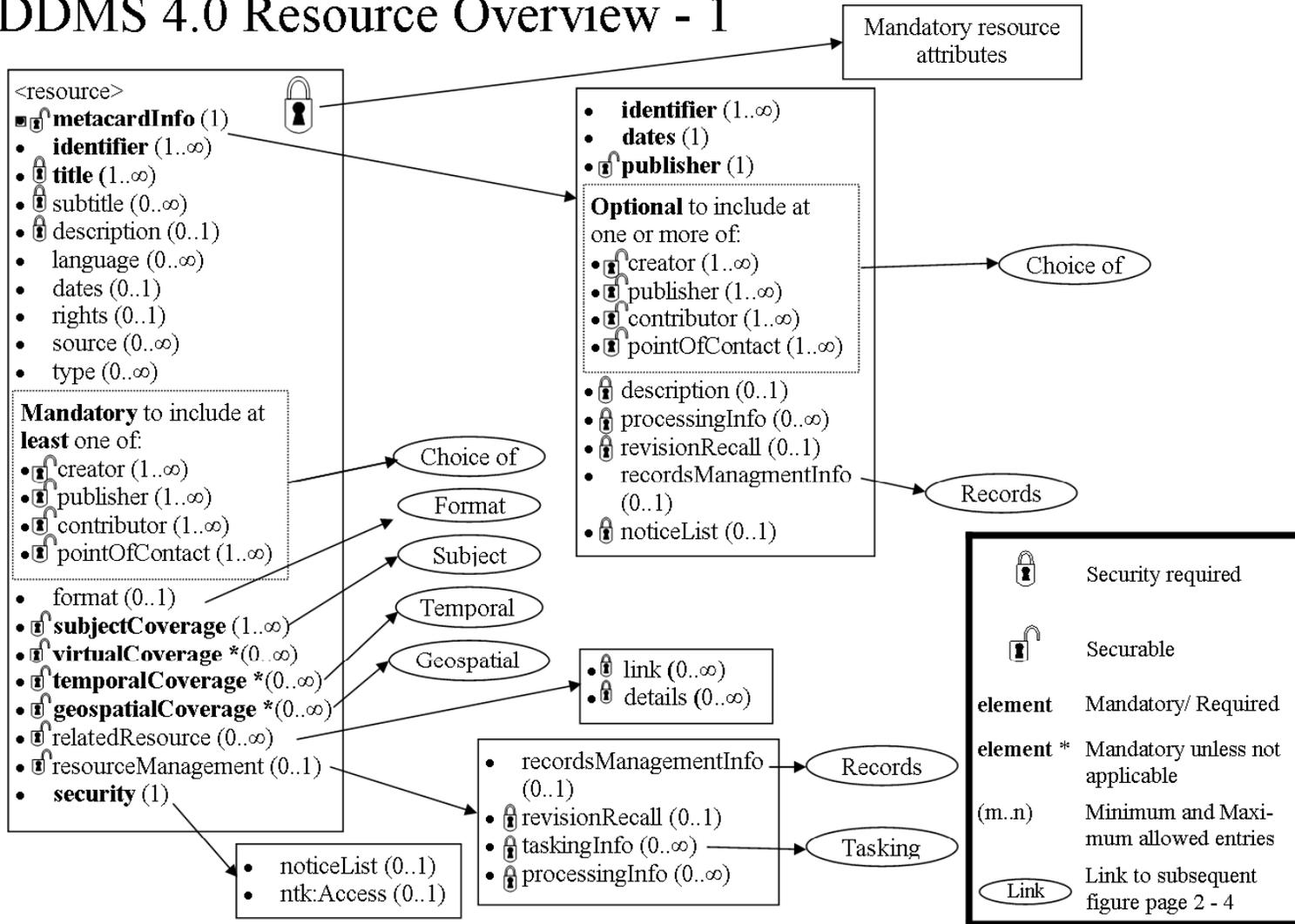


The DDMS XML Schema implements the Extensible Layer by leveraging the `xsd:any` element. This allows any elements from any namespace other than the DDMS namespace to be added to a DDMS record immediately following the `ddms:security` element.



# Partial DDMS Structure

## DDMS 4.0 Resource Overview - 1



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# DDMS & Enterprise Services

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- **Content Discovery**
  - Federated Search leverages DDMS Metadata to facilitate content discovery across the enterprise.
- **Metadata Services**
  - Metadata services supports the publication of COI taxonomies that capture COI semantics. These taxonomies are being used by Content Producers to categorize their content within the DDMS Records using the subject category element. COI extensions to DDMS are also published using metadata services.
- **Service Discovery**
  - DDMS metadata can be published to the Enterprise Catalog when a service is published, enhancing its discovery.



# Related Specifications

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- **Intelligence Community**
  - DDMS imports the Data Encoding Specification (DES) for Information Security Metadata (ISM)
  - DDMS 4.0 has incorporated the content of the DES for Information Resource Metadata (IRM)
    - The IC and DoD have a single specification of discovery metadata
  - DDMS now imports the DES for Need to Know (NTK) Metadata
    - Consistent with IC requirements
- **DoD Community**
  - Universal Core



# Universal Core (UCore)

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- **What is UCore?**
  - Initiated in 2007, UCore is an XML-based information exchange specification and implementation profile
  - It provides a framework for sharing the most commonly used data concepts of Who, What, When, and Where (interrogatives)
  - The purpose of UCore is to improve information sharing by defining and exchanging a *small number of important, universally understandable concepts* between data-sharing communities, without requiring complex mediations
- **UCore Council recently voted on the way ahead for UCore**
  - **Phase One: UCore - DDMS Modifications, APR 2012**
    - Update and improve UCore specification, resulting in UCore 3.0
    - Change Requests (CRs) will be submitted to DDMS to support UCore 3.0
  - **Phase Two: True convergence with the National Information Exchange Model (NIEM), by DEC 2013**
    - Utilizing Phase One products, continue cooperation with PM-ISE, NIEM PMO, and IC CIO to position UCore for convergence into NIEM framework

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# UCore-DDMS Change Requests



- **Eliminate functional overlap between UCore Digest and DDMS Metacard**
  - Digest is a summary of UCore payload for discovery
  - Digest will transition into next DDMS version
  - Technical working group will evaluate Digest and open DDMS CRs for concepts which do not already exist in DDMS
    - UCore Relationship Model
    - Linking between related UCore entities
- **Implement UCore reusable data components (RDCs) within DDMS**
  - UCore interrogatives as the foundational definitions for DDMS components
  - Technical working group will derive RDCs for UCore 3.0 and open DDMS CRs for their reuse in DDMS

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# DDMS Next Steps



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- **Just completed a major change to converge the content of the Intelligence Community's DES for IRM with the DDMS**
  - **Changes for DDMS that reflect the needs of the UCORE are expected to be implemented in the 3<sup>rd</sup> Quarter of FY12**
  - **Changes to the Geographic Markup Language implementation in DDMS have been under discussion as well**
  - **Anticipate a need for continuing maintenance in support of the Intelligence Community's evolving requirements**

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