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SC 32 - Data Management and Interchange

Presentation to JTC 1

November 10, 2008

ISO/IEC JTC 1 Plenary, Nara, Japan

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Topics

- SC 32 Overview
- Market requirements
- Marketing initiatives
- Strategies for cooperation with other organizations
- JTC 1 Issues relating to SC 32
- Highlights: Details of specific projects

SC 32 Structure

- WG 1 – eBusiness
- WG 2 – Metadata
- WG 3 – Database Languages
- WG 4 – SQL Multimedia and Application Packages

Participation & Progress

- Typically 50-60 persons participate in SC 32 and WG meetings
- Over 20 National Bodies participate
- Standards in progress: Completed or Publishing - 18, FDIS – 10, FCD – 9, CD – 7
- SC 32 WG 3 has completed a substantial revision to all nine parts of ISO/IEC 9075 “Database Languages – SQL”. Among the new capabilities in ISO/IEC 9075:2008 is support for the new W3C XQuery Update facility. WG 3 is currently working on adding additional capabilities to the SQL standards.

Market Requirements

- Market requirements for SC 32 standards are driven by the rapid pace of hardware and software advancement as well as by the explosive growth of World Wide Web, internet, intranet, and extranet applications and related semantic technologies
  - Relational DBMS and eBusiness are huge markets
  - Metadata and semantics management are growing markets
- SC 32 projects respond to an increasing market demand for semantics management and semantic computing
  - Rapid evolution of techniques and technologies for creating, storing, accessing, and using data and metadata
- Each part of SQL/MM standards is based on explicit requirements from a domain market
- The market demand for SQL database products remains strong, both from commercial vendors and open-source projects. The clear acceptance of the SQL:2003 standards by the database community is very encouraging. The new capabilities in SQL:2008 were driven by market priorities, so we expect vendor acceptance of the enhancements. WG3 is currently reviewing a variety of options for additional extensions and expansions of the SQL standards.

Marketing Initiatives & Strategies for Cooperation With Other Organizations

- Organize and participate in conferences (e.g., organize the annual Open Forum on Metadata Registries)
- Describe our work on websites
- Vendors advertise products compliant with SC 32 standards
- Interact with other standards committees – SC 32 participants are involved in several SDOs
- Work with other SDOs on PAS submissions to JTC 1
- Pursue international R&D projects in the area of data management and interchange
- Use a variety of electronic communications means – Web sites, Bugzilla, email, …

JTC 1 Issues re: SC 32

Response to JTC1 Resolution 22 on Promoting a Better Understanding of JTC1.

- An ad hoc group met during the SC 32 annual plenary meeting in May 2008 at Sydney.
- SC 32 passed Resolution 5 (See JTC 1 N9286):

  In support of implementing JTC1 Resolution (Gold Coast, 2007) #22 "Promoting a better understanding of JTC1", JTC1/SC32 requests JTC1 to permit JTC1 SC's to make available on their websites, as publicly available information, the following text for each of the JTC 1 standards which are the responsibility of the SC, namely:
  - Table of Contents
  - Clause 0 - Introduction
  - Clause 1 - Scope
  - Clause 2 - Normative References
  - Clause 3 -.Definitions
  - Clause 4 - Symbols and Abbreviations
  - as well as their title and abstract(s).

Rationale Summary for SC 32 Resolution 5 (in response to JTC 1 Resolution 22)

- Having such JTC1/SC32 information publicly available has several benefits including:
  1. Serves as a means for marketing JTC1 standards by providing information essential for access and discovery of such standards by potential users;
  2. Promotes a better understanding of the committee's achievements; and
  3. Facilitates development work both within JTC1 and outside of JTC1. Having such information readily available assists in minimizing duplication of work, identifying potential use of standards in other standards, and maximizing re-use of existing standards, (e.g. existing terms and definitions);
- It is understood that the implementation of this resolution requires
  - the use of the text as stated in the final and authoritative version of the standard as published by the ITTF
  - the use of appropriate ISO copyright symbol (and statement if deemed necessary)

SC 32 Resolution 21: Response to JTC1 Gold Coast Resolution #33–IT Vocabulary Project – JTC 1 N9323

In response to JTC1 Gold Coast Resolution #33, JTC1/SC32 requests that

1) JTC1 make all Parts of ISO/IEC 2382 freely available standards; and
2) JTC1 instruct those responsible for the maintenance of ISO/IEC 2382 not to change or amend the existing definitions and associated terms (English/French) for the concepts defined in the existing 1st 35 Parts of ISO/IEC 2382 (e.g., reformatting definitions according to the requirements of ISO 10241 is acceptable, but changing the meaning of the term (representing a concept) is not acceptable).

A prime reason here is that many of the definition/term pairs in ISO/IEC 2382 are used in other ISO/IEC and ISO standards "as is" as well as in the national standards of JTC1 P-members. Thus, any change to the existing definitions and for the concepts defined in ISO/IEC 2382 will have a very disruptive cascade effect on existing international and national standards developed during the past ten years and in widespread use.

A secondary reason is that any suggested change in a definition/term pair (in English and/or French) indicates that those advocating a change most likely have a different concept in mind from that originally defined in (a part of) ISO/IEC 2382.

Vocabulary for W3C RDF Statements

•English statement: **http://www.example.org/index.html** has a **creator** whose value is **John Smith**

• An RDF statement has a subject, predicate, and Object.

Subject	*Predicate*	*Object*
Web Page	Creator	John Smith

• RDF has the basic idea of using URI references to identify the things referred to in RDF statements.

•The URL can point into a registry of terms: URL for the predicate: http://purl.org/dc/elements/1.1/creator

What is a “Creator”?

- http://purl.org/dc/elements/1.1/creator

- Follow the URI (in this case a URL) and find the definition from Dublin Core. A creator is:
  - An entity primarily responsible for making the resource.
  - Examples of a Creator include a person, an organization, or a service.
- The response is in RDF, so semantic web applications can use it.

JTC 1 Issues re: SC 32

- Banff Resolution 34 – Grid Computing. JTC 1 resolves to enhance/improve collaboration with the Global Grid Forum (GGF).
  - We have not found an SC 32 participant to engage the GGF.
  - Grid technologies are in use in implementations of SC 32 standards. For example, the cancer Data Standards Repository is part of the cancer Biomedical Informatics Grid (caBIG).

Nomination of SC 32 participants as JTC 1 delegates to the MoU/MG

- SC 32 Resolution 24: SC32 endorses Mr. YongJae Kim as a JTC 1 representative from SC32 to the MoU (e-Business) Management Group.
- Also, a person recently volunteered to be a delegate to the MOU/MG: Wenfeng SUN
- Their participation is conditional upon having their travel/participation approved and funded by their organizations
- These are offered for JTC 1 Nara Agenda item 11.6.1

Request to JTC 1
Make Freely Available

Based on the criteria in JTC1 N 7604, titled *"ISO Council Resolution 6/2204 Making JTC 1 Standards Available on the World Wide Web"*, SC32 requests that the following ISO/IEC 9075 specifications be made freely available:

- COR 9075-all parts - JTC1 N 7604 Criteria 3, "CORRIGENDA: Technical Corrigenda"
- 9075-1 (SQL/Framework) JTC1 N 7604 Criteria 7, "INTRODUCTIONS: Purely introductory parts of multi-part standards"

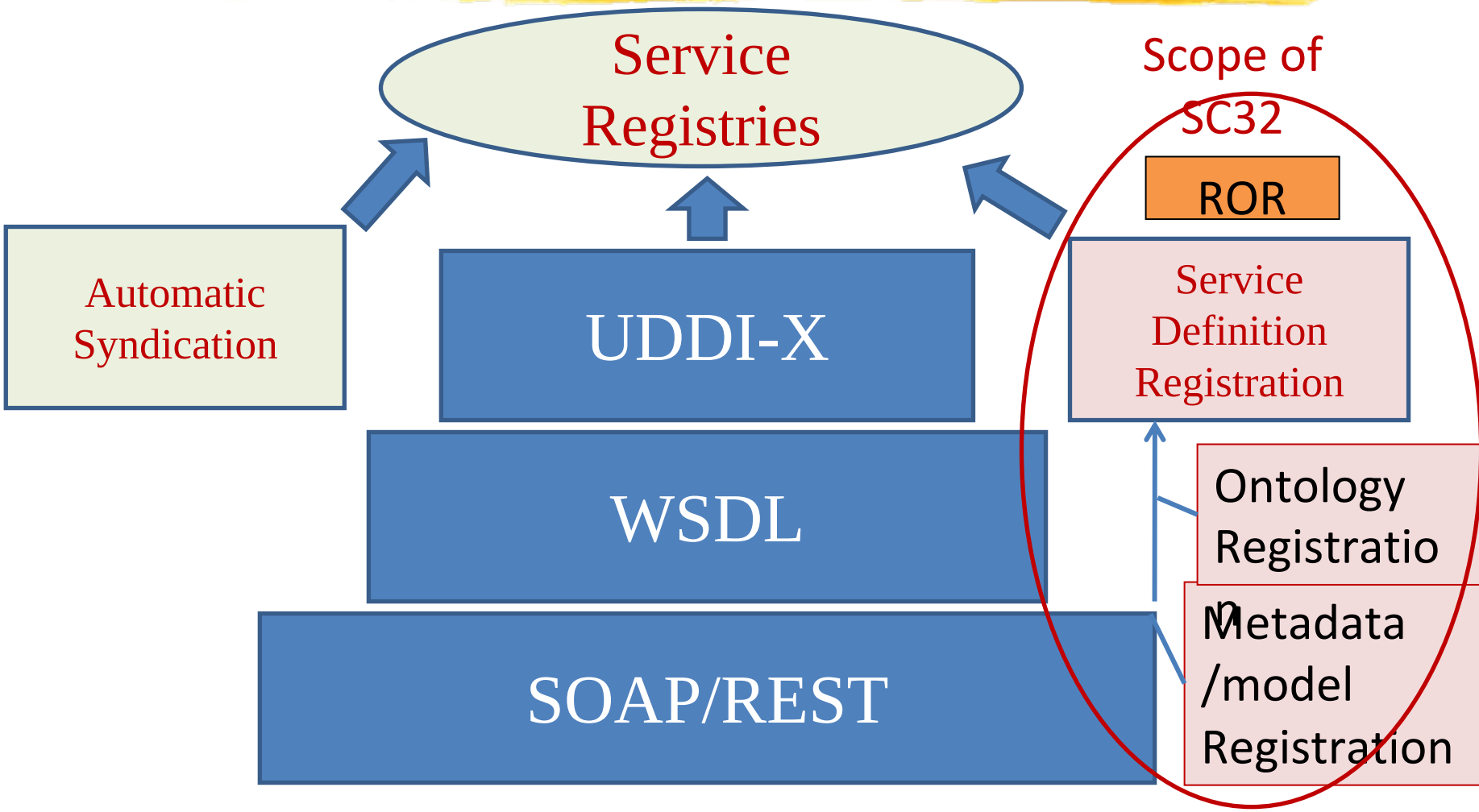
Both fit within the established criteria in JTC1 N 7604

Comments on JTC 1 Resolution 34 & 35 - Web Services

- Some SC32 participants reviewed the web site of WSSG and discussed the current requirements for Registries. Some informal comments were recently sent to the WSSG.
- SC32 acknowledges WSSG's activities and the web site that shows the latest status of Web service related standards.
- At the SC32 Sydney Plenary in May 2008, SC32 initiated a couple Study Period projects in WG2 to investigate the possibility of developing standards such as Registry of Registries (ROR) and "Metamodel for Services Definitions".
- It would be appreciated if SC32/WG2 could have an opportunity to share study results with the WSSG in future.

Specific Projects

Study Period ISO/IEC 19763 Extensions

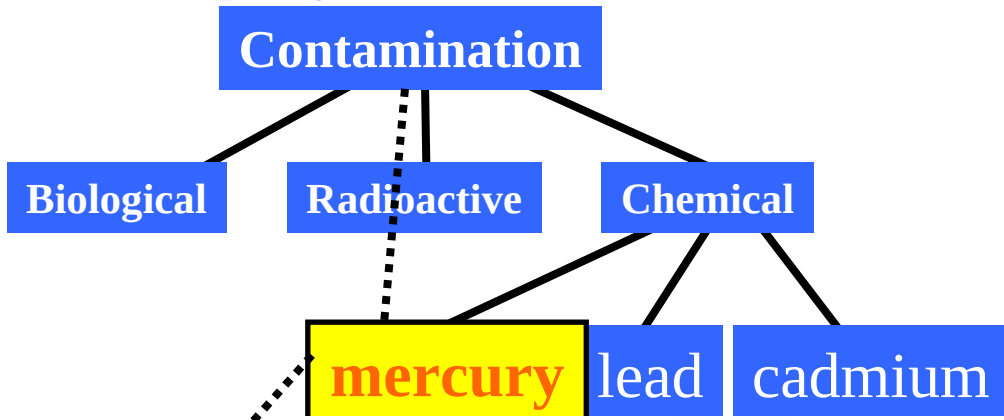


ISO/IEC 11179 Edition 3 Challenge: Combine Data, Metadata & Concept Systems

Inference Search Query:

"find water bodies downstream from Fletcher Creek where chemical contamination was over 10 micrograms per liter between December 2001 and March 2003"

Concept system:



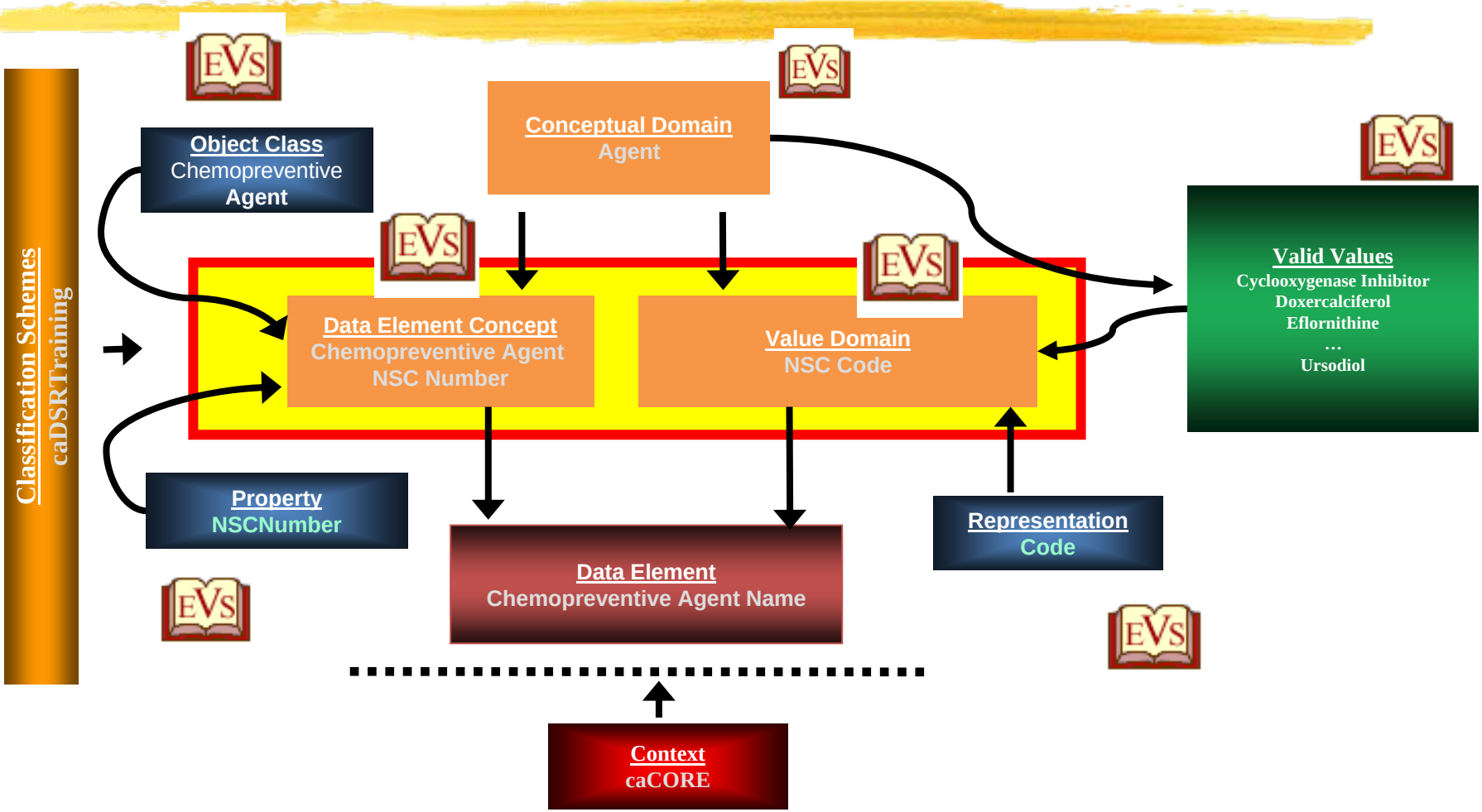
Data:

ID	Date	Temp	Hg
A	06-09-13	4.4	4
B	06-09-13	9.3	2
X	06-09-13	6.7	78

Metadata:

Name	Datatype	Definition	Units
ID	**text**	**Monitoring Station Identifier**	**not applicable**
Date	**date**	**Date**	**yy-mm-dd**
Temp	**number**	**Temperature (to 0.1 degree C)**	**degrees Celcius**
Hg	**number**	**Mercury contamination**	**micrograms per liter**

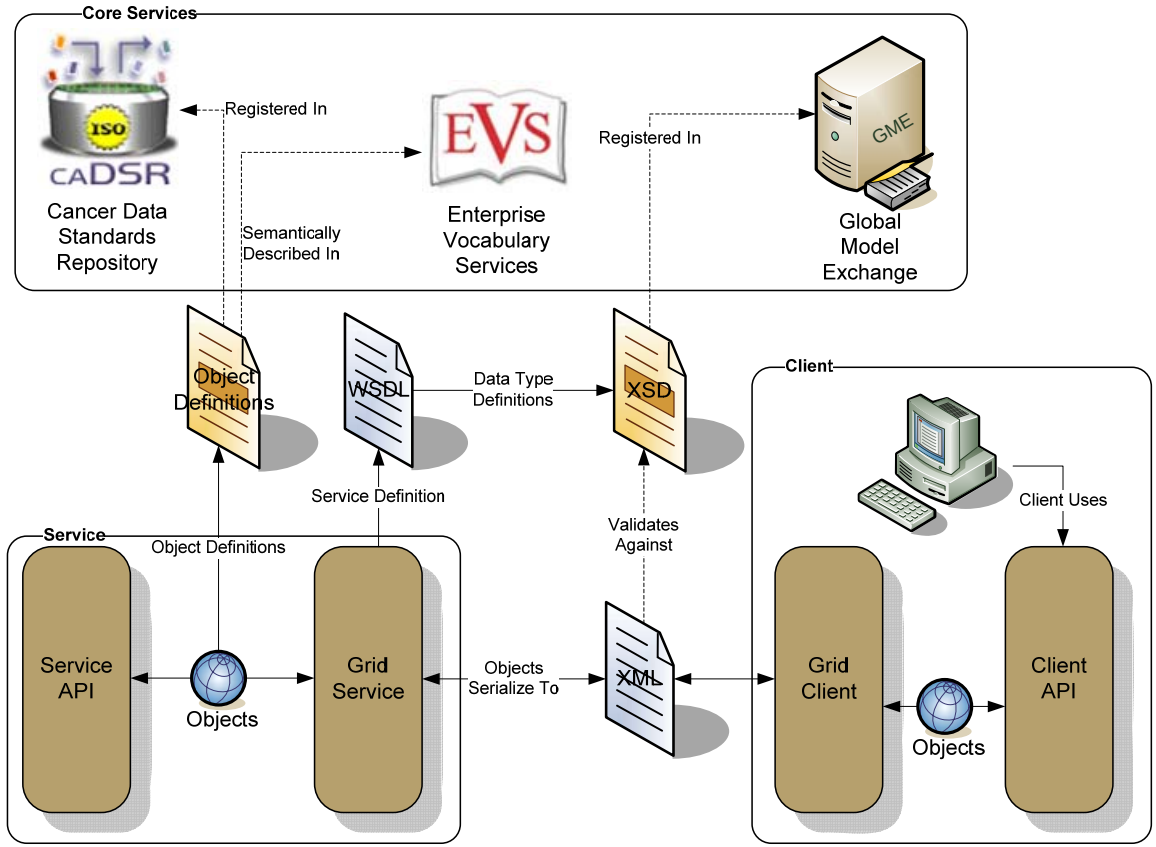
Semantics for Data Management/Data Administration – ISO/IEC 11179 (E3)



Source: Denise Warzel, National Cancer Institute

caGrid Data Description Infrastructure

- Client and service APIs are object oriented, and operate over well-defined and curated data types
- Objects are defined in UML and converted into ISO/IEC 11179 Administered Components, which are in turn registered in the Cancer Data Standards Repository (caDSR)
- Object definitions draw from controlled terminology and vocabulary registered in the Enterprise Vocabulary Services (EVS), and their relationships are thus semantically described
- XML serialization of objects adhere to XML schemas registered in the Global Model Exchange (GME)



Source: National Cancer Institute, caBIG

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