DCML: Use Cases in IT Service Management

J. Darrel Thomas
Chief Technologist, Hosting
Electronic Data Systems Corporation

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Data Center Markup Language (DCML)

- The only open, XML-based standard designed to achieve interoperability by providing a systematic, vendor-neutral way to describe an IT Service environment
- Universal language that describes elemental, process, and service-oriented relationships between IT service entities and policies governing the management of such environments
- Handles heterogeneous and semantic information required to manage at the service level

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The Problem DCML Helps Solve

- IT Services Management requires a multi-dimensional approach
- Mapping of interdependencies and inter-relationships at the elemental, process, and services level does not currently exist
- Complex, heterogeneous environments require interchange standardization between management systems
- DCML helps bridge this disparity using ontological and "like" meta-relationships

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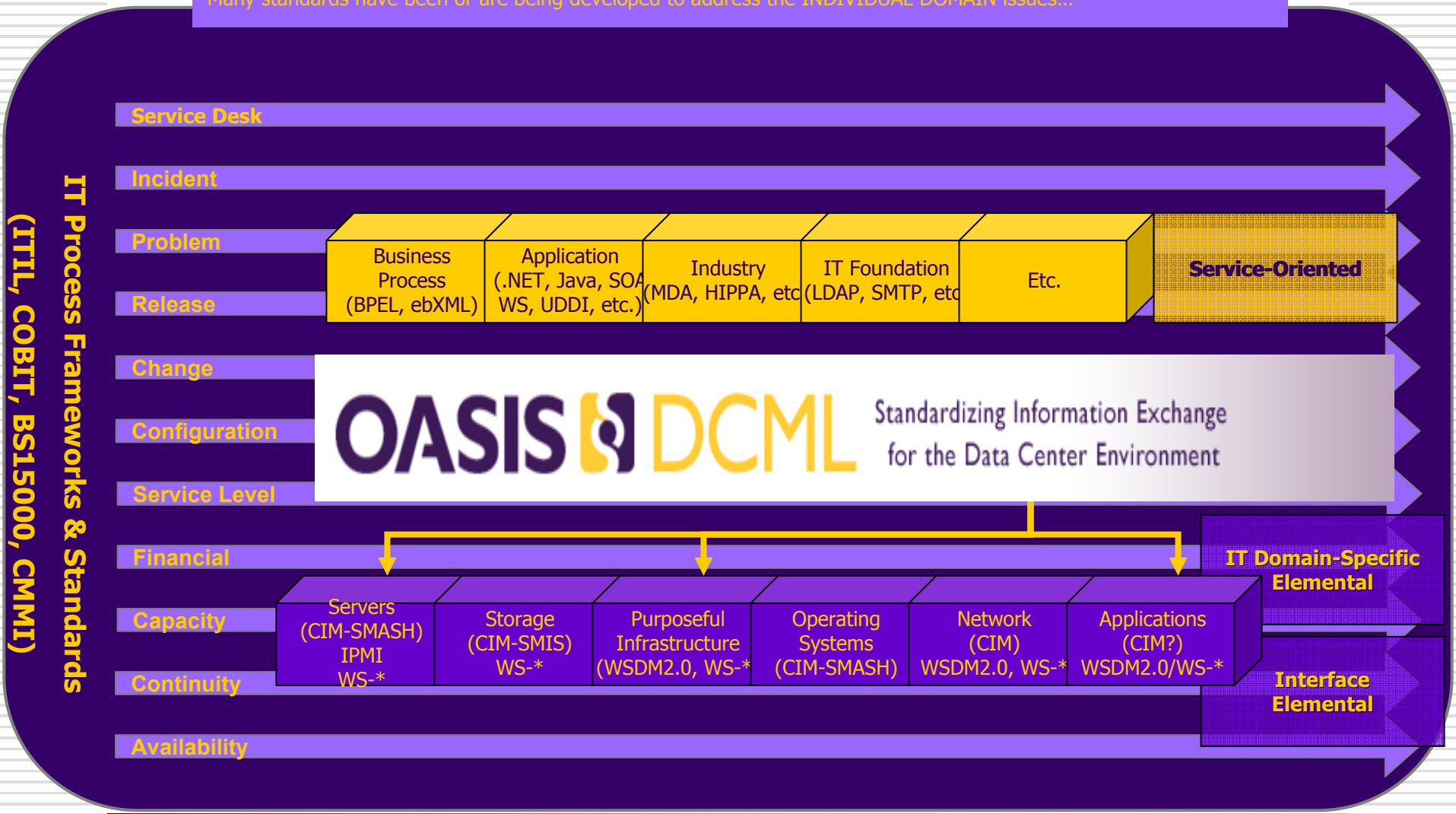
IT Services Management Standardization Has Varying Domain-Based Initiatives to Address Its Dimensions…

Many standards have been or are being developed to address the INDIVIDUAL DOMAIN issues…



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But, There is STILL Confusion with Possibly The Most Import IT Services Dimension – Interrelationships, Configurations, and Dependencies…

This area still looms as the enterprise/service provider's most important inhibitor for standardizing IT Services Management.

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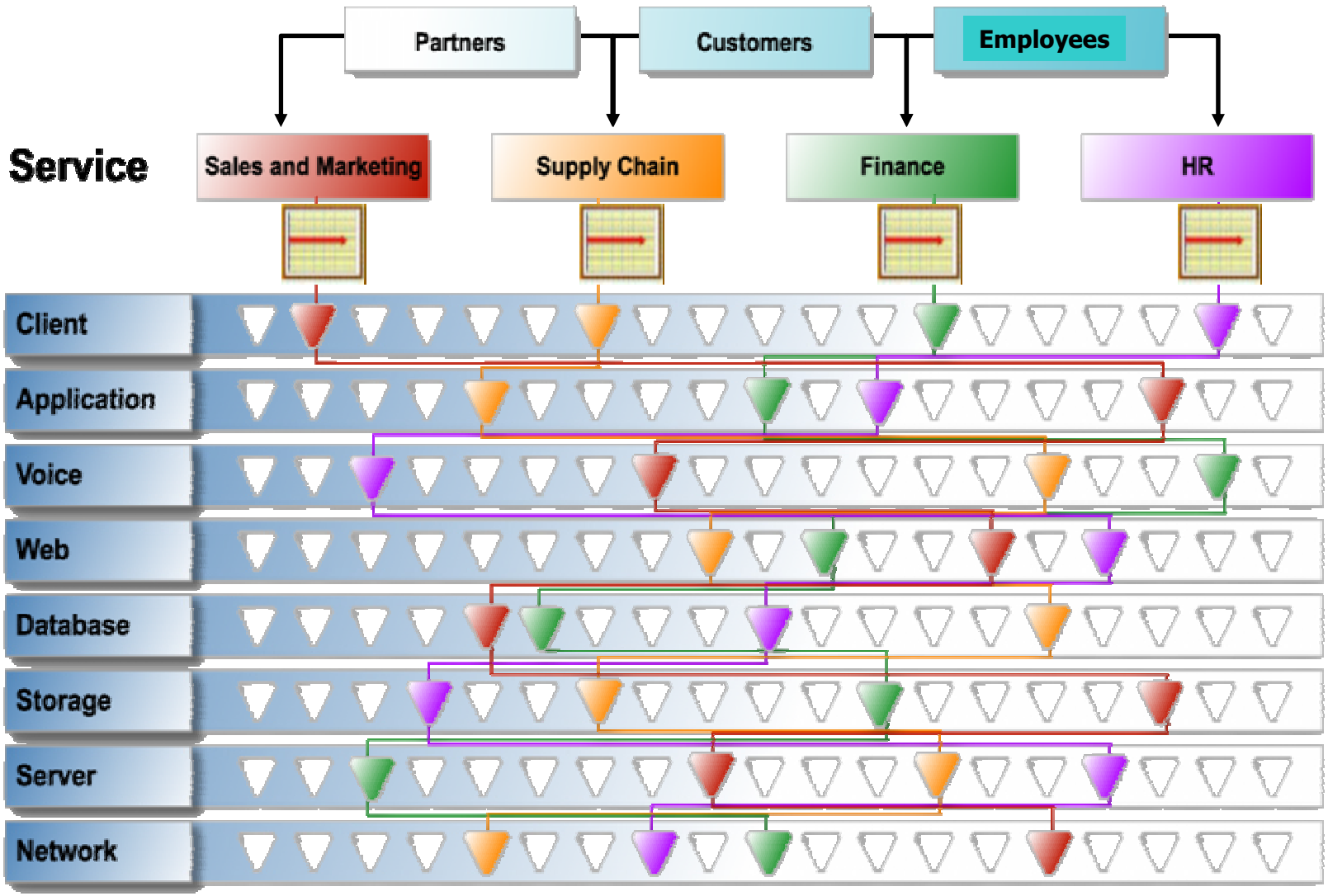
DCML Enables IT As A Service



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Process Use Case: Instrumenting ITIL's CMDB

- **Problem Statement**
  - The Information Technology Infrastructure Library is a process-oriented framework expressing the best practices and components of IT Service Management and how to implement it. Customers require implementations of ITIL, and disparity in the ways in which it is implemented inhibits rapid standardization and adoption. DCML proposes to electronically instantiate the key relational aspects of the primary interdependency and relational process of ITIL, Configuration Management, as well as further instrumenting the process oriented relationships that are iteratively used in the ITIL framework according to expected, patterned, and natural interactions.

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Process Use Case: Instrumenting ITIL's CMDB

- **Success Criteria**
  - Prospective enterprises looking to implement standardized operational models that use the ITIL framework can directly use DCML to build Configuration Items (CIs) within their Configuration Management Database (CMDB), as well as roadmap all IT elements from a company's ITIL-framed Definitive Software Library (DSL) and Definitive Hardware Store (DHS)
  - DCML would be used to create the data model and relationship schema for the DHS, DSL, and CI/CMDB entities of ITIL in the prospective enterprise's IT operational model
  - DCML would also instrument standardized relationship mappings between ITIL processes, specifying their natural invocations as services are run across them within prospective enterprise IT operational model.

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Process Use Case: Instrumenting ITIL's CMDB

Solution Overview

- DCML Member Section would develop reference implementation of simplistic operational model construction with DCML as CMDB/CI/CfM construction centerpiece
- Prospective RI would enable enterprises to mimic development of CMDB, using DCML's schema and data model to create interrelated CIs for CMDB's within respective IT operational models
- RI CMDB stores CI with relationship mappings between DHS and DSL components, as well as interfaces, attributes, and parameters to create running services, systems inter-ITIL process communications.
- Operational Model includes orchestration of CMDB-DCML components via management tooling and integration framework
- Construction of the RI would include the interoperability and usage of member section tools and technologies in the RI
- RI would allow enterprises to use DCML's meta-mapping of other elemental standards to gather elemental component characteristics and relate them to services and processes with integrations
- RI would allow enterprises to use DCML to standardize the mapping of its existing and new resources into its relational/interdependent CMDB and operational model.

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Transformation Use Case: Discovering Configurations for CMDB Population

- **Problem Statement**
  - Outsourcers and enterprises need to be able to discover existing configurations in order to enable transformation and standardization of enterprises to emerging IT technologies and paradigm changes, including utility and grid IT Services. In order to accomplish the task, tools or methods of relationship, interdependency, elemental/resource usage, and existing processes and workflows must be derived.

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Transformation Use Case: Discovering Configurations for CMDB Population

- **Success Criteria**
  - DCML's configuration/relationship mapping characteristics are ideal to be implemented in either tooling or operational processes to obtain relational information and existing configuration data
  - Use case would provide output of discovered interrelated configurations, population items, and identify variances in existing and desired (i.e., recommended DCML CI standards)
  - Prospective member section product would show discovery functionality

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Transformation Use Case: Discovering Configurations for CMDB Population

- **Solution Overview**
  - RI within member section product to implement discovery use case
  - Possible usage of member section IT environment or end-user apportioned pre-production environment to prove solution to discovery use case
  - Population of discovered configurations would show mapping to DCML-based expected CI structures with report and analysis of delta data

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Service Oriented Use Case: Instantiating SOA Thru DCML and IT Services Management

- **Problem Statement**
  - Prospective Customer XYZ Corp wants to implement a SOA-based System in its enterprise, and needs to standardize its implementation across elements and IT processes. It requires a provider or operational model decomposition of its SOA construct into dependencies, relationships, and configurations.

    Its SOA implementation also requires the proper mapping of IT Processes to be invoked to run the SOA implementation during its lifecycle.

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Service Oriented Use Case: Instantiating SOA Thru DCML and IT Services Management

- **Success Criteria**
  - Enterprise or Service Provider can use DCML to decompose SOA implementation into process and elemental-relational constructs and components
  - DCML would be able to construct the SOA service from its pre-integrated CIs and CMDB with interfaces dictated by the SOA requirements
  - DCML would also instrument standardized relationship mappings between ITIL processes, specifying their natural invocations as the SOA implementation is run across them.

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Service Oriented Use Case: Instantiating SOA Thru DCML and IT Services Management

- **Solution Overview**
  - RI to show prospective enterprise constructs SOA in either .NET or J2EE using Web Services platforms using DCML
  - RI uses existing pre-integrated CIs and elements to formulate running SOA implementation
  - SOA exposes operational process interfaces using DCML to create IT operational function controls for Service Support, Service Delivery, and ICTIM process flows
  - RI should show heterogeneous support of SOA implementation, in either .NET or J2EE
  - Running SOA service is successful when using DCML CfM and CIs, and process controls instantiated in DCML

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Standard Interaction Use Case: Instantiating Other Standards and Proprietary Specifications Mapped To DCML and IT Services Management

- **Problem Statement**
  - DCML is regularly compared and contrasted against other elemental, SOA, and Grid standards. It is essential that DCML exhibit the interoperability with key standards and proprietary functions, as well as show proper usage of key standards in its implementation.

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Standard Interaction Use Case: Instantiating Other Standards and Proprietary Specifications Mapped To DCML and IT Services Management

- **Success Criteria**
  - DCML exhibits usage of existing and key elemental standards in its CfM model
  - DCML exhibits interoperability and interfacing to Grid standards
  - DCML provides configuration and interface functionality to SOA standards
  - DCML provides interoperability RI for standards for programming to production (i.e., MDA, OMG, SDM, etc.)

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Standard Interaction Use Case: Instantiating Other Standards and Proprietary Specifications Mapped To DCML and IT Services Management

- **Solution Overview**

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Member Section