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ODP in SC7 – Status and Future

Bryan Wood (Convenor WG19)

Bryan.Wood@Open-IT.co.uk

- What is ODP?

- ODP and the OMG

- ODP in SC7: Issues to consider

What is ODP?

Systems that support distributed processing despite:

- heterogeneity of components
- crossing of organisational boundaries (autonomy of systems)

Enterprise systems, B2B systems, Web services etc

Goals of ODP standards

- portability of applications despite heterogeneity

- interworking between ODP systems
  - exchange information *meaningfully*
  - use functionality *conveniently*

- distribution transparency
  - hide the consequences of distribution for applications

ODP standards: Reference Model for Open Distributed Processing

A *specification framework* (and *standards framework*) covering all aspects of distributed systems

- "enterprise", system, technology

- comprehensive and coherent object-oriented modelling concepts
- Viewpoints and viewpoint specifications:
    - enterprise
    - information
    - computational
    - engineering

ITU-T Rec. X901-904|ISO/IEC 1746 Parts 1-4

ODP Notation and Architectural Framework standards

- ISO/IEC 14750   ODP – Interface Definition Language
- ISO/IEC 14771 ODP – Naming framework
- ISO/IEC 14753 ODP – Interface references and binding
- ISO/IEC 14752 ODP – Protocol support for computational interactions

ODP Component standards

- ISO/IEC 13235   ODP – Trading Function

- ISO/IEC 14769 ODP – Type repository

ODP and the Object Management Group (OMG) – "subcontracting"?

- OMG set up to help solve system integration problems by supplying open, vendor-neutral interoperability specifications.

- RM-ODP referenced by OMG as defining an architectural framework for OMG specifications

- OMG specifications being provided as PAS submissions for ODP Notation and Component standards

- OMG Model Driven Architecture (MDA) incorporates RM-ODP concepts:

  - system specification using UML

  - separation of platform independent and platform specific specifications (PIM and PSM)

OMG PAS submissions

Current:

- ISO/IEC 19500-2 ODP – Open Distributed Processing - General Inter-ORB Protocol (GIOP)/ Internet Inter-ORB Protocol (IIOP)

  – providing basic ODP protocol support for computational interactions

- ISO/IEC 19501 Information technology – Unified Modeling Language (UML)

  – providing notation for ODP specifications

Planned:

- CORBA (Common Object Request Broker Architecture) Services

  – providing basic ODP functions

ODP in SC7: Issues to consider

- ODP and OMG MDA address
  - good practice for the content of system specifications
    - quality
    - maintainability
  - Standards for specification for system integration
  - standards for specification for system distribution

- These concerns should be related to other SC7 activities:
  - System software documentation (WG2)
  - Tools and environment (WG4)
  - Evaluation and measurement (WG6,12,13)
  - Lifecycle processes (WG7)