UDDI v3: The Registry Standard for SOA

Hosted by:

OASIS UDDI Specification Technical Committee

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Agenda

- Welcome

  James Bryce Clark

  Director of Standards Development, OASIS
- Overview

  Luc Clement (Systinet)

  Co-chair of the OASIS UDDI Spec TC
- UDDI v3 and Ongoing TC Activities

  Tony Rogers (Computer Associates)

  Co-chair of the OASIS UDDI Spec TC
- Q&A

UDDI v3.0.2 OASIS Standard

- Approved by OASIS membership at-large in February 2005
- Widely regarded as a cornerstone of Web services
- Defines a standard method for publishing and discovering network-based software components in an SOA
- Developed within an open process

Overview

Luc Clement (Systinet)
Co-chair of the OASIS UDDI Spec TC

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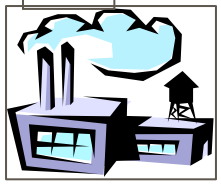
What is UDDI

1. 

SW companies, standards bodies, and programmers populate the registry with descriptions of different types of services

2. 

Businesses populate the registry with descriptions of the services they support

UDDI Business Registry

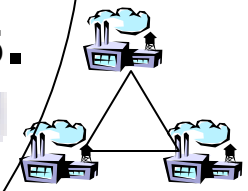
Business Registrations

Service Type Registrations

3. UBR assigns a programmatically unique identifier to each service and business registration

4. 

Marketplaces, search engines, and business apps query the registry to discover services at other companies

5. 

Business uses this data to facilitate easier integration with each other over the Web

The Registry Standard for SOA

- "Universal Description, Discovery and Integration"
  - UDDI v2 OASIS Standard: 2002
  - UDDI v3 OASIS Standard: 3 Feb 05
  - Broad vendor and enterprise adoption
- UDDI - a specification of
  - APIs for publishing and searching for business services and service descriptions, and subscribing to changes to these
  - A data model with built-in metadata extensibility to characterize business services according to enterprise needs
  - Nodes, registries, affiliated registries

The service, service definition and metadata "hub" for SOA

Metadata Extensibility - Modeling your enterprise

- Definition of taxonomies to model business services
  - Semantic information that enables reuse of services
  - Lifecycle
    - Lifecycle stages: Design, develop, test, deploy, configure, provision, discover, operate, manage, and maintain services
  - Availability and performance characteristics of the service - QoS
- Essence: Taxonomies key to a semantic rich registry

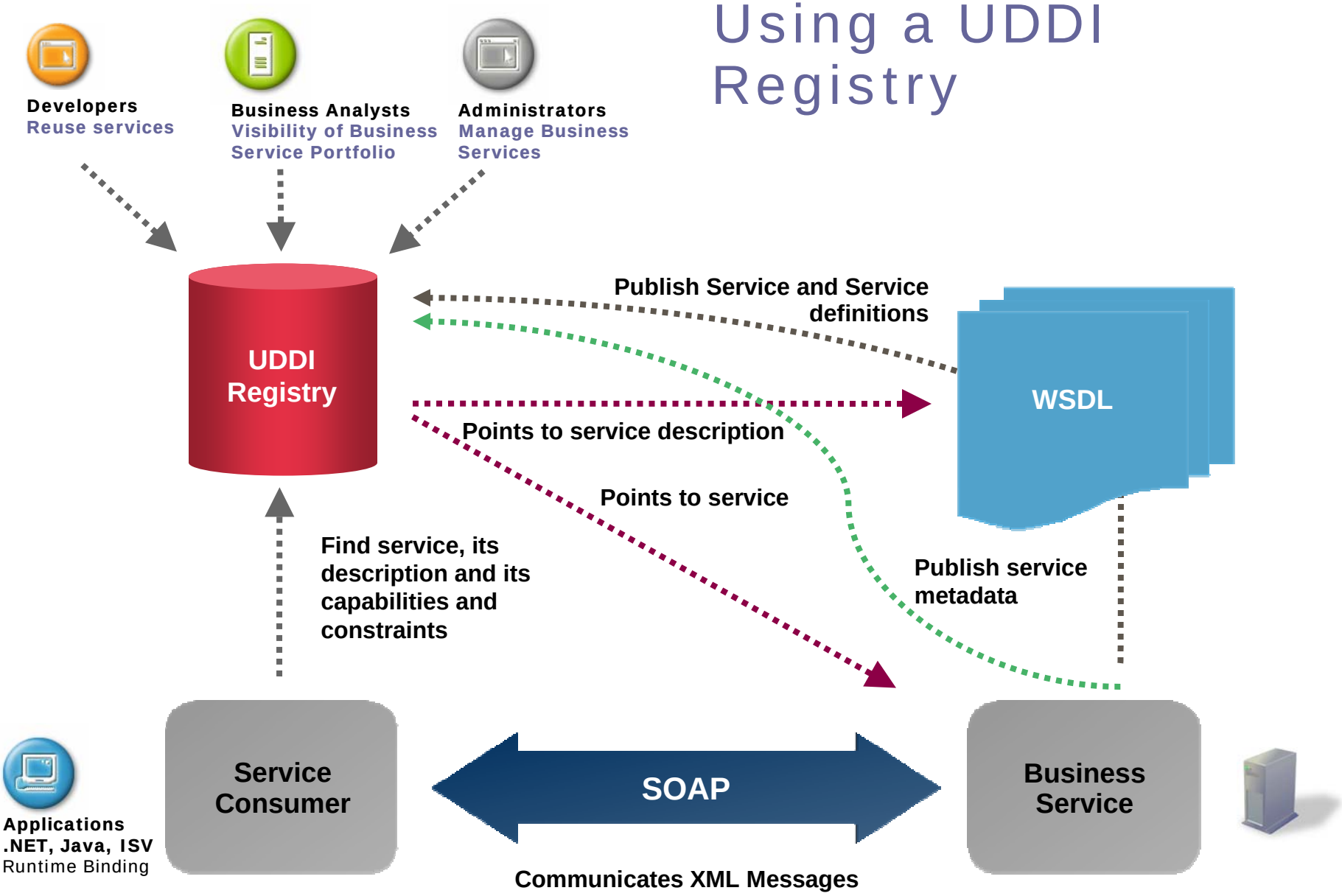
Web Services Registry Protocol

- The registry standard for visibility and reuse of SOA components
  - Design-time visibility and reuse
- The registry standard for an adaptive enterprise - dynamic discovery and binding of your SOA
  - Dynamic location
  - Dynamic binding
  - Dynamic discovery

Typical Registry Applications

- Publishing or finding web services (within an organization or across organizational boundaries) that meet arbitrary criteria
- Determining the security and transport protocols supported by a given web service
- Insulating applications (and providing fail-over) from failures or changes in invoked services

Using a UDDI Registry



UDDI v3 and Ongoing TC Activities

Tony Rogers (Computer Associates)
Co-chair of the OASIS UDDI Spec TC

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What's new in UDDI v3

- Support for registry affiliation
- Publisher assigned keys
  - Human-friendly, URI-based keys
- Subscription API
- Support for digital signatures
- Information Model Improvements
  - categoryBags on bindingTemplates
  - Operational information
  - Support for Complex Categorization
- Extended Discovery Features
  - Support for previous multi-step queries into single-step complex queries
  - Extended Wildcard support
  - Management of large results sets

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Why do you need a standard

- Standardization:
  - Interoperability
  - Broad platform support
- Broad vendor support:
  - Acumen Technology
  - Apache.org
  - BEA
  - Bindingpoint
  - Cape Clear Software
  - Computer Associates
  - Digital Evolution
  - Fujitsu
  - IBM
- (Cont'd) Broad vendor support:
  - Infravio
  - IONA
  - Microsoft
  - Novell
  - Oracle
  - SAP AG
  - Select Business Solutions
  - Sun Microsystems, Inc
  - Systinet
  - webMethods

UDDI is the core and open registry standard for Web services and enterprise SOA

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Standards Convergence on UDDI

- Web services specifications are now converging to UDDI
- Several domain specific standards
  - **Policy -** mapping of WS-policy onto UDDI
  - **Orchestration -** publication and discovery of BPEL4WS abstract processes
  - **Management -** publication and discovery of metrics and manageability provider information - WSDM
  - **Portal Integration -** publication and discovery of WSRP Producer and Portlet services

Ongoing work of the OASIS UDDI TC

- Technical Notes (TN) published to date:
  - Using WSDL in a UDDI Registry
  - Using BPEL4WS in a UDDI Registry
  - Generating a JAX-RPC Client for UDDI 3.0.2
  - UDDI as the registry for ebXML Components
  - Providing a Value Set For Use in UDDI
  - Versioning Value Sets in a UDDI Registry
  - Value Set Overview Documents
  - Handling of anyURI datatypes
- TNs in progress and under consideration in 2005
  - “WSRP – UDDI” Technical Note: publication and discovery of WSRP Producer and Portlet services
  - Using WS-Policy and WS-PolicyAttachment with UDDI
  - “WSDM – UDDI” TN: mapping of WSDM metrics and management endpoints to UDDI
  - WS-Security Related work:
    - "HTTP Basic and Digest Authentication" TN
    - "WS-Security TN for Modeling WS-Security in UDDI" TN

v.Next

- Taxonomy Management
  - Using OWL for the interchange format
  - API for navigation and management of taxonomies
- Query Enhancements
  - Semantic Search
  - Range Based Query
  - Boolean Query Operations
- Information Model
  - Finer grain access control capabilities
  - More flexible ways to represent contacts and property information
  - Managing Stale Data
- Generalized Bindings
  - SOAP 1.2, WSDL 2.0

Closing

James Bryce Clark,
Director of Standards Development,
OASIS

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Foundation for SOA

"There's tremendous power for SOA governance if you store process, policy, SLA's, and related information about services in a registry. Gartner believes that registries will be essential to minimally discover and document services and preferably to enable the governance function."

Frank Kenney, Gartner Research Analyst

Gartner

UDDI Registry Standard - SOA's system of record

Going Forward

- Join OASIS
  Participation remains open to all organizations and individuals
- Comment via uddi public mail list
- Subscribe to uddi-dev list