

**CS 683 Emerging Technologies  
Spring Semester, 2003  
Doc 18 UDDI  
Contents**

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**References**

UDDI Overview Presentation,  
[http://www.uddi.org/pubs/UDDI\\_Overview\\_Presentation.ppt](http://www.uddi.org/pubs/UDDI_Overview_Presentation.ppt)

UDDI V 2.04 API Specification,  
[http://uddi.org/pubs/ProgrammersAPI-V2.04-Published-20020719.htm#\\_Toc25137706](http://uddi.org/pubs/ProgrammersAPI-V2.04-Published-20020719.htm#_Toc25137706)

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## **UDDI**

Universal Description, Discovery and Integration

Started September 2000

DNS like system for finding out about services

A Soap server for accessing information about Soap servers

IBM & Microsoft maintain root UDDI servers

<http://uddi.microsoft.com/>

<http://www-3.ibm.com/services/uddi/>

## **Lots of Specs**

### Version 2 Spec list

- UDDI API Spec
- UDDI Data Structure
- UDDI XML Schema
- UDDI Replication Specification
- UDDI XML Replication Schema
- UDDI XML Custody Schema
- UDDI Operator's Specification
- UDDI WSDL Service Interface
- UDDI WSDL Service Interface Descriptions
  - UDDI Inquire API
  - UDDI Publish API

### UDDI tModels

- UDDI Registry tModels
- UDDI Other Core tModels
- Replication tModels
- Taxonomy tModels

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## **UDDI Versions**

### **V1 (Sept 2000)**

For Business Units

3 taxonomies for describing/searching for services

Descriptions of Services

### **V2 (March 2001)**

For Corporations

More taxonomies

Layered Services

### **V3 (December 2001)**

Associations

Custom taxonomies

Workflow

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## **UDDI Server Contains**

Descriptions of businesses and the services they support

Descriptions of web services

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## **UDDI supports two types of Access**

Inquiry  
Publishing

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## **Business View**

Businesses register public information about themselves

Use

- White pages
- Yellow pages
- Green pages

## **White Pages**

Business name  
Text description  
Contact information  
Known identifiers

## **Yellow Pages**

Business Categories

- Industry: NAICS industry code
- Product/Services: UN/SPSC
- Location

Implemented as name-value pairs

## **Green Pages**

How to do e-commerce with company

Business processes  
Service descriptions  
Binding information



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**See examples In UDDI Registry**

<http://uddi.microsoft.com/>

## Some Technical Information

### Inquiry API

#### Browsing

- find\_binding
- find\_business
- find\_relatedBusiness
- find\_service
- find\_tModel

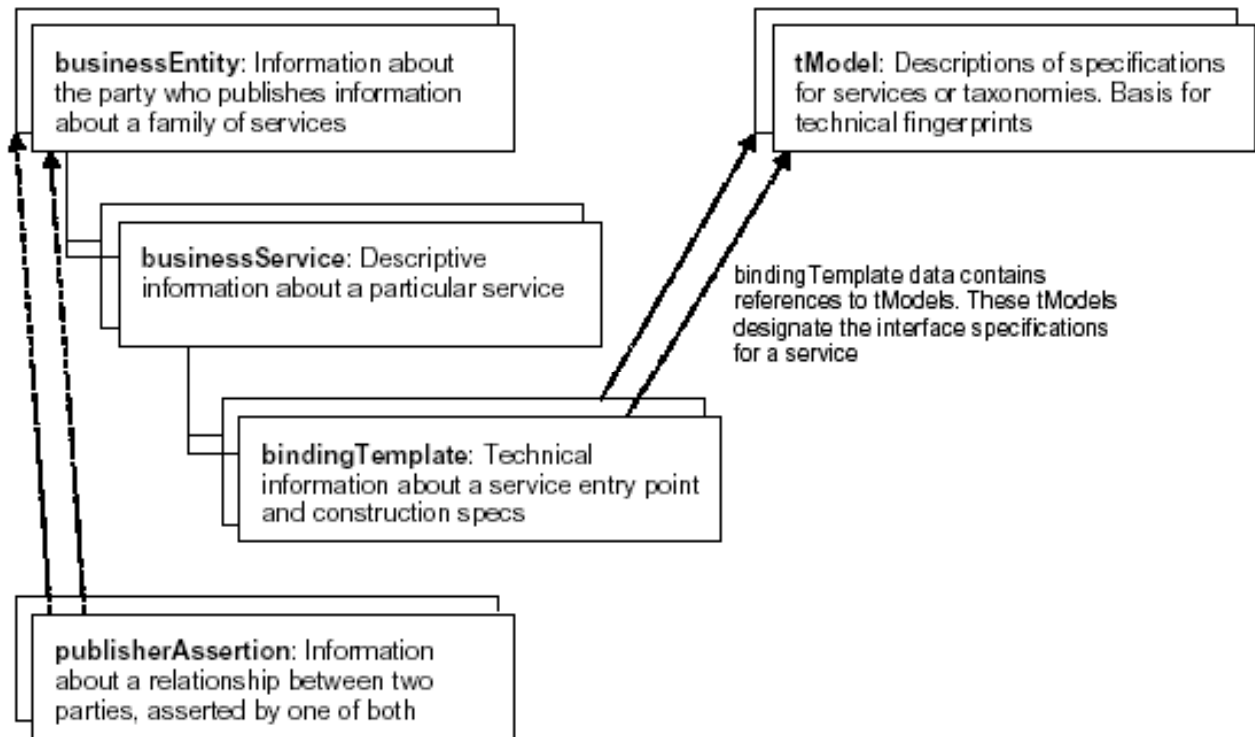
#### Drill-Down

- get\_bindingDetail
- get\_businessDetail
- get\_businessDetailExt
- get\_serviceDetail
- get\_tModelDetail

## **Publishing API**

add\_publisherAssertions  
delete\_binding  
delete\_business  
delete\_publisherAssertions  
delete\_service  
delete\_tModel  
discard\_authenToken  
get\_assertionStatusReport  
get\_authenToken  
get\_publisherAssertions  
get\_registeredInfo  
save\_binding  
save\_business  
save\_service  
save\_tModel  
set\_publisherAssertions

## Data Structures Used



**businessEntity**: info on who publishes info on services

**businessService**: Info about a particular service

**bindingTemplate**: Technical info about a service entry point and construction specs

Refers to tModels

**PublisherAssertion**: Info about a relationship between two parties

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## **UUID or GUID**

Univerally Unique Identifier

Globally Unique Identifier

Used to label much of data used in UDDI

## BusinessEntity

### Schema

```
<element name="businessEntity" type="uddi:businessEntity" />
<complexType name="businessEntity">
  <sequence>
    <element ref="uddi:discoveryURLs" minOccurs="0" />
    <element ref="uddi:name" maxOccurs="unbounded" />
    <element ref="uddi:description" minOccurs="0"
      maxOccurs="unbounded" />
    <element ref="uddi:contacts" minOccurs="0" />
    <element ref="uddi:businessServices" minOccurs="0" />
    <element ref="uddi:identifierBag" minOccurs="0" />
    <element ref="uddi:categoryBag" minOccurs="0" />
  </sequence>
  <attribute name="businessKey" type="uddi:businessKey"
    use="required" />
  <attribute name="operator" type="string" use="optional" />
  <attribute name="authorizedName" type="string" use="optional" />
</complexType>
```

**BusinessEntity**

<b>Field Name</b>	<b>Description</b>
<b>businessKey</b>	UUID for structure.
authorizedName	name of individual that published the businessEntity data.
operator	Name of the UDDI registry that manages the master copy of the businessEntity
discoveryURLs	URLs that point to alternate, file based service discovery mechanisms.
<b>name</b>	Required repeating element. human readable names for the businessEntity
description	short business description
contacts	Optional list of contact information.
businessServices	One or more logical business service descriptions.
identifierBag	Optional list of name-value pairs that can be used to record identifiers for a businessEntity.
categoryBag	Optional list of name-value pairs that are used to add taxonomy information

**tModel**

```
<tModel tModelKey="uuid: 4CD7E4BC-648B-426D-9936-443EAAC8AE23 ">
  <name>uddi-org:inquiry</name>
  <description xml:lang="en">UDDI Inquiry API - Core Specification</description>
  <overviewDoc>
    <description xml:lang="en">
      This tModel defines the inquiry API calls for interacting with a V1 UDDI node.
    </description>
    <overviewURL>
      http://www.uddi.org/wsdl/inquire_v1.wsdl
    </overviewURL>
  </overviewDoc>
  <categoryBag>
    <keyedReference tModelKey="uuid:C1ACF26D-9672-4404-9D70-39B756E62AB4"
      keyName="types"
      keyValue="specification"/>
    <keyedReference tModelKey="uuid:C1ACF26D-9672-4404-9D70-39B756E62AB4"
      keyName="types"
      keyValue="xmlSpec"/>
    <keyedReference tModelKey="uuid:C1ACF26D-9672-4404-9D70-39B756E62AB4"
      keyName="types"
      keyValue="soapSpec"/>
    <keyedReference tModelKey="uuid:C1ACF26D-9672-4404-9D70-39B756E62AB4"
      keyName="types"
      keyValue="wsdlSpec"/>
  </categoryBag>
</tModel>
```