

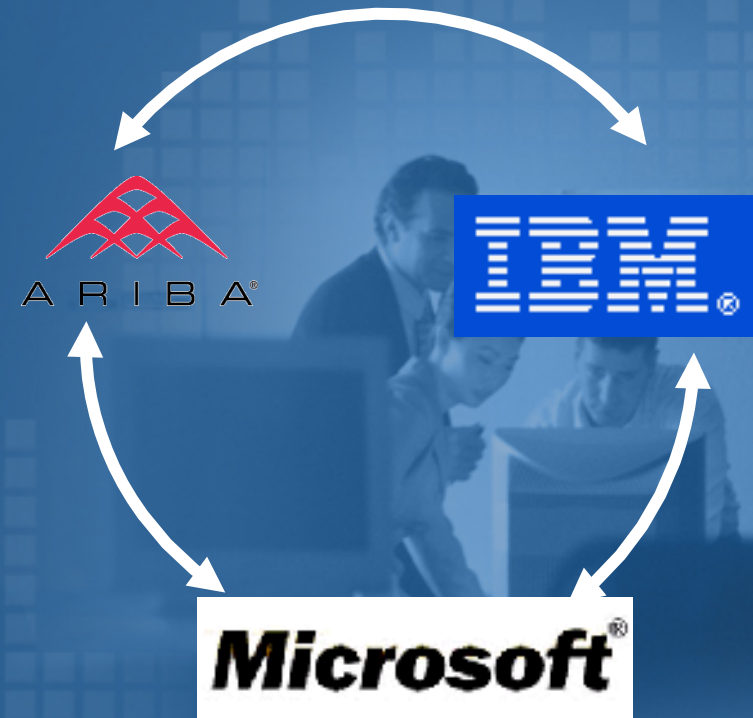
UDDI Overview

Copyright © 2000-2002 by Accenture, Ariba, Inc., Commerce One, Inc., Fujitsu Limited, Hewlett-Packard Company, i2 Technologies, Inc., Intel Corporation, International Business Machines Corporation, Microsoft Corporation, Oracle Corporation, SAP AG, Sun Microsystems, Inc., and VeriSign, Inc. All Rights Reserved.



How did this come about?

- Naturally “evolved”
 - Ariba and IBM collaboration around B2B
 - IBM and Microsoft collaboration around XML and SOAP
 - Microsoft and Ariba collaboration around BizTalk and cXML
- 6 months, ~50 meetings



What is UDDI?

- A project to speed interoperability and adoption for web services
 - Standards-based specifications for service description and discovery
 - Shared operation of a business registry on the web
- Partnership among industry and business leaders
- Universal Description, Discovery, and Integration

What Problems Do We Solve?

Broader B2B



A mid-sized manufacturer needs to create 400 online relationships with customers, each with their own set of standard and protocols

Smarter Search



A flower shop in Australia wants to be "plugged in" to every marketplace in the world, but doesn't know how

Easier Aggregation



A B2B marketplace cannot get catalog data for relevant suppliers in its industry, along with connections to shippers, insurers, etc.

Describe Services

Discover Services

Integrate Them Together

Foundation for Web Services

Publish and Discover Services: UDDI

Formal Service Descriptions: WSDL

Service Interactions: SOAP

Universal Data Format: XML

Ubiquitous Communications: Internet

Broad Industry Support, Simple Process 

Copyright © 2000-2002 by Accenture, Ariba, Inc., Commerce One, Inc., Fujitsu Limited, Hewlett-Packard Company, i2 Technologies, Inc., Intel Corporation, International Business Machines Corporation, Microsoft Corporation, Oracle Corporation, SAP AG, Sun Microsystems, Inc., and VeriSign, Inc. All Rights Reserved.

Our Vision and Process

1. Start with existing standards

- TCP/IP, HTTP, XML
- Industry-specific schemas
- Shared vision of open protocols

2. Augment and implement via a Web Service

- Common web services "stack"
- Shared implementation to avoid confusing customers
- Public specs, open service, inclusive process

3. Transition to a Standards Body

- Manage design process for 3 revs
- License control and IP to a 3rd party

UDDI v1 Implementation



Manufacturers



Flower Shops



Marketplaces

UDDI Business Registry

- ◆ Programmatic descriptions of web services
- ◆ Programmatic descriptions of businesses and the services they support
- ◆ Programming model, schema, and platform agnostic
- ◆ Uses XML, HTTP, and SOAP
- ◆ Free on the Internet

How UDDI v1 Works

1.



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

4.



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

2.



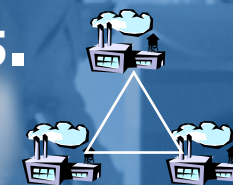
Businesses populate the registry with descriptions of the services they support

UDDI Business Registry



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

5.



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

Registry Data

- **Businesses register public information about themselves**
- **Standards bodies, Programmers, Businesses register information about their Service Types**

White Pages

Yellow Pages

Green Pages

Service Type Registrations

White Pages

- **Business Name**
- **Text Description**
 - list of multi-language text strings
- **Contact info**
 - names, phone numbers, fax numbers, web sites...
- **Known Identifiers**
 - list of identifiers that a business may be known by - DUNS, Thomas, other

Yellow Pages

- **Business categories**
 - **3 standard taxonomies in V1**
 - **Industry: NAICS (Industry codes - US Govt.)**
 - **Product/Services: UN/SPSC (ECMA)**
 - **Location: Geographical taxonomy**
 - **Implemented as name-value pairs to allow any valid taxonomy identifier to be attached to the business white page**

Green Pages

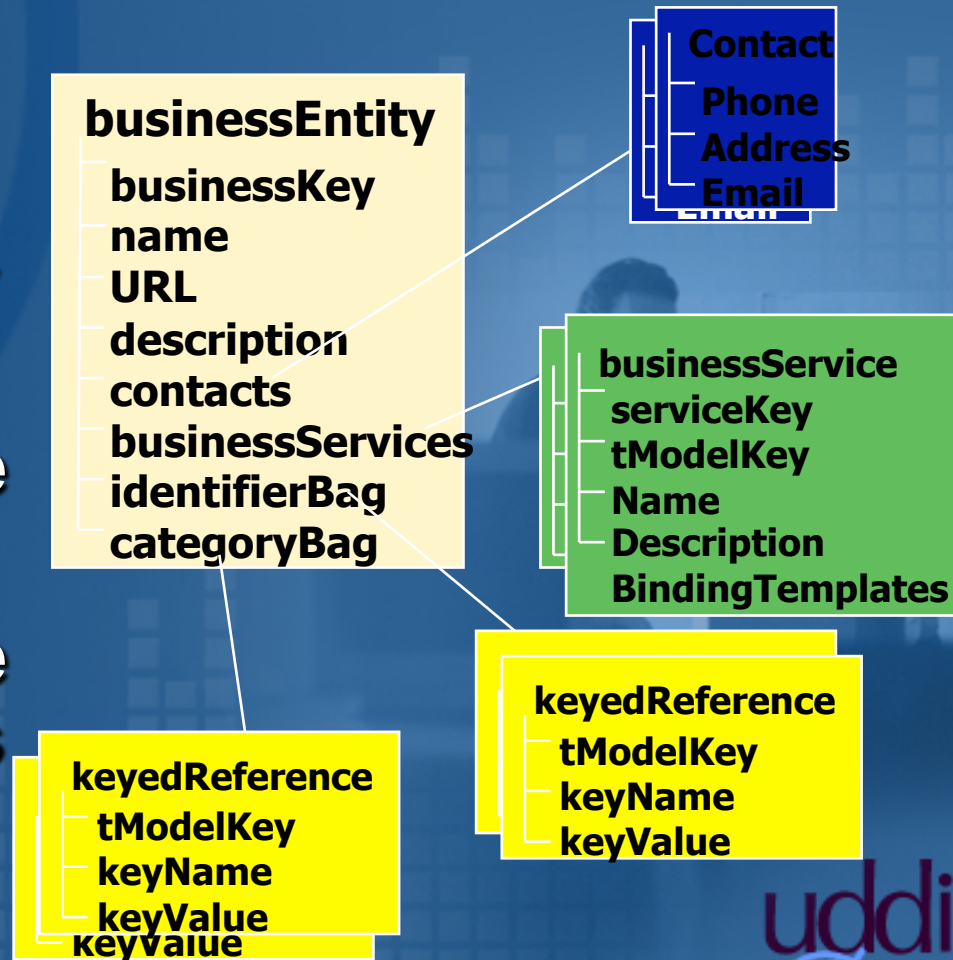
- **New set of information businesses use to describe how to “do e-commerce” with them**
 - **Nested model**
 - **Business processes**
 - **Service descriptions**
 - **Binding information**
 - **Programming/platform/implementation agnostic**
 - **Services can also be categorized**

Service Type Registration

- **Pointer to the namespace where service type is described**
 - **What programmers read to understand how to use the service**
- **Identifier for who published the service**
- **Identifier for the service type registration**
 - **called a tModelKey**
 - **Used as a signature by web sites that implement those services**

Business Registration

- XML document
- Created by end-user company (or on their behalf)
- Can have multiple service listings
- Can have multiple taxonomy listings



Example of a Registration

businessEntity

- TB993...
- Harbour Metals
- www.harbourmetals.co.au
- *"Serving Inner Sydney Harbour for ..."*
- contacts
- businessServices
- identifierBag
- categoryBag

Peter Smythe

- 872-6891
- 4281 King's Blvd, Sydney, NSW
- Peter@harbourmetals.co.au

businessService

- 23T701e54683nf...
- Online catalog
- *"Website where you can ..."*
- BindingTemplates

keyedReference

- EE123...
- **NAICS**
- **02417**

keyedReference

- DFE-2B...
- **DUNS**
- **45231**

BindingTemplate

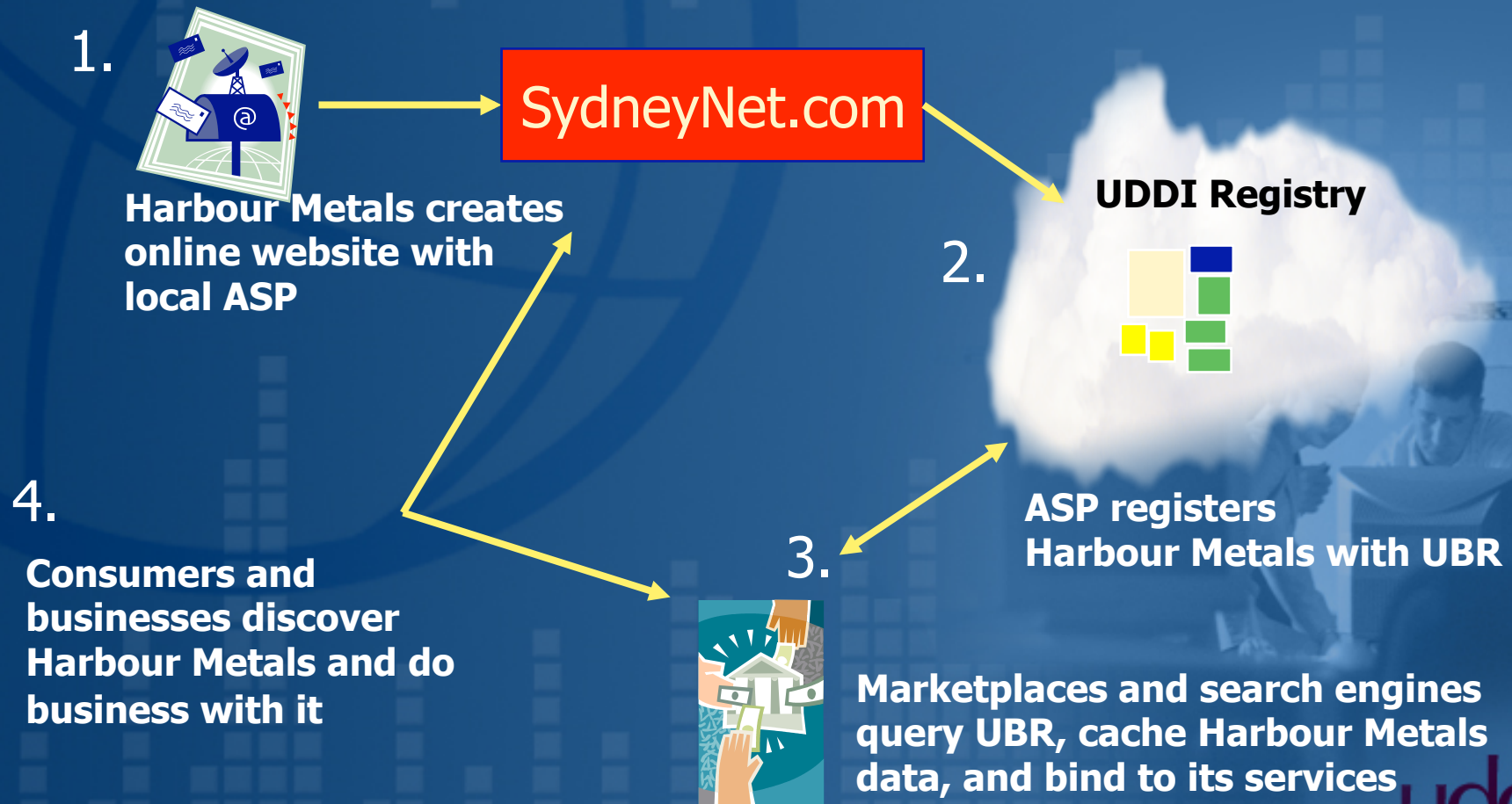
- 5E2D412E5-44EE-...
- <http://www.sydney.net/harbour...>
- tModelInstanceDetails

tModelInstanceInfo

- 4453D6FC-223C-3ED0...
- <http://www.rosetta.net/catalogPIP>

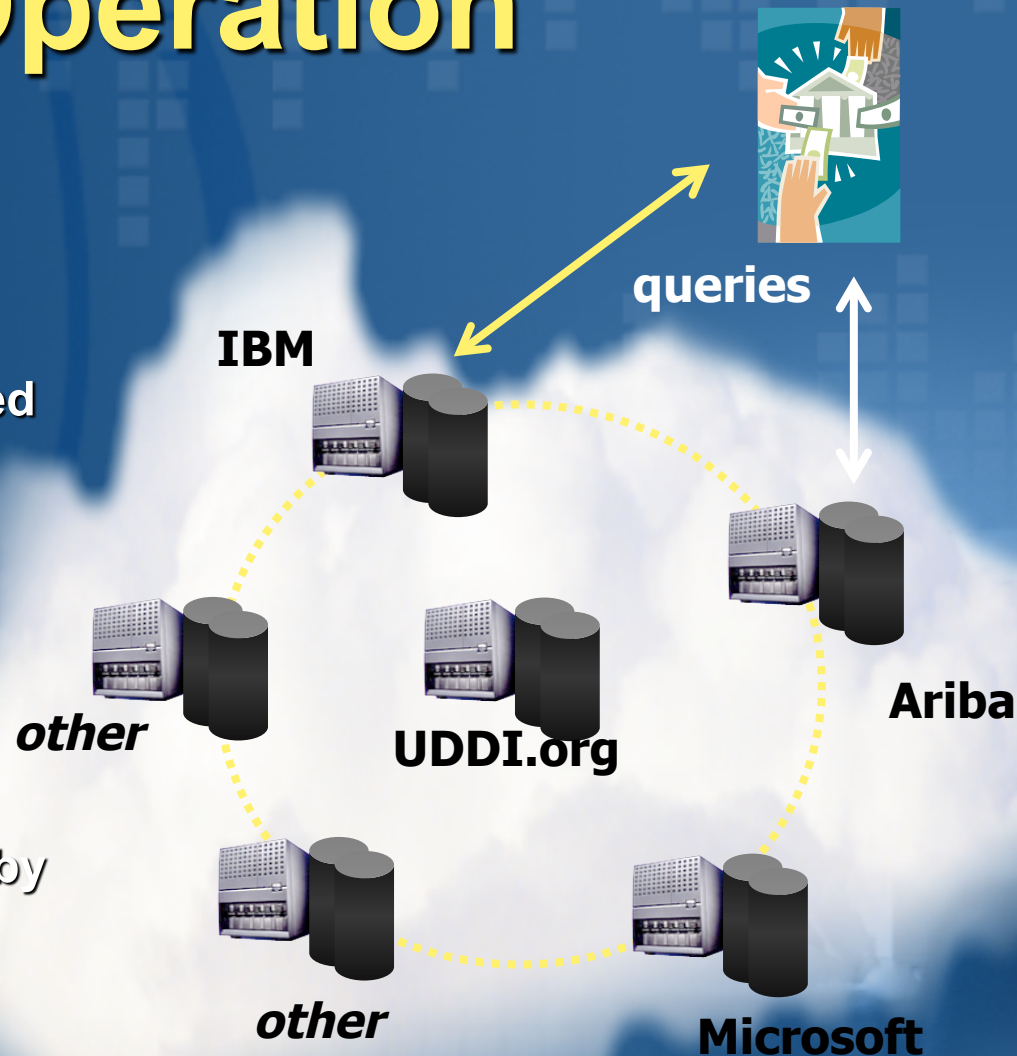
tModelKeys

UDDI at Work



Registry Operation

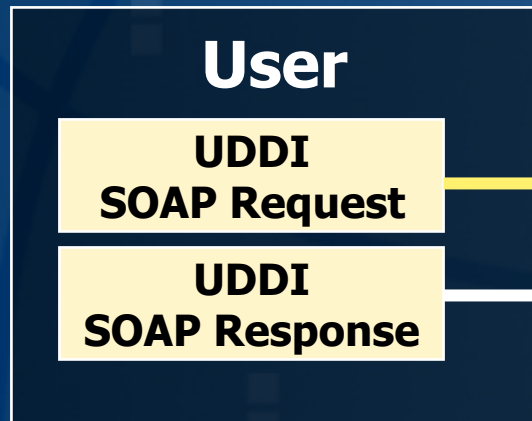
- Peer nodes (websites)
- Companies register with any node
- Registrations replicated on a daily basis
- Complete set of “registered” records available at all nodes
- Common set of SOAP APIs supported by all nodes
- Compliance enforced by business contract



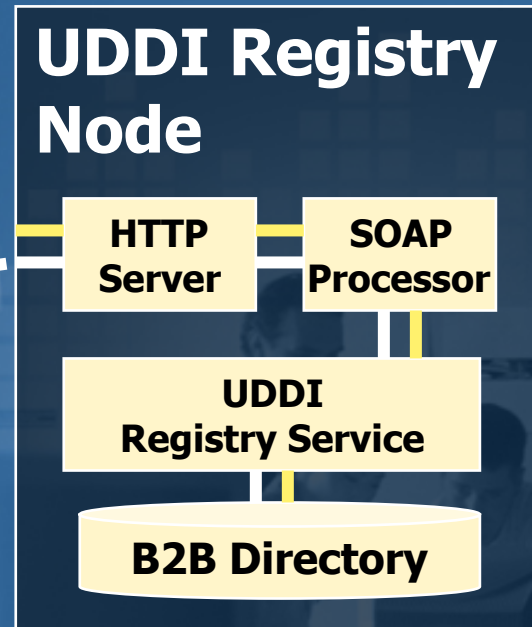
Why a DNS-like Model?

- Enforces cross-platform compatibility across competitor platforms
- Demonstration of trust and openness
- Avoids tacit endorsement of any one vendor's platform
- *May migrate to a third party*

UDDI and SOAP



**Create, View,
Update, and Delete
registrations**



**Implementation-
neutral**

Registry APIs (SOAP Messages)

- **Inquiry API**

- **Find things**

- find_business
- find_service
- find_binding
- find_tModel

- **Get Details about things**

- get_businessDetail
- get_serviceDetail
- get_bindingDetail
- get_tModelDetail

- **Publishers API**

- **Save things**

- save_business
- save_service
- save_binding
- save_tModel

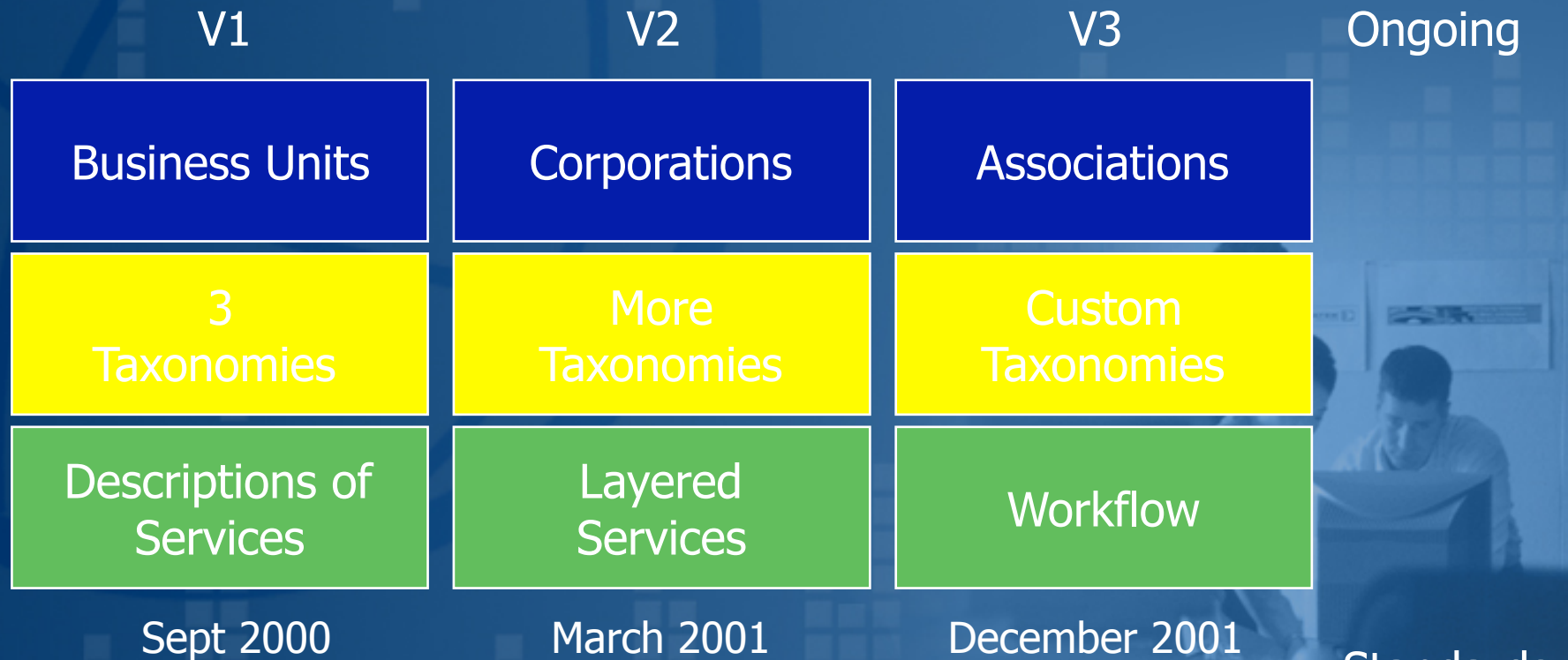
- **Delete things**

- delete_business
- delete_service
- delete_binding
- delete_tModel

- **security...**

- get_authToken
- discard_authToken

UDDI Roadmap



Standards
Body



Summary

- Significant effort that unites existing standards with a shared implementation
- Open process with clear roadmap to a standards body
- Industry momentum