



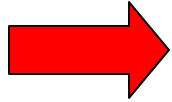
The Potential of Web Services and Enterprise Portals for Data Administrators

Section 2

Real-Time EAI with Web Services



Session Topics



■ **Real-Time Web Service Concepts**

- Web Services Messaging

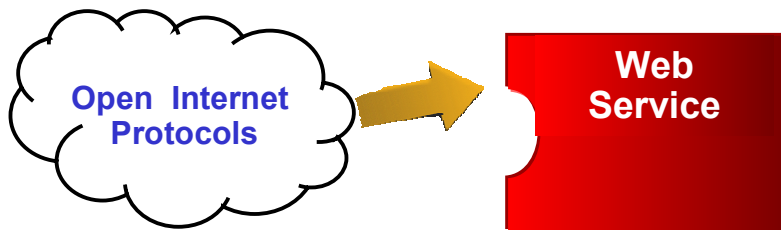
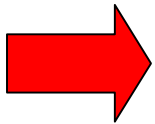
■ **Web Services Products**

- Microsoft Web Services
- IBM Web Services
- Software AG Web Services
- Oracle Web Services
- Others

XML Web Services Messaging

■ SOAP, WSDL and UDDI are based on emerging standards using Web infrastructure

- XML - eXtensible Markup Language
- SOAP - Simple Object Access Protocol
- WSDL - Web Services Description Language
- UDDI - Universal Description, Discovery and Integration



A programmable application component accessible via standard Web protocols

Source: Software AG



Web Services Standards

W3C

- WSDL
- XMLP WG (SOAP)
- XML Schema WG
- XML Query WG
- XPath WG
- XSig WG
- Xencrypt WG
- Apache AXIS WG

OASIS

- ebXML
- TPAML

OMG

- XMI Metadata
- UML 2.0 RFP
- CWM

RosettaNet

- RNIF WG

Java/J2EE

- J2EE Web Services (JSR 151)
- JAXM
- JAXB
- JAX-RPX
- JAXP
- JAXR
- UML/EJB, JMA
- Security
- Connectors

Source: Oracle



Web Service Types

Web Services classified as

- **Simple Web Services**
- **Complex Web Services**

Source: Oracle



Simple Web Services

Applications that Communicate ...

- Point-to-Point, Request-Response, Tightly Coupled
- Applications Expose XML Interfaces (WSDL)
- WSDL Interfaces Published to Registry (UDDI)
- Clients look up UDDI and Invoke over XML Protocol (SOAP)

Source: Oracle



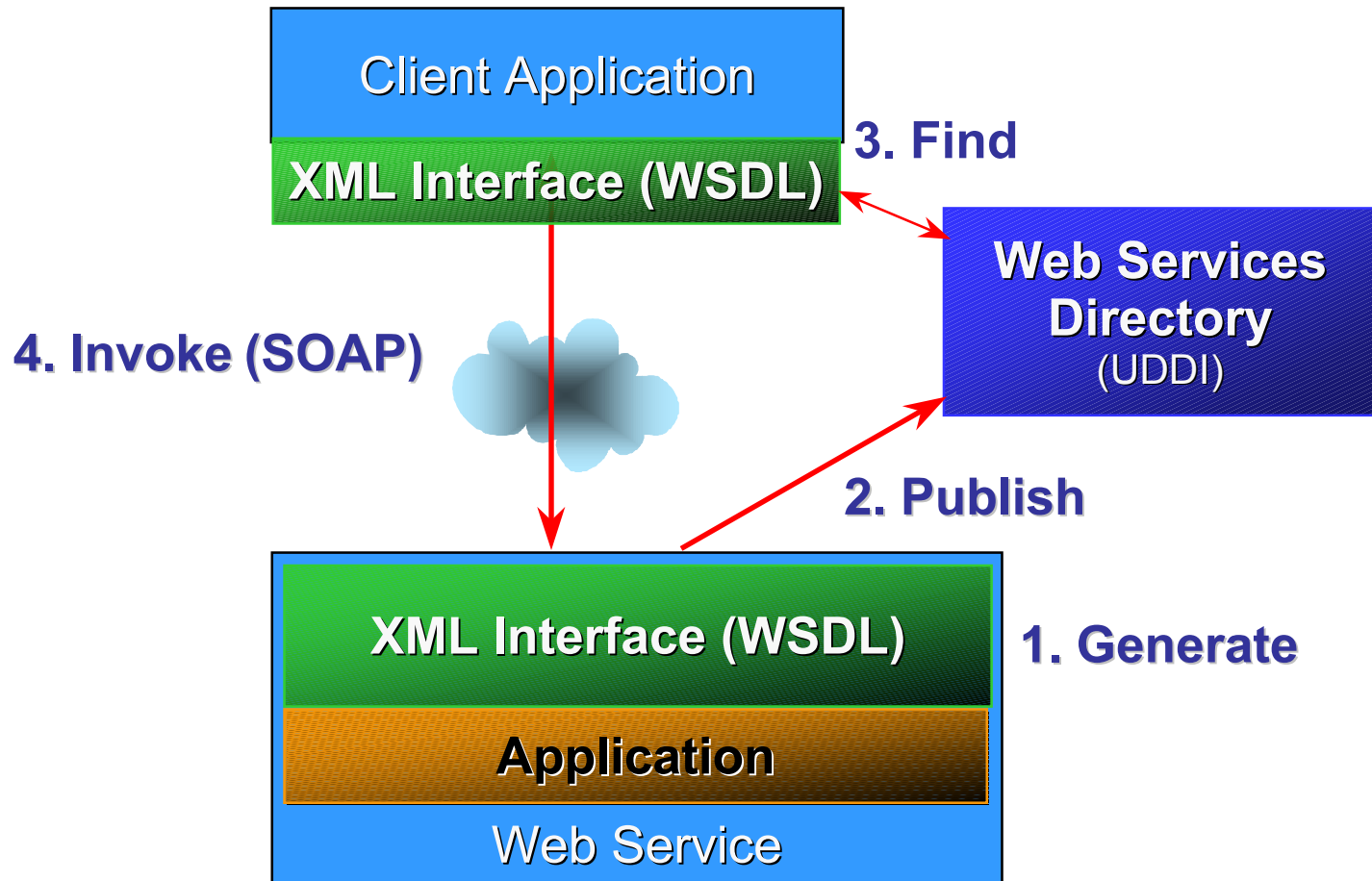
Complex Web Services

Applications that Communicate ...

- Multi-Party, Not Point-to-Point
- Multi-Step Conversations, Not Request-Response
- Loosely Coupled, Not Tightly Coupled
- Based on ebXML, RosettaNet Standards

Source: Oracle

Web Services Model



Source: Oracle



SOAP -Simple Object Access Protocol

- Introduces self-describing data representation format in XML
- Uses HTTP(S) and other protocols as transport layer
- Represent request and response as XML message
- Supports both RPC style and Messaging style invocation



Emerging Standards - SOAP

■ SOAP

- XML-based format for accessing services and exchanging information between programs in platform-independent way

■ SOAP envelope

- Defines overall framework for expressing what is in message; who should deal with it, and whether optional or mandatory

■ SOAP encoding rules

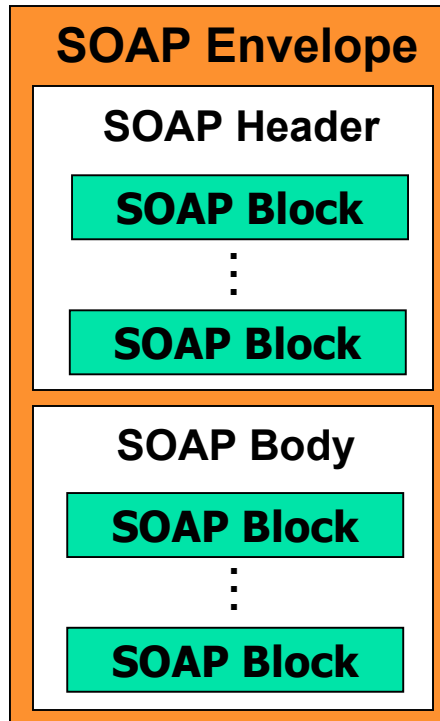
- Defines serialization mechanism that can be used to exchange instances of application-defined data types

■ SOAP RPC

- Representation defines a convention that can be used to represent Remote Procedure Calls and responses



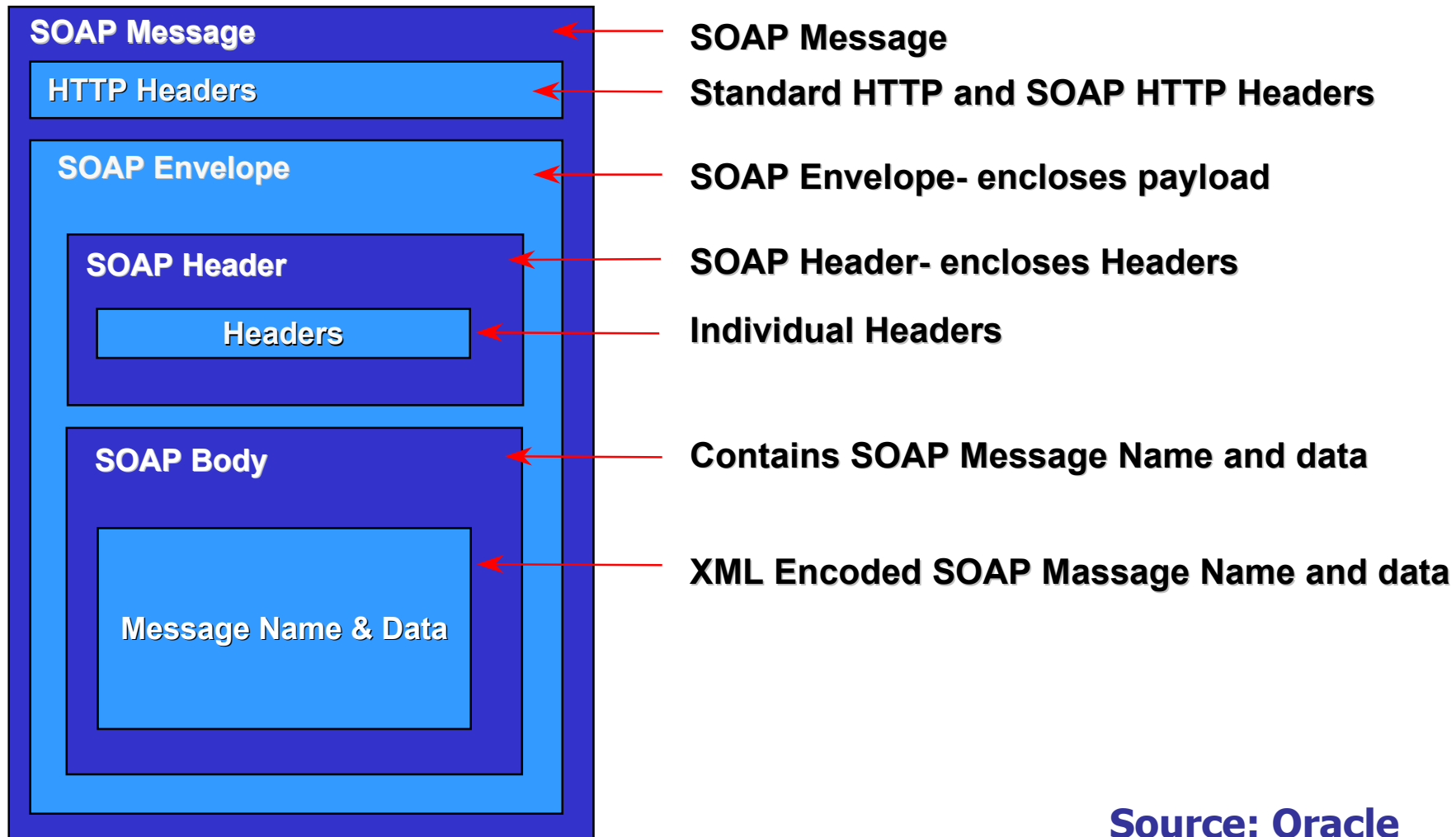
C. SOAP Message Structure



[Source: <http://www.w3.org/TR/2001/WD-soap12-part1-20011002/>]

Source: W3C SOAP Specs

SOAP Message - Overview



Source: Oracle



SOAP Example

```
<SOAP-ENV:Envelope>
  <SOAP-ENV:Body>
    <GetStockQuote
      xmlns="urn:stock-quotes" >
      <StockSymbol>ORCL</StockSymbol>
    </GetStockQuote>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

Request

```
<SOAP-ENV:Envelope>
  <SOAP-ENV:Body>
    <GetStockQuoteResponse
      xmlns="urn:stock-quotes" >
      <USD_Price>45.25</USD_Price>
    </m:GetStockQuoteResponse>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

Response

Source: Oracle



Emerging Standards - WSDL

- **WSDL is an XML format**

- Describes network services as set of end points operating on messages containing either document-oriented or procedure-oriented information

- **WSDL is extensible**

- Allows description of end points and their messages regardless of what message formats or network protocols are used to communicate



Web Services Definition Language

- Description language to define Web service interfaces and how to invoke them
- Allows both the messages and the operations on the messages to be defined abstractly in XML
- WSDL schema includes:
 - Types
 - Message
 - Operation
 - Port Type
 - Binding
 - Port
 - Service

Source: Oracle



UDDI Registry- Universal Description, Discovery and Integration

- Standards based specification for service description and discovery
- Programmatic descriptions of businesses and services they support
- Publishing APIs
- Inquiry APIs



UDDI Business Registration

- **“White pages”**
 - including address, contact and known identifiers
- **“Yellow pages”**
 - including industry categories, based on standard taxonomies
- **“Green pages”**
 - technical information about the services exposed by the business
- **Joint Initiative - uddi.org**
 - Sep 2000: Ariba, IBM and Microsoft
 - Now: Over 130 Participating Organizations
 - Open community to support development of UDDI





UDDI Registry Components

White Pages

- Directory of names
- Provider info
- Contact Info

Yellow Pages

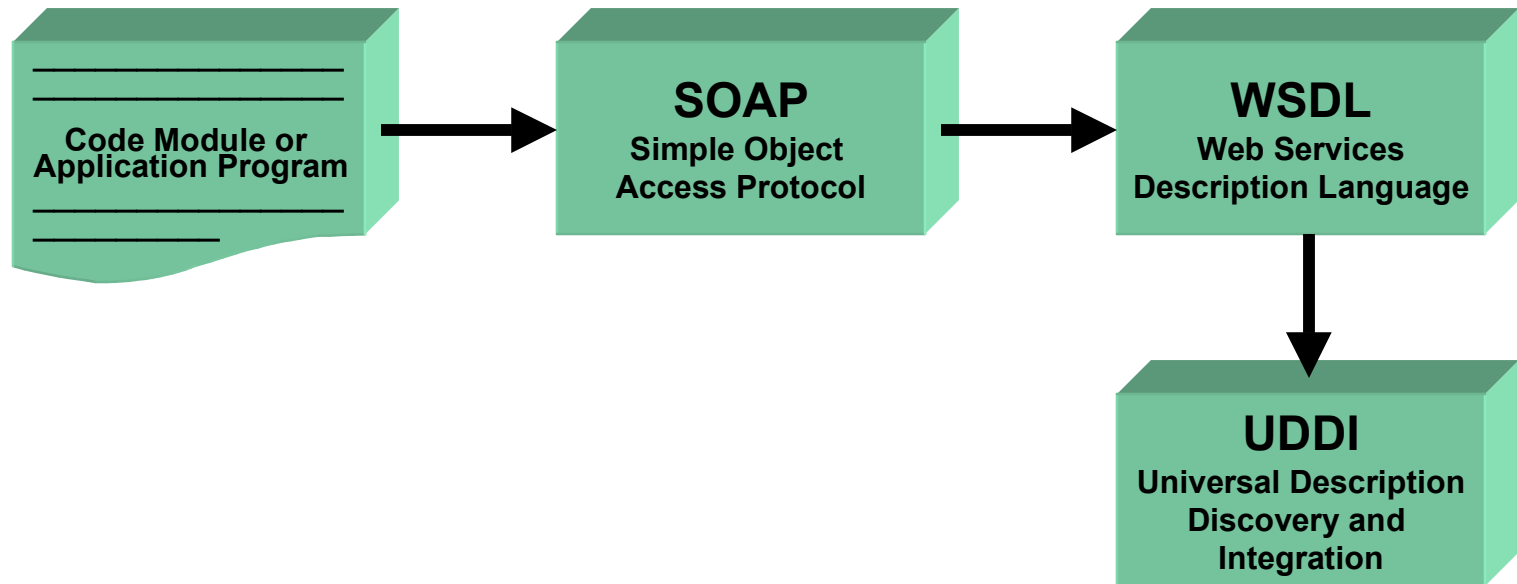
- Directory of Domains
- Specific Search using Context such as location, service type
- Point to White pages

Green Pages

- Directory of Business Info
- Information About Business Model
- Technical details of provided Service
- Information Business Process

Source: Oracle

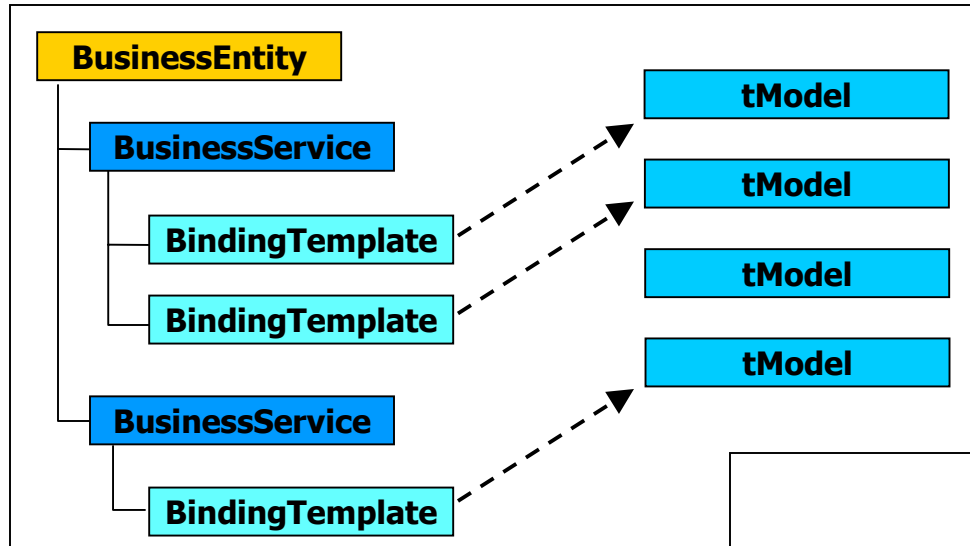
Relationship between Program and SOAP, WSDL and UDDI



- **Web Services are implemented using:**
 - SOAP (Simple Object Access Protocol)
 - WSDL (Web Services Description Language)
 - UDDI (Universal Description, Discovery and Integration).

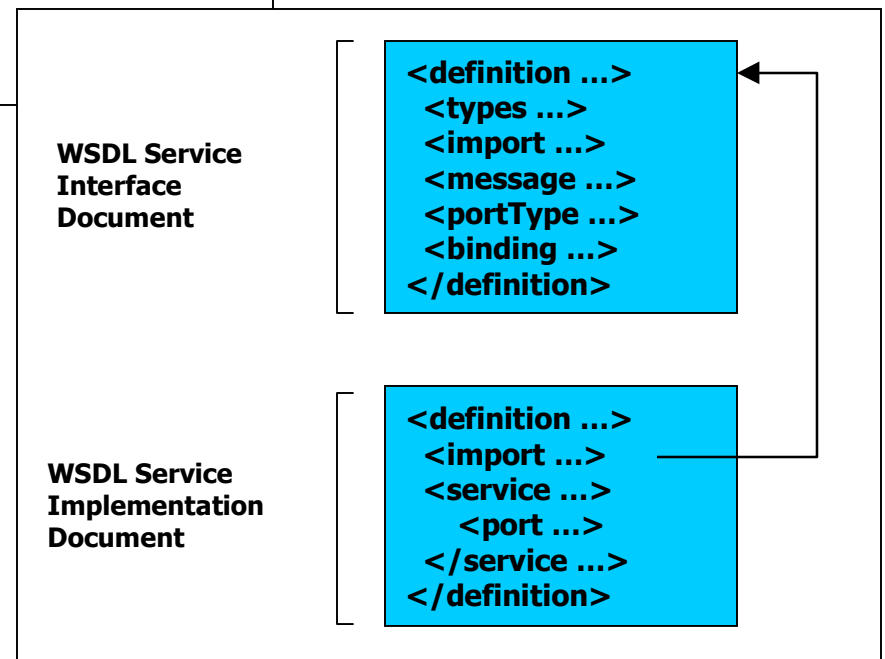
Source: IES

UDDI and WSDL Structure

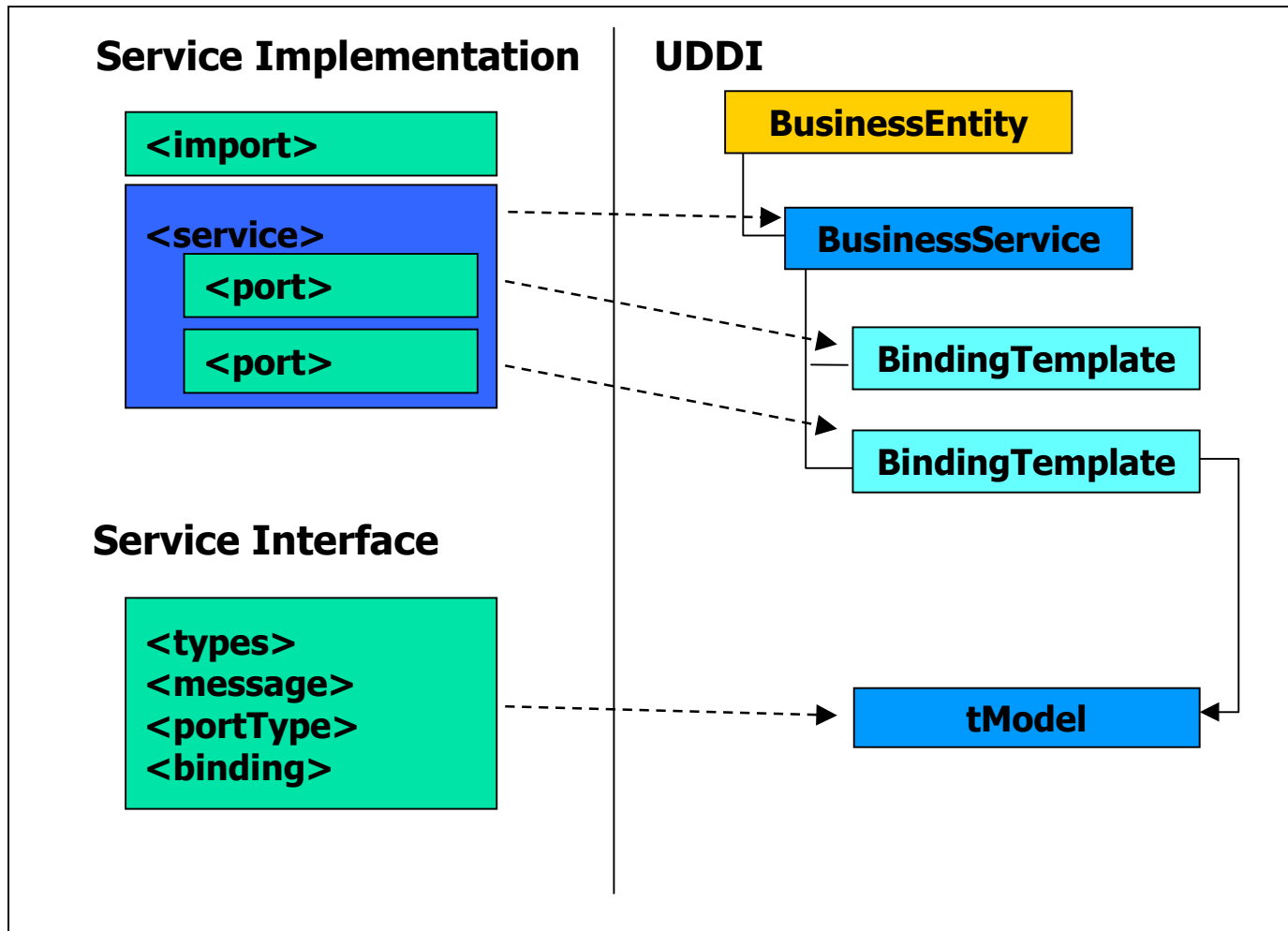


UDDI Structure

WSDL Structure



UDDI and WSDL Mapping





Example of WSDL using SOAP 1.1 for Function "GetLastTradePrice" – Part 1

```
<?xml version="1.0"?>
  <definitions name="StockQuote" targetNamespace="http://example.com/stockquote.wsdl"
    xmlns:tns="http://example.com/stockquote.wsdl"
    xmlns:xsd1="http://example.com/stockquote.xsd"
    xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
    xmlns="http://schemas.xmlsoap.org/wsdl/">
    <types>
      <schema targetNamespace="http://example.com/stockquote.xsd"
        xmlns="http://www.w3.org/1999/XMLSchema">
        <element name="TradePriceRequest">
          <complexType>
            <all>
              <element name="tickerSymbol" type="string"/>
            </all>
          </complexType>
        </element>
        <element name="TradePrice">
          <complexType>
            <all>
              <element name="price" type="float"/>
            </all>
          </complexType>
        </element>
      </schema>
    </types>
    .... ..
```

Source: <http://www-106.ibm.com/developerworks/web/library/w-wsdl.html?dwzone=web>

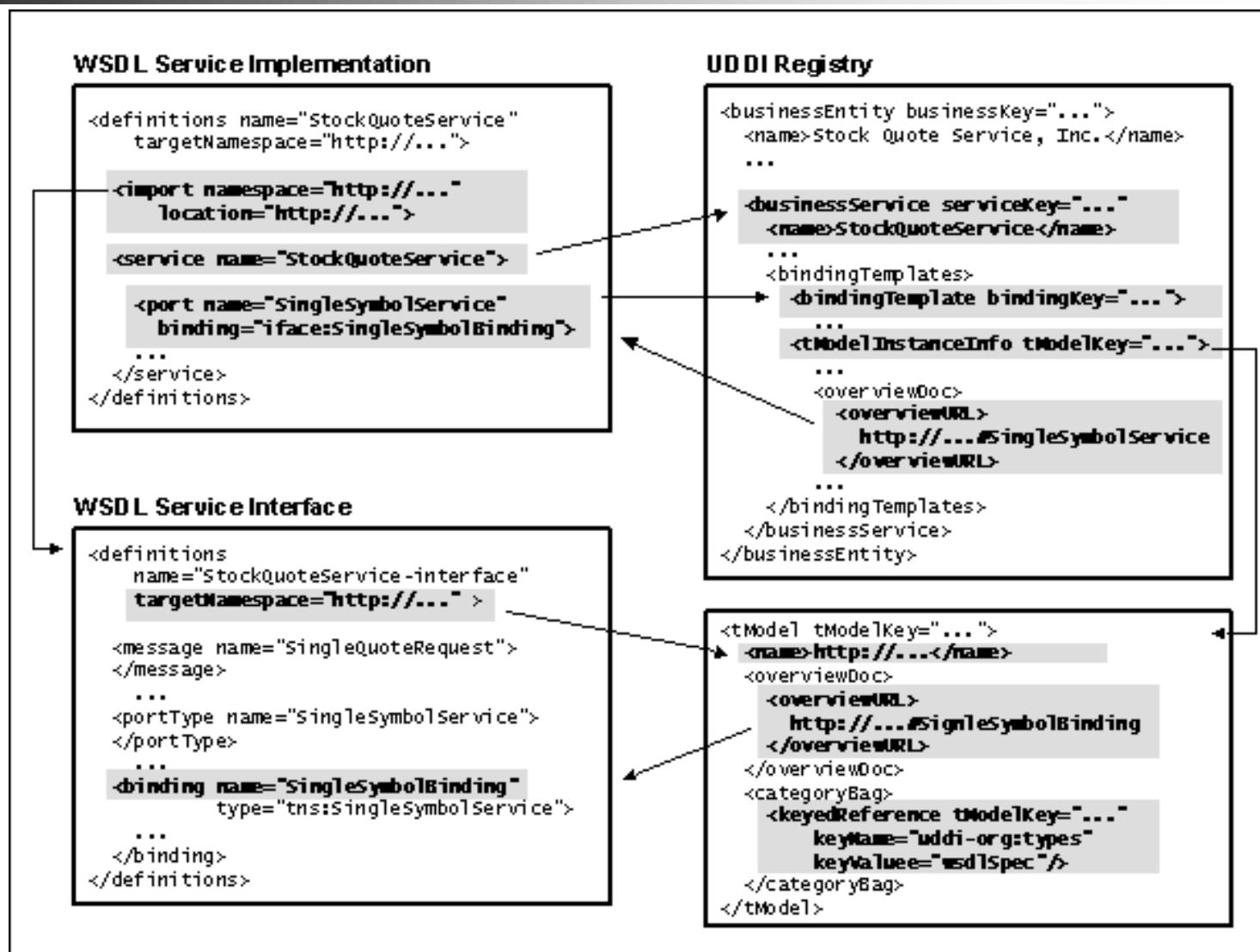


Example of WSDL using SOAP 1.1 for Function "GetLastTradePrice" – Part 2

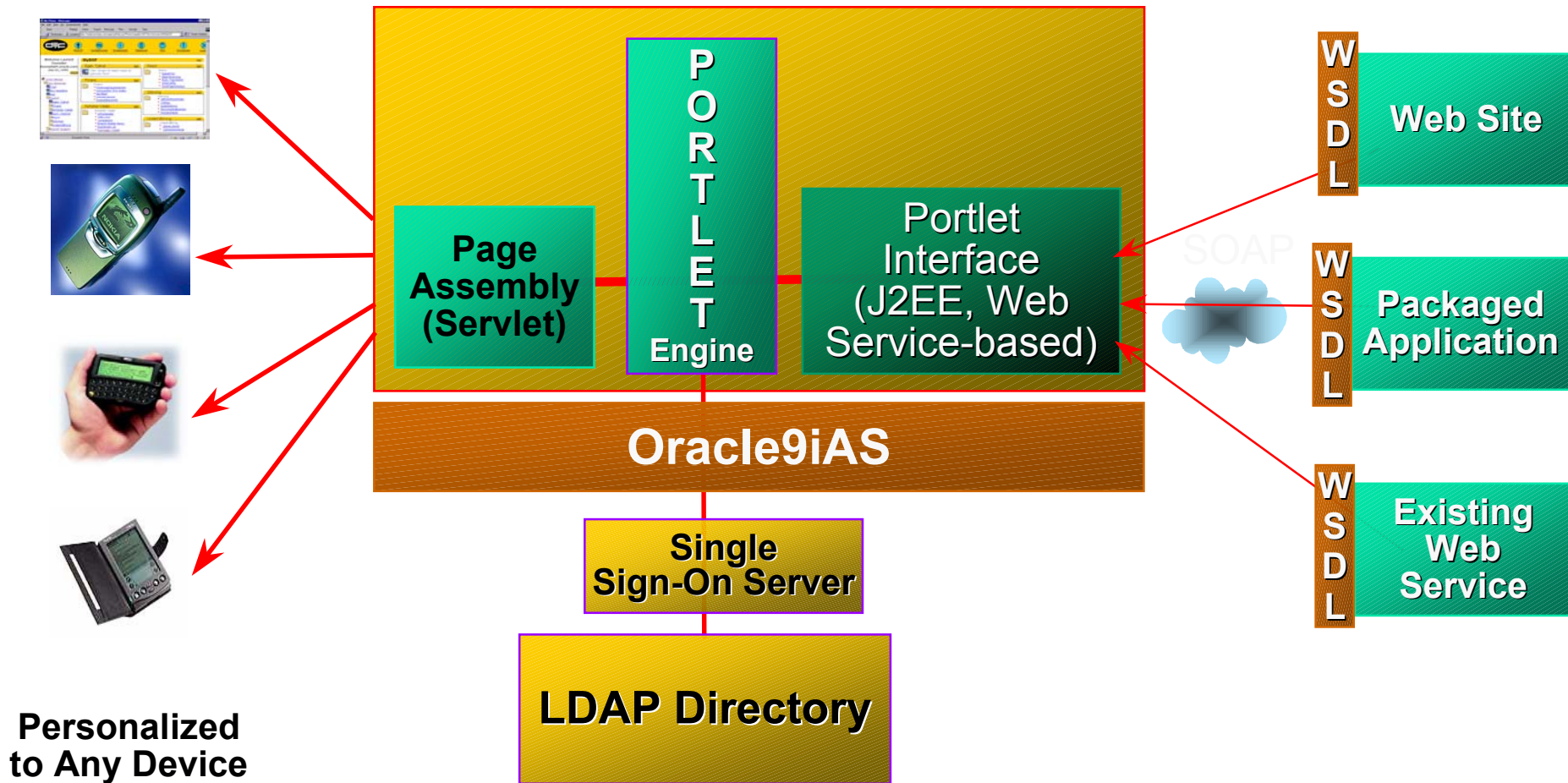
```
.... ....
<message name="GetLastTradePriceInput">
  <part name="body" element="xsd1:TradePrice"/>
</message>
<message name="GetLastTradePriceOutput">
  <part name="body" element="xsd1:TradePriceResult"/>
</message>
<portType name="StockQuotePortType">
  <operation name="GetLastTradePrice">
    <input message="tns:GetLastTradePriceInput"/>
    <output message="tns:GetLastTradePriceOutput"/>
  </operation>
</portType>
<binding name="StockQuoteSoapBinding" type="tns:StockQuotePortType">
  <soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/http"/>
  <operation name="GetLastTradePrice">
    <soap:operation soapAction="http://example.com/GetLastTradePrice"/>
    <input>
      <soap:body use="literal" namespace="http://example.com/stockquote.xsd"
        encodingStyle="http://schemas.xmlsoap.org/soap/encoding"/>
    </input>
    <output>
      <soap:body use="literal" namespace="http://example.com/stockquote.xsd"
        encodingStyle="http://schemas.xmlsoap.org/soap/encoding"/>
    </output>
  </soap:operation>
</binding>
<service name="StockQuoteService">
  <documentation>My first service</documentation>
  <port name="StockQuotePort" binding="tns:StockQuoteBinding">
    <soap:address location="http://example.com/stockquote"/>
  </port>
</service>
</definitions>
```

Source: <http://www-106.ibm.com/developerworks/web/library/w-wsdl.html?dwzone=web>

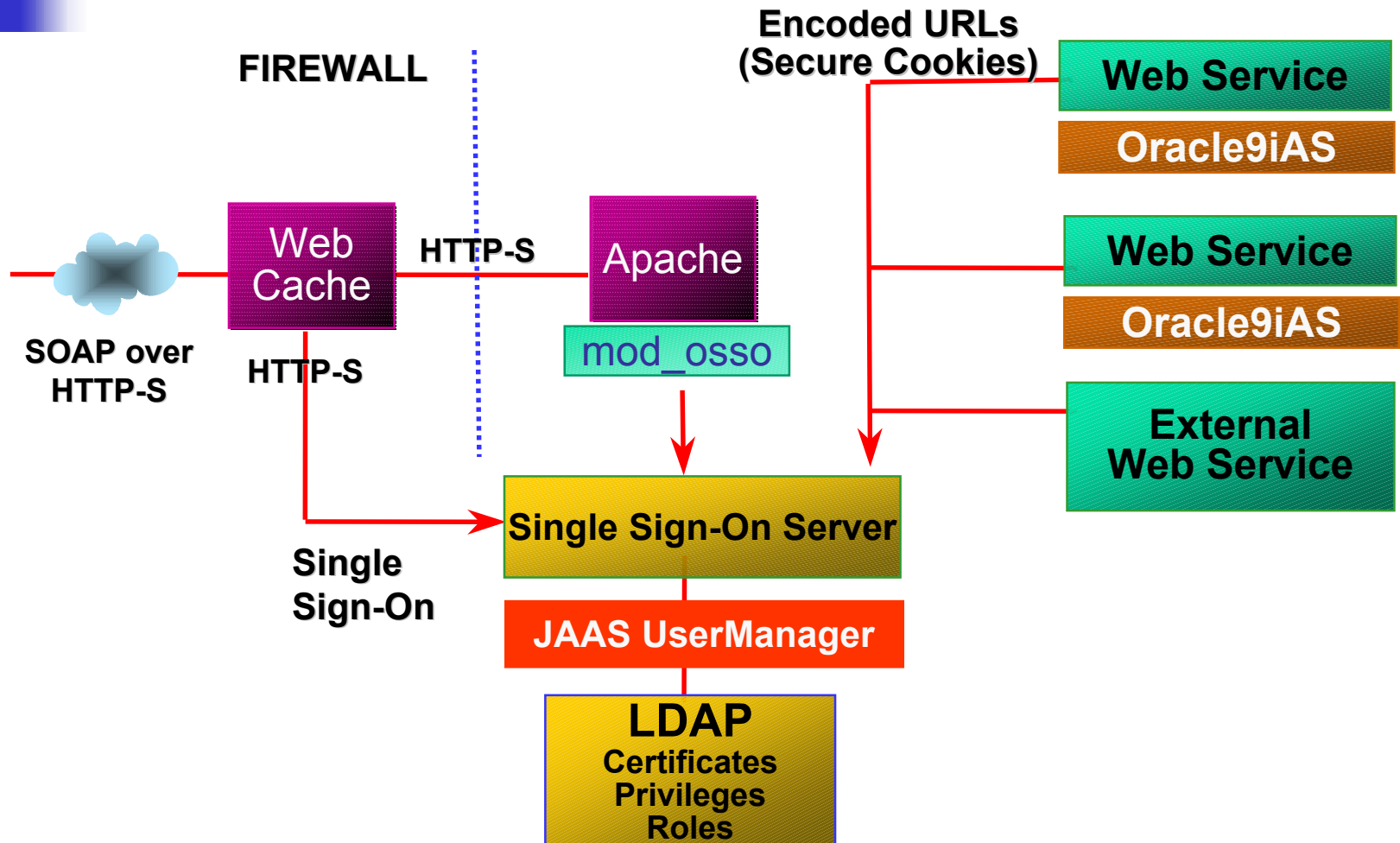
Summary of WSDL to UDDI Mapping



Example of Web Services Access



Example of Web Services Security



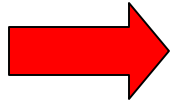
Source: Oracle



Session Topics

- **Real-Time Web Service Concepts**

- Web Services Messaging



- **Web Services Products**

- Microsoft Web Services
- IBM Web Services
- Software AG Web Services
- Oracle Web Services
- Others

A. Webservices.org Resources

Webservices.org

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Categories: News Software Events Submit News Create an account Oct 12, 2001

Posted on Thursday, October 11 @ 17:43:11 BST (42 reads)

Events: IONA launches web services webcast series

Webservices.org member [ahusain](#) writes "Waltham, MA - October 2001 - IONA®, the e-Business Platform provider for Total Business Integration™ (NASDAQ: IONA), today announced "The Truth About Web Services." This sixteen-part webcast series will educate developers, managers and executives about the benefits, strategies for adoption, and implementation of Web Services, the most talked-about advance in technology in years."

([Read More...](#) | 4779 bytes more | [Events](#))

Posted on Thursday, October 11 @ 17:39:41 BST (4 reads)

Events: Interoperability summit to coordinate development of electronic business specifications

Representatives and members of standards groups and consortia from around the world are invited to attend the first in a series of inter-consortia meetings aimed at identifying common ground and coordinating development of electronic business specifications. Hosted by HR-XML, OASIS, Object Management Group (OMG), UN/CEFACT and XBRL.org, the Interoperability Summit Series will identify intersections between major horizontal and vertical groups in order to promote acceptance of common models and approaches. The event will be hosted in Orlando, Florida, USA on Dec 6-7 2001. More information can be found [here](#).

([Events](#))

Posted on Thursday, October 11 @ 08:53:44 BST (5 reads)

News: Web Services and Mobile Intelligent Agents

Webservices.org member [markw](#) writes "In the latest article at WebServicesArchitect.com, John Fou talks about intelligent agents, and using Web Services to make them mobile. Web Services enabled mobile intelligent agents would be able to rapidly conduct business with our electronic partners, with a minimum of human intervention. [Read the article](#)"

([News](#))

Posted on Thursday, October 11 @ 08:51:39 BST (12 reads)

News: Free-basing Web Services

Webservices.org member [jcondon](#) writes "A new series of articles came out on [developerWorks Web Services Zone](#) called [Free-based Web services: Terminology](#). This article gives examples of Web Services and discusses the Gartner Group timeline for web services adoption. This piece also focuses on terminology so you can talk to your customers. On a similar note another article came out called [Web services networks](#). This article explains how a Web service can act as a go-between for different companies working together, and explores the potential -- and the potential problems -- of using Web services as intermediaries."

([News](#))

Posted on Wednesday, October 10 @ 20:13:26 BST (23 reads)

News: Gartner say Webservices will help reduce costs and improve the efficiency of IT projects by 30%

The importance of Webservices is being discussed this week at Gartner's conference, Gartner Symposium/ITxpo 2001, which is taking place at Lake Buena Vista, Florida. Research presented by Gartner suggests that Webservices will have a very significant role to play in the future success of many ecommerce projects. Gartner predicts that Webservices will "drive a 30 percent increase in the efficiency of IT development projects" by 2005. Further details of Gartner's research can be read [here](#).

([News](#))

Oct 11th News & Articles

Past Articles

- [Simplicity key to successful Web services deployment \(zdnet\)](#)
- [Microsoft CEO Steve Ballmer tells analysts that Sun's Liberty initiative won't matter in the real world \(zdnet video\)](#)
- [Microsoft's Ballmer dismisses rival project \(zdnet\)](#)
- [Microsoft Reads "Indigo" for Web Services \(eweek\)](#)
- [Gartner Says Web Services Coming Soon \(internet news\)](#)
- [Clash of the Web servers \(zdnet\)](#)
- [Web services improves employee benefits processing \(ibm\)](#)
- [Microsoft launches Java for .Net, in reversal of plans \(CRN\)](#)
- [After J#, why would Internet Explorer still need a JVM? \(o'reilly weblog\)](#)
- [Java Servlet 2.4 Specification JSR 154 addresses SOAP, Web service modular deployment \(jcp\)](#)
- [Enterprise JavaBeans 2.1: JSR 153 addresses JAXM, MDBs \(jcp\)](#)
- [ITxpo: McNealy blasts competitors \(infoworld\)](#)

Contributing Members

Avinon, CapeClear, CSW, CMP Media, Dart, Developer Works, Glue Tech, IBM, Idoxx, Industrial, InterKeep



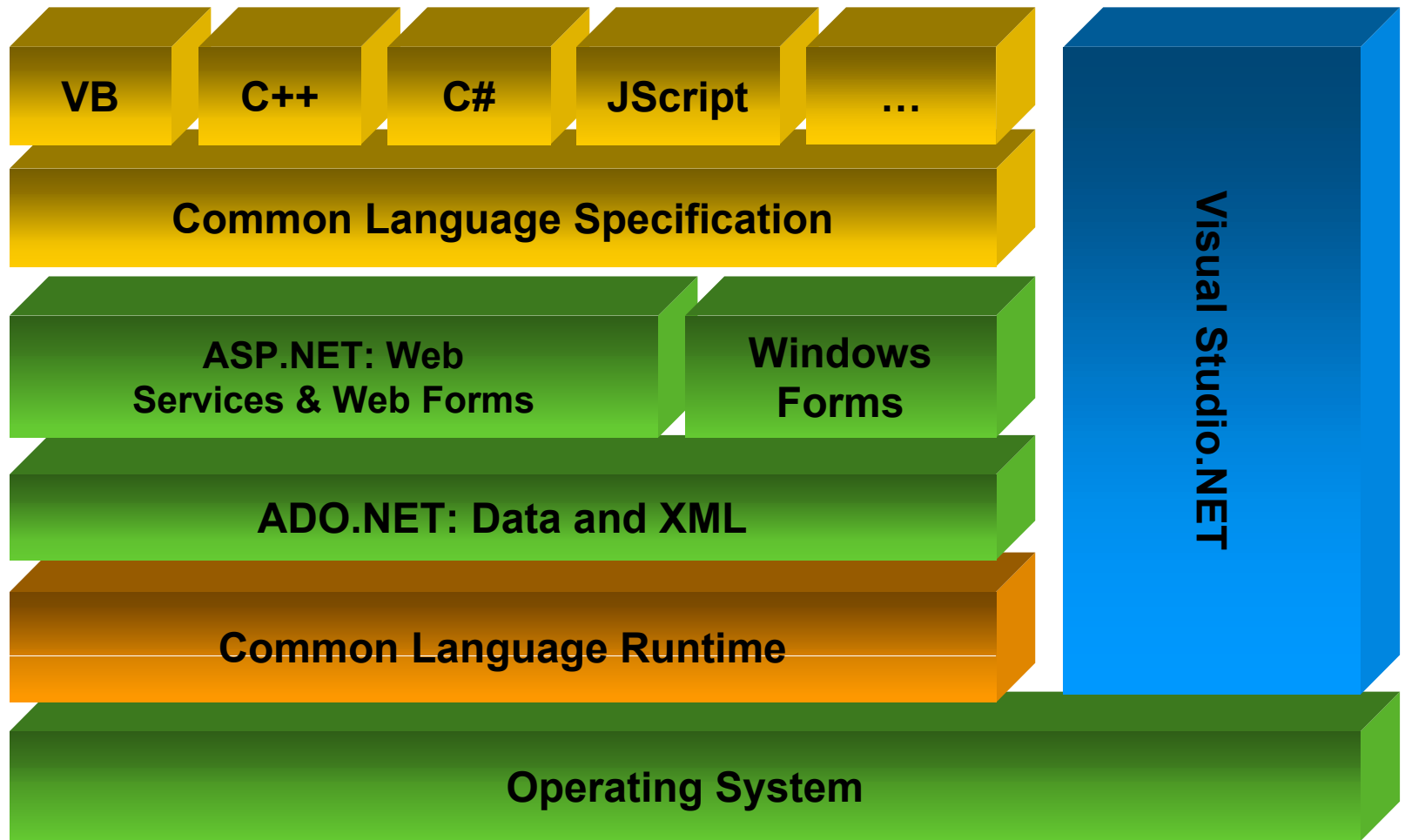
A. Web Service Vendors Overview

- **Web Services Proposed by Ariba, IBM and Microsoft in Sep 2000**
 - Now over 130 organizations participating
- **Many Web Services Products will become available over next 2-3 years**
- **Major Web Services Vendors**
 - Microsoft (.NET is based on XML and Web Services)
 - IBM (Web-Service-enabling ALL IBM products)
 - Software AG (based on EntireX)
 - Oracle (based on Oracle9i and Oracle9iAS)
 - HP (extended from e-Speak)
 - Sun (Sun Open Net Environment - ONE)

**Sources: Microsoft, IBM,
Software AG, HP, Sun**

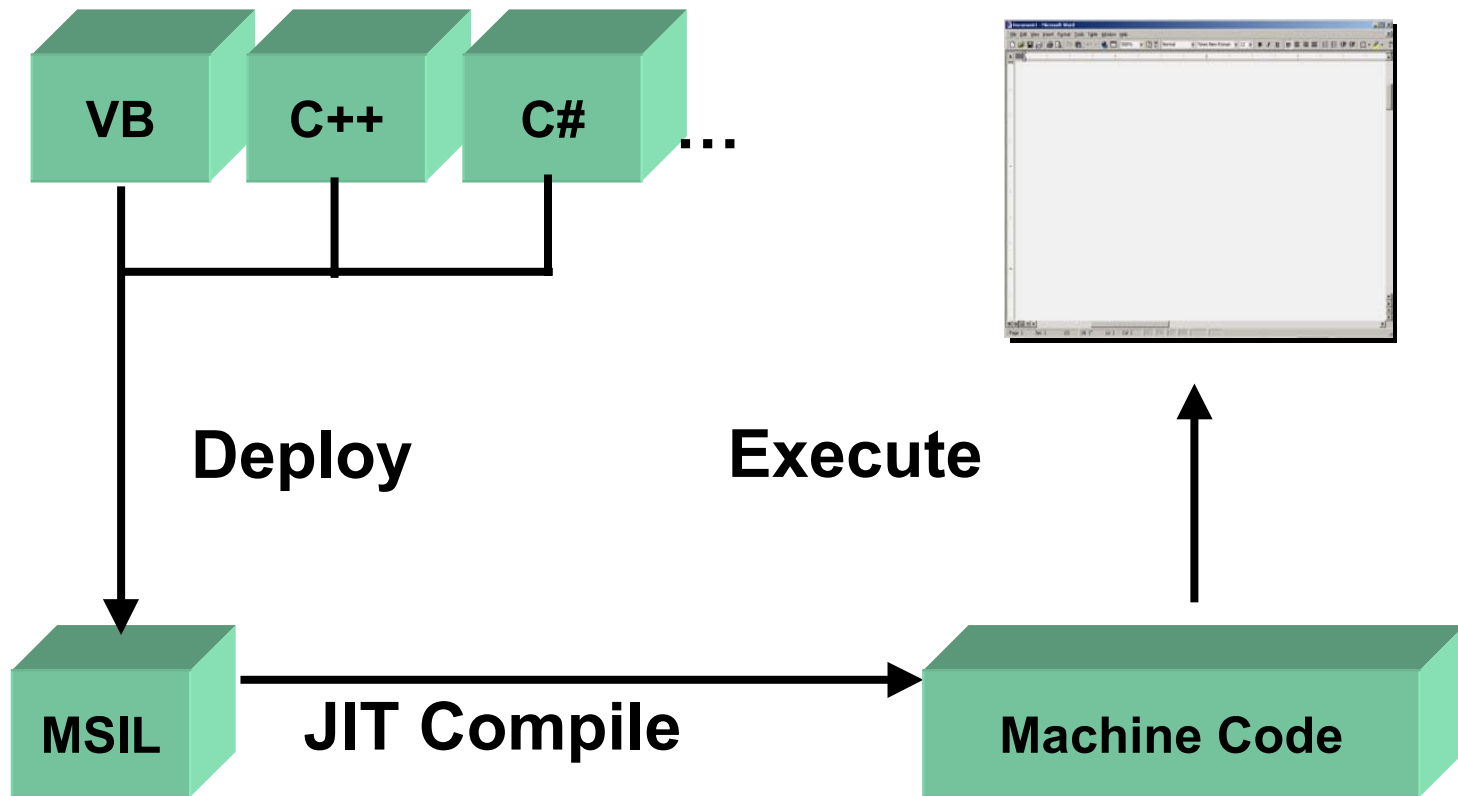


B. Microsoft .NET Framework



Source: Microsoft

B. Microsoft Intermediate Language



Microsoft Intermediate Language (MSIL) .NET Portability

Source: Microsoft

B. MSDN .NET Online Training Courses

The screenshot shows a web browser window displaying a Microsoft .NET Framework overview. The browser's address bar shows the URL: <http://www.microsoft.com/Seminar/Includes/Seminar.asp?Url=/Seminar/en/developers/2001071...>. The page has a blue header with the Microsoft logo and the title "Architecting An Application Using Microsoft® .NET Framework: Part 1". Below the header, the main content area features a 3D diagram illustrating the .NET Framework architecture. The diagram consists of several layers: a green base labeled "Operating System", followed by an orange layer labeled "Common Language Runtime", then a green layer labeled "ADO.NET: Data and XML", and a green layer labeled "ASP.NET: Web Services & Web Forms" and "Windows Forms". Above these layers is a yellow layer labeled "Common Language Specification", which contains boxes for "VB", "C++", "C#", "JScript", and "...". A blue vertical bar on the right side of the diagram is labeled "Visual Studio.NET". To the right of the diagram, the MSDN logo is displayed, followed by the name "Scott Swigart, 3 Leaf Solutions". Below the MSDN logo, there is a section titled "Related Content Links:" with several links: "PowerPoint Download", "Visit MSDN Online", "Register for the MSDN Flash Email Newsletter", "Join the MSDN Online Membership", "Become an MSDN CD Subscriber", "Certifications, Requirements, exams and Training options", "Demonstration #1", "Demonstration #2", "Demonstration #3", "Demonstration #4", and "Demonstration #5". On the left side of the main content area, there is a vertical navigation bar with icons for play, pause, stop, and a help icon. Below the icons, the text "mute" and "help" are visible. At the bottom of the main content area, there is a section titled "Slides: 1 - 55" with a progress indicator showing "00:52:39 (of total: 01:50:44)". Below this, a list of slides is shown: 1. Architecting an Application using the Microsoft® .NET Framework, 2. What We Will Cover, 3. Session Prerequisites, 4. Agenda, and 5. .NET Framework Overview: What is the .NET framework?. A "Top" link is also present.

Microsoft®

Architecting An Application Using Microsoft® .NET Framework: Part 1

.NET Framework Overview
What is the .NET framework?

VB C++ C# JScript ...

Common Language Specification

ASP.NET: Web Services & Web Forms Windows Forms

ADO.NET: Data and XML

Common Language Runtime

Operating System

Visual Studio.NET

msdn

Scott Swigart,
3 Leaf Solutions

Related Content Links:

- PowerPoint Download
- Visit MSDN Online
- Register for the MSDN Flash Email Newsletter
- Join the MSDN Online Membership
- Become an MSDN CD Subscriber
- Certifications, Requirements, exams and Training options
- Demonstration #1
- Demonstration #2
- Demonstration #3
- Demonstration #4
- Demonstration #5

Slides: 1 - 55 00:52:39 (of total: 01:50:44)

1. Architecting an Application using the Microsoft® .NET Framework
2. What We Will Cover
3. Session Prerequisites
4. Agenda
5. .NET Framework Overview: What is the .NET framework?

Top

Part 1: Architecting an application using .NET Framework – 200
Source: <http://msdn.microsoft.com/events/quarterlyevent.asp>

C. IBM Web Services Resources

The screenshot shows the IBM developerWorks website for Web services. The browser is Microsoft Internet Explorer. The page has a blue header with the IBM logo and navigation links: IBM home, Products & services, Support & downloads, My account. Below the header is a yellow banner for the 'Web services zone'. The main content area is divided into several sections:

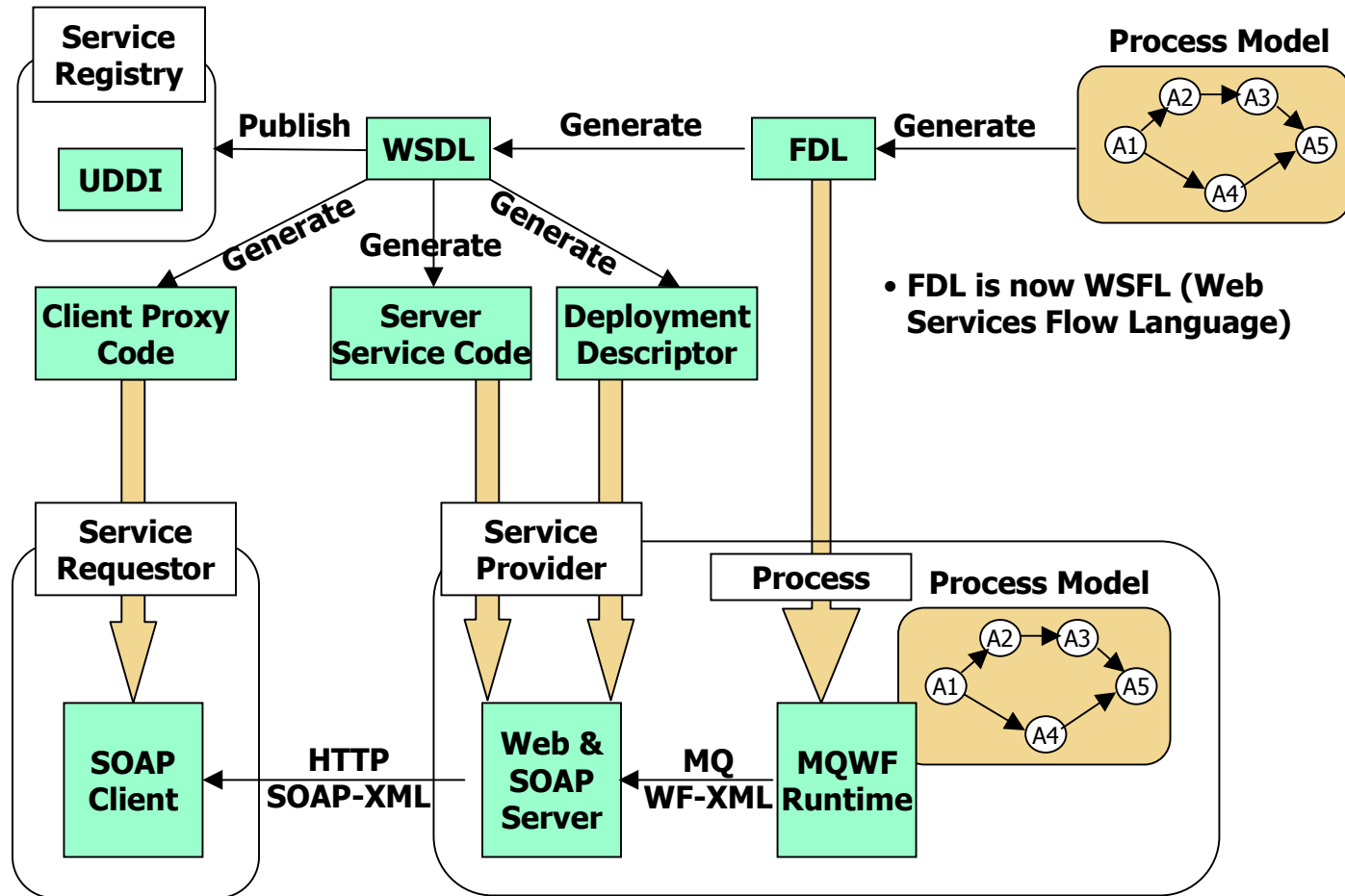
- Web services zone:** Features an article titled 'Employee benefits processing with Web services' by Dan Giso, dated October 12, 2001. It includes a list of links: Building Web services networks, Web Services Invocation Framework, Myths and misunderstandings surrounding SOAP, Using WSDL in a UDDI registry, Part 2, Web services and XML technologies CD, and a dW theme: Focus on security.
- Discussion forums:** A link to 'Web services technical' forums.
- Columns:** A list of articles including 'Web services architect, Part 5' by Dan Giso, 'The Web services insider, Part 9' by James Snell and Maryann Hondo, 'The Web services (r)evolution, Part 4' by Graham Glass, and 'The Python Web services developer, Part 4' by Uche Ogbuji and Mike Olson.
- Most popular links:** A list of links including 'Is Web services the reincarnation of CORBA?', 'Digital signatures for SOAP messages', 'A Primer for HTTP', 'Web services -- the Web's next revolution', and 'Technical Overview of Web services'.
- Letter from the editor:** A link to 'Find out what the Web Services zone is all about and how it can help you.'

The right sidebar contains several sections:

- Site map:** Links to Feedback and About dW.
- Newsletters:** A subscription form for dW's FREE weekly newsletter.
- WebSphere:** A link to 'Activate Web services with WebSphere'.
- WEB SERVICES briefing days:** A link to 'WEB SERVICES briefing days'.
- News:** A list of news items including 'Web services and mobile intelligent agents', 'Gartner says Web services coming soon', and 'IBM: Web services, databases and Linux'.
- alphaWorks code:** A link to 'Download and develop with: Web Services Toolkit 2.4'.
- From IBM:** A link to 'DB2 and Web services'.

Source: <http://www-106.ibm.com/developerworks/webservices/>

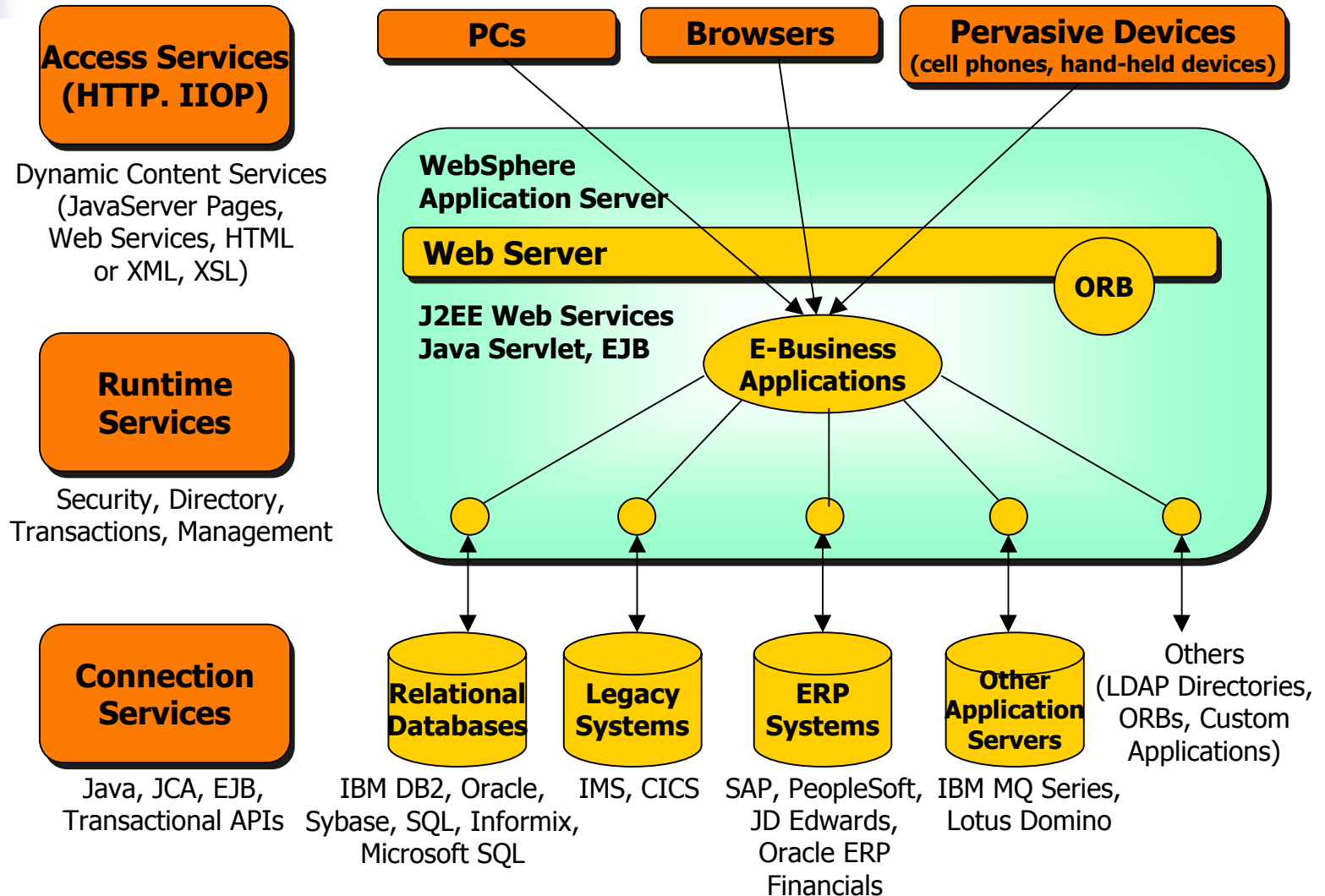
C. IBM Web Services Toolkit



IBM Web Services Toolkit for Developing Web Services

Source: IBM

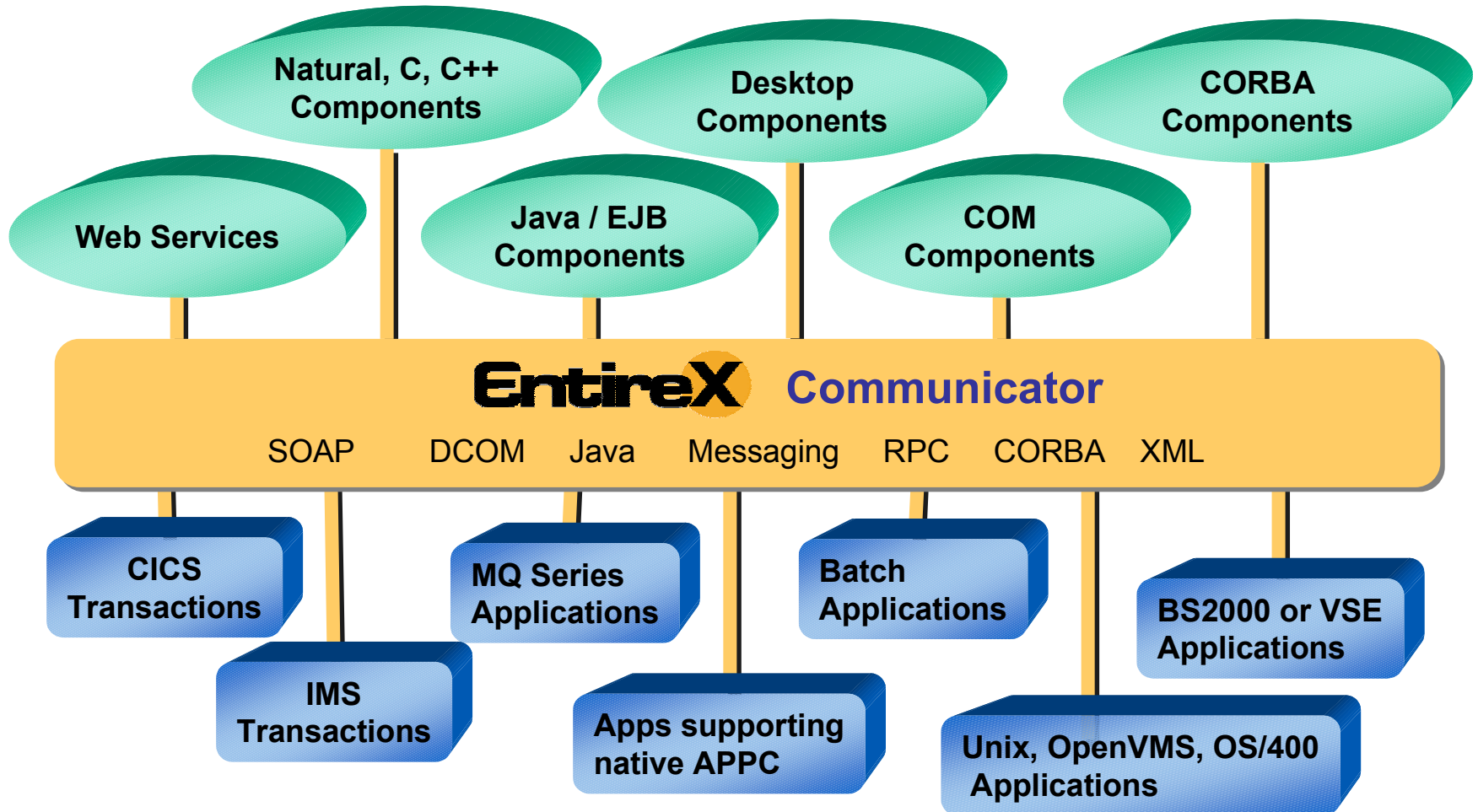
C. IBM WebSphere Application Server



IBM WebSphere Application Server Environment Support

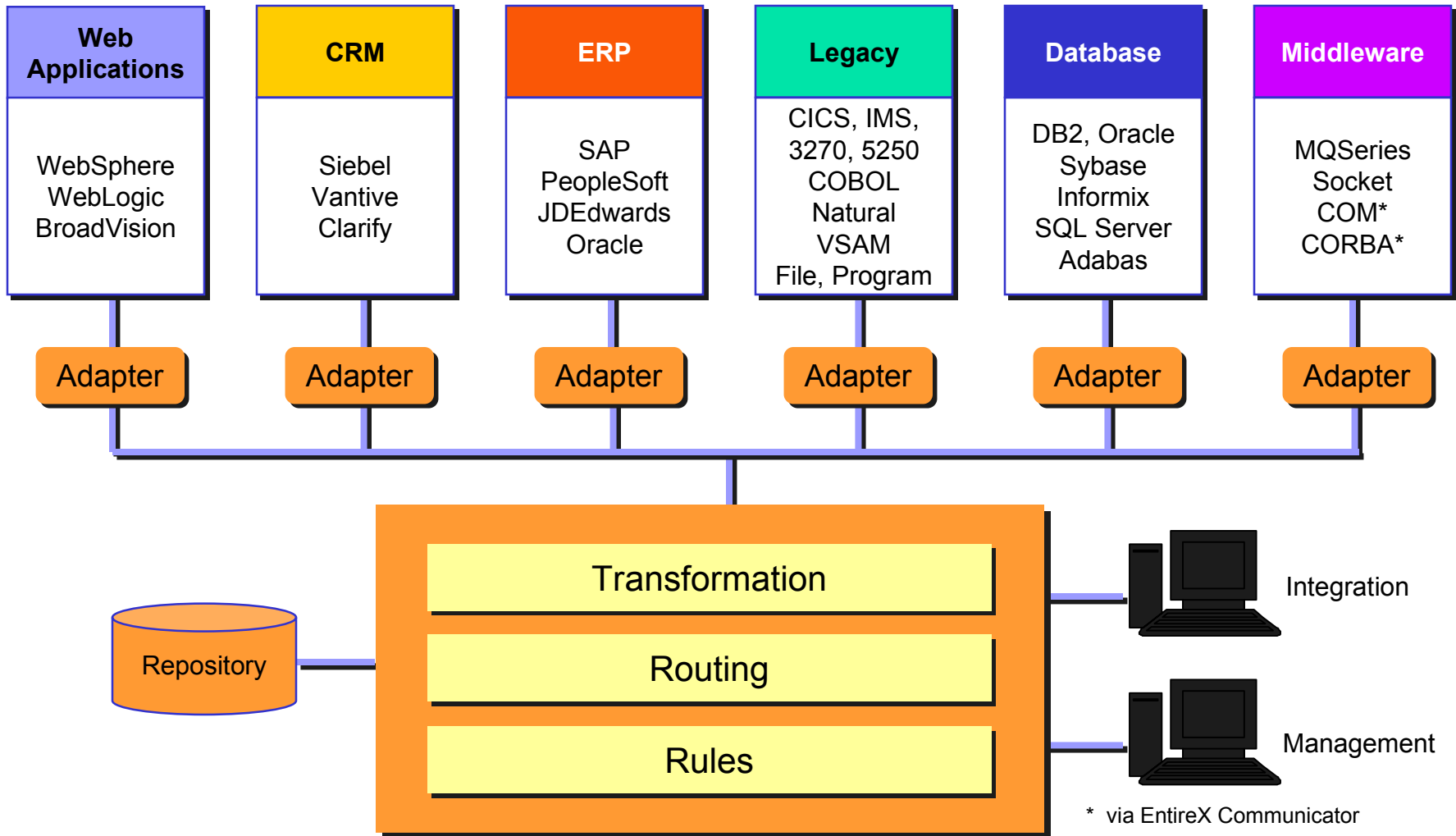
Source: IBM

D. Software AG EntireX Communicator



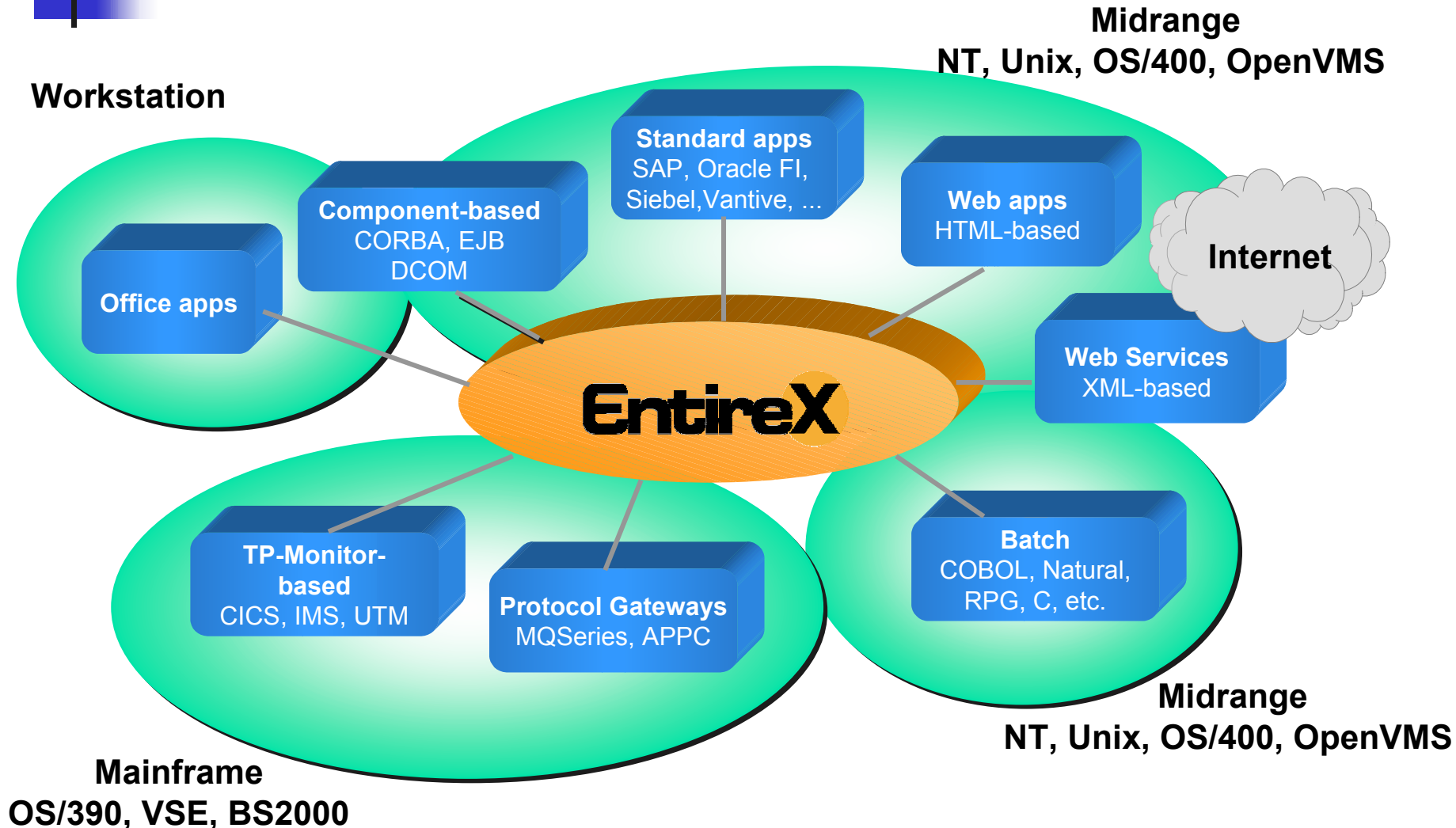
Source: Software AG

D. Software AG EntireX Orchestrator



Source: Software AG

D. Software AG Web Services Support



Source: Software AG

D. Example: EntireX Converts Service into a Web Service in 3 Clicks

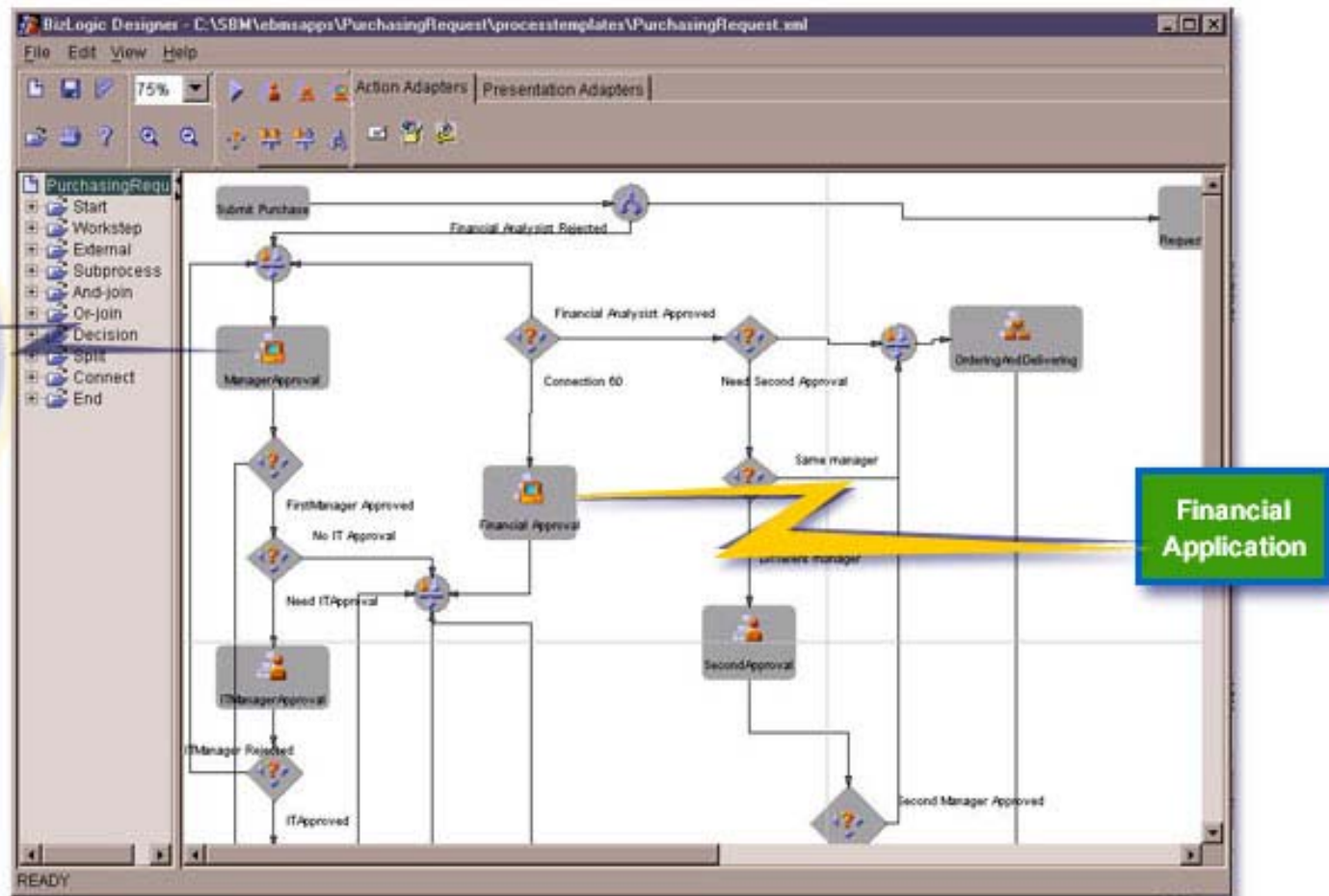
The screenshot shows the EntireX Workbench interface with the following components:

- Left Panel (Project Explorer):** Displays a tree structure of projects. The 'Java Wrapper' project is selected, and the 'Example.idl' file is highlighted.
- Top Menu Bar:** Includes 'File', 'Edit', 'View', 'Tools', 'Java', 'XML', 'CORBA', 'C', 'Cobol', 'Mapping', 'Checks', and 'Window'. The 'XML' menu is open, showing options: 'Define XML mapping', 'Generate XML adapter', 'Generate Tamino X-Tension', and 'Generate WSDL'. An orange circle highlights the 'XML' menu, and an arrow points to the '1. Wrappers' callout.
- Center Panel (Interface Definition):** Displays the 'CALC' interface definition. It includes fields for 'opcode (A1) In', 'Operand_1 (I4) In', 'Operand_2 (I4) In', and 'function_result (I4) RESULT'. An orange arrow points from this panel to the '2. Interface definition' callout.
- Right Panel (XML Mapping):** Displays the XML mapping for the 'CALC' interface. It shows a SOAP-ENV:Envelope structure with a SOAP-ENV:Header and a SOAP-ENV:Body. The body contains a CALC element with three children: opcode, Operand_1, and Operand_2. An orange arrow points from this panel to the '3. XML Mapping' callout.
- Bottom Panel (Properties):** Displays the properties of the selected element. It includes fields for 'Element', 'Mapped to', 'Format', 'Length', 'Default', 'Encoding', 'Namespace Prefix', 'Min. Occurrences', 'Max. Occurrences', and 'Null suppression'. The 'Element' field is set to 'Envelope'.

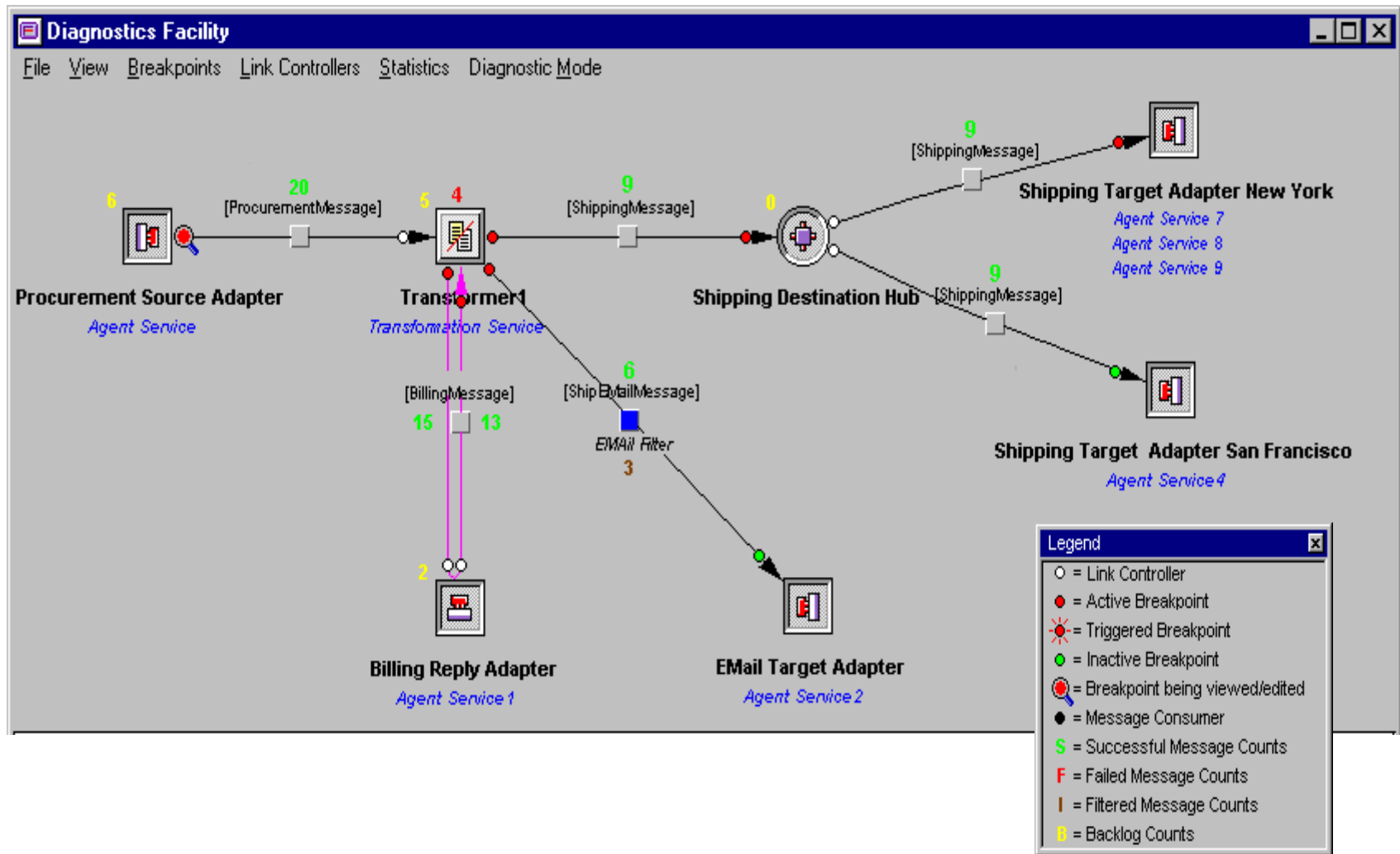
Three orange callouts are present:

- 1. Wrappers:** Points to the 'XML' menu.
- 2. Interface definition:** Points to the 'CALC' interface definition.
- 3. XML Mapping:** Points to the XML mapping structure.

D. EntireX Business Process Management

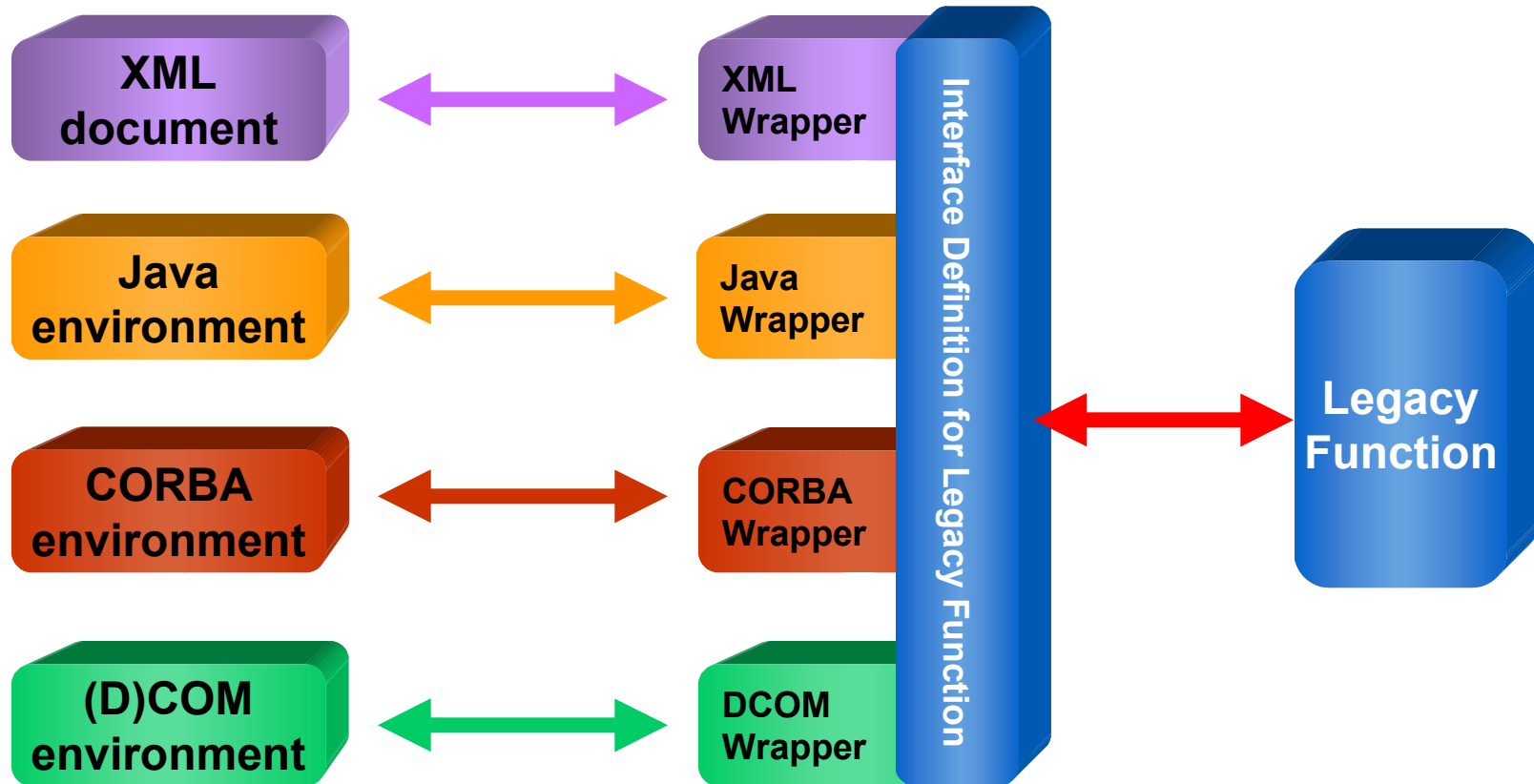


D. EntireX Diagnostics Facility



Source: Software AG

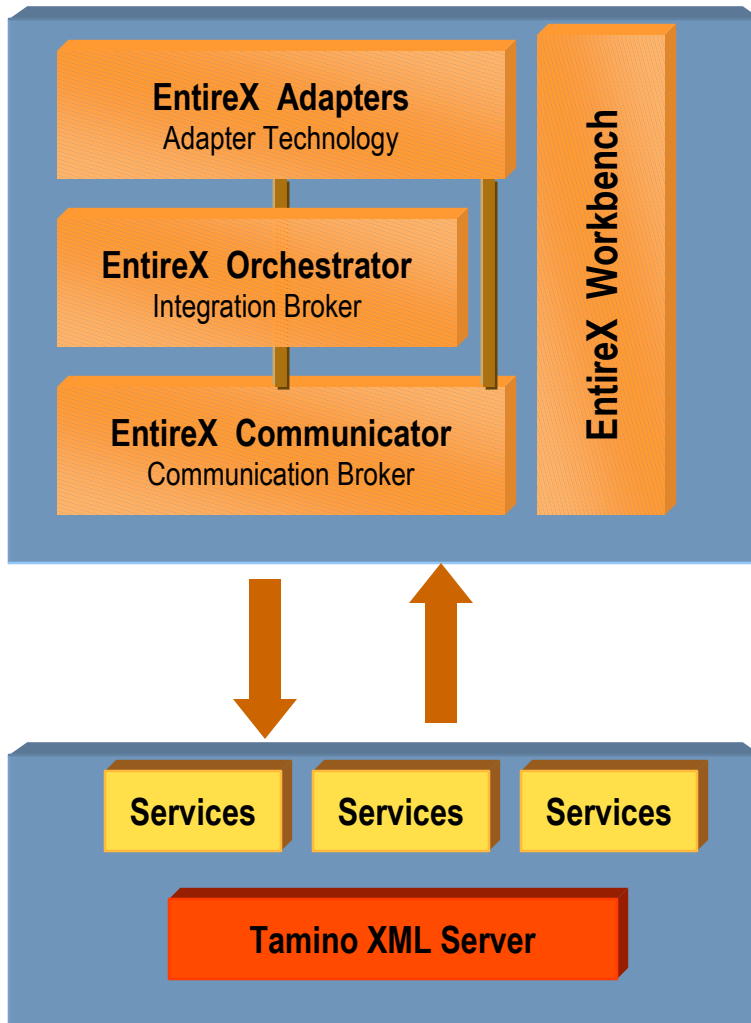
D. EntireX Wrapper Technology



Tools support generation of
proxies (Wrapper components)
for legacy function

Source: Software AG

D. EntireX Integration Server Tamino XML Server



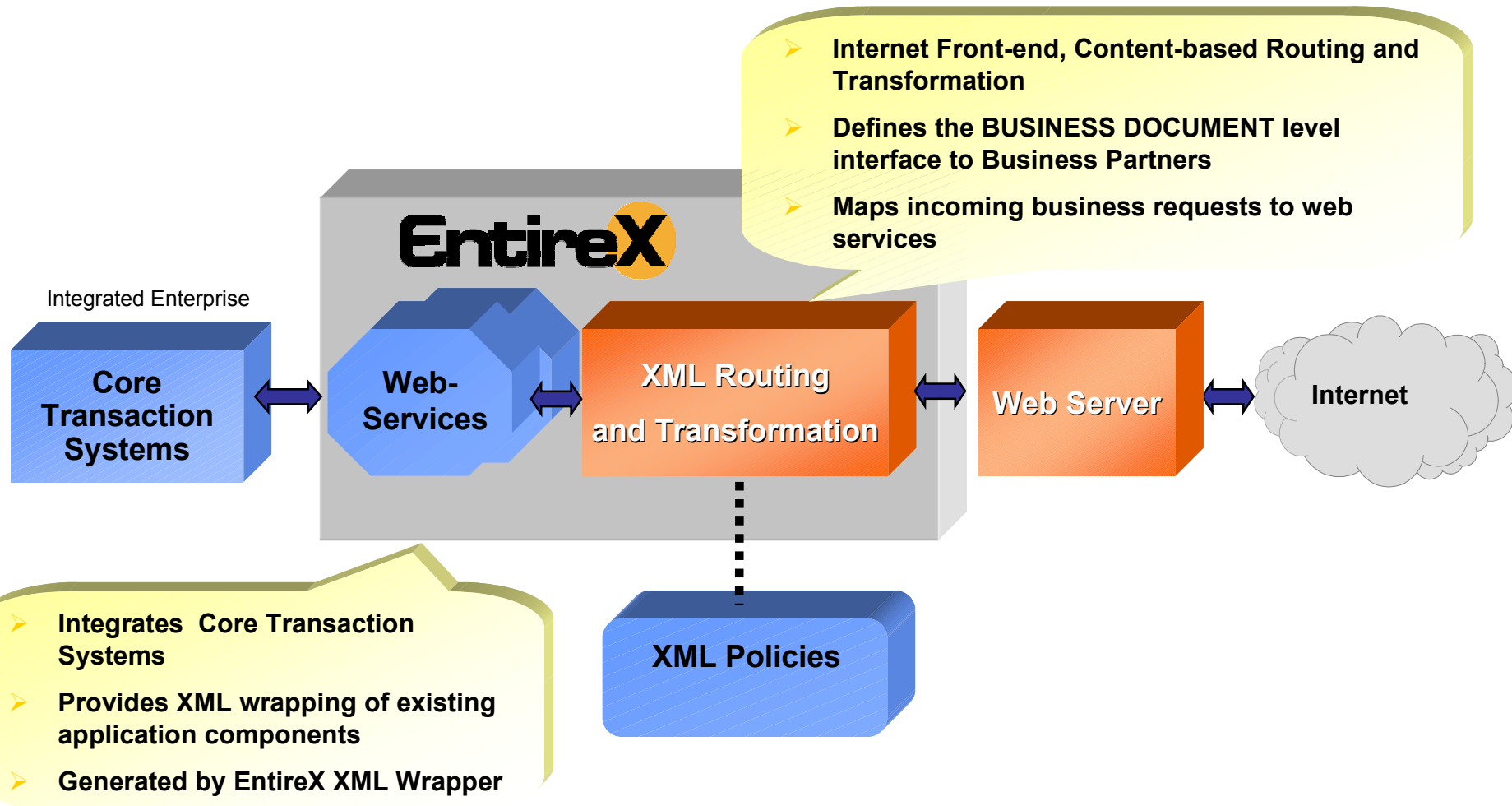
■ Integration Services

- Custom interfaces to Enterprise Applications
- Standardized Adapters for Packages

■ XML Services

- UDDI Directory Services for cataloging and locating Web Services
- Business Activity Monitoring Service for providing Business Intelligence
- Repository Services for storing Routing Rules, Profiles, Transformation

D. EntireX enables Collaboration



Source: Software AG



D. Software AG XML Support

- **XML Solutions from Software AG:**
 - XML and application integration
 - XML and message integration
 - XML and data integration
 - XML and legal tender
 - XML and Web Services

- **Rapidly build XML-powered electronic business processes**
 - Leverage existing transaction processing infrastructure
 - Without disturbing foundations of existing IT operations

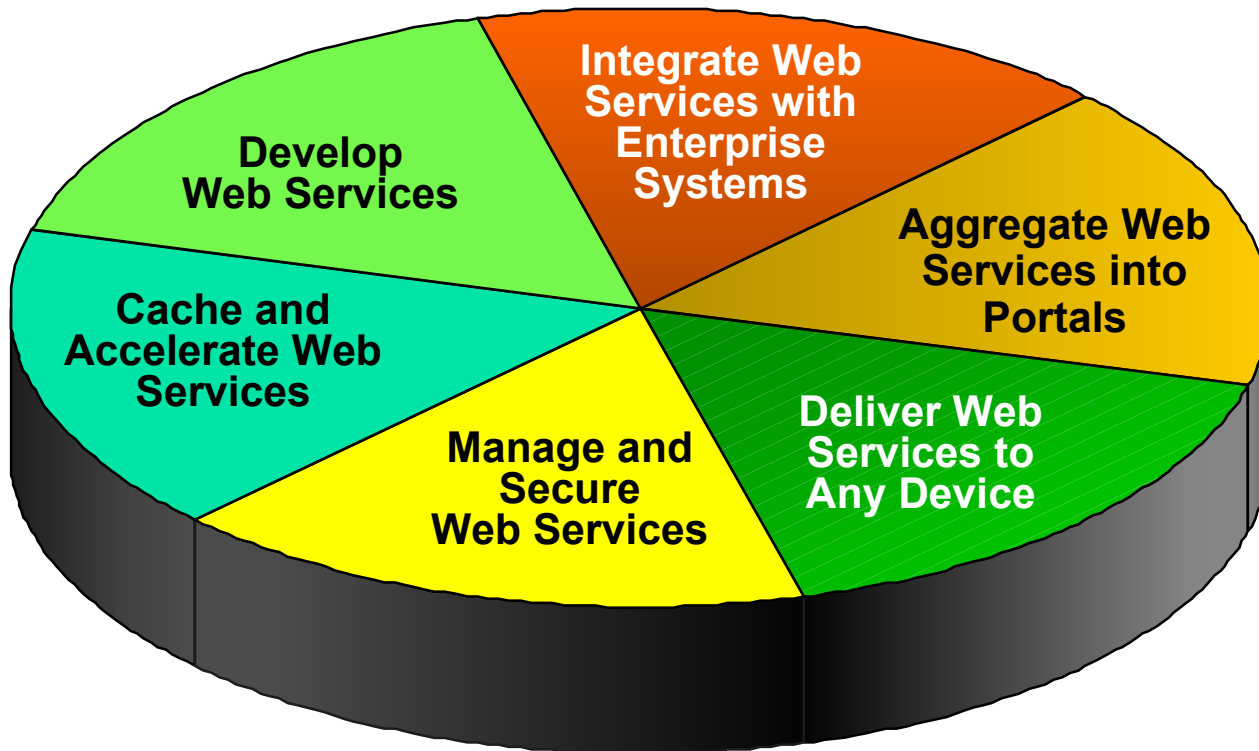




Performance & Caching

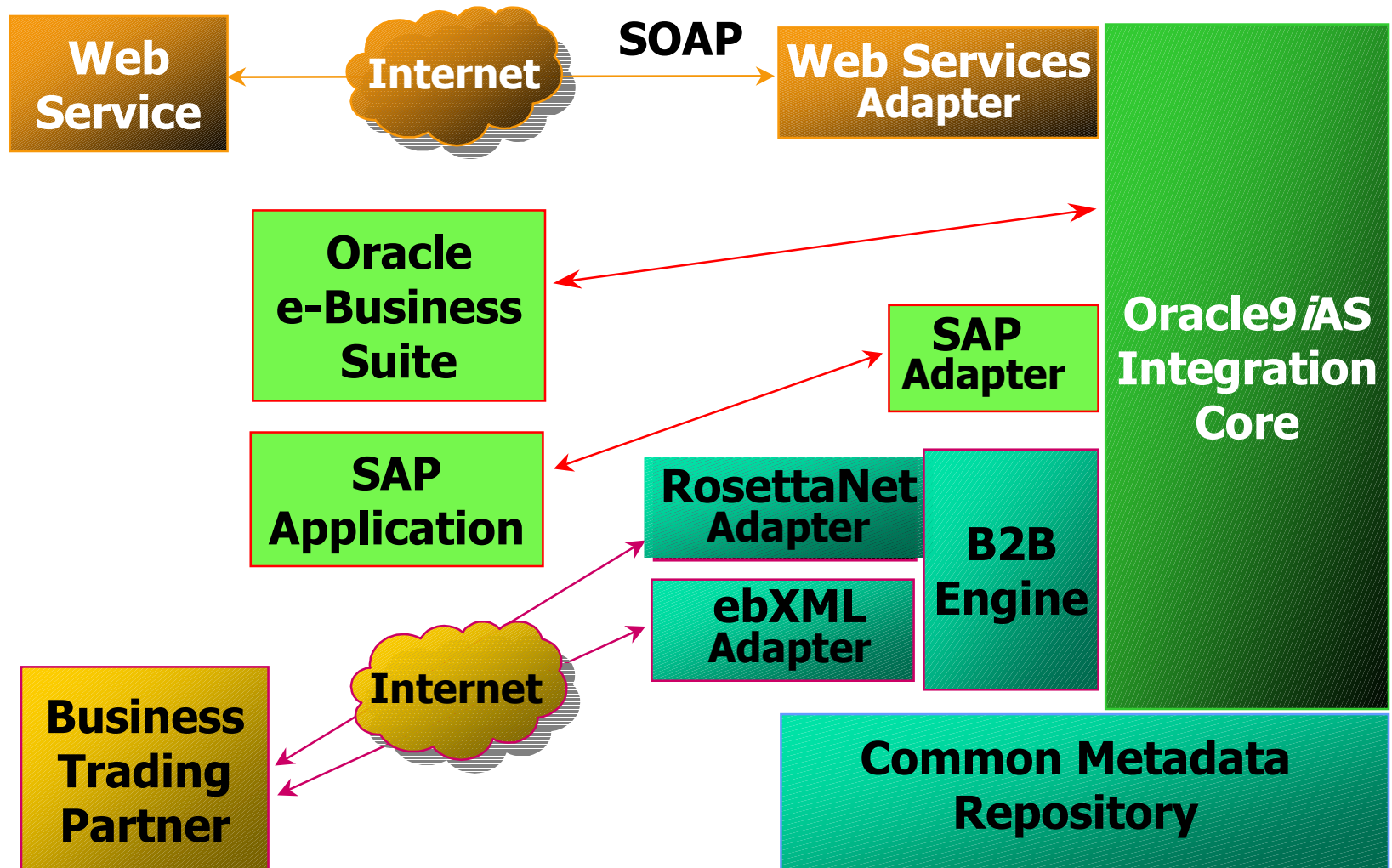
Source: Oracle

E. Oracle9i App Server Web Services



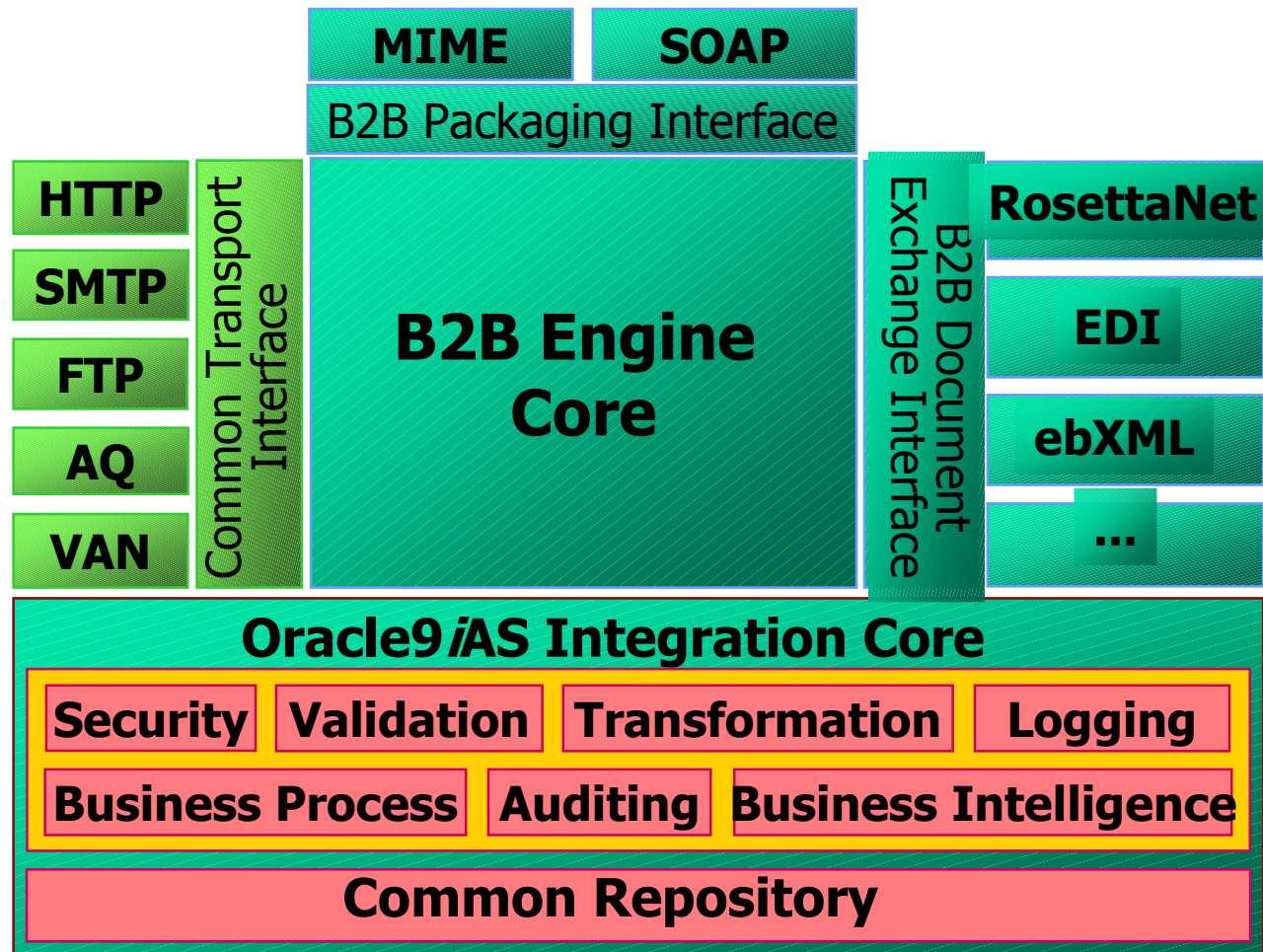
Source: Oracle

E. Oracle9iAS Integration



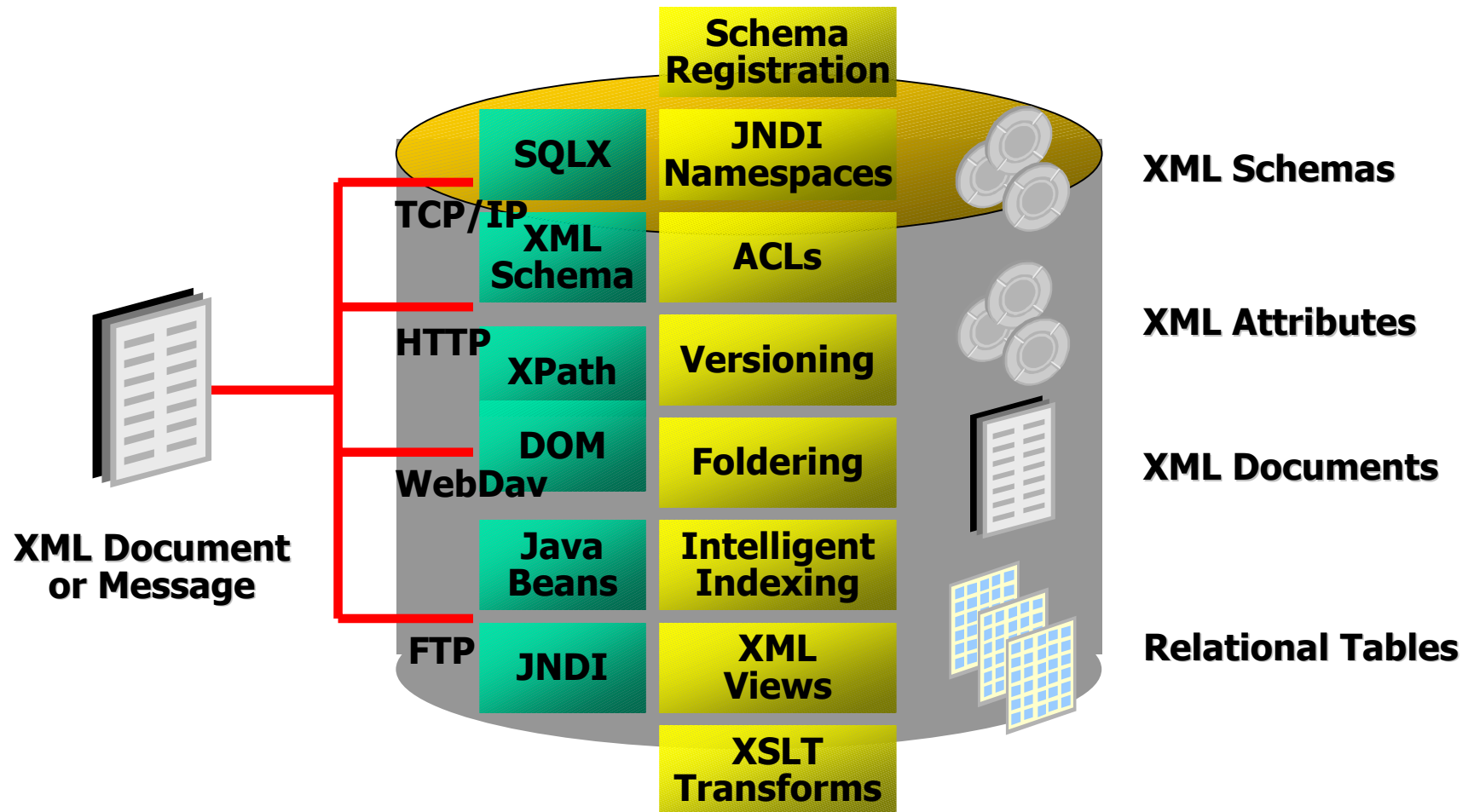
Source: Oracle

E. Oracle9 iAS Integration B2B Integration Components



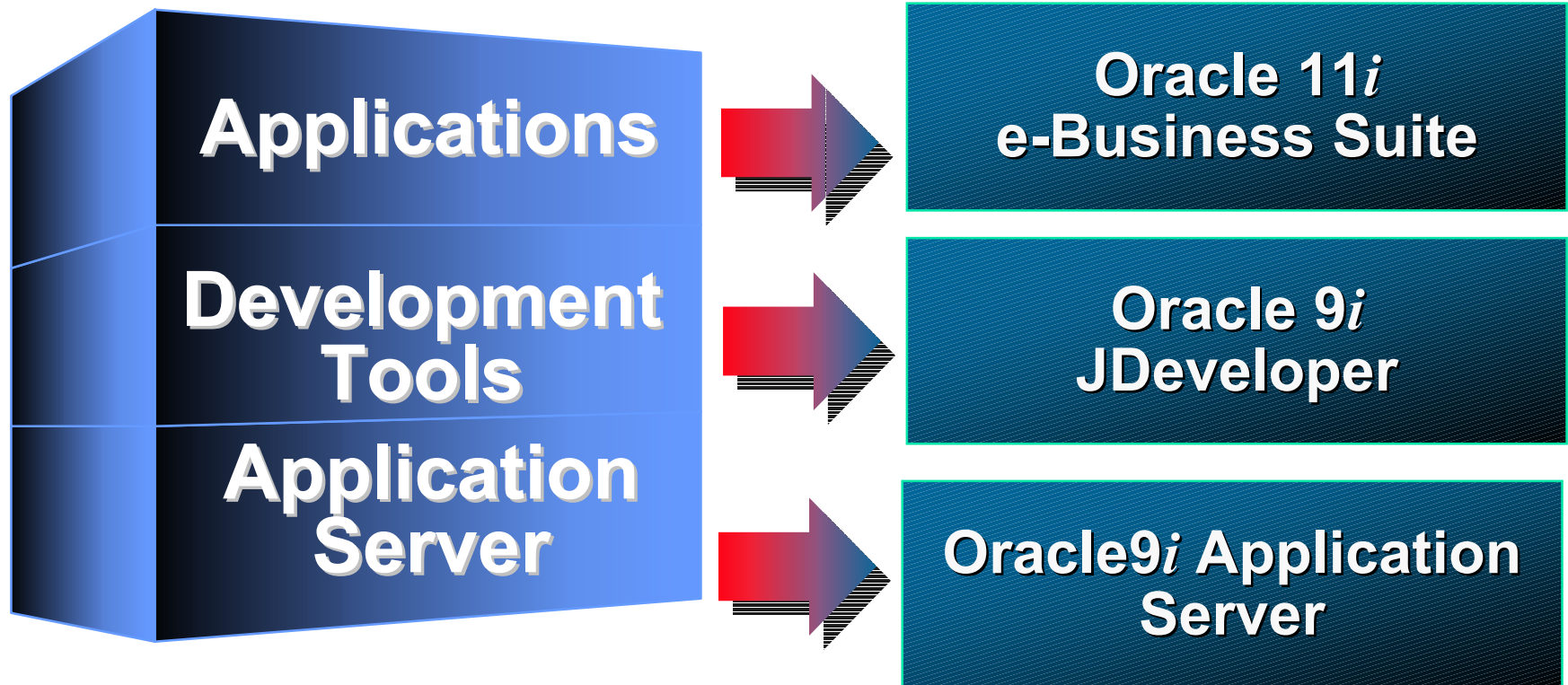
Source: Oracle

E. Oracle9i/XDB - XML Database



Source: Oracle

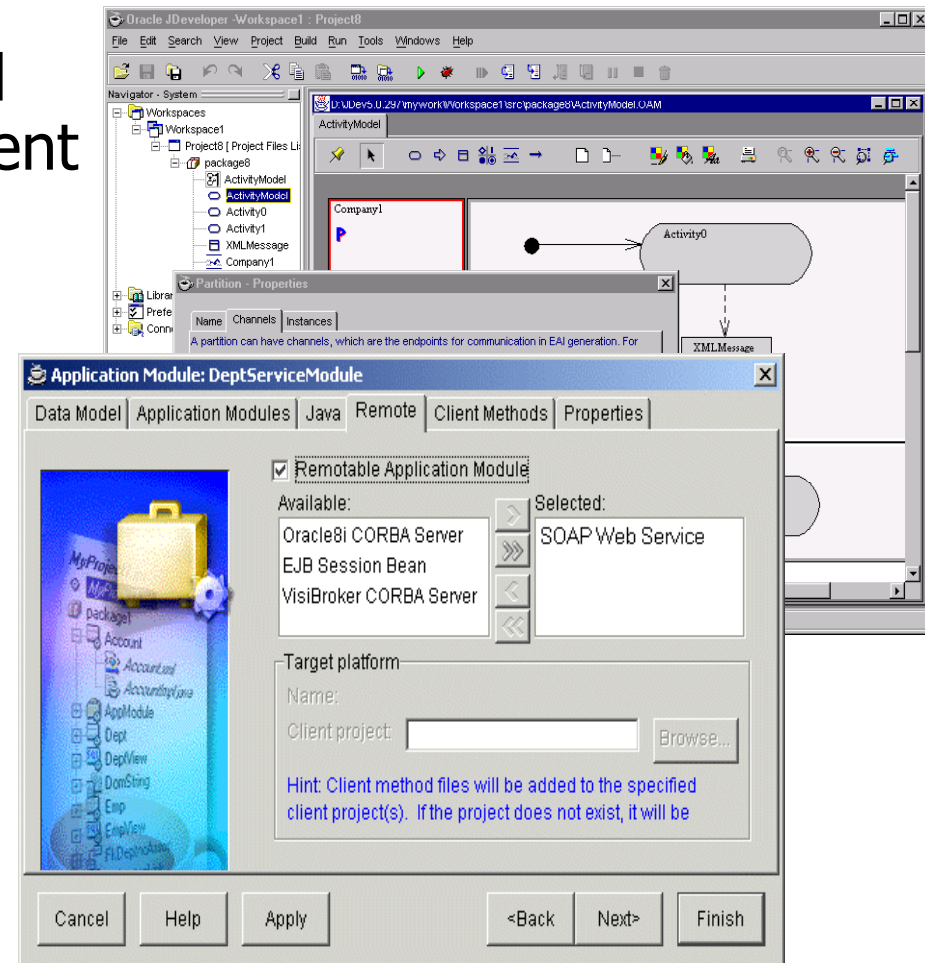
E. Oracle Web Services Strategy



Source: Oracle

E. Oracle JDeveloper Tools for Web Service Design and Development

- Single IDE for J2EE and Web Service Development
 - Search UDDI registry
 - Bind to web services
 - Publish web services
- Service Creation Tools
 - Java → WSDL
 - PL/SQL → WSDL
- SOAP Proxy Generation
- HTML/XML Stream Processing Wizard



Source: Oracle



E. Oracle9iAS UDDI Registry

- Register Businesses and Web Services
- Deploy as private or public registry
- interoperability with private or public registries
- Security and access control

Source: Oracle

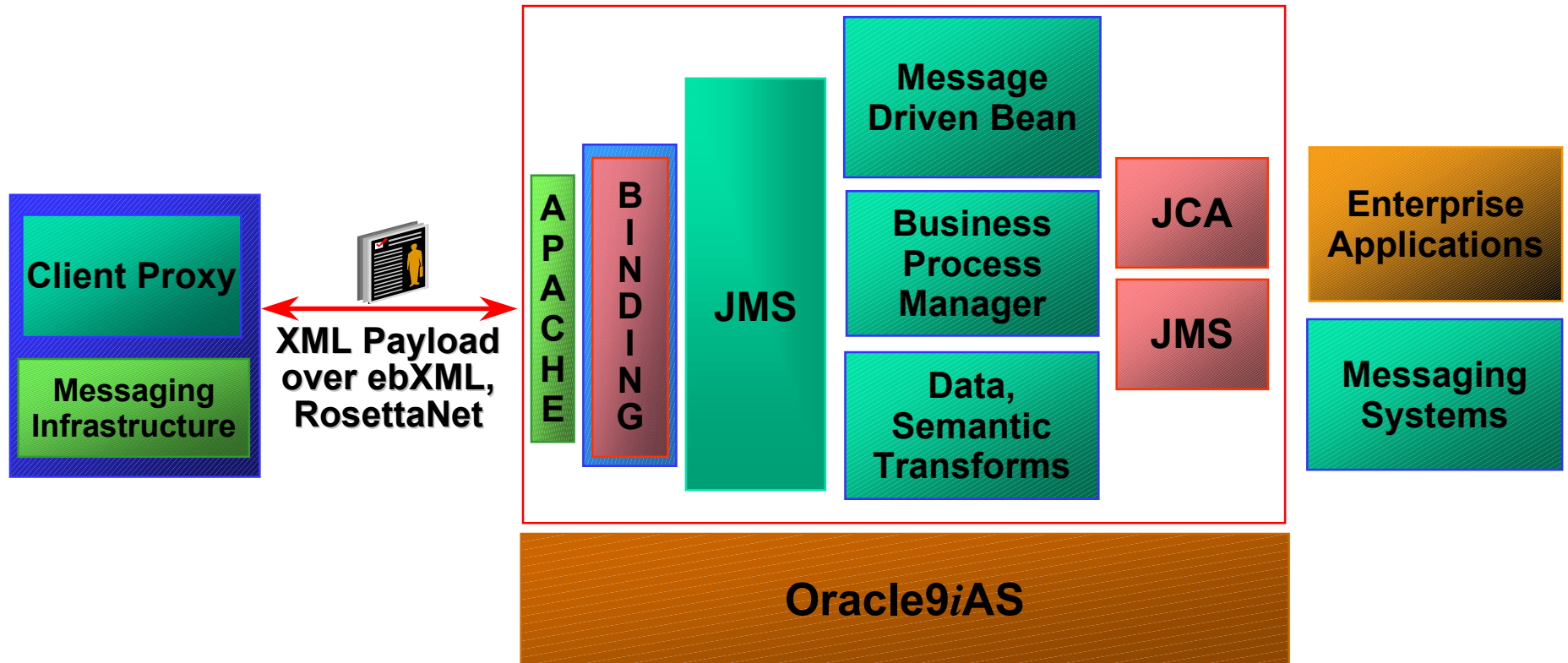


E. Oracle UDDI Support

- White, Yellow, Green Pages
- Inquiry API for Java programmers
 - Search, locate, drill-down
- Publish web services at deployment time
 - Via EM support
 - Categorize using standard taxonomies
- Browse UDDI repository
 - Or any UDDI browser can be used

Source: Oracle

E. Oracle Web Services Integration



Source: Oracle

F. HP Web Services Search Results

The screenshot shows a Microsoft Internet Explorer window displaying the HP Web Services search results page. The browser's address bar shows the URL: <http://search.hp.com/query.html?col=hpcom+ccen&la=en&ref=http%3A%2F%2Fwelcome.hp.com%2Fcountry%2Fus%2Feng%2Fwelcome.html&q=web+services&submit.x=9&submit.y=12>. The page features the HP logo and a navigation bar with links to home, products & services, support, solutions, and how to buy. A search bar is prominently displayed, showing the search term "web services" and a dropdown menu for "United States". Below the search bar, a list of search results is shown, including links to "Web Services", "Web Services FAQ's", "Welcome to Web Services Developer Resources", "A Brief Introduction to the Web services protocol stack: SOAP, WSDL and UDDI", "HP Web Services Platform: A Comparison with HP E-Speak", "Web Services - What's new", "Web Services Site Map", "Web Services Product Information", "HP Web Services Platform Architecture - An Overview", and "Web services concepts - A Technical Overview". The left sidebar contains a list of favorites, including links to IBM ThinkPad Recommended Sites, Links, Media, and various developerWorks articles.

search hp - search results for 'web services' - Microsoft Internet Explorer

hp UNITED STATES

hp home products & services support solutions how to buy

printable version

search search all of hewlett-packard United States

start a new search
search only within these results

web services

advanced search help

quick tips
plus
minus
quotes

hide summaries sort by date 1-10

Web Services 2001-09-28
<http://h20008.www2.hp.com/> find similar

Web Services FAQ's 2001-10-09
Web Services Frequently Asked Questions
<http://h20008.www2.hp.com/faq/faqs.shtml> find similar

Welcome to Web Services Developer Resources 2001-10-09
Learn about developing web services. You will find software downloads, troubleshooting guides, documentation, free support, webcasts and more to help you with your ...
<http://h20008.www2.hp.com/developers/welcome2.asp> find similar

A Brief Introduction to the Web services protocol stack: SOAP, WSDL and UDDI 2001-09-08
Web Services Protocol Stack
<http://h20008.www2.hp.com/media/protocolstack.pdf> find similar

HP Web Services Platform: A Comparison with HP E-Speak 2001-09-08
Web Services Platform comparison with E-Speak
http://h20008.www2.hp.com/media/espeak_webservices.pdf find similar

Web Services - What's new 2001-10-03
Updates to the web services website within the last 30 days
<http://h20008.www2.hp.com/updates.shtml> find similar

Web Services Site Map 2001-09-12
Web Services site map
<http://h20008.www2.hp.com/map.shtml> find similar

Web Services Product Information 2001-09-09
A summary of the hp web services platform major features.
<http://h20008.www2.hp.com/product/overview.shtml> find similar

HP Web Services Platform Architecture - An Overview 2001-09-08
Architecture
<http://h20008.www2.hp.com/media/architecture.pdf> find similar

Web services concepts - A Technical Overview 2001-09-08

F. Sun Web Services Search Results

The screenshot shows a Microsoft Internet Explorer browser window titled "Sun Microsystems Search - Microsoft Internet Explorer". The address bar displays the URL <http://s2.sun.com/search/sun/?qt=web%20services>. The left sidebar contains a "Favorites" list with various links related to web services, including "IBM ThinkPad Recommended Sites", "Cape Clear Web Services Software using XML, SOAP, J2EE, EJB, JAVA, WSDL, UDDI an...", "Database and Application Development", "developer/Works XML Tip How to use XLink with XML", "developer/Works XML Tip Using XML and XPointer", "developer/Works Web architecture Web Services Description Language (WSDL) 1.0", "developer/Works Web services The Web services insider, Part 2 A summary of the W3C ...", "developer/Works Web services The Web services insider, Part 3 Apache and Microsoft ...", "developer/Works Web services Understanding WSDL in a UDDI registry, Part 1", "developer/Works Web services Understanding WSDL in a UDDI registry, Part 2", "developer/Works Web services Web services insider Part 1 Reflections on SOAP", "developer/Works XML zone The basics of using XML Schema to define elements", "developer/Works XML zone What kind of language is XSLT", "Free AOL & Unlimited Internet", "Microsoft Product Support", "MSN", "Radio Station Guide", "RealPlayer Home Page", "Simple Object Access Protocol (SOAP) 1.1", "SOAP Version 1.2 Part 1 Messaging Framework", "SOAP Version 1.2 Part 2 Adjuncts", "SoapRPC.com Webservices Resources", "UDDI - Universal Description, Discovery and Integration", "UDDI Browser", "Web Events", "Web Service Definition Language (WSDL)", "Web Services Description Language (WSDL)", "Webservices.org", "XML IBM Web Services Toolkit Provides New Support for UDDI, SOAP, and WSDL", "XML Linking Language (XLink) Version 1.0", "XML Schema Part 0 Primer", "XML Schema Part 1 Structures", and "Building with .NET - Microsoft's .NET Vision".

The main content area displays the Sun Microsystems logo and the text "sun.com". Below the logo is a "SELECT A TOPIC" dropdown menu and a "Go" button. The page title is "Home > Search". The search results are displayed as a list of 10 items, sorted by relevance. The first item is "Sun[tm] Open Net Environment" with a description: "The Sun[tm] Open Net Environment (Sun ONE) presents a new generation of software for creating, assembling, and deploying open, smart **Web services** across the Internet. Sun ONE supports a ...". The second item is also "Sun[tm] Open Net Environment" with a description: "The Sun[tm] Open Net Environment (Sun ONE) presents a new generation of software for creating, assembling, and deploying open, smart **Web services** across the Internet. Sun ONE ...". The third item is "Sun[tm] Open Net Environment" with a description: "The Sun[tm] Open Net Environment (Sun ONE) presents a new generation of software for creating, assembling, and deploying open, smart **Web services** across the Internet. Sun ONE supports a ...". The fourth item is "Sun[tm] Open Net Environment" with a description: "The Sun[tm] Open Net Environment (Sun ONE) presents a new generation of software for creating, assembling, and deploying open, smart **Web services** across the Internet. Sun ONE supports a ...". The fifth item is "Sun[tm] Open Net Environment" with a description: "The Sun[tm] Open Net Environment (Sun ONE) presents a new generation of software for creating, assembling, and deploying open, smart **Web services** across the Internet. Sun ONE ...". The sixth item is "Sun[tm] Open Net Environment" with a description: "The Sun[tm] Open Net Environment (Sun ONE) presents a new generation of software for creating, assembling, and deploying open, smart **Web services** across the Internet. Sun ONE supports a ...". The seventh item is "Sun[tm] Open Net Environment" with a description: "The Sun[tm] Open Net Environment (Sun ONE) presents a new generation of software for creating, assembling, and deploying open, smart **Web services** across the Internet. Sun ONE supports a ...". The eighth item is "Sun[tm] Open Net Environment Support & Services" with a description: "The Sun[tm] Open Net Environment (Sun ONE) presents a new generation of software for creating, assembling, and deploying open, smart **Web services** across the Internet. Sun ...". The ninth item is "Sun[tm] Open Net Environment In the News" with a description: "The Sun[tm] Open Net Environment (Sun ONE) presents a new generation of software for creating, assembling, and deploying open, smart **Web services** across the Internet. Sun ONE ...". The tenth item is "Sun Journal - Sun ONE and Web Services: Volume 5, Number 2".

On the right side of the search results, there is a "Search" box with the text "web services" and a "Search" button. Below the search box is a "Help" link. Further down is a section titled "Areas:" with a list of checkboxes: "Sun Microsystems", "Solutions Catalog", "iPlanet", and "Training".



ERP Vendors Web Services Support

- **Oracle 11i e-Business Suite**
 - See Oracle slides
- **SAP Web Services Support:**
 - Java capability to execute concurrently with SAP ABAP programming language
 - Java and ABAP both run in same SAP kernel environment
 - Allows SAP to build Web Services capabilities into its products, so users can switch each between Java, SAP-centric and Web Services applications
- **PeopleSoft Web Services Support:**
 - Initially in PeopleSoft Supply Chain and MarketPlace



Borland, Linux and Business Objects

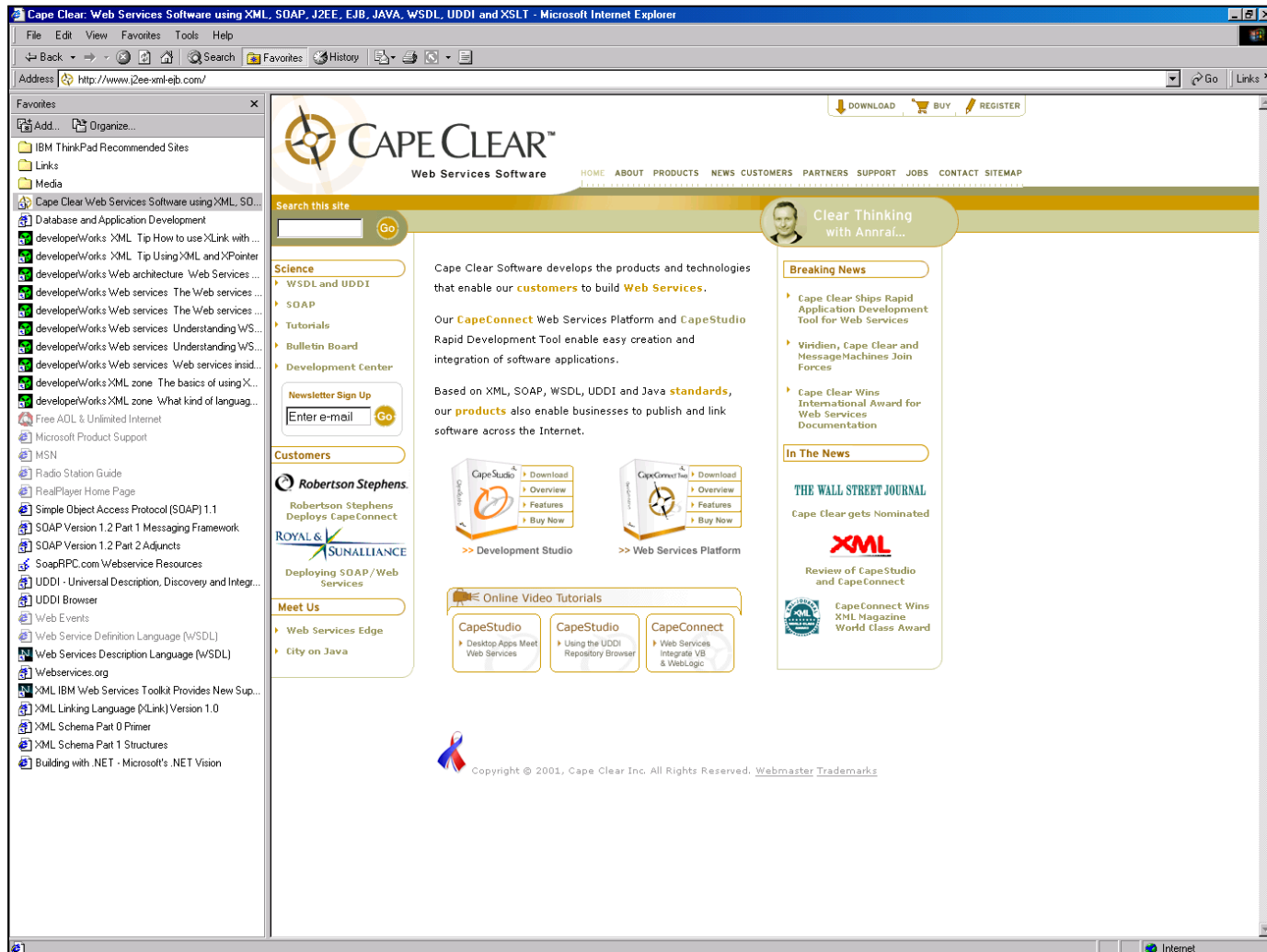
- **Borland JBuilder supports Web Services:**

- Delphi for Windows, Kylix for Linux support Web Services
- Code sharing, object-library and project-file sharing
- BizSnap builds Web Services interfaces into existing apps
- Kylix provides full SOAP, WSDL and UDDI generation

- **BusinessObjects**

- BusinessObjects is an integrated Business Intelligence (BI) toolset and platform
- BusinessObjects Analytics supports enterprise analytic applications
- Business Objects Web Services SDK provides a high-level capability for building BI Web Services.

F. Other Vendors Web Services



Source: Cape Clear <http://www.j2ee-xml-ejb.com/>