

Service Oriented Architecture & Web 2.0

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Agenda

- Service Oriented Architecture
- Web 2.0
- Convergence of SOA & Web 2.0
- Software as a Service
- Web Technologies
- Tools for SOA & Web 2.0

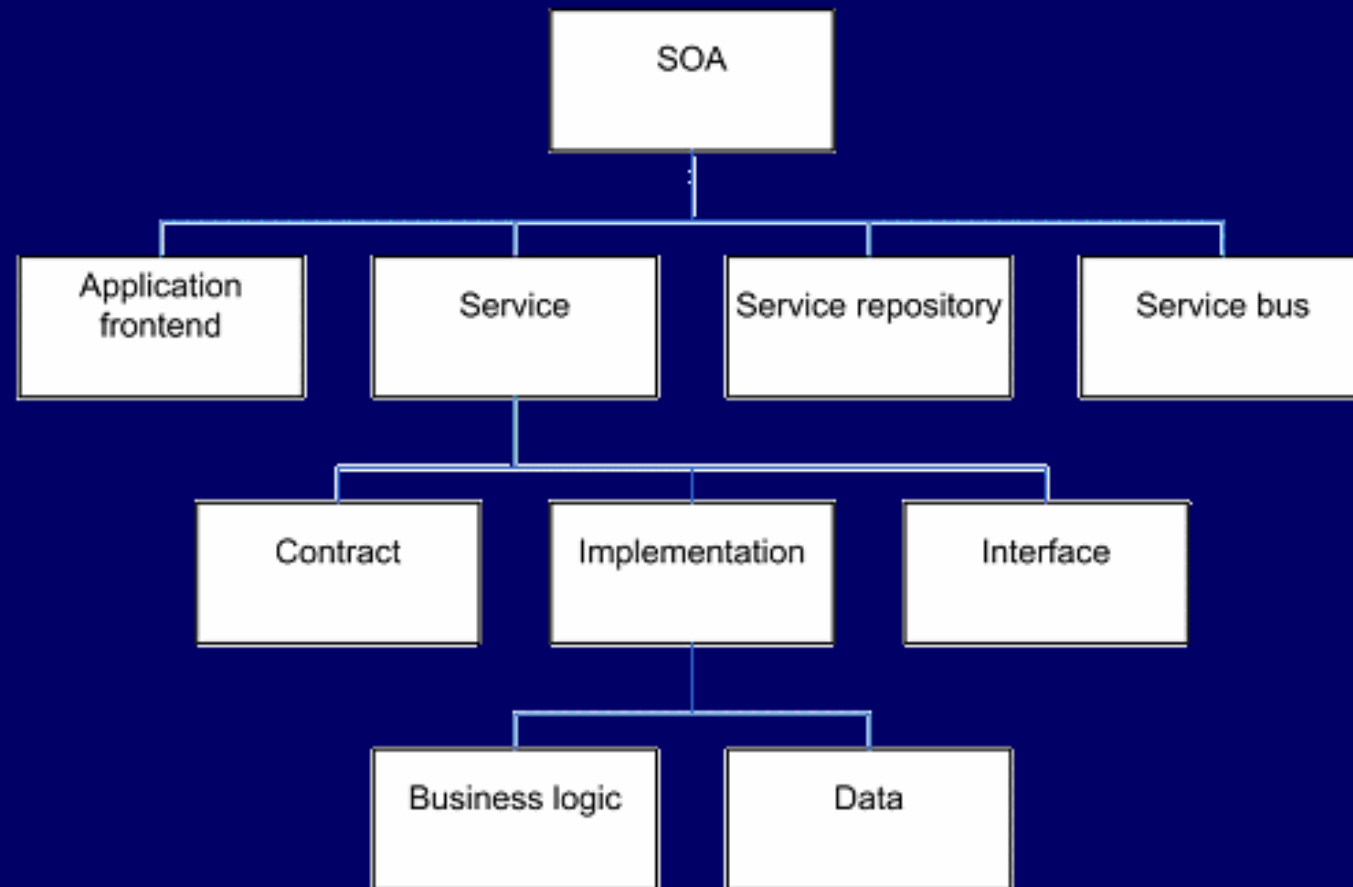


Service Oriented Architecture

- Design framework to integrate siloed applications
- Functionality is accessed as services on a network

“ SOA breaks down monolithic applications into a suite of services, implementing functionality in a modular fashion ”

SOA Elements





Benefits of SOA

- ❑ Enhanced business decision making
- ❑ Greater employee productivity
- ❑ Stronger connections with customers and suppliers
- ❑ More productive, more flexible applications
- ❑ Faster, more cost-effective application development
- ❑ More manageable and secure applications

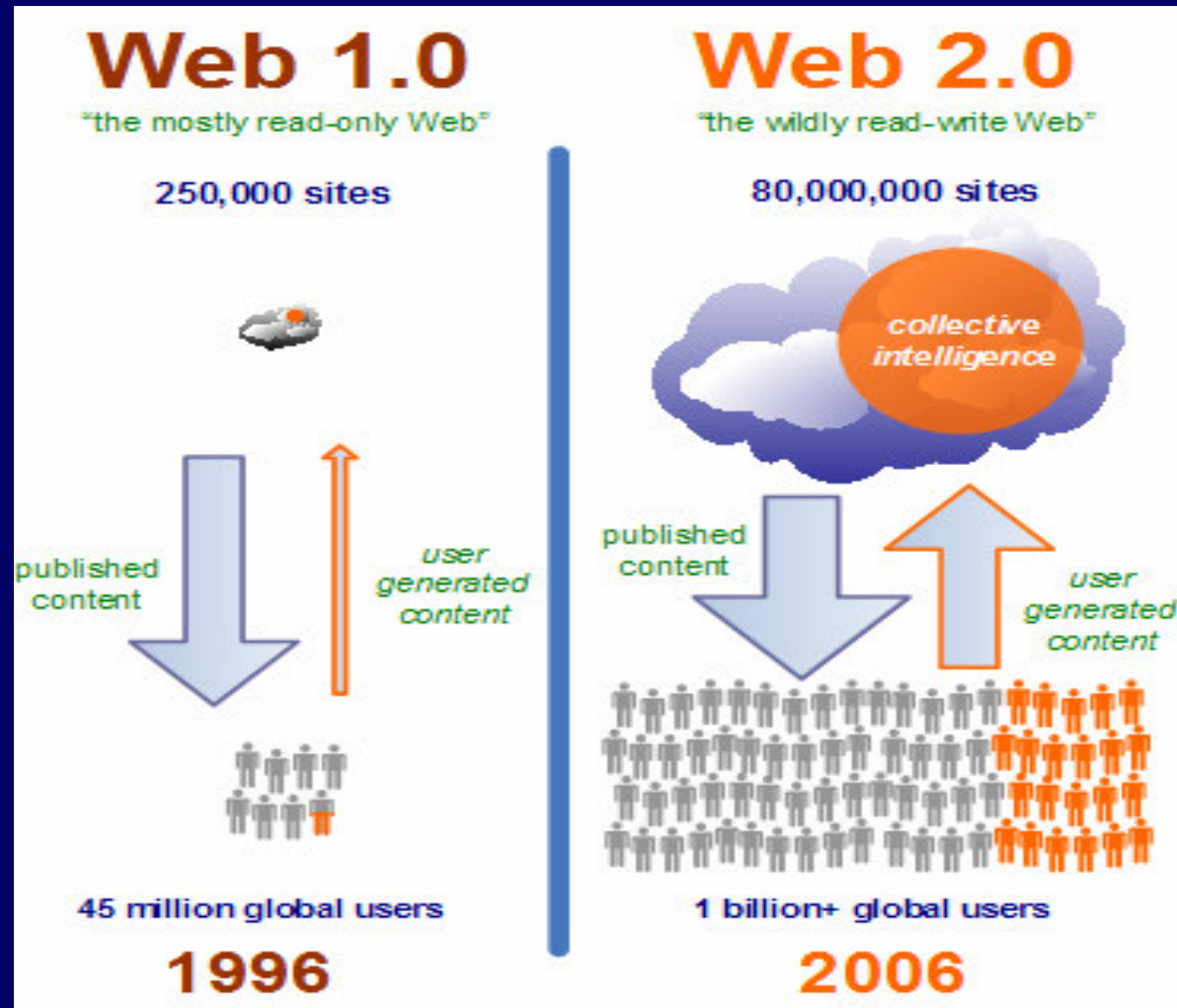


Web 2.0

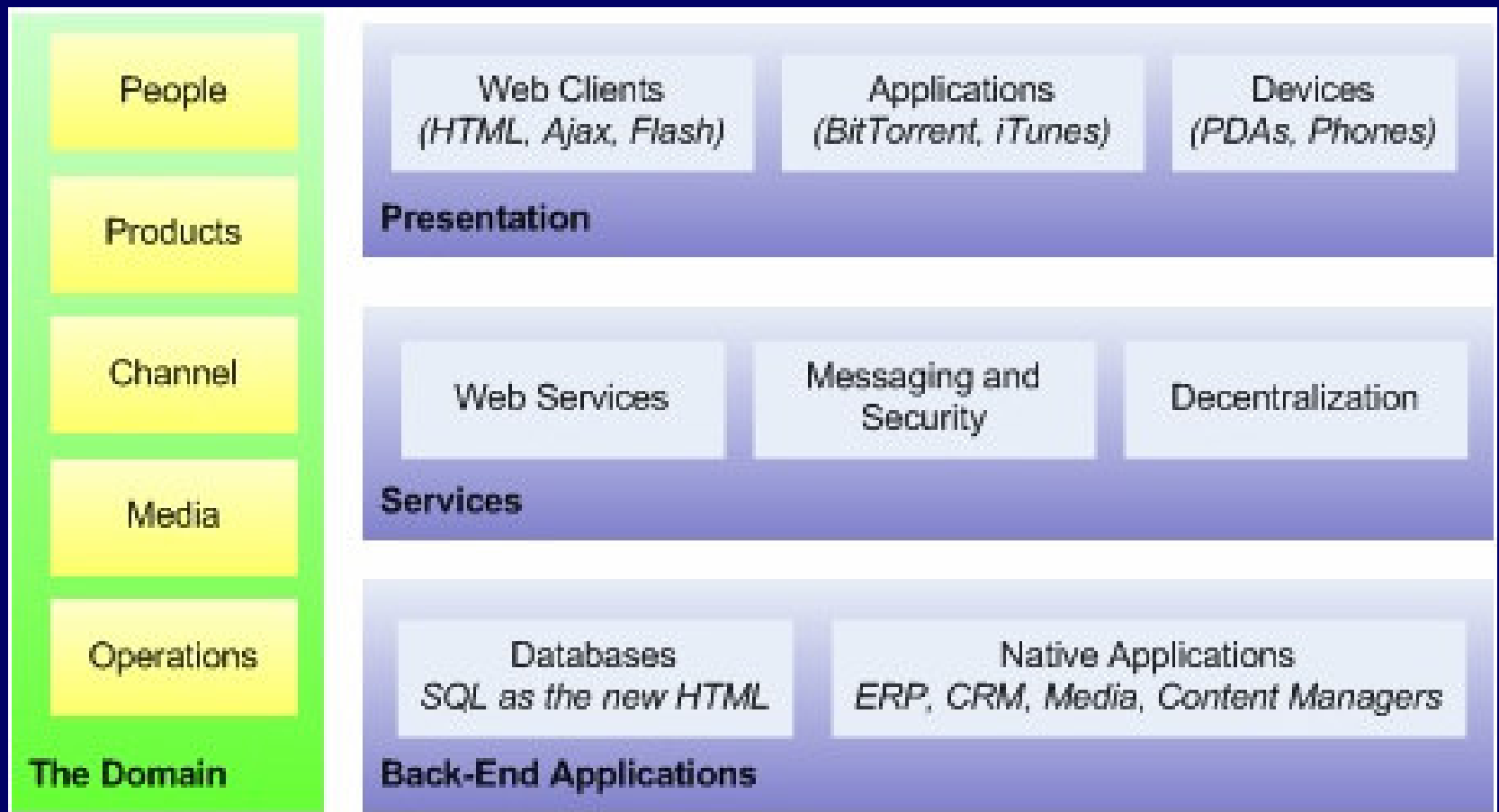
- Term coined by Tim O'Reilly
- Transition of websites from isolated information silos to interlinked computing platforms
- Data as a driving force
- Architecture of participation
- Rich user experience

“ Web 2.0 Is Much More About A Change In People and Society Than Technology ”

Web 1.0 vs. Web 2.0



Convergence of SOA & Web2.0



Convergence Example

Enterprise Mashups in the Web 2.0 Era:

Adding a social and business context to the "Global SOA"



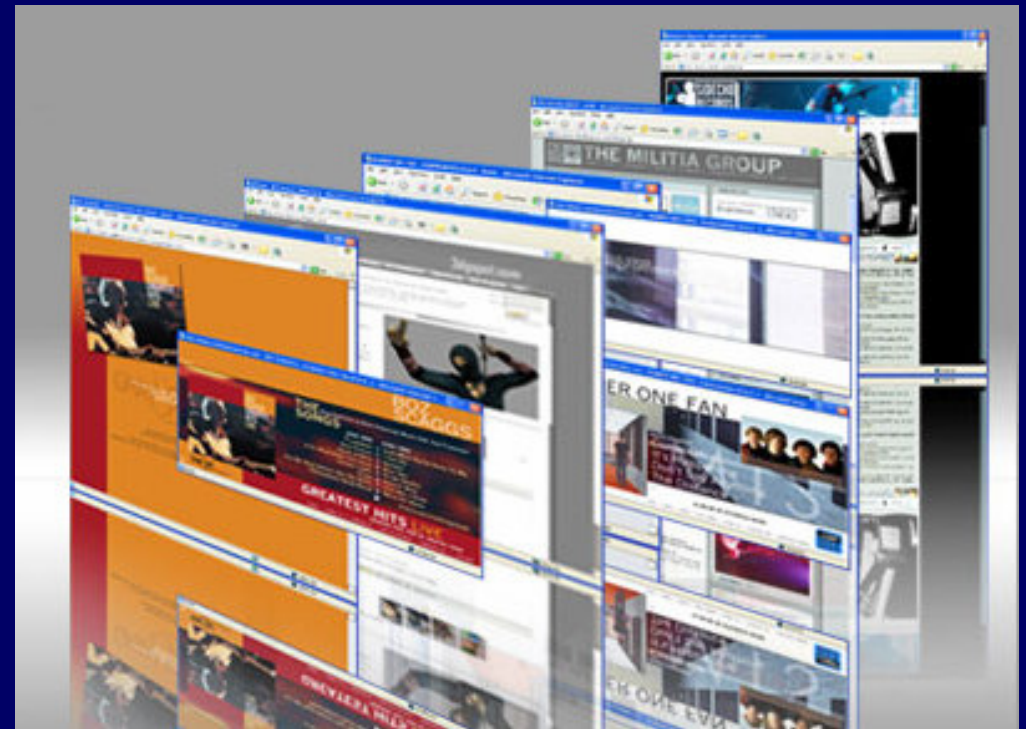


Software as a Service

- ❑ Software deployed as a hosted service and accessed over the Internet
- ❑ Network-based access to commercially available software
- ❑ Leverage the SOA & Web2.0 Technologies
- ❑ Subscription based Software license
- ❑ Examples: Microsoft Office Live System, Google Spreadsheets

Web Technologies

- Client Side
- Server Side
- Web Services
- Mashups





Client Side Technologies

Programs are executed on the client-side by a web browser

- eXtensible HyperText Markup Language (XHTML)
- Cascading Style Sheets (CSS)
- Asynchronous JavaScript and XML (AJAX)
- Virtual Reality Modeling Language (VRML)



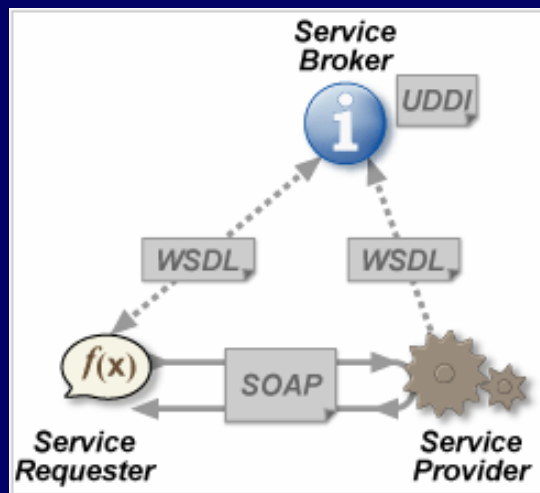
Server Side Technologies

A request is fulfilled by running a script on the web server to generate dynamic pages

- ❑ Active Server Pages .NET (ASP.NET)
- ❑ PHP Hypertext Preprocessor
- ❑ Common Gateway Interface (CGI)
- ❑ Java Server Pages (JSP)

Web Services

- A standardized way of integrating Web-based applications
- Supports interoperable Machine to Machine interaction over a network



- Protocols Used:
 - Simple Object Access Protocol (SOAP)
 - Web Services Description Language (WSDL)
 - Universal Description Discovery and Integration (UDDI)



XML and SOAP: The Language Analogy

- Three Entities

- Russian
- Frenchman
- Spaniard

- How Do They Communicate with Each Other?

- Common Script (Latin Script)

- But this is not enough

- Common Language (English)

- Analogy: XML and SOAP



Mashups

- A web application that combines data from more than one source into an integrated experience
- Data is collected from Web feeds web services and screen scraping
- Common Mashup Genres:
 - Mapping mashups
 - Video and photo mashups
 - Search and Shopping mashups
 - News mashups

Traffic in Seattle: An Example

The screenshot displays the Microsoft Popfly interface. At the top left is the Popfly logo. On the right, it says "Traffic in Seattle" with a user profile for "gsmodi" and a "Sign Out" button. Below the navigation bar, a yellow warning banner reads: "This is a user-created page. Do not enter any personal information or passwords." The main content is a map of the Seattle area with a pop-up window titled "Shoulder closed, on I-5 NB at PACIFIC AVE". The pop-up text states: "ACCIDENT; RIGHT SHOULDER CLOSED; IN THE GORE POINT ; STAY LEFT." The map shows various locations like Everett, Lynnwood, Mountlake Terrace, Bothell, Kirkland, Redmond, and Bellevue. The bottom of the page contains copyright information: "© Microsoft 2007 Privacy Legal Behave Report Abuse Learn more about Popfly".



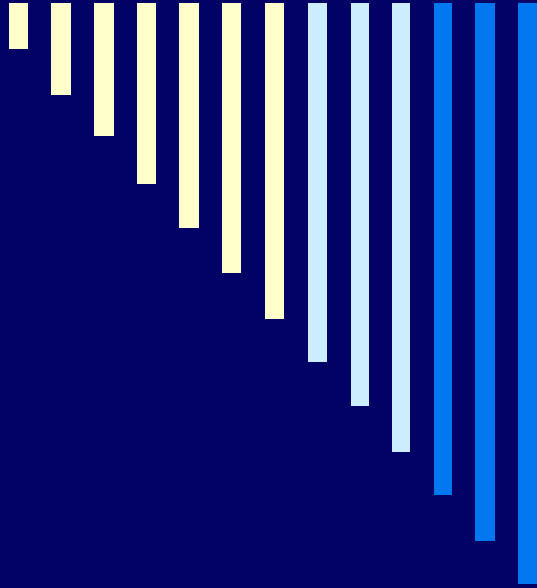
Tools for SOA & Web 2.0

- ❑ Microsoft BizTalk Server
- ❑ Microsoft SharePoint Server
- ❑ Microsoft Visual Studio
- ❑ Microsoft SilverLight
- ❑ ASP.Net AJAX (Atlas)
- ❑ Microsoft Expression Studio
- ❑ Windows Live APIs (Rich Media, Photos, Contacts, Maps, Search, Authentication)

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Thank You !

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