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# What is Web 2.0?

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## Agenda

- **What is Web 2.0?**
  - Examples of Web 2.0 elements
  - Characteristics of things that are Web 2.0
- **Web 2.0 and IBM i**
  - Technologies At Play
  - Consuming Web 2.0 on IBM i
  - Producing Web 2.0 on IBM i

*The New Power Equation*

## Web Feeds - RSS & Atom

### What:

- **R**eally **S**imple **S**yndication
- Atom – revised syndication standard
- Primarily subscription based
- Can carry any media type: text, images, audio, video, etc.

### Why:

- Simple way to syndicate information over the web
- Easy to generate (XML)
- Allows users to subscribe to frequently published content
- Allows machines to communicate with each other



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## Blogs

### What:

- Short for “**Web Log**”
- Personal Publishing System
- User-generated website with journal style entries
- Displayed in a reverse chronological order
- Commentary or news on one or more particular topics

### Why:

- Allow one or more authors to easily post information/articles for others to view
- Receive feedback via comments
- Easily syndicated through feeds
- Facilitate communication to customers



WordPress

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## Micro Blogs

### What:

- Blog with condensed posts
- Twitter: 140 characters or less per post
- Mobile device enabled
- “What’s on your mind?” or “What are you doing now?”
- Thousands of 3<sup>rd</sup> Party apps: [TwitPics.com](http://TwitPics.com)

### Why:

- Share thoughts
- More usable from mobile devices
- Follow interesting/famous people
- Build a following: Politicians, Entertainers, Businesses

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## Wikis

### What:

- From "wiki-wiki," Hawaiian for "quick"
- Collaborative authoring environment
- Non-linear in nature
- “What I Know Is...”

### Why:

- Allows people to easily and collaboratively create, edit, share pages of information
- Leverages the **wisdom of crowds**
- Promotes a sense of community
- Ideal for sharing info within teams that are large, compartmentalized, or geographically dispersed
- Low cost/low effort solution
- All changed content tracked – no information lost



[Wikipedia.com](http://Wikipedia.com)

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# Social Bookmarking and Tagging

## What:

- AKA Folksonomy (vs. Taxonomy)
- Tools to organize information on the Web
- **Social Bookmarking:** Place online to store/share your favourite sites
- **Tags:** User-defined metadata

## Why:

- Users bookmark web sites for other people to find by tagging the site
- Provides vetting of relevant content without reliance on algorithms
- Easily syndicated through feeds



Dogear / Del.icio.us

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# Social Networking

## What:

- Uses existing relationships to connect people online

## Why:

- Maintain a social and/or professional network
- Connect to people through  $n$  degrees of separation
- "... it's who you know."



LinkedIn.com /  
MySpace.com

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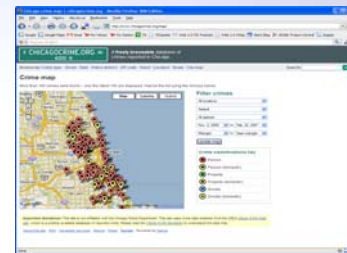
# Mashups

What:

- Mash together existing services into a new service

Why:

- Rapid application development
- Reuse existing services
- Avoid reinventing the wheel
- Example of “Global SOA”

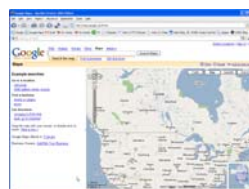


ChicagoCrime.org



Twitter

+



Google Maps

=



TwitterVision

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## What is Web 2.0?

“Web 2.0 is the business revolution in the computer industry caused by the move to the *internet as platform*, and an attempt to understand the rules for success on that new platform. Chief among those rules is this: *Build applications that harness network effects to get better the more people use them.* (This is what I've elsewhere called 'harnessing collective intelligence.')" - Tim O'Reilly



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## What is Web 2.0?

- **Internet as the Platform**
  - Rich Internet Applications (RIA)
    - Easy of use, rich interaction (Desktop-like)
  - Light Web Services
    - Web Feeds, Mashups
- **Applications that get better the more people use them**
  - Folksonomy: Social Bookmarking, Tagging
  - Social Networking: IMs, YouTube, Flickr, MySpace, LinkedIn
  - Collaborative Authoring/Publishing: Wikis, Blogs

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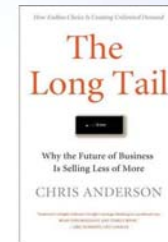
## The Three software patterns driving Web2.0



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## Business Impact – The Long Tail

- The future of business is selling less of more. Infinite choice and lower costs to connect supply and demand is changing the nature of the market and will **transform entire industries**. Growth is in the Long Tail.  
Chris Anderson, "The Long Tail"
- No longer have to target the products which will sell large numbers
- Only way to use the tail is to keep costs low, web provides a platform to do that
- Consumers can get that really bizarre product that they can't get in stores
- Eg. eBay, iTunes



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## Is Web 2.0 Important?

According to Gartner, inc<sup>1</sup>:

- By enabling decentralized innovation, Web 2.0 catalyzes **rapid user/consumer-driven change**, which will **accelerate market share growth** for companies that exploit it
- As the number of participants and types of collaborative models continues to grow, **power will increasingly shift to the consumer**, forcing businesses to proactively market to and analyze community influencers.
- By 2008, the **majority of Global 1000** companies will have adopted several technology-related aspects of Web 2.0
- Missing out on the non-technology aspects of Web 2.0 means that many organizations will also **miss out on some of the positive business benefits**

1. [http://www.topcoder.com/tc?module=Static&d1=pressroom&d2=art\\_051606](http://www.topcoder.com/tc?module=Static&d1=pressroom&d2=art_051606)

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## Is Web 2.0 Important?

*“Blogs.. simply the most explosive outbreak in the information world since the Internet itself.” Business Week, May 2005*

*“Why should you care? Because power is shifting from institutions to communities, your company is at risk”. Forrester, 2006*

*“Enterprises have been ringing our phones off the hook to ask us about Web 2.0,” Rod Smith, IBM VP for emerging IBM technologies*

*“Few enterprises realize how to implement the full range of [web 2.0] capabilities to succeed” Gartner Report*

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## Marketing 2.0

- Using Web 2.0 for Marketing:
  - Online Ads: Google Adwords
  - YouTube promotional video (Viral Marketing)
  - Create a corporate Twitter account
  - Facebook Fan page
  - Team or Executive Blog
    - CEO's who Twitter
  - Online Support: GetSatisfaction.com

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## Consuming and Producing Web 2.0 on IBM i

- **Consuming Web 2.0**
  - Running pre-made Web 2.0 apps on your IBM i
  - Examples: Wikis, Blogs, IM, etc..
- **Producing Web 2.0**
  - Developing Web 2.0 apps that use IBM i resources
  - Tools: JSF Web Tools, PHP IDE, etc..

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## Technologies At Play

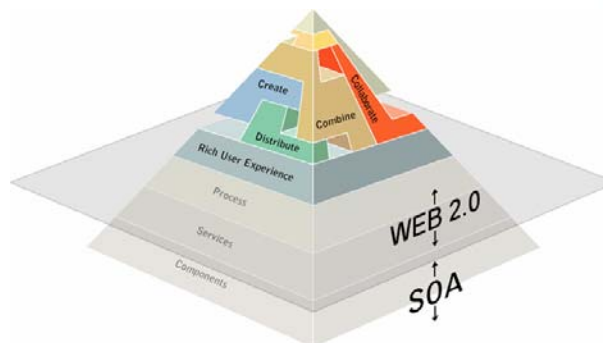
- XML
  - eXtensible Markup Language
  - Use tags to structure content in human readable format
  - Allows sane parsing via numerous open source parsers
    - SAX, Expat, FastXML, libxml, etc...
  - Widely used as container for transporting data over Net

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## Technologies At Play

- Web Services
  - Web APIs that can be accessed over the internet
  - To truly take advantage of the “internet as a platform”, you need to provide your services as internet APIs or Web services
  - Link between Web 2.0 and Service Oriented Architecture (SOA)



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## Technologies At Play

- AJAX
  - Asynchronous JavaScript and XML
    - But you don't need to use XML or run asynchronously
  - Web development technique for creating interactive webpage
  - Uses built in function in JavaScript called XMLHttpRequest
  - Retrieve data and update portions of screen **without page reload**

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## Technologies At Play

- LAMP = Linux, Apache, MySQL and PHP
  - For IBM i use PASE instead of Linux (PAMP)
  - PASE/QShell
    - AIX shell and environment for i5OS
  - Apache
    - Open Source Web Server
  - MySQL
    - Open Source Database
  - PHP
    - Open Source Web Language + Interpreter Runtime

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## Technologies At Play

- PASE
  - AIX runtime environment to allow \*NIX code on IBM i
  - Optional install, likely already installed if using TCP/IP
- Zend Core
  - PHP with Apache solution from Zend for IBM i
  - Installing Zend Core
- MySQL
  - Download and Install MySQL on PASE
  - Configure Zend Core to use instance of MySQL

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## Consuming Open Source Web 2.0

- Wiki - MediaWiki
  - Open source wiki software built with PHP/MySQL
  - Wikipedia runs on MediaWiki
  
- Blog - WordPress
  - Open source blogging engine built with PHP/MySQL
  - WDSC Development Team blog runs on WordPress
    - <http://wdsc.wordpress.com>



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## Consuming Business Ready Web 2.0



- Lotus Sametime 8.0.x
  - Real-time Messaging and Web Conferencing



- Sametime 8.0.x requires Domino 7.0.x or Domino 8 and i5/OS V5R3 or later.
- [What's new in Sametime 8.0](#)

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## Consuming Business Ready Web 2.0

- Lotus Connections 
  - Social Software platform
  - Lotus Connections has five components that work together: Profiles, Communities, Blogs, Dogear and Activities.
  - Initial release only available on Windows/Linux (require IXS/IXA)
- Lotus Quickr 
  - Collaborative Content Platform, follow on to Quickplace
  - Share content, collaborate and work faster online with your teams.
  - Lotus Quickr 8.0 Domino runs on Domino 7 or 8 for IBM i
  - Lotus Quickr 8.1 services for Lotus Domino requires IBM i V5R4 or later and Domino 8.0.1 or 8.0.2.
- Inside and outside the firewall



READY FOR  
BUSINESS



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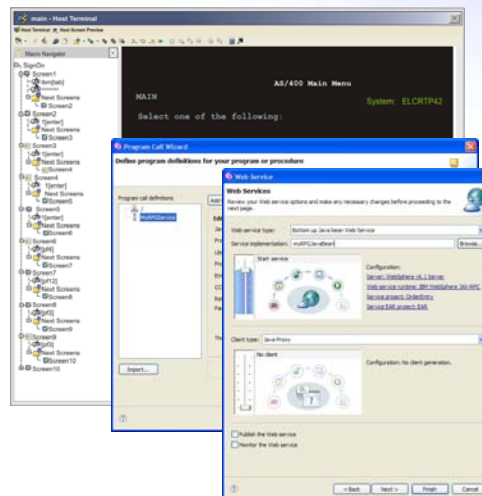
## Producing Web 2.0 for IBM i

- Development Tools for:
  - Web Services for IBM i
  - JSF
  - WebFacing Web Settings
  - PHP
  - AJAX / JavaScript

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## Web Services Tools for IBM i

- Program Call Bean Wizard
  - Produces JavaBean from a IBM i native API (\*PGM/\*SRGPGM)
- HATS Macro Editor
  - Produces JavaBean (Integraton Object) from a 5250 application
- Web Services Wizard
  - Web Service from a JavaBean or,
  - Web Service directly from IBM i program source



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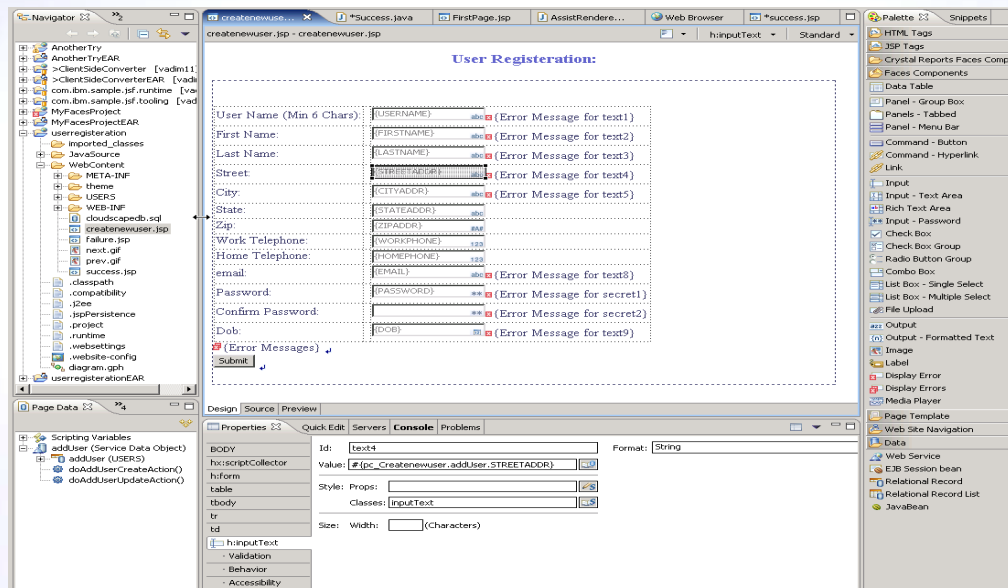
## Producing Web 2.0 for IBM i

- JSF Web Tools
  - Drag and drop web design
  - Rich palette of components
  - Includes JSF Widget Library (JWL)
    - Built in AJAX capabilities
  - Dialog for customizing instances of components
  - Connects UI actions to business logic through Web Service or JavaBean

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# Producing Web 2.0 for IBM i

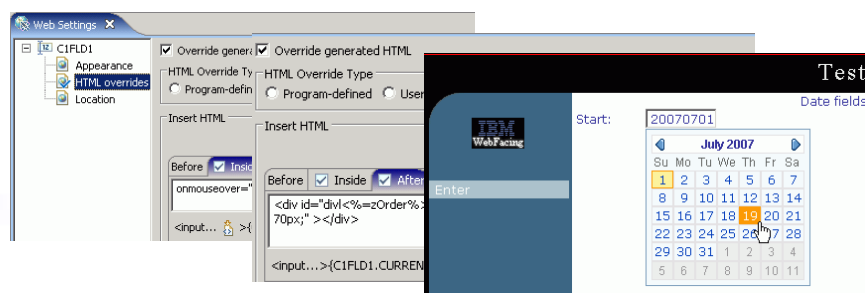
- JSF Web Tools



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# Producing Web 2.0 for IBM i

- Extending WebFacing with Web 2.0 widgets
  - WebFacing allows you to customize pages via Web Settings
  - HTML Override Web Settings can be used to insert custom HTML/JS into your pages
  - Example of how to integrate a calendar widget
    - <http://wdsc.wordpress.com/2007/04/03/hi-and-my-first-post/>



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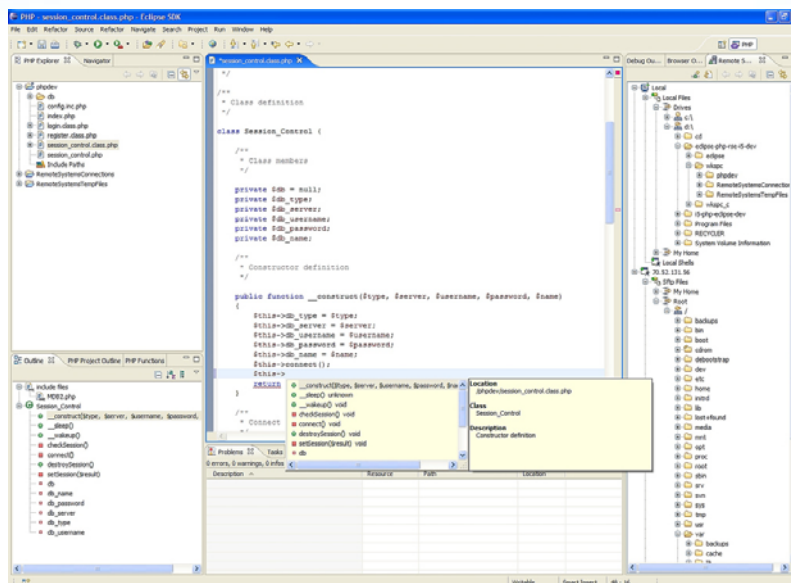
## Producing Web 2.0 for IBM i

- Eclipse PHP IDE
  - IBM and Zend sponsored open source Eclipse project
    - Builds off of the Web Tools Project
  - Currently in active development
    - Project is stable and can be used for development
  - Outline view, debugger, publishing, context assist..

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## Producing Web 2.0 for IBM i

- PHP Tooling – screen shot



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## Producing Web 2.0 for IBM i

- AJAX Toolkit Framework
  - Open source Eclipse project
  - Tools framework for AJAX Toolkits: Dojo, Rico, Zimbra
  - JavaScript Editor
  - Embedded Mozilla Browser
  - Views/Monitors for DOM, CSS, XHR to help debug app
  - JavaScript Debugger and Browser Console view helps with JavaScript debugging

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## Technologies At Play

- RDi SOA - Rich UI
  - Easily develop web-based business applications
  - Develop in RDi SOA using EGL programming language
  - Requires little-to-no prior knowledge of JavaScript
  - Rich UI converts EGL into Web 2.0 application
    - Use the Rich UI widget library or create your own
  - Lots of samples & information at the EGL Cafe
  - Download a free trial from the Cafe

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# Technologies At Play

- RDi SOA - Rich UI

Welcome to the sMash Employee demo with EGL Rich UI front end.

The grid below contains a list of employees served up using REST services written in Groovy and hosted by sMash. You can edit each cell by clicking in it. You can save the changes, create a new employee, or delete the currently selected employee using the buttons that are provided below.

The entire UI is written in EGL Rich UI, and no JavaScript, HTML, or dojo is needed.

Username	First name	Last name	Location	Phone Number
Chris	Chris	Laffra	East	555-3345
Saul	Ben	Margolis	East	555-9932
hdjkhaskjdh	jhadjkashk	dhajkdhaksj	West	555-3321
Terry	Theresa	Ramsey	West	555-3321

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# Producing Web 2.0 for IBM i

- Firebug
  - Open source Firefox plugin
  - Edit, debug, and monitor CSS, HTML, and JavaScript live in any web page
  - <http://www.getfirebug.com/>

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## Web 2.0 for IBM i

- What is Web 2.0?
  - Not just technology
  - Evolution: New attitude, new way of thinking
  - Internet as platform: network effects, wisdom of crowds
- Web 2.0 for IBM i
  - Offers the environment necessary to use and develop Web 2.0 applications

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## What's Next? Web 3.0?

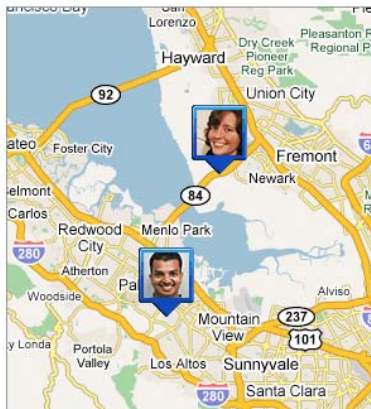
- Web as a Database
- Semantic Web
- Artificial Intelligence
- 3D Web
- Smart Planet



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## Web 2.0? Really?

Google™  
Latitude



My wife is on her way back from work. I'd better start preparing dinner now.

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twitter



startkrplant

Follow

Thank you for watering me!

1:40 AM Jun 27th, 2008 from web

URGENT! Water me!

4:53 PM Jun 26th, 2008 from web

Water me please.

4:52 PM Jun 26th, 2008 from web

Thank you for watering me!

3:35 PM Jun 26th, 2008 from web

URGENT! Water me!

3:34 PM Jun 26th, 2008 from web

## Reference Material

- YouTube: <http://www.youtube.com>
- Web 2.0 ... The Machine Is Us/ing Us, by Michael Wesch, Assistant Professor of Cultural Anthropology, Kansas State University: <http://www.youtube.com/watch?v=6gmP4nk0EOE>
- Wordpress: <http://www.wordpress.org> and <http://www.wordpress.com>
- Wikipedia: <http://www.wikipedia.com>
- Delicious: <http://del.icio.us>
- LinkedIn: <http://www.linkedin.com>
- MySpace: <http://www.myspace.com>
- Chicago Crime: <http://www.chicagocrime.com/maps>
- Twitter: <http://www.twitter.com>
- Google Maps: <http://maps.google.com>
- Twitter Vision: <http://www.twittervision.com>
- What is Web 2.0? by Tim O'Reilly, Sept. 2005: <http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html>
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- Installing Zend Core: <http://www.sematopia.com/?p=146>
- Installing MySQL: <http://devzone.zend.com/node/view/id/609>
- Lotus Sametime for IBM i: <http://www.ibm.com/eserver/series/sametime>
- Lotus Quickplace for IBM i: <http://www-03.ibm.com/servers/eserver/series/quickplace/>
- Lotus Domino for IBM i: <http://www.ibm.com/eserver/series/domino>
- Lotus Connections: <http://www.ibm.com/lotus/connections>
- Lotus Quickr: <http://www.ibm.com/software/sw-lotus/products/product3.nsf/wdocs/quickr>
- WebSphere Development Studio Client for IBM i (WDSC): <http://www.ibm.com/software/awdtools/wdt400/>
- WebFacing Deployment Tools with HATS Technology (WDHT): <http://www-306.ibm.com/software/awdtools/wdht/>
- Firebug: <http://www.getfirebug.com/>
- Second Life: <http://www.secondlife.com>
- WDSC Development Team blog: <http://wdsc.wordpress.com/>

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