

Web 2.0

Do believe the hype

A_XIBASE

TTUC San Francisco, May 8th, 2007

Agenda

- Web 2.0 Definitions
- How much hype is in the Web 2.0
- Impact on Systems Mgmt
- ksh 2.0
- Google Maps + ITM6

Web 2.0

- XMLHttpRequest (XHR)



XMLHTTPRequest Usage

- Asynchronous
- Event driven
- Scripted
- Response from a web server in XML or text
- Error handling facility

XMLHttpRequest Example

```
var request = new XMLHttpRequest();  
request.onreadystatechange = showAlerts;  
request.open("GET", "getAlerts.srv?host=ABC");  
request.send();
```

```
<?xml version="1.0" encoding="UTF-8">  
<response>  
  <alert>  
    <id>1</id>  
    <host>ABC</host>  
    <situation>CPU_Load_Warn</situation>  
    <text>88%</text>  
  </alert>  
</response>
```

Object-oriented Javascript

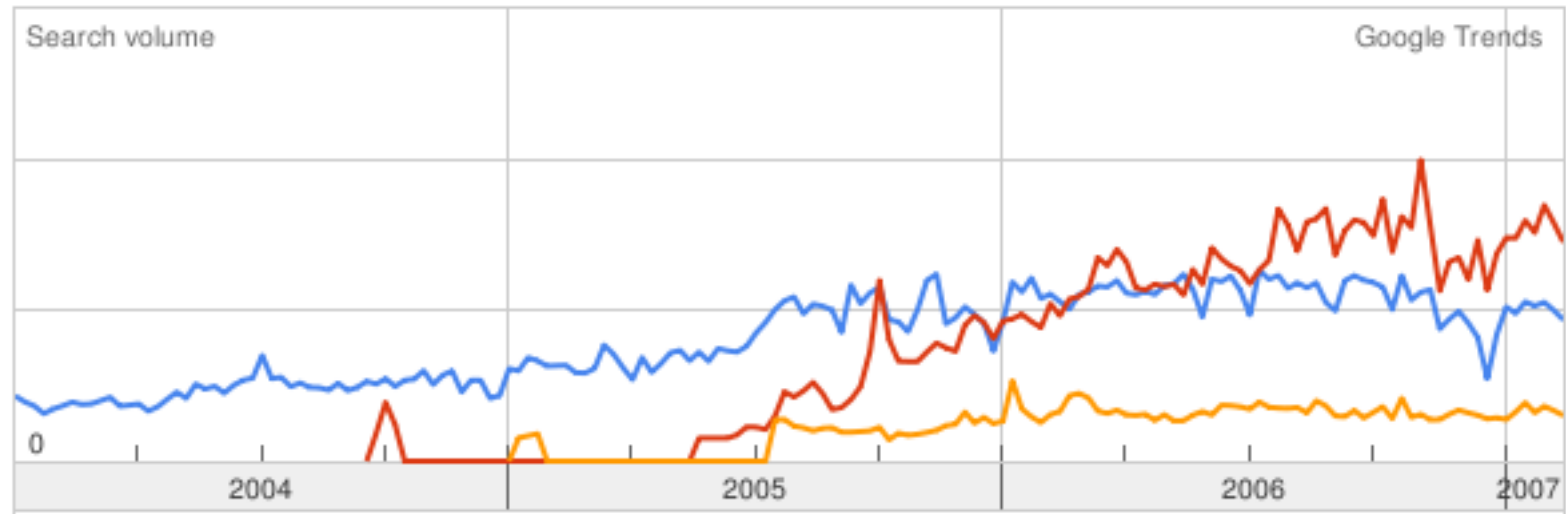
- OOJ replaces procedural, dynamically typed, interpreted Javascript
- Abstraction frameworks (libraries)
- HTTP APIs
- Web client development platform

Standards & Specifications

Specification	Entity	Version	Date	Status
XMLHttpRequest	W3C	1.0	Feb 2007	Draft
XML	W3C	1.0 (4 th ed)	Apr 2006	OK
Window Object	W3C	1.0	Apr 2006	Draft
HTTP	IETF	1.1	Jun 1999	OK
DOM 3 Core	W3C	3.0	Apr 2004	OK
JSON	IETF	1.0	Oct 2006	Draft
DOM 3 Events	W3C	3.0	Apr 2006	Draft

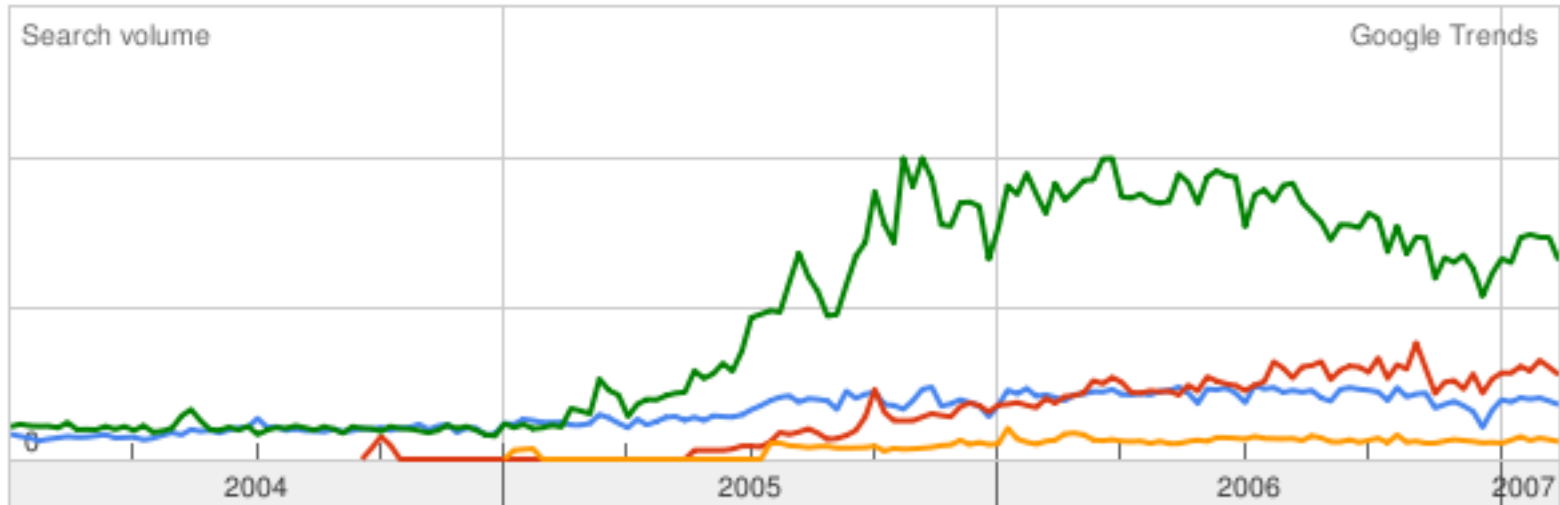
Hype Factor – Trend

● soa ● web 2.0 ● mashup



Hype Factor – with Ajax

● soa ● web 2.0 ● mashup ● ajax

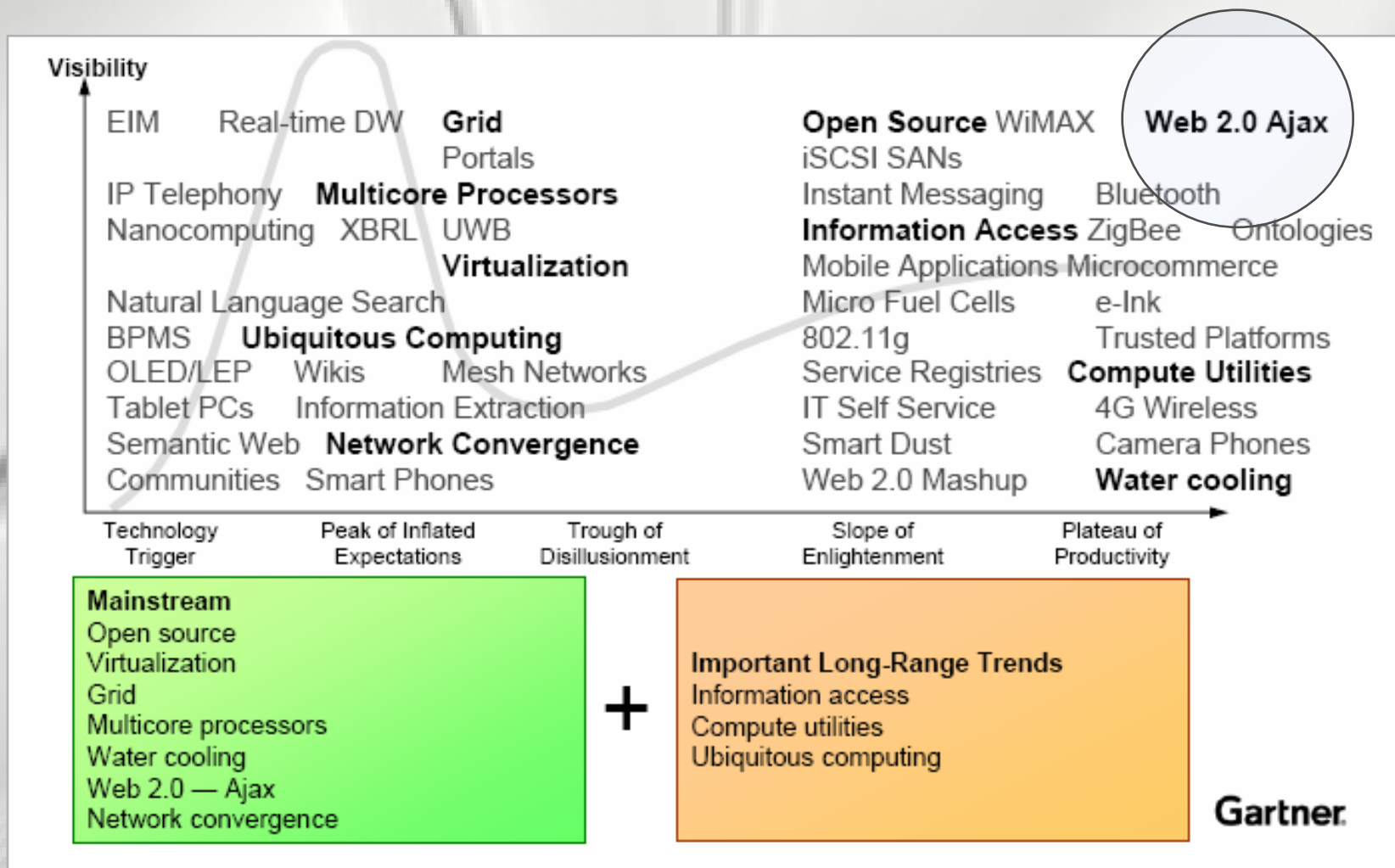


Hype Factor Index

Keyword	AdWords CPC	Top Advertisers
ajax	\$2.00	Microsoft Gartner Adobe
web 2.0	\$4.00	Sun Gartner iwantfood
soa	\$5.50	Webmethods Gartner Microsoft
mashup	\$1.00	Google

WSJ, Jan. 18. 2006, Google average CPC \$0.50

Industry Views



Source: 25th Gartner Datacenter Summit (Nov. 2006)

Analyst Views

- By 2010, at least **60%** of new application development projects will include RIA technology

Source: Infrastructure Futures Report, 25th Gartner Datacenter Summit (Nov. 2006)

- By year-end 2008, more than **90%** of public Web sites that have more than 100,000 visitors per day will use some form of Ajax technology (0.8 probability).

Top 10 Strategic Technologies in 2007, 25th Gartner Datacenter Summit (Nov. 2006)

- By year-end 2008, more than **80%** of new Web applications will rely on client-side JavaScript explicitly through snippets and widgets, or implicitly through declarative XML models (0.7 probability).

Top 10 Strategic Technologies in 2007, 25th Gartner Datacenter Summit (Nov. 2006)

Impact on Systems Mgmt Tools

- Integration at the presentation level using HTTP APIs (portals w/o portal overhead)
- Grids, trees, diagrams, and reports implemented in web browser
- Reusable browser components as a way to deliver customized, role-based interfaces
- Emergence of RIA frameworks – object-oriented Javascript. Abstraction layer

> IBM session on Web 2.0: tomorrow @ 4:30 pm

Web 2.0 in ITM 6.1

- <http://HTEMS:1920///cms/soap/kshhsoap.htm>
- Web client for TEMS SOAP server
- Ajax request/response
- CT_Get (**Get**, Alert, Acknowledge etc.)
- Built-in user authentication with SOAP

Ajax in Action

Enter your SOAP Request here:

Endpoint:

Endpoint:

Interface:

Method:

Payload (XML):

Your Soap Response Payload:

```
<?xml version="1.0" encoding="UTF-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-
ENV="http://schemas.xmlsoap.org/soap/envelope/"
SOAP-
ENV:encodingStyle="http://schemas.xmlsoap.org/soap/en
coding/"> <SOAP-ENV:Body><SOAP-CHK:Success
xmlns:SOAP-CHK = "http://soaptest1/soaptest/"
xmlns="urn:candle-soap:attributes"><TABLE
name="O4SRV.INODESTS">
<OBJECT>ManagedSystem</OBJECT>
<DATA>
<NAME>
<Timestamp>1070430190233000</Timestamp>
<Name>#192.168.0.112:LZ</Name>
<Managing_System>HUB_AXIDELL</Managing_System>
<ORIGINNODE>#192.168.0.112:LZ</ORIGINNODE>
<Reason>FA</Reason>
<Status>*OFFLINE</Status>
<Product>LZ</Product>
<Version>06.10.03</Version>
<Type>V</Type>
<HLOCFLAG>L</HLOCFLAG>
```

Request

onClick

Response

ksh 2.0

- FF/Opera, SOAP wrapper

KSH 2.0

Hub TEMS

User Name

Password

Table

Query

Response

```
<VERSION>06.10.00</VERSION>
<HOSTINFO></HOSTINFO>
<HOSTADDR><![CDATA[<IP.PIPE>#192.168.127.136[1918]</IP.PIPE>]]></HOSTADDR>
<NODETYPE></NODETYPE>
<GBLTMSTMP>1070513113019000</GBLTMSTMP>
<AFFINITIES>0000000080000000000000000000000000000000000068f0</AFFINITIES>
</ROW>
</DATA>
</TABLE>
</SOAP-CHK:Success></SOAP-ENV:Body></SOAP-ENV:Envelope>
```

Returned XML is valid

ksh 2.0 -> agent grid

- SOAP -> managed systems list

KSH 2.0

Hub TEMS:

User Name:

Password:

Table:

Query:

Agent	IP	Tems	Online ▲	Type	Version	OS	Time
Primary:AXIDELL:NT	192.168.0.108	HUB_AXICOREVM3	No	Windows	06.10.04	Win2003~5.2-SP1	13-May-07 10:33
axicorevm3ASFSDp:UAGENT00		AXICOREVM3:UA	Yes	UA	06.00.00		13-May-07 10:41
Primary:AXICORE:NT	192.168.127.1	HUB_AXICOREVM3	Yes	Windows	06.10.00	WinXP~5.1-SP2	13-May-07 11:30
AXICOREVM3:UA	192.168.127.136	HUB_AXICOREVM3	Yes	UM	06.10.00	Win2003~5.2-SP1	13-May-07 11:31
AXICOREVM3:SY	192.168.127.136	HUB_AXICOREVM3	Yes	SPA	06.10.00	Win2003~5.2-SP1	13-May-07 11:31
AXICOREVM3:Warehouse	192.168.127.136	HUB_AXICOREVM3	Yes	WPA	06.10.00	Win2003~5.2-SP1	13-May-07 11:32
Primary:AXICOREVM3:NT	192.168.127.136	HUB_AXICOREVM3	Yes	Windows	06.10.00	Win2003~5.2-SP1	13-May-07 11:33
HUB_AXICOREVM3	192.168.127.136	HUB_AXICOREVM3	Yes	Tems	06.10.00		13-May-07 11:33

ksh 2.0 – alert grid

- SOAP -> open situation event list

KSH 2.0

Hub TEMS

User Name

Password

Table

Query

Situation ^	Display Item	Agent	Status	Time
NT_Log_Space_Low	System	Primary:AXICORE:NT	Y	13-May-07 10:51
NT_Log_Space_Low	Security	Primary:AXICORE:NT	Y	13-May-07 10:51
NT_Log_Space_Low	Application	Primary:AXICORE:NT	Y	13-May-07 10:51

Other Use Cases

- MSL tree
- Logical view tree
- Agent attributes
- Web-based workspace
- Integration across Tivoli tools

Mashup

- Composite web application
- Multiple sources
- Decoupled data and presentation models
- HTTP API integration

Axibase Fabrica Maps Demo

Markers:

- [1] AXICOREVM3
- [2] AXIVM2
- [3] 333 O'Farrell St, San Francisco,

Sources:

- AXICOREVM3
- AXIVM2

Overview

Property	Value
ID	2
Name	AXIVM2
Severity	Critical
Host IP	192.168.0.105
Host Name	AXIVM2
Managing Node	HUB_AXICOREVM3
Node	Primary:AXIVM2.NT
OS Name	Win2003
OS Patch Level	SP2
OS Version	5.2
Origin Node	Primary:AXIVM2.NT
Product	NT
Version	06.10.00

Sev.	Time Open	Host	Agent	Situation Name	Display Item	Text
🔍	16-May-07 11:44	AXICOREVM3	Primary:AXICOREVM3.NT	NT_System_CPU_Warning		Operating System Version = 5.2, % Processor Time = 1; % Processor Time = 1; Processor = 0
🔍	16-May-07 11:26	AXIVM2	Primary:AXIVM2.NT	NT_System_CPU_Warning		Operating System Version = 5.2, % Processor Time = 1; % Processor Time = 1; Processor = 0
🔍	16-May-07 11:25	AXIVM2	Primary:AXIVM2.NT	NumProc		Processes = 35

Mapping Services

- Service providers: Microsoft/Virtual Earth, Google/Maps, Yahoo, Decarta
- SaaS/priced by transaction
- Transaction is load, drag, zoom, route request
- Starts at \$10K/year
- Imagery supplied by TeleAtlas and NAVTEQ
- Feature wars: VE “oblique” images, Google Street Views

Challenges

- API stability
- Cost
- Difficult to estimate usage/transaction volumes
- Networking issues
- Security (user vs. user-agent activity)

Conclusion

- Web 2.0 is here (if you focus on XHR)
- New capabilities:
 - Visualization
 - Integration at the interface level
- New challenges:
 - Increased dependency of information workers on third-party applications