Turn your Web Application into an OpenSocial container: Introducing Project SocialSite

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Understand the importance of Social Networking features in Web applications.

Learn about the new OpenSocial standard for plugging into Social Networks.

See how Project SocialSite's Web Services and Widgets make it easy to make your Web Applications social.

Agenda

> **Social Software / Web history lesson**
> **Introducing OpenSocial**
> **Apache Shindig: the OpenSocial RI**
> **Options for making your sites social**
> **Introducing Project SocialSite**
> **Conclusion and Q&A**

| TMI? | Extra details that I'll gloss over if time is limited |

Web history lesson

> **Nowadays...**
> - Every web site seems to include blogs, wikis, feeds and friends
> - Nearly 100% of college freshmen are on Facebook
> - IT departments are busy building internal Social Networks
> - Enterprise software vendors are backing OpenSocial
> - Social Media campaigns are the order of the day for PR folks
> - Enterprise Portals are incorporating Social Networking features
> - All software is going social...

> **How did we get here?**

The static Web

> ### *It's hard to publish anything on the Web*
> - Have to Install a web server, upload via FTP, manage files, etc.
> - Write HTML code by hand or with expensive tool
>
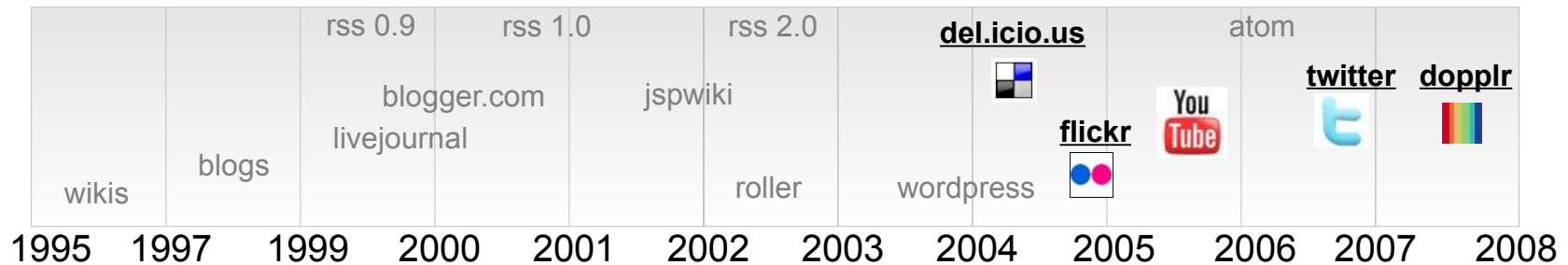> Lots of brochure-style Web sites. Not social.

| 1995 | 1997 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
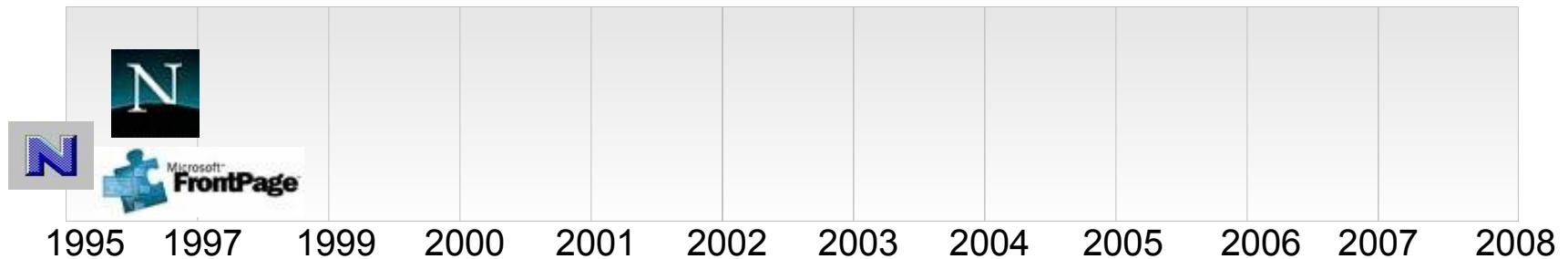
Blogs, wikis and feeds

> ## *It's easy for anybody to publish on the web*
> - Blogs for personal journals, news sites and conversations
> - Wikis for document centered collaboration
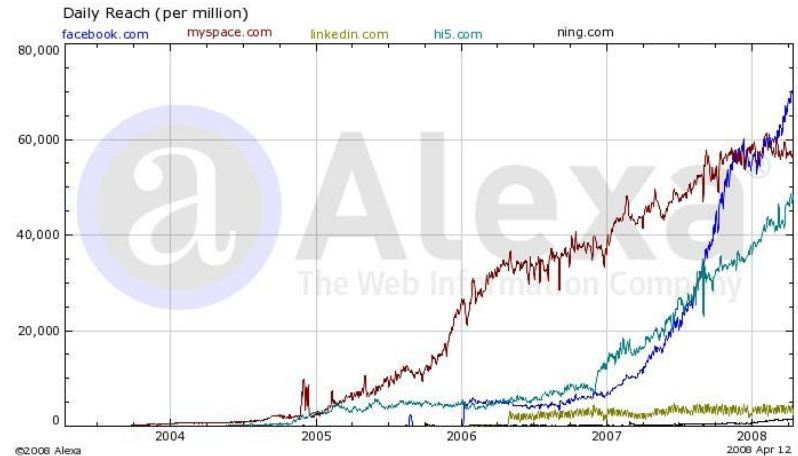> - With feeds and RESTful feed-based APIs

rss 0.9   rss 1.0   rss 2.0

blogger.com   jspwiki   wordpress   atom

wikis   blogs

livejournal   Roller

1995   1997   1999   2000   2001   2002   2003   2004   2005   2006   2007   2008

The social Web

> ### *It's easy for anybody to share with friends*
>   • Links, News, Videos, Photos, Status, Travel Plans, Purchases...
> With privacy controls based on friends, family, groups
> With feeds and RESTful feed-based APIs

1995	1997	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008

rss 0.9   rss 1.0   rss 2.0   **del.icio.us**   atom

blogger.com   jspwiki   **twitter**   **dopplr**

livejournal   **flickr**   You Tube

blogs   wikis   roller   wordpress

Social Network services take hold

> **Eventually, MySpace and Facebook explode in popularity**
>
> - Start with younger audience, expand to older users & businesses

Daily Reach (per million)

facebook.com   myspace.com   linkedin.com   hi5.com   ning.com

80,000

60,000

40,000

20,000

0

2004   2005   2006   2007   2008

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		rss 0.9	rss 1.0		rss 2.0		**facebook**	atom		
		blogger.com		jspwiki			fb🏠			
		livejournal			**friendster**	**myspace**		flickr	youtube	
wikis	blogs				😊	📇				
1995	1997	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008

Facebook changes the game

> Launches an API, becomes an application platform

> Allows 3rd party applications to:
  - Plugin to Facebook UI, appear in sidebar or full-page
  - Access Social Graph data: friends, activities feed, etc.

Facebook launches API and FBML

		rss 0.9	rss 1.0		rss 2.0		facebook	atom		
				jspwiki		del.icio.us			**fbml**	
		blogger.com					myspace			
		livejournal			friendster		flickr	youtube		dopplr
wikis	blogs				roller	wordpress			twitter	

| 1995 | 1997 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |

OpenSocial arrives

> Google's answer to Facebook API
- A standard API for interacting with Social Networks

> Supported by everybody
- But not Facebook (yet)

Google
launches
OpenSocial

opensocial

1995	1997	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
		rss 0.9		rss 1.0		rss 2.0		facebook		atom	
							del.icio.us				dopplr
		blogger.com		jspwiki			myspace			twitter	
		livejournal				friendster	flickr		youtube		
	blogs										fbml
wikis						roller	wordpress				

So just what is a Social Network service?

> System that allows users to share personal information, activities and applications with friends and members of the same social groups.

> May also include integrated applications such as Blogs, Guestbooks, Forums, Photo Galleries, Chat, etc.

> For finding friends, sharing information, getting a date, making business connections, collaborating on projects, etc.

Social Network as platform

> Instead of trying to build all the applications that users will ever need, Social Network sites allow 3rd party developers to provide those applications.

> To do this Social Networks provide APIs that allow:
> - Plugging into Social Network UI
> - Accessing Social Graph data

Social networking goes to work

> Social Graph of rich personal profile information, relationships, memberships and activities enables better:
  - Personalization
  - Sharing with flexible privacy controls
  - Collaboration and groups

> IT departments are deploying Social Networking technologies
> IBM, Oracle, SalesForce, BEA, etc. are working on products

> Someday...
  - All software will be social?
  - Convergence of Social Graph and Identity Management?

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What is OpenSocial?

> A specification

> Defines how applications can:
  - Plugin to Social Network services
  - via Web UI and RESTful Web services

What does OpenSocial specify?

> ## A JavaScript API

- Provides client-side access to People, Activities and Persistence
- Enables embedding applications in a Social Network service's UI
- Built on top of Google Gadget technology

> ## And a REST API

- Provides server-side access to People, Activities and Persistence
- Based on Atom Publishing Protocol
  - But with option to use JSON representation instead of Atom format XML

OpenSocial architecture example
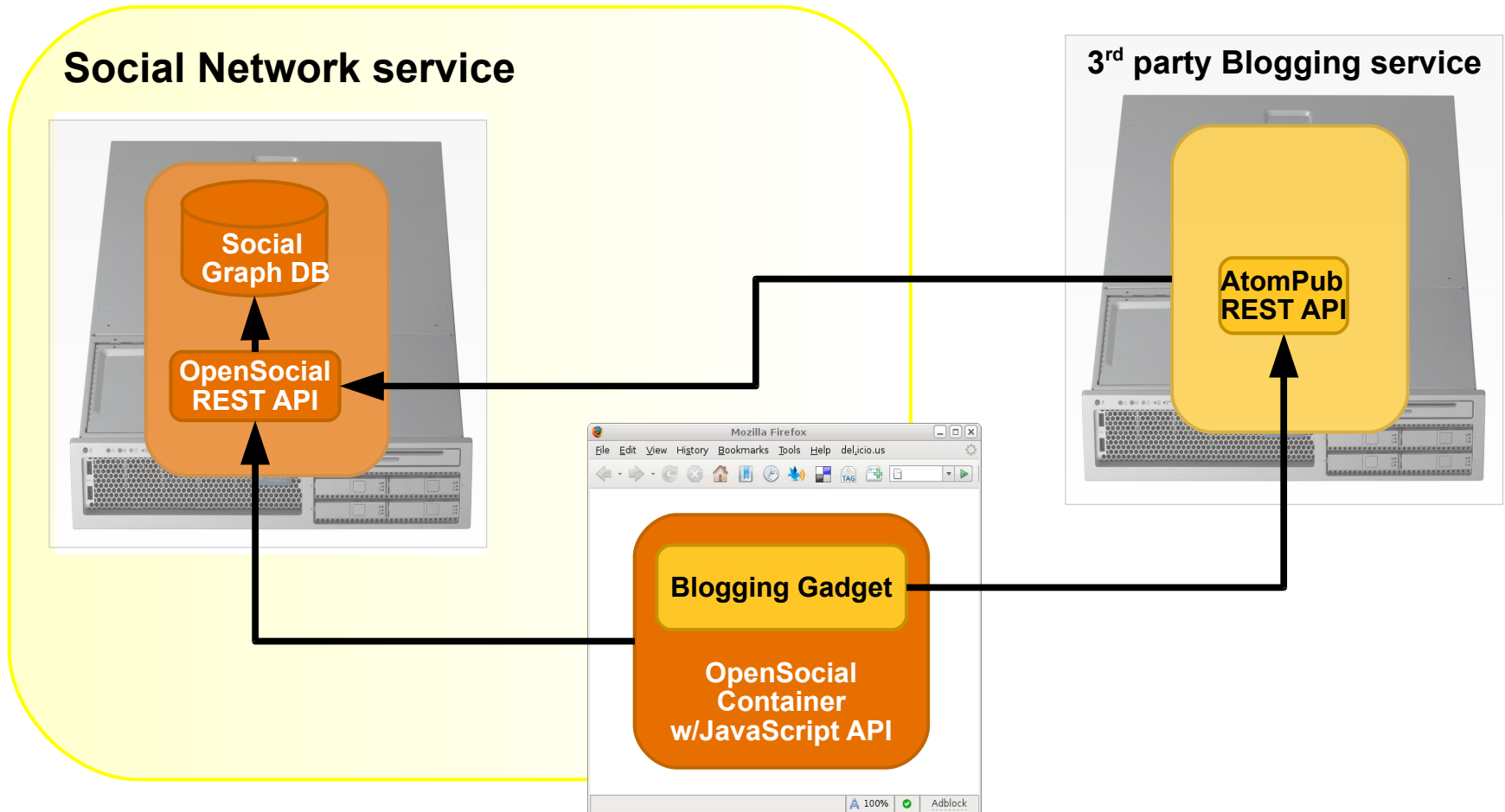
The OpenSocial JavaScript API

> JavaScript API implemented as Google Gadget Feature

> People
- With > 50 personal profile properties
- Read only collection: applications can't add or change people

> Activities
- Activity has title, body text, link and media files
- Applications can create activities

> Persistence
- So applications can store data and configuration data

The OpenSocial REST API

> Provides access to same data as JavaScript API
  - People
  - Activities
  - Persistence

> Based on Atom Publishing Protocol
  - But allows use of either JSON or Atom format XML

OpenSocial Person model

TMI?

Organization
ADDRESS
DESCRIPTION
END_DATE
FIELD
NAME
SALARY
START_DATE
SUB_FIELD
TITLE
WEBPAGE

Person
ABOUT_ME
ACTIVITIES
ADDRESSES
AGE
BODY_TYPE
BOOKS
CARS
CHILDREN
CURRENT_LOCATION
DATE_OF_BIRTH
DRINKER
EMAILS
ETHNICITY
FASHION
FOOD
GENDER
HAPPIEST_WHEN
HEROS
HUMOR
ID
INTERESTS
JOB_INTERESTS
JOBS
LANGUAGES_SPOKEN
LIVING_ARRANGEMENT

LOOKING_FOR
MOVIES
MUSIC
NAME
NICKNAME
PETS
PHONE_NUMBERS
POLITICAL_VIEWS
PROFILE_SONG
PROFILE_URL
PROFILE_VIDEO
QUOTES
RELATIONSHIP_STATUS
RELIGION
ROMANCE
SCARED_OF
SCHOOLS
SEXUAL_ORIENTATION
SMOKER
SPORTS
STATUS
TAGS
THUMBNAIL_URL
TIME_ZONE
TURN_OFFS
TURN_ONS
TV_SHOWS
URLS

1 **Name**
ADDITIONAL_NAME
FAMILY_NAME
GIVEN_NAME
HONORIFIC_PREFIX
UNSTRUCTURED

1 **BodyType**
BUILD
EYE_COLOR
HAIR_COLOR
HEIGHT
WEIGHT

URL *
ADDRESS
LINK_TYPE
TYPE

Email *
ADDRESS
TYPE

Phone *
NUMBER
TYPE

Address
COUNTRY
EXTENDED_ADDRESS
LATITUDE
LOCALITY
PO_BOX
POSTAL_ZODE
REGION
STREET_ADDRESS
TYPE
UNSTRUCTURE_ADDRESS

*

OpenSocial Activity model

TMI?

Activity
APP_ID
BODY
BODY_ID
EXTERNAL_ID
ID
MEDIA_ITEMS
POSTED_TIME
PRIORITY
STREAM_FAVICON_URL
STREAM_SOURCE_URL
STREAM_TITLE
TEMPLATE_PARAMS
TITLE
TITLE_ID
URL
USER_ID

*

MediaItem
TYPE
MIME_TYPE
URL
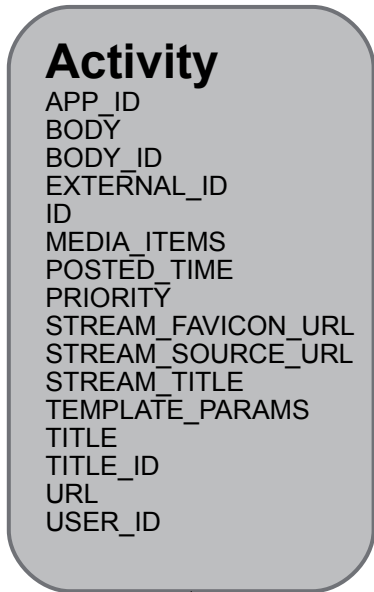
Gadgets can define activity templates:

```
<messagebundle>
 <msg name="LISTEN_TO_THIS_SONG">
    ${Subject.DisplayName} told ${Owner.DisplayName} to
    listen to a song!
 </msg>
</messagebundle>
```

Here's a JavaScript API call that references one:

```
var owner = ...;
  var viewer = ...;
  var activity =
    opensocial.newActivity('LISTEN_TO_THIS_SONG',
     {Song: 'Do That There - (Young Einstein hoo-hoo mix)',
      Artist: 'Lyrics Born',
      Subject: viewer, Owner: owner})
```

OpenSocial JavaScript API objects

TMI?

Environment
getDomain()
supportsField()

Message
EMAIL
NOTIFICATION
PRIVATE_MESSAGE
PUBLIC_MESSAGE

opensocial
getEnvironment()
hasPermission()
newActivity()
newActivityMediaItem()
newDataRequest()
newMessage()
requestCreateActivity()
requestPermission()
requestSendMessage()
requestShareApp()

DataRequest
add()
newFetchActivitiesRequest()
newFetchPeopleRequest()
newFetchPersonAppDataRequest()
newFetchPersonRequest()
newUpdatePersonAppDataRequest()
send()

DataResponse
get()
hadError()

ResponseItem
getData()
getErrorCode()
getErrorMessage()
getOriginalDataRequest()
hadError()

Time for a demo?

Let's take a look at code for an OpenSocial
Gadget

Status of OpenSocial

> Current specification is v0.7 and still evolving
  - Active mailing list, ~40 posts per day
  - Some areas still fuzzy: support for Groups, Authentication, etc.

> Reference implementation ongoing in Apache incubator
  - Highly active project, lots of churn in the codebase

> The governance
  - TBD
  - OpenSocial Foundation announced, but that's about it

OpenSocial not the Silver Bullet

> Doesn't solve the silo problem

> Doesn't cure cancer

> Or the data portability problem

> Or world hunger

OpenSocial vs. Data Portability

TMI?

DataPortability
connect. control. share. remix.

Existing Technologies
Invent nothing   +

Turnkey Reference Blueprints
Keep it simple and open - put it all in context   +

apml   OpenID

microformats   RDF

RSS   OPML   OAUTH

And others...

DataPortability Technical Blueprint
DataPortability Policy Blueprint
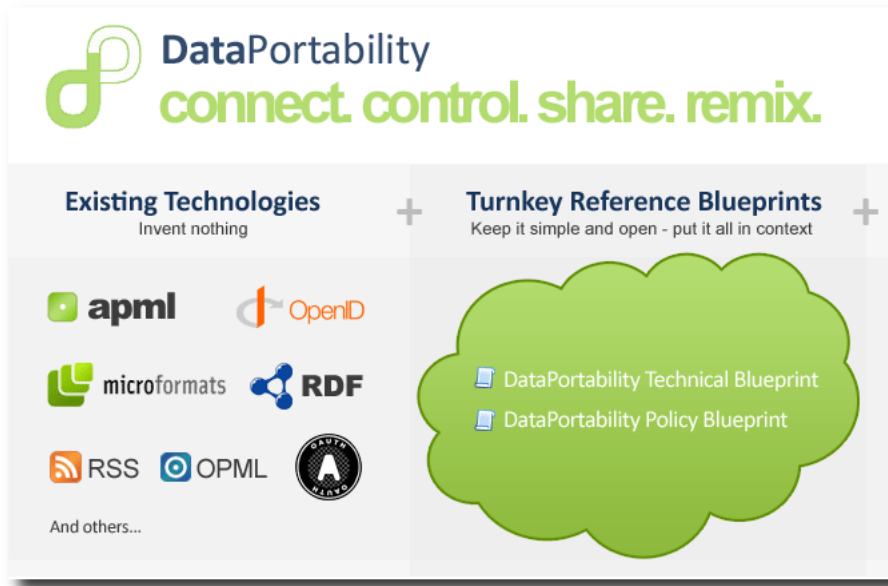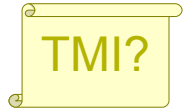
> **OpenSocial does not yet solve the Silo Problem**

> **Is the problem solvable?**

- Yes, probably, but...
- Is it really OK for your friends to export your data to another network?
- Do you want the same set of friends on every network?

OpenSocial vs. Web as Social Network

TMI?
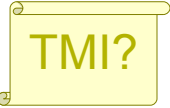
> ## Why not make the Web itself into the Social Network?
> - Google's Social Graph API
> - Friend Of A Friend (FOAF)
> - XHTML Friends Network
> - Open Linked Data vis a vis The Semantic Web!

> ## This approach could eventually solve the silo problem

> ## Not yet ready for prime time?
> - No stanard way to do authentication & authorization
> - Or fine-grained privacy controls

Is OpenSocial really "open"

TMI?

> Initially developed behind closed doors by Google in collaboration with Ning, Hi5, MySpace, LinkedIn and others

> Will soon be governed by independent organization, the OpenSocial Foundation

> Reference implementation is Open Source, developed by the Apache Shindig (incubating) project
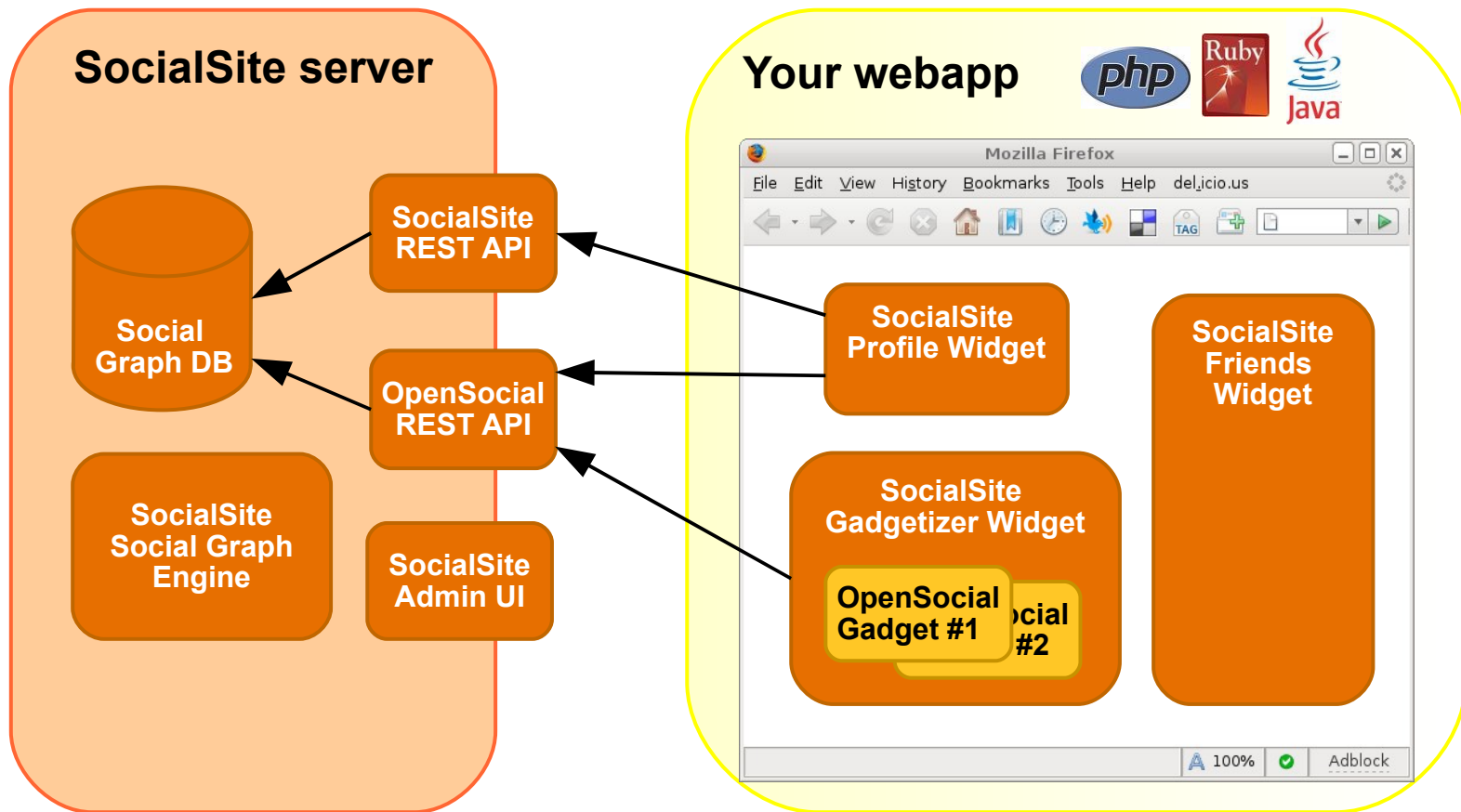
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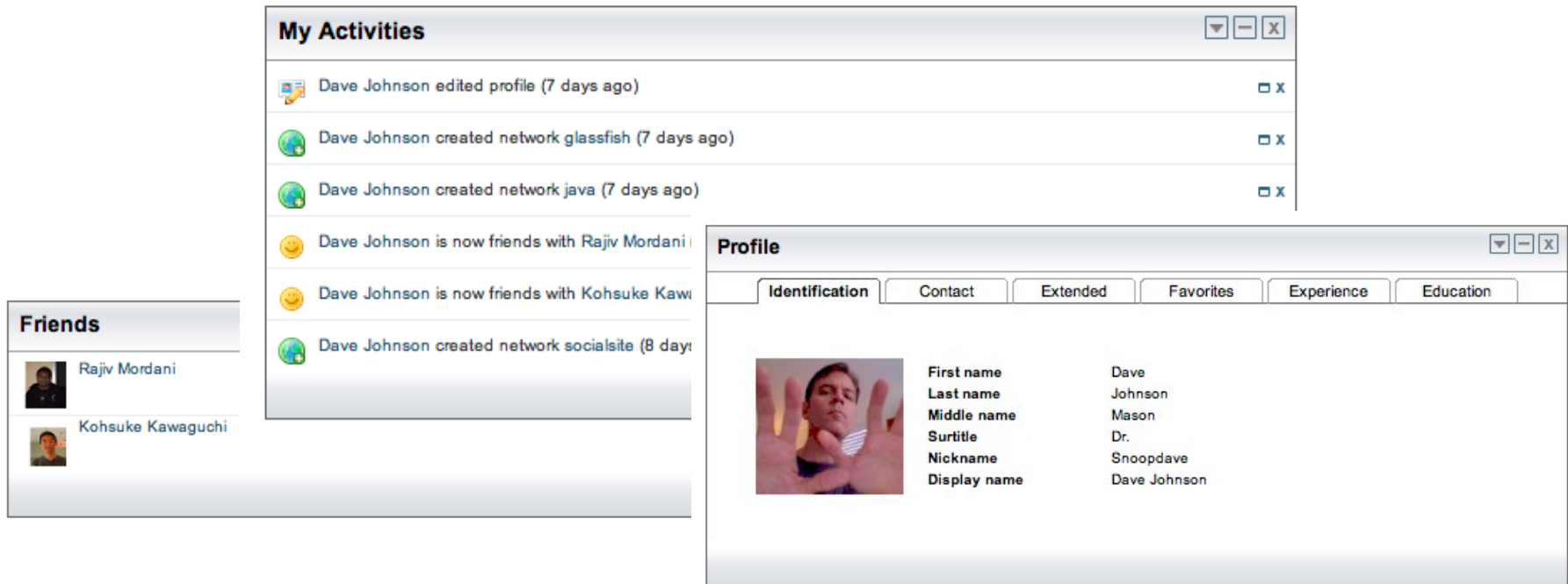> **Introducing Project SocialSite**
> **Conclusion and Q&A**

Apache Shindig (incubating)

> OpenSocial RI under development at Apache

> High-quality, high-performance and secure

> Already in production at major sites

> Google, Ning, Hi5 and others participating

Apache Shindig (incubating) features

> ## JavaScript
>
> - Google Gadget API with all standard Features
> - OpenSocial API implemented as Google Gadget Feature

> ## Java
>
> - Google Gadget server
> - Stubs for implementing OpenSocial REST API

> ## PHP
>
> - Google Gadget server
> - Stubs for implementing OpenSocial REST API

What's missing from Apache Shindig?

> Does not provide persistent Social Graph repository
  - Containers are expected to provide the Social Graph data
  - Shindig Provides only simple static XML data for testing

  - *May eventually provide one, but it's not the project's focus*

> Does not support end-to-end Social Network UI
  - Only UI is provided via OpenSocial Gadgets
  - Gadgets cannot manipulate the Social Graph
    - e.g. Users cannot edit Profile, make friends, join groups

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> **Using SocialSite Widgets and Web services**
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How do you make your sites social?

> You'd like to have social features on your site(s)

- Profile page for each user
- Status and activities stream
- Allow users to form friendships, join groups
- Sharing based on relationships and group memberships
- Allow users to install applications as OpenSocial Gadgets

> What do you do?

Plugin to an existing Social Network?

> Instead of building your own Social Network, plug your sites in to one that already exists, such as Facebook, MySpace, LinkedIn, Orkut, Hi5, etc.
>   • Via Facebook applications and/or OpenSocial Gadgets

> Not the solution we're looking for
>   • Doesn't really make *your* existing Web sites any more social

Use a hosted or "white-label" solution?

> Use a hosted service that provides a complete Social Networking site that you can re-brand

> Still not quite what we want
  - Doesn't really make *your* existing Web sites any more social

Use Apache Shindig?

> Use Apache Shindig to make each of your existing Web sites and applications into an OpenSocial container

> Close, but not a complete solution
  - Your existing sites don't have Social Graph data
  - And you don't want each site to be it's own Social Graph silo

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Introducing Project SocialSite

> We're working to build ***Widgets and Web Services*** to social-enable your existing Web site and applications

> Web services
  - Full support for OpenSocial REST API
  - SocialSite API: provides read/write access to Social Graph

> Widgets
  - Packaged as jMaki Widgets to benefit from tooling support
  - Gadgetizer Widget so your users can use Google & OpenSocial Gadgets

> Backed by a comprehensive Social Graph database
  - Customizable Profile properties and relationships
  - With support for Table Partitioning so we can scale to millions of users

SocialSite Architecture

SocialSite server

Your webapp

SocialSite REST API

Social Graph DB

OpenSocial REST API

SocialSite Social Graph Engine

SocialSite Admin UI

Mozilla Firefox

File Edit View History Bookmarks Tools Help del.icio.us

SocialSite Profile Widget

SocialSite Friends Widget

SocialSite Gadgetizer Widget

OpenSocial Gadget #1

ocial #2

100%   Adblock

Project SocialSite widgets   1/2

> Complete UI for Social Networking
> Including both *display* of:
  - Profiles, Activities, Friends, Groups, etc.

Project SocialSite widgets   2/2

> As well as *editing, joining, accepting, managing...*
  - Profiles, Groups, Relationships, Privacy controls, etc.

Project SocialSite's value adds

> Comprehensive, scalable Social Graph

> Easy to use Widgets for Java, PHP, Ruby apps
- Together can form complete UI for Social Networking

> Gadget management features
- Control what Gadgets your users are allowed to install
- View Gadget installation and usage statistics

> Identity Management integration
- Integrate with Directory Servers and Access Management

Time for a demo?

Adding Social Networking features to webapps

Time for a demo?

SocialSite widgets in Roller

SocialSite in the Roller Front Page blog TMI?

SocialSite in the Roller UI

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Summary

> Developers, get ready: software is going social

> OpenSocial provides social software interoperability

> Project SocialSite makes it easy to social-enable your apps

> Stay tuned for more from Project SocialSite

For more information: upcoming sessions

> **TS-6574: How to implement your own OpenSocial container**
>   - Wednesday 1:30 PM

> **BOF-5857: Turn your site into an OpenSocial container**
>   - Thursday 6:30 PM

> **BOF-6575: Building OpenSocial JSF components**
>   - Thursday 7:30 PM

> **BOF-6435: Creating Facebook and OpenSocial Widgets with Java**
>   - Thursday: 8:30 PM

> **TS-6537: Applications for the masses by the masses**
>   - Friday 10:50 AM

For More Information: helpful links

> OpenSocial Homepage
  - http://code.google.com/apis/opensocial
> OpenSocial Group: specification discussions
  - http://groups.google.com/group/opensocial-and-gadgets-spec
> OpenSocial Foundation
  - http://opensocial.org
> Apache Shindig (incubating)
  - http://incubator.apache.org/shindig

> Coming soon... Project SocialSite
  - http://socialsite.dev.java.net

That's all folks...

>Q&A