

Google™



Google and the Social Web

Dan Holevoet
May 27, 2009

Post your questions for this talk on Google Moderator:
code.google.com/events/io/questions

Direct link to this talk's Moderator page:
<http://tinyurl.com/gsw-qa>



“The web is better when it's social.”

David Glazer, Google Engineering Director

Clock



Me



Arne



Jason



Ryan

Movies

 **Finding Nemo**
★★★★★

 **Finding Nemo**
★★★★★ Friends
★★★★★ Everyone

 **The Big Lebowski**
★★★★

 **The Big Lebowski**
★★★★★ Friends
★★★★★ Everyone

 **Gigli**
★

 **Gigli**
★★★★★ Friends
★★★★★ Everyone



Stocks

GOOG 385.27 -3.45 (-0.89%)

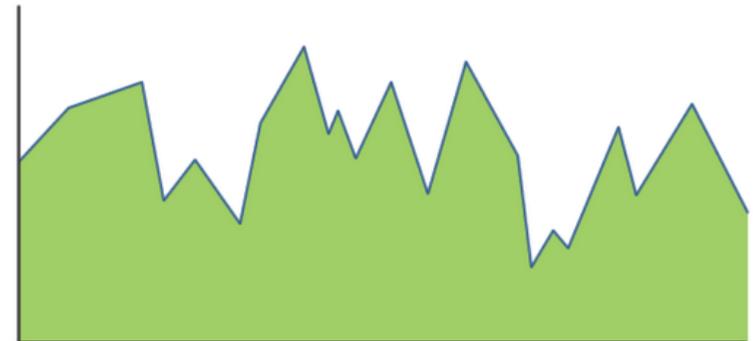
Open:	384.05	EPS:	13.67
High:	387.50	P/E:	28.23
Low:	383.93	Beta:	1.22
52wk High:	602.45	Mkt Cap:	121.85B
52wk Low:	247.30	Avg. Vol:	4.35M



GOOG 385.27 -3.45 (-0.89%)

Open:	384.05	EPS:	13.67
High:	387.50	P/E:	28.23
Low:	383.93	Beta:	1.22
52wk High:	602.45	Mkt Cap:	121.85B
52wk Low:	247.30	Avg. Vol:	4.35M

Rated Buy: 1024 **Rated Sell: 367**





Google Is Better When It's Social



Google Docs

Collaboration is social

Foodles Share Autosaved on 4:45 PM

File Edit View Format Insert Tools Form Help

Viewing now: ^

- jfisher
- ryanboyd

	A	B	C	D
1	User	Foodles		
2	Dan	ryanboyd		
3	Ryan	5000000^5200000		
4	Jeff	OVER 9000!		
5				
6				
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21				

Press enter to send your message

NaN

Google Reader

Sharing is social

[+ Add a subscription](#)

Home [-]
All items (1000+)
Starred items 
[-] Your stuff
  Shared items
  Notes
 Trends 
 Browse for stuff

Friends' shared items (18) [-]
 [-] Comment view
  **Sara G (5)**
  **Jonas Shen (9)**
  **Warren James (2)**
  Pamela Fox
  Sarah Price

Items shared by Sarah Price »

Show: **0 new items** - [all items](#) [Mark all as read](#) [Refresh](#) [Feed settings...](#) - [show details](#)

Sarah Price
Online Operations Associate at Google, Inc.
Mountain View, CA
[View full profile](#)



You have been subscribed to items shared by Sarah Price, because Sarah Price is your friend. You can hide Sarah Price from your friends' shared items list by clicking the "Hide" button below.

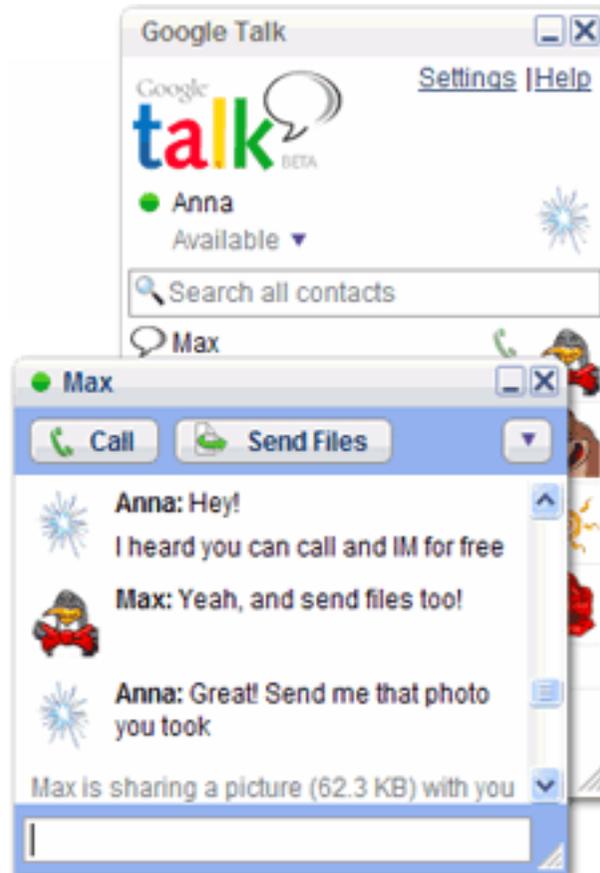
You can always see all of your "hidden" friends on the [settings page](#).

[Hide Sarah Price](#)

 /Film	Neil Gaiman on The Colbert Report - Gaiman.	Mar 21, 2009	»
 Lolcats 'n' Funny Pictures	dis not what it looks likes - dis not what it looks	Mar 18, 2009	»
 Wired Top Stories	Lasers Are the Future of Flight - The science	Feb 21, 2009	»

Google Groups, Google Talk, Gmail

Communication is social



YouTube

Updates are social

 **Friend Activity** [\(view all\)](#) [edit](#)   

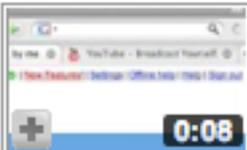
 **Favorited by Liz** (2 days ago)



Arne Roomann-Kurrik - OpenSocial Apps for Speed & Scale HD
Designing OpenSocial Apps for Speed and Scale - Arne Roomann-Kurrik & Chris Chabot...

★★★★★ 3 days ago 1,379 views [GoogleDevelopers](#)

 **Rated by Liz** (3 days ago)



test333
test4344

★★★★★ 3 days ago 1,379 views [GoogleDevelopers](#)

Google 09 



Implicit Social Graphs



Google Contacts

- **Contacts lets users manage relationships**

The screenshot shows the Google Contacts interface for a group named "Sandbox Friends". At the top, there are buttons for adding contacts and a search bar. Below the search bar, a list of contact groups is shown, with "Friends" selected. The "Friends" group contains 5 contacts, which are listed as friend1@gmail.com through friend5@gmail.com. The interface also includes options to add to the group, edit, export, print, and delete the group.

Group Name	Contact Count
My Contacts	5
Most Contacted	8
Friends	5
Family	0
Co-workers	0
Suggested Contacts	9

Friends
5 contacts

- friend1@gmail.com
- friend2@gmail.com
- friend3@gmail.com
- friend4@gmail.com
- friend5@gmail.com

Profiles

- Let users create a persona
- Public image on the web
- Available in search

[Lane LiaBraaten - Silicon Valley, CA | Facebook](#)  
Lane LiaBraaten (Silicon Valley, CA) is on Facebook. Facebook gives people the power to share and makes the world more open and connected.
www.facebook.com/people/Lane-LiaBraaten/883760047 - 22k - [Cached](#) - [Similar pages](#) - 

[Lane LiaBraaten | Facebook](#)  
Lane LiaBraaten is on Facebook, a social utility that connects people with friends and others who work, study and live around them. Lane LiaBraaten uses ...
www.facebook.com/people/Lane_LiaBraaten/883760047 - [Similar pages](#) - 

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[New! -- Orkut Developer's Guide - Lane LiaBraaten - com...](#)  
From, Sent On, Attachments. Lane LiaBraaten, Dec 21, 2007 8:52 am. ronman, Jan 11, 2008 4:47 pm. Arne Roomann-Kurrik (Google), Jan 24, 2008 10:45 am ...
markmail.org/message/3rajzw4offeyppul - 11k - [Cached](#) - [Similar pages](#) - 

[Lane LiaBraaten's Public Profile](#)  
Lane LiaBraaten's Public Profile on Plaxo. Plaxo helps members like Lane LiaBraaten keep in touch with the people who really matter, helping them to connect ...
www.plaxo.com/directory/profile/128849558365/319dfa6d/Lane/LiaBraaten - [Similar pages](#) - 

 [Lane LiaBraaten](#) - Google - San Francisco, CA
www.google.com/profiles

Search for Lane Liabraaten on: [MySpace](#) - [Facebook](#) - [Classmates](#) - [LinkedIn](#)


1 2 3 4 5 6 7 8 9 10 [Next](#)



 **Lane LiaBraaten**
Google
San Francisco, CA



About me

Where I grew up
Fairfax, VA

Places I've lived
Jacksonville, FL; Fairmont, WV; Saint Augustine, FL; San Jose, CA; Blacksburg, VA

Companies I've worked for
Gestalt; Institute for Scientific Research; America Online; US Inspect; Pizza Hut

Schools I've attended
Virginia Tech; Carnegie Mellon

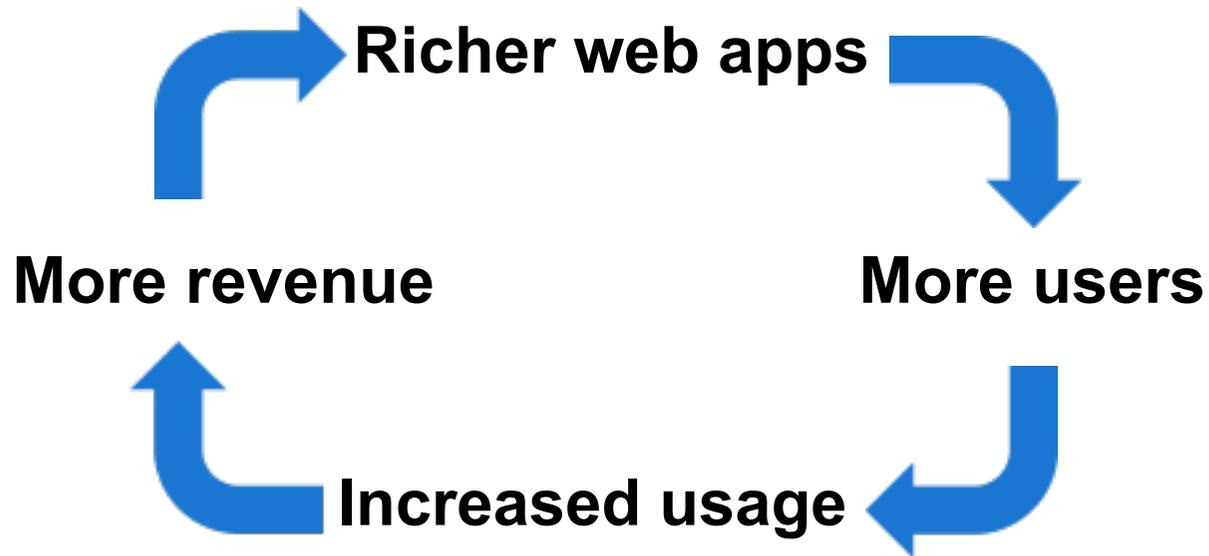
What I'm working on
[What's up with OpenSocial](#)
[What's up with orkut](#)
[Other work I've done](#)
[My Photo Journal](#)
[My Presos](#)
[Friends and photos](#)
[More friends and photos](#)
[What I'm watching](#)
[What I'm watching](#)
[My Facebook app - percent](#)

Interests
snowboarding

My places

©2009 Google. Map data ©2009 Europa Technologies
[Report this profile](#)

What's Google Getting with Social?



Recommendations for the Social Web

Use the same approach

- **Interact with your friends where you are and where they are**
- **Don't lock users into a single site**
- **Take advantage of implicit social graphs**

The result is more powerful, more useful applications



How Developers Benefit



How Developers Benefit

- **Use Google's social graph**
 - **In your own apps**
 - **To integrate with our apps**
 - **To add features to our apps**
- **Several technologies to accomplish these goals...**

OpenSocial

- **Common APIs for accessing social data**
 - **People**
 - **Activities**
 - **App Data**
- **JavaScript, REST, and RPC implementations**
- **Newest version, 0.9, just released**

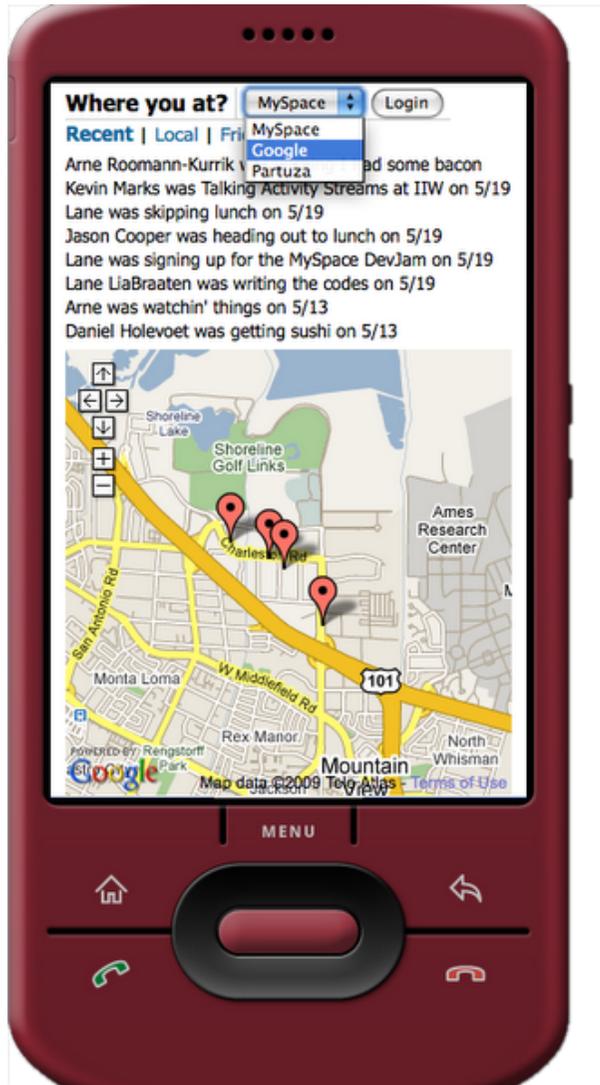
opensocial

OpenSocial

Supporting products



Portable Contacts



- The coolest technology without a logo
- Fully compatible with opensocial.Person API
- Pulls the user's social graph into a 3rd party site (with the user's permission)

Portable Contacts

Other talks

**Powering Mobile Apps With Social Data:
Tomorrow 1:15-2:15**

**Make Your Website More Social:
Tomorrow 2:30-3:30**

Google Friend Connect

The screenshot shows the Earth Connect website interface. At the top, there's a blue header with the "EARTH CONNECT" logo and a call to action: "We need the world to take action on Global Warming. And you can start here. Use Earth Connect to share your thoughts about Global Warming. In the lead up to Copenhagen, your words will be more important than ever before." To the right, it says "JOIN THE MOVEMENT" and "Become a part of the Earth Connect network. VOTE EARTH and help spread the word."

Below the header, there's a "TALKING POINT" section with a megaphone icon. It says: "Each week, different people will pose a question or topic to spark some discussion about Global Warming. To receive an email when a new topic is posted, you can subscribe here."

The main content area features a discussion thread titled "The Road to Copenhagen" with the question: "What do you think can be done to keep the world focused on Climate Change in the lead-up to Copenhagen?". There's a checkbox for "Get Email Subscription with Feedburner" and a link to "View all entries".

Below the thread, there's a "Your Thoughts (7465)" section with a text input field and a "Post" button. A link to "Add a video" is also present.

The discussion thread includes several posts with user avatars, names, and dates (5/22). The posts are: "Clean up the earth by doing what's right?? We all know what we should be doing, but i think it is mo...", "Los restos de un remoto ancestro humano, un primate de hace 47 millones de años, han sido descubiert...", "Very good", "It would be nice if we focused on Lifestyle Change instead of Climate Change, blessings..", "I agree...", and "Great idea I...".

On the right side, there's a "Members (14727)" section with a grid of user avatars and a "More" link. Below that, there's a "Your Friends (3)" section with a link to "Invite your friends".

- Uses OpenSocial (gadgets, REST/RPC)
- Allows site owners to mix in social data to existing sites
- Cut and paste or
- Deep integrations

Google Friend Connect

Other talks

**Best Practices in Code and Interaction
Design: Today 1:45-2:45**

**Deep Integrations with Google Friend
Connect: Tomorrow 10:45-11:45**

Back to OpenSocial...



What They Have in Common

- **Millions of users with a shared focus and demands**
- **Common social graph and social data**
 - **Uses the 'Friends' group in Contacts**
 - **App data is shared between app instances**
 - **The same endpoint is used for the REST/RPC protocols**

iGoogle

OpenSocial

- Provides 'home' and 'canvas' views
- requestShareApp and Updates for organic growth

Quartermile   

Fitness Nuts

Enter an activity:

 [\[Save\]](#)

Team activities

Sarah P walked 1.0 miles at 3.0 mph on 5/25
[\[More...\]](#)
[Reset team](#)

Quartermile [Edit](#) [Delete](#) [Share](#) 

Fitness Nuts [Last month](#) [Last week](#) [Last day](#)

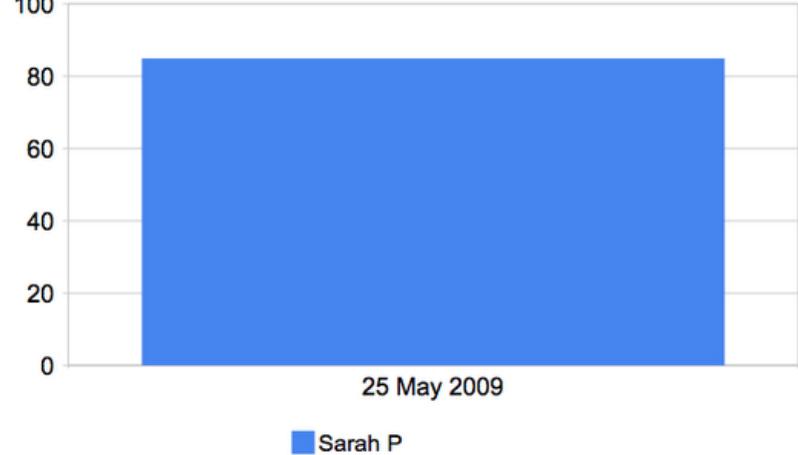
Enter an activity:

 [\[Save\]](#)

Team activities

Sarah P walked 1.0 miles at 3.0 mph on 5/25
[\[Less...\]](#)

Daily Performance (foodles)

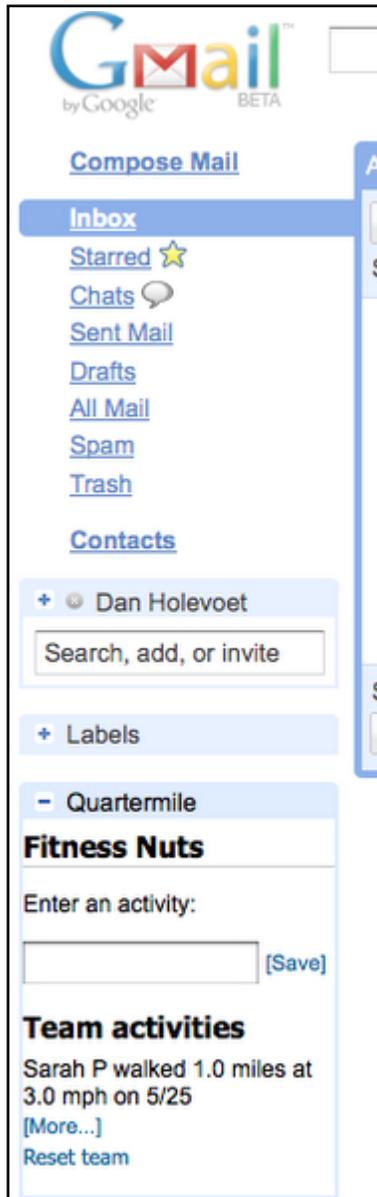


Activity	Performance (foodles)
Sarah P	85

Gmail

OpenSocial

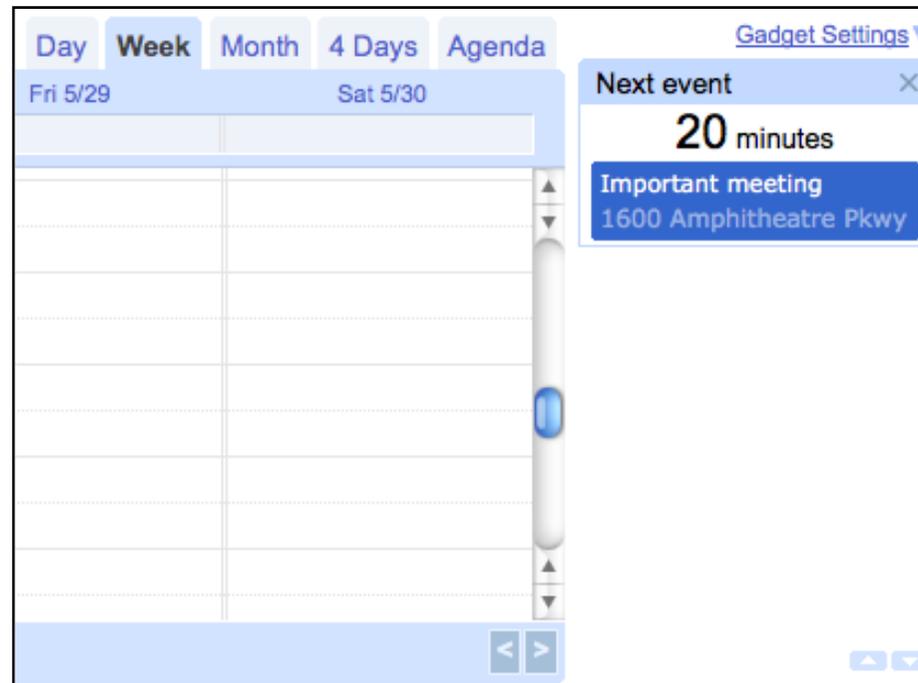
- Provides 'nav' and 'canvas' views
- Enabled as a Gmail Labs feature



Google Calendar

OpenSocial

- Early preview
- Provides 'nav' and 'canvas' views
- Includes google.calendar API extensions, eg:
 - `google.calendar.showEvent`
 - `google.calendar.subscribeToDates`
 - `google.calendar.getUserEvents`



Google Calendar

OpenSocial

- **Gadgets are all about making Calendar extensible**
- **Bringing apps into Calendar**
- **Private whitelist for now, open to developers in the near future**
- **Check out the Developer Sandbox at I/O for a closer look at more details**

Container Cheat Sheet

Leverage social graph	
Quick data entry	
Dashboard view	
Container-specific extensions	

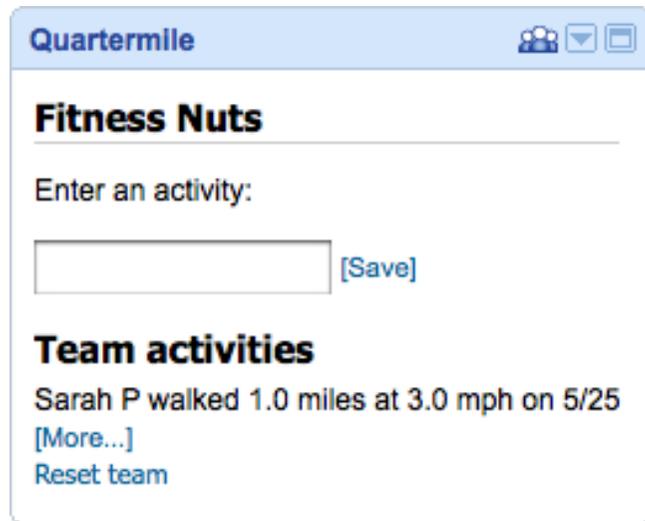


Quartermile: An Example Gadget



Quartermile

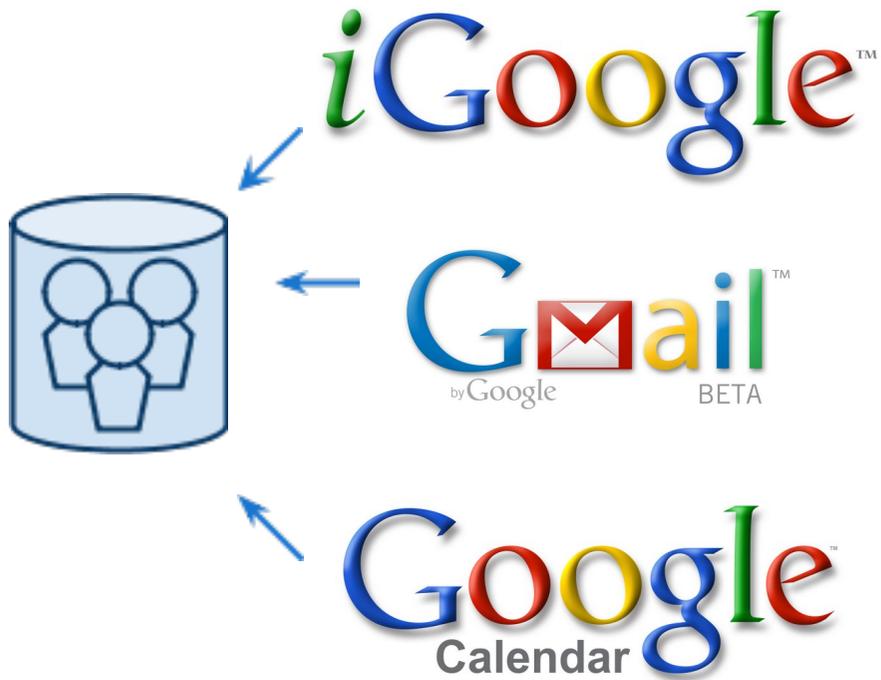
Gadget overview



The screenshot shows a window titled "Quartermile" with a blue header bar containing icons for users, a dropdown menu, and a window control. The main content is divided into two sections. The first section, "Fitness Nuts", has a sub-header and a form labeled "Enter an activity:" with a text input field and a "[Save]" button. The second section, "Team activities", displays a list item: "Sarah P walked 1.0 miles at 3.0 mph on 5/25" with a "[More...]" link and a "Reset team" link below it.

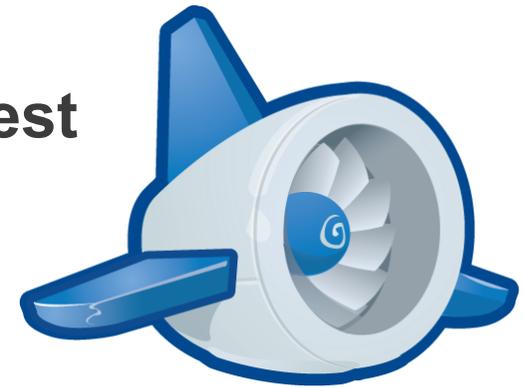
- Track exercise with others
- View stats
- Quick, "smart" data entry box
- Google App Engine backend

Quartermile Architecture



Signed request

JSON



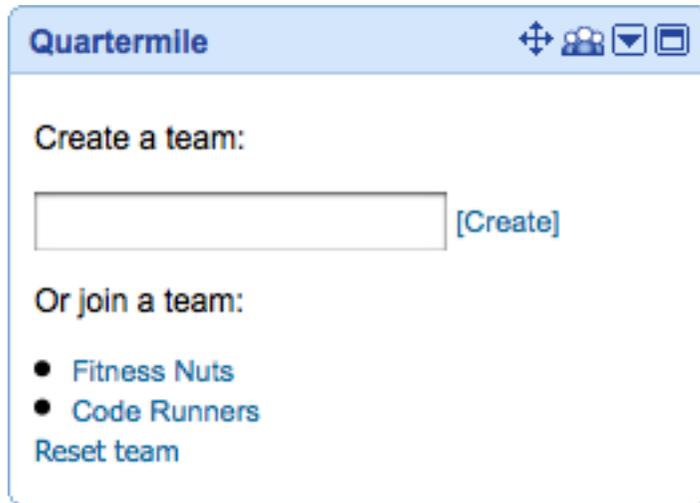
Quartermile

Designing for iGoogle

Leverage social graph	
Quick data entry	
Dashboard view	
Container-specific extensions	

Quartermile

Joining a team



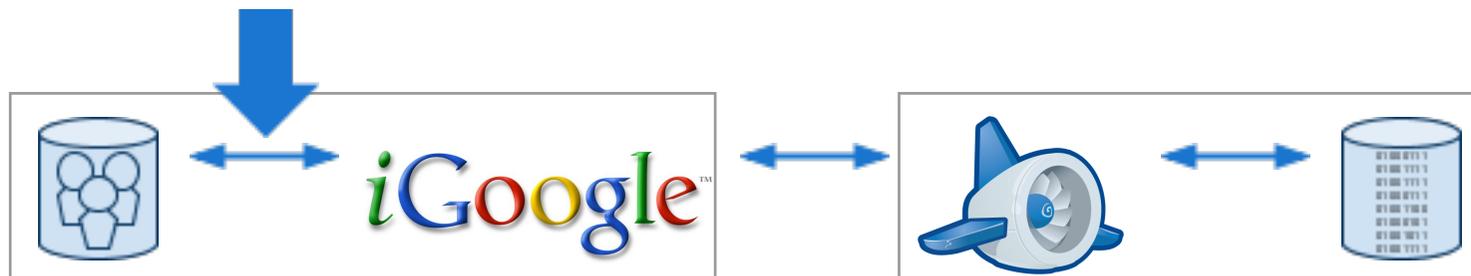
The screenshot shows a web browser window titled "Quartermile". The interface includes a "Create a team:" section with a text input field and a "[Create]" button. Below this is an "Or join a team:" section with two radio button options: "Fitness Nuts" and "Code Runners". At the bottom of this section is a "Reset team" link. The browser window also shows standard navigation icons in the top right corner.

- **Load VIEWER_FRIENDS**
- **Send result to backend**
- **Return set of "interesting" teams**

Quartermile

Retrieving friends (client)

```
var batch = osapi.newBatch().  
  add('viewer', osapi.people.getViewer()).  
  add('friends', osapi.people.get({  
    userId: '@viewer',  
    groupId: '@friends' }));  
  
batch.execute(callback);
```



Quartermile

Retrieving friends (compared with 0.8)

```
var req = opensocial.newDataRequest();
req.add(req.newFetchPersonRequest('VIEWER'),
    'viewer');

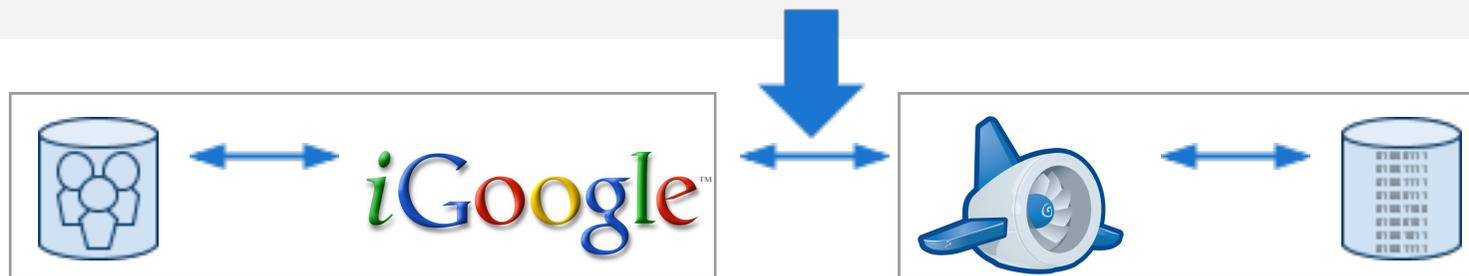
var friends = opensocial.newIdSpec({
    'userId': 'VIEWER', 'groupId': 'FRIENDS' });
req.add(req.newFetchPeopleRequest(friends),
    'friends');

req.send(callback);
```

Quartermile

Getting a team list (client)

```
// ['2001', '2003', '3000']  
  
function getInterestingTeams(ids) {  
  var request = {  
    'method': 'get_interesting_teams',  
    'data': ids };  
  osapi.http.post(SERVER, { body:  
    gadgets.json.stringify(request) }).  
  execute(displayTeams);  
}
```



Quartermile

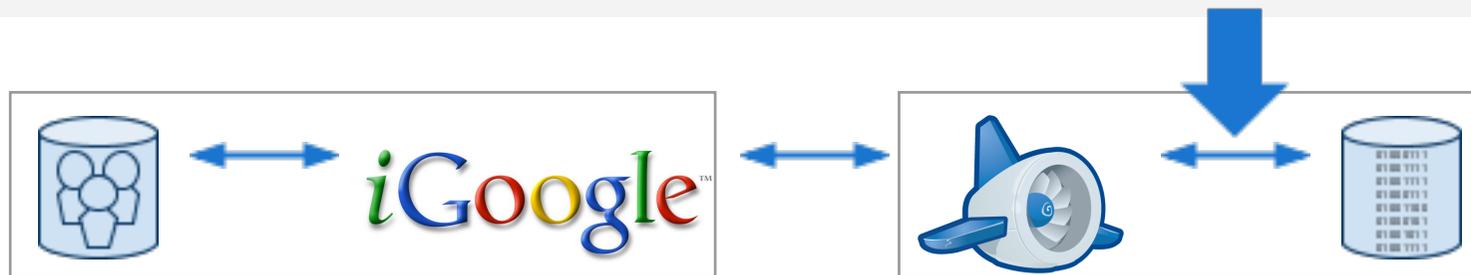
Getting a team list (server)

```
// team_ids = [2001, 2003, 3000]

teams = model_get_by_id(models.Team, team_ids)

gql = models.Team.gql("ORDER BY count DESC")
interesting_teams =
  gql.fetch(Settings.MAX_INTERESTING_TEAMS)

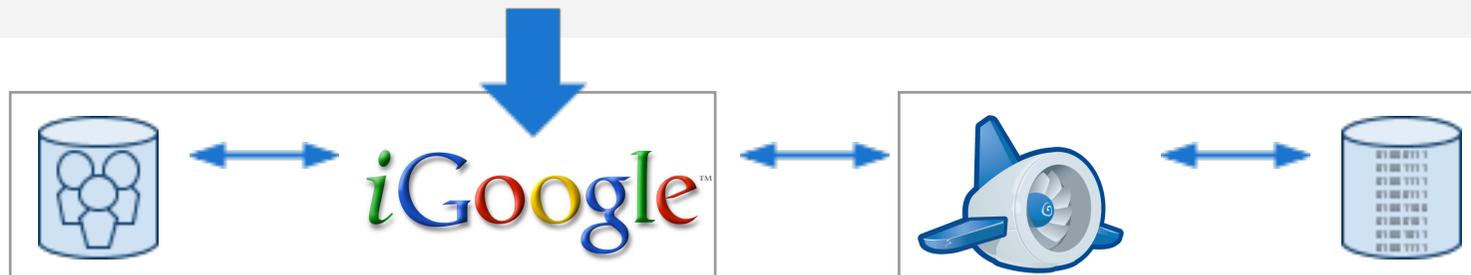
return teams + interesting_teams
```



Quarter Mile

Displaying the list of teams (client)

```
// [{ 'team_id': 2001, 'team_name': 'Fitness Nuts' },  
//  { 'team_id': 2003, 'team_name': 'Code Runners' }]  
  
function displayTeams(data) {  
  var teams = data.teams;  
  for (i in teams) {  
    $('#interesting').append(jQuery('<li>' +  
      teams[i].team_name + '</li>'));  
  }  
}
```



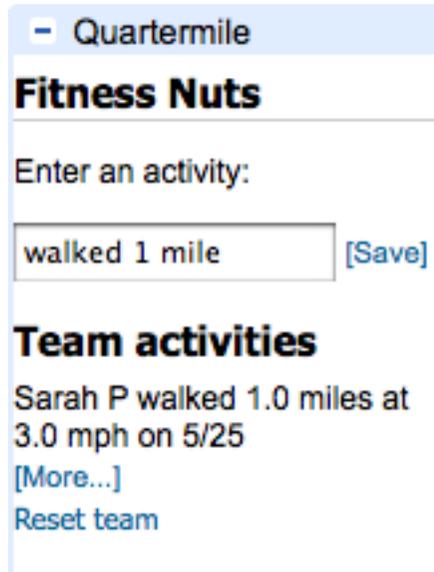
Quartermile

Designing for Gmail

Leverage social graph	✓
Quick data entry	
Dashboard view	
Container-specific extensions	

Quartermile

Recording an exercise



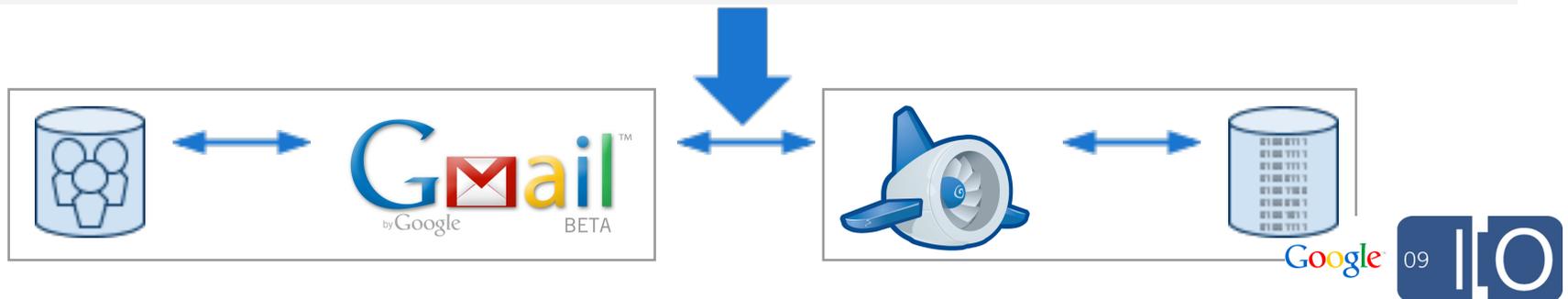
The screenshot shows a web interface for 'Quartermile'. At the top, there is a header 'Quartermile' with a minus sign icon. Below it is a section titled 'Fitness Nuts'. Under this section, there is a prompt 'Enter an activity:'. A text input field contains the text 'walked 1 mile', and to its right is a blue button labeled '[Save]'. Below the 'Fitness Nuts' section is another section titled 'Team activities'. This section contains the text 'Sarah P walked 1.0 miles at 3.0 mph on 5/25', a blue link '[More...]', and a blue link 'Reset team'.

- User enters an activity
- Gadget sends request to server
- Response is rendered in the activity list

Quartermile

Recording an exercise (client)

```
// 'walked 1 mile'  
  
function saveExercise(text) {  
  var request = {  
    'method': 'create_activity',  
    'data': text };  
  osapi.http.post(SERVER, { body:  
    gadgets.json.stringify(request) }).  
  execute(updateExercises);  
}
```



Quartermile

Designing for Gmail part two

Leverage social graph	✓
Quick data entry	✓
Dashboard view	
Container-specific extensions	

Quartermile

Displaying a dashboard



[Show search options](#)
[Create a filter](#)

[Compose Mail](#)

- [Inbox](#)
- [Starred](#) ★
- [Chats](#) ☰
- [Sent Mail](#)
- [Drafts](#)
- [All Mail](#)
- [Spam \(1\)](#)
- [Trash](#)
- [Contacts](#)

Dan Holevoet

Labels

Quartermile

Fitness Nuts

Enter an activity:

Team activities

Sarah P walked 1.0 miles at 3.0 mph on 5/25
[\[More...\]](#)
[Reset team](#)

Invite a friend

Fitness Nuts

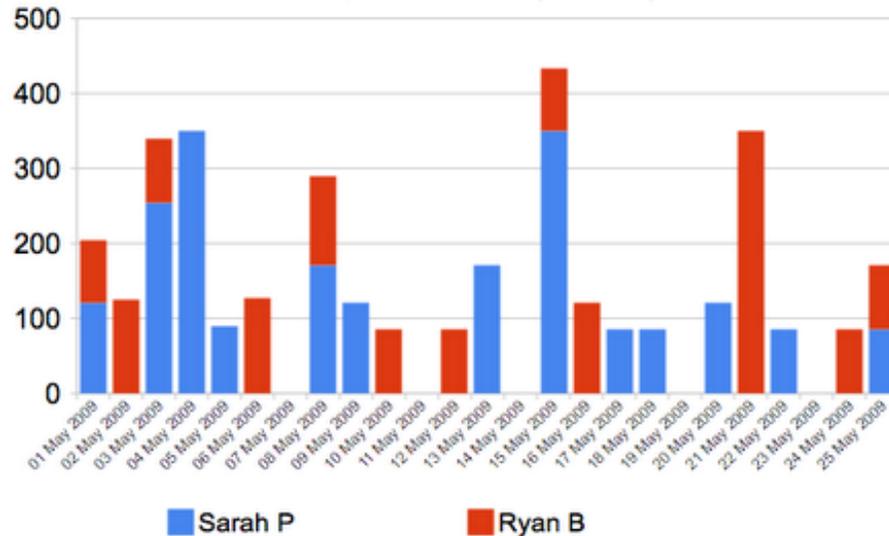
Enter an activity:

Team activities

Sarah P walked 1.0 miles at 3.0 mph on 5/25
 Ryan B walked 1.0 miles at 3.0 mph on 5/25
 Ryan B walked 1.0 miles at 3.0 mph on 5/24
 Sarah P walked 1.0 miles at 3.0 mph on 5/22
 Ryan B swam 1.0 miles at 2.0 mph on 5/21
 Sarah P ran 1.0 miles at 6.0 mph on 5/20
 Sarah P walked 1.0 miles at 3.0 mph on 5/18
 Sarah P walked 1.0 miles at 3.0 mph on 5/17
 Ryan B ran 1.0 miles at 6.0 mph on 5/16
 Sarah P swam 1.0 miles at 2.0 mph on 5/15
 Ryan B walked 1.0 miles at 3.0 mph on 5/15
 Sarah P walked 2.0 miles at 3.0 mph on 5/13
 Ryan B walked 1.0 miles at 3.0 mph on 5/12
 Ryan B walked 1.0 miles at 3.0 mph on 5/10
 Sarah P ran 1.0 miles at 6.0 mph on 5/9
 Sarah P walked 2.0 miles at 3.0 mph on 5/8
 Ryan B ran 1.0 miles at 6.0 mph on 5/8
 Ryan B walked 1.5 miles at 3.0 mph on 5/6
 Sarah P did 20.0 push ups on 5/5
 Sarah P walked 1.0 miles at 3.0 mph on 5/5
 Sarah P swam 1.0 miles at 2.0 mph on 5/4
 Sarah P walked 3.0 miles at 3.0 mph on 5/3
 Ryan B walked 1.0 miles at 3.0 mph on 5/3
 Ryan B ran 1.0 miles at 6.0 mph on 5/2
 Ryan B did 20.0 push ups on 5/2
 Sarah P ran 1.0 miles at 6.0 mph on 5/1
 Ryan B walked 1.0 miles at 3.0 mph on 5/1
[\[Less...\]](#)
[Reset team](#)

Last month Last week Last day

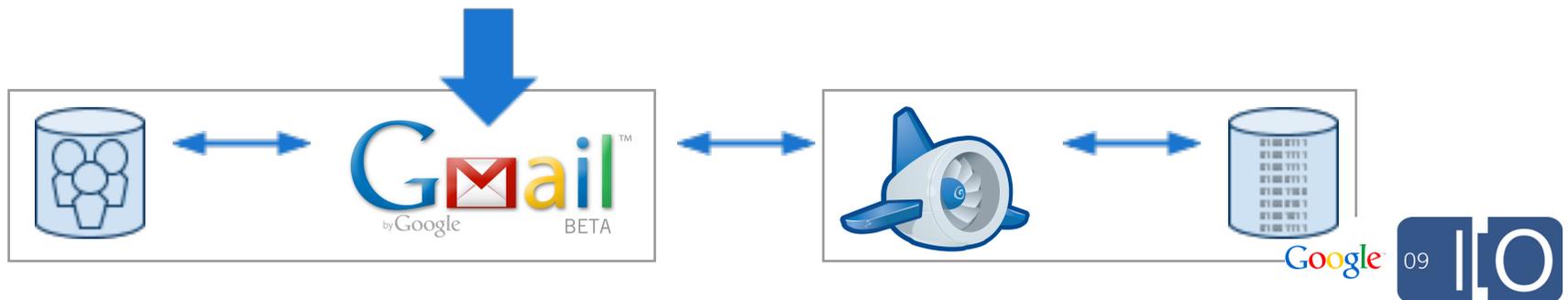
Recent performance (foodles)



Quartermile

Navigating to the canvas view (client)

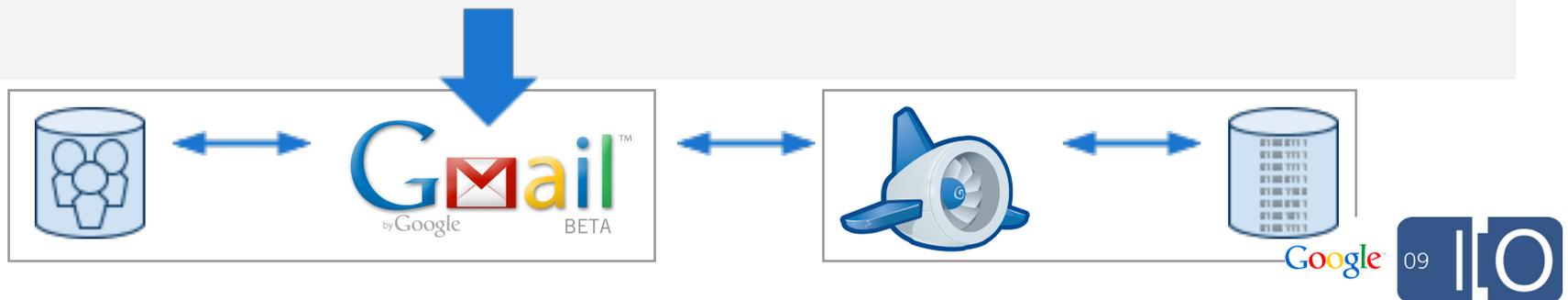
```
gadgets.views.requestNavigateTo('canvas');
```



Quartermile

Rendering charts (client)

```
var table = new google.visualization.DataTable();  
table.addColumn('string', 'Timestamp');  
for (i in data.accounts) {  
    ...  
}  
var chart = new google.visualization.ColumnChart(  
    document.getElementById('dash_chart'));  
chart.draw(table, {isStacked:true, width:600,  
    height:400, legend:'bottom'});
```



Google Visualization API

Other talks

**Using the Visualization API with GWT:
Today 4:15-5:15**

**Implementing Your Own Visualization
Datasource: Tomorrow 10:45-11:45**

Quartermile

Designing for Calendar

Leverage social graph	✓
Quick data entry	✓
Dashboard view	✓
Container-specific extensions	

Quartermile

Viewing a slice of data

Day Week Month 4 Days Agenda

Fri 5/29 Sat 5/30

Gadget Settings

Quartermile

Fitness Nuts

Enter an activity:

[Save]

Team activities

Sarah P walked 1.0 miles at 3.0 mph on 5/25

Ryan B walked 1.0 miles at 3.0 mph on 5/25

[More...]

Reset team

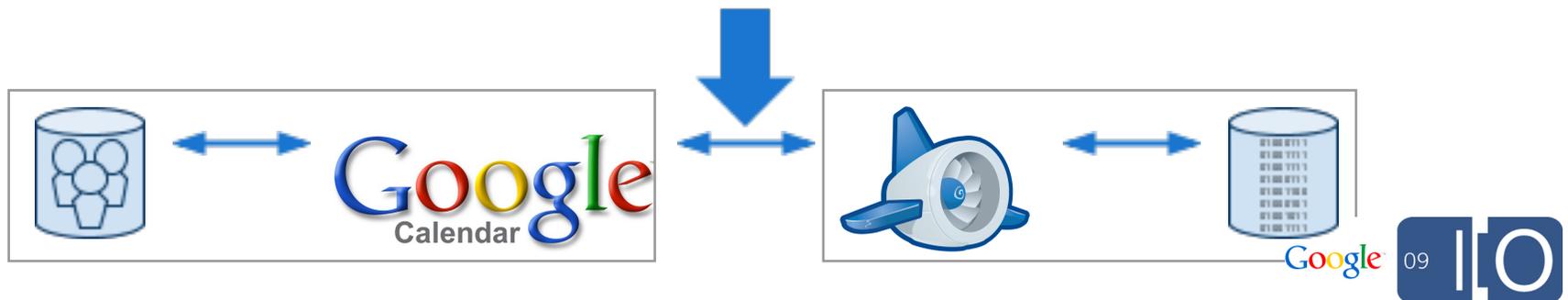
- User loads Calendar
- User switches between dates or daily, weekly, or monthly view
- List of activities updates based on the current view range

Quartermile

Specifying a date callback (client)

```
function changeDateView(dateRange) {  
  var startTime = dateRange.startTime;  
  var endTime = dateRange.endTime;  
  
  updateRange(startTime, endTime);  
}
```

```
google.calendar.subscribeToDates(changeDateView);
```



Quartermile

Finished gadget

Leverage social graph	✓
Quick data entry	✓
Dashboard view	✓
Container-specific extensions	✓

Quarter Mile

Getting users

- **Submit to container directory**
- **Use available API calls for organic growth**
 - **requestShareApp, Updates**
- **Cross promote**
- **Advertise**



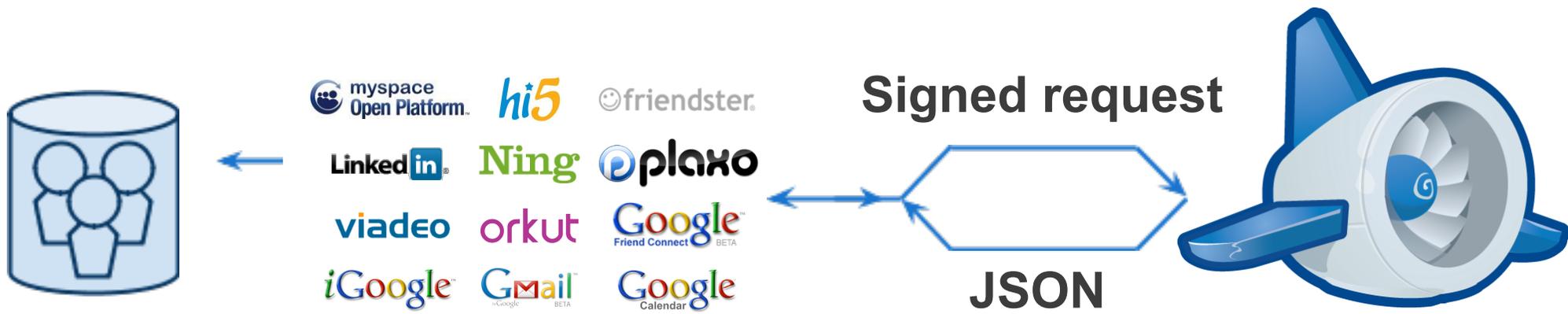
Out to the Social Web



Out to the Social Web



Out to the Social Web



Out to the Social Web

Where to go for more

Designing OpenSocial Apps for Speed and Scale: Today 12:30-1:30

Best Practices in Code and Interaction Design: Today 1:45-2:45

Deep Integrations with Google Friend Connect: Tomorrow 10:45-11:45

Building a Business with Social Apps: Tomorrow 12:00-1:00

Powering Mobile Apps With Social Data: Tomorrow 1:15-2:15

Make Your Website More Social: Tomorrow 2:30-3:30

Q & A

Post your [questions](#) for this talk on Google Moderator:
<http://tinyurl.com/gsw-qa>

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