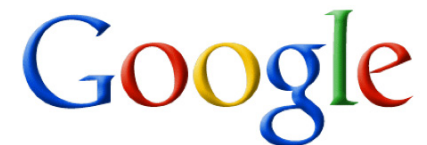




Mashing Up with Google Mashup Editor and Yahoo! Pipes

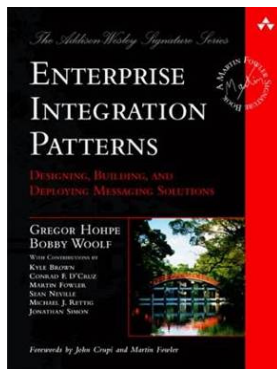
Gregor Hohpe

www.eaipatterns.com



Who's Gregor?

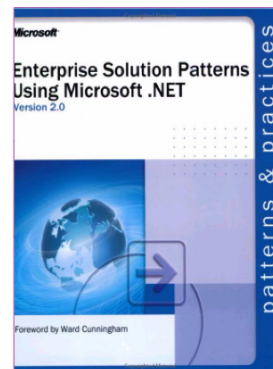
- Distributed systems, enterprise integration, service-oriented architectures, mashups
- Write code every day. Share knowledge through patterns.
- www.eaipatterns.com



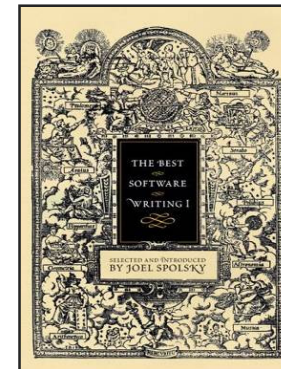
Enterprise Integration Patterns
Addison-Wesley



Integration Patterns
Microsoft Press



Enterprise Solution Patterns
Microsoft Press



Best Software Writing I (Joel Spolsky)
APress



SOA Expertenwissen
dpunkt Verlag



A Brief History of Time

- Web 1.0
 - Static HTML pages, Shopping Sites
 - User oriented
- Web 1.5
 - Web Services
 - Machine oriented
- Web 2.0
 - Web as platform, lightweight programming
 - Data Feeds
 - User contributed content, collective intelligence
 - Mashups



Mashups

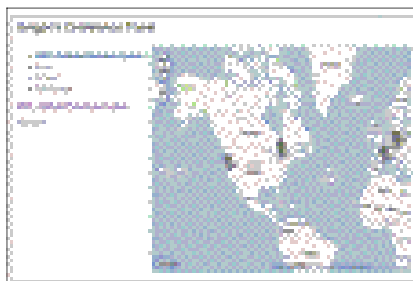
A web application that combines data from more than one source into an integrated experience.

- RIA = Rich Internet Applications
- Combine multiple data feeds
- Often read-only
- User developed
- Access services over Internet
- Ad-hoc, easy to change
- Mashups on mashups

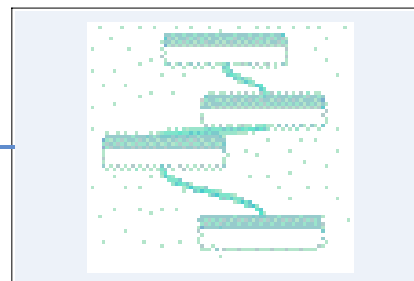


Mashup Anatomy

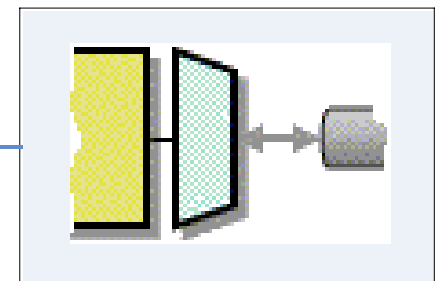
Front-End



Transform / Aggregate



Data Sources / Adapters



- Google Mashup Editor
- QED Wiki
- JavaScript Libraries
- Microsoft Popfly

- Yahoo! Pipes
- Snaplogic
- Microsoft Popfly
- IBM Damia

- Dapper
- Openkapow
- Snaplogic
- StrikeIron

(not meant to be complete nor a recommendation)



Example: My Travel Map



Google Calendar with
Conference Events



Feed



Yahoo! Pipes



Geo Enriched Feed



Google Mashup Editor
Interactive Application



Starting Point: Google Calendar

Google Calendar - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.google.com/calendar/render

Google Gmail Calendar Documents Photos Groups Reader my services >

gregor@hohpe.com | Settings | Help | Sign out

Google Calendar BETA

Search Public Calendars Search My Calendars Show Search Options

Create Event

Quick Add

< Today October 2007 >

Print Day Week Month Next 4 Days Agenda

Sun	Mon	Tue	Wed	Thu	Fri	Sat
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3

Colorado Software Summit

My Calendars

- Gregor Hohpe
- Gregor's Conferences

Other Calendars

- Dev Events
- San Francisco Festivals

Manage calendars



Calendar Feed

Mail Calendar Documents Photos Groups Web more ▾ | [Add Calendar to your iGoogle Homepage](#) | [Settings](#) | [Help](#) | [Sign out](#)

Google Calendar BETA

[Create Event](#)
[Quick Add](#)

Gregor's Conferences Details
[Calendar Details](#) | [Share this calendar](#) | [Notifications](#)

Calendar Name: Gregor's Conferences

Description: My public speaking engagements

Location:

e.g. "San Francisco" or "New York" or "USA." Specifying a general location will help people find events on [Google Maps](#) (if public).

Calendar Address

Please use the following address to access your calendar from other applications. You can copy and paste this into any feed reader.

<http://www.google.com/calendar/feeds/k6bnejmglue0r1tsg6bfhku8@group.calendar.google.com/public/basic>

OK

Auto-accept invitations
Calendars for resources like conference rooms can automatically accept invitations from people with whom the calendar is shared when there are no conflicting events. [Learn more](#)

Auto-accept invitations that do not conflict.
 Automatically add all invitations to this calendar.
 Do not show invitations.

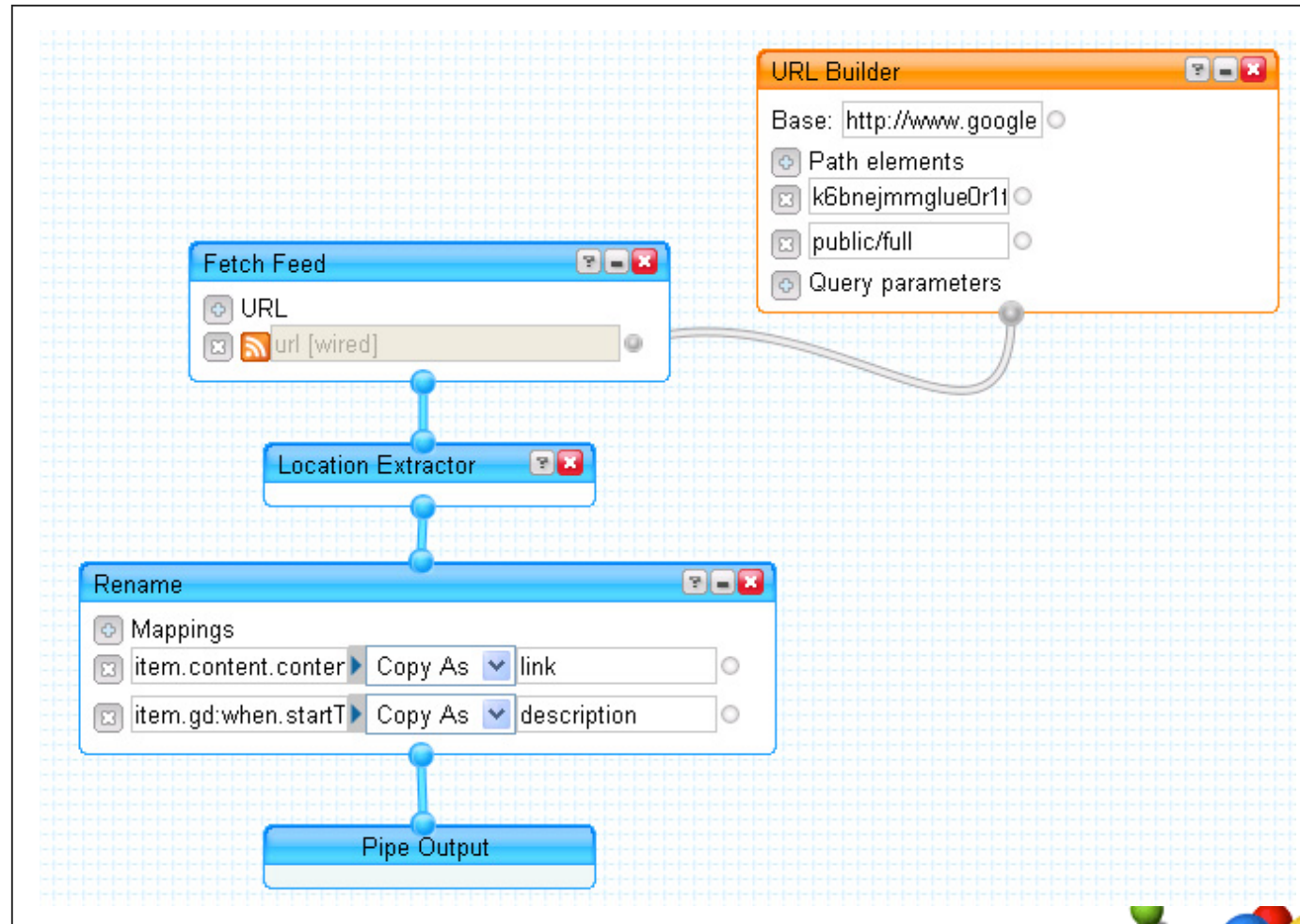
Calendar Address: [XML](#) [iCAL](#) [HTML](#)
[Learn more](#) [Change sharing settings](#)
This is the address for your calendar. No one can use this link unless you have made your calendar public.

Private Address: [XML](#) [iCAL](#) [HTML](#) [Reset Private URLs](#)
[Learn more](#)
This is the private address for this calendar. Don't share this address with others unless you want them to see all the events on this calendar.

« [Back to Calendar](#) [Save](#) [Cancel](#)



Yahoo! Pipe



Yahoo! Pipes

- Data flow pipeline editor
- Input: any XML, Output: RSS, JSON, KML
- Visual, browser-based editor, simple debugging by inspection
- Pipes hosted at Yahoo!, accessible *via* URL
- Users can share and clone pipes



Google Mashup Editor

- AJAX development framework
- Rich rendering off data feeds using templates
- Browser-based IDE
- One click deployment
- Event model for rich user interactivity
- User entered data (by application / by user)
- Built-in support for Google Maps



Mashup Editor Application

```

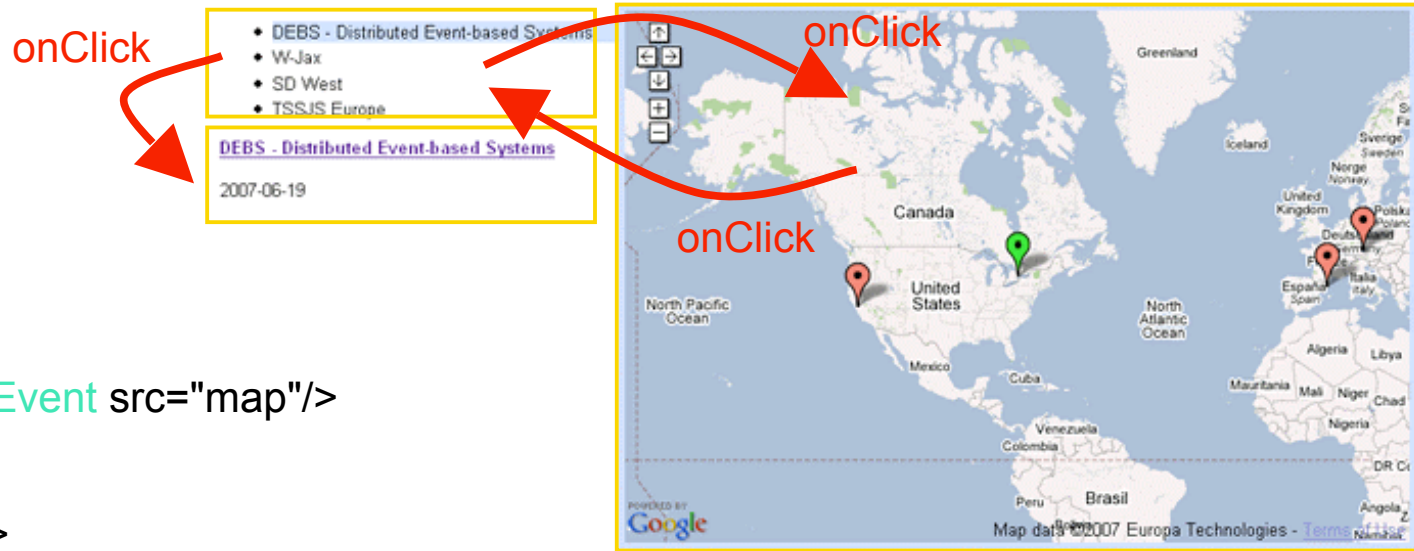
<gm:page title="GregorConferenceMap">
  <h1>Gregor's Conference Travel</h1>
  <table width="900">
    <tr valign="top">
      <td width="300">
        <gm:list id="myList" data="http://pipes.yahoo.com/pipes/pipe.run?_id=...&_render=rss"
          pagesize="10">
          <gm:handleEvent src="map"/>
        </gm:list>
        <gm:item id="item" template="itemTemplate">
          <gm:handleEvent src="myList"/>
        </gm:item>
      </td>
      <td class="mainPanel">
        <gm:map id="map" data="{myList}" latref="geo:lat"
          lngref="geo:long">
          <gm:handleEvent src="myList"/>
        </gm:map>
      </td>
    </tr>
  </table>
</gm:page>

```



Google Mashup Editor Event Model

Gregor's Conference Travel



```

...
<gm:list>
  <gm:handleEvent src="map"/>
</gm:list>

<gm:item ... >
  <gm:handleEvent src="myList"/>
</gm:item>

...
<gm:map ... >
  <gm:handleEvent src="myList"/>
</gm:map>

```



Programming Models

- Data pipeline
- Declarative within HTML DOM tree
- Query pipeline (IBM Damia)
- Visual programming back in vogue?
 - Intuitive
 - Scalability concerns



Snags (Small Picture)

- Spec vs. common practice, *e.g.* RSS GUIDs
- Atom vs. RSS feed formats
- Absence of schema does not mean no data mapping issues
- XPATH (in various guises)
- Debugging (especially in declarative models)



Snags (Big Picture)

- License agreements
- Inside the enterprise
- Security
- Service-level agreements
- Contract changes
- Scalability



Useful Tools



 www.feedvalidator.org



Mashups vs. SOA vs. Web Services vs. EAI

Mashups

- User-driven
- Bottom-up
- Quick time to value
- Laissez faire
- Design by sample data
- Reuse by copy-paste
- Uses services

EAI / SOA

- IT driven
- Top-down
- Longer time
- Robust, guarantees
- Design by contract
- Service re-use
- Uses services

It's all (still) about integration!



Resources

- **Blog / Tutorial**

- www.eaipatterns.com/ramblings.html
- code.google.com/support/bin/topic.py?topic=12044

- **Products**

- code.google.com/gme
- pipes.yahoo.com

- **Market Watch / Directories**

- programmableweb.com

- **Events**

- **Mashup Camp**

