



Mashing Up with Google Mashup Editor and Yahoo! Pipes

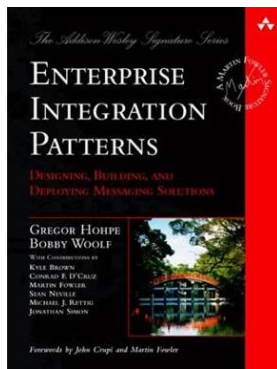
Gregor Hohpe

www.eaipatterns.com



Who's Gregor?

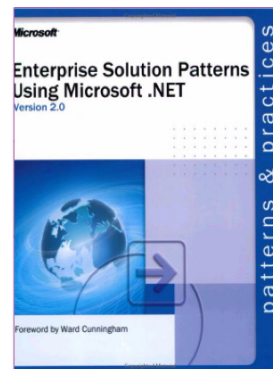
- Distributed systems, enterprise integration, service-oriented architectures, mashups
- Write code every day. Share knowledge through patterns.
- www.eaipatterns.com



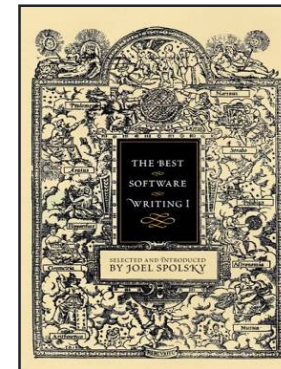
Enterprise Integration Patterns
Addison-Wesley



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

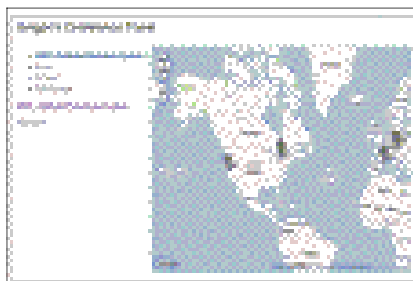
A web application that combines data from more than one source into an integrated experience.

- 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

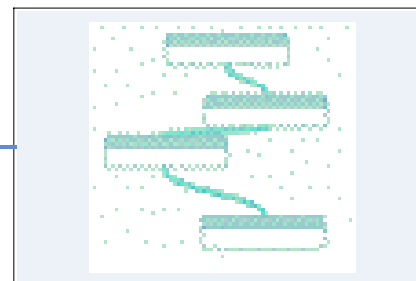


Mashup Anatomy

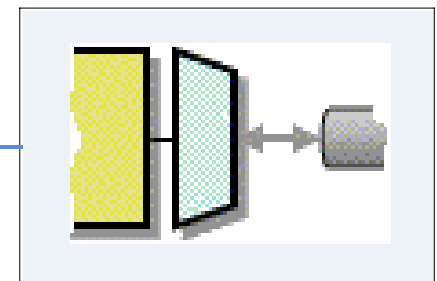
Front-End



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

The screenshot shows the Google Calendar interface in a Mozilla Firefox browser window. The browser's address bar shows the URL <http://www.google.com/calendar/render>. The page title is "Google Calendar - Mozilla Firefox". The user is logged in as "gregor@hohpe.com". The calendar is set to "October 2007" and is displayed in a "Month" view. A green bar highlights the event "Colorado Software Summit" spanning from Sunday, October 21st to Saturday, October 27th. The left sidebar shows "My Calendars" with "Gregor Hohpe" and "Gregor's Conferences" selected, and "Other Calendars" with "Dev Events" and "San Francisco Festivals" listed. The bottom status bar shows "Done".



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 your calendar (if it's 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.

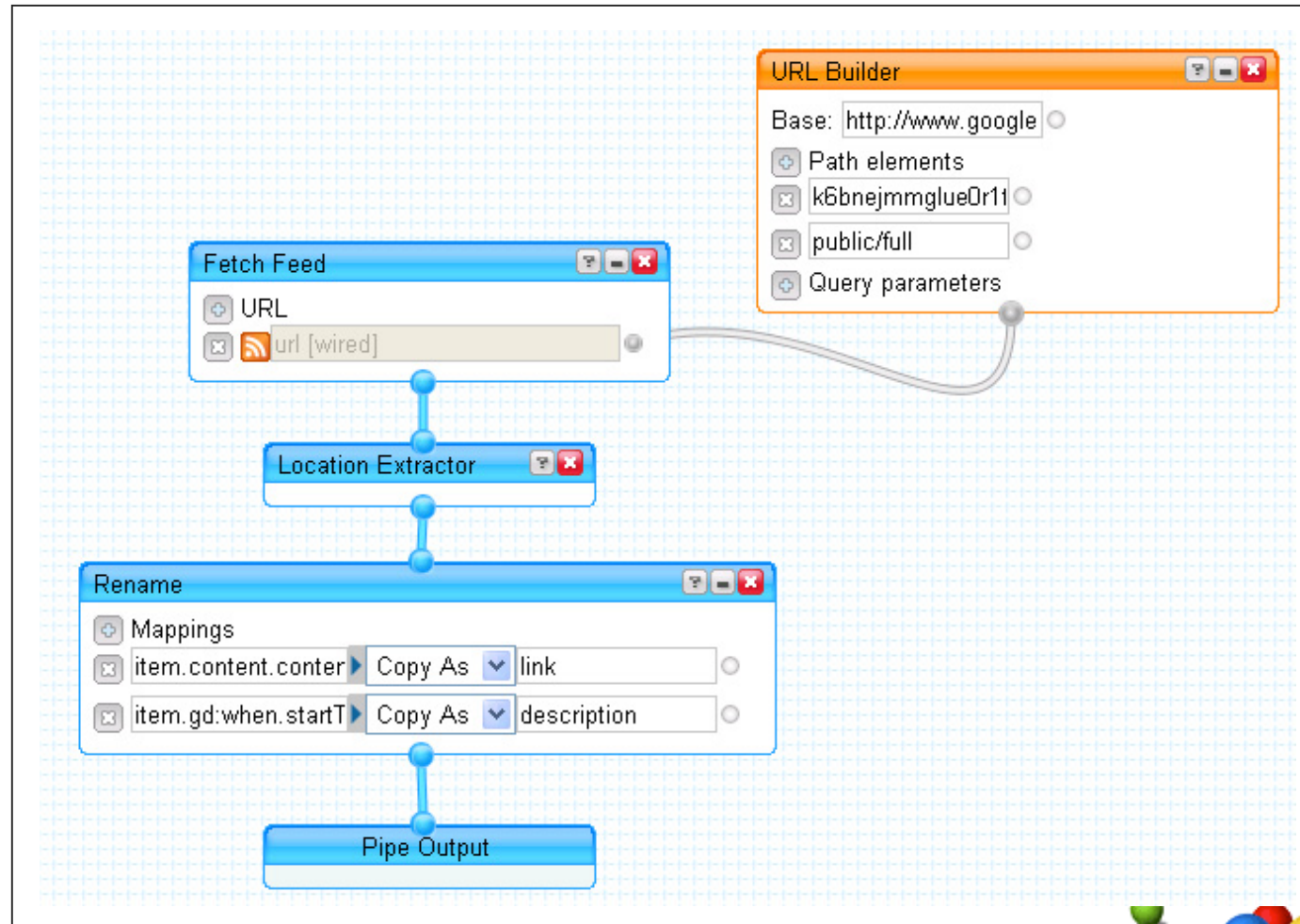
Calendar Address: [XML](#) [iCAL](#) [HTML](#)
[Learn more](#) [Change sharing settings](#)
This is the address for your calendar. No one can use this link unless you have made your calendar public.

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>

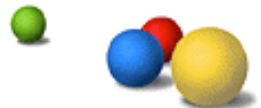
...
<gm:map ... >
  <gm:handleEvent src="myList"/>
</gm:map>

```



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**

