

Applikationen im Browser Webservices ohne Grenzen

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Java Forum Stuttgart

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About Me

- Software Technik - FHTE Esslingen
- DB2e - IBM
- Consulting (LBBW) - Intellixx
- Developers Program - eBay
- Developer Network - Yahoo!

What's coming up

1. Web 2.0
2. Mashups
3. Web Services - XML and beyond
4. Authentication Web Services
5. Developer Candy

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1. Web 2.0

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What is Web 2.0?

Strategic Positioning

- The web as a platform

User Positioning

- You control your own data

Core Competencies

- Services, not packaged software
- Architecture of participation
- Remixable, right to remix
- Software above the level of a single device
- Harnessing collective intelligence

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Source: Tim O'Reilly on Web 2.0, <http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html>

What is Web 2.0?

Taxonomy (Directories)	→	Folksonomy (Tagging)
Screen scraping	→	Web services
Personal websites	→	Blogging
Bookmarks	→	del.icio.us
Ofoto	→	Flickr
evite	→	Upcoming.org
DoubleClick	→	Google AdSense

- User generated content
- Social Networks

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Source: Tim O'Reilly on Web 2.0, <http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html>

It's not only about data...

- It's about people and developers
- Social Networks
- Enable users to consume data in their own way
- Platforms for identity, reputation, your network, storage...
- Yahoo! Hackday US / London

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US Hackday

Event:

- Learning, Hacking, Camping
- Social aspect of Web 2.0?

Numbers:

- 350 developers came to Yahoo!
- One of them was Beck
- 4000 Pictures on Flickr (hackday06)
- 56 hacks presented.



And the winner is...

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Hackday Winners

- **Blogging In Motion** (blogginginmotion.com),
 - Combined a camera, a handbag, a pedometer and the Flickr API
 - Takes a picture after every few steps
 - Automatically uploads to Flickr
- **Outside the box!**
- **It doesn't have to be**
 - Web2.0
 - AJAX
 - Mashups
 - JSON
 - Social networking
- **But it can...!** ☺



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UK Hackday

Numbers:

- Location: Alexandria Place
- Got struck by lightning twice
- 500 developers came
- 5600 Pictures on Flickr (hackdaylondon)
- 76 hacks presented



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2. Mashups

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What is a Mashup?

"A mashup is a website or web application that seamlessly combines content from more than one source into an integrated experience."

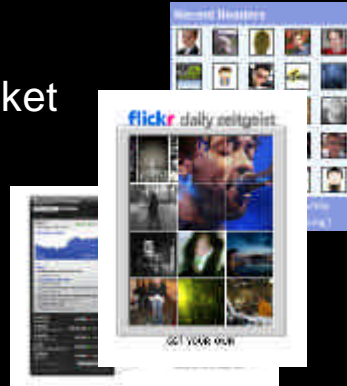
- Mixing and Remixing Content.
- Sources
 - APIs
 - Feeds - RSS / Atom - gData
 - HTML (Scraping)
- Revolutionized web development!
- Mostly non-commercial usage

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It's about openness It's about Off-Network

- Badges / Widgets / Snippets
- Get the content to the users where it's value to them
- How Flickr and Photobucket got distribution
- Facebook (f8), Myspace

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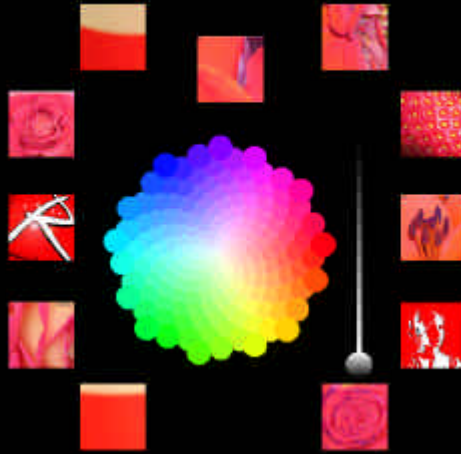
Yahoo! APIs



<http://developer.yahoo.com>

<http://krazydad.com/colrpickr>

flickr Flickr Central Experimental Color Picker - Jan Skagardh



<http://developer.yahoo.com>

<http://www.rollyo.com/>

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This is a beta of Rollyo. Please use our [contact form](#) to send us any feedback.

ROLLYO
Beta



Roll Your Own
Edit your searchroll

Manage Searchrolls

Delete, Rename, or Reorder your Searchrolls

Searchroll Name:

Choose a name for your searchroll. Be as descriptive as possible. (Limit 28 characters)

Sources:

Enter up to 28 web site address (URLs) - one per line.
Use only top level domains such as .com or .support.apple.com.

Category:

Choose a category where you would like your Searchroll listed in the Rollyo directory.

Tags:

Enter any number of keywords, separated by commas, to help other users find your

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Multiple APIs: Eventbrowser <http://api.local.yahoo.com/eb>



3. Web Services XML and beyond

Styles of APIs and Web Services

- REST, yREST or RESTful
- RSS
- SOAP
- JavaScript, ActionScript APIs
- HTTP GET or POST

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REST(ful) MyWeb2.0 Example

What is REST:

A stateless client/server protocol: each HTTP message contains all the information necessary to understand the request. As a result, neither the client nor the server needs to remember any communication-state between messages.

<http://search.yahooapis.com/MyWebService/V1/urlSearch?appid=dantheurer&yahooiid=dantheurer&results=1&output=xml>

- Host name
- Service
- Version
- Call

Parameters:

- appid
- yahooiid
- results
- output
- callback

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MyWeb2.0 Response XML

```
<?xml version="1.0"?>
<ResultSet xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" ...
  totalResultsAvailable="52" totalResultsReturned="1" firstResultPosition="1">
  <Result>
    <Title>Yahoo! Developer Network</Title>
    <Summary>APIs, Code & more</Summary>
    <Url>http://developer.yahoo.com/</Url>
    <ClickUrl>http://developer.yahoo.com/</ClickUrl>
    <User>dantheurer</User>
    <Note></Note>
    <Date>1148078778</Date>
    <Tags>
      <Tag>api</Tag>
      <Tag>web 2.0</Tag>
      <Tag>webservices</Tag>
    </Tags>
  </Result>
</ResultSet>
```

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MyWeb2.0 Response serialized PHP

```
a:1:{s:9:"ResultSet"; a:4:{
  s:21:"totalResultsAvailable";s:2:"52";
  s:20:"totalResultsReturned";s:1:"1";
  s:19:"firstResultPosition";s:1:"1";
  s:6:"Result"; a:8:{
    s:5:"Title"; s:24:"Yahoo! Developer Network";
    s:7:"Summary";s:211:"APIs, Code & more";
    s:3:"Url";s:27:"http://developer.yahoo.com/";
    s:8:"ClickUrl";s:27:"http://developer.yahoo.com/";
    s:4:"User";s:10:"dantheurer";
    s:4:"Note";s:0:"";
    s:4:"Date";s:10:"1148078778";
    s:4:"Tags";a:1:{
      s:3:"Tag";a:3:{
        i:0;s:3:"api";
        i:1;s:7:"web 2.0";
        i:2;s:11:"webservices";
      }
    }
  }
}
```

```
}}}}
```

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JSON

JavaScript Object Notation

...&output=JSON&callback=cbFunction

- Proxy free AJAX development
- No XML parsing required
- Less overhead on the wire
- Fast

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JSON – Dynamic Script Tag

- Create a script node. The `src` url makes the request.
- The server sends the JSON text embedded in a script.
 - `cbFunction({ ... JSONtext ... });`
- The function `cbFunction` gets called with the result data as value.
- You have to be able to trust the service provider

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MyWeb2.0 Response JSON

```
cbFunction( {"ResultSet":{
  "totalResultsAvailable":52,
  "totalResultsReturned":1,
  "firstResultPosition":1,
  "Result":[{"
    "Title":"Yahoo! Developer Network",
    "Summary":"APIs, Code & more",
    "Url":"http://developer.yahoo.com/",
    "ClickUrl":"http://developer.yahoo.com/",
    "User":"dantheurer",
    "Note":"",
    "Date":1148078778,
    "Tags":{"
      "Tag":["
        "api",
        "web 2.0",
        "webservices"
      ]
    }
  ]
}
```

}}}}))

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4. Web Service Authentication

<http://developer.yahoo.com>

The Power of Authentication

- At this point it gets really interesting. Not only can you write at that point but you can get personalized content.
- Authenticated APIs
 - Your Bookmarks
 - Your Events
 - Your Photos
 - Your Mail - New
- Y! Mail is a biggest online email platform with over 250 million users.
- A multiple of that in total registered users

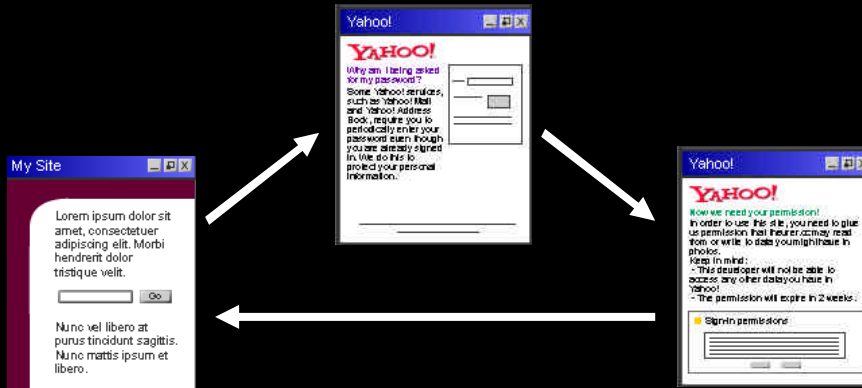
<http://developer.yahoo.com>

Browser Based Authentication

- Similar to Flickr Auth
- Recent implementations are
 - OAuth from AOL
 - Windows Live ID from Microsoft.
- Potential to enable a lot of data API's
- It can be used to log in to different applications with a Yahoo! ID.

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How Browser-Based Authentication Works



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BBAuth Demo



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QuickTime™ and a
TIFF (LZW) decompressor
are needed to see this picture.

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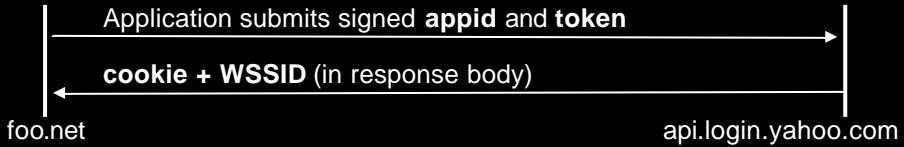
<http://developer.yahoo.com>

BBAuth Application Flow



In the re-direct to the application's success URL, Yahoo includes a **token**

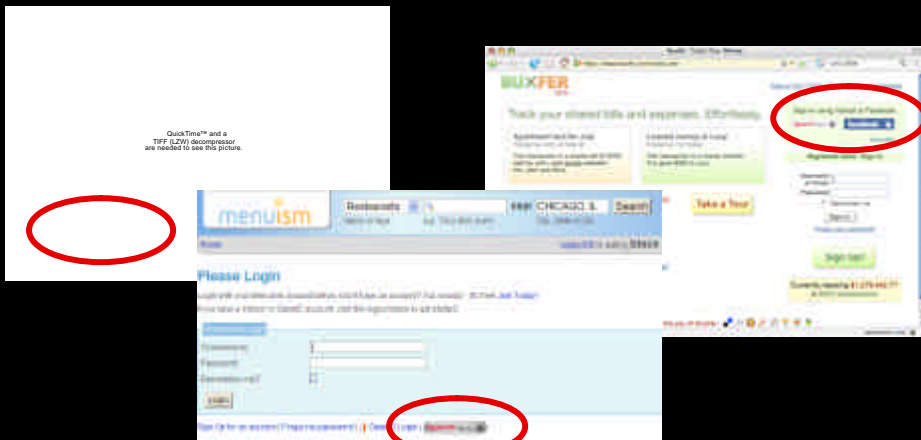
The calls are signed with the secret issued by Yahoo.



- cookies are valid for one hour
- foo.net can re-submit token for a fresh cookie for up to 14 days

Single Sign-On

idproxy.net - menuism.com - buxfer.com



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5. Developer Candy

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Javascript User Interface Library (YUI)

- A collection of JavaScript libraries you can use in your Web development
 - Complex user interface controls
 - A cross-browser Ajax library
 - Connection, event, drag-drop and more
- Updated frequently
 - Code available on Sourceforge
 - Docs available at <http://developer.yahoo.com/yui/>
- Free and open-source (BSD license)

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Design Patterns

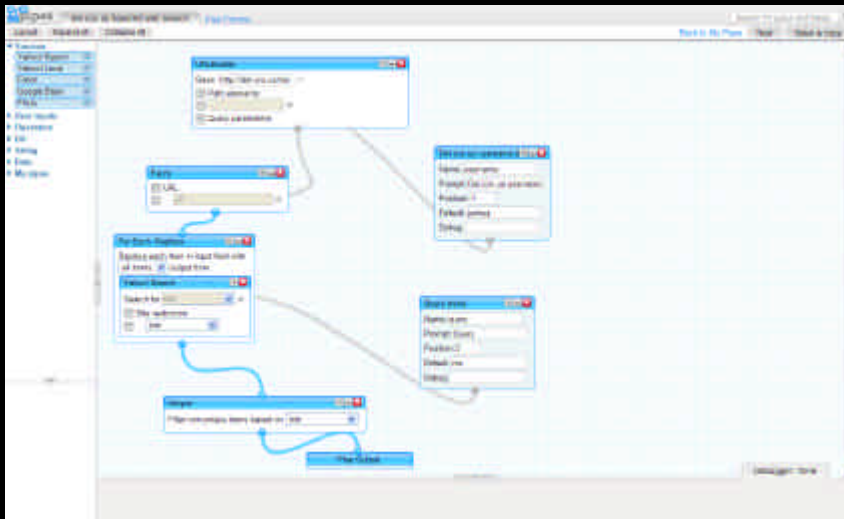
A pattern describes an optimal solution to a common problem within a specific context.

- Auto-Complete
- Breadcrumbs
- Drag and Drop
- Tabs (Module / Navigation)
- Rating an Object
- Pagination (Objects / Pages)
- Writing a Review



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Yahoo! Pipes



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