

Mashups

Overview

- Web 2.0
- Mashups in general
- Mapping Mashups
- Data formats and ressources
- Creating your own mashup
 - Tools

INTRODUCTION

Web 2.0

- Criteria for Web 2.0 Applications (T. O'Reilly):
<http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html>
 - Lightweight Programming Models"
 - Design for "hackability" and remixability
 - Innovation in assembly





<http://kosmar.de/archives/2005/11/11/the-huge-cloud-lens-bubble-map-web2>

What is this “2.0” all about anyway?

- Collaboration
- Interoperability: Similar to interoperability in Geoinformatics
 - Different systems can talk to one another based on acknowledged standards
- Flexibility: continuously extended
- Simplicity
- the “read-write” Web

Collaboration: User generated content

- Participation: Content is created or shared by the users of a service, rather than provided by a central editorial team.
- Examples
 - flickr
 - panoramio
 - Ebay
 - scribd
 - But also comments in amazon.com etc.

Source: <http://www.ebizmba.com/articles/user-generated-content> [2008-10-17]

Example

- Modern, intuitive user interface
- <http://www.scribd.com/publisher/integration>

Integrating iPaper into Your Site

iPaper is the best way to view documents on the web, and you can add iPaper documents to your web pages quickly and easily. There are several methods you can use to embed iPaper in your website, each geared toward specific requirements:



Custom Integration with the Scribd API

Use the [Scribd API](#) to harness the full power of Scribd's scalable conversion system, storage system, ad network, search engine, and iPaper viewer on your website at no cost to you. The Scribd API is the most powerful and customizable way to upload documents to Scribd, convert documents to iPaper, manage existing documents on your website, and find the content you need - fast. The Scribd API is REST-based and similar in design to Flickr's or Facebook's API, so a basic level of web development experience is required.

[Learn more about the Scribd API »](#)



Embed Documents on Your Web Pages

Use [Simple Embed](#) if you have only a handful of documents. To get started just upload your documents to Scribd. We will instantly convert them to iPaper, store them on our secure servers, and host them on Scribd.com. You can then copy and paste the embed code from Scribd and embed the documents on your website.

[Learn more about simple embeds »](#)



QuickSwitch

QuickSwitch is the easiest way to upgrade websites with many documents to iPaper! QuickSwitch works in the background to convert your documents to iPaper with no user interaction, no site downtime, and no advanced programming. You simply copy-and-paste a small block of code into your webpage, and QuickSwitch does the rest. QuickSwitch can even embed your new iPaper content in your website for you!

[Learn more about QuickSwitch »](#)

Collaboration: Opportunities

- Content
- Deep feelings of involvement, reputation
- Showing support for certain activities
- Regular updates to a Web2.0 site
- Viral potential

Collaboration: Social networking

- Social networking sites let people find, contact, and collaborate with each other, based on shared social status or interests.
- Examples
 - Facebook
 - LinkedIn
 - StudiVZ

Social networking: Opportunities

- “Wisdom of crowds” - Crowd-sourcing /
- Leverage resources - Members support each other
- Many connections strengthen a network
- Member-get-member
- Free tools for unions to use

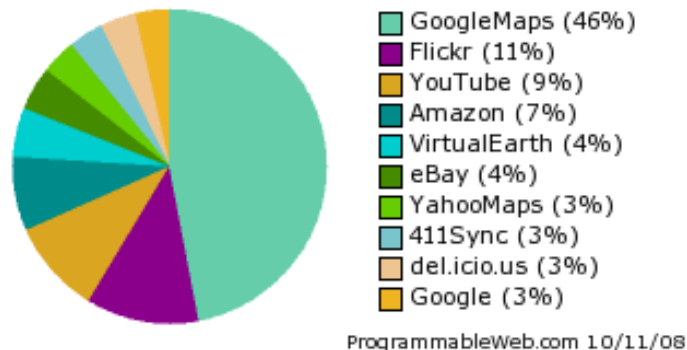
MASHUPS

Definition

- „A mashup is a combination of one or more data sources to create a unified interface and experience.“ <http://mashupawards.com/what-is-a-mashup>
- „... a web application that combines data and/or functionality from more than one source“ <http://en.wikipedia.org/>
- Applications created by third party developers by accessing public APIs
- Websites which combine data and services from across the web
- Remixing information on the web
- Presumably originating from “mixing up music”

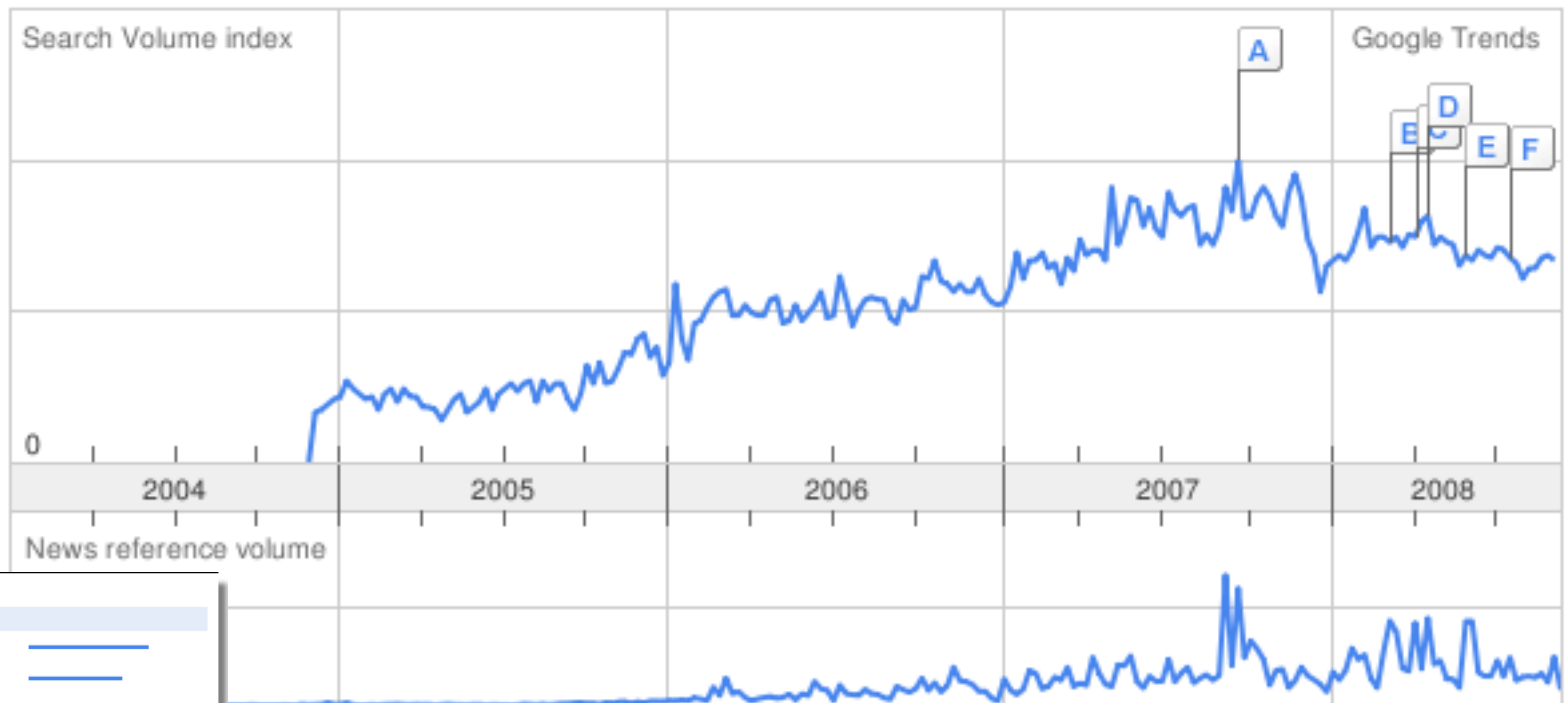
Mashups

- large amount of APIs – currently 517
(<http://www.programmableweb.com/apis>)
- using lightweight web services



23 30Boxes 411Sync 43Things A9 AdobeOnAir AIM AIMPhoneline
 Alexa AlexaThumbnail AlexaTopSites AlexaWebInfo **Amazon**
AmazonEC2 AmazonPayments AmazonQueue **AmazonS3** AOLMusicNow
 AOLVideo AOLWebAIM AonawareDictionary Backpack **Basecamp**
BBC BigTribe bLaugh Blinksale **Blogger** Bloglines BlueDot Box.net
 BTWeb21C buySAFE Buzznet CafePress **ClearForest** Clickatell Clicky
 CNET **CommissionJunction** Compete DabbleDB Dapper
 DataUnisonEbayResearch Daylife deCarta **del.icio.us** DemocracyInAction
Digg DigitalPodcast EarthTools EasyUtil **eBay** EditGrid Entrez eSideWalk ESV
Eventful ExactTarget **Facebook** **FedEx** **FeedBurner** FeedMap
Findory Flickr FollowTheMoney Fotolia FUTEFWikipedia Garmin
geocoder geocoderCanada GeolQ **GeoNames** Gigablast
 GlobeXplorer **Google** **GoogleAdSense** **GoogleAdWords**
GoogleAjaxFeeds **GoogleAjaxSearch** **GoogleBase**
GoogleCalendar GoogleCheckout GoogleClientAuth GoogleCodeSearch
GoogleDesktop **GoogleHomepage** **GoogleMaps**
 GoogleMashupEditor GoogleNotebook GooglePicasa GoogleSafeBrowsing
 GoogleSpreadsheets GoogleTalk GoogleWebAuth **GrouperVideo** **hostip**
HotOrNot **ImageLoop** **indeed** InnerGearsCityState Interfax
 InternetArchive Jaiku Jots JotSpot Kayak **LastFM** LiveContactsJS
 LiveJournal LiveVideo LivingStones Ma.gnolia MacromediaNews Map24
 MapPoint MapQuest MechanicalTurk MetaCarta MicrosoftMSDN Mobivity
 Moreover **MSNMessenger** **Multimap** MusicBrainz MusicMobs NASA
 Naver Nestoria **Netvibes** NewsCloud NewsGator NewsIsFree Ning
NOAA Omnidrive **Ontok** OntokWikipedia OpenDOAR OpenLayers
 OpenPatentServices OpenStreetMap Orb Pageflakes Panoramio **PayPal**
 PhishTank Pingdom Pixagogo Plaxo Plazes **Poly9FreeEarth** PriceRunner
 Prodigem Prosper PubSub Rakuten **RapLeaf** RawSugar RememberTheMilk
 Revver **Rhapsody** Riya Rrove **Salesforce** SecondLife SeqPod
 Shadows SharedBook **Shopping.com** ShutterPoint Simpy SkyhookWireless
Skype SlideShare SmashFly Smugmug Snipshot SNOCAP Sparklines
 SplogSpot SpokenBuzz SpringWidgets Start stikkit StrikelronSMSPro
 StrikelronTaxes StrikelronUSCensus SunlightLabs SuperDataPack Syndic8
 TagTheNet TagTooga Tailrank **Technorati** Textamerica Topicalizer
 TradeSports Trulia **Trynt** Tunelog **Twitter** Twittervision TypeKey TypePad
 UPCLDatabase **Upcoming** UPS UrbanDictionary USGSElevation
 USPostalService USYellowPages **Vast** Veoh **VirtualEarth**
WeatherBug WeatherByCity Weblogs WebPurify WebShots WebThumb
 WeFeelFine Where2GetItSlippyMap WindowsDesktopGadgets
 WindowsLiveDomains WindowsLiveExpo WindowsLiveGadgets
 WindowsLiveLive

Relevance of Mashups according to Google



Regions

1. [United States](#)
2. [India](#)
3. [United Kingdom](#)
4. [Canada](#)
5. [Australia](#)
6. [Netherlands](#)
7. [Switzerland](#)
8. [Sweden](#)
9. [Belgium](#)
10. [Germany](#)

Significance of Mashups

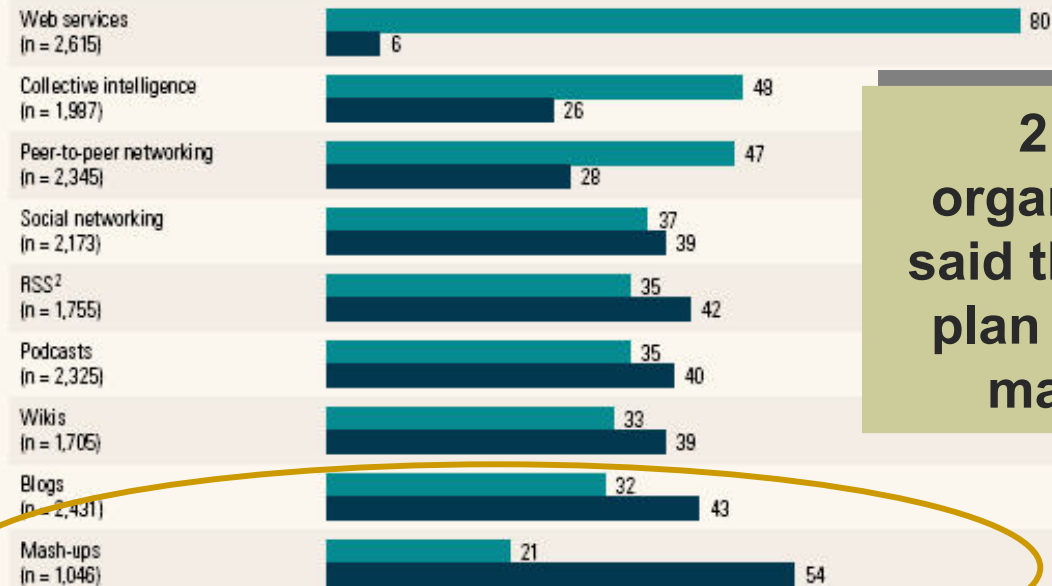
Exhibit 3

Popular bets

% of respondents¹

■ Using or planning to use
■ Not under consideration

Is your company investing in any of the following Web 2.0 technologies or tools?



21% of organizations said they are or plan on using mashups

Source: McKinsey Global Survey; How Businesses are Using Web 2.0; January 2007

¹Respondents whose investment plans are uncertain are not shown; respondents who answered "not familiar enough to say" or "don't know" are excluded.

²Really Simple Syndication.

Mashup opportunities

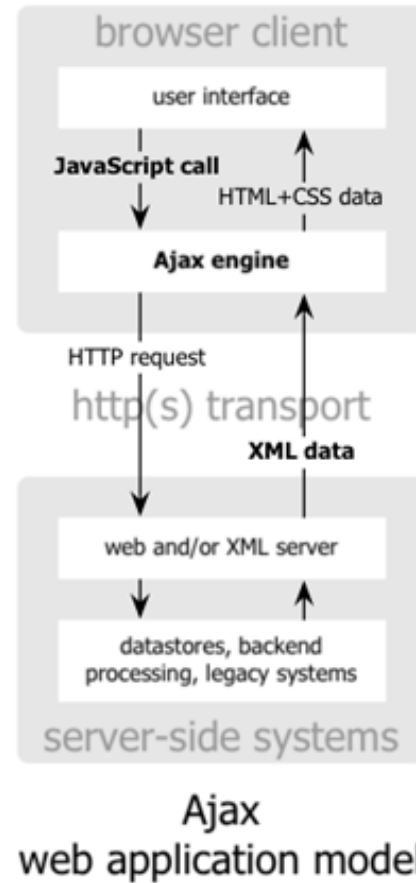
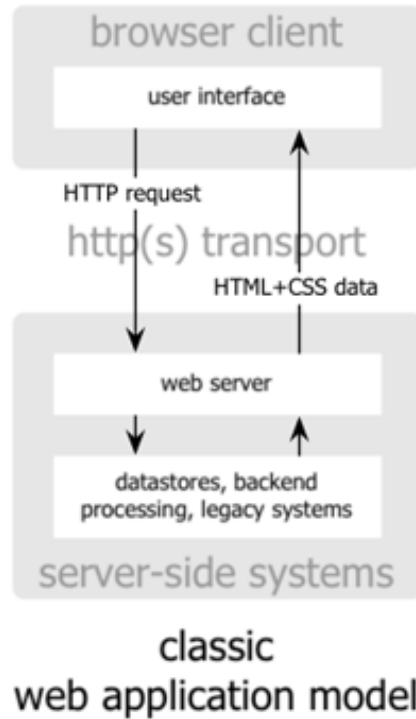
- cheap to maintain if using free APIs / data sources
- Using other people's large data resources will let you present people with tailored pages to their needs
- Useful tools will encourage repeat visits

Technological Background

Ajax: Overview

- Ajax is not an API or a programming language
- Ajax aims to provide more responsive web applications
- In normal request/response HTTP cycles, the browser locks waiting for the response and an entire page must be displayed (□ synchronous)
- With Ajax, asynchronous requests may be made and responses are used to update part of a page
- User can continue to interact with a page while the request is in progress
- Less data needs to be transmitted
- Page update is quicker because only a part of a page is modified

Ajax



The traditional model for web applications (left) compared to the Ajax model (right). (Source: Garret 2005)

Technologies used

Technologie	Aufgabe
Hypertext Transfer Protocol (HTTP)	Datentransfer über ein Netzwerk
eXtensible Markup Language (XML)	Asynchroner Datenaustausch
eXtensible HyperText Markup Language (XHTML)	Beschreibung von Seiteninhalten
Cascading Style Sheets (CSS)	Aussehen der Website
Document Object Model (DOM)	Repräsentation der Daten bzw. Inhalte
JavaScript	Manipulation des Document Object Models und dynamische Darstellung der Inhalte. JavaScript dient gleichzeitig als Schnittstelle zwischen einzelnen Komponenten.
XMLHttpRequest-Object	Bestandteil vieler Browser, um Daten auf asynchroner Basis mit dem Webserver austauschen zu können.

Approaches to Ajax

- Microsoft introduced the XmlDocument and XMLHttpRequest objects which are used to make asynchronous requests directly from JavaScript
- Other browsers followed this path
- Most browsers now name the object XMLHttpRequest

The request phase

- An `XMLHttpRequest` object is used to create the request
- A callback is a function called when a response is received
 - The function name is assigned to a property of `XMLHttpRequest`
- The `open` method sets up the request
 - Method parameter, either "GET" or "POST"
 - URL parameter with zip code in the URL
 - A parameter signifying asynchronous or not
- The `send` method sends the request

The Response Document

- The response from the server is created by a program running on the server
- A string with the city and state is sent as the response
- In our practise, this will be in PHP

16.2 The Receive Phase

- The function that parses the response must have access to the XMLHttpRequest object
- This cannot be global since there may be multiple outstanding requests at any time
- The callback becomes an anonymous function which is defined in the getPlace method and keeps references to the XMLHttpRequest object held in a local variable
- The response handler only acts if the readyState is 4, meaning the response is complete

16.2 Cross-Browser Support

- Older Microsoft browsers uses a different approach to getting the request object
- Testing the existence of `window.XMLHttpRequest` differentiates the browsers
- In the older browsers

```
new ActiveXObject("Microsoft.XMLHTTP")
```

- creates the object needed

MAPPING MASHUPS

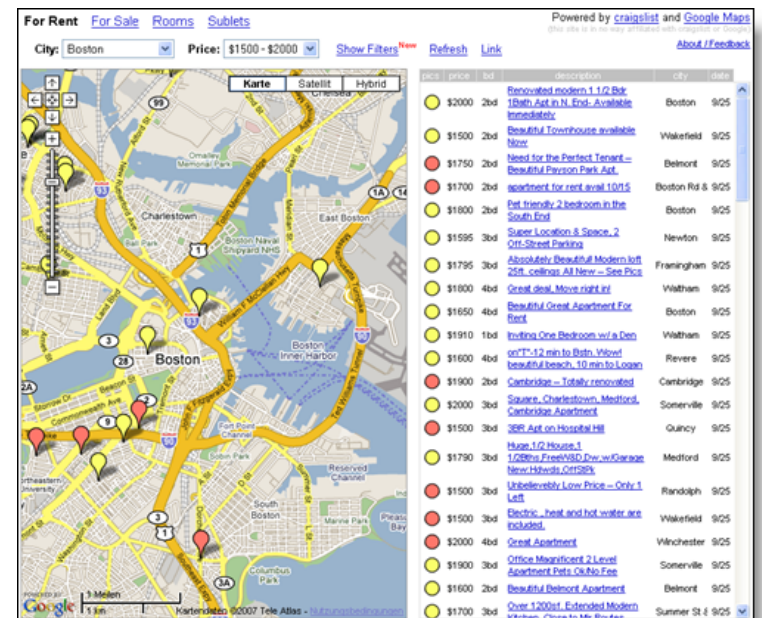
Map-based Web Mashups

- mashups that involve geodata
- ~58% of Mashups are mapping mashups (according to programmableWeb)
- Three main API providers:
 - Google Maps (50% of all mashups)
 - Yahoo Maps (4% of all mashups)
 - Microsoft Virtual Earth (4% of all mashups)

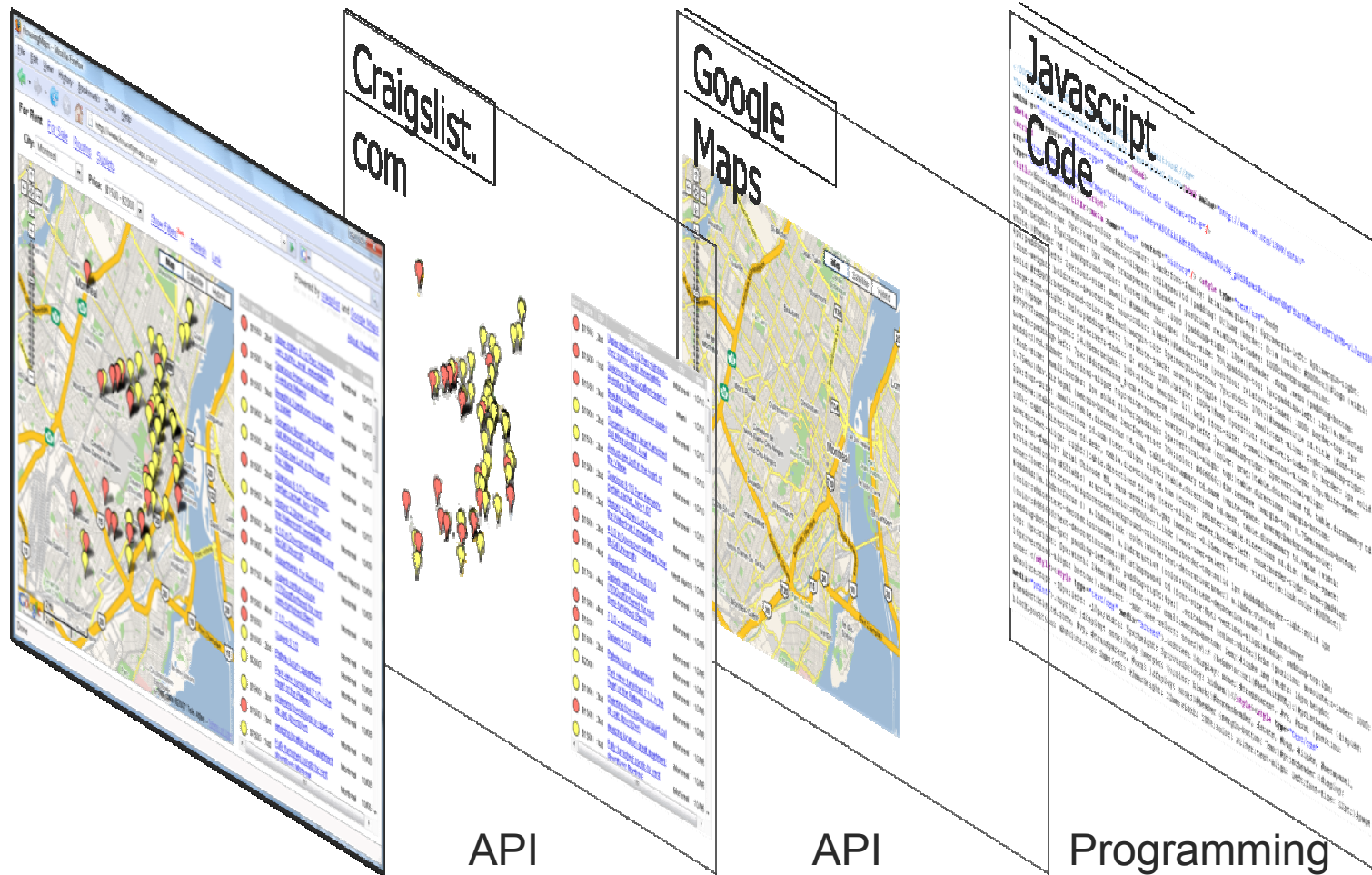
Mapping Mashups

- Typical example: usage of cartographic data from Google Maps

$\text{www.craigslist.com} + \text{maps.google.com} = \text{www.housingmaps.com}$



Mapping Mashup: What's behind?





Examples

Example: Documentation (by NGOs)

- <http://www.altsean.org/Photogalleries/ProtestsMap.php>
- Based on <http://maps.google.com/maps/user?uid=108894007309163730326&hl=en&ptab=2>

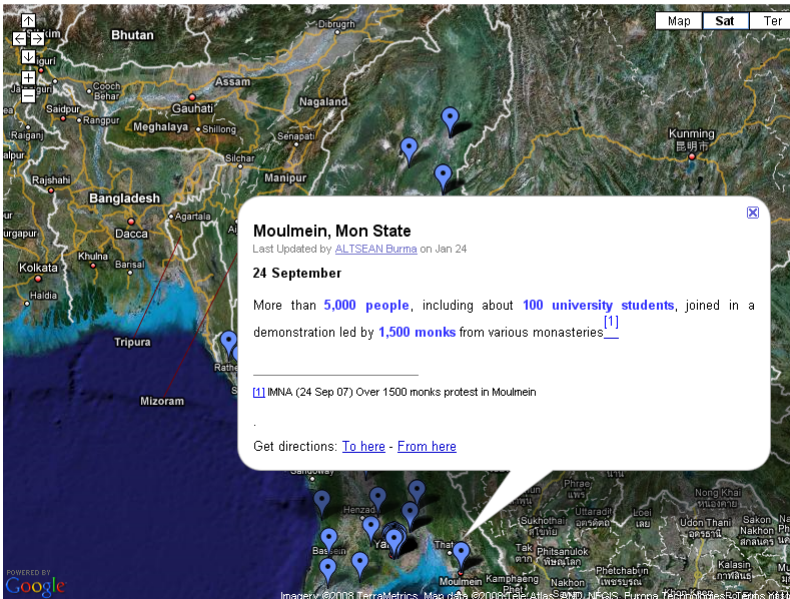
ALTSEAN-BURMA

Alternative Asean Network on Burma
campaigns, advocacy and capacity-building for human rights

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MAP OF DEMONSTRATIONS AUGUST-SEPTEMBER 2007

Zoom in and click on the placemarks to see details of the protests.



Moulmein, Mon State

Last Updated by [ALTSEAN Burma](#) on Jan 24

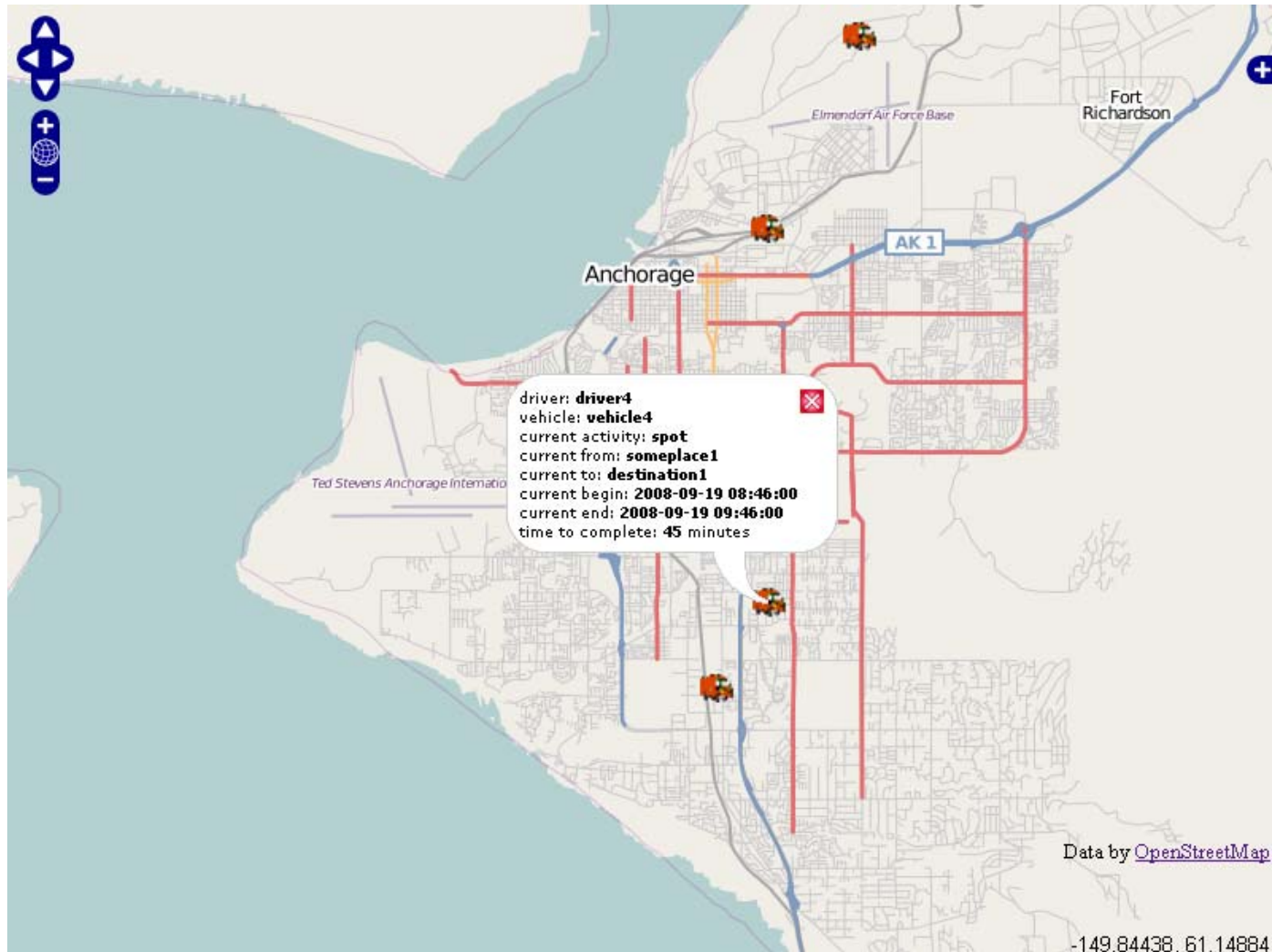
24 September

More than **5,000 people**, including about **100 university students**, joined in a demonstration led by **1,500 monks** from various monasteries^[1]

^[1] [INNA](#) (24 Sep 07) Over 1500 monks protest in Moulmein

Get directions: [To here](#) - [From here](#)

Fleet management



http://maps.dispatchsys.com/dispatch_map/test_map/ol_test27.htm

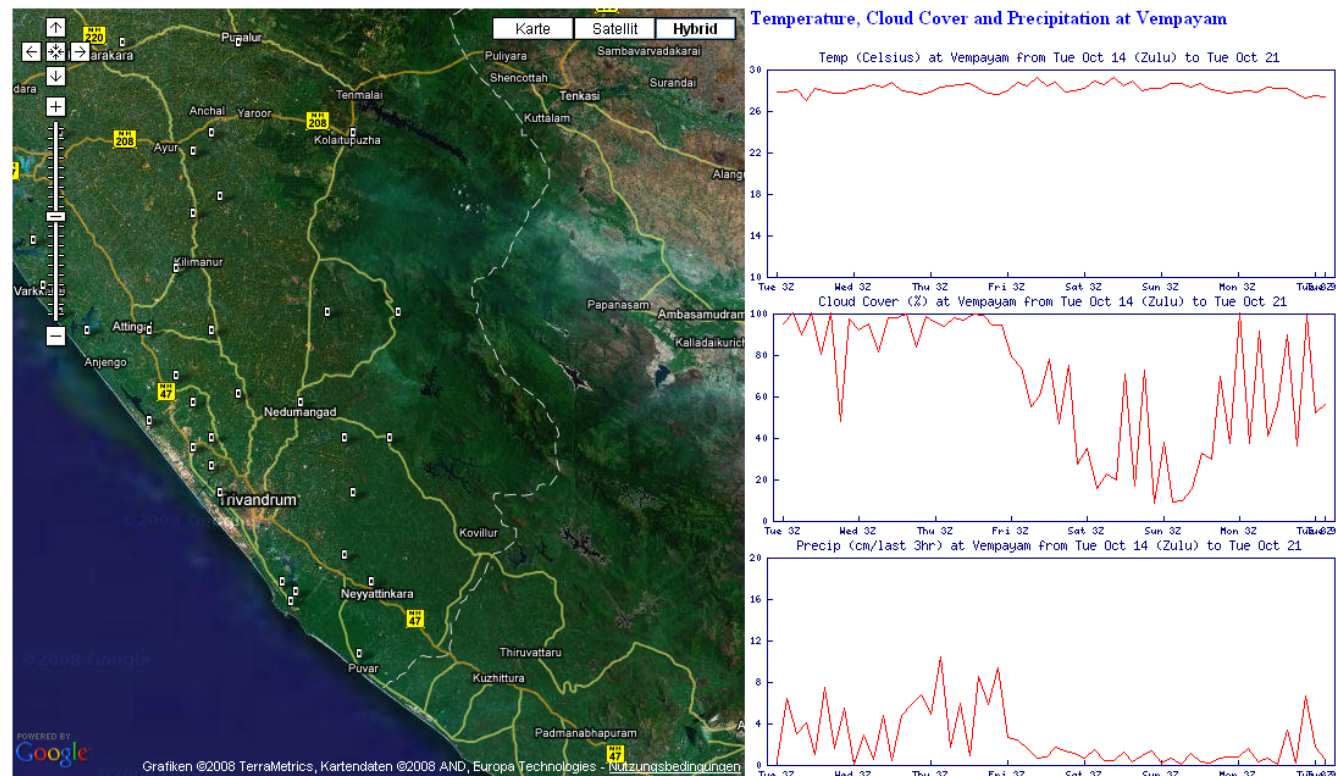
Example: Integration of weather data

- <http://www.edugrid.ac.in/webgis/gwebgis.html>

Dynamic Weather Information and Forecasting System

[Home](#)

Thiruvananthapuram



FORMATS

XML (Extensible Markup Language)

JSON (JavaScript Object Notation)

KML (Keyhole Markup Language)

CSV (Comma Separated Value)

Successful Formats (Outside the OGC)

- Geo + RSS/Atom = GeoRSS
 - Geo + JSON = GeoJSON
 - Geo + Tags = GeoTagging
 - KML?
-
- Prevalent, convenient content creation & compelling viewer

XML (Extensible Markup Language)

- XML stands for eXtensible Markup Language
- XML was designed to describe and to contain data.
- XML is a markup language much like HTML, but XML tags are not predefined in XML. You must define your own tags
- XML uses a Document Type Definition (DTD) or an XML Schema to define the structure of the data.
- XML with a DTD or XML Schema is designed to be self-descriptive.

Principle of Markup

```

10
3463098.153
20
5430038.584
30
0.0
    
```

DXF

eXtensible

- Markup Language
- Definition of structural elements for data
- Strict syntax

```

EF      59009      BGRUND
002660042 000133021 000133022 000133023 000133041
001774001 000147000 002660104 002660041 002660042
E
    
```


Elementname *Attributname* *Elementname* *Attributname, free selectable*

<person wohnort="Karlshorst">Franz Josef Behr</person>

 Start-Tag with Attribute Start-Tag Element content End-Tag

References

- World Wide Web Consortium, XML <http://www.w3c.org/XML/>



Leading the Web to its Full Potential...

Activities | Technical Reports | How Tutorials | New Visitors | About W3C | Join W3C

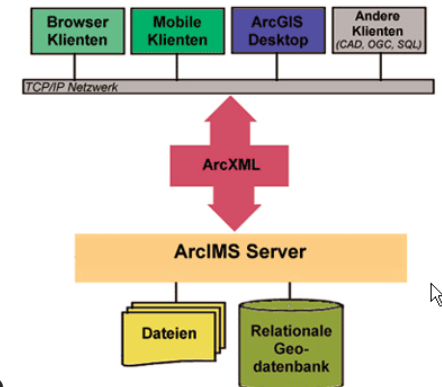
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W3C A-Z

- Accessibility
- Agents
- CSS2
- CSS3
- CSS Validator
- Device Independent
- DOM
- HTML
- HTML Table
- HTML Validator
- HTTP
- Internationalization
- Isense
- Languages
- Media
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- Navigation
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XML and GIS

- XML is often used for the description of meta data
- NAS - the new emerging German data exchange standard,
<http://www.adv-online.de/veroeffentlichungen/afis-alkis-atkis/geoinfodok-index-3-0.htm>
- Open GIS Consortium (OGC)
 - Geography Markup Language (GML)
 - XML-based messaging: GetCapabilities, GetFeature...
- LandXML.org
- World Wide Web Consortium (W3C)
 - Scalable Vector Graphics (SVG)
 - ...
- ESRI: Arc Extensible Markup Language (ArcXML), the ...
uses for communication between ArcIMS components
- Google Earth's KML
- ...



JavaScript Object Notation (JSON)

- uses JavaScript notation to define (geo-) objects.
- has recently become quite intensively used throughout the web
- For example, several of Google's web-based applications and services can provide feed data in JSON format.
- Advantage: compactness of data representation.
- Certain security aspects must be considered, especially the need to take precautions with user-entered data since it could contain malicious code which then could be executed.

JavaScript Object Notation (JSON)

```
{
  "markers": [
    {
      "lat": 40.078678917425364,
      "lng": 116.58738613128662,
      "html": "<center><div id='ISPRS'><a href='http://... '>Airport</a><br><img src='home/ISPRS/airport.jpg'\></div></center>",
      "label": "Beijing Capital International Airport",
      "icontype": "airport"
    },
    {
      "lat": 39.902773622574756,
      "lng": 116.42115354537964,
      "html": "<center><div id='ISPRS'><a href='http://www.bjrailwaystation.com.cn/'>Railway Station</a><br><img src='home/ISPRS/train.jpg'\></div></center>",
      "label": "Beijing Railway Station",
      "icontype": "train"
    }
  ],
  "lines": [
    {
      "colour": "#33FF00",
      "width": 4,
      "opacity": 0.8,
      "points": [
        { "lat": 39.903390903993035, "lng": 116.41884684562683 },
        { "lat": 39.90309049439747, "lng": 116.4180314540863 },
        { "lat": 39.900543132699426, "lng": 116.41479134559631 }
      ]
    },
    {
      "colour": "#FF0000",
      "width": 4,
      "opacity": 0.8,
      "points": [
        { "lat": 39.95119273428447, "lng": 116.40208840370178 },
        { "lat": 39.95773923195536, "lng": 116.40189528465271 }
      ]
    }
  ]
}
```

GeoJSON

- JSON = JavaScript Object Notation
- lightweight data-interchange format
- efficient use in JavaScript programs

```
{  
  "type": "Feature",  
  "id": "OpenLayers.Feature.Vector_122",  
  "properties": {  
  },  
  "geometry": {  
    "type": "Point",  
    "coordinates": [  
      115.3125,  
      24.9609375  
    ]  
  },  
  "crs": {  
    "type": "EPSG",  
    "properties": {  
      "code": 4326  
    }  
  }  
}
```

CSV

- Comma seperated (delimited) values
- popular in spreadsheets and database technology
- adopted in GIS field

```
Road_0001;Aimin_Jie;Road;Polyline;116.376;39.9309;116.376;39.9266;116.376;39.9317;LINESTRING(116.375686 39.931674,116.375683 39.931593,116.375747 39.93026,116.375806 39.926574)
```

RSS, GeoRSS

- When you think about RSS as the start of a programmable Web, as you expose APIs to your Web sites, amazing things can happen.

When you think about RSS as the start of a programmable Web, as you expose APIs to your Web sites, amazing things can happen.

Bill Gates (2006) [1]

[1] <http://www.microsoft.com/presspass/exec/billg/speeches/2006/03-20MIX.msp> [2008-10-22]

GeoRSS: Example

```
<item>
  <title>
    A5: Karlsruhe Richtung Heidelberg
  </title>
  <link>
    http://www.antenne.de/antenne/meldungen\_deutschland.php
  </link>
  <description>
    Zwischen Bruchsal und Kronau Bauarbeiten,  
rechte Spur gesperrt bis 13.03.2008 16:00 Uhr
  </description>
  <pubDate>
    Tue, 29 Apr 2008 21:33:09 +0200
  </pubDate>
  <georss:line>
    8.6033 49.2269 8.56665 49.1583 8.56 49.148
  </georss:line>
</item>
```

GeoRSS: Geometries

- `<georss:point>45.256 -71.92</georss:point>`
- `<georss:line>`
`45.256 -110.45 46.46 -109.48 43.84 -109.86</georss:line>`
- `<georss:polygon>45.256 -110.45 46.46 -109.48 43.84 -109.86`
`45.256 -110.45</georss:polygon>`

Simple Marker Definition

```
<marker>  
  <name>Aksu</name>  
  <lng>80.333330000</lng>  
  <lat>41.166670000</lat>  
</marker>
```


Keyhole Markup Language - KML

- “Language of Google Earth”
- KML (Keyhole Markup Language) is an XML-based markup language for locating and visualizing features on a 2D or 3D digital map/surface (e.g., Google Earth/Maps)
- Originally developed by Keyhole, Inc. who was acquired by Google in 2004
- KML now is an open standard officially named the OpenGIS® KML Encoding Standard (OGC KML). It is maintained by the Open Geospatial Consortium, Inc. (OGC). The complete specification for OGC KML can be found at <http://www.opengeospatial.org/standards/kml/>.
- The complete XML schema for KML is located at <http://schemas.opengis.net/kml/>.

-
- Unlike GML, KML includes tags and attributes that allow the user to describe how the feature should be rendered and visualized on the digital map
 - KML uses geographic coordinates (lat/long) in WGS84 for its coordinate reference system
 - Each feature is located in 3D space, using one or more x,y,z coordinates

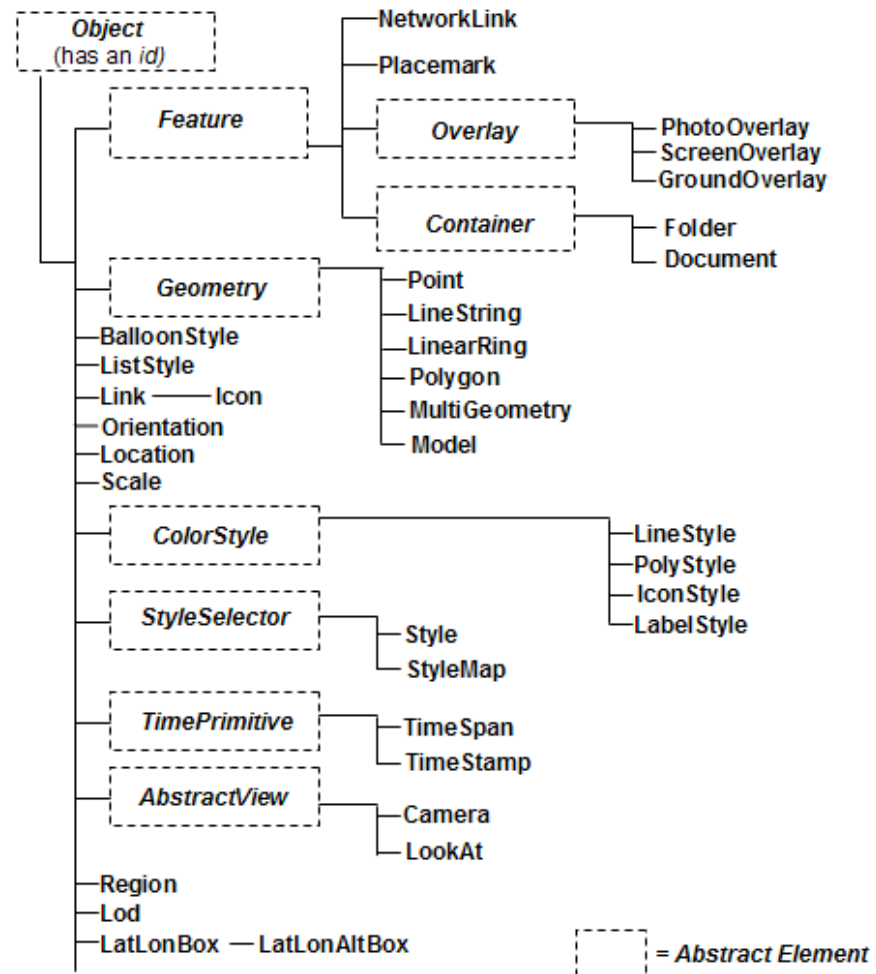
Interoperability

- In addition to Google, many other vendors now utilize KML such as:
 - ArcGIS Explorer
 - Live Search Maps
 - Microsoft Virtual Earth
- Users share locations of events and features
- You can create KML files in Google Earth
- Once you create a KML file, you can copy and paste the KML into a text editor or XML editor to edit
- ArcGIS can create a KML file from features using an ArcScript
- MapInfo can create a KML file using the Google Earth Link Utility (8.5+)

KML Elements

■ Features specified in the KML schema include:

- Placemarks
- Images
- Polygons
- 3D models
- Textual Annotation



KML Placemark Sample

```
<?xml version="1.0" encoding="UTF-8"?>
<kml xmlns="http://earth.google.com/kml/2.0">
<Placemark>
  <description>New York City</description>
  <name>The Big Apple</name>
  <Point>
    <coordinates>-74.006393,40.714172,0</coordinates>
  </Point>
</Placemark>
</kml>
```

Creating KML Files

- You can create KML files in Google Earth
- Once you create a KML file, you can copy and paste the KML into a text editor or XML editor to edit
- ArcGIS can create a KML file from features using an ArcScript
- MapInfo can create a KML file using the Google Earth Link Utility (8.5+)



Using KML Files

- Double-clicking on a KML file will automatically launch Google Earth and zoom to the feature(s)
- KML and KMZ files can be used in Google Maps, however your file must be hosted on a web server
- Google Maps doesn't support every type of KML feature
- ArcGIS Explorer utilizes KML files
- KML files can be shared through the KML Gallery and Google Earth Community

Keyhole Markup Language - KML

```
<Folder>
<name>USGS M&gt;2.5 Earthquakes</name>
<description>Real-time, worldwide earthquake list for the past 7 days
</description>
<Placemark>
<name>M 2.6, Greater Los Angeles area, California</name>
<description>February 22, 2006 09:01:09 GMT<br/>
http://earthquake.usgs.gov/eqcenter/recenteqsww/Quakes/ci14213880.php
</description>
<Style>
<IconStyle>
  <scale>0.5</scale>
  <Icon><href>http://labs.google.com/ridefinder/images/red.png</href></Icon>
</IconStyle>
</Style>
<LookAt>
  <longitude>-117.4733</longitude>
  <latitude>34.2235</latitude>
</LookAt>
<Point>
  <coordinates>-117.4733,34.2235,0</coordinates>
</Point>
</Placemark>
</Folder>
```

HOW TO CREATE A MASHUP

GeoStack

- According to Andrew Turner
<http://highearthorbit.com/>
- Create
- Publish
- Aggregate
- Consume

Come up with an idea

- The first thing you'll need, of course, is an idea - simple is good, useful is better.
- A good place to start: Take a common task, like searching for something ... and make it easier or more efficient

Choose data sources

- Data is provided usually through APIs.
- Popular APIs (Flickr, YouTube): relatively simple to use
- Others, like a shopping cart service, require a bit more fortitude to master (and rightly so).
- Most APIs are built to work with a variety of programming languages

You need an ID

How do I start?

1. [Sign up for a Google Maps API key.](#)
2. Read the [Maps API Concepts.](#)
3. Check out some [Maps API Examples.](#)
4. Read the [Maps API Reference.](#)

Windows Live ID



Create Identity-aware Applications

Windows Live ID is the identity and authentication system provided by Windows Live. Currently, more than 380 million users have credentials that work with Windows Live ID. Three software development kits (SDKs) now make it possible for developers like you to use this powerful service.

READY TO GET STARTED?

Get an App ID

MapTP AJAX API

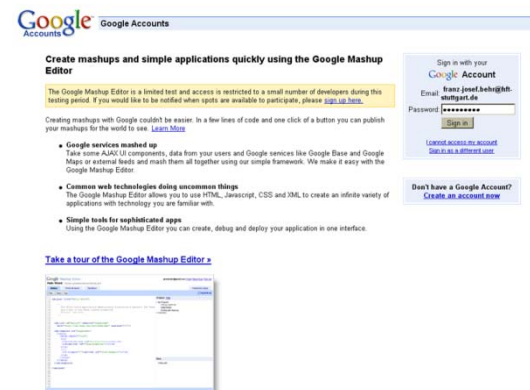
 [E-mail this page](#)

GET YOUR FREE MAPTP AJAX APPLICATION KEY

Use the Free MapTP AJAX API to develop professional mapping applications with the unique interactive mapping technology of MapTP. The applications can be used free of charge on a public, non-password-protected, freely accessible, commercial or non commercial website on the internet. You will be asked to agree to the complete [Terms of Use](#) during the registration process. There is a daily limit of 10,000 transactions or sessions per application key. If you would like to use the Free MapTP AJAX API on more frequently visited websites, please [contact us](#)

Build the mashup

- From scratch: different scale of complexity
 - use HTML, Javascript, CSS and XML to create a variety of applications with technology you are familiar with.
- Using Mashup editors:
- Popular Mashup Editors, i.e. lightweight mashup environments “for assembling personal, enterprise, and Web content into simple, flexible, and dynamic applications” (IBM, <http://services.alphaworks.ibm.com/graduated/qedwiki.html>)
 - Yahoo! Pipes, “a powerful composition tool to aggregate, manipulate, and mashup content from around the web”, <http://pipes.yahoo.com/pipes/>
 - Dapper, <http://www.dapper.net/>
 - QEDWiki



Google AJAX Search API - Map Search Wizard - Mozilla Firefox


Datei Bearbeiten Ansicht Chronik Lesezeichen Extras Hilfe

http://www.google.com/uds/solutions/wizards/mapsearch.html

syndication

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[Developer Forum](#)

Search Google Code

Search

Google AJAX Search API (Beta)

[Google Code Home](#) > [AJAX Search API](#) > [Wizards](#) > [Map Search Wizard](#)

Map Search Wizard - Put a Searchable Map on Your Web Page

Embed a searchable Google Map on your web page and let your users find places around you. Customize how the map should be displayed, and this wizard will write the code for you.

1

Customize it

Map width: pixels

Map height: pixels

Map zoom:


☐ city level
☒ street level
☐ block level

Center location name:

Center location link URL:

Center location address:

Preview center location



powered by Google

2

Tell us about your web site

This control is based on both the Google AJAX Search API and Maps API. Both of these APIs require a free API key that's associated with your [Google Account](#) and the URL of your web site. By using these APIs you are agreeing to the AJAX Search API [terms of use](#) as well as the Maps API [terms of use](#).

Site URL:

Fertig

Start

C:\Dokumente und Einst...

C:\Dokumente und Einst...

Google Maps Tutorial.ppt...

Google AJAX Search ...

[ppgjs] for franz-josef.b...

GMaps_2006_10_17.ppt...

DE

22:06

Publish your Mashup

- Mashup hosting? Which provider?
- Consider where you'll host your mashup
 - Which server-side language is needed? PHP, Java, Ruby on Rails, ...?
 - Operating system: Linux or Windows based hosting?

Judging your Mashup

- Uniqueness
- Creativity
- Usefulness
- Content
- User Experience: intuitively usable? Too many (confusing) data sources?

Caveats

- More visitors than contributors!?
- Will you get the quality you need?
- Can't control people's creativity

DATA SOURCES

Common free data sources

Own data

Common free data sources

- <http://www.geonames.org>
 - <http://OpenStreetMap.org>
 - Wikipedia, like http://en.wikipedia.org/wiki/List_of_cities
 - <https://www.cia.gov/cia/publications/factbook/appendix/appendix-d.html>
-
- But lack of geodata for developing countries

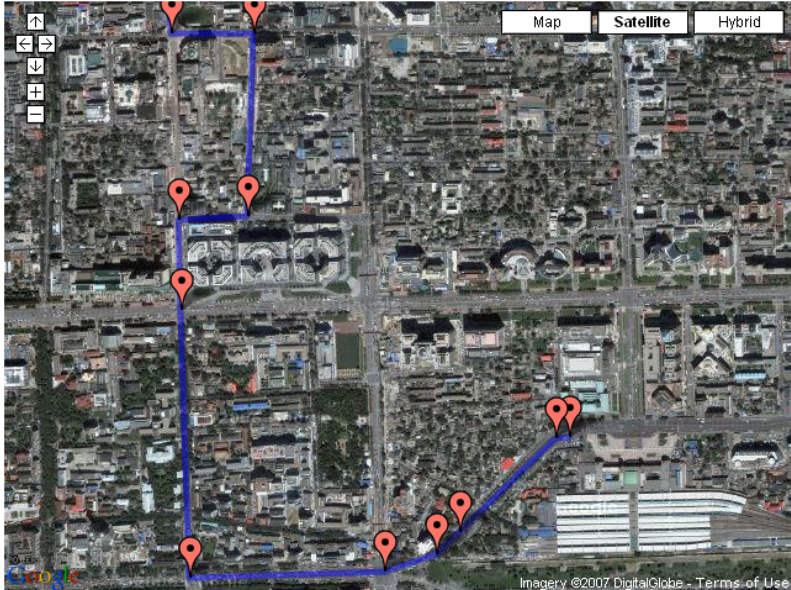
Create your own vector data

- Using Google Maps Mashups which can export data in a format suited for further processing
- Using Google Earth (KML output)

Create a line with clicks, then convert that to a list of points This shows how to create a list of end.

Last Click Lat/Long:

Segment distance : Total distance :



latitude, longitude

39.90338267361069,	116.41887903213501
39.90334152168421,	116.41840696334839
39.900847668807245,	116.41507029533386
39.90027151827219,	116.41424417495728
39.89979413273051,	116.41246318817139
39.89962951625534,	116.40568256378174
39.90677350742503,	116.40538215637207
39.90017661812053,	116.40520632568236

<http://www.meulensteen.nl/maps/>

TOOLS

Code Editors

- UltraEdit; powerfull
- Notepad++: Open Source
- HTMLKit, <http://www.chami.com/> (Shareware)
- Dreamweaver, and other Adobe products

Useful Tools

- Firefox Addon: Validator

HTMLKit, <http://www.chami.com/>



Browser extensions

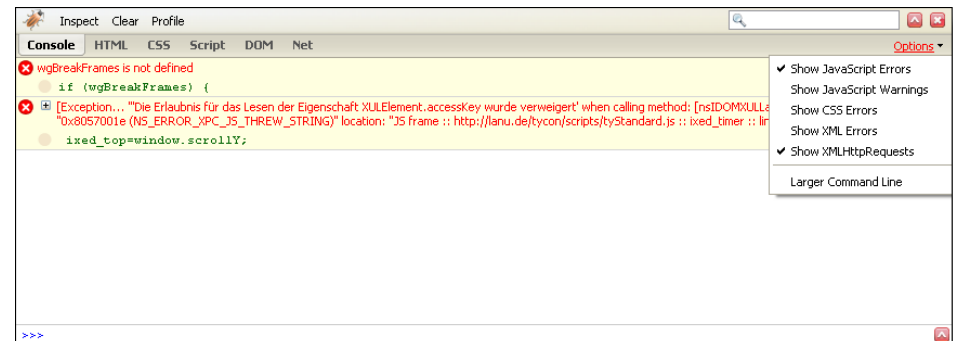
■ Web Developer

- indispensable Firefox Extension for general web development which I use very often



■ Firebug

- an extension that integrates with Firefox.
- You can edit, debug, and monitor CSS, HTML, and JavaScript live in any web page

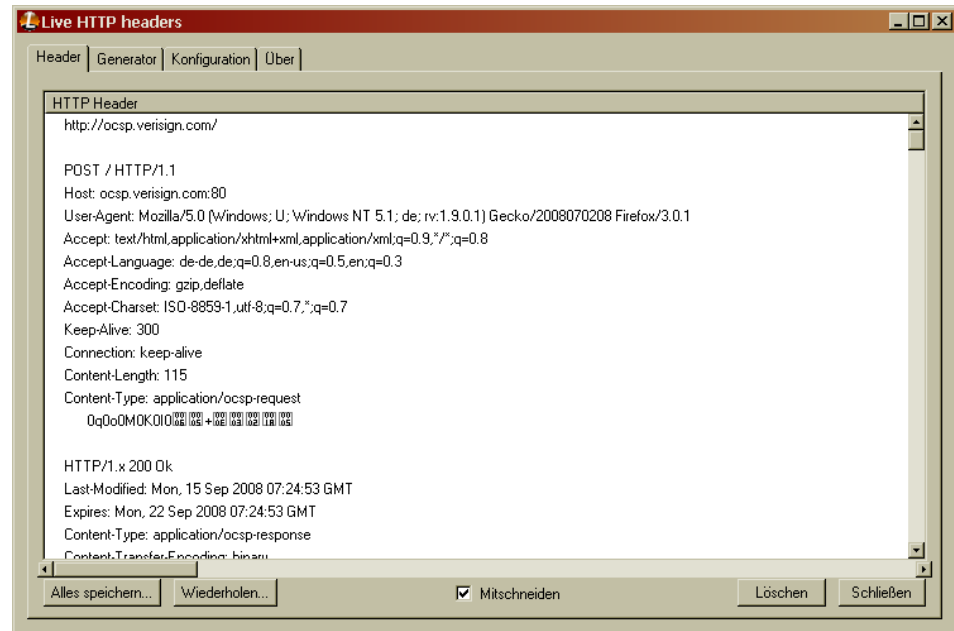


Browser extensions

- Validator



- Live HTTP Headers



- Thank you!