

LFE Medieninformatik • Markus Zimmermann

Usage of the Web for Various Prototyping Scenarios

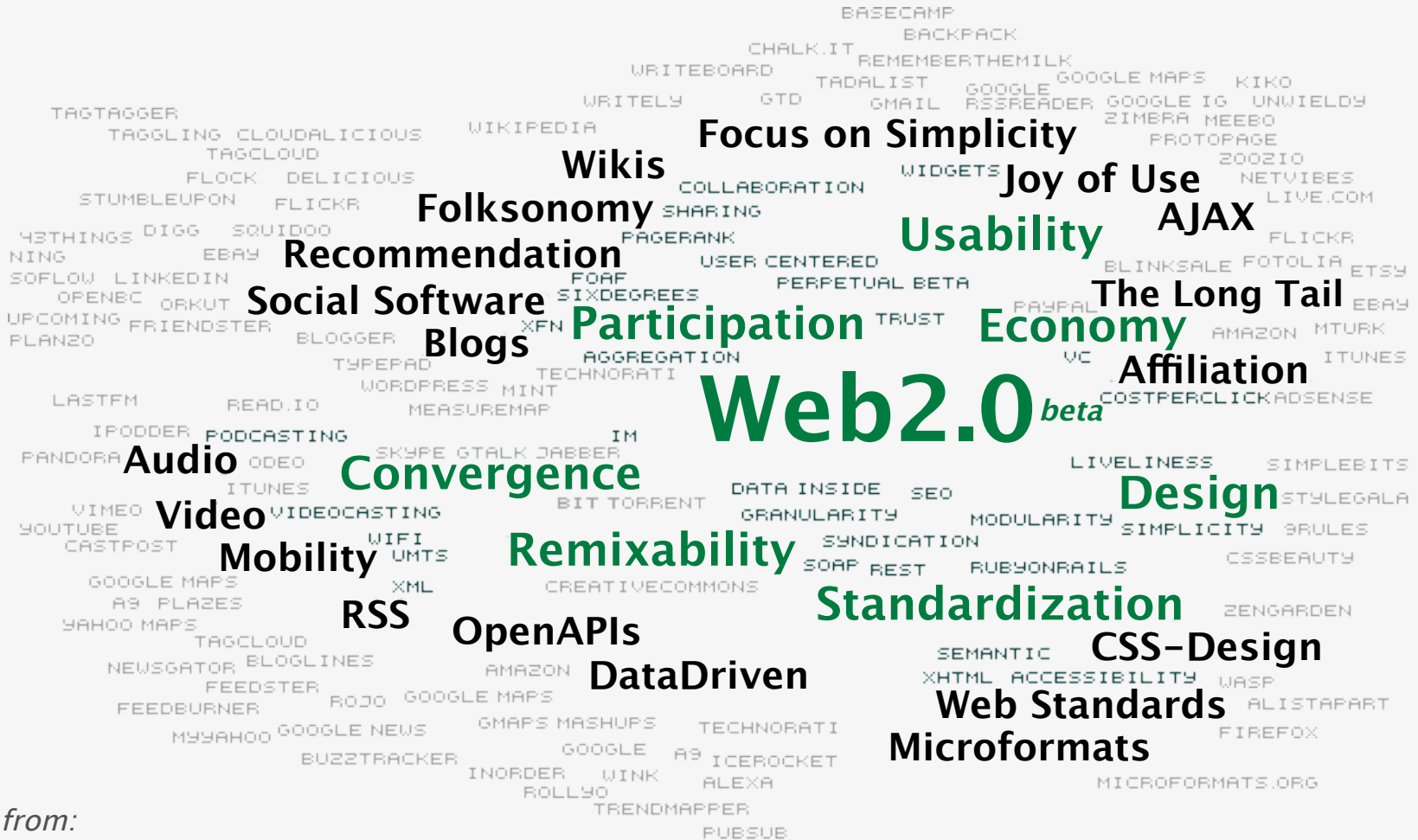
Advanced Seminar Media Informatics
Winter semester 2009/2010
Prototyping





OUTLINE

- 1. Introduction**
- 2. New Technologies for Rapid Web Development**
- 3. Mashups and Patchwork Prototyping**
- 4. Utilities for creating Prototypes in the Web**
- 5. Projects**
- 6. Discussion**



Adapted from:
Markus Angermeier,
11.11.2005



NEW TECHNOLOGIES: SERVER-SIDE



Free
Scripting Language



Free
Database Software

Powerful in combination.



NEW TECHNOLOGIES: CLIENT-SIDE

DHTML

- Dynamic modification of websites

CSS

- Style-sheet markup language

JAVA-SCRIPT

- Scripting-Language for Web-Browsers

LIBRARIES

- DOJO, PROTOTYPE
- Java-Script helper functions



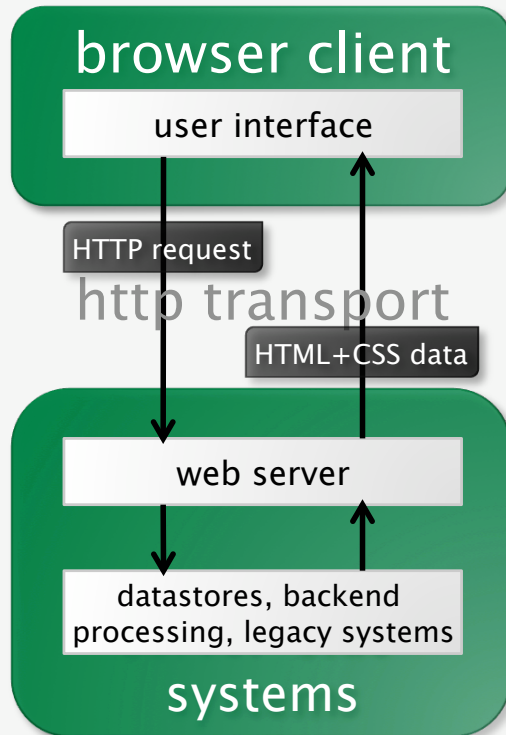
AJAX

NEW TECHNOLOGIES: WEB-APPLICATIONS

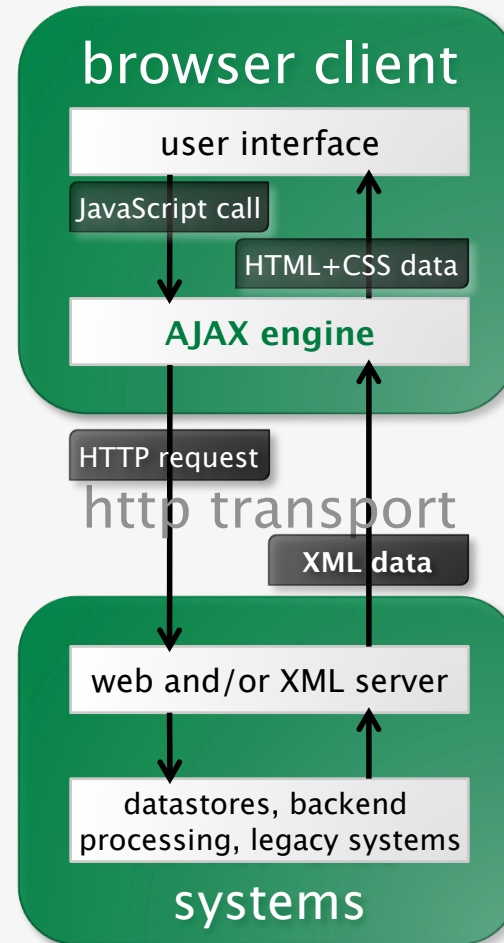


WEB APPLICATION MODELS

CLASSIC



AJAX



Adapted from:
J.J. Garrett



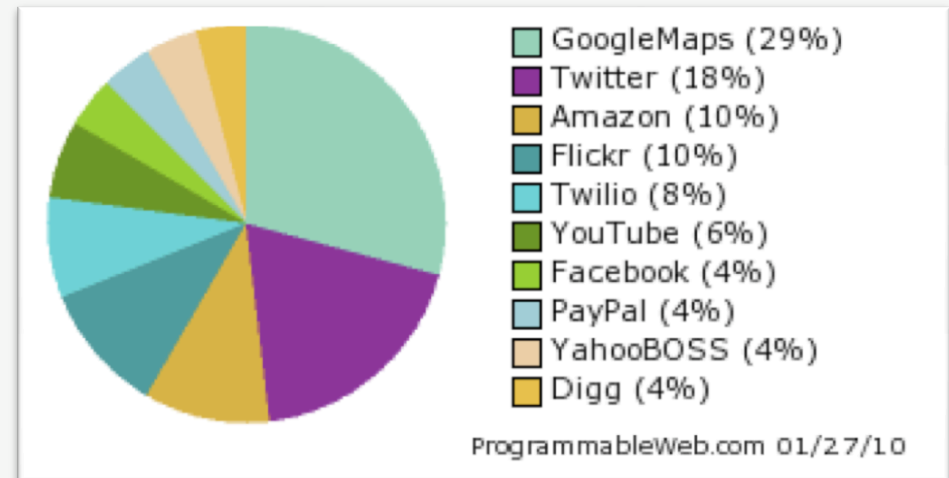
NEW TECHNOLOGIES: APIS

APPLICATION PROGRAMMING INTERFACES:

- Google Maps API
- Flickr API
- YouTube API
- Amazon API

PROGRAMMABLEWEB:

4613 Mashups
1643 APIs



Source: ProgrammableWeb.com, 27.1.10



MASHUP VS. PROTOTYPING

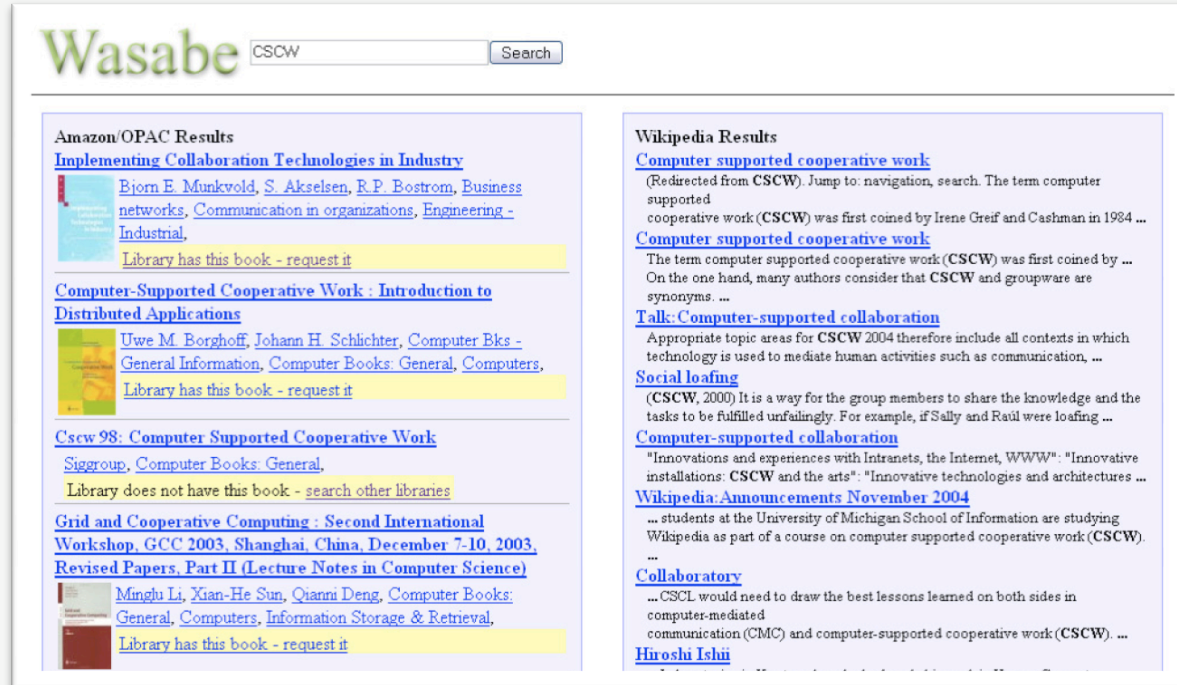
MASHUP

- Website combining data and services from multiple sources.

PATCHWORK PROTOTYPE

- „Use combinations of web services, mashups, locally developed code and open source software“ —*I.R. Floyd*

MASHUP AS PATCHWORK PROTOTYPE



The screenshot shows the Wasabe search engine interface. At the top, the search term 'CSCW' is entered in a search box. Below the search bar, there are two columns of search results.

Amazon/OPAC Results:

- Implementing Collaboration Technologies in Industry**
Bjorn E. Munkvold, S. Akselsen, R.P. Bostrom, *Business networks, Communication in organizations, Engineering - Industrial.*
Library has this book - request it
- Computer-Supported Cooperative Work : Introduction to Distributed Applications**
Uwe M. Borghoff, Johann H. Schlichter, *Computer Bks - General Information, Computer Books: General, Computers.*
Library has this book - request it
- Csw 98: Computer Supported Cooperative Work**
Siggrou, *Computer Books: General.*
Library does not have this book - search other libraries
- Grid and Cooperative Computing : Second International Workshop, GCC 2003, Shanghai, China, December 7-10, 2003, Revised Papers, Part II (Lecture Notes in Computer Science)**
Minglu Li, Xian-He Sun, Qianni Deng, *Computer Books: General, Computers, Information Storage & Retrieval.*
Library has this book - request it

Wikipedia Results:

- Computer supported cooperative work**
(Redirected from CSCW). Jump to: navigation, search. The term computer supported cooperative work (CSCW) was first coined by Irene Greif and Cashman in 1984 ...
- Computer supported cooperative work**
The term computer supported cooperative work (CSCW) was first coined by ... On the one hand, many authors consider that CSCW and groupware are synonyms. ...
- Talk: Computer-supported collaboration**
Appropriate topic areas for CSCW 2004 therefore include all contexts in which technology is used to mediate human activities such as communication, ...
- Social loafing**
(CSCW, 2000) It is a way for the group members to share the knowledge and the tasks to be fulfilled unfliningly. For example, if Sally and Raul were loafing ...
- Computer-supported collaboration**
"Innovations and experiences with Intranets, the Internet, WWW": "Innovative installations: CSCW and the arts": "Innovative technologies and architectures ...
- Wikipedia:Announcements November 2004**
... students at the University of Michigan School of Information are studying Wikipedia as part of a course on computer supported cooperative work (CSCW). ...
- Collaboratory**
... CSCL would need to draw the best lessons learned on both sides in computer-mediated communication (CMC) and computer-supported cooperative work (CSCW). ...
- Hiroshi Ishii**

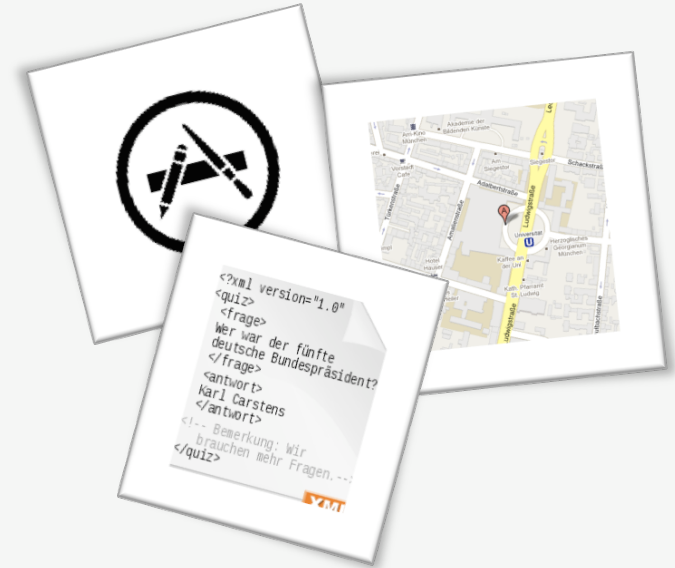
Source:
I.R. Floyd

Example: Wasabe. 10 minutes of work

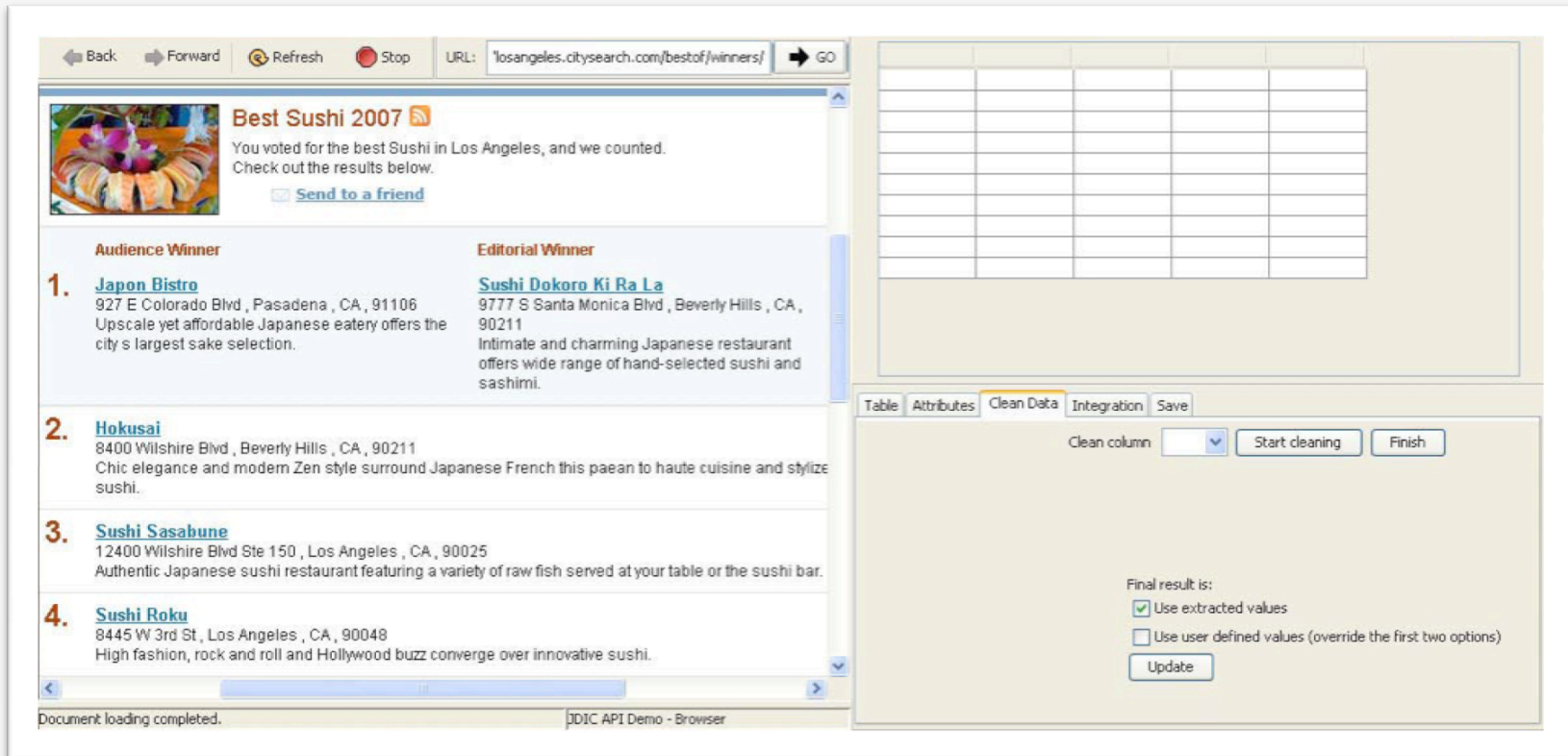


DATA INTEGRATION /
APPLICATION INTEGRATION /
PRESENTATION INTEGRATION

UTILITIES FOR CREATING PROTOTYPES IN THE WEB



KARMA: DATA INTEGRATION



The screenshot displays a web browser window on the left and a KARMA control panel on the right. The browser window shows the URL 'losangeles.citysearch.com/bestof/winners/' and a search result for 'Best Sushi 2007'. The results are categorized into 'Audience Winner' and 'Editorial Winner'.

Audience Winner:

- Japon Bistro**
927 E Colorado Blvd, Pasadena, CA, 91106
Upscale yet affordable Japanese eatery offers the city's largest sake selection.
- Hokusai**
8400 Wilshire Blvd, Beverly Hills, CA, 90211
Chic elegance and modern Zen style surround Japanese French this paean to haute cuisine and stylize sushi.
- Sushi Sasabune**
12400 Wilshire Blvd Ste 150, Los Angeles, CA, 90025
Authentic Japanese sushi restaurant featuring a variety of raw fish served at your table or the sushi bar.
- Sushi Roku**
8445 W 3rd St, Los Angeles, CA, 90048
High fashion, rock and roll and Hollywood buzz converge over innovative sushi.

Editorial Winner:

- Sushi Dokoro Ki Ra La**
9777 S Santa Monica Blvd, Beverly Hills, CA, 90211
Intimate and charming Japanese restaurant offers wide range of hand-selected sushi and sashimi.

The KARMA control panel on the right features a table with 10 columns and 10 rows. Below the table, there are tabs for 'Table', 'Attributes', 'Clean Data', 'Integration', and 'Save'. The 'Clean Data' tab is active, showing a 'Clean column' dropdown menu, 'Start cleaning', and 'Finish' buttons. At the bottom, there are options for 'Final result is:' with checkboxes for 'Use extracted values' (checked) and 'Use user defined values (override the first two options)', along with an 'Update' button.

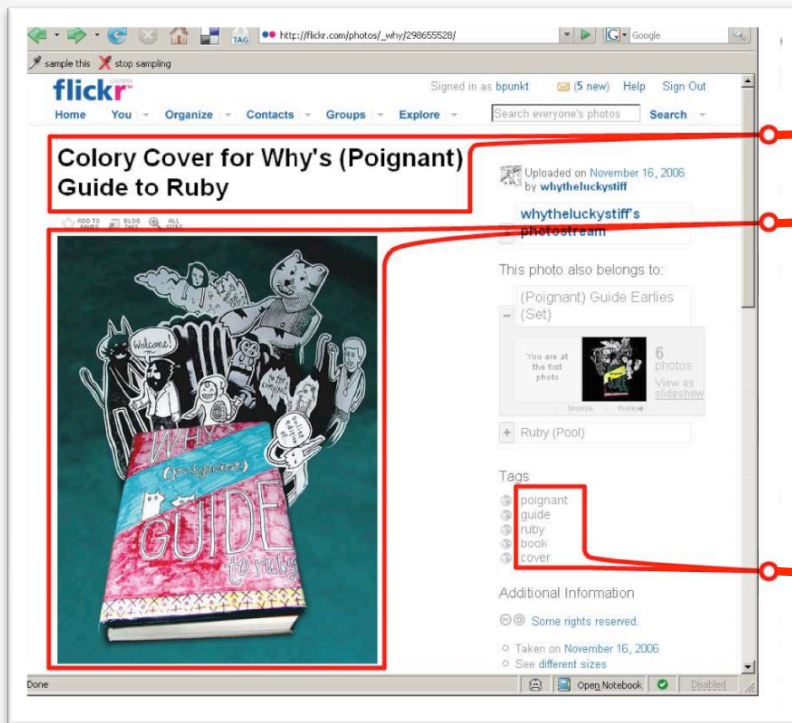
Source: Tuchindra



D.MIX: APPLICATION INTEGRATION

Demonstrated services

Corresponding Flickr API calls



`flickr.photos.getInfo(photo_id = "298655528").title`
Return the current photo's title.

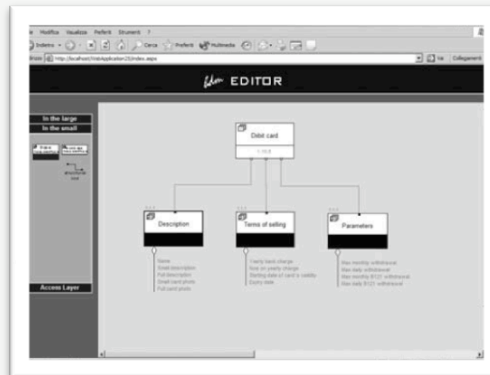
`info = flickr.photos.getInfo(photo_id = "298655528" URL = "http://farm" + info.farm-id + ".static.flickr.com/" + info.server-id + "/" + info.attributed["id"] + "-" + info.secret + ".jpg"`
Return the static URL for this image.

`flickr.tags.getListPhoto(photo_id = "298655528")`
Get the tag list for a given photo.
`flickr.photos.search(tags = "poignant ...")`
Return a list of photos for this user, matching the given tags.

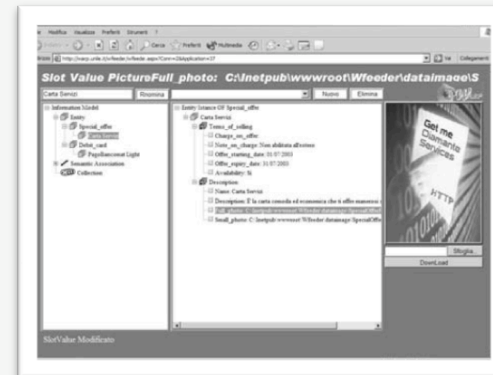
Source:
Hartmann

WARP: PROTOTYPING TOOLKIT

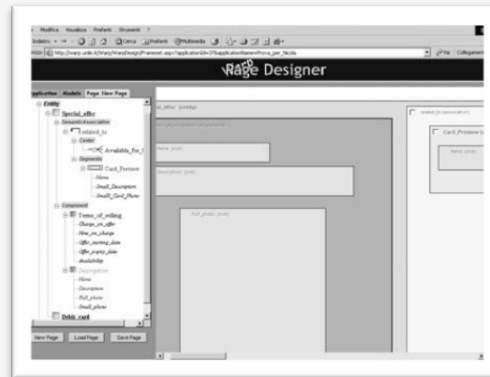
1. Schema



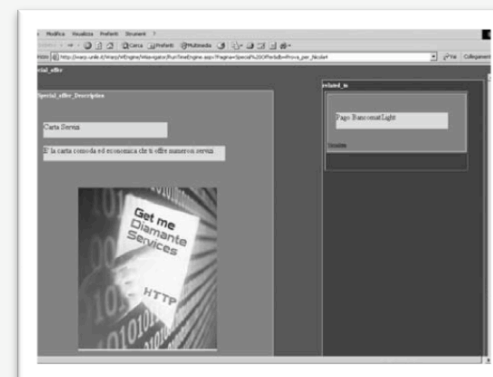
2. Feeder



3. Generator



4. Prototype



Source:
M. Bochicchio

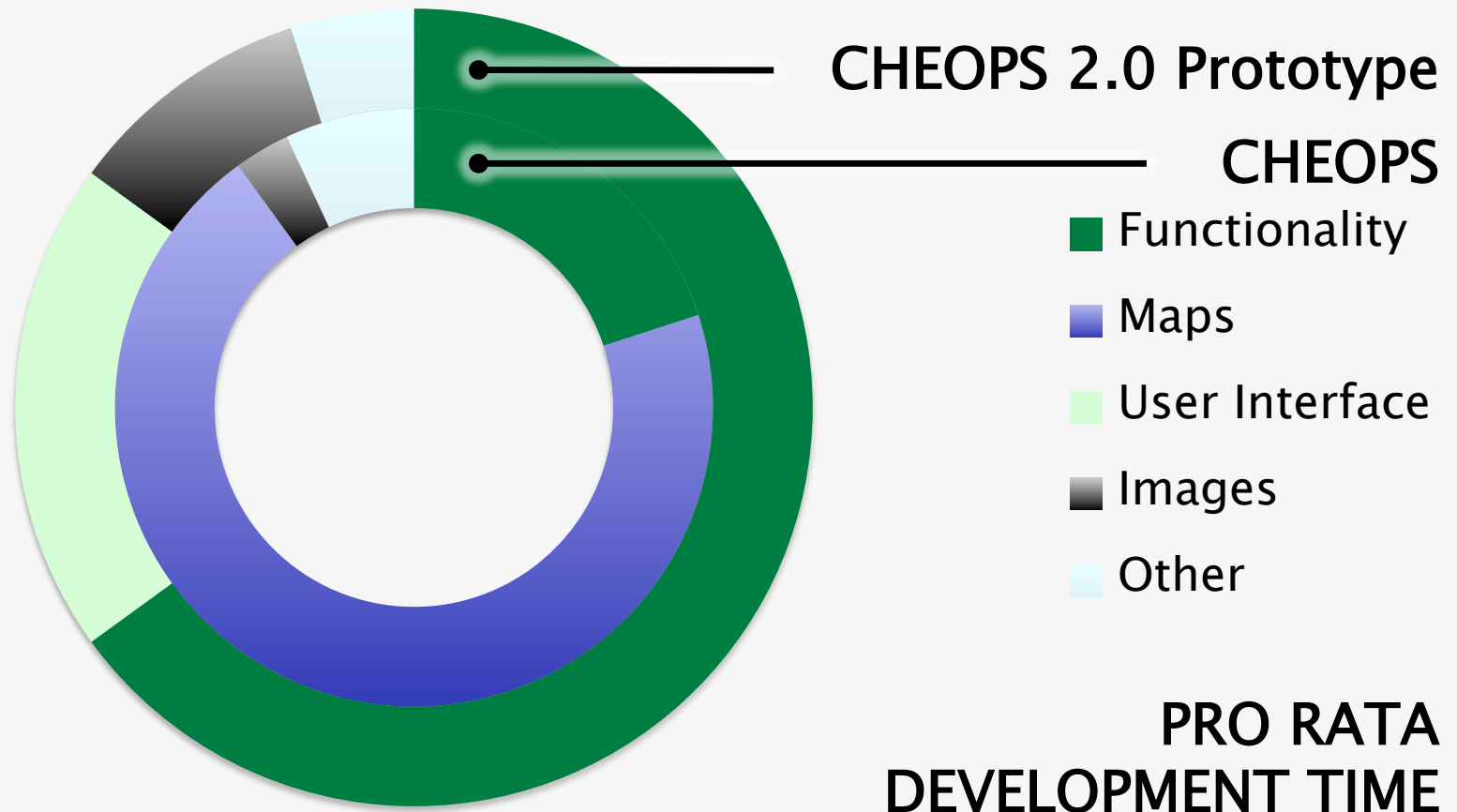


IMPLEMENTED IN THE WEB:

PROTOTYPING PROJECTS

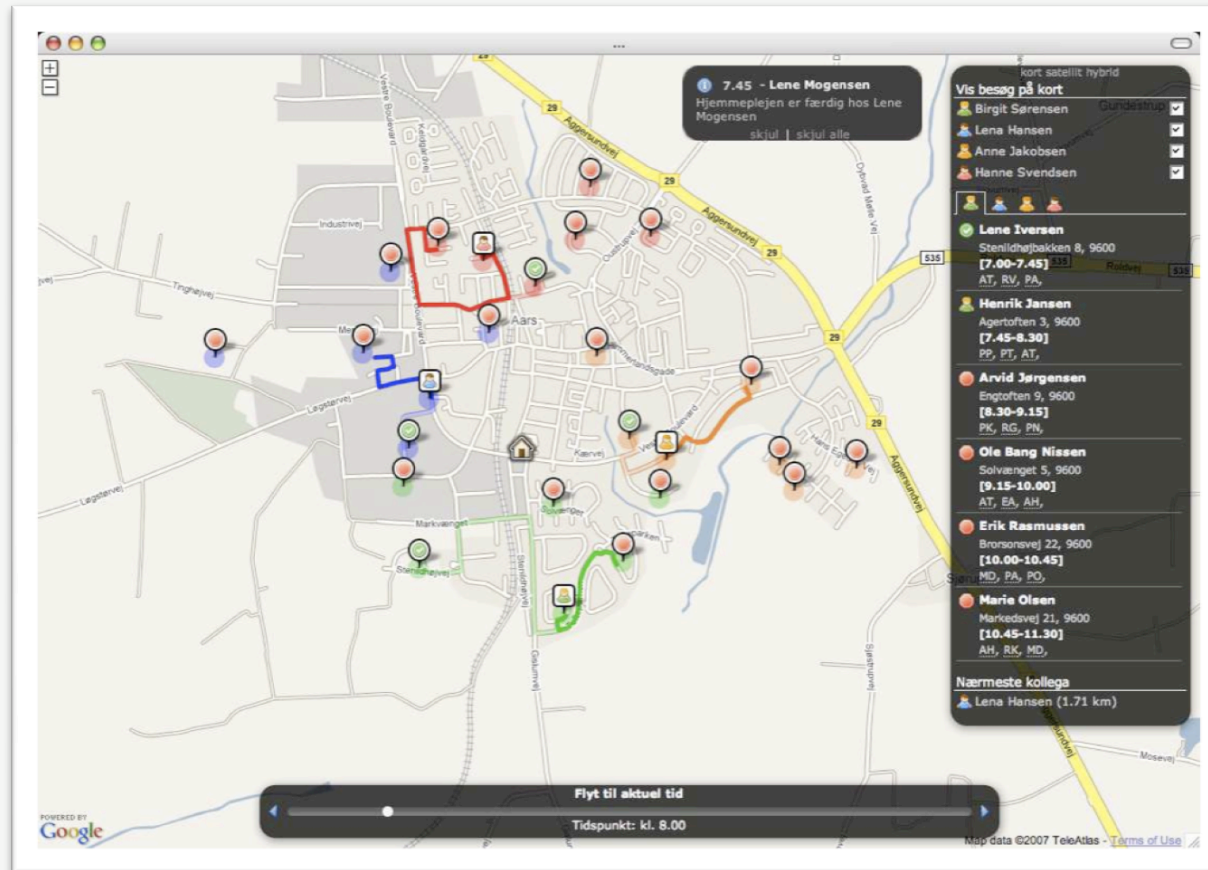


CHEOPS: CRISIS MANAGEMENT



Adapted from:
F. Rousseaux

GEOHEALTH: HEALTHCARE WORKERS SERVICE



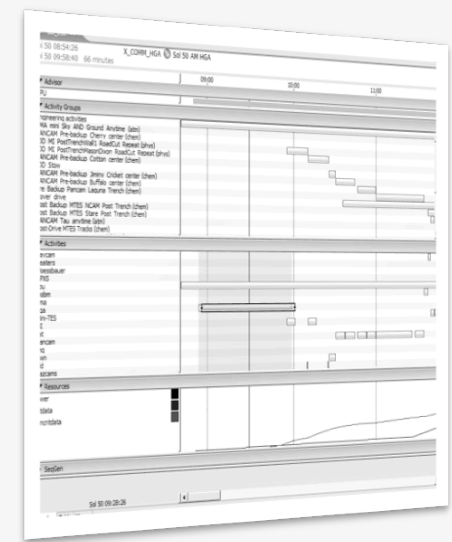
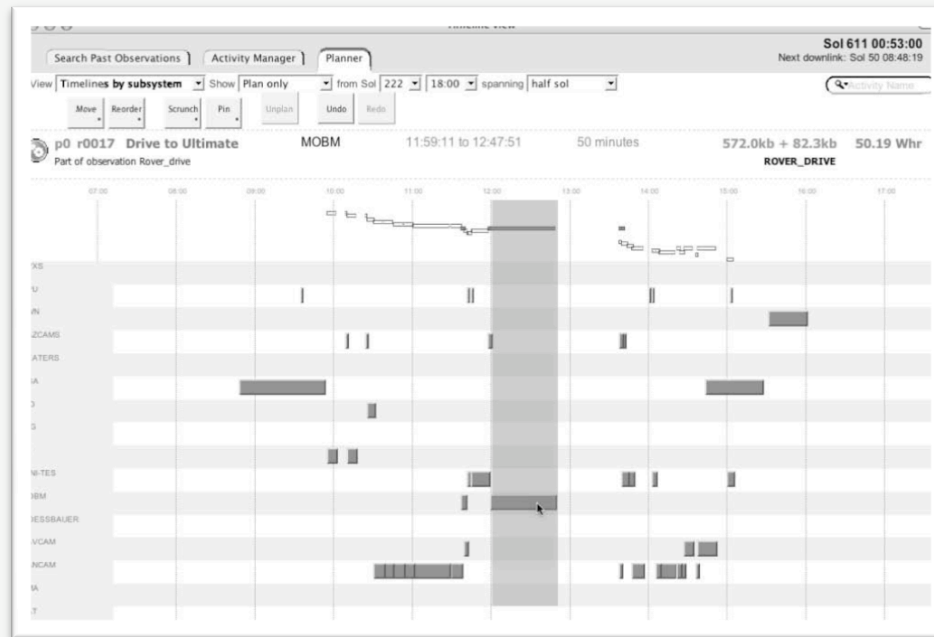
Source:
C.M. Christensen

SPIFE: MARS ROVER SCHEDULING TOOL

Preliminary
case:
MAPGEN

Prototype:
SPIFe

Final
application:
ENSEMBLE

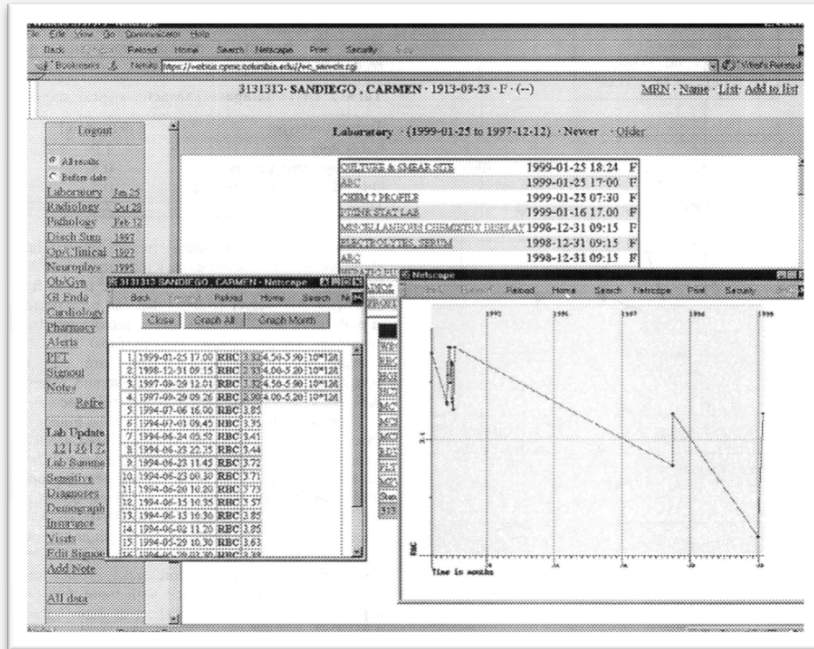


Source: M. McCurdy

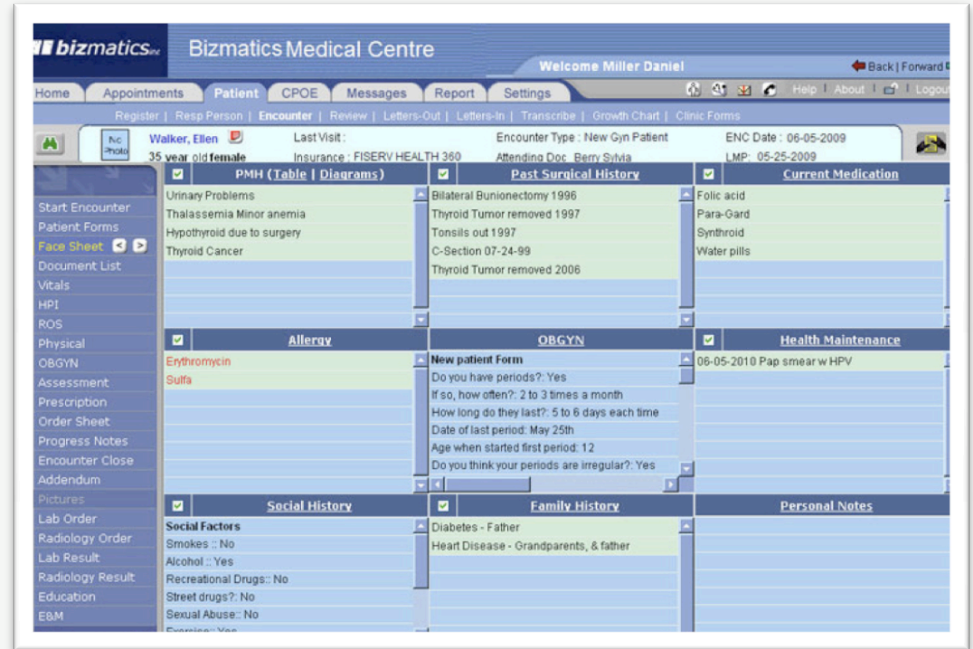
PROTOTYPING PROJECTS: CLINICAL INFORMATION SYSTEMS

WebCIS Prototype (1998)

WebCIS Application (2009)



Source: Hripcsak



Source: Bizmatics



DISCUSSION: WEB PROTOTYPING

LIMITATIONS

- **Stateless** technology
- **Identification/**
Authentication
- Different **platforms**
- **Validation/Securing/**
Maintenance not
guaranteed

BENEFITS

- **Fast development** cycle
(patchwork manner)
- Few technological
knowledge necessary
- Highly interactive
prototypes (Mixed-Fi)
- Platform- and device-
independent
(worldwide access)



CONCLUSION

- Prototype creation and data sampling process **more and more simplified**
- Borders between classic **applications and web applications** drastically blurred through dynamic web.

