

**Digital sketchbook / external, visual memory**

**Background research / feasibility study**

25 January, 2005

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Together with:  
Ralph Ammer

1. Abstract
2. Appendix
  - A. Resources and Prototypes

"The details are not the details. They make the design."

**Charles Eames (found @dynamicdiagrams.com)**

## **1 Abstract**

In this document we try to present a brief overview of the different ways of visualising databases with special regard to their accessibility and principles of use.

Our questions are:

What is the relationship between the content and its visual structure & organisation?

How do people access it and interact with it? Are the results comprehensible? How important are transitions, progressions? Is there a particular difference between “Visual Explanations” and “Database Visualisations”?

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<input type="checkbox"/>	☆ <a href="#">Michael Hohl</a>	<b>Fwd: Become one of the low 3.25% rates</b> - Begin forwarded messa	<b>2:48pm</b>
<input type="checkbox"/>	☆ <a href="#">Gmail Team</a>	Gmail is different. Here's what you need to know. - First off, welcome	11/20/04

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>>> [Google approach](#) [Inbox](#)

☆ [Michael Hohl](#) to me

[Show options](#) 2:57pm (12 minutes ago)

A Google approach to email.

Gmail is an experiment in a new kind of webmail, built on the idea that you should never have to delete mail and you should always be able to find the message you want. The key features are:

- Search, don't sort.  
Use Google search to find the exact message you want, no matter when it was sent or received.
- Don't throw anything away.  
1000 megabytes of free storage so you'll never need to delete another message.
- Keep it all in context.  
Each message is grouped with all its replies and displayed as a conversation.
- No pop-up ads. No untargeted banners.  
You see only relevant text ads and links to related web pages of interest.

[Reply](#) [Forward](#) [Invite Michael to Gmail](#)

[New window](#)

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[@Mail - WebMail System](#)  
WebMail solution for Pop3 / Imap Full source included - Unix/Win  
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Article Central - 15 hours ago  
The free plan includes 50MB of space, unlimited data transfer, and a ...

[About these links](#)

# Thinkmap.com

Thinkmap that allows users to search for songs by artist name, song title, date published, and subject matter (what is "subject matter"?)

The screenshot shows the Sony Music Thinkmap interface. At the top, the search bar contains 'Sky' and filters are set to 'by subject' between '1962' and '1996'. The interface is divided into several sections:

- Project Management:** Includes buttons for 'new', 'edit', 'delete', and 'print' next to a 'project' label.
- Short List:** A table with columns for 'clip', 'song', and 'artist'. It lists several songs, some with checkboxes for selection.
- Results:** A table with columns for 'clip', 'song', 'artist', and 'date'. It lists 25 search results for 'Sky'.
- Conceptual Map:** A network diagram with 'Sky' at the center, connected to nodes for 'Sun', 'Circles', 'Rain', 'Music', 'Wind', and 'Colors: Blue'. The 'Rain' node is highlighted with a red circle.
- Footer:** Includes a copyright notice for 1999 Sony Music Entertainment Inc. and navigation links like 'LOGOUT', 'CONTACT', 'INFORMATION', and 'HELP'.

clip	song	artist	date
	(Ghost) Riders In The Sky	Marty Robbins	1991
	(Ghost) Riders In The Sky	JOHNNY CASH	1992
	Above The Clouds	Electric Light Orchestra	1986
	Above The Clouds	Electric Light Orchestra	1995
	Big White Cloud	JOHN CALE	1991
	Blue Skies	WILLIE NELSON	1983
	Blue Skies	Benny Goodman	1987
	Blue Skies	Harry Connick, Jr.	1988
	Blue Skies	FRANK SINATRA	1993
	Blue Skies	WILLIE NELSON	1995
	Blue Skies	Josephine Baker	1995
	Blue Skies	FRANK SINATRA	1995
	Blue Skies	WILLIE NELSON	1995
	Blue Skies	BENNY GOODMAN	1995
	Blue Skies	COUNT BASIE	1995
	Blue Sky	THE ALLMAN BROTHERS BAND	1992
	Blue Sky	The Allman Brothers Band	1996
	Blue Sky Mine	MIDNIGHT OIL	1990
	But Not For Me	RAY CONNIFF	1993
	But Not For Me	null	1987

[http://www.thinkmap.com/casestudies\\_sonymusic.jsp](http://www.thinkmap.com/casestudies_sonymusic.jsp)

## spatial analysis

of nonspatial data: the word "over"



The central peak represents the word "over." The other points identify synonyms of "over." The height of each point reflects the number of occurrences of that synonym in the dataset. To the top right is "above" and to the lower right is "past." The cluster on the left represents such synonyms as "throughout," "all over," and "roundabout;" and those toward the bottom, "extra," "remaining," "leftover" and so on.

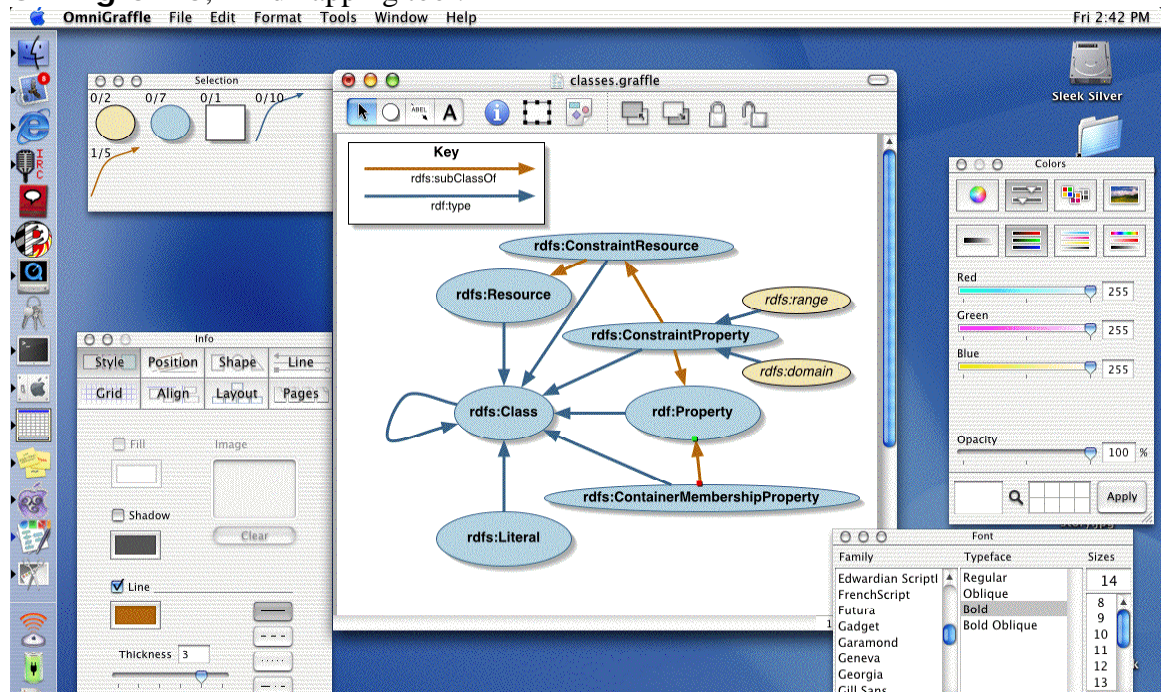
<http://gis.esri.com/library/userconf/proc00/professional/papers/PAP196/p196.htm>

Treemap by Ben Shneiderman



<http://www.smartmoney.com/marketmap/>

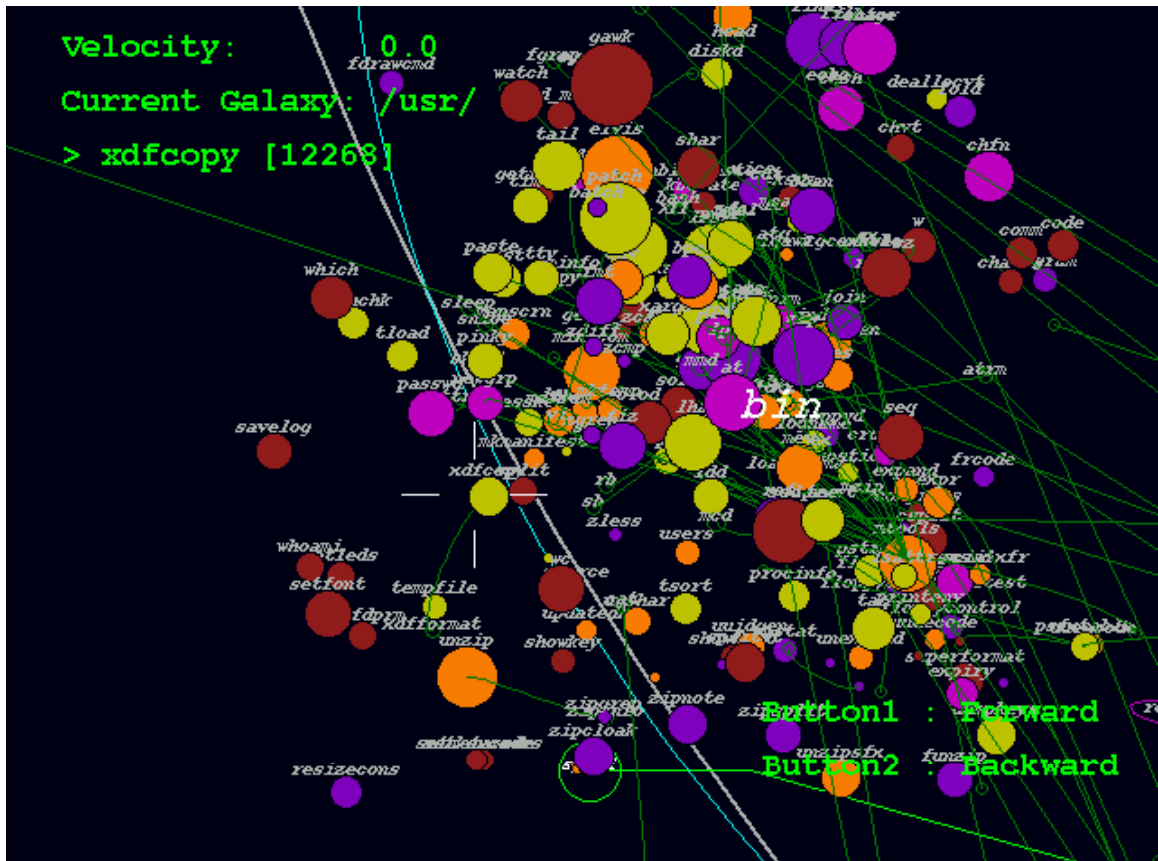
# OmniGraffle, mindmapping tool:





# Xcruise

By Yusuke Shinyama



## "Zoom-interface"

by Jeff Ruskin



Press and hold the up arrow key to zoom in, and the down arrow key to zoom out. Use the mouse to point at what you want to be in the center of the display as you zoom in. Just keep the point of the cursor on the detail you want to look at.

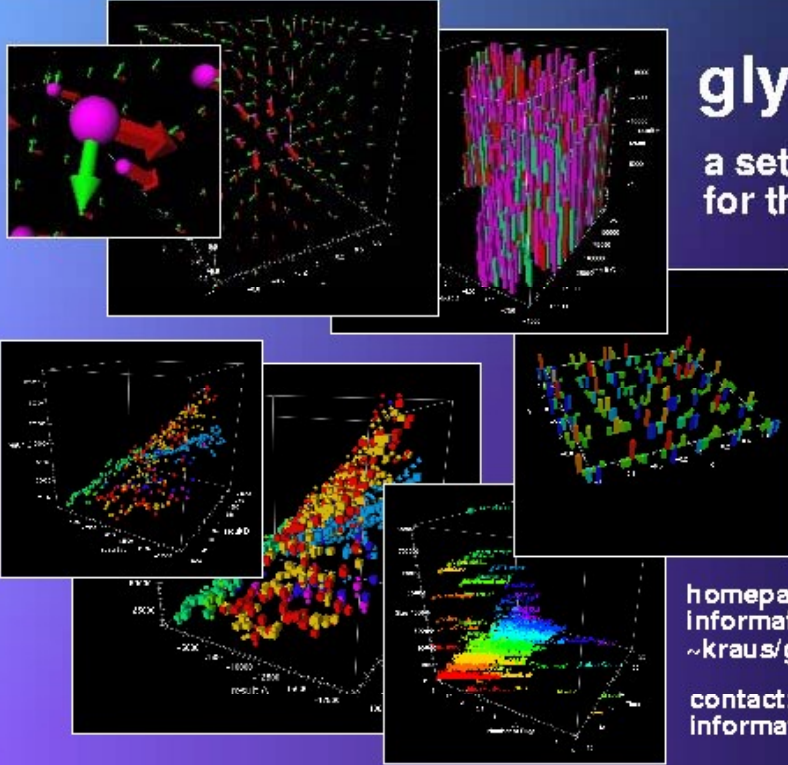
To pan the picture, hold the mouse button whilst moving the mouse.

If you get lost, zoom out to gain perspective.

Shockwave demo in folder and at <http://nooface.net/>

## "Glyphs"

by Universität Stuttgart



**glyphs**  
a set of modules  
for the IRIS Explorer

by the  
Visualization  
and Interactive  
Systems Group,  
Universität  
Stuttgart

homepage: <http://wwwvis.informatik.uni-stuttgart.de/~kraus/glyphs/index.html>

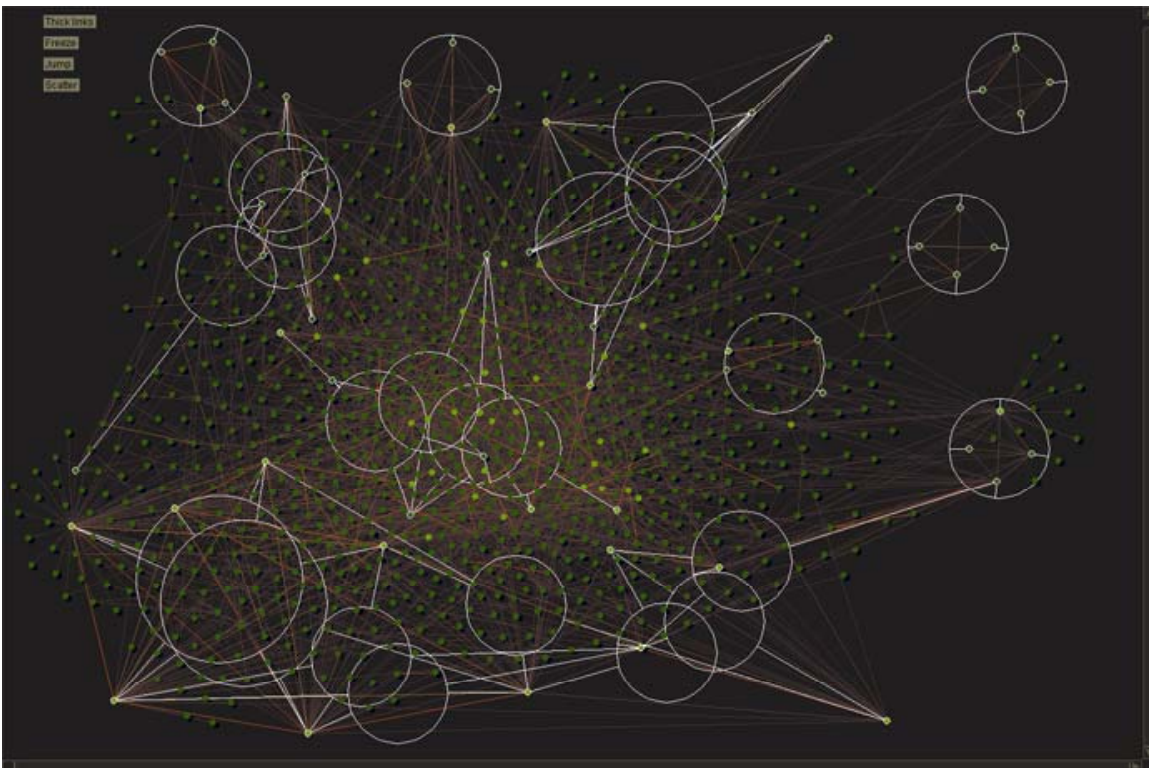
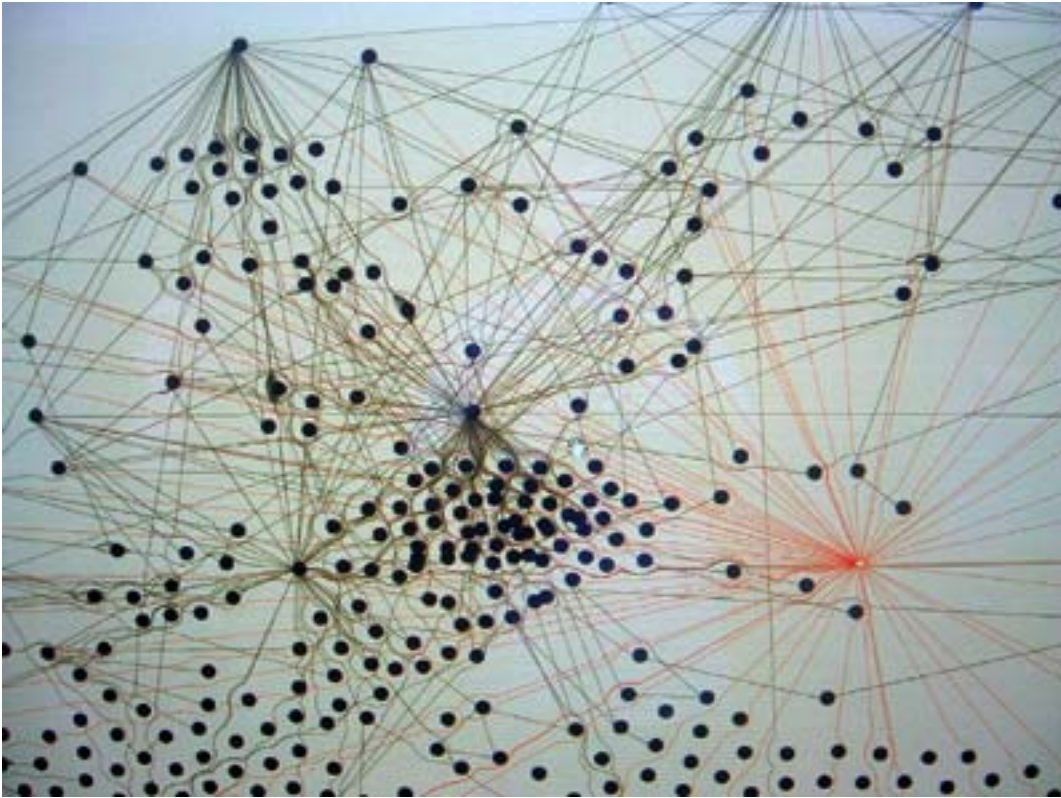
contact: [Martin.Kraus@informatik.uni-stuttgart.de](mailto:Martin.Kraus@informatik.uni-stuttgart.de)

The aim of the glyphs project is to provide a set of IRIS Explorer modules which allow non-programmers to interactively visualize scattered data points or data on a grid using customizable glyphs.

<http://www.vis.uni-stuttgart.de/~kraus/glyphs/>

## Trace encounters

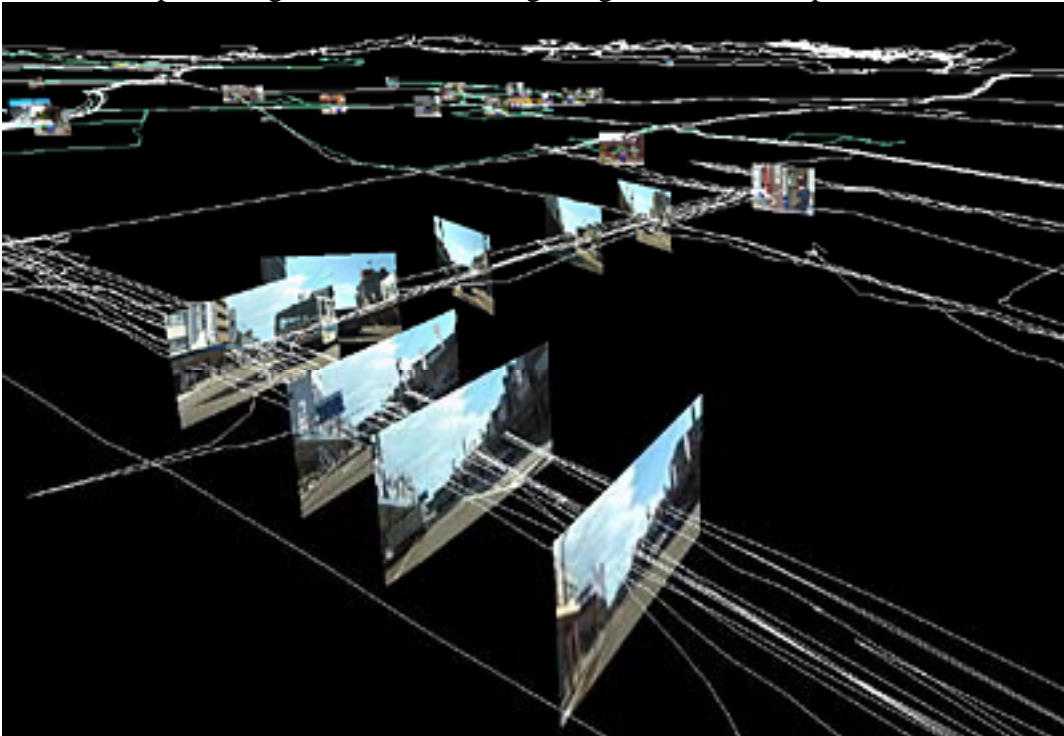
by Jefferson Y. Han, Bradford Paley <http://www.traceencounters.org/>



**Masaki Fujihata:**

"Field Works@Alsace"

Influence: Spatial organization of moving image over time in space



from [http://www.daniel-sauter.com/display.php?project\\_id=16](http://www.daniel-sauter.com/display.php?project_id=16)

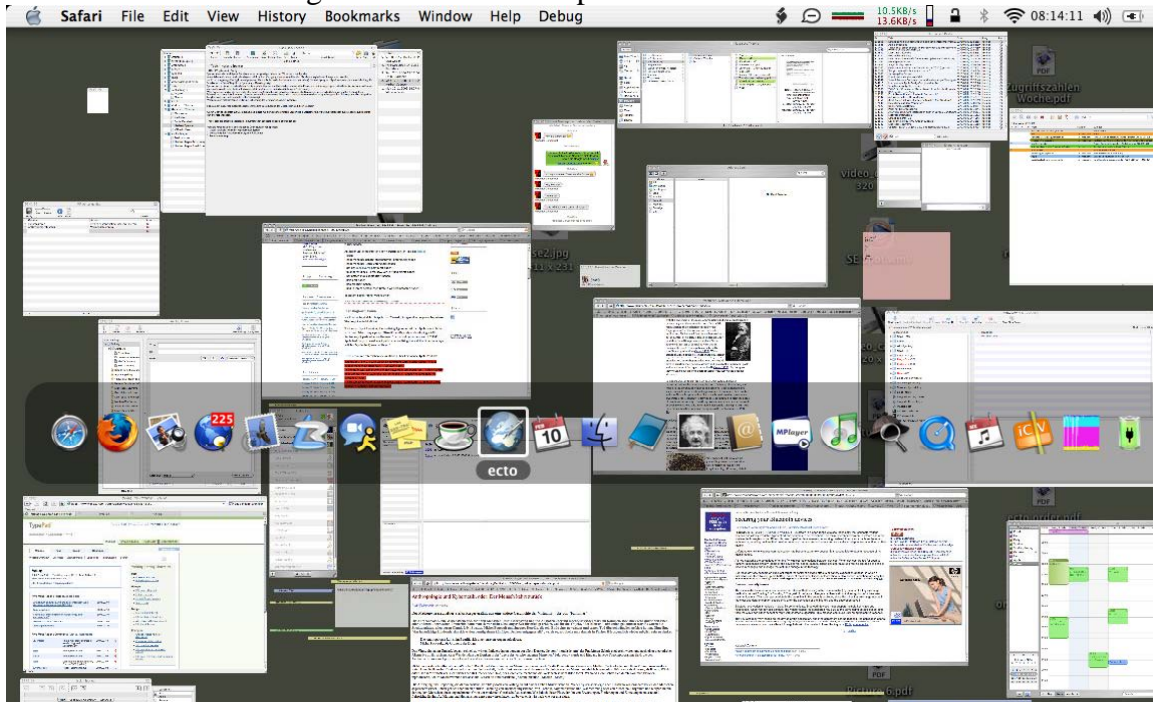
## Mac OS "Tiger"



Meta-Data is stored separately

# Mac OS X "Expose"

Animated zoom creating an overview over open windows



## Dynamicdiagrams

From [dynamicdiagrams.com](http://dynamicdiagrams.com)

Different methods of displaying websites

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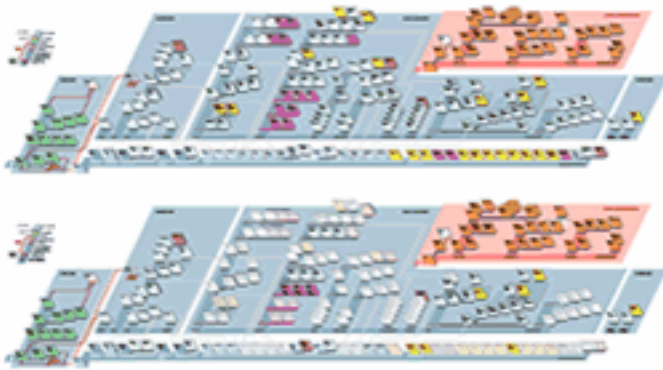
### Prototype Diagrams

These four prototype diagrams each represented a different potential focus for our analysis.



### Inventory Diagram, Different Views

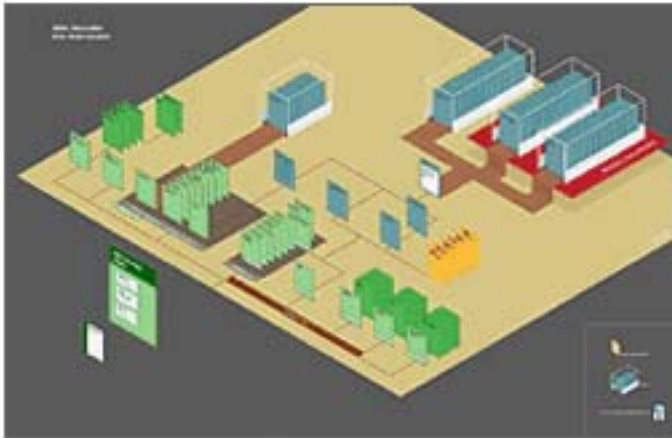
The inventory diagram groups individual pages with more room for annotation. As above, different views show different groups of pages.



### Isometric Diagram, Different Views

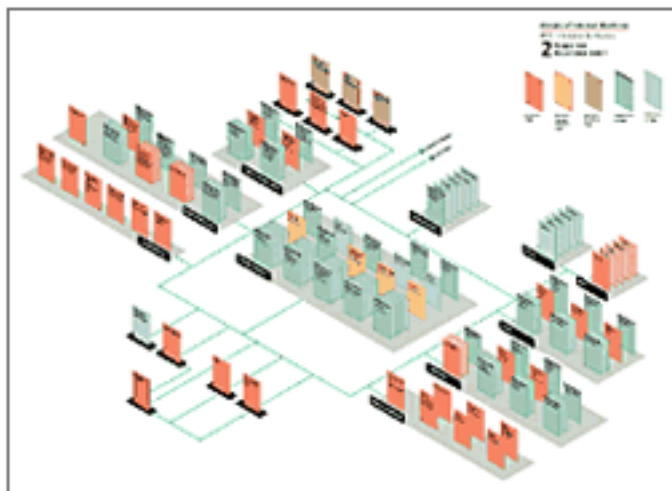
The isometric diagram shows the interlinked structure of the site. Specific pages are "grayed out" depending on the state being viewed.

Both are site diagrams:



**AMA Publications Site Diagram**

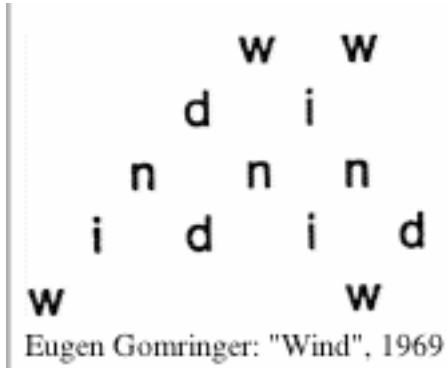
The site's content groups, navigational paths, and access-control levels are all shown in this high-level planning diagram.



**Annals Site Diagram**

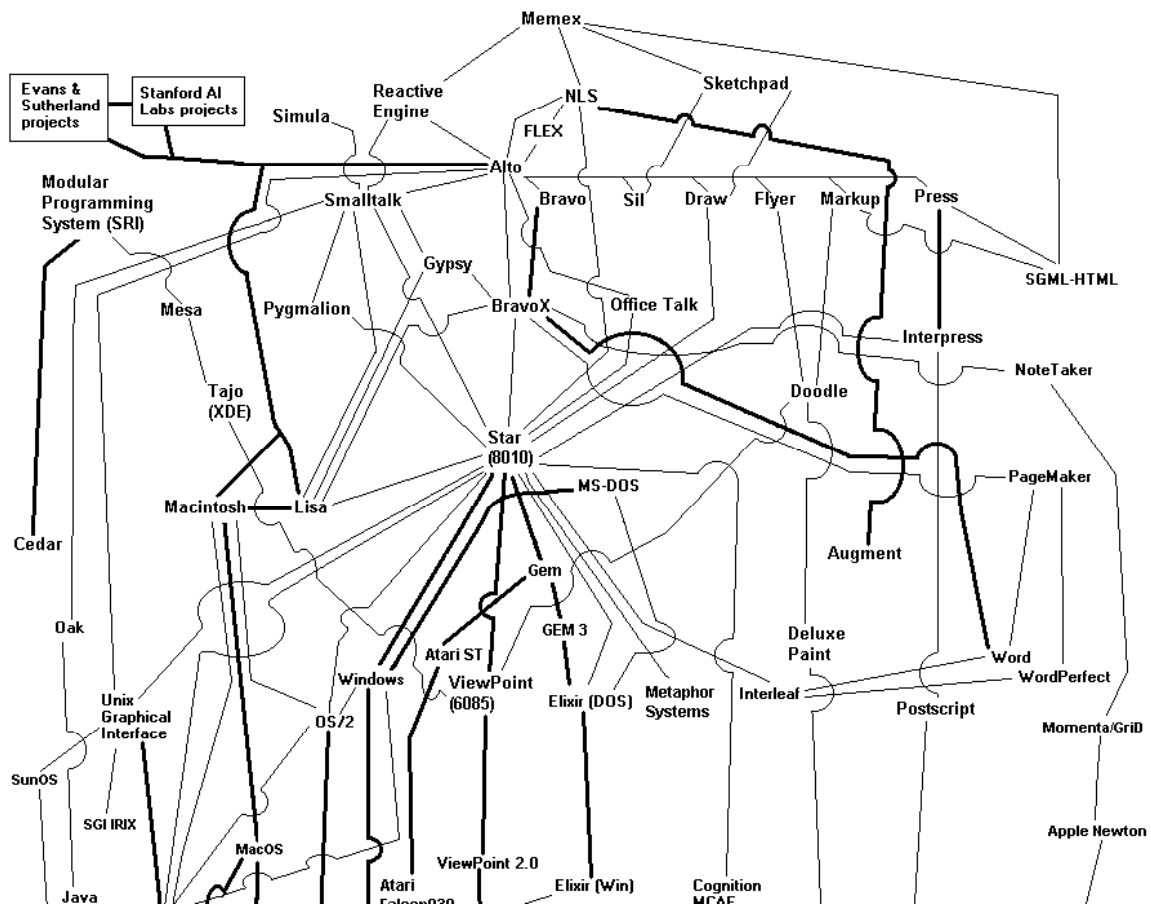
Color coding shows various levels of access for a registered guest.

Concrete Poetry  
The content and its structure



<http://images.google.com/images?q=site+diagram&hl=en&btnG=Google+Search>

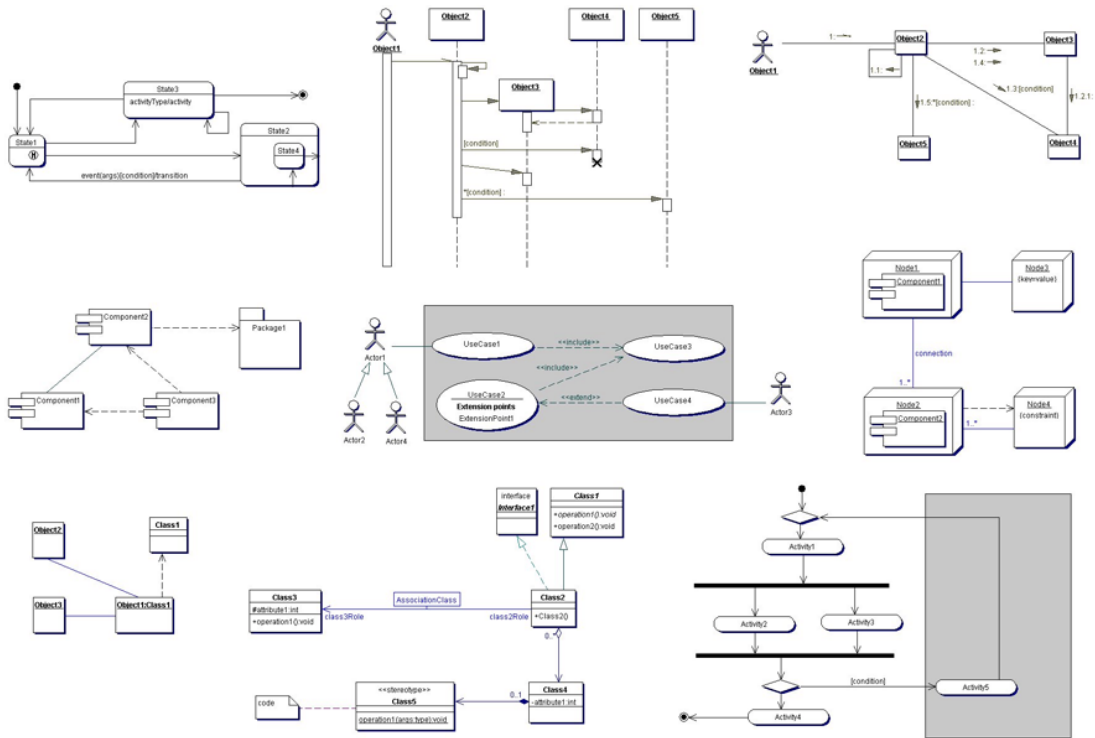
Trail Diagram



<http://images.google.com/images?q=trail+diagram&svnum=30&hl=en&lr=&safe=off&start=40&sa=N> <http://www.digibarn.com/stories/desktop-history/diagram-full.gif>

# UML (Unified Modelling Language)

## Unified Modeling Language Syntax Reference Poster



UML Syntax Reference Poster - Claudio De Sio Cesari OO & Java Trainer, Mentor & Consultant - 2002 - <http://www.claudiodesio.com>

[www.claudiodesio.com](http://www.claudiodesio.com)

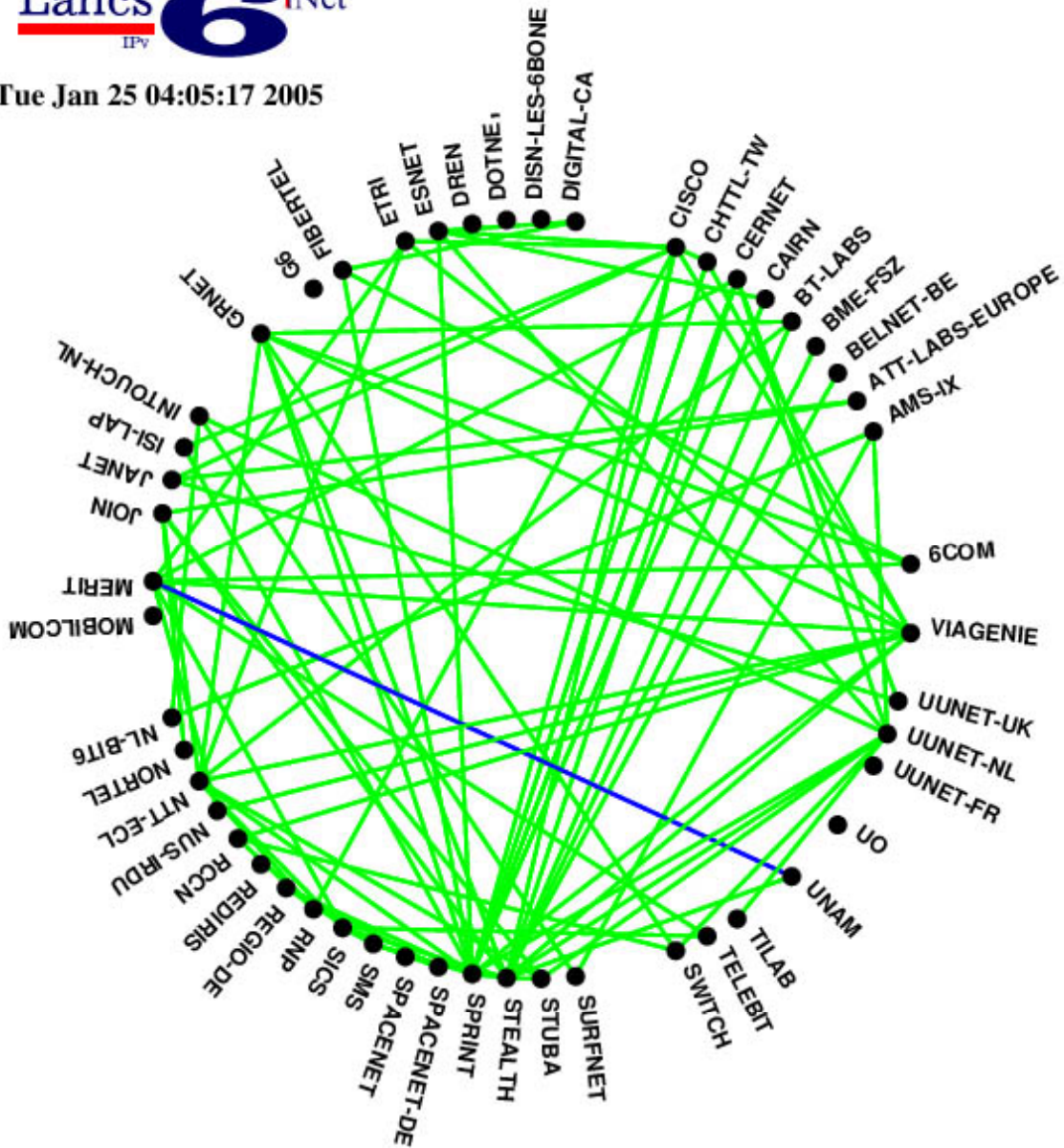
# Network Connectivity

## Backbone Site Connectivity for 6Bone



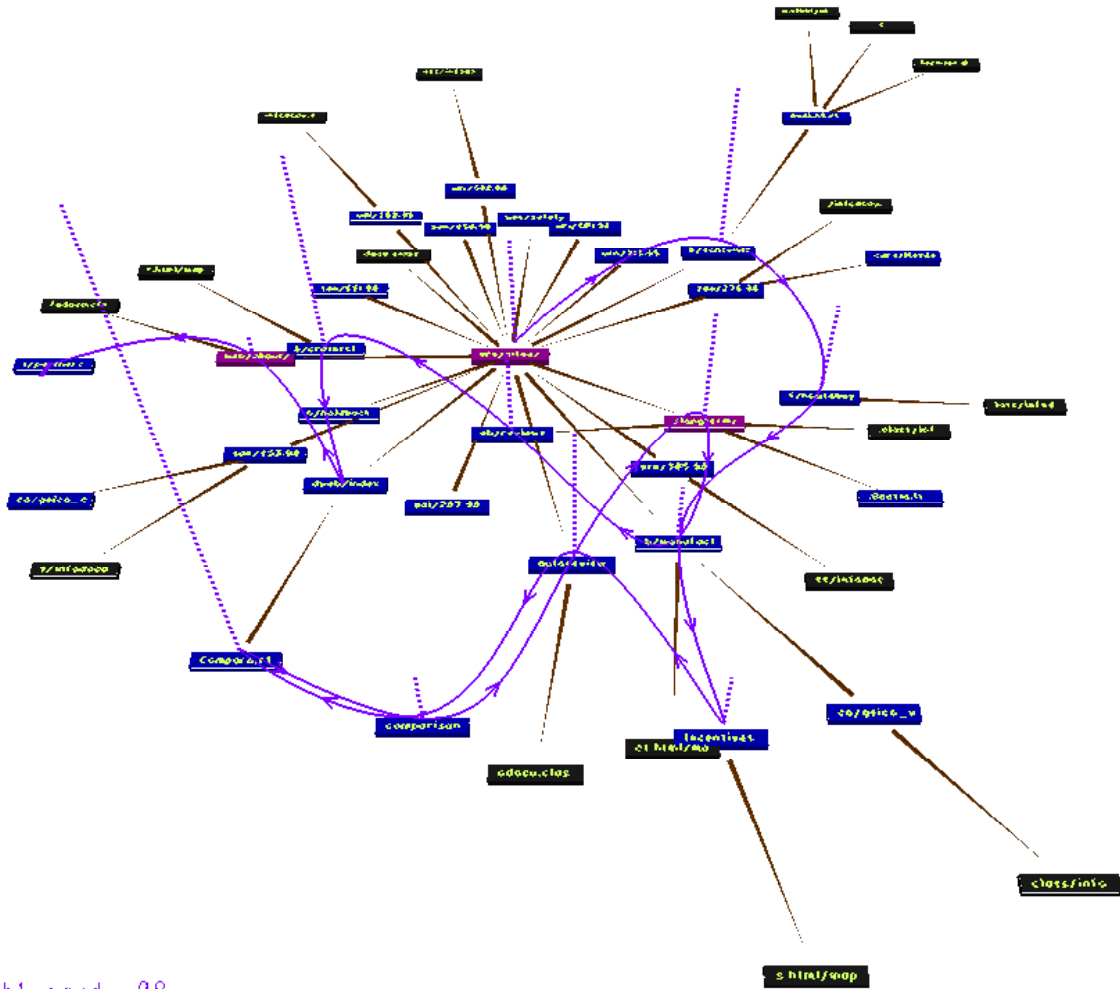
Tue Jan 25 04:05:17 2005

BGP4+ — (green line)  
UNKNOWN — (black line)



<http://www.cs-ipv6.lancs.ac.uk/ftp-archive/6Bone/Maps/backbone.gif>

## Website User Paths



(VISVIP 3D Visualisation of Variable Instrument Program)

<http://www.itl.nist.gov/iaui/vvrg/cugini/webmet/visvip/webvis-paper.html>

Interface for path  
visualisation

Explain:

VISVIP

Operations

Types

Parameters

### Control layout of graph of website



Push Factor:



Pull Factor:



Adjacency:



Converge:



Redraw:



Node Ops:

Stick

Slip

Filter

Scatter



Proximity to userpath:

0

1

2

All



Connectivity:

Page link

User jump

Link or jump



Node Locations:

Save

Restore

### Control display of user-paths within website



Userpaths:

Show All

Hide All

Select Which



Playback:

Start

Pause

Relative speed:

10

Time from start:

278



Display:

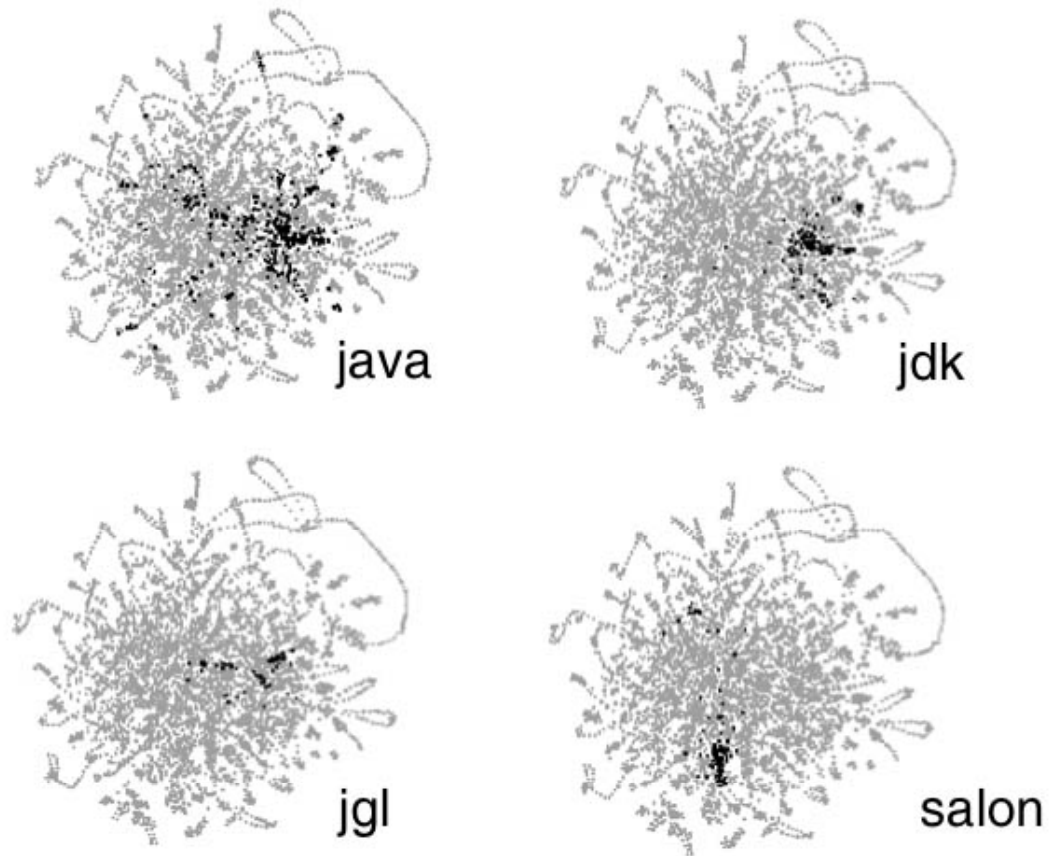
Cumulative

Path

Term



"Trailmaps", by Matthew Chalmers, Glasgow



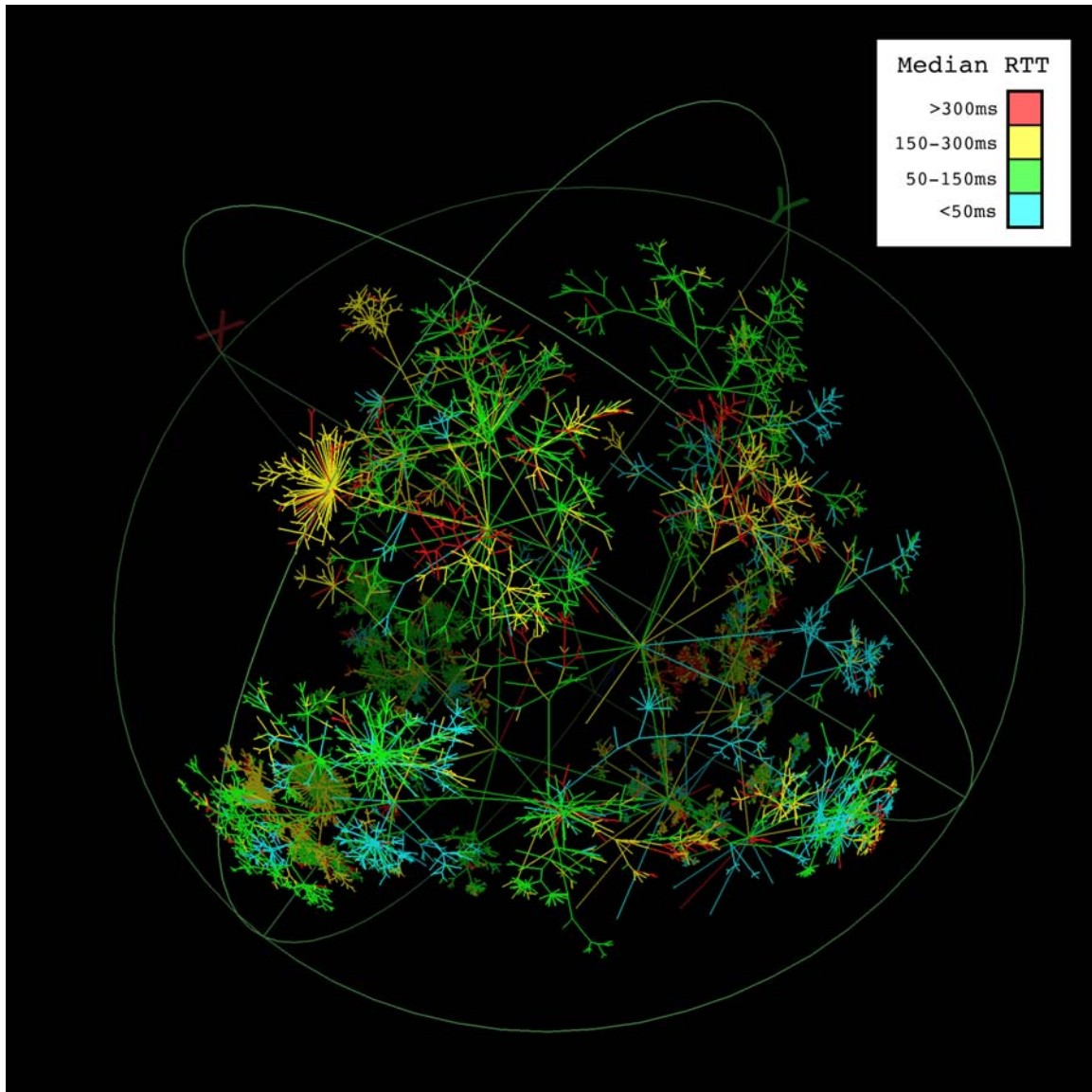
The path shows past activity; usage history and not content analysis.

<http://www.dcs.gla.ac.uk/~matthew/> >

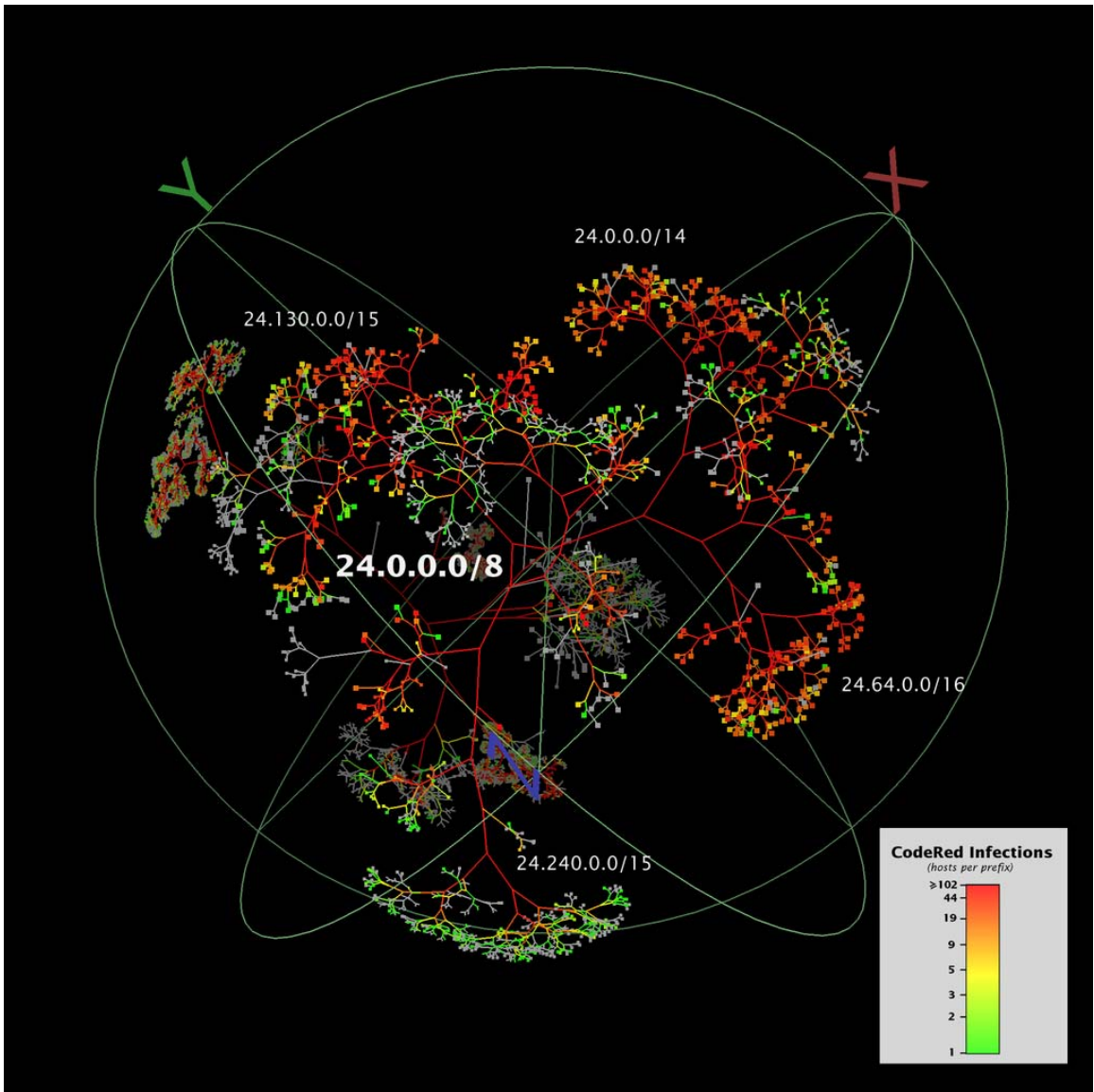
<http://www.dcs.gla.ac.uk/~matthew/papers/tut99.pdf>

## Walrus

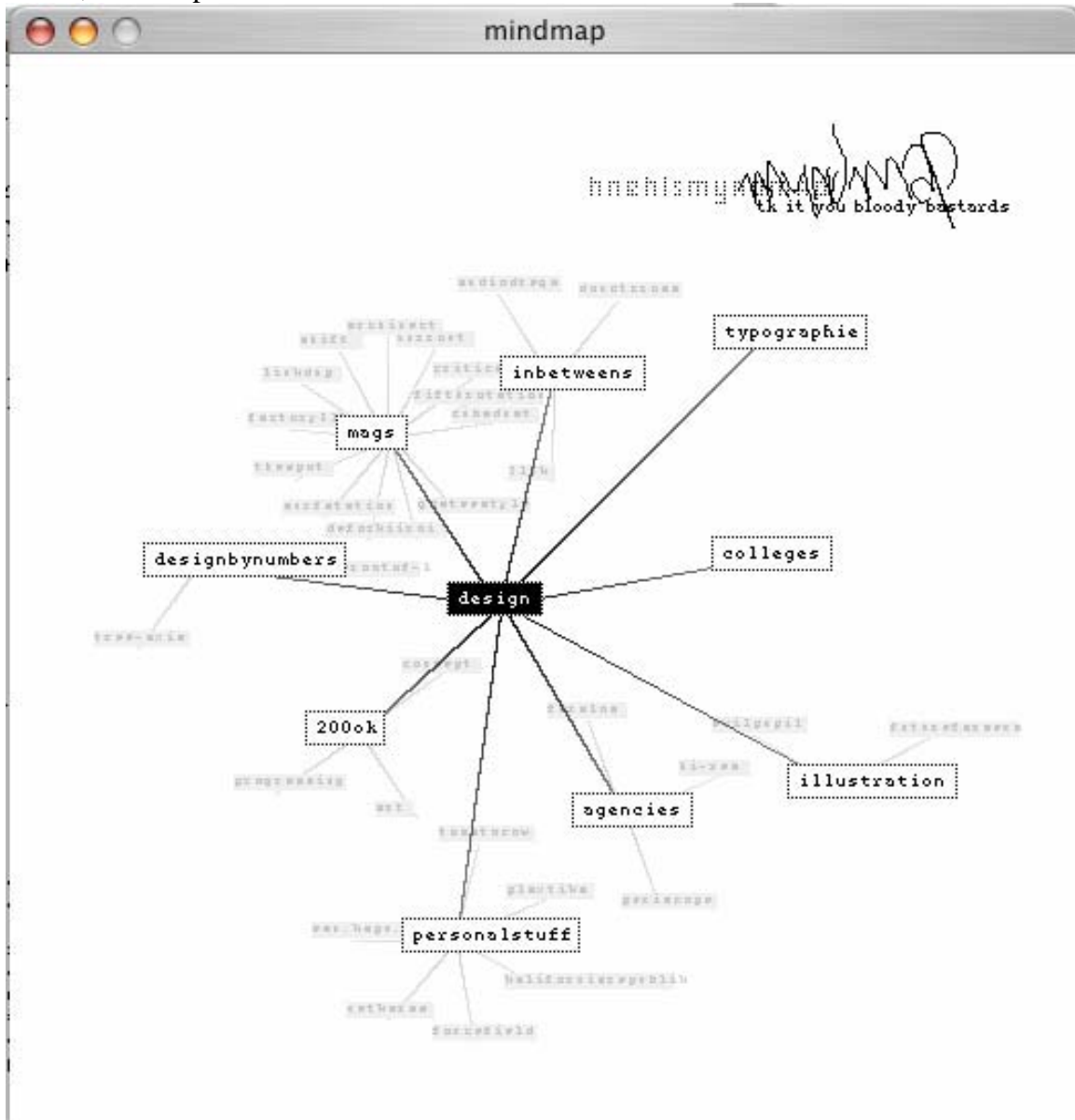
from CAIDA:



<http://www.caida.org/tools/visualization/walrus/>  
showing TIME to different websites.

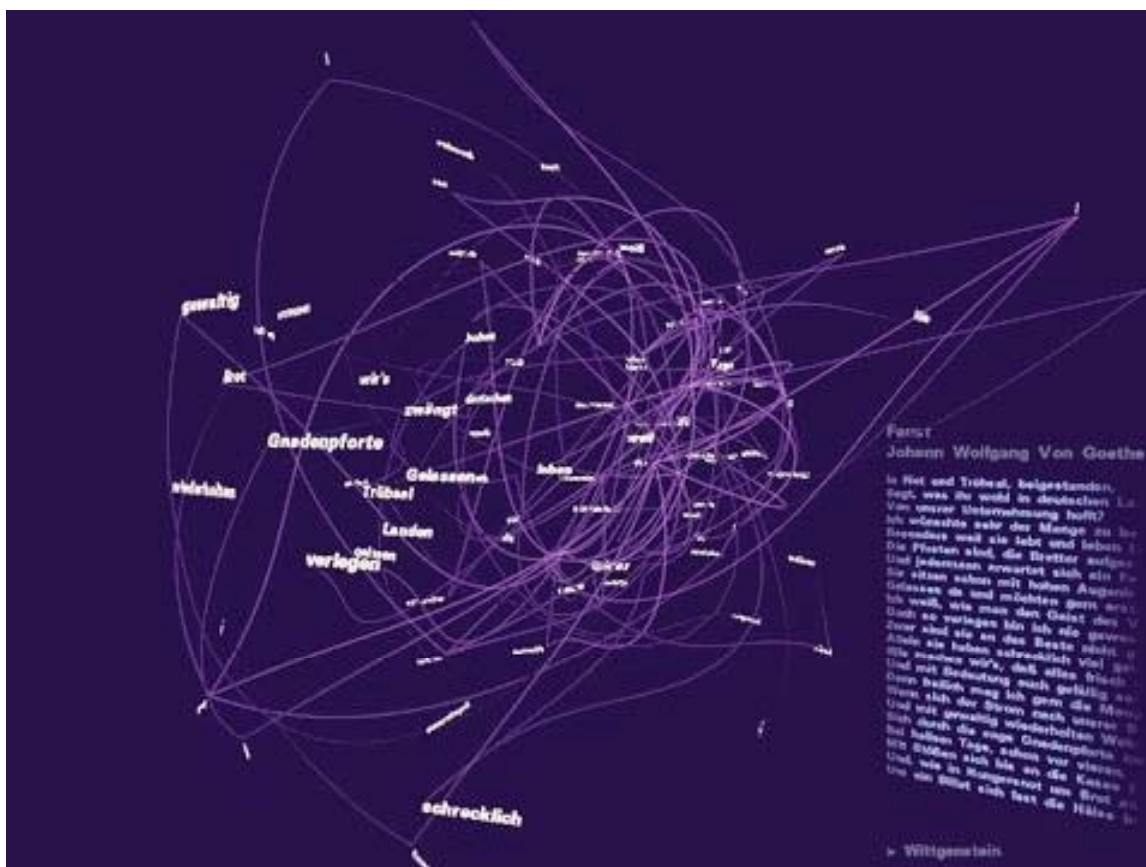


200ok, mindmap menu



<http://www.200ok.de>

# Ben Fry "text"



## Flickr search interface:

The screenshot shows the Flickr search interface in a browser window. The address bar displays <http://www.flickr.com/photos/search/>. The page title is "Flickr: Photos from everyone in Flickr". The navigation menu includes [Home](#), [Photos](#), [Everyone's](#), [Tags](#), [Contacts](#), [Yours](#), [Organizer](#), [Groups](#), [People](#), and [Invite](#). The user is logged in as [Michael Hohl](#), with links for [Log Out](#) and [Help](#).

# Search everyone's photos.

**Search with more than one tag**

(e.g. search for photos tagged with *cute black cat*)

Find photos with **all** of these tags  
 Find photos with **any** of these tags

**Search titles, tags and descriptions**

<b>Your Photos</b> <ul style="list-style-type: none"><li>- <a href="#">Your Photo page</a></li><li>- <a href="#">Recent Comments</a></li><li>- <a href="#">Your Tags</a></li><li>- <a href="#">Your Sets</a></li><li>- <a href="#">Upload form</a></li><li>- <a href="#">Uploading Tools</a></li><li>- <a href="#">Organizer</a></li><li>- <a href="#">Your Favorites</a></li></ul>	<b>Your Account</b> <ul style="list-style-type: none"><li>- <a href="#">Account page</a></li><li>- <a href="#">Edit Profile</a></li><li>- <a href="#">Profile Privacy</a></li><li>- <a href="#">Photo Privacy</a></li><li>- <a href="#">Upload-by-email</a></li><li>- <a href="#">Buy a Pro Account</a></li><li>- <a href="#">Order History</a></li></ul>	<b>Explore</b> <ul style="list-style-type: none"><li>- <a href="#">Everyone's photos</a></li><li>- <a href="#">Comments you've made</a></li><li>- <a href="#">Everyone's tags</a></li><li>- <a href="#">Creative Commons</a></li><li>- <a href="#">Group Listings</a></li><li>- <a href="#">Photo Search</a></li><li>- <a href="#">Flickr Blog (offsite)</a></li></ul>	<b>People</b> <ul style="list-style-type: none"><li>- <a href="#">Your contacts</a></li><li>- <a href="#">Contacts' photos</a></li><li>- <a href="#">People Search</a></li><li>- <a href="#">Invite</a></li><li>- <a href="#">Your Groups</a></li><li>- <a href="#">FlickrMail</a></li></ul>	<b>Support</b> <ul style="list-style-type: none"><li>- <a href="#">FAQ</a></li><li>- <a href="#">Support Forums</a></li><li>- <a href="#">FlickrHelp</a></li><li>- <a href="#">FlickrIdeas</a></li><li>- <a href="#">FlickrBugs</a></li><li>- <a href="#">Help by email</a></li><li>- <a href="#">"Get the most out of Flickr"</a></li></ul>
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[< Home Page](#) [Complete Sitemap >](#)

## Flickr results for tag search:

The screenshot shows a web browser window with the title "Flickr: Photos tagged with mouse". The address bar contains the URL "http://www.flickr.com/photos/tags/mouse/". The browser's search bar shows "Google". The page header includes navigation links: Home | Photos: Everyone's | Tags | Contacts | Yours | Organizer | Groups | People | Invite. The Flickr logo is in the top right, with "BETA" above it. Below the logo, it says "Logged in as Michael Hohl | Log Out | Help".

# Tags / mouse

[View as slideshow](#)  
([New window](#) <sup>Ⓔ</sup>)

You're looking at all the public photos tagged with **mouse**.

Related:  
[cat](#), [mickey](#), [computer](#)

See also:  
[keyboard](#), [desk](#), [apple](#),  
[dead](#), [red](#), [mac](#), [disney](#),  
[mice](#), [mousepad](#), [christmas](#)

[Ads by Gooooogle](#)

**Computer Mice for Kids**  
A Big & Fun Selection at Low Prices We Donate our Profits to Charity!  
[www.ergocube.com](#)

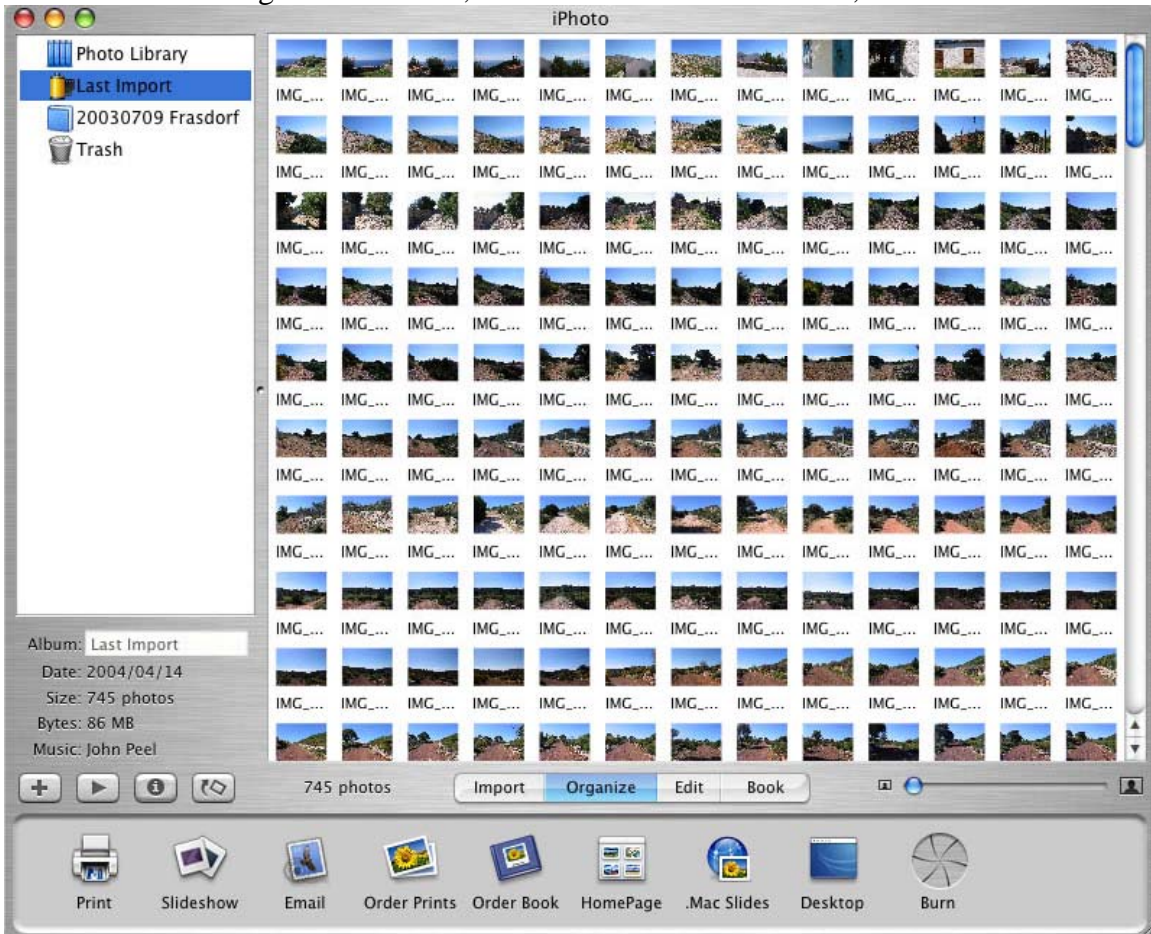
**The Mouse Depot**  
The Most Humane Mouse Trap Catch and Release a Live Mouse  
[www.themousedepot.com](#)

The main content area displays a grid of 13 photo thumbnails. The first thumbnail is a white computer mouse, captioned "From gudguds". The remaining 12 thumbnails show various scenes of mice, including a mouse in a bowl of chocolate, a mouse on a clock face, a mouse in a kitchen, and a mouse in a trap. Each thumbnail is captioned "From Mouse".

“a word says more than 1,000 images” (T. Bolsinger)

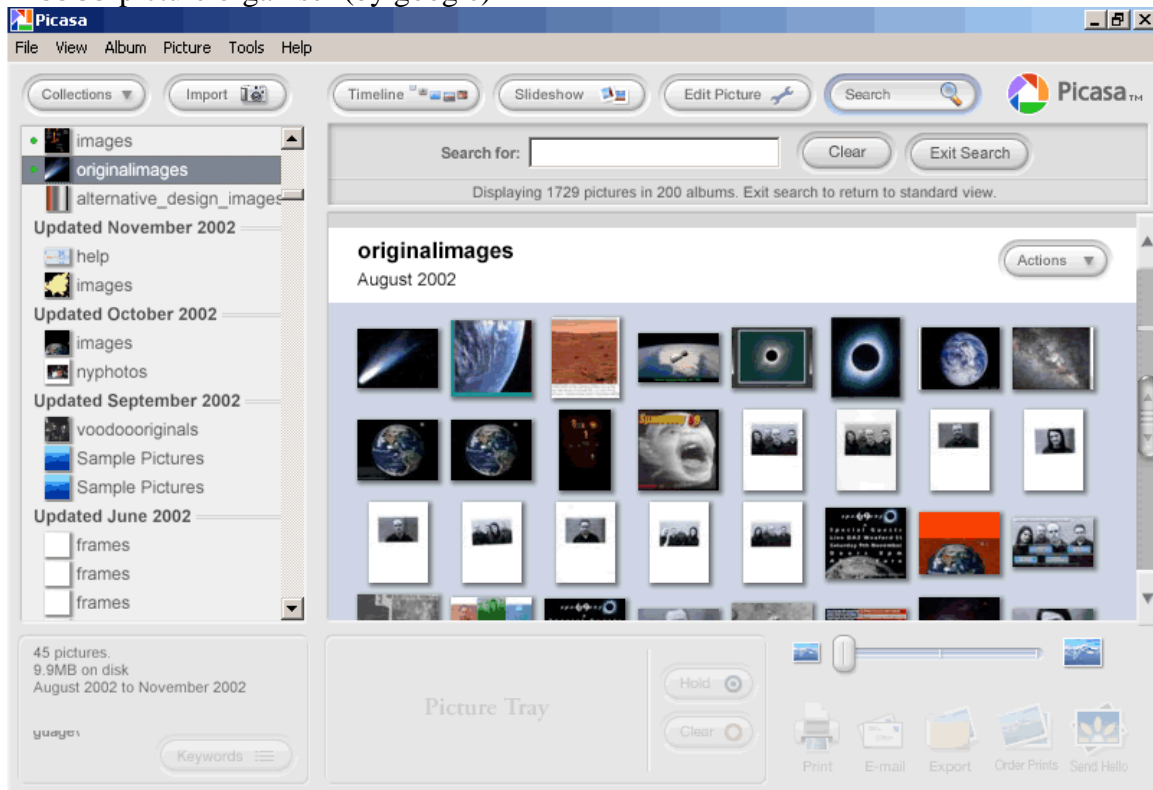
[www.flickr.com](#)

**iPhoto:** Picture organiser / viewer, The overview is the interface, zoom into icon



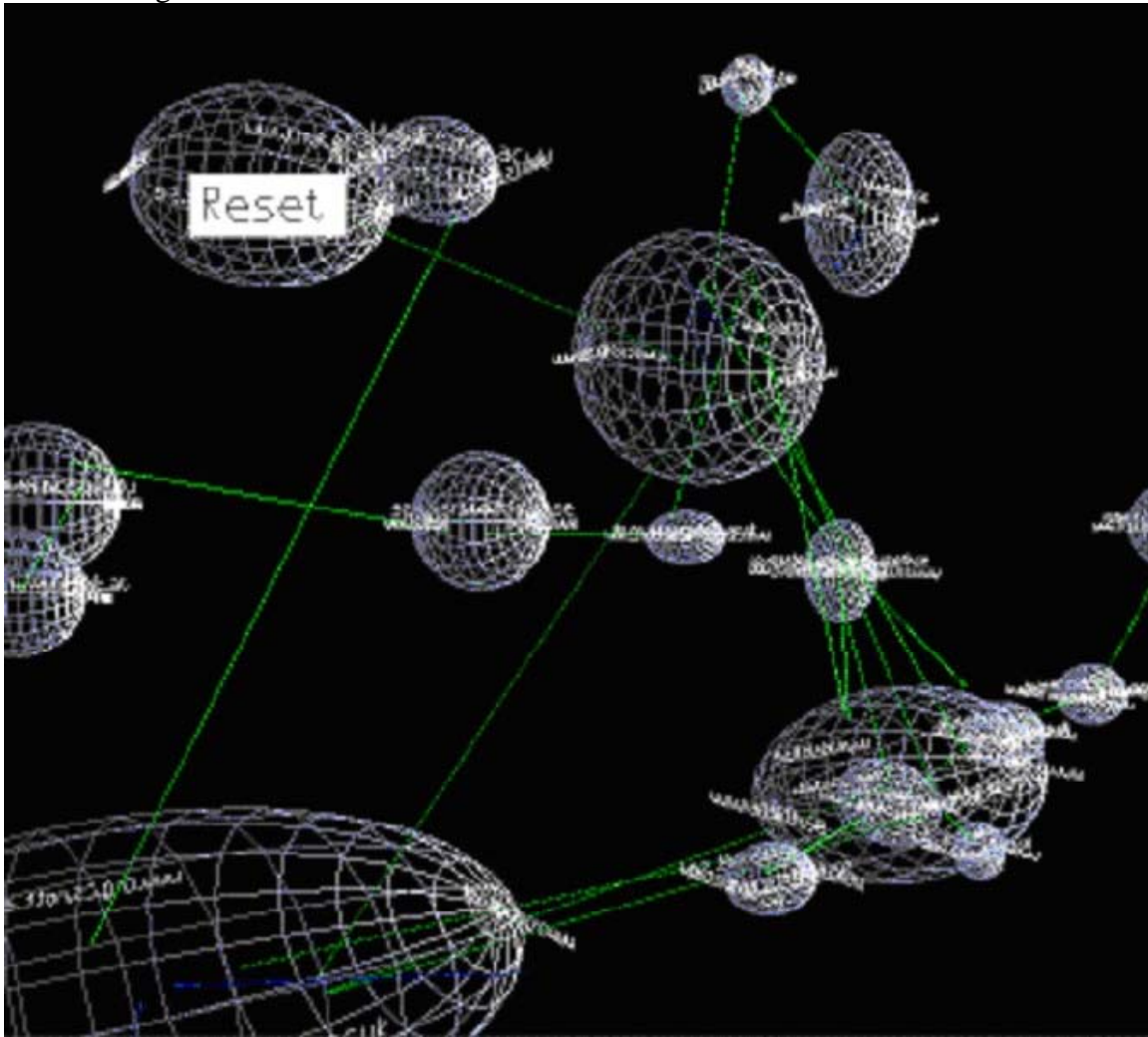


# Picasa picture organiser (by google)



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

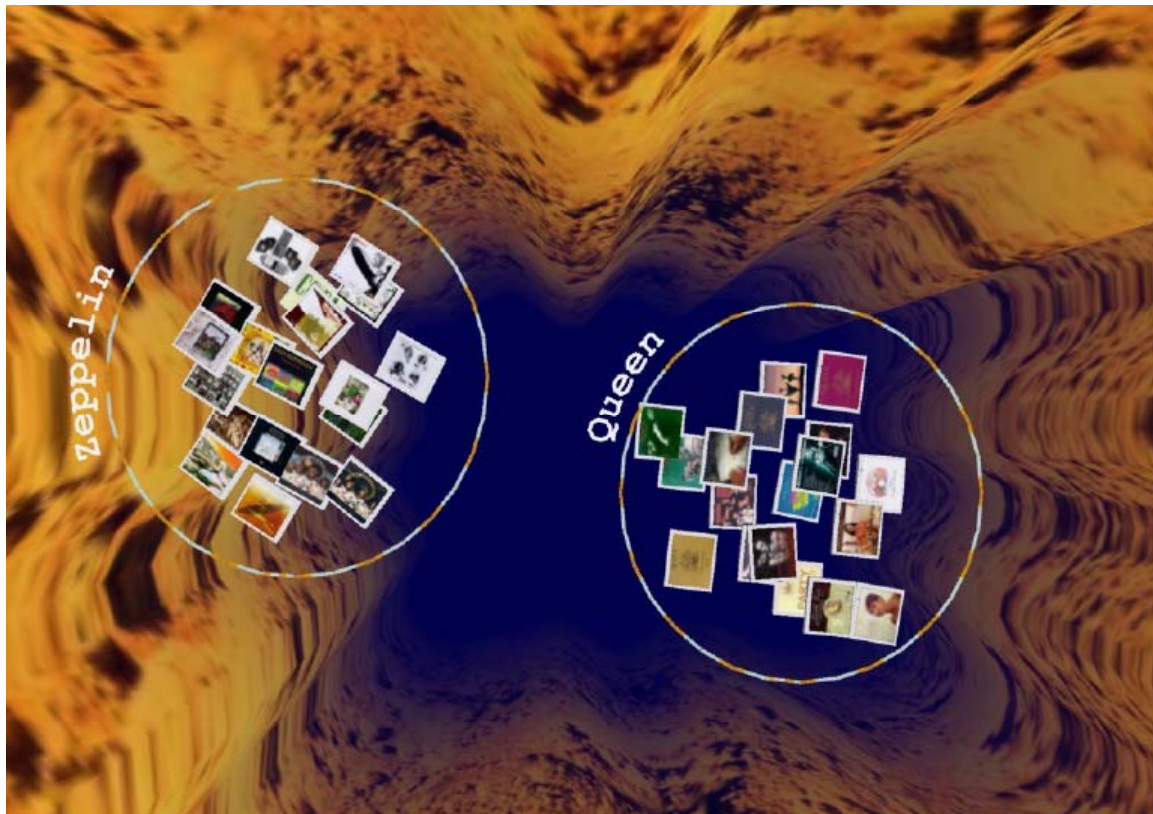
Website diagram:



<http://www.iisbook.com/pages/images.html>

## "interactive pond"

for information visualisation and exploration by Olov Ståhl, Anders Wallberg





[http://www.iisbook.com/images/F\\_04\\_01.JPG](http://www.iisbook.com/images/F_04_01.JPG)

Don't confuse Operating Systems, File View, Search and "image organiser" applications..  
They all are visualising data. Helping to organise data.

"sketchbook" is not an organiser, but expected to enhance creativity and create insights  
by allowing among others to access, enhance, magnify, zoom and filter sketches in an  
enlightening way.

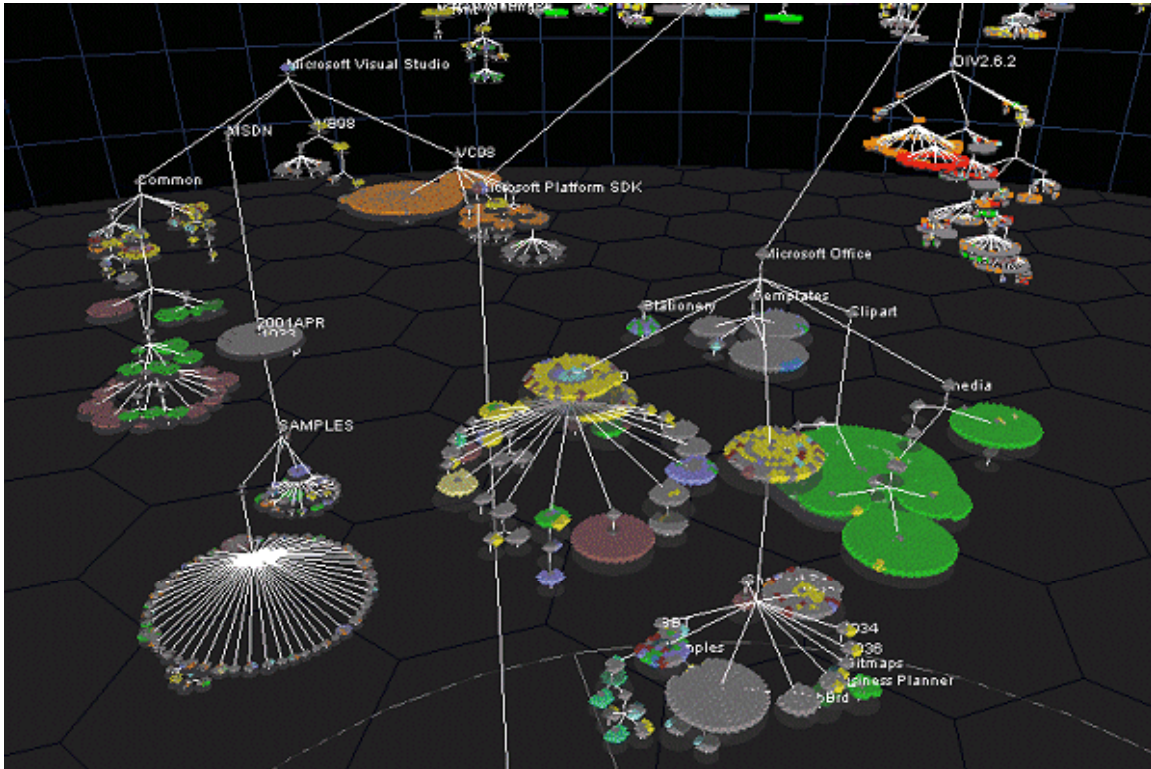
## **Lifestream (file system)**

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

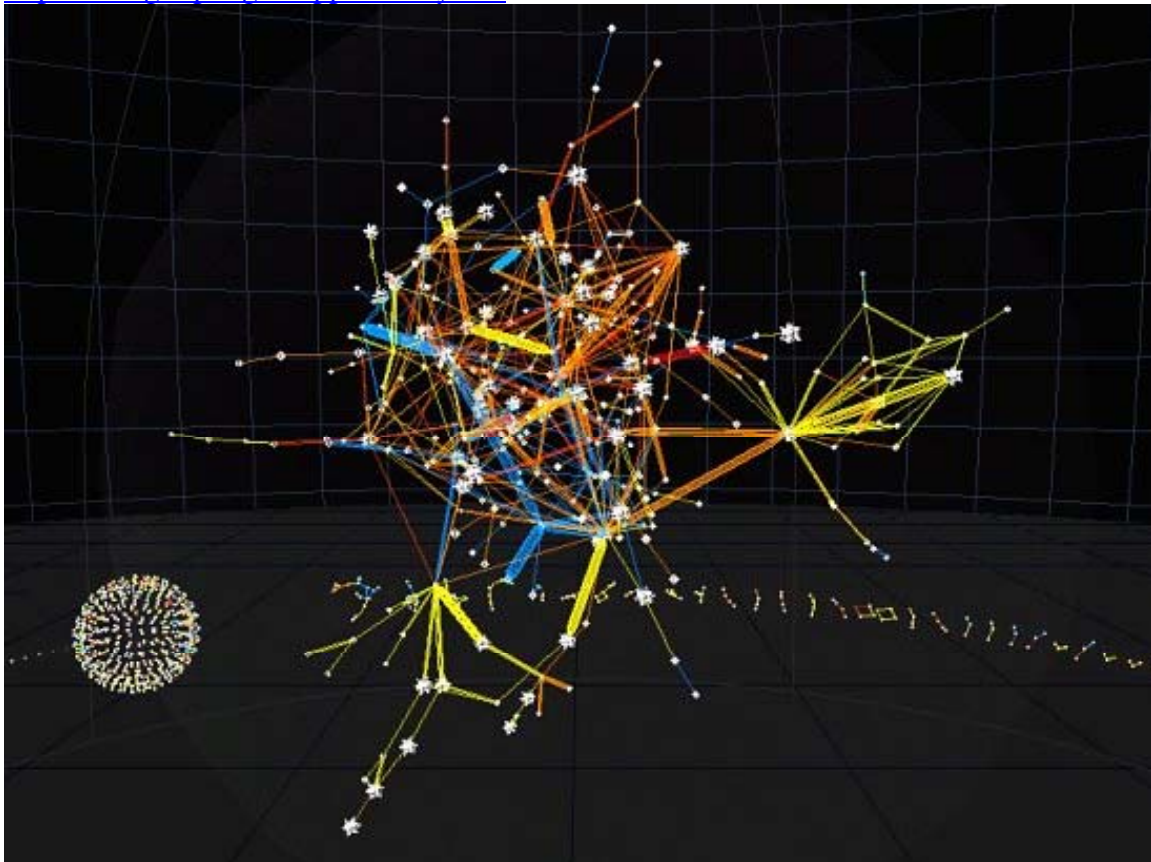
the filesystem is chronological

<http://sigchi.org/chi96/proceedings/videos/Fertig/etf.htm>

## "Starlight" View of hierarchical file system



<http://starlight.pnl.gov/appSecurity.stm>



OS X 3D filesystem browser:



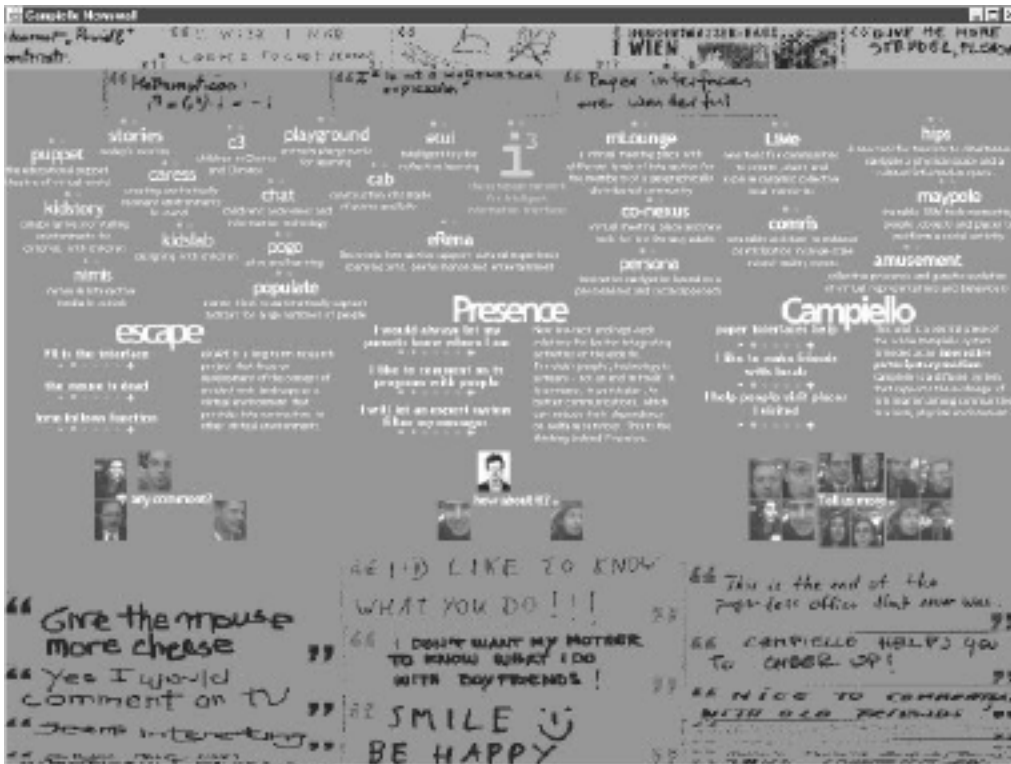
<http://qin.laya.com/docs/articles/acm.html>

"task gallery" Microsoft 3D interface:



Campiello paper interface in Venice





(no example of paper interface "ActiveNewscards" available online.)

### LiMe (living memory)



interface by philips to be used on the table (from Gillian)

<http://www.design.philips.com/about/design/section-13506/>

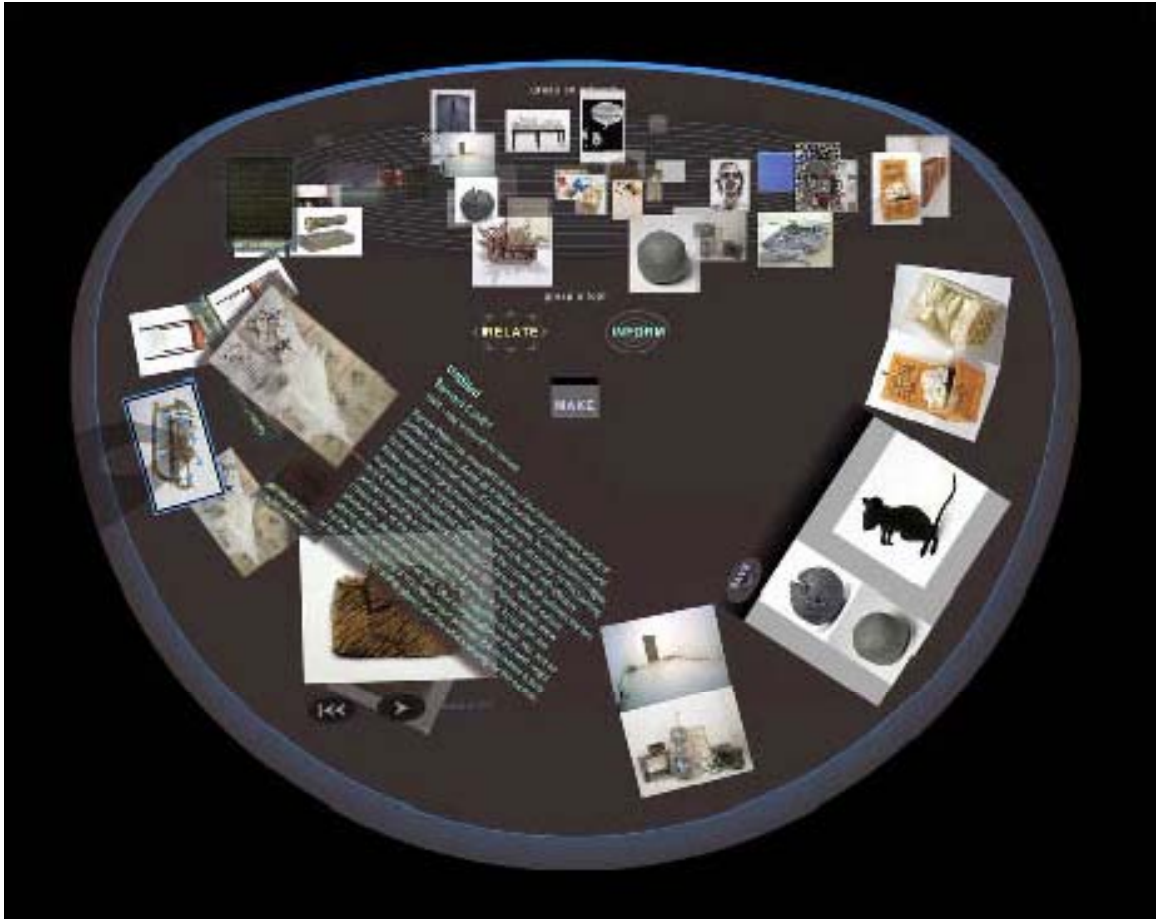
See movie "in the cafe"

<http://www.design.philips.com/assets/Downloadablefile/lime-12959.mov>

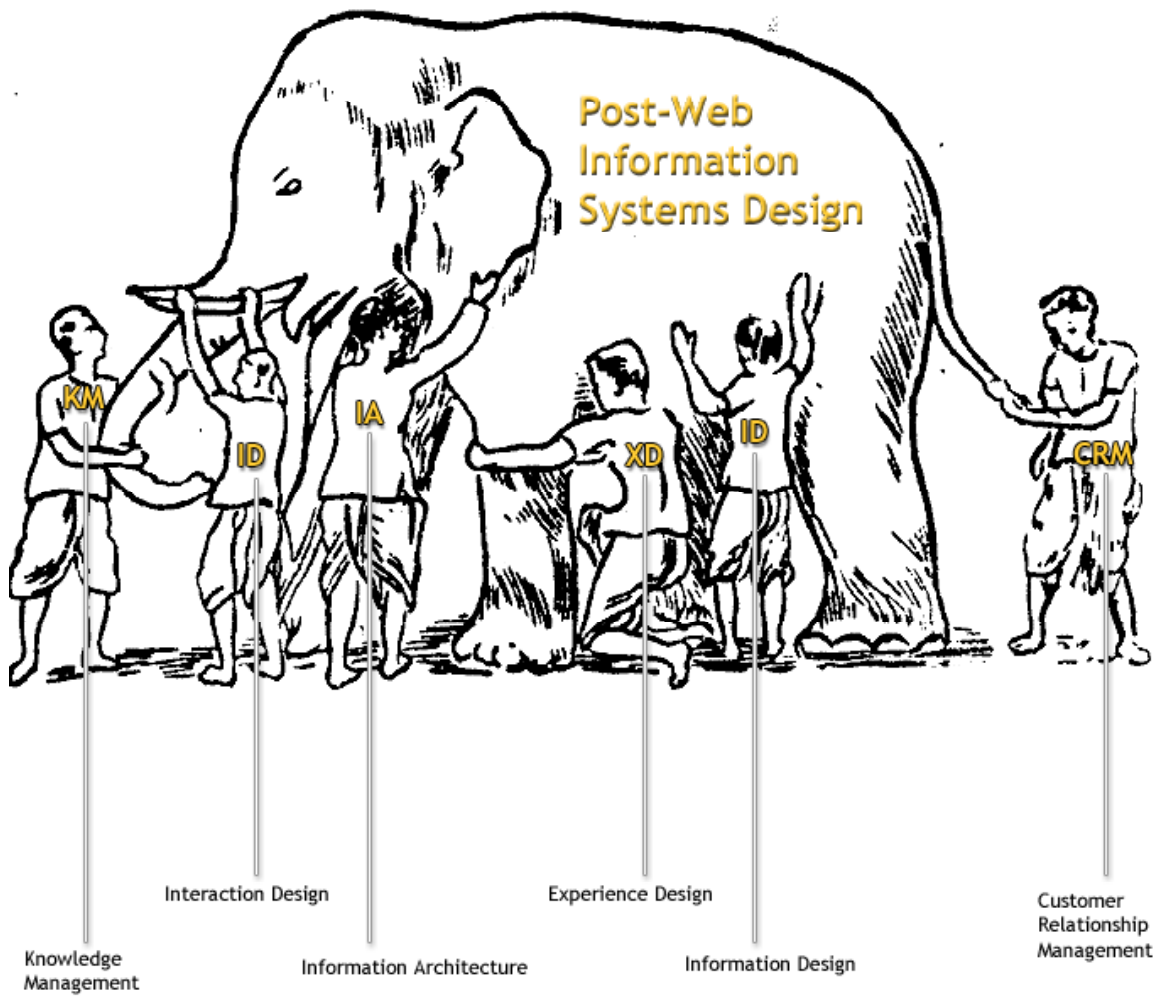
## Dialog table

For multiple users





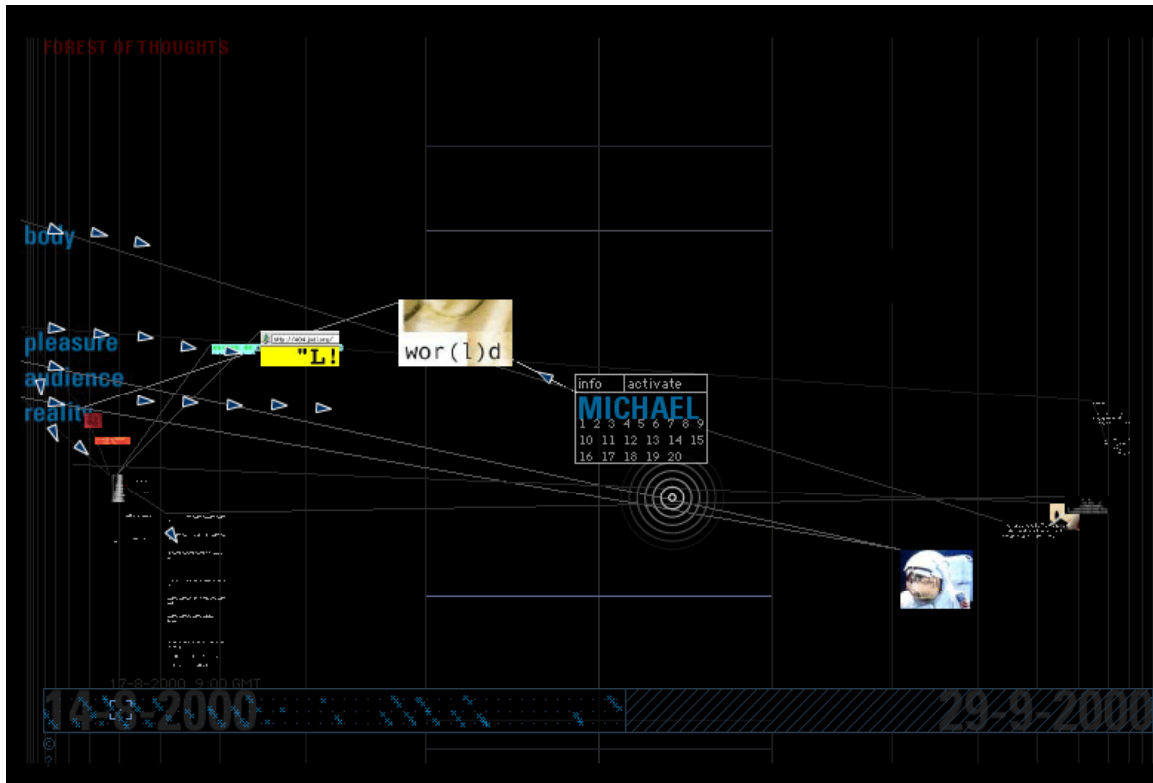
<http://dialogtable.com>



<http://kwc.org/blog/archives/category/pensieve.html>

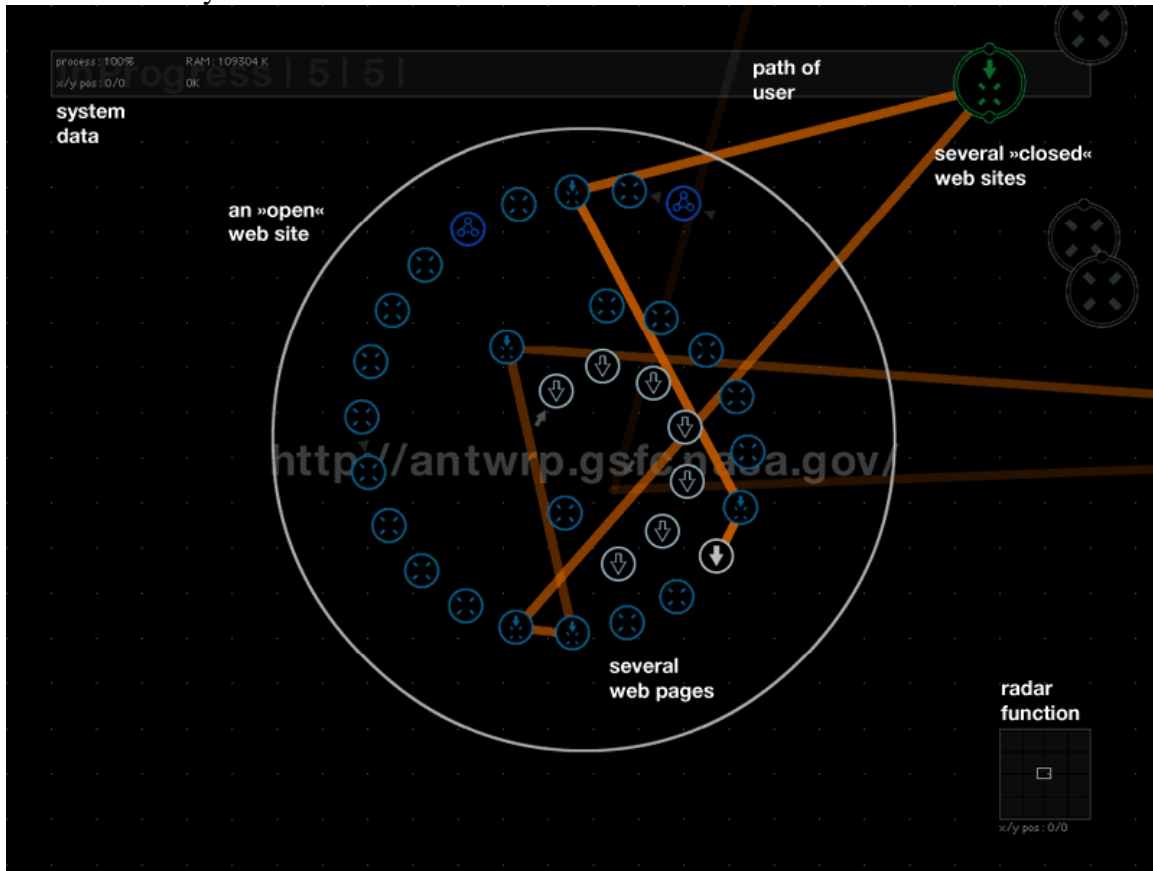
## Forest of thoughts:

Boris Müller for "Die Zeit" "The Forest of Thoughts was a constantly changing and self-developing art-space - a »living exhibition« - on the internet."



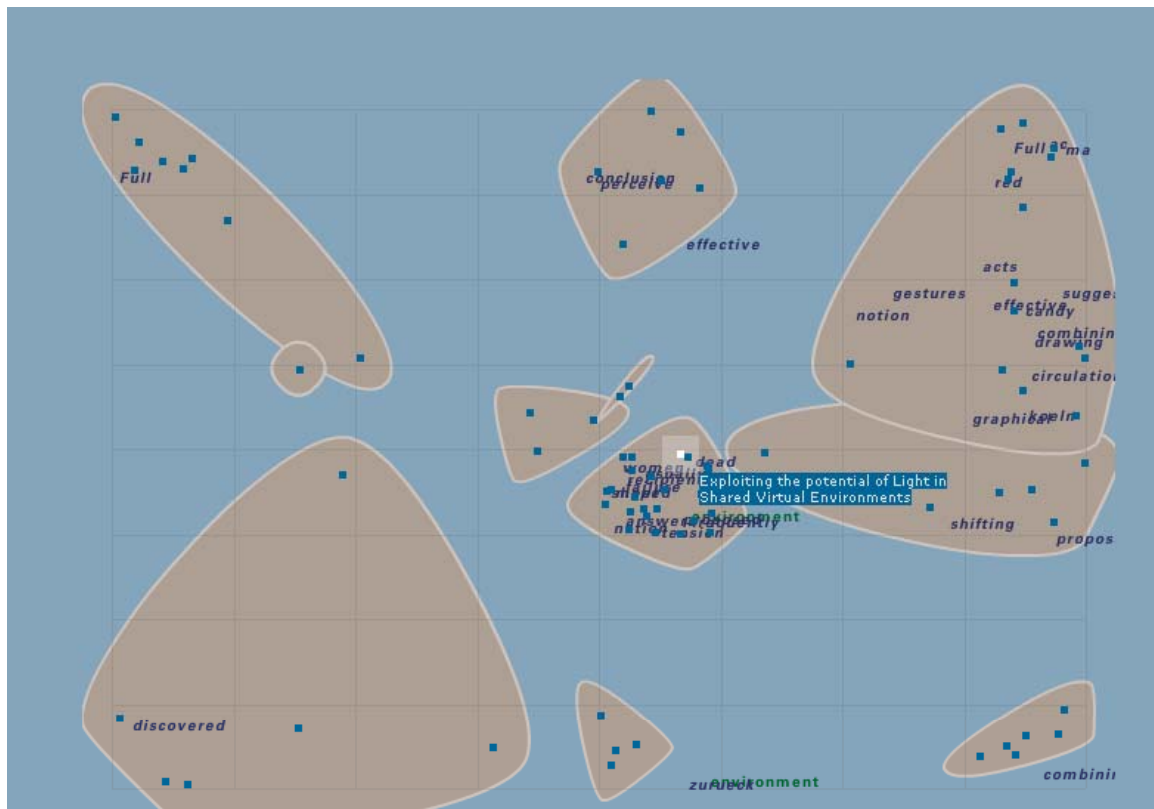
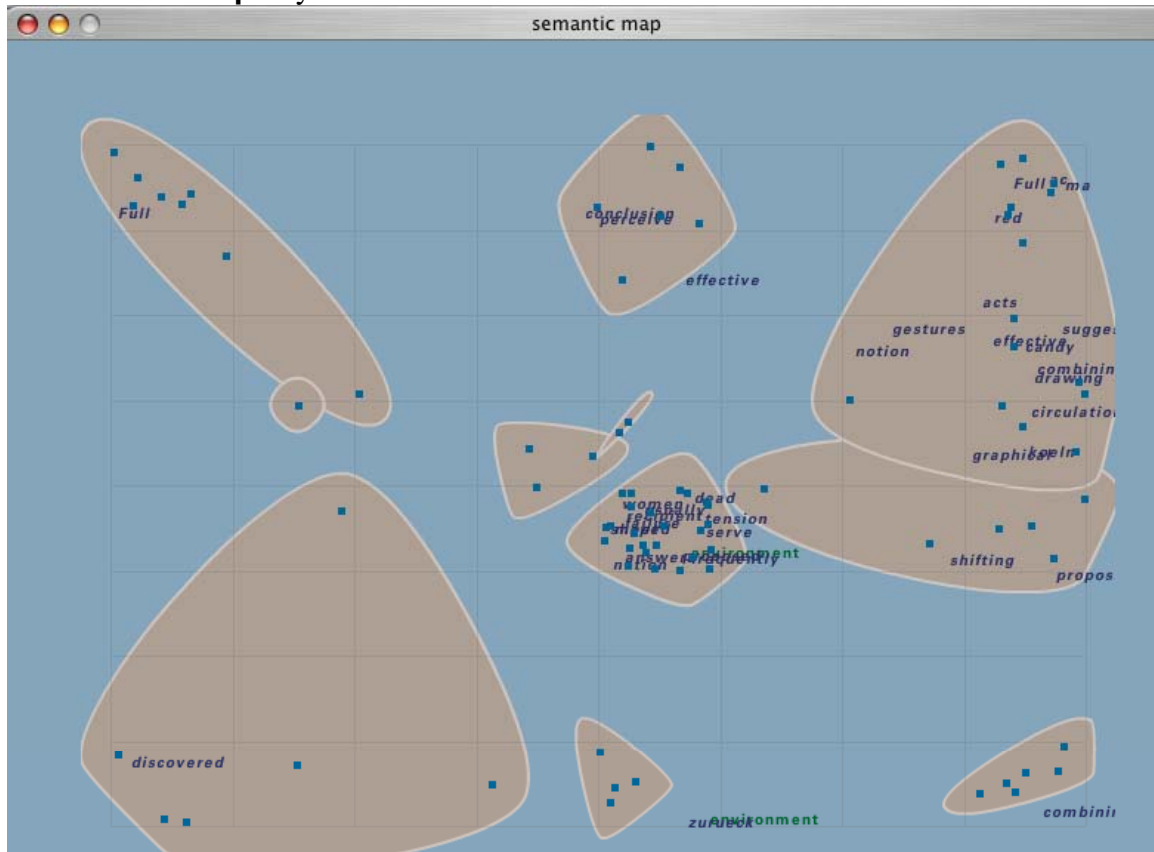
<http://www.esono.com/boris/projects/forest/>

# Ambulator by Boris Müller



<http://www.esono.com/boris/projects/ambulator/>

# "Semantic Map" by Boris Müller





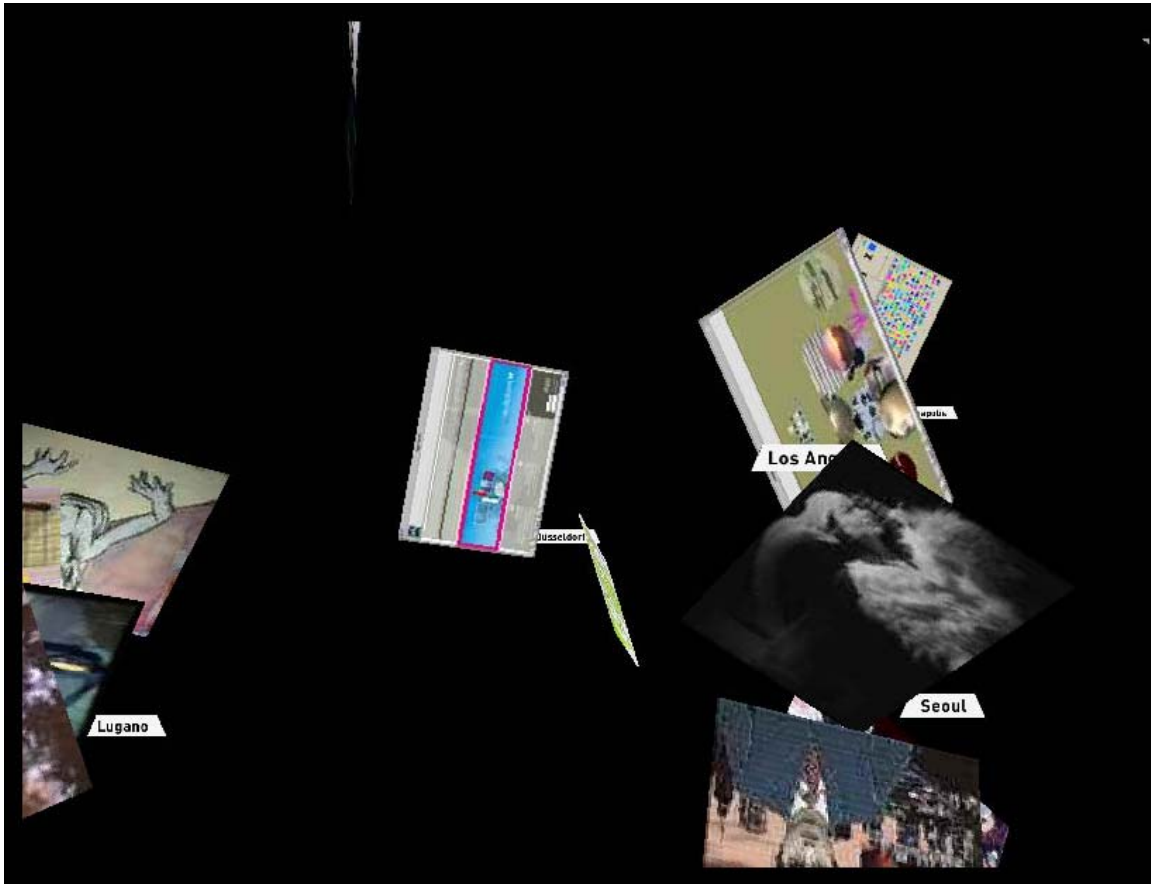
Different view of “Semantic Map”



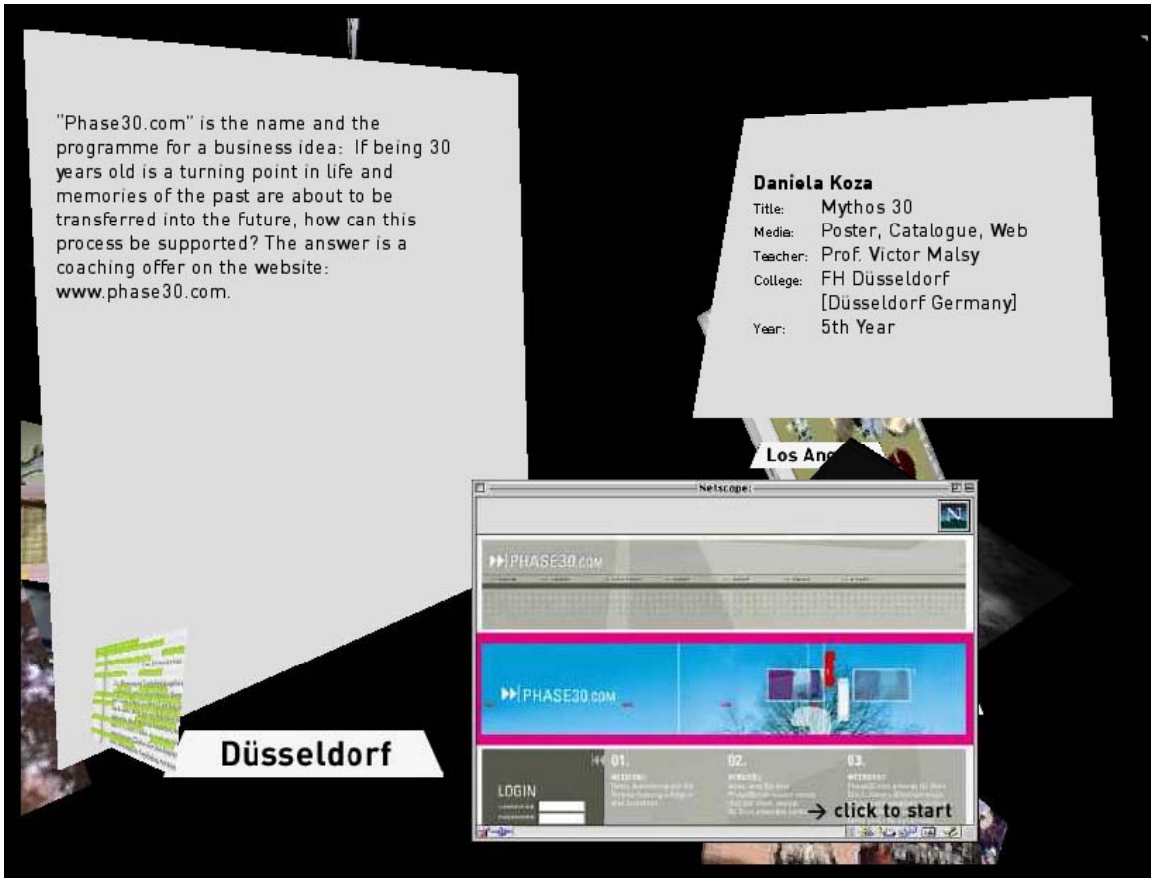


Project archive by Boris Müller

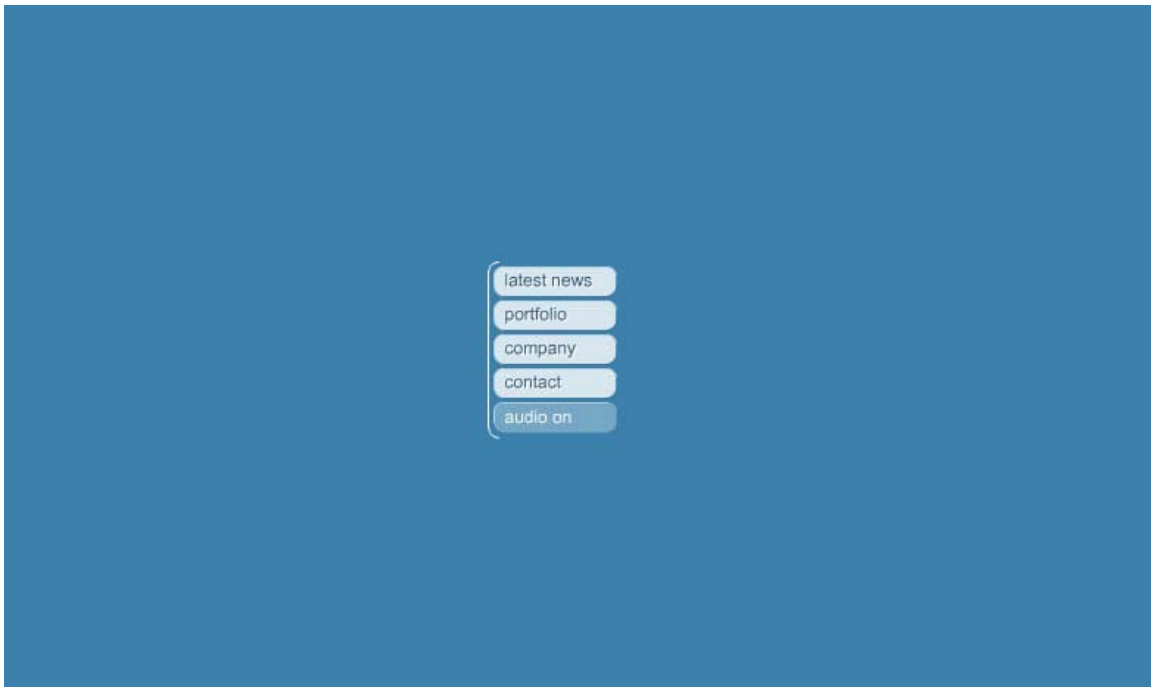
View 1: overview



Project view:



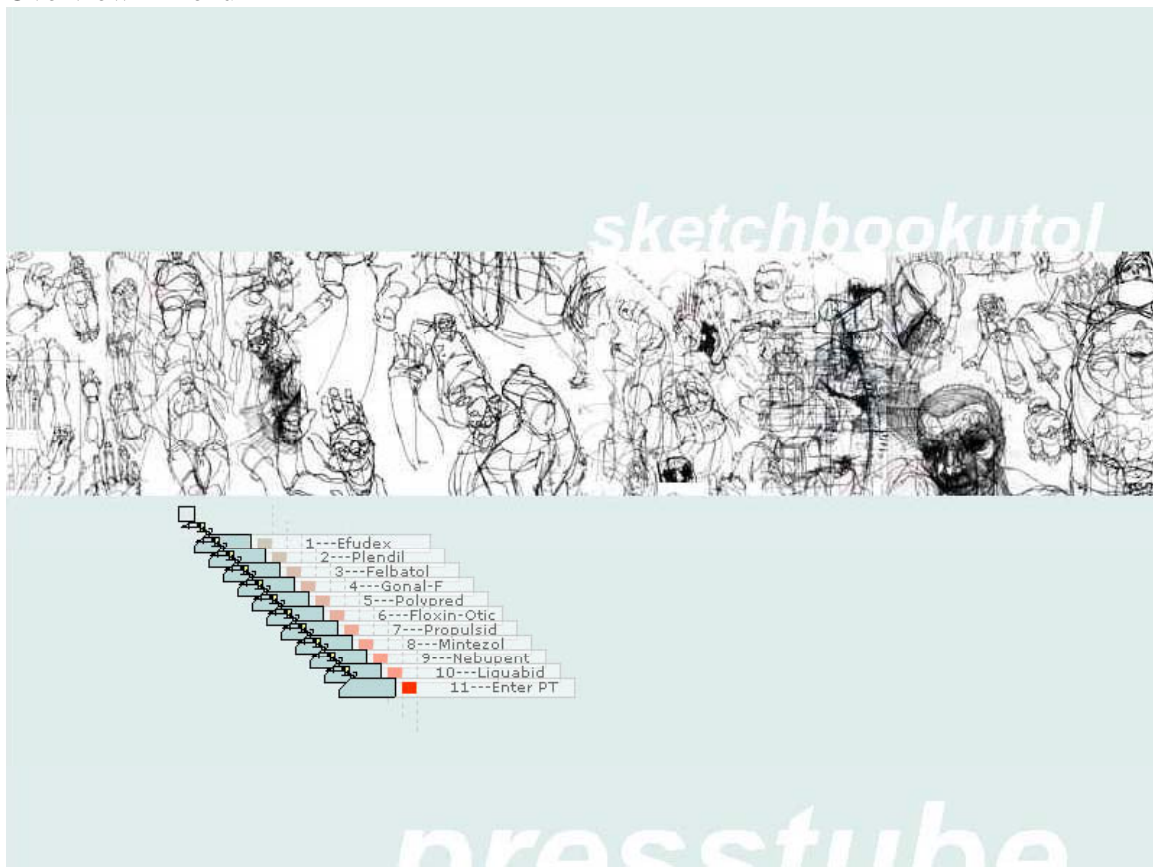
“Giant Octopus” menu by Joshua Davies



<http://www.joshuadavis.com/pound.html>

# Presstube sketchbook

Overview + menu

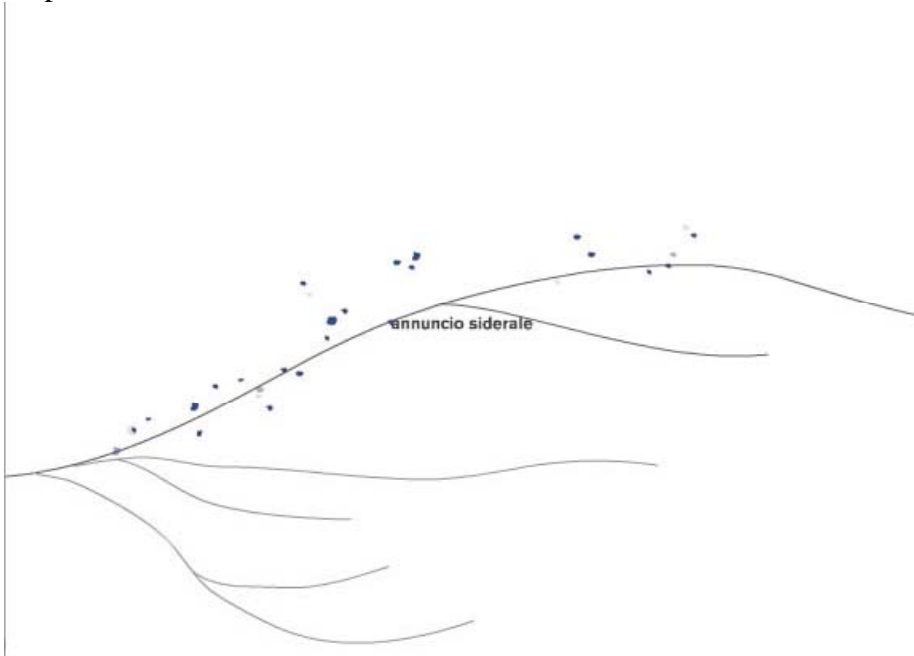




<http://www.presstube.com/chapter/>

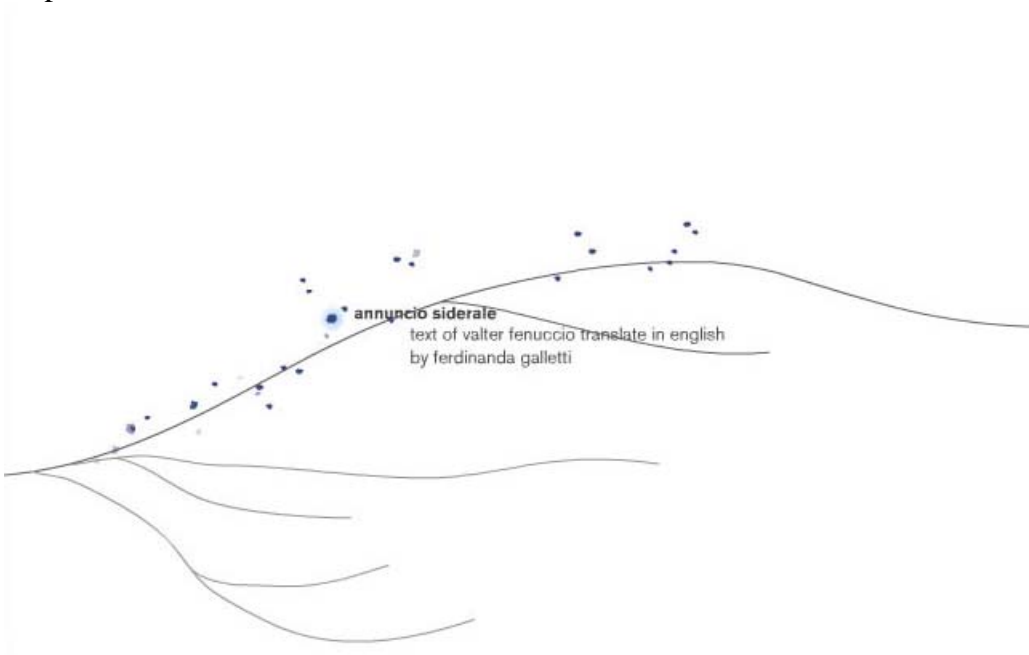
# Saggio tree navigation portfolio

Step 1:



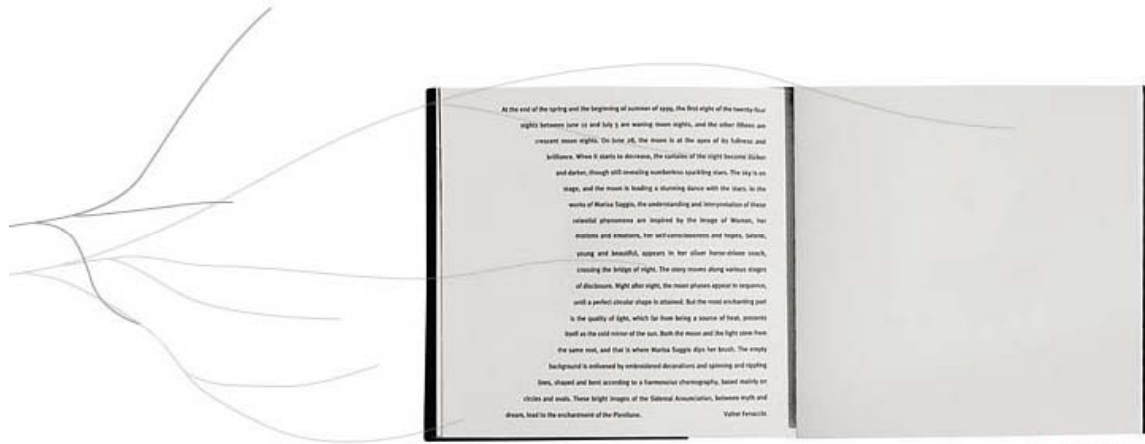
MARISA SAGGIO

Step 2:



MARISA SAGGIO

Step 3:



[read english text](#)

MARISA SAGGIO

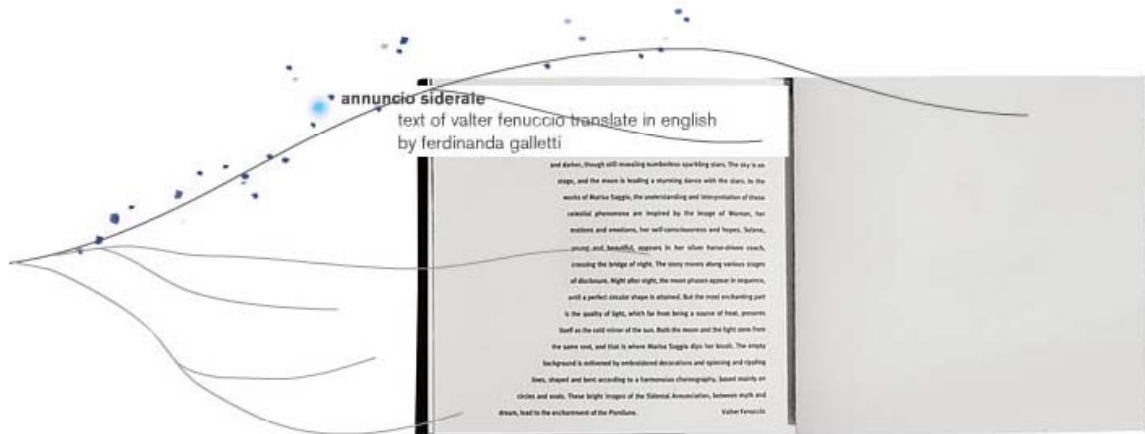
ANNUNCIO SIDERALE

text of valter fenuccio translate in english by ferdinanda galletti

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Step 4:



[read english text](#)

MARISA SAGGIO

ANNUNCIO SIDERALE

text of valter fenuccio translate in english by ferdinanda galletti

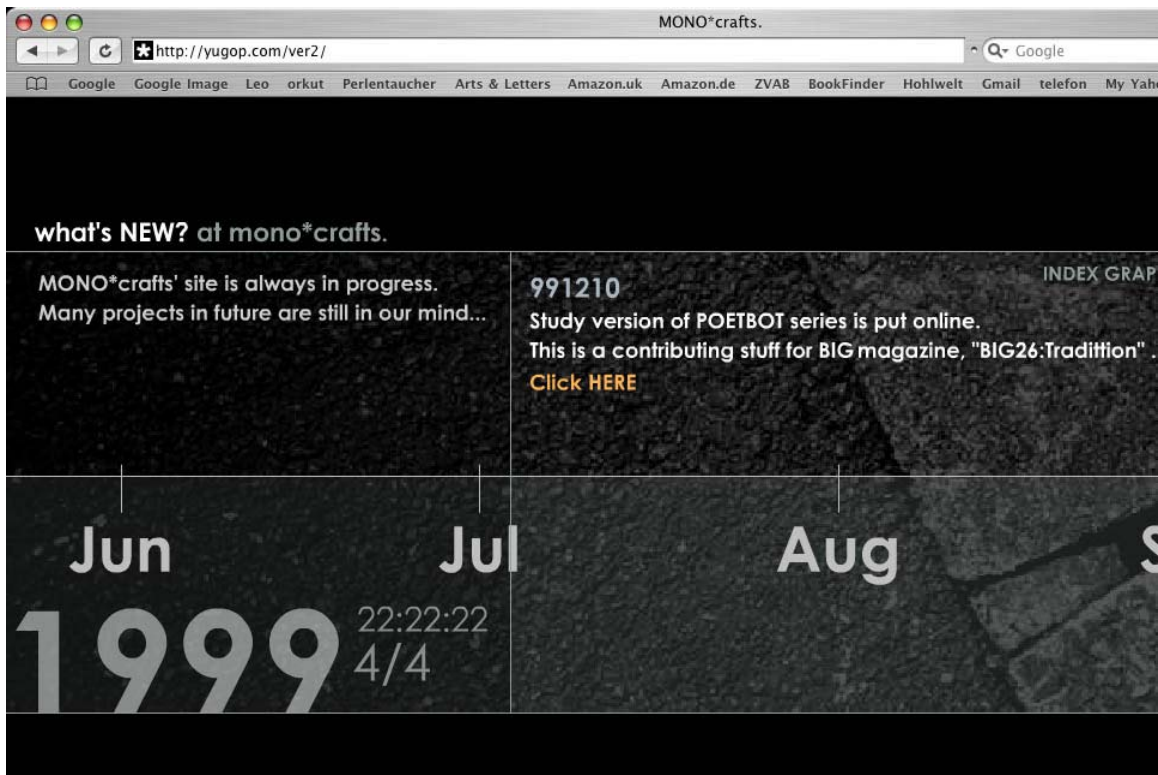
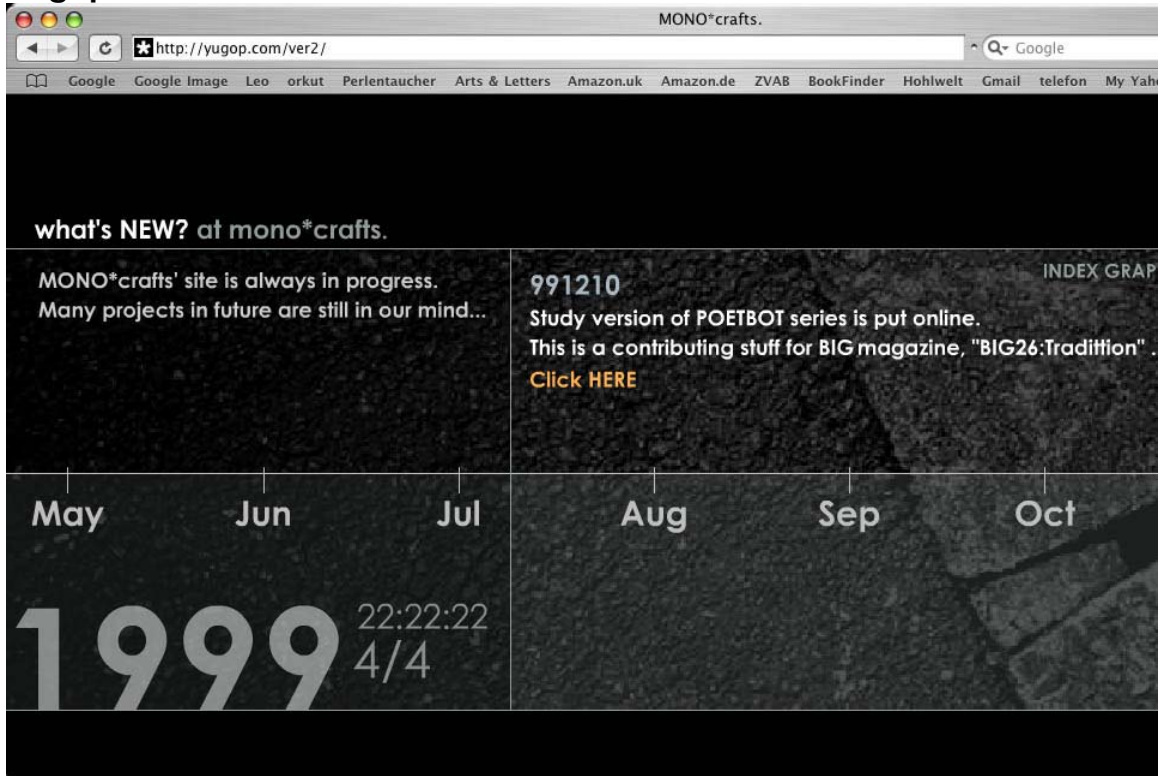
[credits](#)

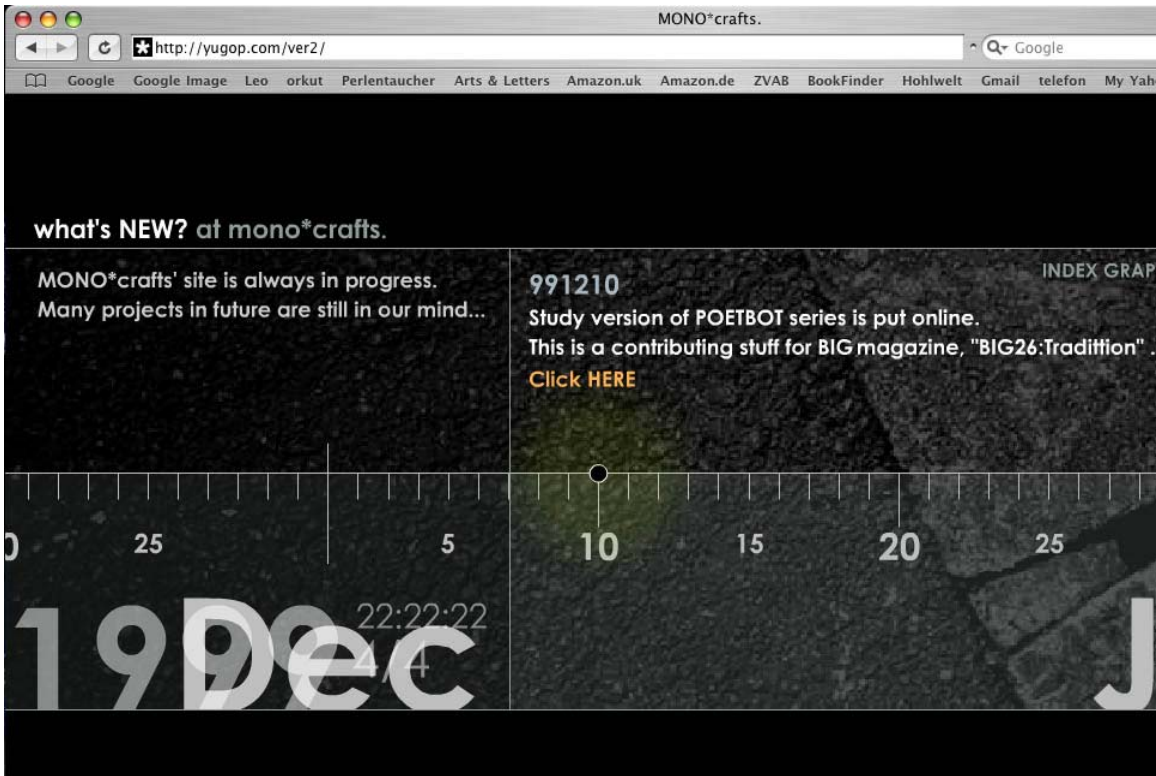
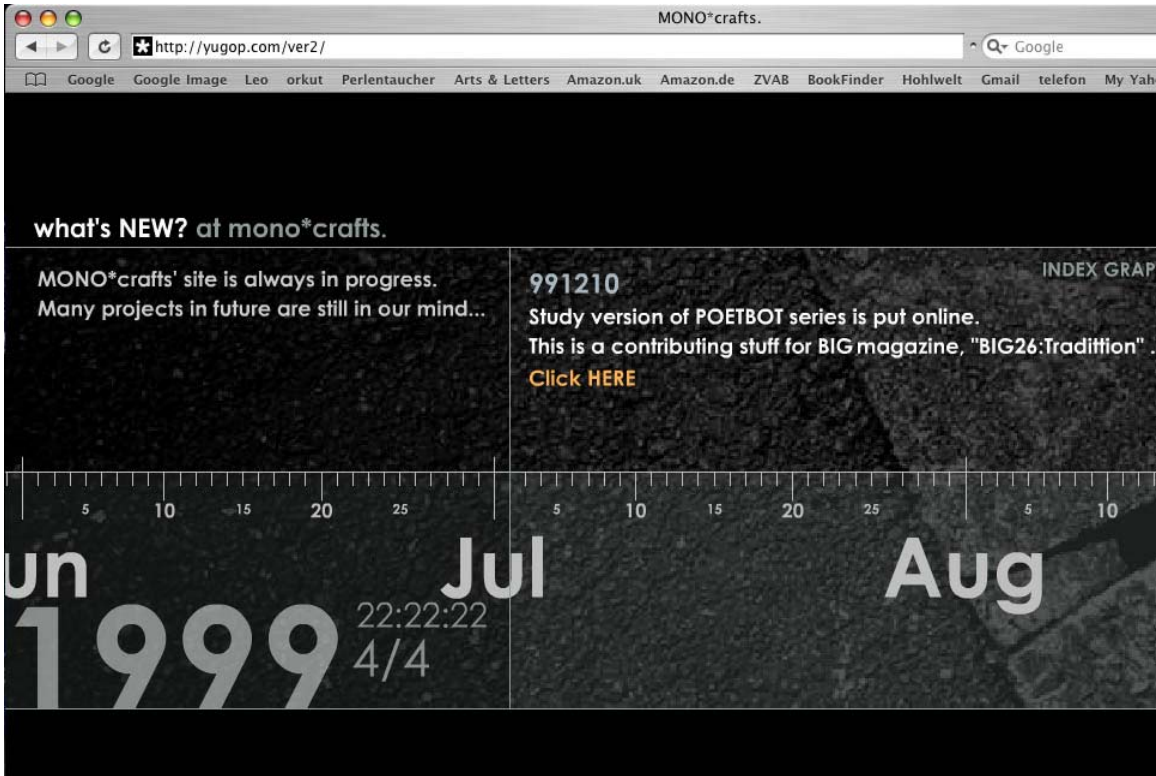
[back](#) [next](#)

<http://www.posttool.com/saggio/site/saggio.html>



# Yugop timeline zoom





http://yugop.com/ver2/

## Appendix

### A: Resources and Prototypes

Woolman, Matt (2002), Digital Information Graphics, Thames & Hudson

Mspaces, Zzstructures, mspaces,

<http://www.dgp.utoronto.ca/~mjmcguff/research/>

Links from Gillian:

<http://www.i3net.org/> outcomes in the book: <http://www.iisbook.com/pages/images.html>

<http://web.media.mit.edu/~federico/living-memory/english/index.html>

File Systems overview:

<http://courses.washington.edu/hypertext/cgi-bin/12.228.185.206/html/maps/filedirec.html>

<http://courses.washington.edu/hypertext/cgi-bin/12.228.185.206/html/tablesall.html>