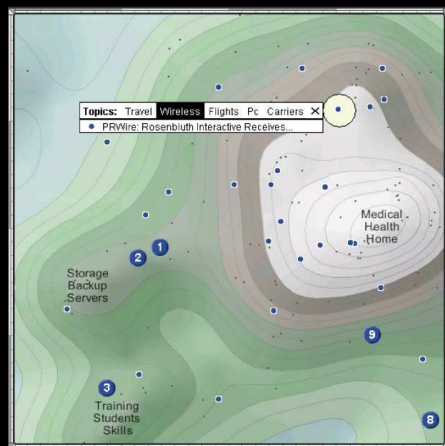
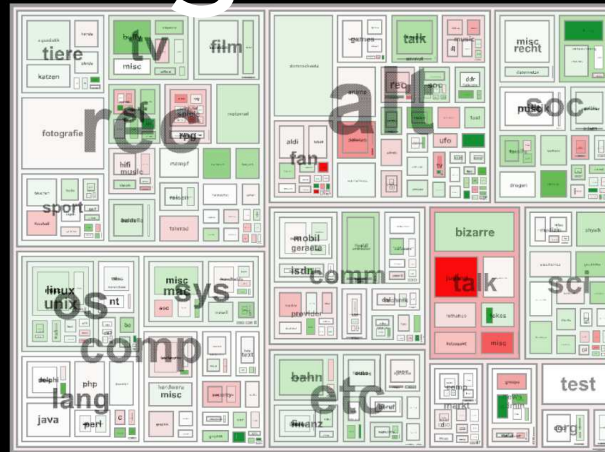


The map visualization displays a complex network of domains and their relationships. The domains are labeled with text and represented by small icons. The domains include: Home, Society, Sports, Recreation, World, Science, Health, News, Business, Regional, Computers, Shopping, Reference, Arts, and Gam. The map features a dark blue background with light blue wavy patterns and numerous small icons representing different entities and their relationships.

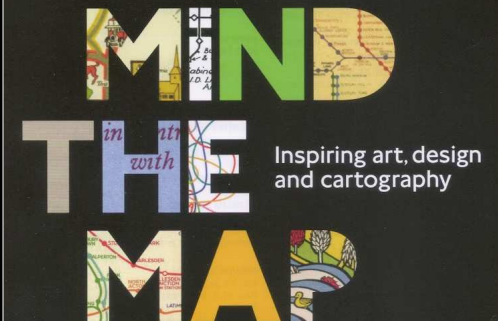
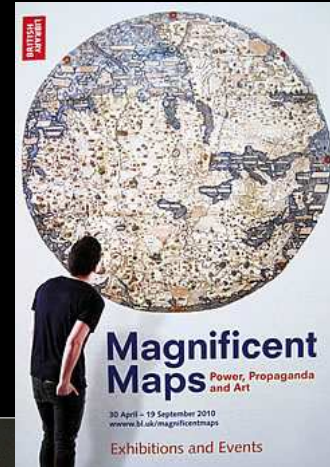
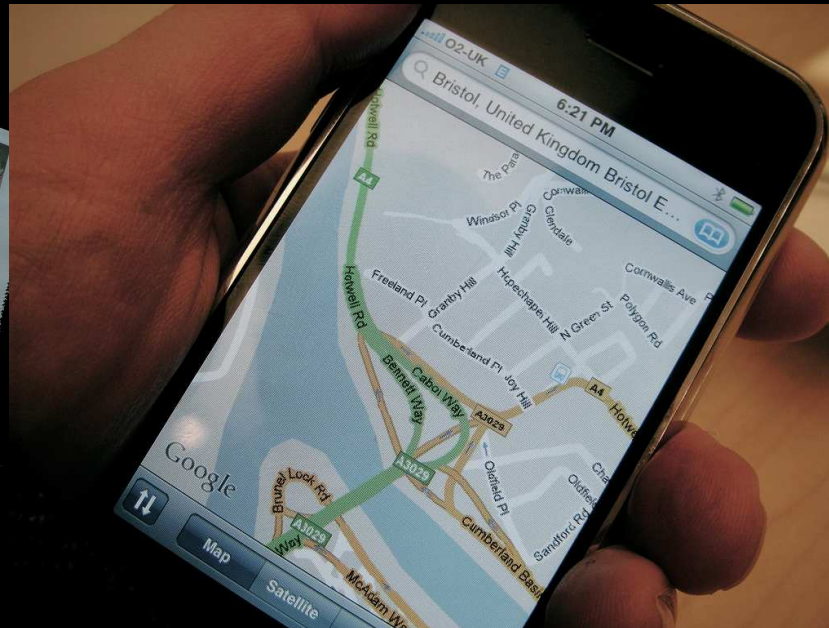
[illegible]

Department of Geography, University of Manchester

The Shape of Knowledge Conference, London, 4th September 2012

Mapping is on the march

- Cartography maybe dead.....
- But popular explosion in all kinds of mapping, availability of maps and potential participation in mapmaking



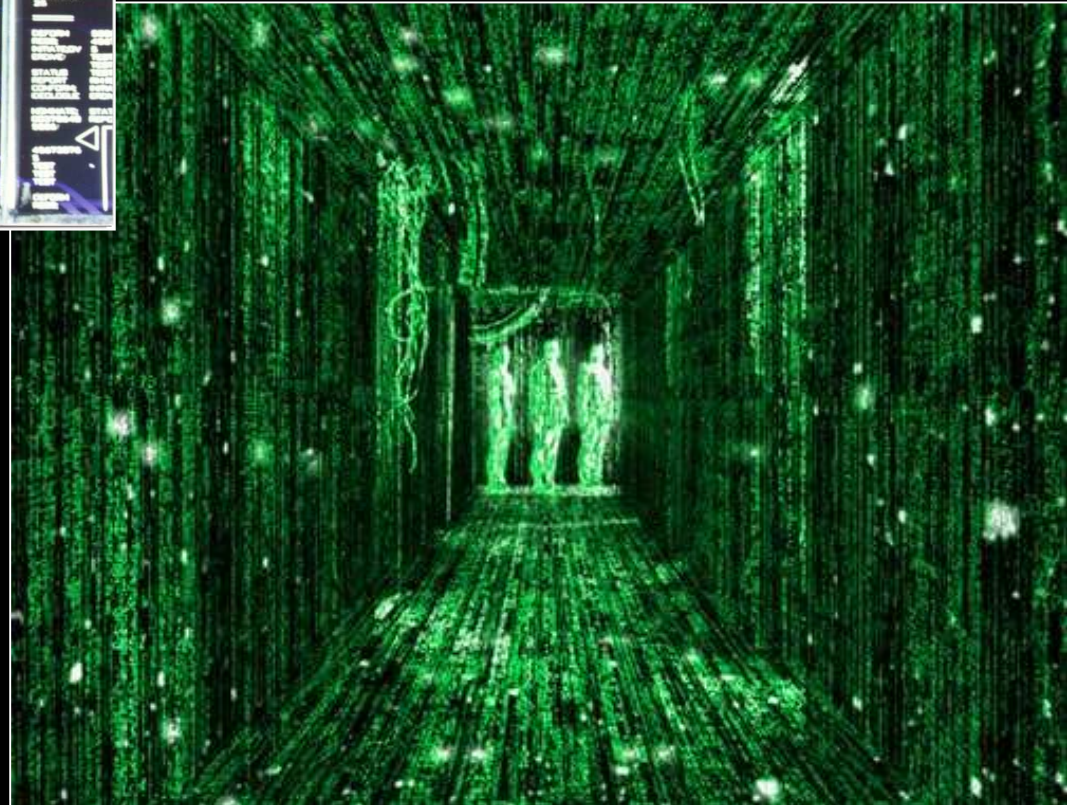
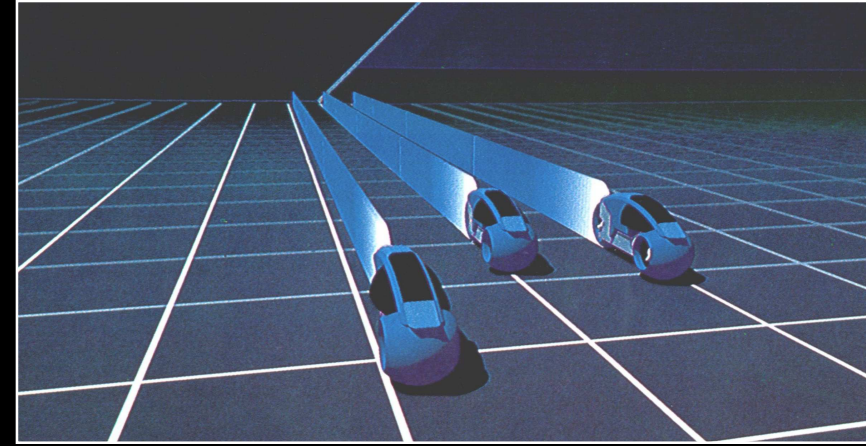
Mapping is on the march

- I'm a geographer, so I believe *maps* enjoy a privileged position in understanding space
- maps have been powerful visual tools for understanding the world for 1000s of years
- navigation - 'what is where' and 'how to get there'
- revealing what is hidden. making the invisible visible
- maps have been key in framing our understanding places, their size, shape and the relations between them
- Claiming ownership of space. Maps creating space...

The map is a help provided to the imagination through the eyes.

Henri Abraham Chatelain, Atlas Historique (1705)

Mapping revolution in real space, but for navigating cyberspace?



Challenges in mapping cyberspace

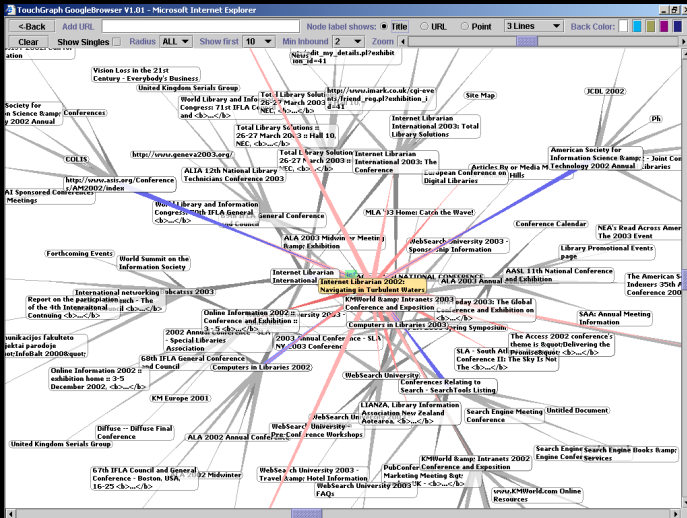
- Socio-technical issue in surveying
 - scale, complexity, heterogeneity, dynamic (growing, changing)
 - the conflation of maps and territory; breaking the Euclidean norms of material space (continuity, symmetrical, location is indivisible),
 - private/public, 'dark web', copyright control, ethics of invasive monitoring / tracking
- Meaningful classification / categorisation - do we know what we are looking for?
- Appropriate metaphors that communicate rather than confuse. What should a map of cyberspace look like.....??

Spatialization - making info maps

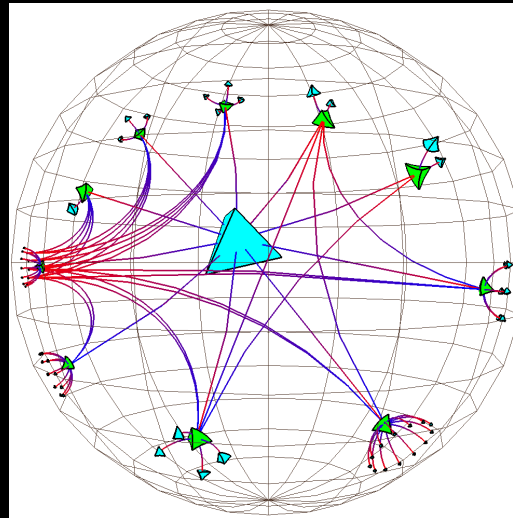
- Interfaces and map-like tools for virtual navigation
- Wide variety of 'experiments', some products (late 1990s, early 2000s)
 - visual metaphors (cartographic, cities, charts, organic)
 - dimensions (2D, 2.5D, 3D fly-thru)
 - static map to dynamically generated 'radar' displays
 - degrees of user interactivity
- Scales of the maps
 - individual site maps
 - dynamic surf maps / trail maps / history visualization
 - large chunks of information space
- Most popular mapping efforts have deployed graphs

Graphs don't seem to communicate

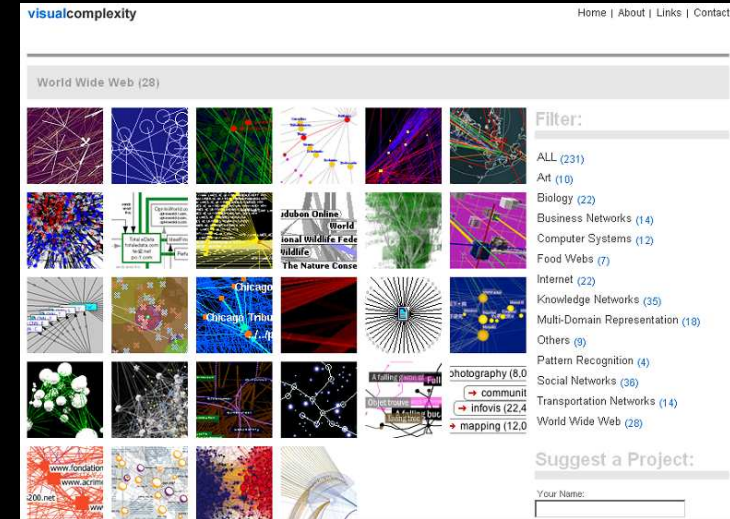
- Popular - easy for designers to implement, algorithms can handle very large data sets
- Failure of graphs as mapping. Can denote data but often don't connote real meaning to the viewer



TouchGraph



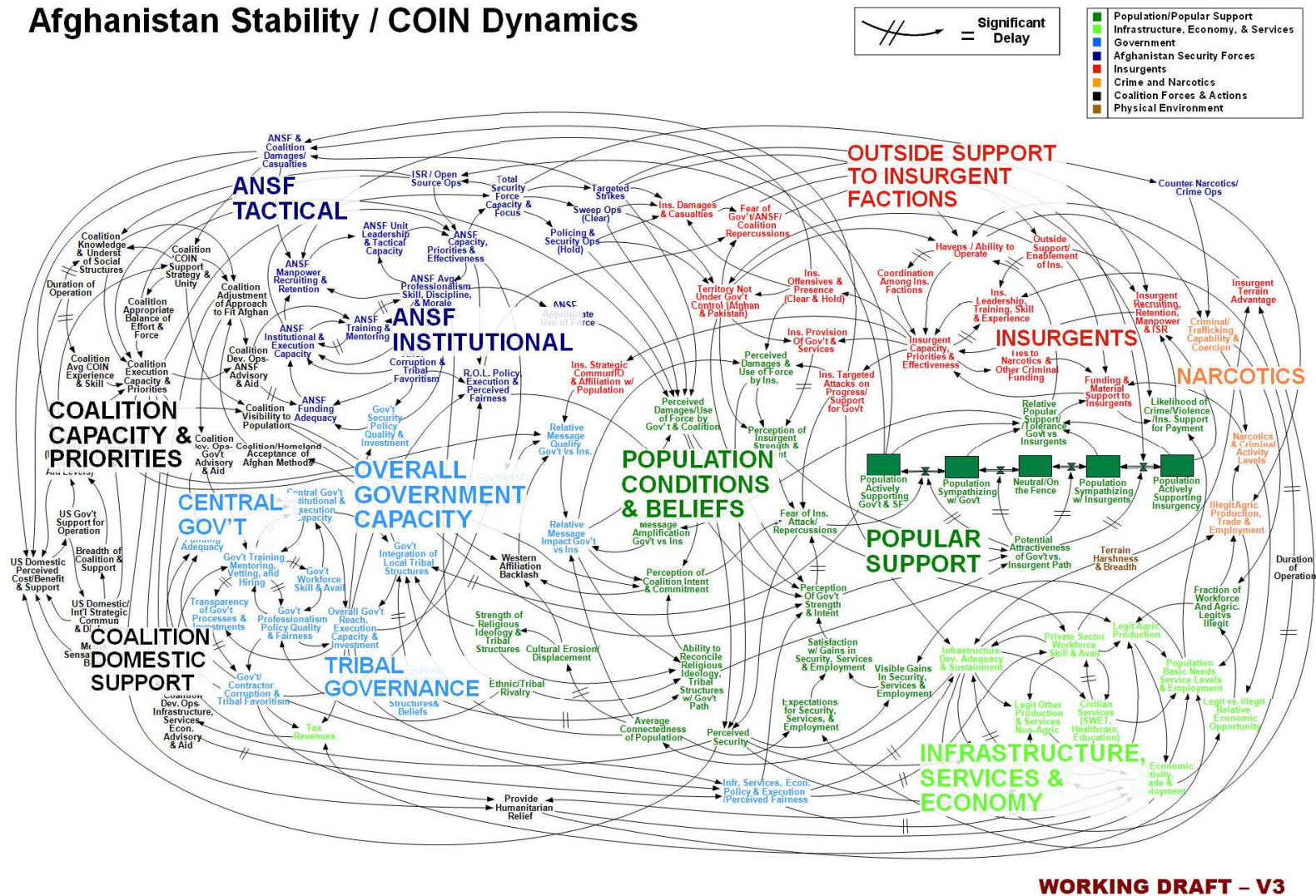
Tamara Munzer's
Hyperbolic graphs



Manuel Lima's
Visual Complexity

Graphs don't seem to communicate

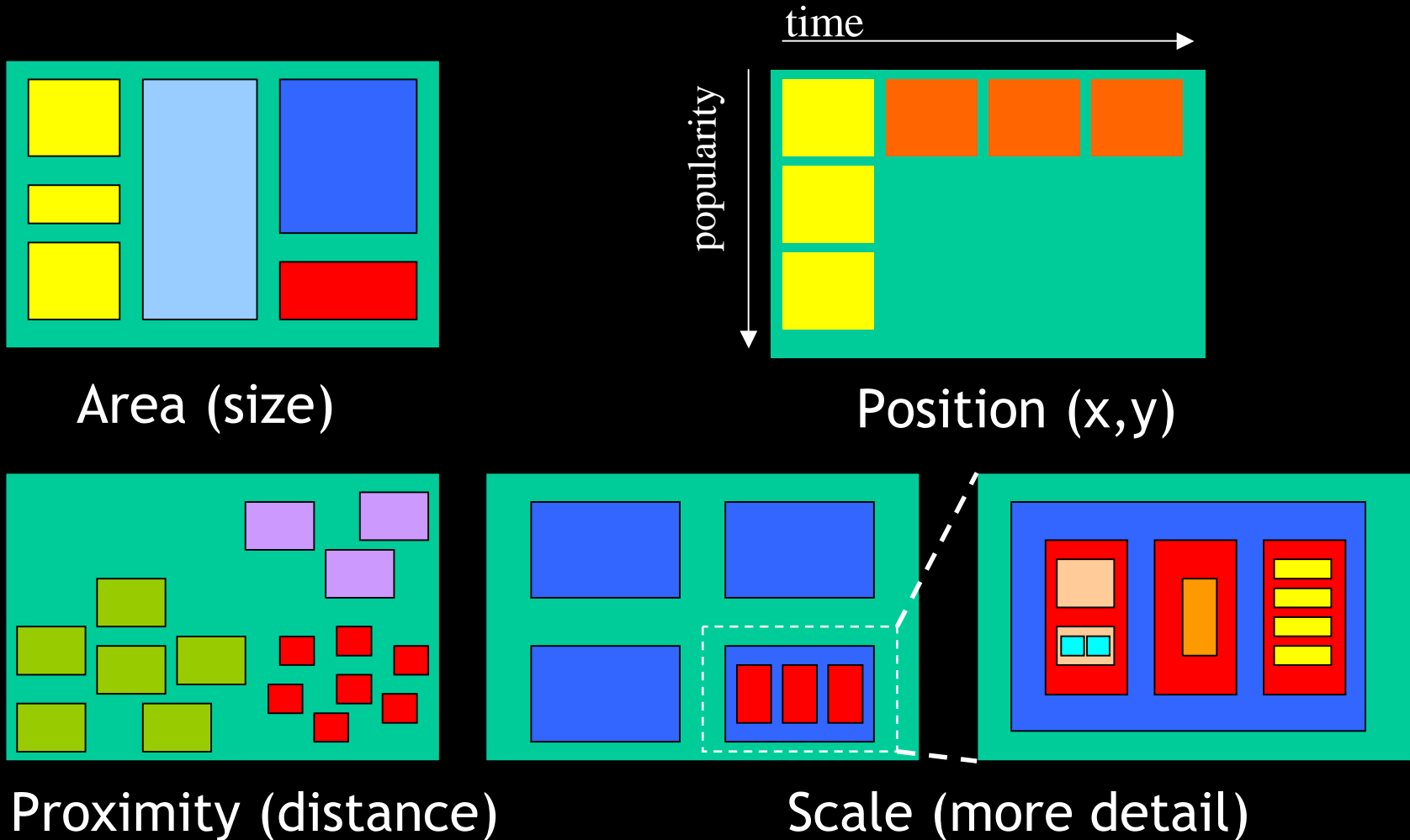
complexity = confusion



WORKING DRAFT – V3

Spatialization - making info maps

- Focus on interactive 2d space-filling information maps. Distinctly cartographic in connotation

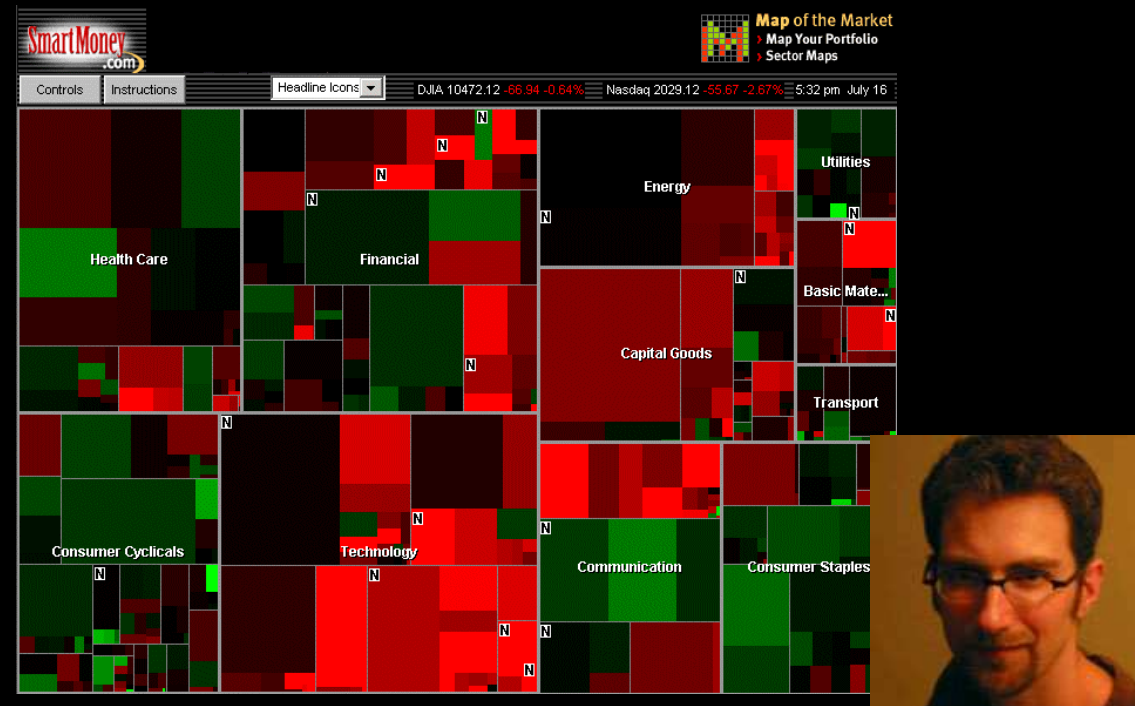
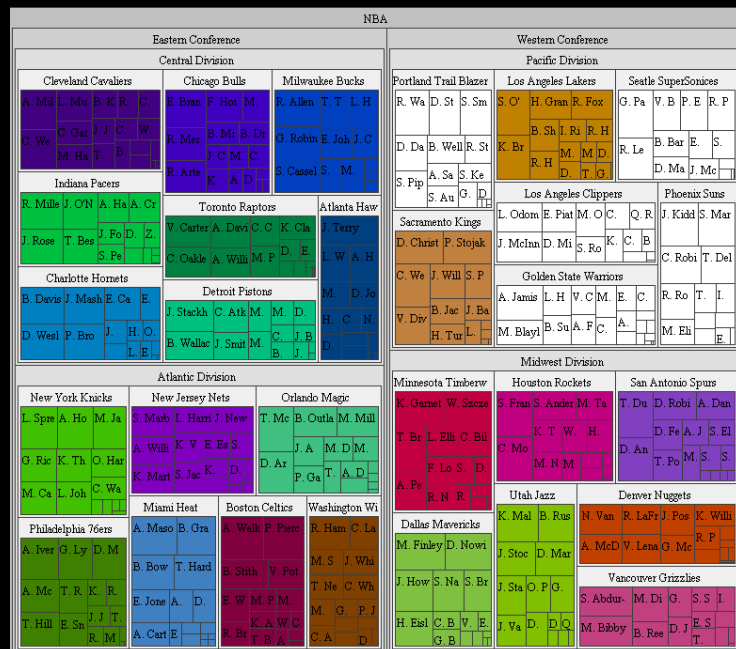
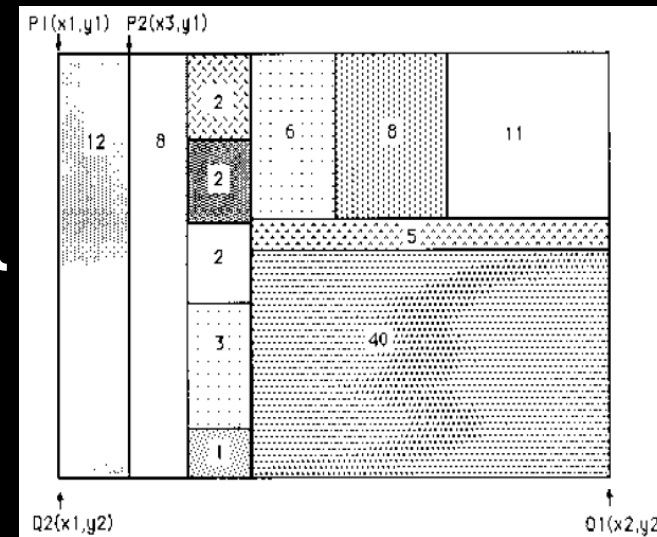


Spatialization - making info maps

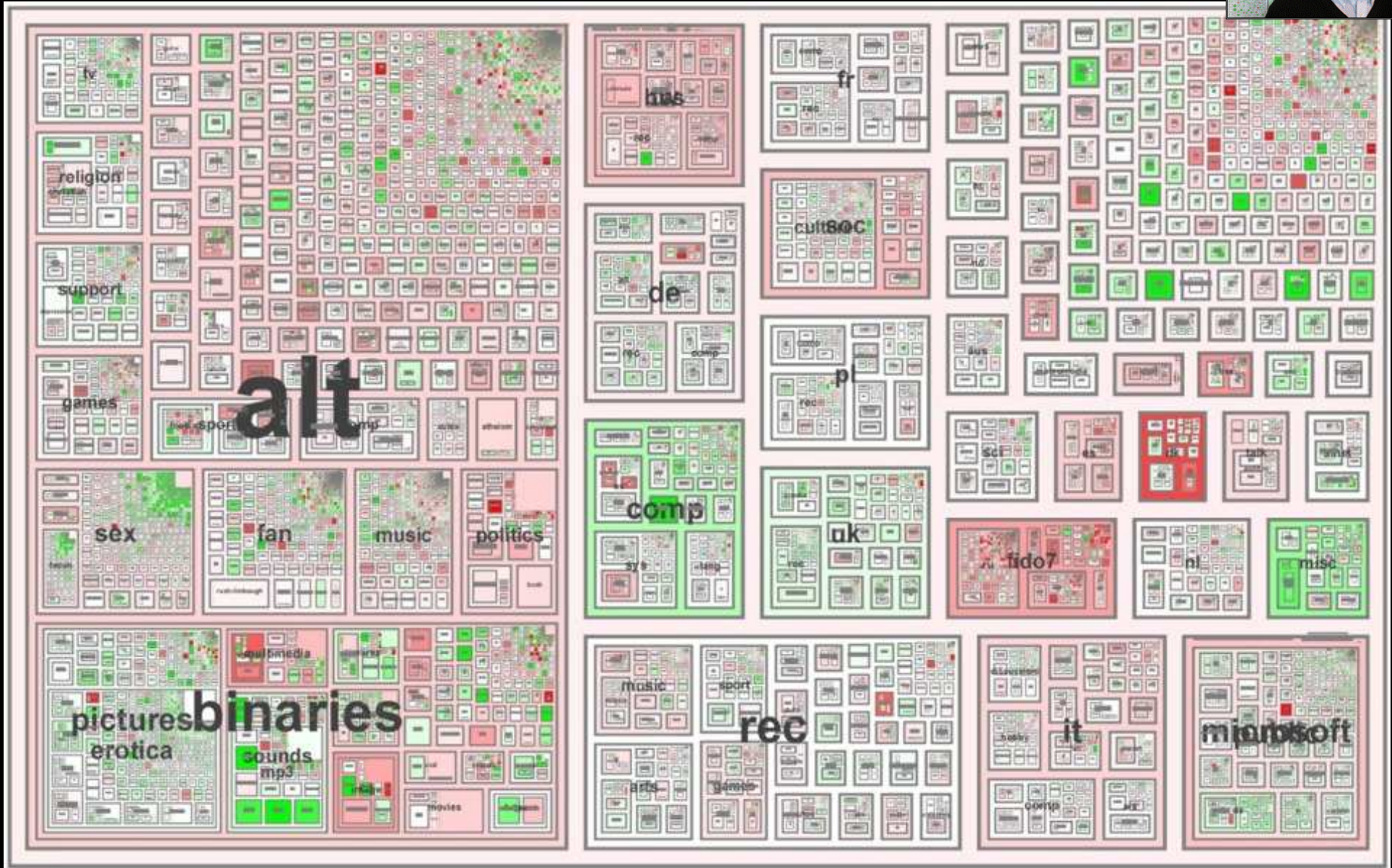
- Broadly two types:
 1. Cadastral mapping style -
 - discrete tiling of area by categories
 - defining property, implies ownership
 2. Landscape mapping metaphor -
 - continuous space, smooth transition
 - notion of terrain height denotes volume
 - shape conveyed by hill shading and/or contouring
 - terrain forms are indicative of underlying process (geomorphology in geographic landscapes)

Cadastral metaphor

- Treemaps algorithm, hierarchical tiling, space filing; intuitive meaning to size
- Ben Shneiderman, CS, UMD



Martin Wattenberg, Map of the Market



Music

NewsGroup Name	Date	Total Groups	Total Messages	Total Posters	Deep red means - 300% change Deep green means + 300% change
alt.music	01/01/2001	807	197736	43757	
napster mp3					
oasis					
rush					
dj makers					
weird-al					
ween					
classic country					
tmby					
ska					
korn					
dio					
balance					
pearl-jam					
mdfink					
blur					
gateshead					
ash					
midl					
hin					
bjork					
mariah					
trance					
prince					
what the 3rd					
lyrics					
nirvana					
yes					
u2					
pink-floyd					
placebo					
tool					

Newsmap by Marcos Weskamp



[REGISTER](#) [LOGIN](#) [CUSTOMIZE](#) [+ SELECT ALL](#)

ARG AUS AUS BRA CAN FRA GER INDI ITAL MEX NETI NEU SPA ☒ U.K. ☐ U.S.

search all...

On Labor Day, jobs debate a convention warm-up

US to ramp up pressure on Iran to avoid war: report

Peshawar suicide bomber kills two in attack on US vehicle

UN envoy: Diplomatic attempts to end Syrian conflict are 'nearly impossible ...

Gaza teenager dies after self-immolation

Hungary Taking Heat for Extraditing Azeri Convict

UN Syria Envoy Recognizes 'Very Difficult Mission'

Clinton to seek China sea unity in Indonesia

William Hague urges Ecuador to resume talks over Assange

29 dead as Kurdish rebels clash with Turkish forces

Paralympics 2012: Oscar Pistorius apologises for timing of criticism

Berbatov 'lost respect' for Fergie

Nicole watches with horror as Lewis Hamilton crashes out of Belgium F1

Russell Crowe Rescued By Coastguard

Mo Farah shows off his newborn daughters for first time

Paralympics: Iranian athlete hands with Duchess of Cambridge

Manufacturing downturn eases sharply in Aug PMI

Van Persie celebrates hat-trick for Manchester United but rues penalty dink

Cristiano Ronaldo LIVE! debate

Nadal faces another two months on sidelines with knee injury

Baker breaks Golden Girl's record on Olympic record on way to second

Templeton puts heart's career behind him

Ashley Cole out of England World Cup qualifier against Moldova with injury

Skeissall hopes to add Michael

David Weir takes third life as Britain's Paralympic gold medal continues

Paralympics: In talks to sign

FA announce

Sixteen whales die after mass stranding in Fife, as experts probe several ...

Sea tragedy father 'truly heroic'

Prince Andrew abseils down the Shard for charity

Footballer car crash pair named

Cameron prepares cabinet reshuffle

7/7 victim faces degradation threat

Insider into 2005 police shooting of Muhammad Ali

A brain pain map to tell why we feel discomfort

Scientists are working on a way of measuring the level and location of pain felt by patients using a special "pain map" of the brain. The research, which utilises detailed brain-scanning technology, could also finally put an end to the age-old d

Sep 03 17:10 | 12 related articles | Times of India

[FEEDBACK](#)

[+ SELECT ALL](#) ☒ WORLD ☒ NATIONAL ☒ BUSINESS ☒ TECHNOLOGY ☒ SPORTS ☒ ENTERTAINMENT ☒ HEALTH

LESS THAN 10 MIN. AGO
MORE THAN 10 MIN. AGO

powered by

Tim Bray's Antarctica Systems, Map.net



File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Media Print

Address <http://maps.map.net/cat?ap=0;ms=10>

map.net™

←This is a Web Site
[Learn More](#)

Start Teleport Export

Arts
[Business](#)
[Computers](#)
[Games](#)
[Health](#)
[Home](#)
[Kids and Teens](#)
[News](#)
[Recreation](#)
[Reference](#)
[Regional](#)
[Science](#)
[Shopping](#)
[Society](#)
[Sports](#)
[World](#)

News
Business
Arts
Computers
MTV
U.S. Department of Agriculture (USDA) Homepage
Science
Regional
US Census Bureau
United States Department of Justice
United Nations
Society
Kids and Teens
Recreation
Sports
The Library of Congress
Health
Reference
Encyclopedia.com from Electric Library
Home Shopping
World
Games
Open Directory Project

1 - 10 of 2937063 sites

Filter Clear Advanced List

Smaller Map Email map Feedback About us Login/Register Landmarks Flash Interface

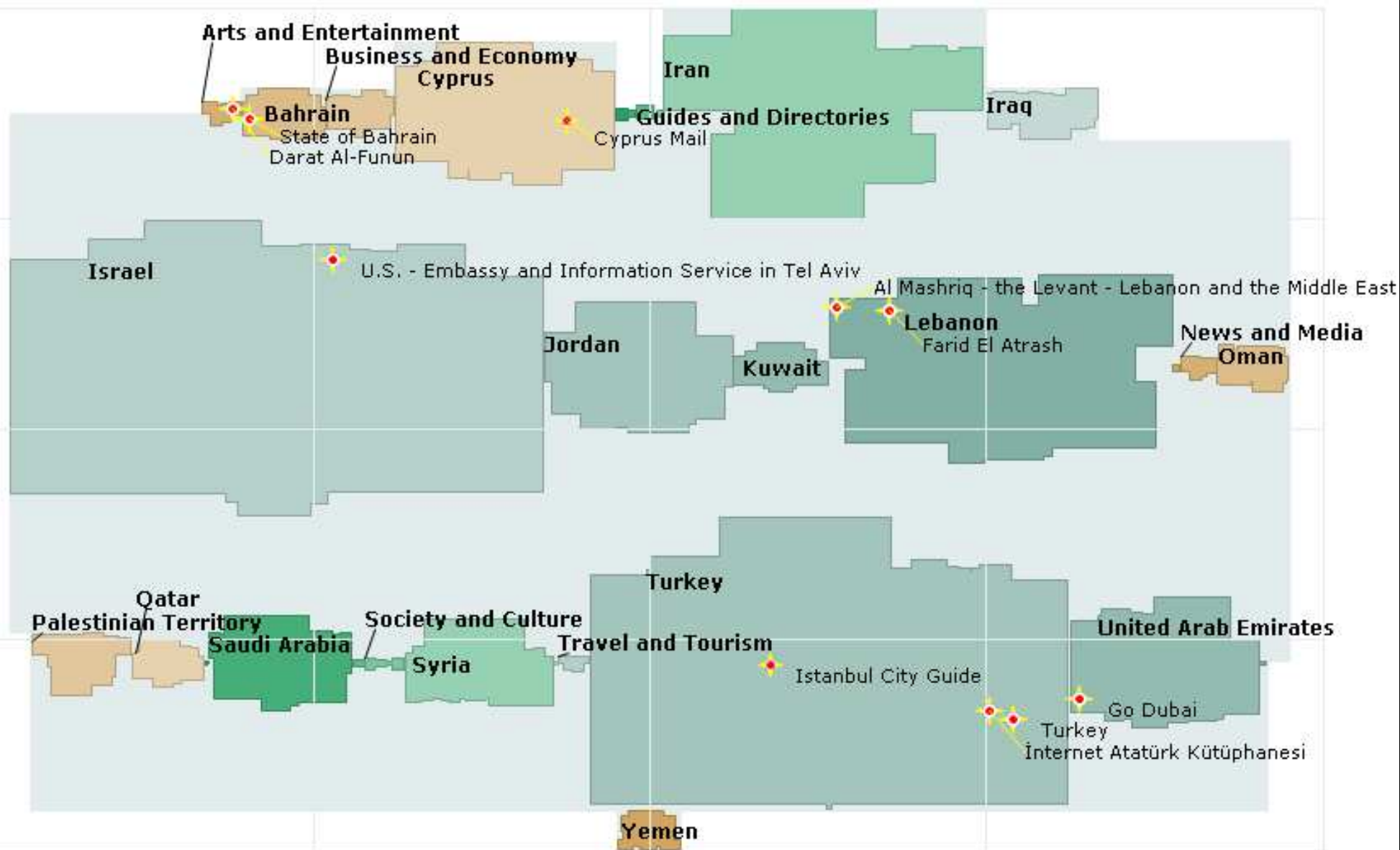
visual3
not

Help build the largest human-edited directory on the web.
Submit a Site - **Open Directory** - Become an Editor

Internet

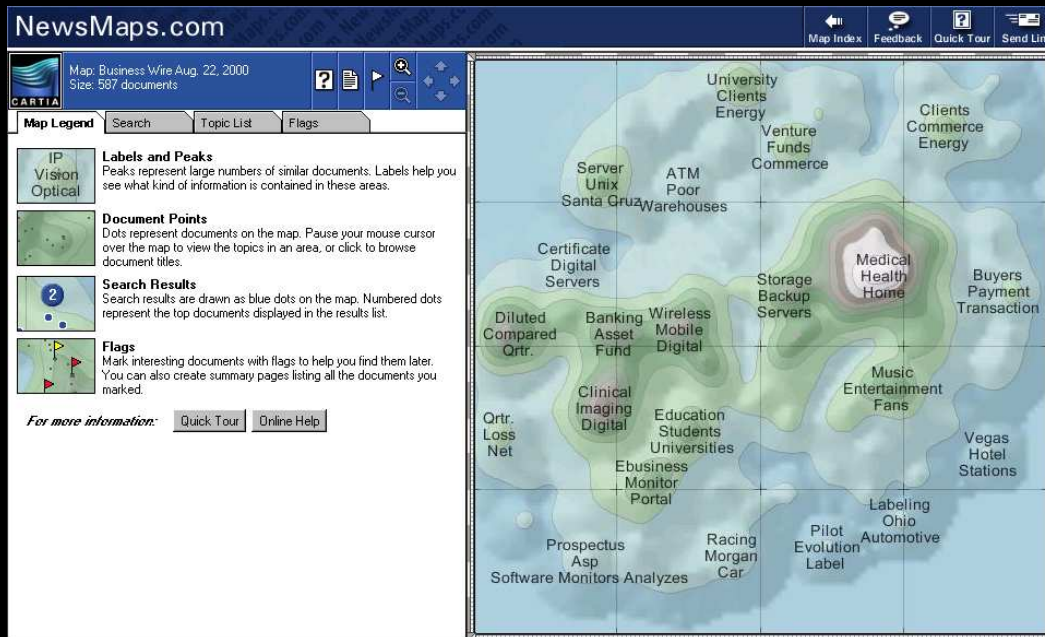
<http://www.map.net/>

Zooming into the Middle East

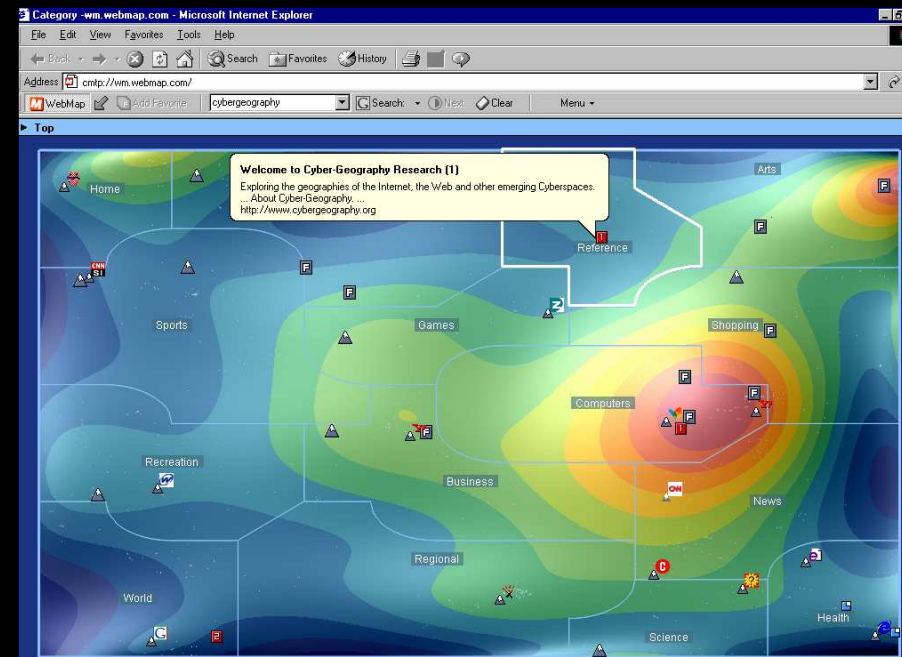


Landscape metaphor

- Clustering, Self-Organising algorithms
- Detail categories lost; does terrain work?
- Labelling issues for clusters

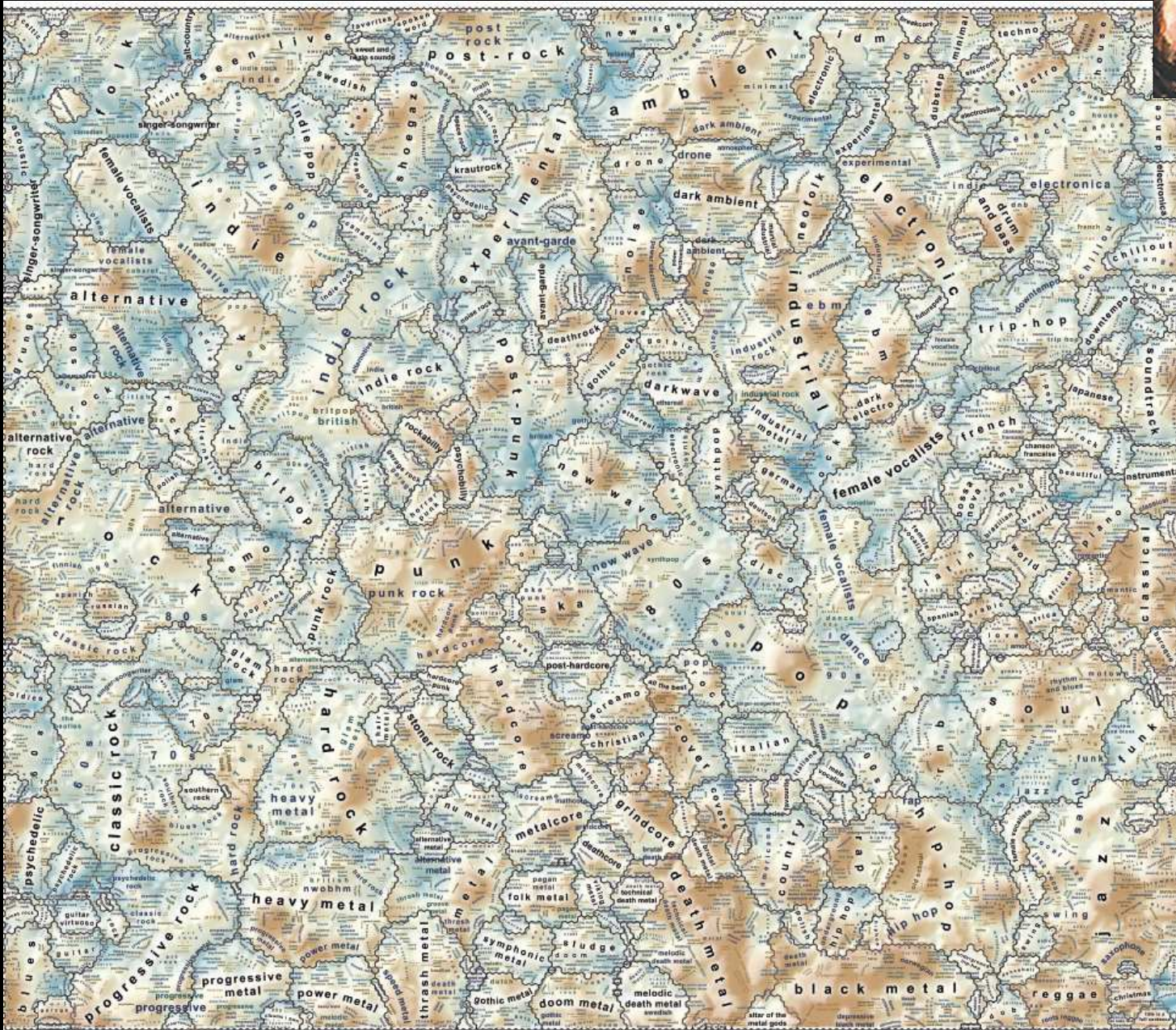


Cartia - ThemeScope



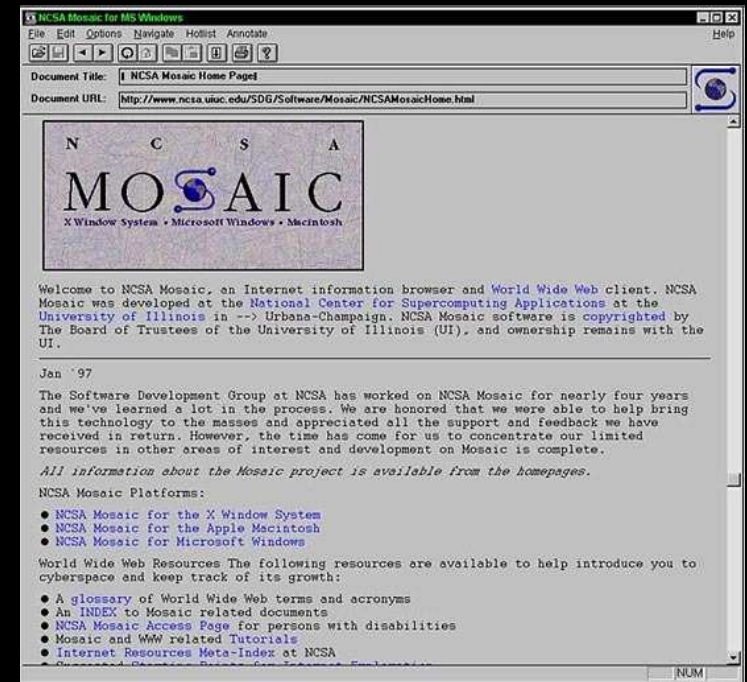
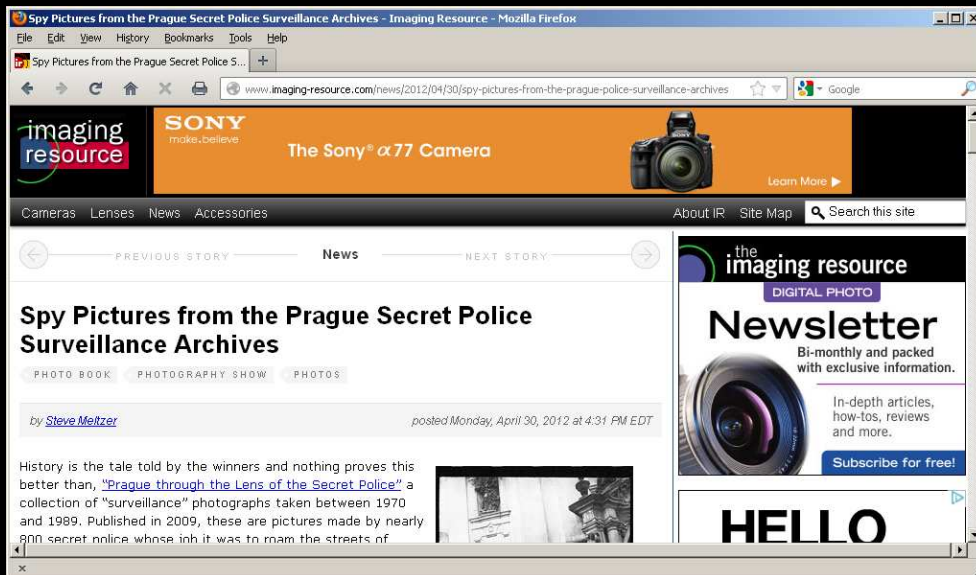
WebMap Technologies - InternetMap

Andre Skupin SOM of Last.fm music



Why mapping cyberspace failed?

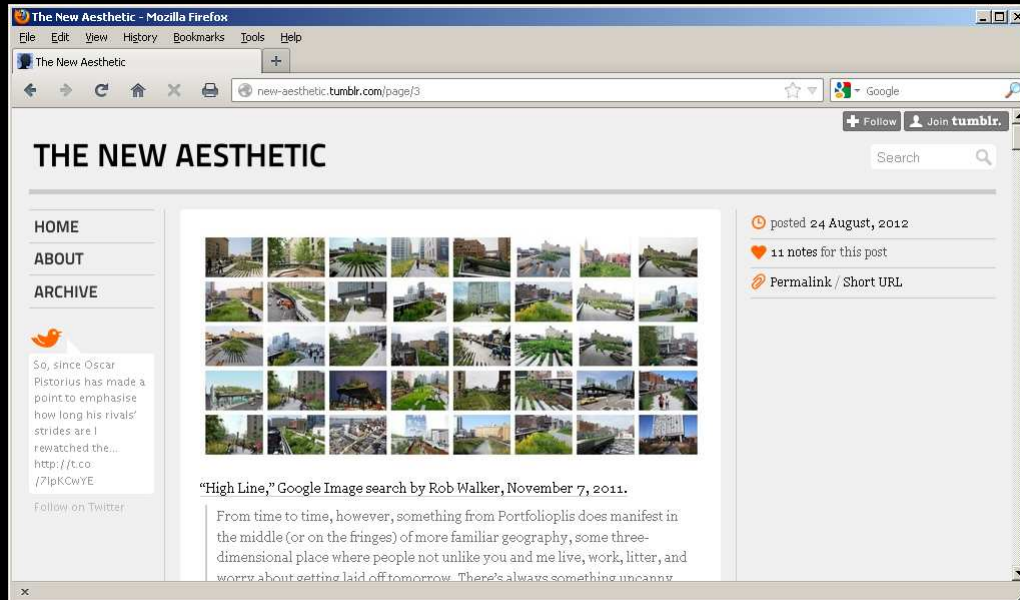
- Implementation - maps not workable
- Did not find the right metaphors, designs
- Political economy - fragmentation of info spaces
- Un representable?



NCSA Mosaic 1993

But wait, what about ‘New Aesthetics’?

- Claimed to be radical ways of seeing the world that can only arise from computation vision. Space seen through coded eyes (sensors, logs, screens)

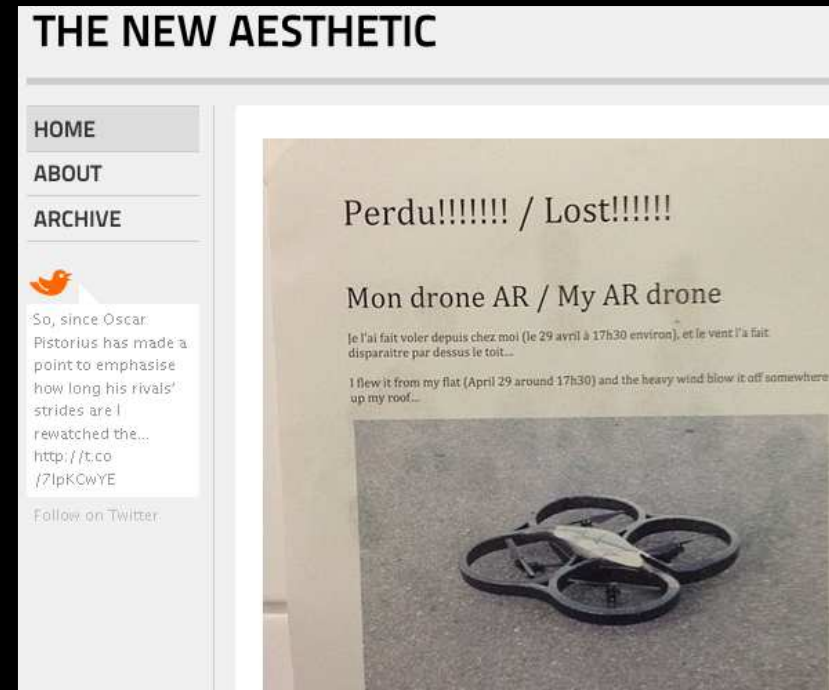


James Birdle, and his tumblr

- Art that arises as “acknowledgment of computers as weird artifacts that have taken on lives of their own”, it speaks to “what is means to live in the twenty-first century” (Ian Bogost, The Atlantic)

But wait, what about ‘New Aesthetics’?

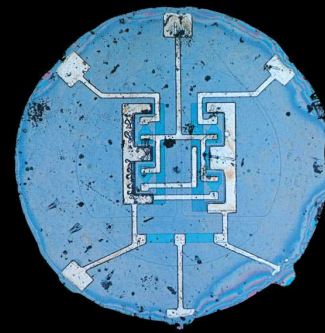
- According to commentary by cyber-guru Bruce Sterling, “New Aesthetic is telling the truth. There truly are many forms of imagery nowadays that are modern, and unique to this period. We’re surround by machineries generating heaps of raw graphic novelty.”



Will 'New Aesthetics' succeed?

- Art - fragmentary and fripperies
- Typical of superficiality of social 'scrapbooking' of virtual ephemera. Sample of digital exhaust that pervades our living
- Needs to be political. Properly documenting all this pollution; not just 'what' but 'why'
- A more critical mapping of software space

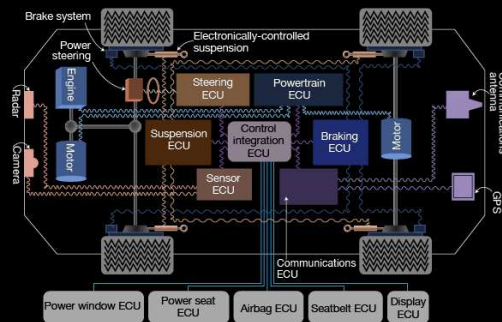
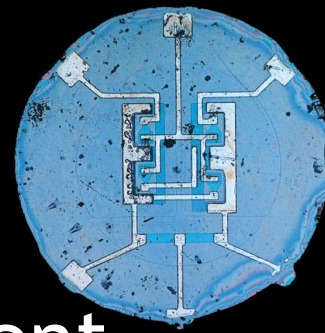
Mapping Software Space



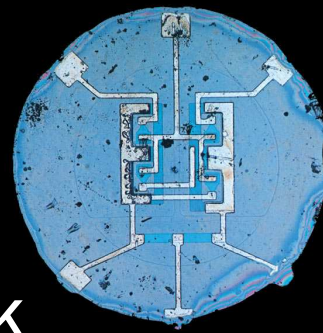
- What needed now is focus of mapping effort not on the content but its context; seeing computational infrastructures, not information alone
- See the algorithmic pinch-points and databases that structure our experience of information and everyday mobility
- But what should / can be surveyed?, metaphors to communicate meaning of code be devised?
- ‘Software studies’, not computer science

Mapping Software Space

- Automatic production of space, emergent properties of software
- Code exhibits secondary agency
- Software sorting of people and places
- Documenting code/space
- Mapping full coded ecosystems (objects, infrastructures, processes, assemblages)



Mapping Software Space

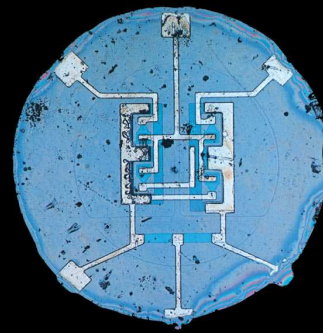


- We use a smartphone on a daily basis for work and leisure, becoming intimately familiar with its materiality but how much do we know of the software running on it?
- Annette Schindler noted in 2003 “you think you know your computer, but really all you know is a surface on your screen.”



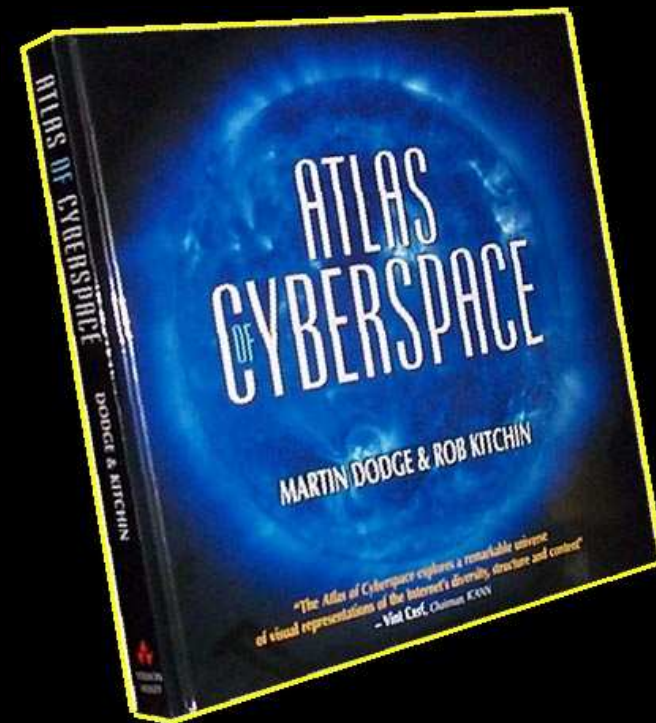
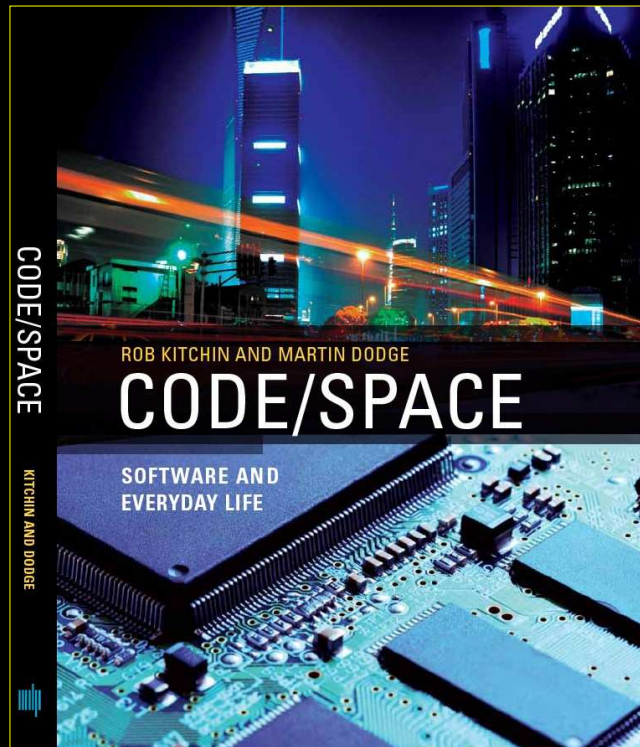
- Many stories of apps ‘leaking’ data, like geographic position, point clearly covert living of code

Mapping Software Space



- Map of your smartphone as a code/space
 - How is it observing you and mapping your movement
 - Relations surrounding the phone/person (cooperation, flirts, deals, lies, crimes); phone-phone associations
 - Risks in the code and connections (virus, trojans)
 - Pathways through hertzian space
 - Hidden contexts : carbon footprints, toxic inputs, disposal; unseen labour exploitation in the phone factories
- Can such maps of code/space be made?
- Will they have a political effect of changing of view of software and its role in our lives?

www.kitchen.org/atlas
www.cybergeography.org/codespace/



- Email: m.dodge@manchester.ac.uk
- Blog: <http://cyberbadger.blogspot.com>

Sources:

- Slide 2
 - <http://www.guardian.co.uk/technology/2012/aug/28/google-apple-digital-mapping>
 - <http://www.bl.uk/magnificentmaps/>
 - Mind the Map exhibition,
 - <http://www.ltmuseum.co.uk/whats-on/exhibitions>
- Slide 7
 - <http://www.touchgraph.com/navigator>
 - <http://www.cs.ubc.ca/~tmm/>
 - <http://www.visualcomplexity.com/vc/>
- Slide 8
 - http://talkingpointsmemo.com/news/2009/12/the_militarys_plan_for_the_afghan_war_surge_in_one.php

- Slide 11
 - <http://www.cs.umd.edu/~ben/>
 - <http://www.cs.umd.edu/hcil/treemap-history/>
 - <http://www.smartmoney.com/map-of-the-market/>
 - Martin Wattenberg, <http://www.bewitched.com/>
- Slide 12
 - <http://www.connectedaction.net/marc-smith/>
- Slide 14
 - <http://marumushi.com/projects/newsmap>
- Slide 18
 - Andre Skupin,
 - <http://geography.sdsu.edu/People/Pages/skupin/index.htm>
 - <http://cns.iu.edu/research/10-Last.fm.pdf>
- Slide 20
 - James Birdle, <http://shorttermmemoryloss.com/>
 - <http://new-aesthetic.tumblr.com/>
- Slide 21
 - http://www.wired.com/beyond_the_beyond/2012/04/an-essay-on-the-new-aesthetic/