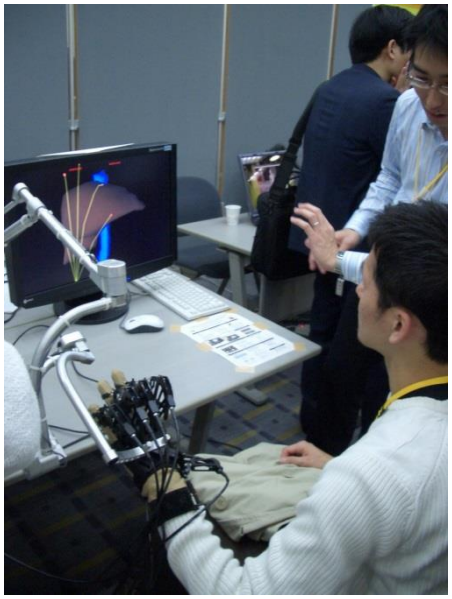

PV251 Visualization
Seminar no. 1

Plan of seminars

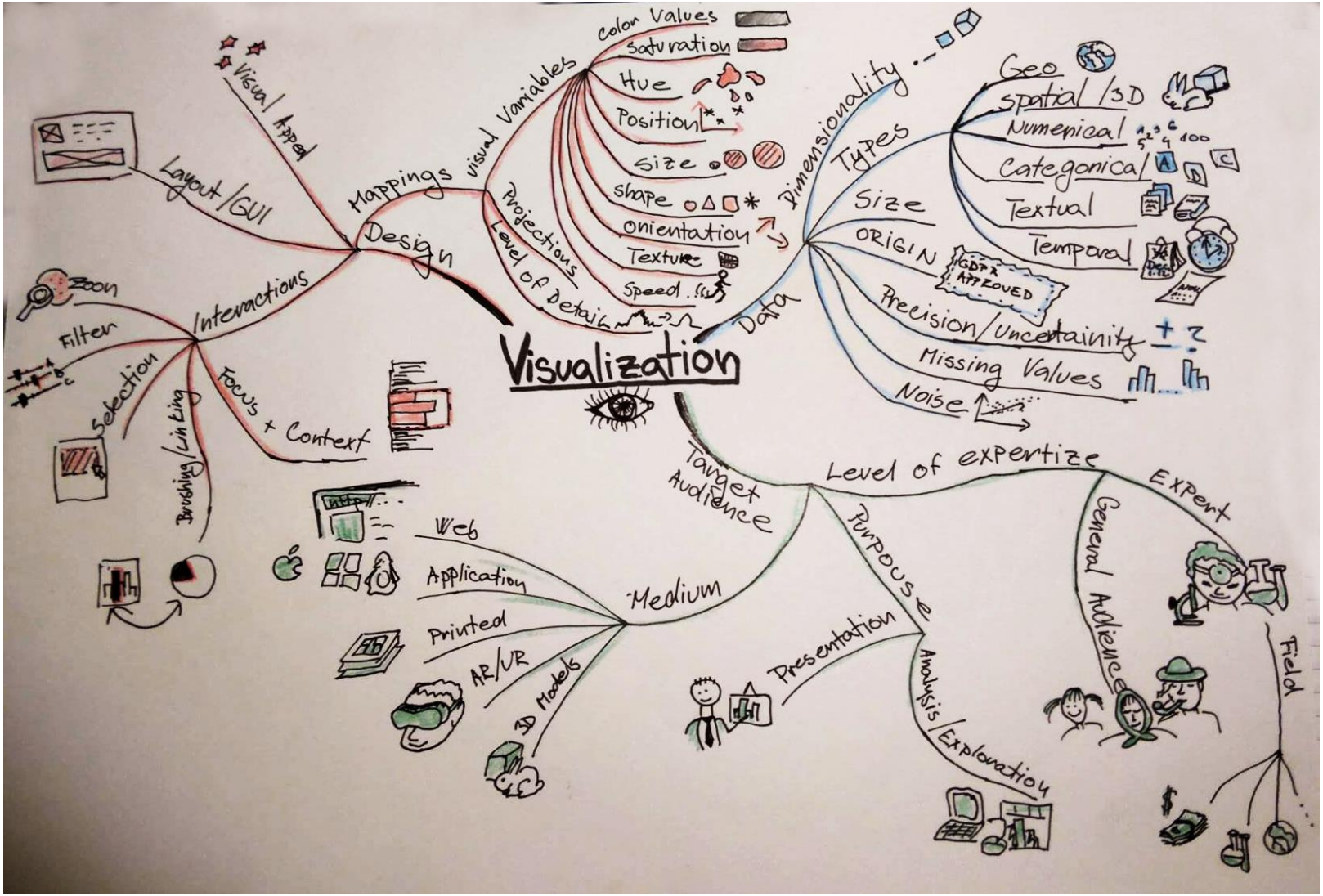
1. Introduction, visualization examples, first task
2. Online tools, Processing, second task
3. Introduction to D3
4. Data import, D3 cont.
5. R + Shiny
6. Projects, consultations

Visualization – only what we can see?

http://vimeo.com/44267609



Visualization Mind Map

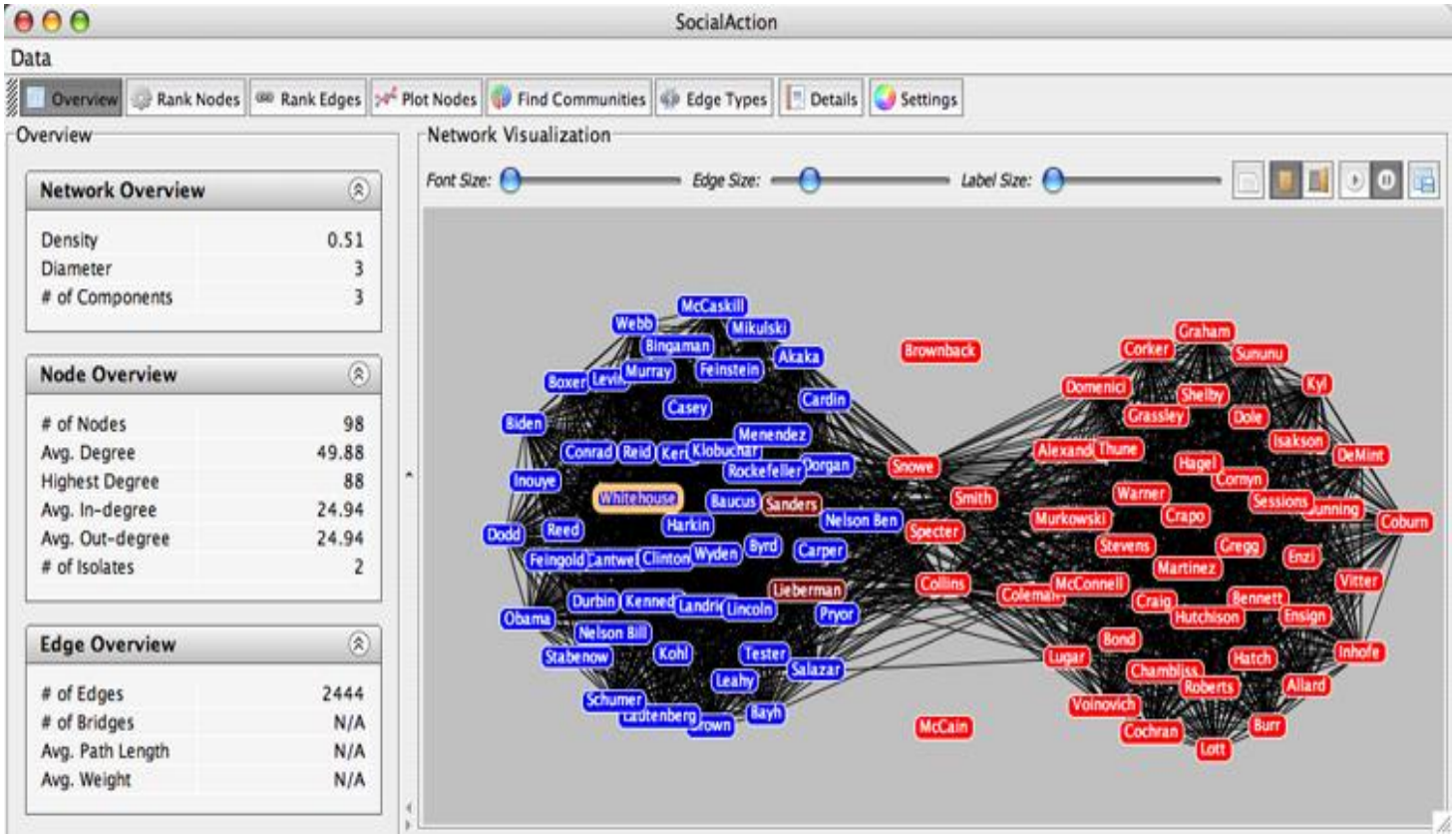


Mind Maps

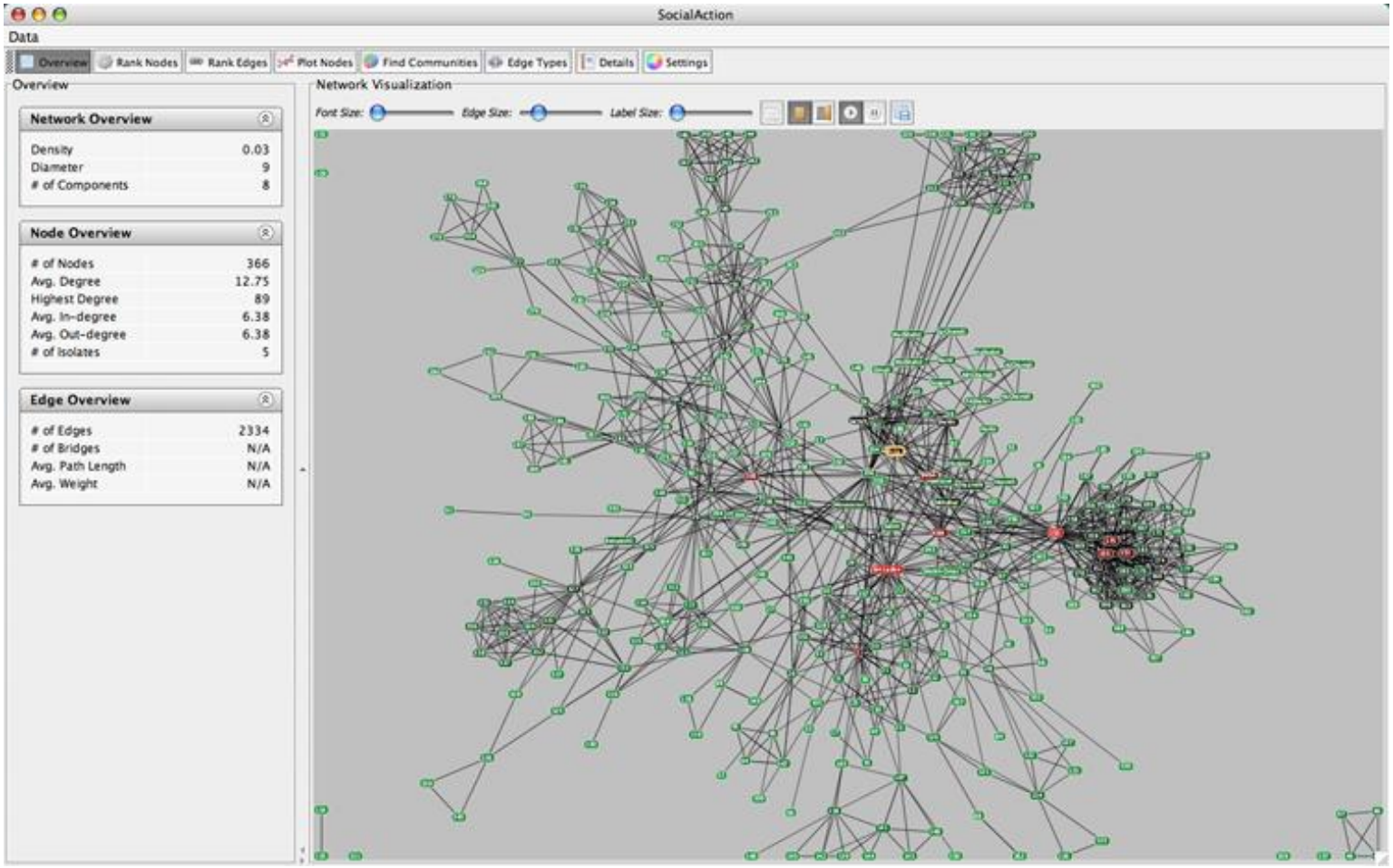
http://www.youtube.com/watch?v=wLWV0XN7K1g

SocialAction: social network analysis of US senators

http://vimeo.com/7308004



SocialAction: Global terrorist network analysis



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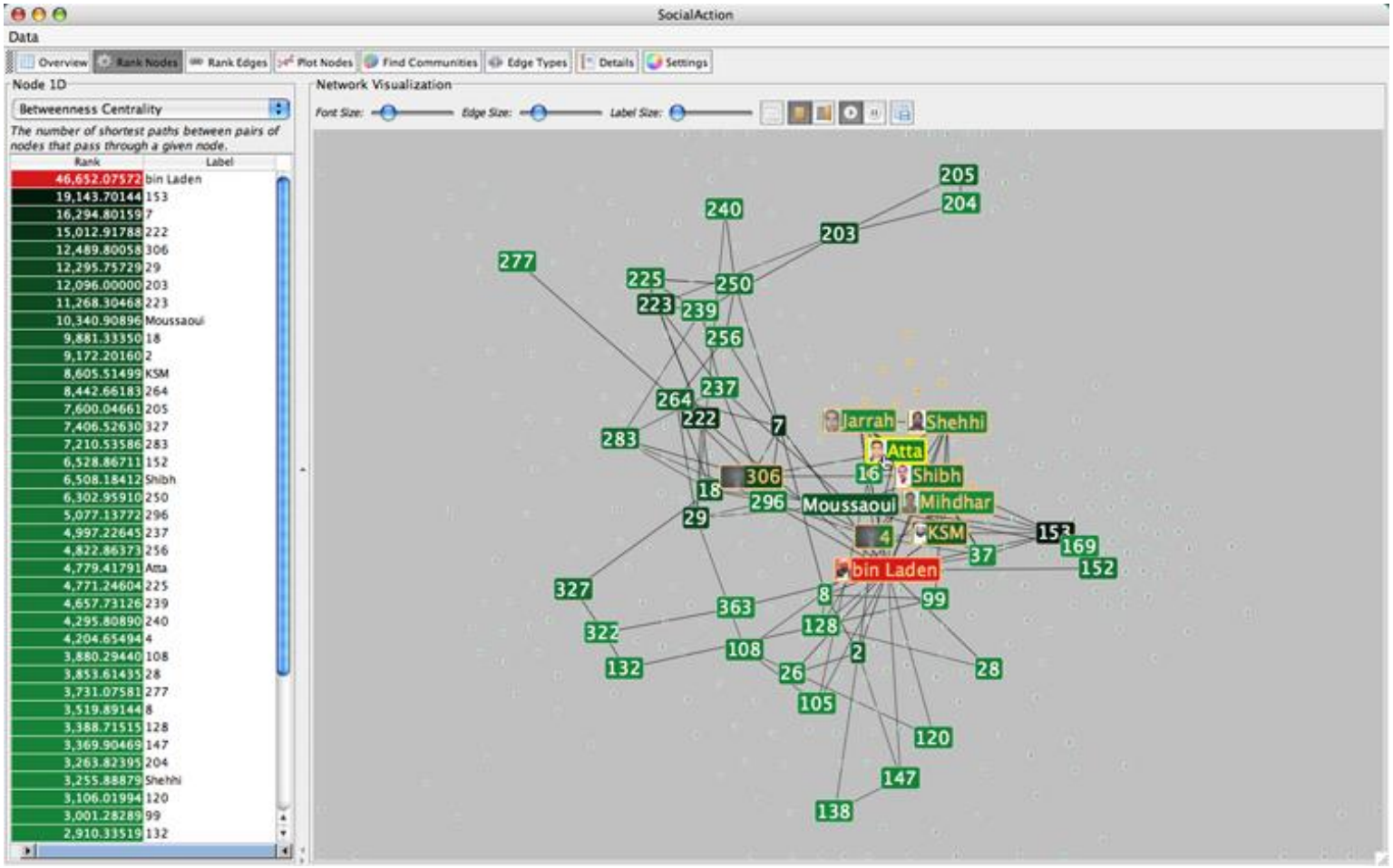
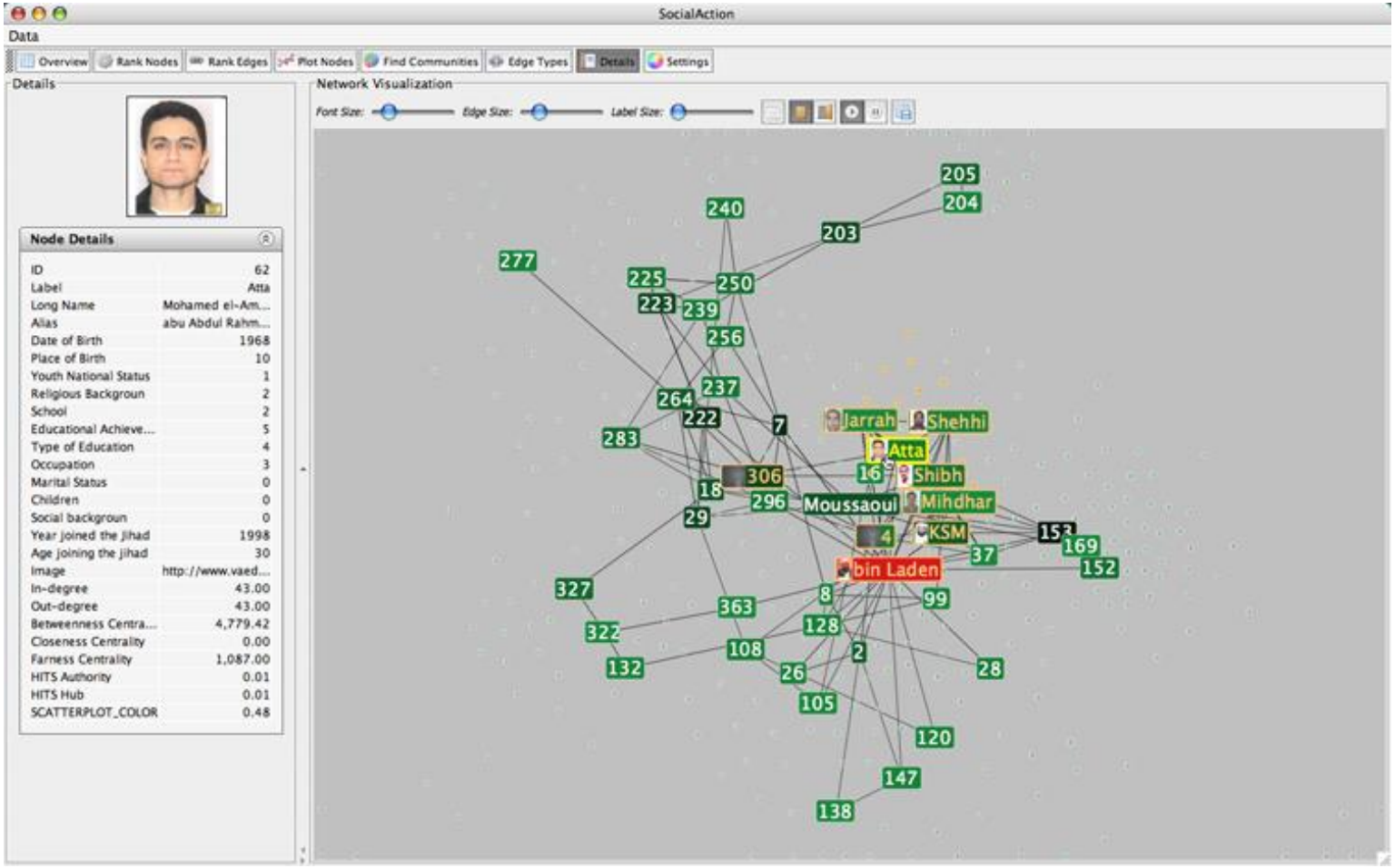
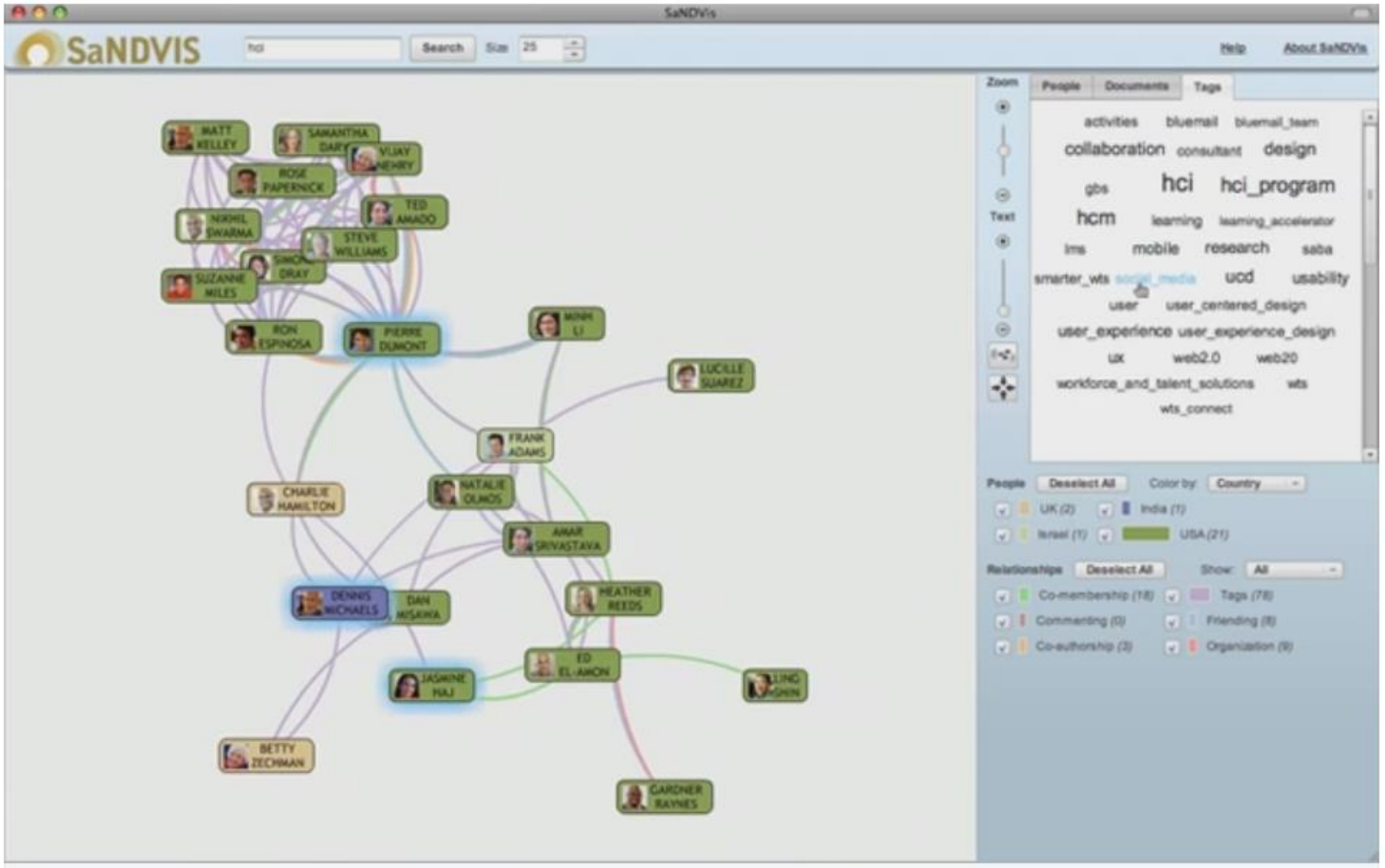


SocialAction: Global terrorist network analysis

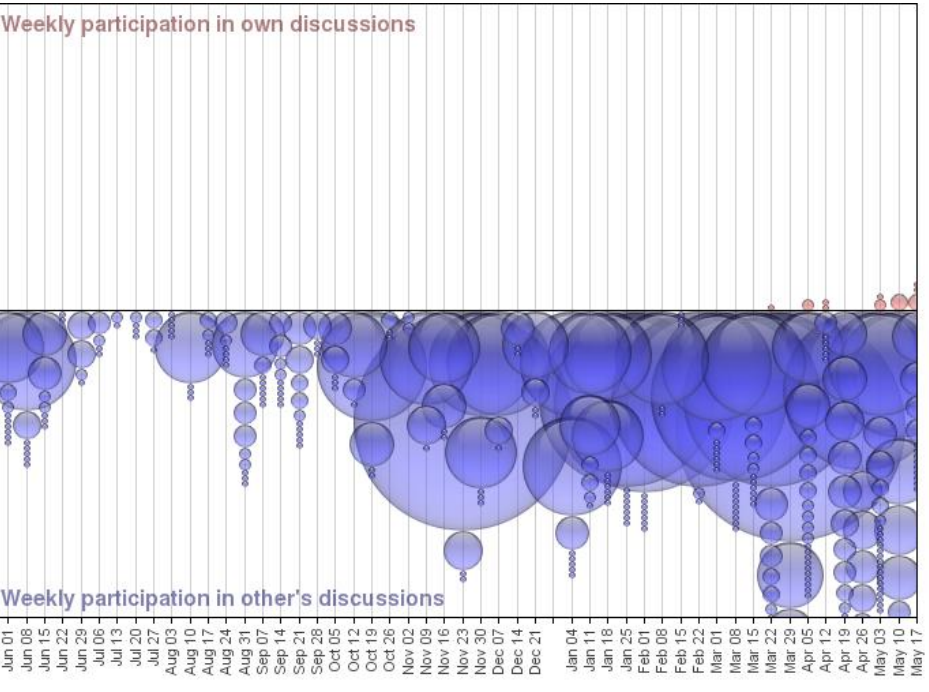


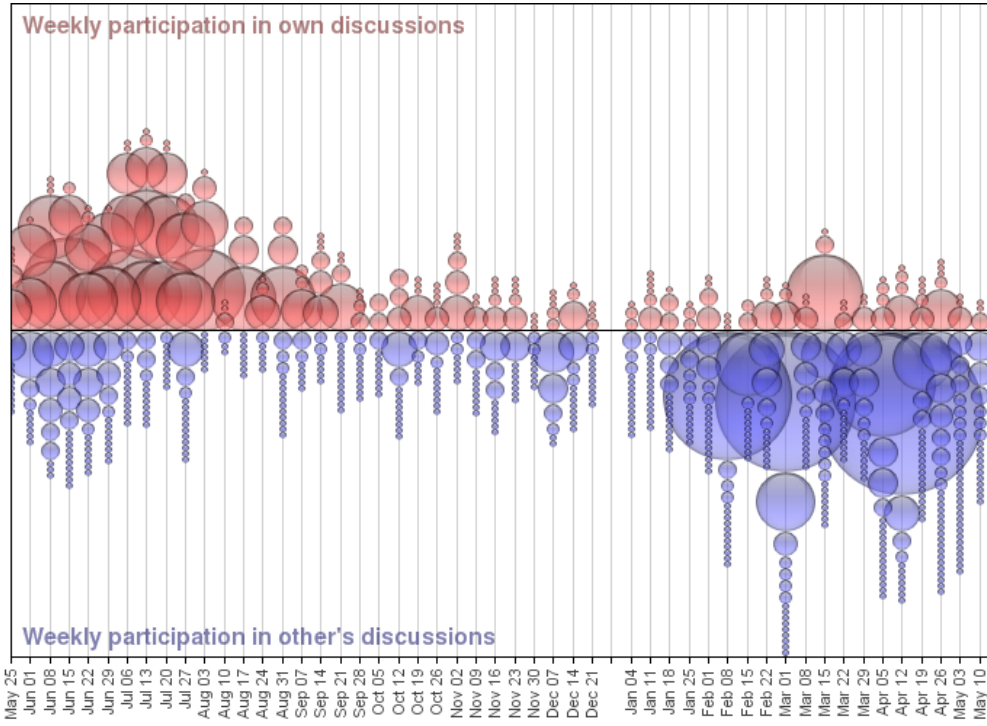
SaNDVIS – Visual Social Network Analytics for Relationship Discovery in the Enterprise

http://vimeo.com/25094971



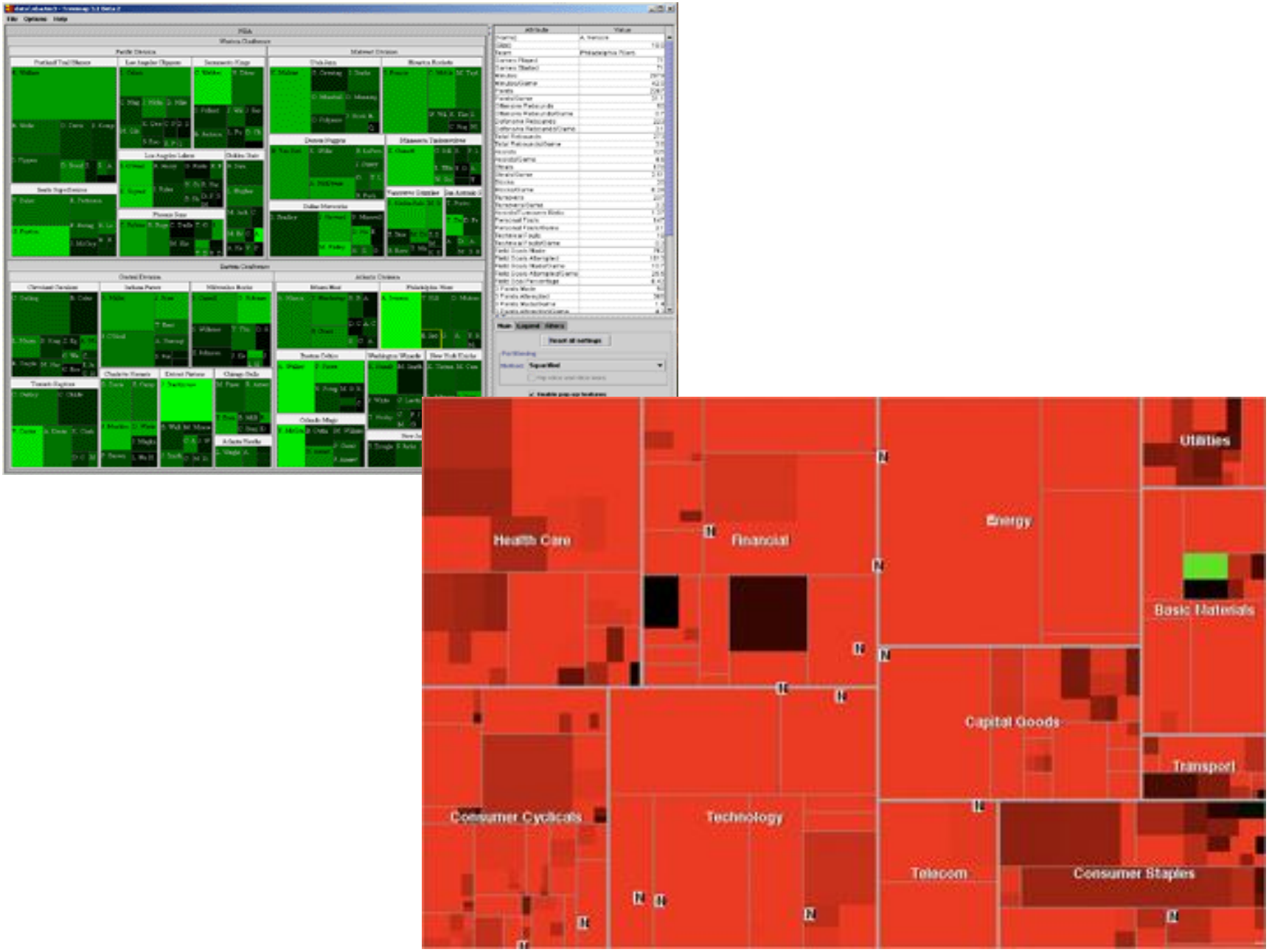
Boardtracker (AuthorLines)





Tree maps


Health Care
Financial
Energy
Utilities
Basic Mat...
Capital Goods
Transport
Consumer Cyclicals
Technology
Communication
Consumer Staples
Email Us
To License This Tool


Health Care
Financial
Energy
Utilities
Basic Materials
Capital Goods
Transport
Consumer Cyclicals
Technology
Telecom
Consumer Staples

Ben Shneiderman – Time Searcher

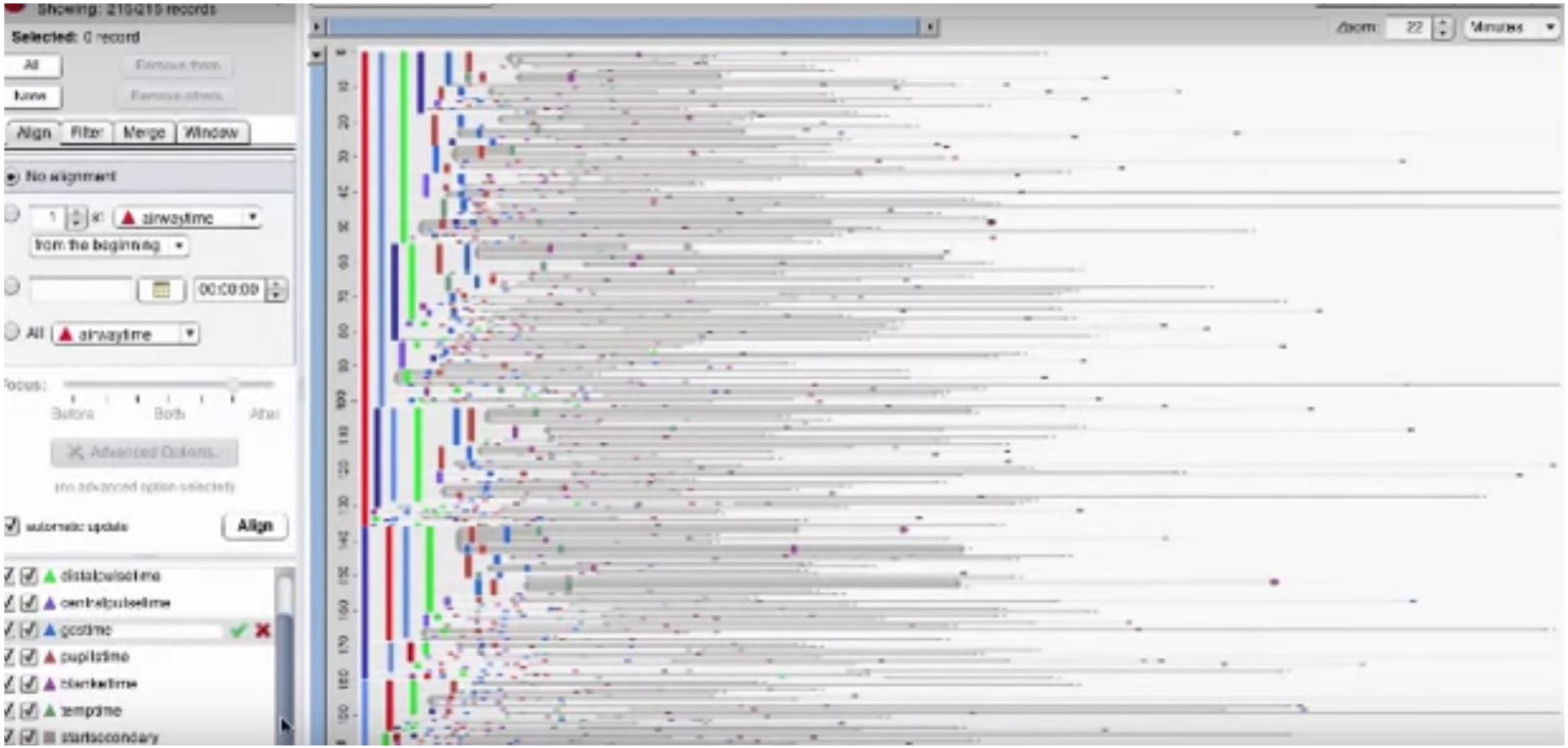
http://www.youtube.com/watch?v=r1pKvDdLxVM

Look at 19:10

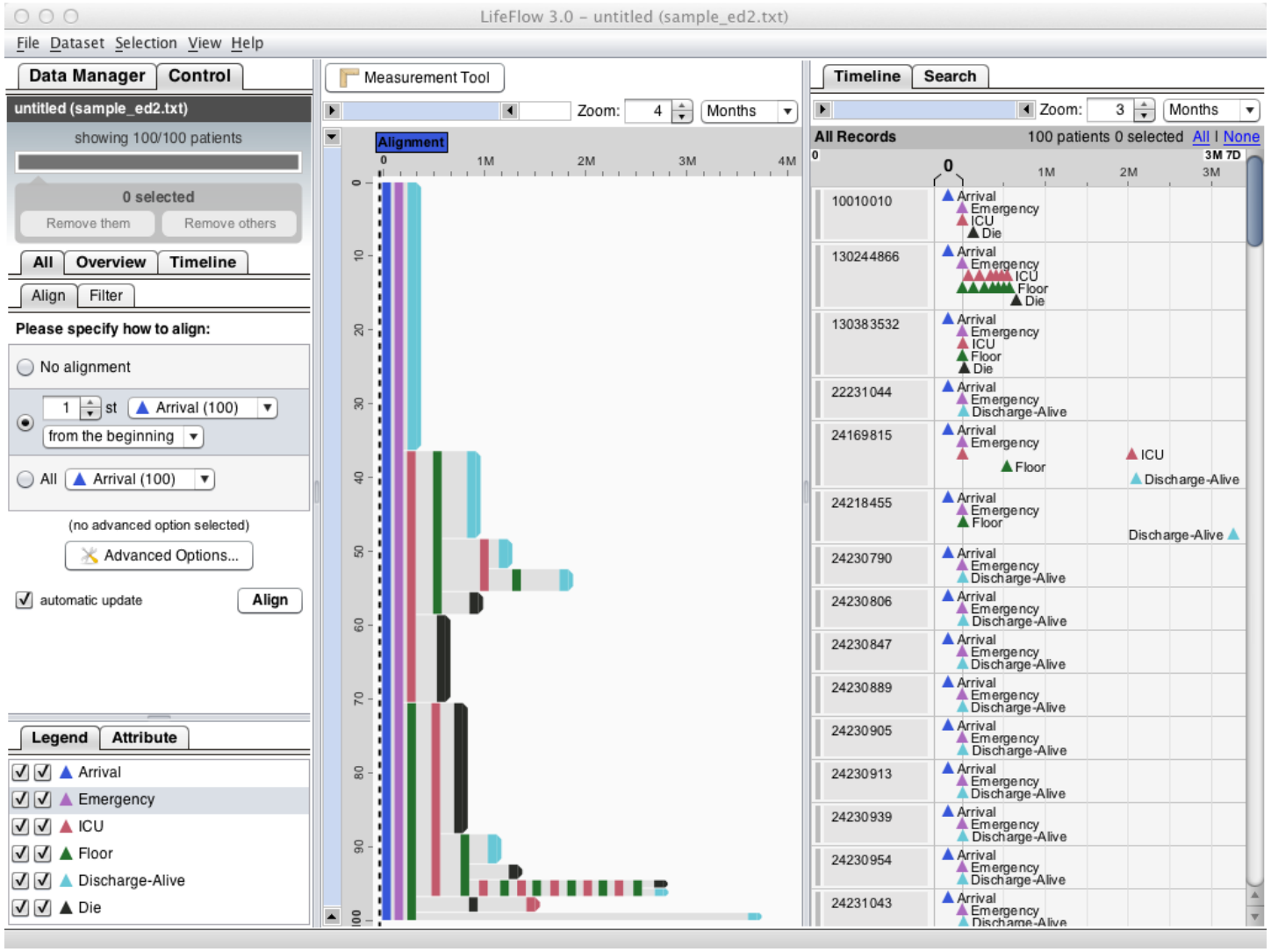
http://www.cs.umd.edu/hcil/sharp/slides/UMDvisit-HOUSTON-Dec2010-IntroBen.pdf

Visual Analysis of Temporal Event Sequence, Aggregations

https://www.youtube.com/watch?v=FHgcJDnW8q8

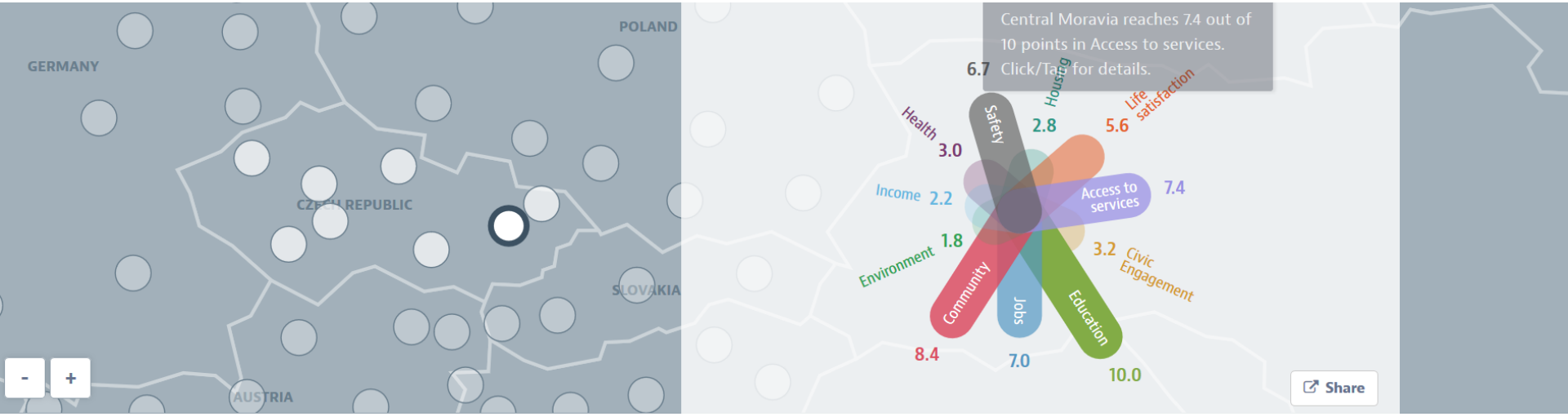


LifeFlow: Interface with User Controls



Regional Well-Being

- https://www.oecdregionalwellbeing.org/CZ07.html



Explore the map to find out how life is across OECD regions and discover regions with similar well-being.

Each region is measured in eleven topics important for well-being. The values of the indicators are expressed as a score between 0 and 10. A high score indicates better performance relative to the other regions.

Help

Regions with similar well-being *in other countries*

Poland
Mazowieckie

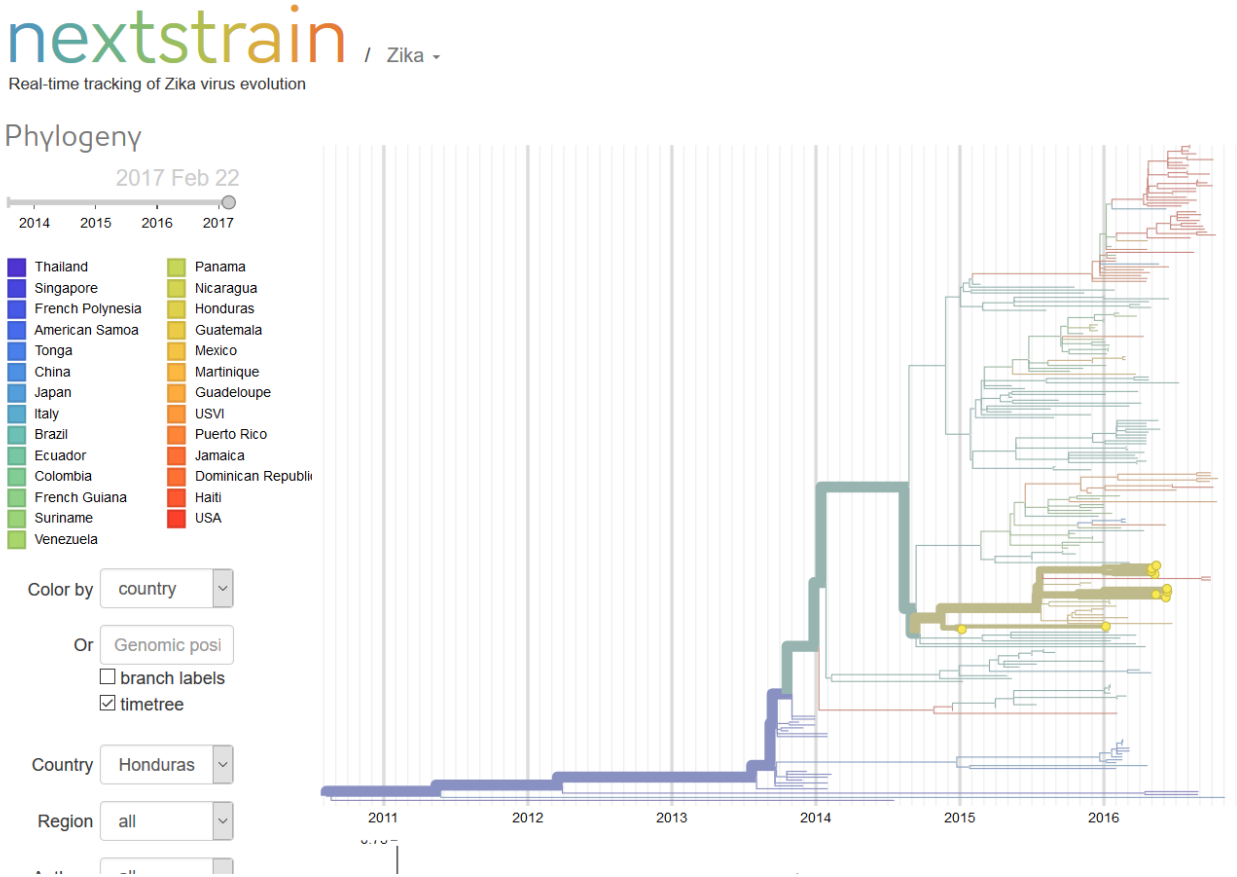
Slovak Republic
Bratislava Region

Slovenia
Eastern Slovenia

Israel
Southern District

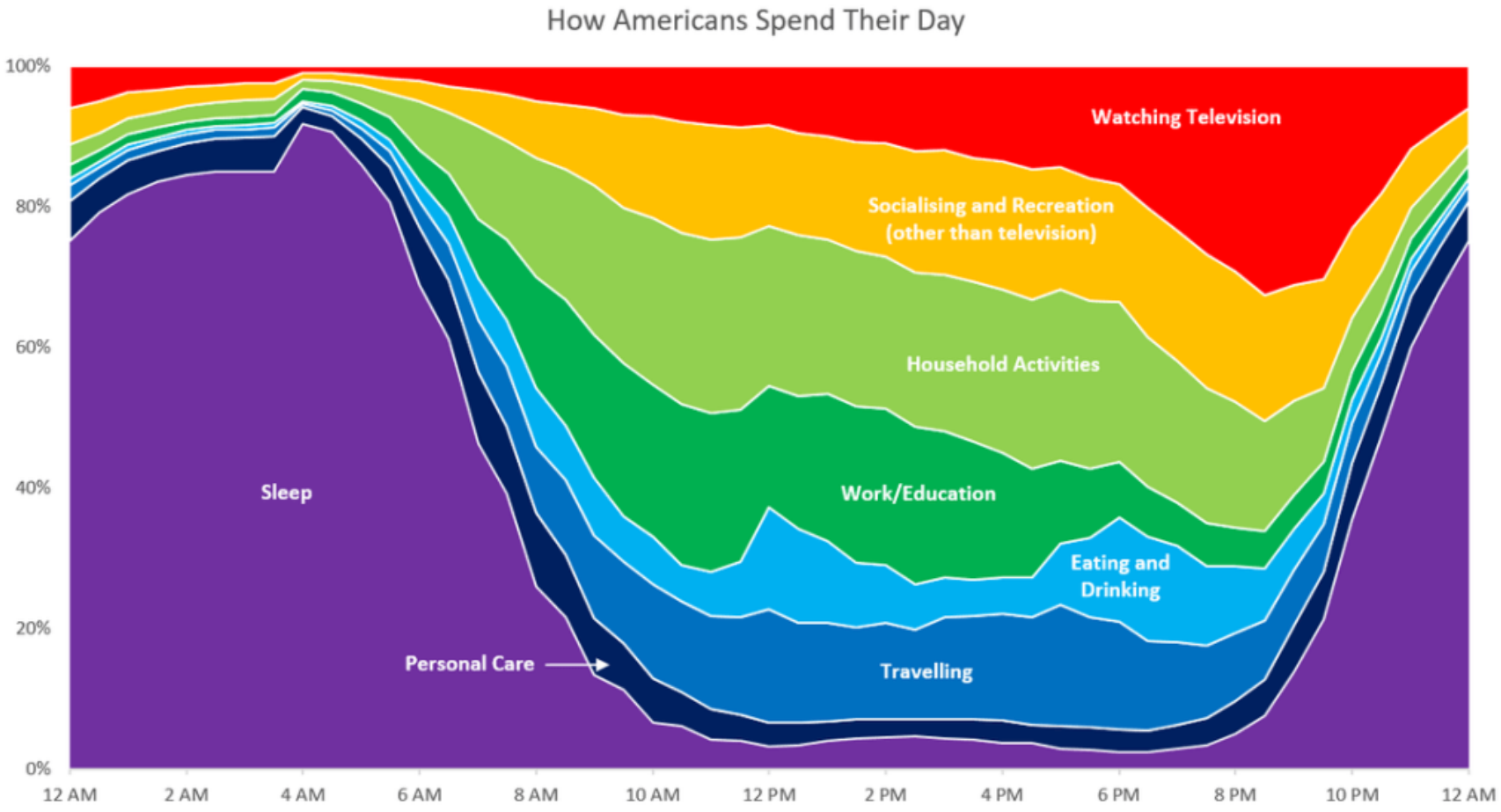
Zika virus

- http://nextstrain.org/zika/

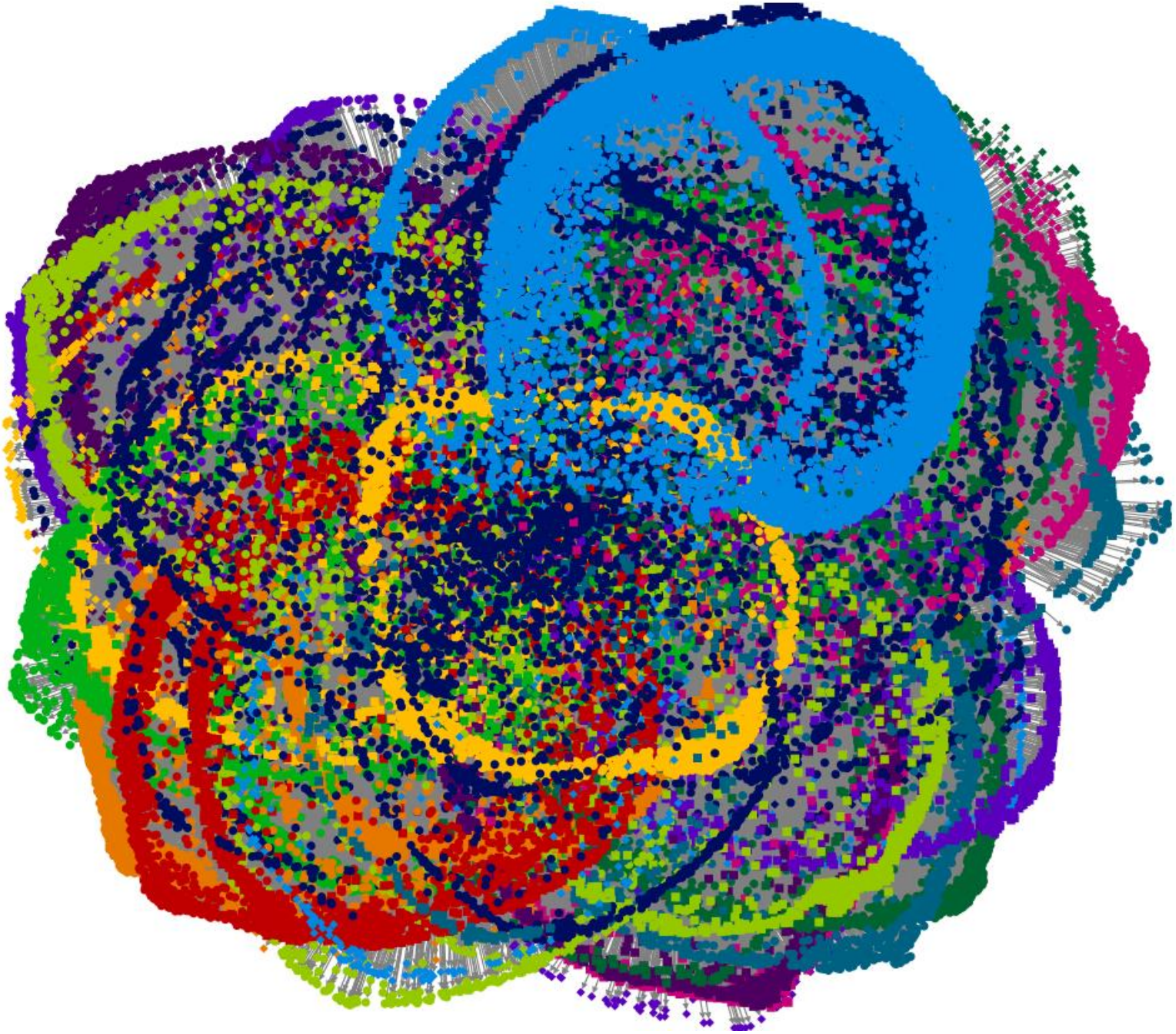


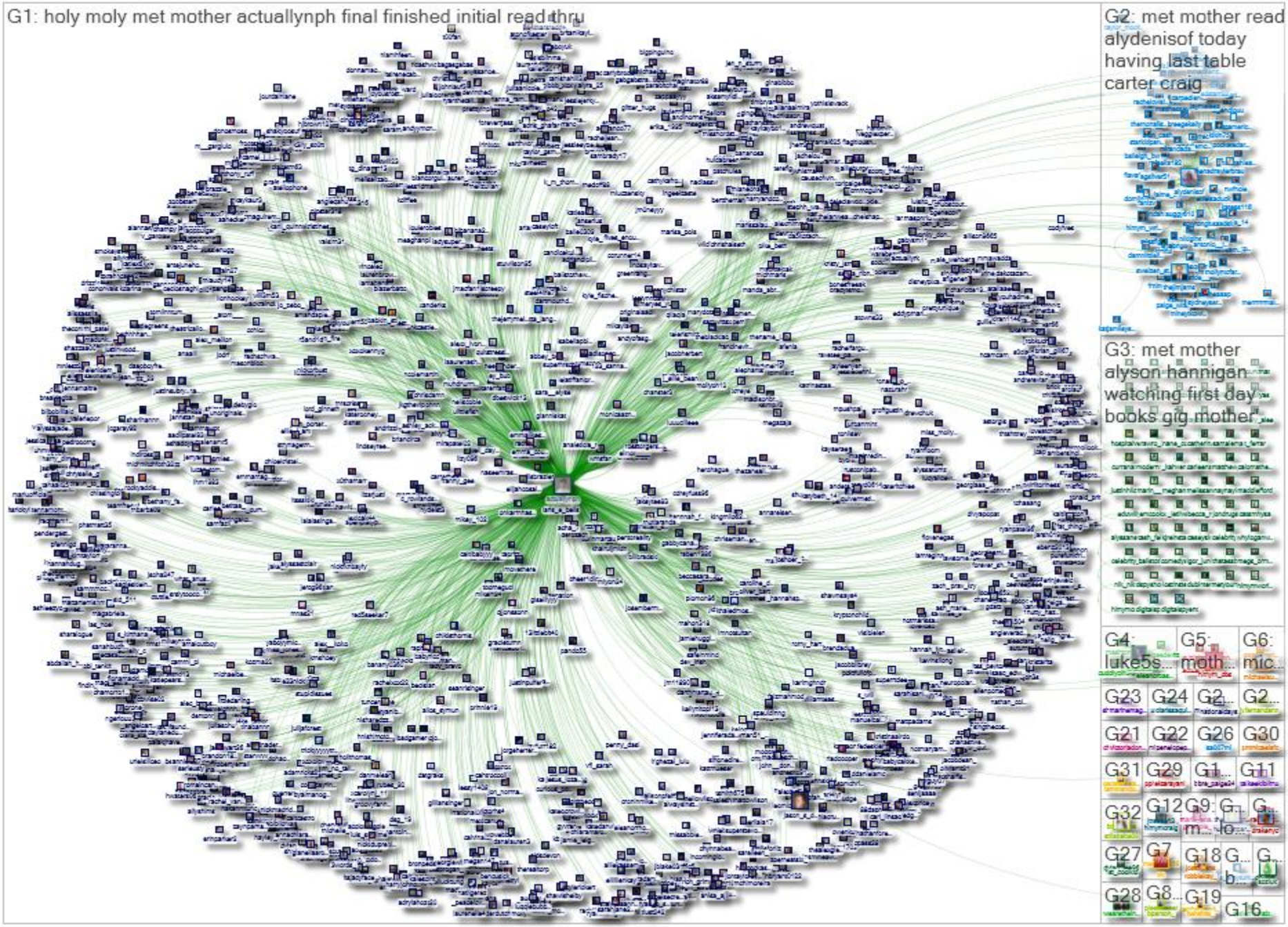
Randy Olson

- Herd Immunity http://imgur.com/a/8M7q8
- Largest cities over time https://www.reddit.com/r/dataisbeautiful/comments/5jiia1/animated_map_shows_location_of_worlds_largest/


How Americans Spend Their Day
100%
80%
60%
40%
20%
0%
12 AM
2 AM
4 AM
6 AM
8 AM
10 AM
12 PM
2 PM
4 PM
6 PM
8 PM
10 PM
12 AM
Watching Television
Socialising and Recreation
(other than television)
Household Activities
Work/Education
Eating and
Drinking
Travelling
Personal Care
Sleep

Visualizations are not always the solution ☺




G1: holy moly met mother actuallynph final finished initial read thru
G2: met mother read alydenisof today having last table carter craig
G3: met mother alyson hannigan watching first day books gig mother
G4
G5
G6
G23
G24
G2
G21
G22
G26
G30
G31
G29
G1
G11
G32
G12
G9
G7
G18
G27
G8
G19
G16
G28

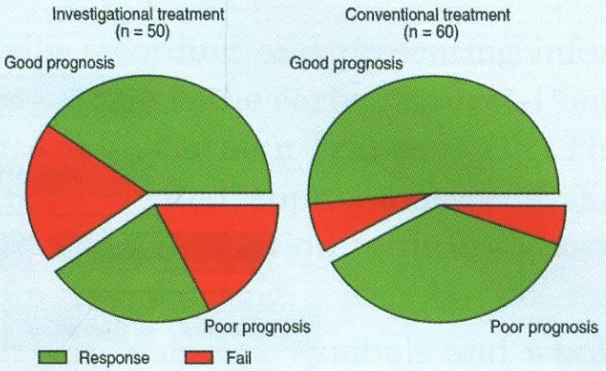
Misleading representations

Table

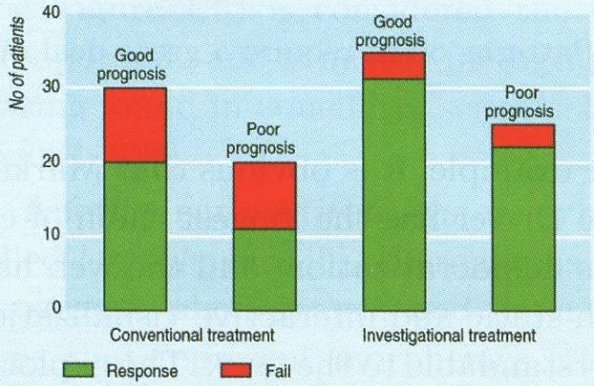
	Conventional treatment		Investigational treatment	
	Total no	% Fail	Total no	% Fail
Good prognosis	30	30	35	11
Poor prognosis	20	45	25	12
Total	50	38	60	12

(Negatively framed tables displayed failure rates in red.
Positively framed tables displayed response rates in green)

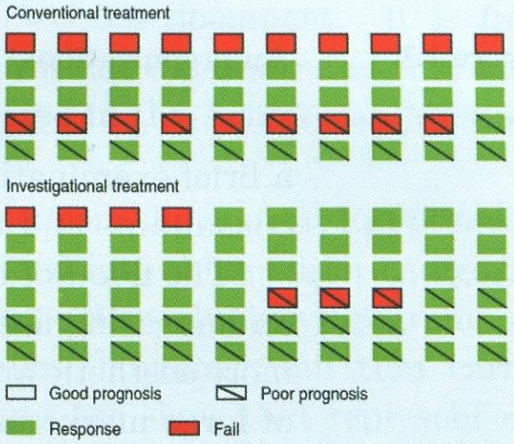
Pie chart



Bar graph



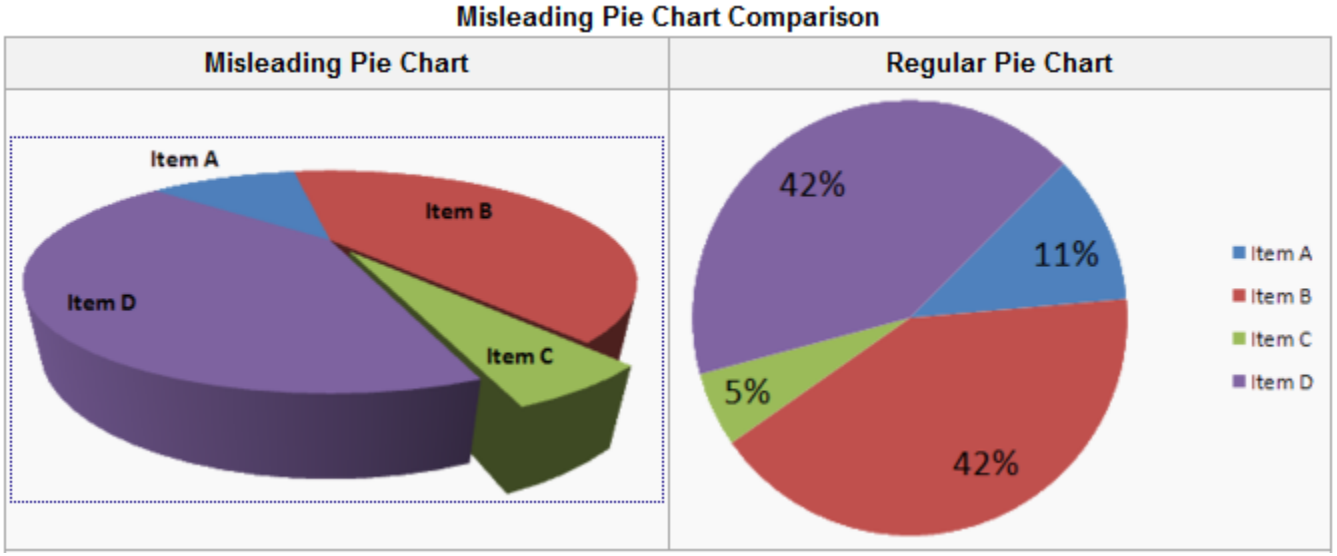
Icon



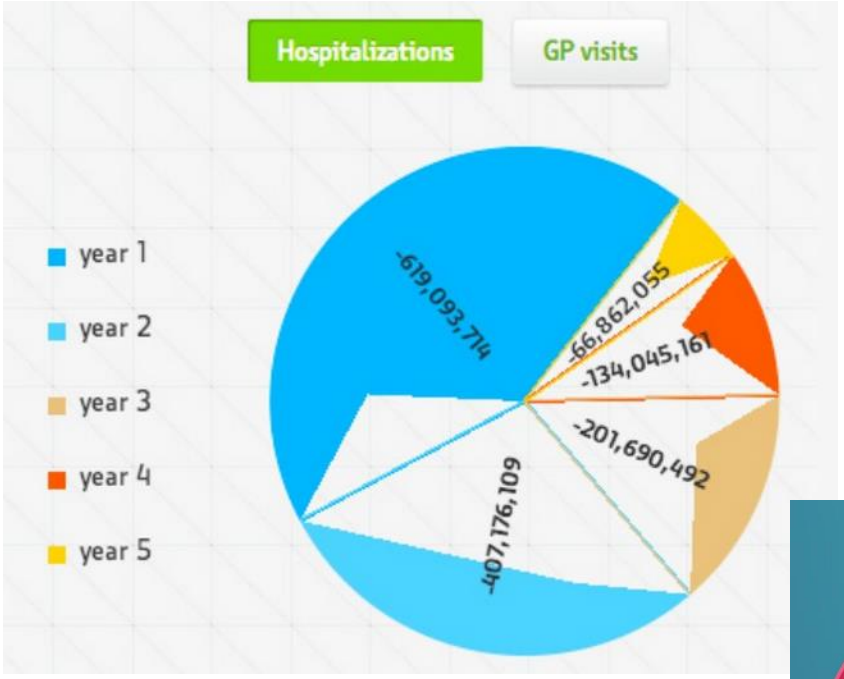
Misleading representations

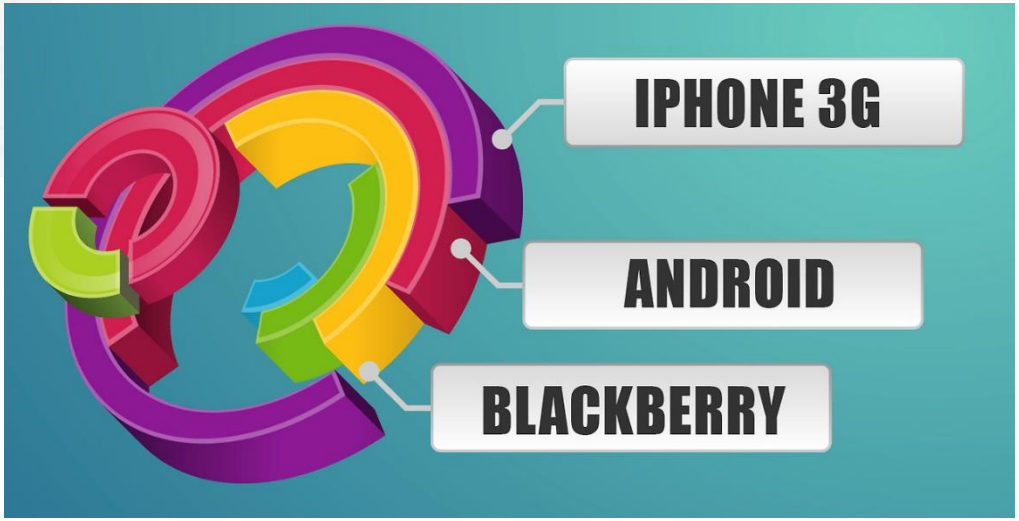
- Other examples:

http://en.wikipedia.org/wiki/Misleading_graph



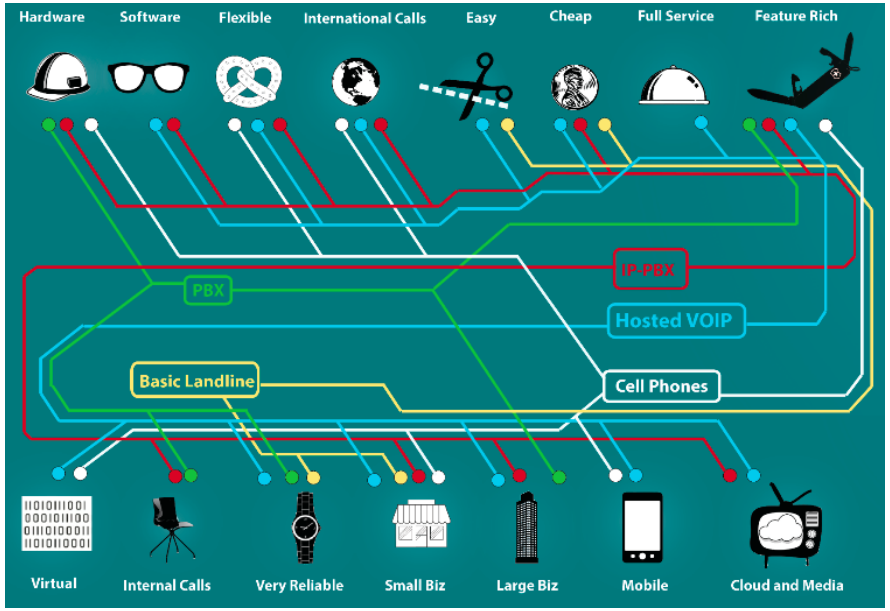
Nonsense visualizations

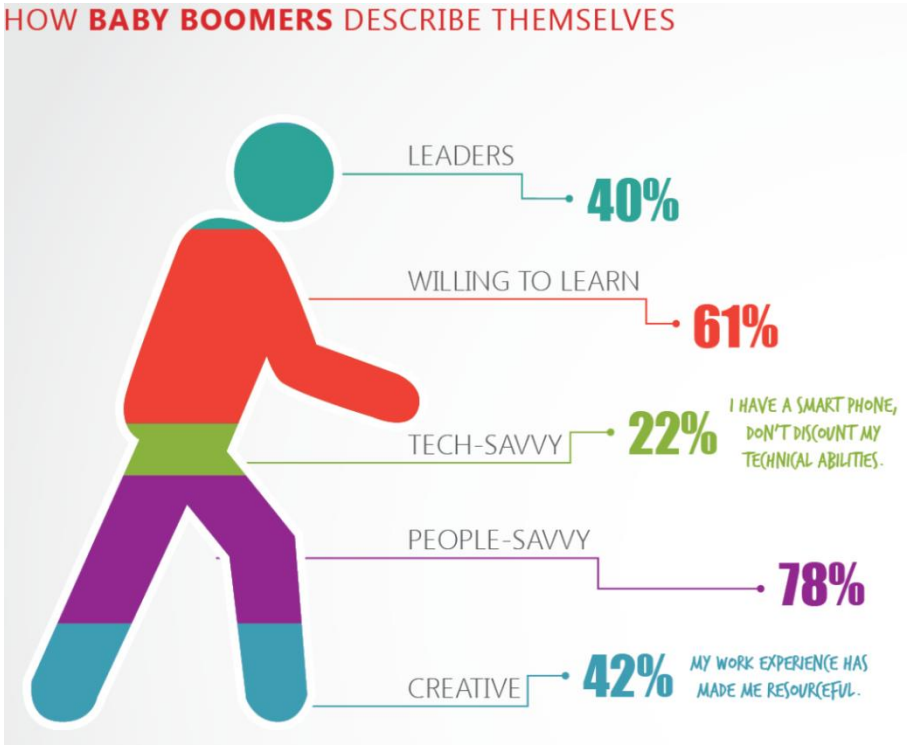




Nonsense visualizations

More here: http://wtfviz.net/

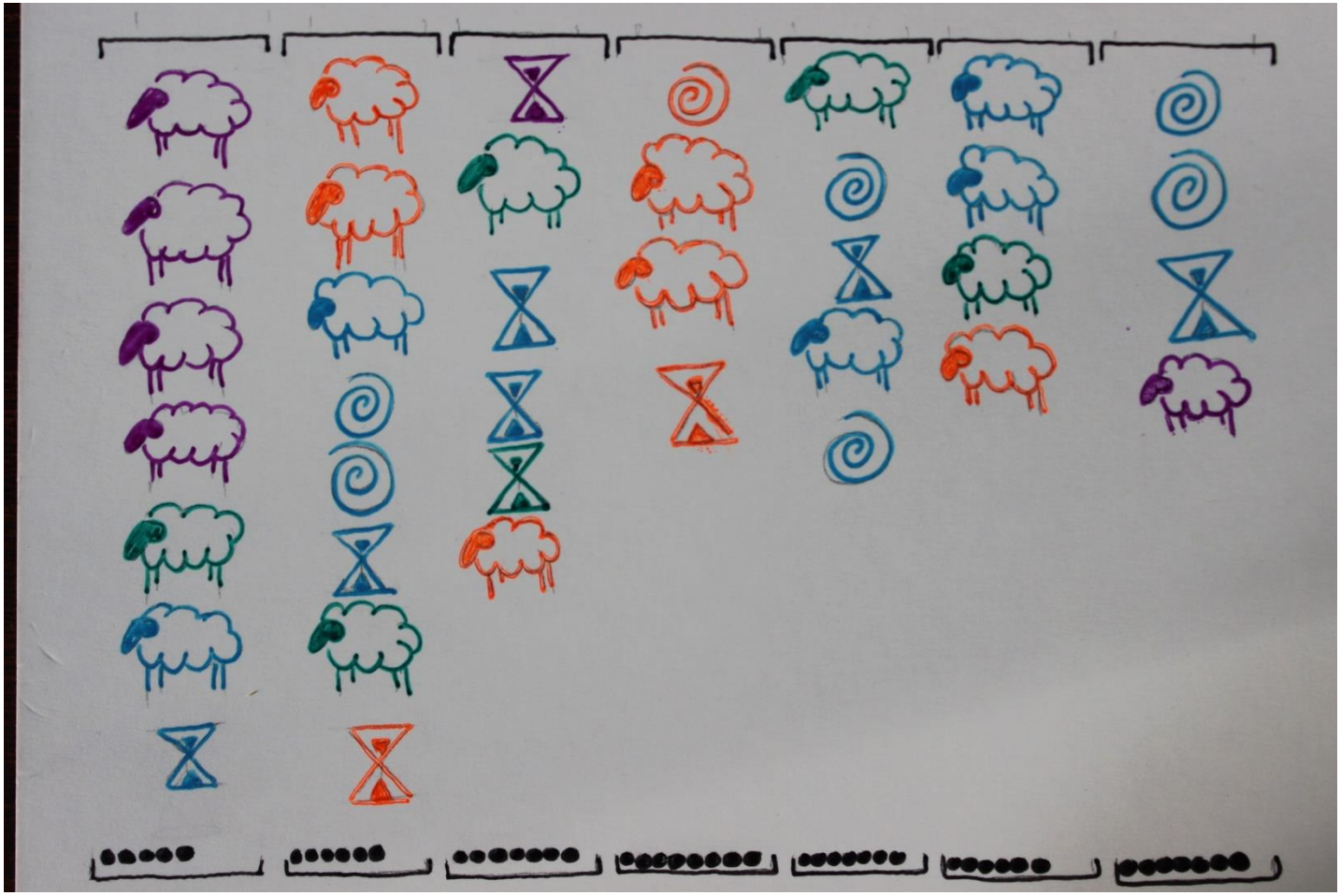




Task no. 1

- Make a postcard visualizing data of your own choice (can be really whatever ☺)

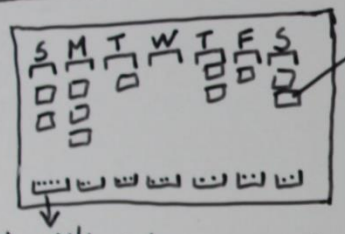
- Front side: visualization
- Back side: legend



DEAR DATA: YAWNZZZZZZZ

ABOUT THE DATA: tracked every yawn for a week and what was its cause aswell as what was I doing during yawning.

HOW TO READ IT:



every symbol between the brackets is a yawn, arranged in chronological order during the day

the little dots represent hours of sleep

#• = # hours of sleep

→ TIRED (counting sheep, get it?)

→ EMPATHY (i.e. seeing someone yawn and yawn immediatly after)

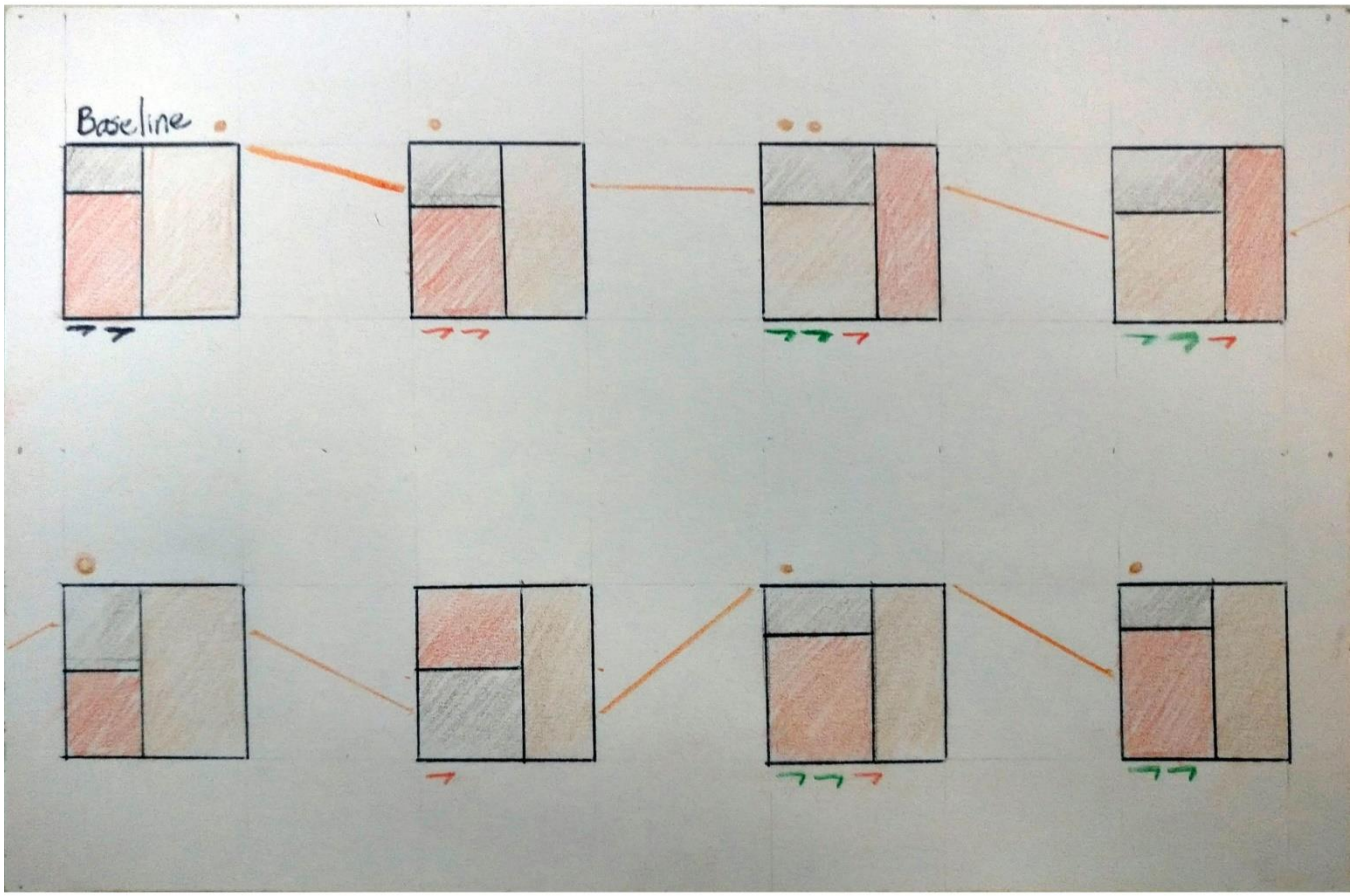
DOING WHAT?/WHERE?:

- Studying/In classes
- at home relaxing
- outside (street, cafe...)
- In/waiting for transports (metro, train, ...)

→ BORED

POSTCARD

Stamp here


Baseline

Luis Santos

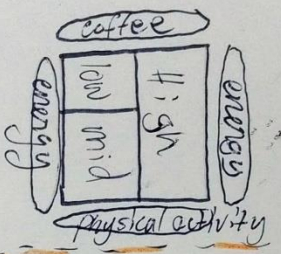
77900

MEIC-A

POSTCARD

A week of Food & Physical Activity

Coffee — Energy



Macro nutrients in square
fats | carbs | protein

coffe: one ● is one coffe had during the day and the diameter is how much coffee I had.

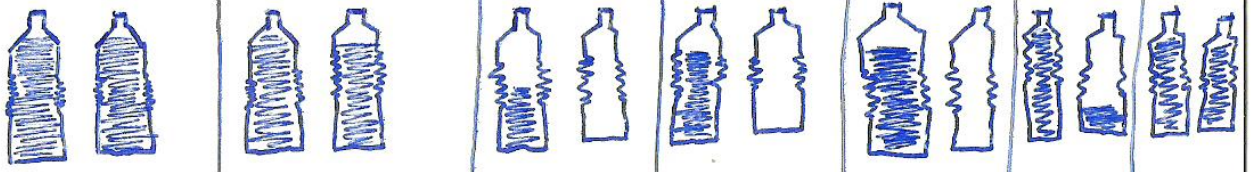
7 : one hour of phy.act.
7 : gym
7 : walking

The figure shows the basic intuition for how to read the data on the left & right we have the days energy level, above amount of coffe bellow hours of physical activity inside the square a decomposition of macro nutrients (protein, carbs & fat)

I'll leave it to the reader to find the weekend

Energy levels vary ~~from~~ 0, 25, 50, 75, 100 depending on how I ~~feel~~ during the day. The ~~rel~~ relates energy levels

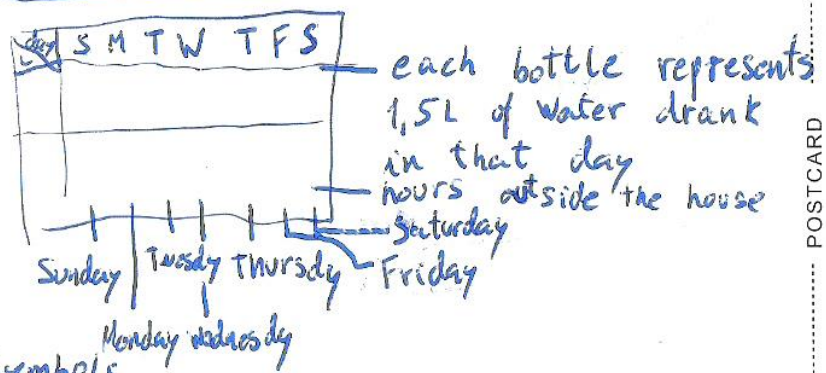
Motivation: I wanted to show how my daily intake of macro nutrients ~~and~~ and stimulants ~~related~~ related with physical activity affect my energy levels for a day. I included a base line for what a normal day would be

Day /	Sun	Mon	Tue	Wed	Thu	Fri	Sat
							
hours outside the house	0 h	2 h	9 h	4 h	5 h	3 h	0 h

Dear Data

Week 05: Liters of water per day

How to read it:



Symbols

 - 0% of 1,5L

 - 100% of 1,5L

POSTCARD

Stamp here

André Vieira

79591