

**cs465**

**principles of user interface design, implementation and evaluation**

Karrie G. Karahalios  
10. September 2008

# 1. Color for Graphic Design

*color models*

*which models to use*

*blending, transparency*

# 2. Information Visualization

*examples*

*social visualization: assignment*

# Color

- Why is it important?
- Different color models

## Introduction to color

(from course notes of Andries Van Dam Oct. 20, 2005, Brown University)

(<http://www.cs.brown.edu/courses/cs123/lectures/Color.pdf>)

([http://www.cs.brown.edu/exploratories/freeSoftware/catalogs/color\\_theory.html](http://www.cs.brown.edu/exploratories/freeSoftware/catalogs/color_theory.html))

# Information Visualization

- Edward Tufte
- Social Network Visualizations
- Maps
- Social Visualizations

# Information Visualization Examples

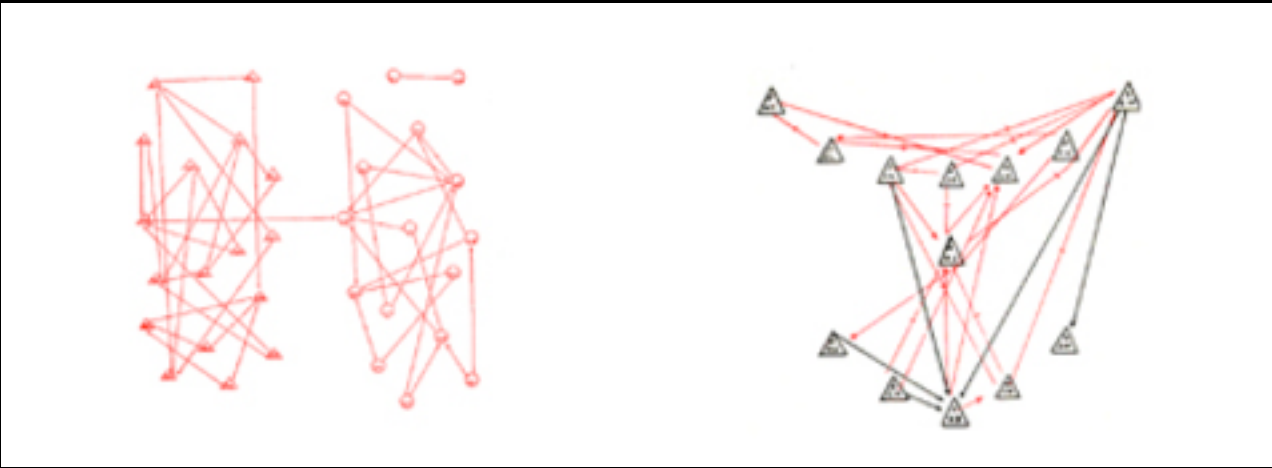
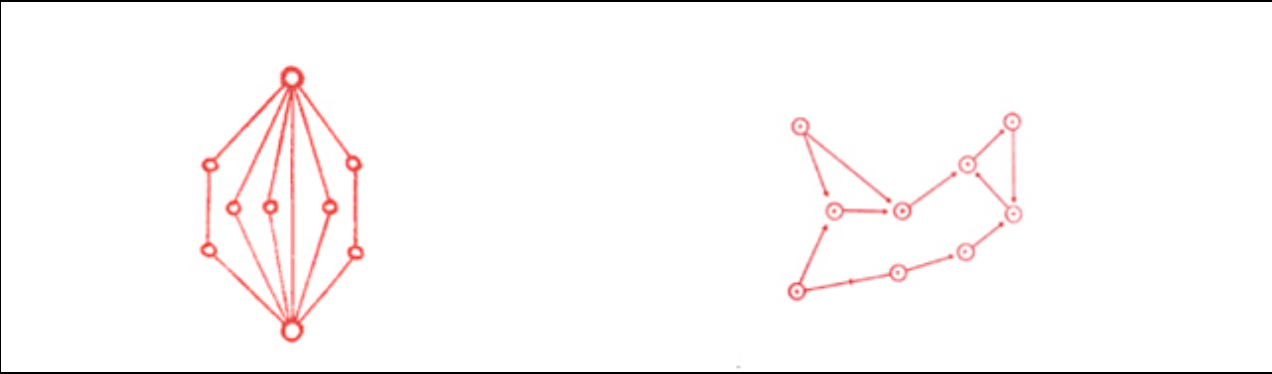
- Dynamic queries, starfield displays, and the path to Spotfire  
(<http://www.cs.umd.edu/hcil/spotfire/>)
- Treemaps  
(<http://www.cs.umd.edu/hcil/treemap-history/index.shtml> )
- Sage CMU  
(<http://www.cs.cmu.edu/Groups/sage/sage1.html> )
- Zoomable interfaces – Pad++  
(<http://www.cs.umd.edu/projects/hcil/pad++/> )
- Non-linear magnification  
(<http://www.cs.indiana.edu/~tkeahey/research/nlm/nlmTour.html> )
- Geography of Cyberspace  
([http://www.geog.ucl.ac.uk/casa/martin/geography\\_of\\_cyberspace.html](http://www.geog.ucl.ac.uk/casa/martin/geography_of_cyberspace.html) )  
Atlas of Cyberspace  
(<http://www.geog.ucl.ac.uk/casa/martin/atlas/atlas.html> )

## Social Visualization

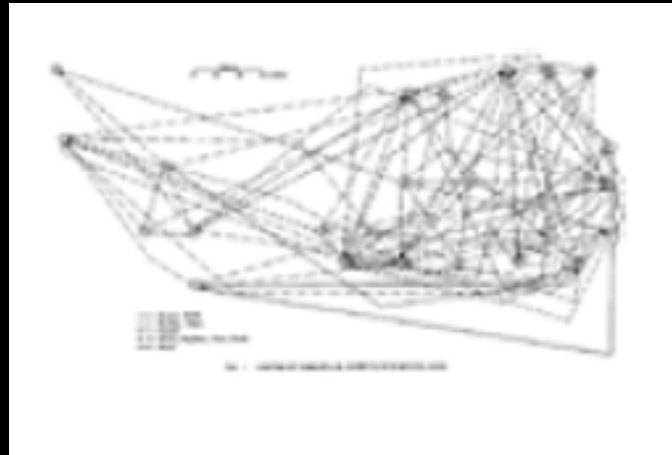
- is a subset of information visualization
- the key distinction is that social visualizations focus on people, the groups they form, their patterns, interactions, and how they relate to their communities.

## A History

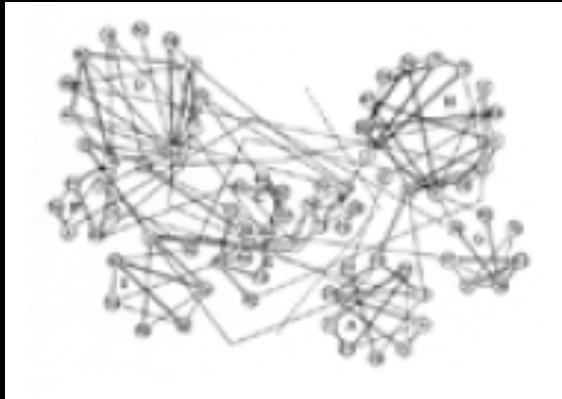
1. Hand-drawn images beginning in the 1930's. The effectiveness of these visuals depended heavily on the artistic skill and insight of the creator.
2. The 1950's introduced computational procedures such as classification into the drawings.
3. In the 1970's, the availability of the computer brought automatic machine drawn visuals.
4. In the 1980's, the advent of the personal computer allowed for the creation of graphs on the monitor screen and in color.
5. In the 1990's the world wide web and the browser created a new environment for display.



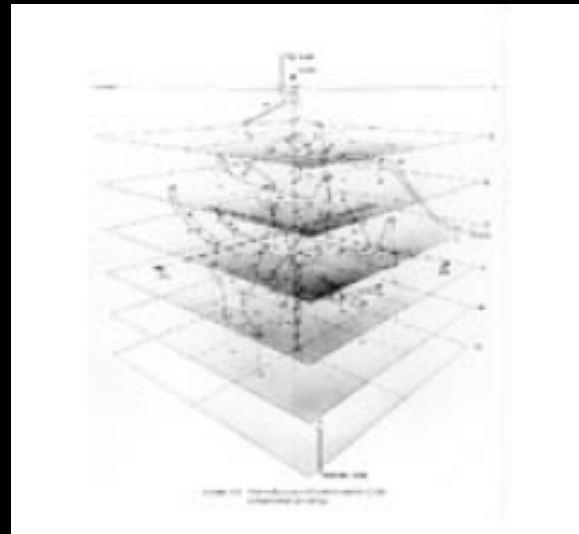
Jacob Moreno, 1930's



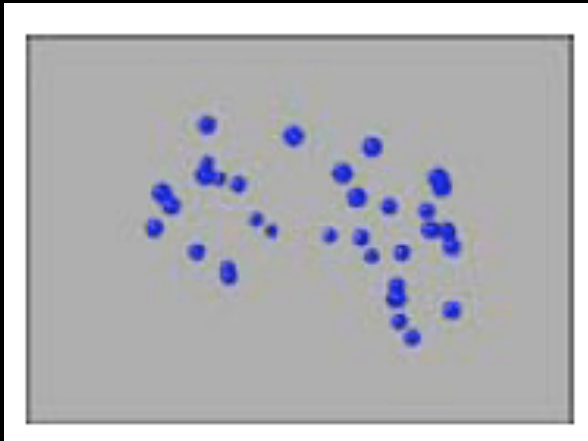
Leonard and Loomis, 1941



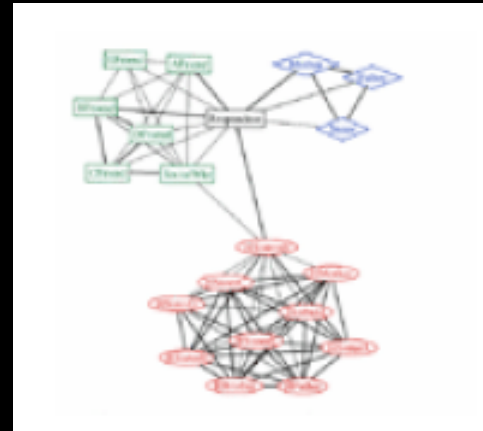
Proctor



1<sup>st</sup> 3d Visualization



Conference attendees



Pajek

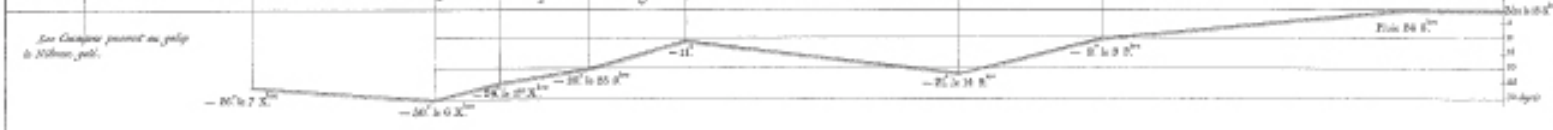
# Carte Figurative des succès successifs en hommes de l'Armée Française dans la Campagne de Russie 1812-1813.

Dressée par M. MINARD, Inspecteur Général des Lignes à Chaux-de-Fonds en Suisse. Paris, le 20 Novembre 1869.

Les nombres d'hommes présents sont représentés par les longueurs des lignes abaisées à raison d'un millimètre pour dix mille hommes; ils sont le plus écrits au dessus des lignes. Le trait orange les hommes qui restent en Russie; le noir ceux qui ont été tués. Les contingents qui ont servi à travers la campagne ont été pris dans les ouvrages de M. M. Chatelet, de Ségur, de Foy, de Valenciennes, de Charlebray et le journal inédit de Dabry, pharmacien à Pétersbourg depuis le 23 Octobre. Les notes sont tirées à l'ordinaire de l'histoire de la guerre de Russie par le Général Dumas qui servait de secrétaire de Dabry sur le front à M. de Ségur et ce général sur les autres. M. de Ségur, ainsi que nous l'avons vu, a été tué.



TABLEAU GRAPHIQUE de la température en degrés du thermomètre de Réaumur au dessous de zéro.



Approuvé par le Roi, le 27 Mars 1819 à Paris.


Dep. Min. Guerre et Marine.

Charles Joseph Minard

In progress version of Lifeline Frame [not for demo purposes - Microsoft Internet Explorer - [Working Offline]

File Edit View Go Favorites Help

Back Links Best of the Web Channel Guide Customize Links Internet Explorer News Internet Start

 **Linda Simpson**  
Female 40

Line from input file: %-.3-10-1997,3-12-1997,black,p10,Sonogram,images/babysonogra

**Lifeline**

92 93 94 95 96 97

Notes: Tobacco, Depression, Lyme, Arthritis, Obesity, Checkup, AtrialFlutter, Flu, Pneumonia, KneePain, Fatigue>Diabetes, Diabe, Pregnancy

Hosps.: Appendectomy, Pneumonia, KneeSurgery

Tests: BloodEKG, EKG, Xray, Blood, Blood, Blood, Sonogr

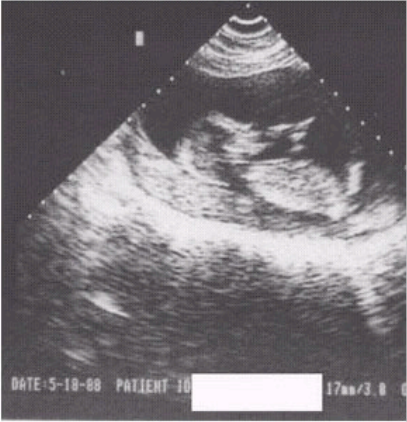
Meds.: Prozac, Heartdrug, Ventolyn, Antib., Advil, Advil, Insulin, Insulin

Others: PhysicalTherapy

Immun.: TBtest, LowSaltFatDiet, Tetanos, Flu

92 93 94 95 96 97

load Control Panel

  
DATE: 5-10-88 PATIENT ID: [redacted] 17mm/3.8

**Lifeline Control Panel**

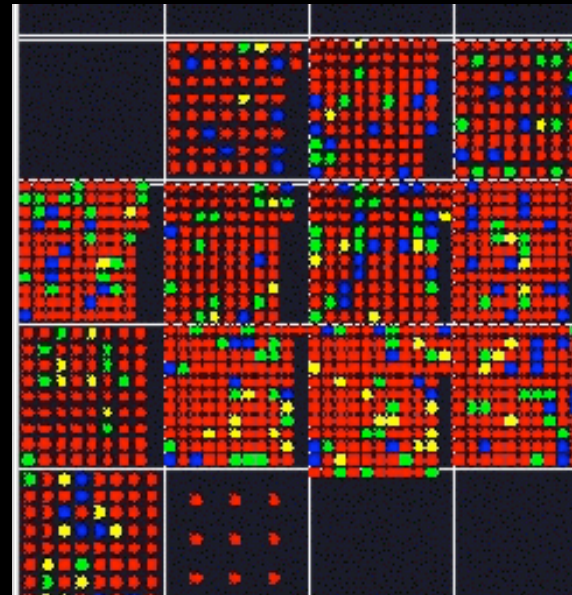
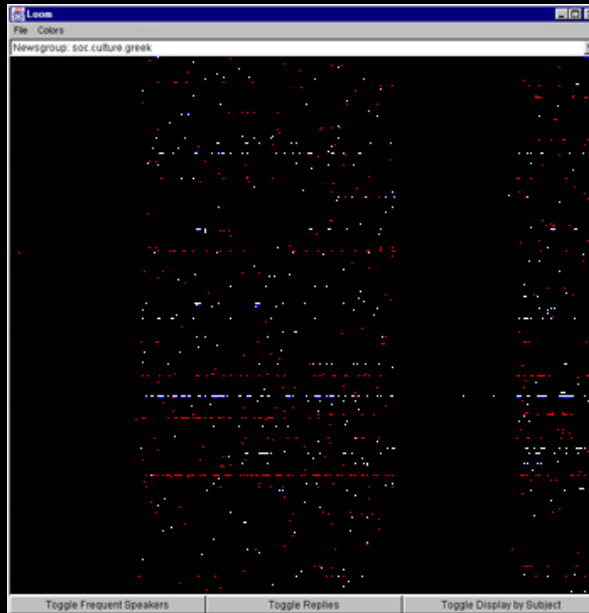
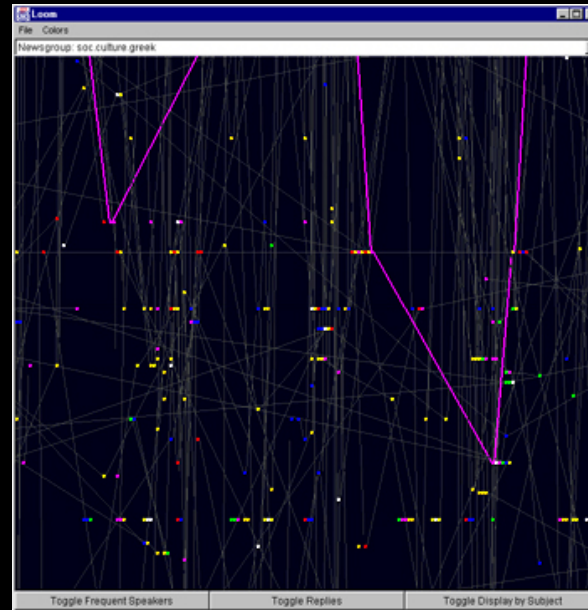
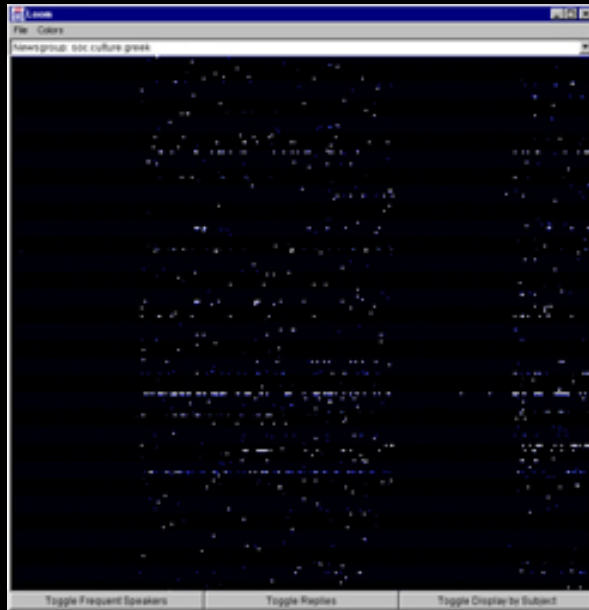
Layout Label

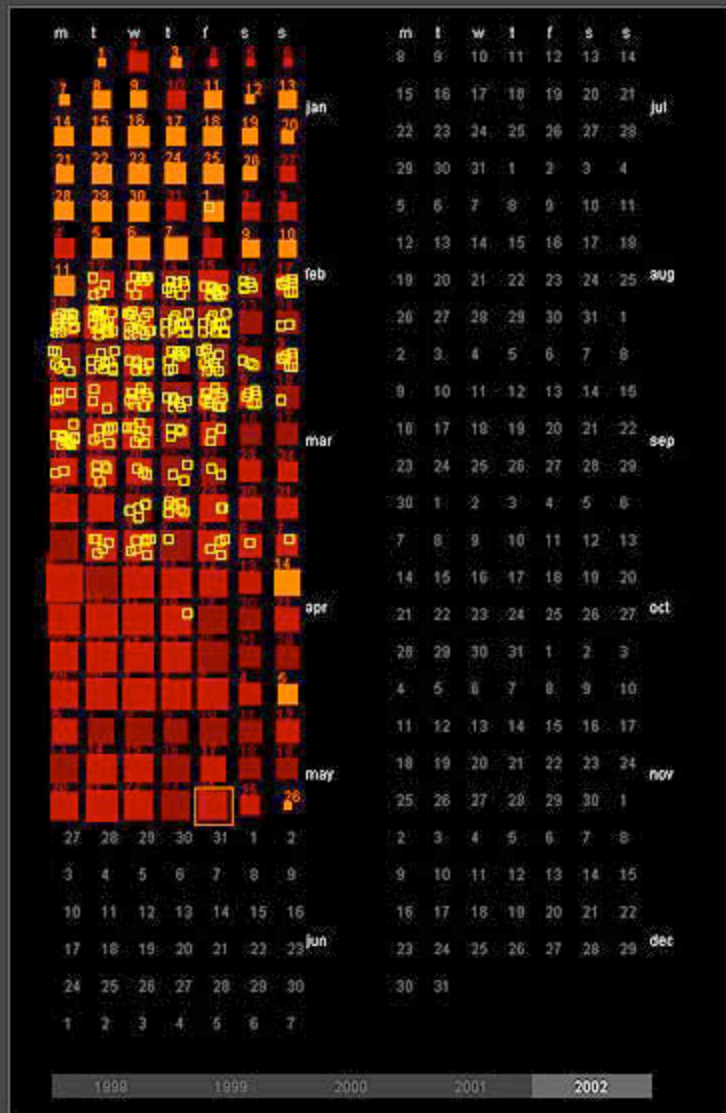
- Default
- Quick Compact
- Slow Compact
- Chronologically Ordered
- Event Ordered

Apply OK Cancel

Warning: Applet Window

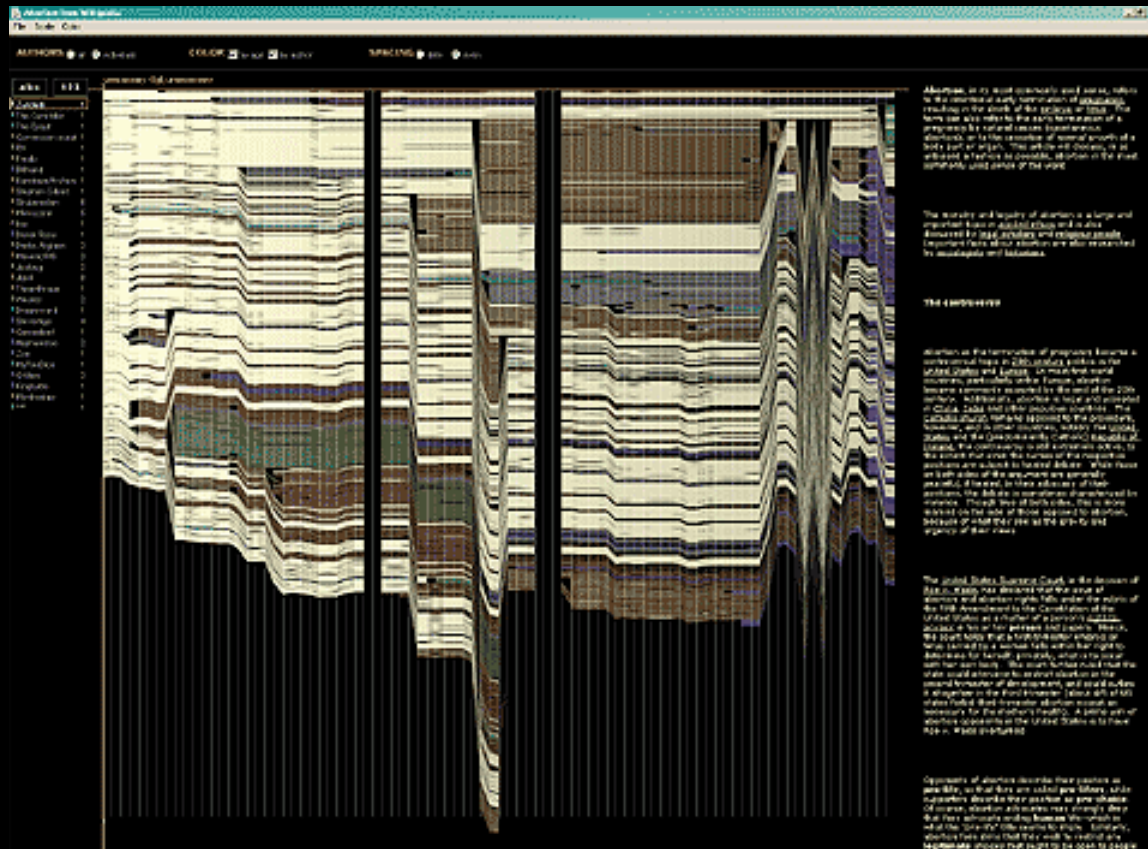
# Loom





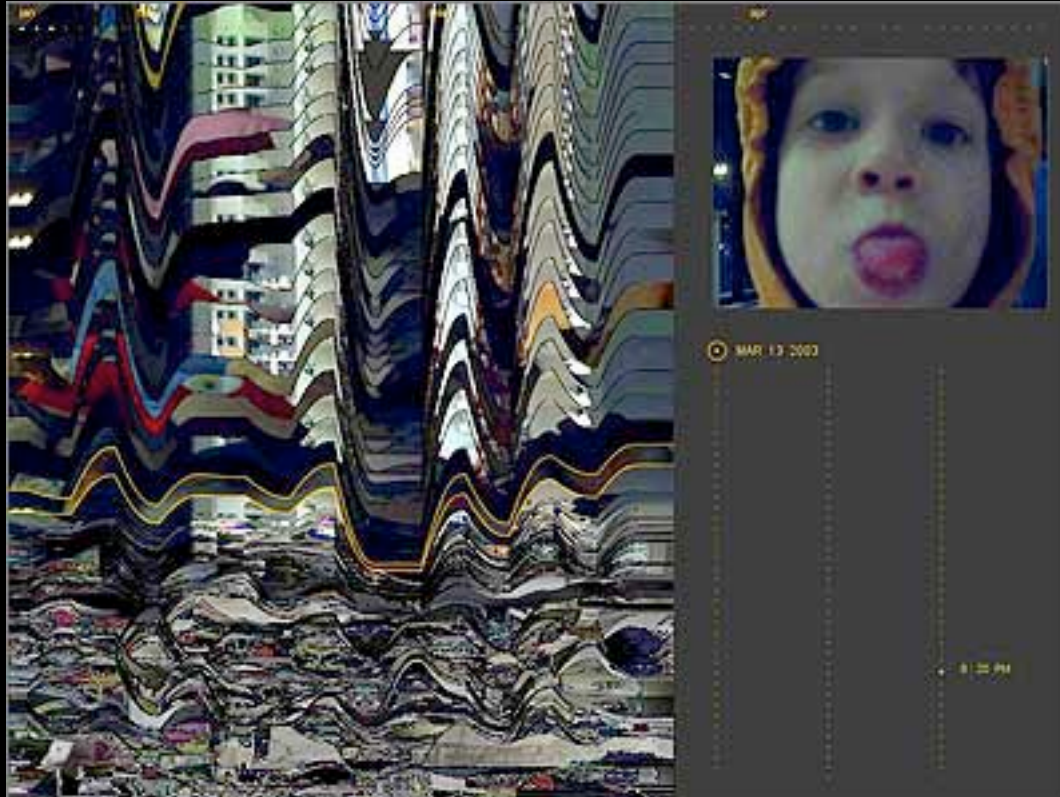
Post History, Fernanda Viegas





HistoryFlow  
wikipedia visualization  
Fernanda Viegas





Artifacts of the Presence Era

# Assignment

Slashdot | The Wi-Fi Cameras are Coming - Microsoft Internet Explorer provided by Insight Broadband

File Edit View Favorites Tools Help

Address <http://slashdot.org/articles/05/01/05/0047212.sthn?id=152&id=125&id=1> Go Links

Google Search Web 470 blocked AutoFF Options

Stories

Old Stories  
Old Polls  
Topics  
Hall of Fame  
Submit Story

About  
Supporters  
Code  
Awards

Services  
Broadband  
FaceCrabber  
Product Guide  
Special Offers  
Tech Jobs

The Wi-Fi Cameras are Coming | [Log in/Creates an Account](#) | [Top](#) | [100 comments](#) | [Search Discussion](#)

Threshold:

The Fine Print: The following comments are owned by whoever posted them. We are not responsible for them in any way.

yay! (Score 5, Funny)  
by [Anonymous Coward](#) on Wednesday January 05, @10:43PM ([@11272175](#))  
finally I can peep on chicks better!  
[\[ Reply to This \]](#)

- [Re: yay!](#) by [American\\_Idiot](#) (Score 1) Wednesday January 05, @11:36PM
- [Re: yay!](#) by [Boglin](#) (Score 2) Thursday January 06, @12:02AM
- [I reply beneath your current threshold.](#)

A hem (Score 3)  
by [Eures Marian](#) ([83629](#)) <[emarian@lavnormal.org](mailto:emarian@lavnormal.org)> on Wednesday January 05, @10:44PM ([@11272184](#))  
(<http://slashdot.org>)  
How many times do they need to reimplement something? Can't they use WEP chipsets that already exist?  
[\[ Reply to This \]](#)

1500 images? (Score 5, Insightful)  
by [thestach](#) ([844290](#)) on Wednesday January 05, @10:44PM ([@11272186](#))  
maybe if they're the size of postage stamps...  
[\[ Reply to This \]](#)

- [Re: 1500 images?](#) by [insabbel](#) (Score 3) Wednesday January 05, @10:37PM
  - [Re: 1500 images?](#) by [thestach](#) (Score 2) Wednesday January 05, @11:02PM
    - [Re: 1500 images?](#) by [daniangerous](#) (Score 2) Wednesday January 05, @11:34PM
      - [Re: 1500 images?](#) by [EnderWiggut](#) (Score 1) Wednesday January 05, @11:53PM
  - [I reply beneath your current threshold.](#)
- [Re: 1500 images?](#) by [LiquidCooled](#) (Score 3) Wednesday January 05, @11:02PM
  - [Re: 1500 images?](#) by [Jeff DeMaagd](#) (Score 2) Thursday January 06, @12:04AM
- [I reply beneath your current threshold.](#)

Great (Score 2, Interesting)  
by [Dr Kyle](#) ([818035](#)) on Wednesday January 05, @10:44PM ([@11272187](#))  
Now I don't have to stop and swap cards when they get full, but swap batteries because I'm constantly uploading them to my server.  
[\[ Reply to This \]](#)

Internet