CPSC 599.28/601.28
Social Visualization

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Social visualization

• Drawn by hand in the 1930s

Moreno’s Image of a Pattern of Linkages
Grant's Drawing of a Target Sociogram of a First Grade Class
Friendships among forth graders
Online communication

- Chat
- Email
- Online communities
- Blogs
- Etc. ...

- Let's look at purpose – what would one want to visualize and why?

Chat

Purpose #1
A visual interface for chat.
**Comic Chat**

Purpose #1

A visual interface for chat.

http://research.microsoft.com/vwg/projectsheets/comicchat.htm

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**Chat Circles**

Purpose #1

- A visual interface for chat.
- In contrast to more pictorial solutions
- Abstract shapes to convey
  - identity and
  - activity

Chat Circles

Abstract shapes to convey
- identity and
- activity

Participant -> circle (colour is personal choice)
Activity -> brighter (dimmer with silence)

Proximity is needed to ‘hear’
Chat Circles

Movement leaves trails

Chat Circles

purpose:
conversation history
Graphical Log
- participant is thread
- bars are messages
Online interaction environments

Purpose:
The people who use them -> data portraits
• Do people get really involved?
• Post frequently? Rarely?
• Do people respond to each other?
• Are newcomers welcome?
• Who are the experts?
• Who has been here for a while and has made many posts?

PeopleGarden
http://graphics.lcs.mit.edu/~becca/papers/pgarden

PeopleGarden
Basic person flower
More petals - more messages
New on the right
Petals fade with time
Marked difference in saturation
mean time gap

Responses to postings
Magenta indicates initial post
PeopleGarden

- A PeopleGarden showing messages from a message board with 1200 postings over a 2-month period.
- Height of flower denotes amount of time a user has been at the board.

PeopleGarden

A dominating voice  A more democratic group
Visualizing dialog

Purpose:
Give the impression of the conversation

Data:
The identity of who the person enters the text
The text – words and punctuation

What to visualize?

The Approach

• The response relationship
• The use of capitals
• The use of exclamation marks
• The number of words
• The number of characters
The number of words

• To sense an individual’s quantity of contribution to the conversation
The number of characters

- A sense of quantity can be distinguished
Motion – Control Theory

Where we want to go = where we are + ((where we want to go – where we are)/2)

Where we want to go = where we are + ((where we want to go – where we are)/n)

If n < 0.5 motion accelerates past target
If n = 0.5 motion oscillate around target
If 0.5 < n < 1 overshoot target and comes back
If n = 1 will get to target immediately
* If 1 < n < 2 will slow down as particle is closer to target
If n is over 2 particle will never reach target

The Response Relationship
The use of capitals

- To shout or capture one’s attention

The use of exclamation marks

- To exaggerate or emphasize
Demonstration

Enriching communication

Visualizing Human Dialog

• A Visual Representation illustrating a conversation or ‘chat’ between several people

• Representation uses abstract patterns

Annie Tat
Enriching communication

The Shape of Conversation

• A Visual Representation depicting a conversation between 2 parties

• A Visual History of the conversation is developed like a painting on a canvas

With Edward Tse, Holly Simon & Allan Dunning

Instant messaging

Reveal one person's chat activities
-> data in chat log history

• make individual messages apparent
• keep the link between the message's visual symbol and its text contents.
• indicate the beginning and ending of a 'conversation' as defined by the opening and closing of a chat dialog box.
• group one's interactions with each person in one's chat network.
• provide a structure linking the interactions with all people in one's chat network.
• show temporal order
• show temporal spacing and frequency
• provide an indication of the emotional content of the chat dialog as indicated by the emoticons used.

CrystalChat
CrystalChat

Reveal one person’s chat activities
- > data in chat log history
CrystalChat

one row of circles = one conversation

CrystalChat

?? marks = transparency
@ emoticons = red
neutral = yellow
@ emoticons = blue
Artifacts of the Presence Era

Purpose: To show what is happening in conjunction with what has happened.

Video taping and audio taping the room in the gallery.

http://alumni.media.mit.edu/~fviegas/ICA/
Artifacts of the Presence Era

(1) original audio wave created over five minutes of activity
(2) sampled height of the audio wave
(3) shape of top layer in history stack; this is the landscape on top of which the newly-formed layer will be placed
(4) placement of sampled wave on top of previous layers
(5) resulting wave form, notice how the shape has changed from #1

(6) schematic masque showing how the final layer shape was “cut” from the chosen video image.
Artifacts of the Presence Era

Layer every five minutes

Artifacts of the Presence Era

Layers compress over time
Artifacts of the Presence Era

Compressed layers merge over time

Wiki: web based collaboration

History Flow Wikipedia Visualization

• make broad trends in revision histories immediately visible
• preserve details for closer examination.

Wiki: web based collaboration
Wiki: web based collaboration

Wiki: web based collaboration
Baby Names

Relative popularity of baby names during the last century

http://babynamewizard.com/namevoyager/lnv0105.html

GapMinder

Hans Rosling: Debunking third-world myths with the best stats you've ever seen

We Feel Fine

Jonathan Harris: The Web's secret stories

http://www.ted.com/index.php/talks/view/id/144

References

• Wattenberg, M. Baby Names, Visualization, and Social Data Analysis. In Proc Information Visualization, (InfoVis), 2005.