

SES #	TOPICS	READINGS AND RESOURCES
1	Introduction: What is Social Visualization?	<p><i>Readings</i></p> <p>Garton, Haythornthwaite and Wellman. Studying online social networks.</p> <p>Freeman, Lin. Visualizing social networks. (PDF)</p> <p><i>More Examples</i></p> <p>They Rule (Josh On)</p> <p>September 11 Terror Network and Political books, polarized readers by Valdis Krebs. See also these Ryze and blog networks.</p> <p>Works by Mark Lombardi.</p> <p>The Sociable Media Group's Social Network Fragments.</p> <p><i>Possibly Useful Software</i></p> <p>Here is a list of open source graphing software, for those of you who wish to try computational sketching. There are some nice examples with TouchGraph, among others.</p>
2	Social Networks: Foci, Strong and Weak Links	<p><i>Readings on Perception and Design</i></p> <p>Tufte, E. <i>Envisioning Information</i>. Cheshire, CT: Graphics Press. 1990. There are several copies in the Lab; it is on reserve in Rotch. This book will be useful throughout the semester and you may want to have a copy of it.</p> <p>On color: Jacobsen and Bender. "Color as a determined communication." (PDF - 1.07 MB)</p> <p>Some quick readings on gestalt perception: David Chandler's page on Gestalt principles and this one by Carlo Pedroza.</p> <p><i>Readings on Social Networks</i></p>

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		<p>Granovetter. "The Strength of Weak Ties." (PDF - 2.11 MB)</p> <p>Feld, Scott. "The Focused Organization of Social Ties." (PDF - 1.96 MB)</p> <p>Adamic and Adar. How to search a social network (skim).</p> <p>Ravid and Rafaeli. Asynchronous discussion groups as Small World and Scale Free Networks (skim).</p>
3	No Class	
4	Basic Design Elements: Using Color, Form and Line	<p><i>Readings</i></p> <p>Small, David. "Navigating large bodies of text." <i>IBM Systems Journal</i> 35, no. 3 & 4 (1996). (PDF - 2.94 MB)</p> <p>Donath, Judith. A semantic approach to visualizing conversations. 2002.</p> <p>Goodwin, Charles. "Action and embodiment within situated human interaction." <i>Journal of Pragmatics</i> 32: 1489-522 OR Goodwin and Heritage. "Conversation Analysis." <i>Annual Review of Anthropology</i> 19: 283-307. (PDF 1 - 2.23 MB) (PDF 2 - 2.77 MB)</p>
5	The Social Structure of Conversations	<p><i>Readings</i></p> <p>Visualizations of History.</p> <p>Lifelines University of Maryland (Plaisant).</p> <p>Wiki history IBM (Wattenberg and Viegas).</p> <p>Artifacts of the Presence Era SMG (Donath, Viegas, Perry and Howe).</p> <p>Map Life Path.</p>
6	Time, Narrative and History	<p><i>Readings</i></p>

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		<p>Donath, Judith. A semantic approach to visualizing online conversation.</p> <p>Whittaker, Terveen, Hill, and Cherny. The dynamics of mass interaction. (PDF)</p> <p>Boyd, Danah, Hyun-Yeul Lee, Daniel Ramage, and Judith Donath. Developing Legible Visualizations for Online Social Spaces. (PDF)</p> <p>Smith, Marc. Netscan: the interface and a paper (with Andrew Fiore).</p> <p>Wattenberg, and Millen. Conversation thumbnails for large-scale discussions.</p> <p>Sack, Warren. Conversation Map and a paper about it.</p>
7	Inhabited Visualizations	<p><i>Readings</i></p> <p>Donath, Judith. Visualizing Email. (PDF)</p> <p>Duchenaud, & Bellotti. Email as Habitat.</p> <p>Remail project at IBM</p>
8	Visualizing Email	<p><i>Required Readings</i></p> <p>Brilliant, Richard. Chapter 1 in <i>Portraiture</i>. (Handout).</p> <p>Id/Entity: Portraits in the 21st Century - also DVD.</p> <p><i>Supplementary Readings</i></p> <p>From Paradise Now exhibit catalog, works by Nancy Burson, Kevin Clarke, Larry Miller, Steve Miller, and G Schneider.</p> <p>Kevin Clarke's portraits (e.g Friedrich von Schiller, John Cage, from the Blood of Poets).</p> <p>Quinn, Marc. Sir John Sulston: A Genomic Portrait .</p>

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		<p>Felix Gonzalex-Torres</p> <p>Gary Schneider</p> <p>Campbell, Jim. Portrait of my Mother, Portrait of my Father.</p> <p>Diego Goldberg family portraits. The Brown Sisters.</p> <p>Miscellaneous stuff at New Portrait.</p> <p>Grocery lists</p>
9	Data Portraits	
10	Final Project Proposal Presentations	<p><i>Readings</i></p> <p>Azar, Beth. What is in a face?</p> <p>Ecological Face Displays</p> <p>Donath, Judith. Mediated Faces (draft). (PDF)</p> <p>Walker, Sproull, and Subramani. Using a human face in an interface (local copy). (PDF)</p>
11	Visualized Faces	<p><i>Readings</i></p> <p>Milgram, Stanley. <i>Psychological Maps of Paris.</i></p> <p>Johnson and Lakoff. <i>Metaphors We Live By.</i> (selections).</p> <p>Lynch, Kevin. Chapter 1 in <i>The Image of the City.</i></p>
12	Spaces, Metaphors and Maps	<p><i>Readings on Augmenting Public Space</i></p> <p>Rozier, Karahalios, and Donath. "Here and There: An Augmented Reality System of Linked Audio." 2001. (PDF)</p> <p>Reckimoto, J., Y. Ayatsuka, and K. Hayashi. "Augmentable Reality: situated communication through physical and digital spaces." <i>ISWC'98.</i> 1998. (PDF)</p>

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		<p>Tejp</p> <p><i>Readings on Ambient Displays</i></p> <p>Wisneski, Craig, Hiroshi Ishii, Andrew Dahley, Matt Gorbet, Scott Brave, Brygg Ullmer, and Paul Yarin. "Ambient Displays: Turning Architectural Space into an Interface between People and Digital Information." (PDF)</p> <p>Redström, Johan, Tobias Skog, and Lars Hallnäs. "Informative Art: Using Amplified Artworks as Information Displays." (PDF - 3.38 MB)</p>
13	Visualization as Architecture	
14	Final Project	

Social Visualization

Viégas, Fernanda, Ethan Perry, Ethan Howe, and Judith Donath. "Artifacts of the Presence Era: Using Information Visualization to Create an Evocative Souvenir." To be presented at InfoVis 2004, in Austin, TX. ([PDF](#))

Perry, Ethan, and Judith Donath. "Anthropomorphic Visualization: A New Approach For Depicting Participants in Online Spaces." Short paper, ACM Computer-Human Interaction 2004, Vienna, Austria. ([PDF](#))

Viégas, Fernanda, Danah Boyd, David H. Nguyen, Jeffrey Potter, and Judith Donath. "Digital Artifacts for Remembering and Storytelling: PostHistory and Social Network Fragments." HICSS 2004 (conference paper). ([PDF](#))

Donath, Judith. "[A Semantic Approach to Visualizing Online Conversations.](#)" *Communications of the ACM* 45, no. 4 (April 2002).

Borovoy, R., F. Martin, S. Vemuri, M. Resnick, B. Silverman, and C. Hancock. "Meme tags and community mirrors: Moving from conferences to collaboration." In *Proceedings of CSCW '98*. Seattle, WA: Nov. 1998, pp. 14-19.

Donath, J. "[Visual Who.](#)" In *Proceedings of ACM Multimedia '95*. San Francisco, CA: Nov. 5-9, 1995.

Donath, Judith, Karrie Karahalios, and Fernanda Viegas. "Visiphone." *ICAD 2000*. ([PDF](#))

Susani, Marco. [Mapping conversation](#).

Minar, Nelson, and Judith Donath. "[Visualizing the crowds at a web site](#)." *CHI 1999* (short paper).

Xiong, Rebecca, and Judith Donath. "PeopleGarden: Creating data portraits for users." *UIST 1999*. ([PDF](#))

Kerr, Bernard. [Thread Arcs](#).

Smith, Marc. "[Netscan](#): measuring and mapping the social structure of Usenet." In *Communities in Cyberspace*. London: Routledge (in press), 1998.

Sack, Warren. [Conversation Map](#).

Ben Fry - [Activity in the Media Lab Shop](#).

[Id/Entity](#).

[They Rule \(Josh On\)](#).

[September 11 Terror Network](#) (Valdis Krebs).

[Mark Lombardi's works](#).

[Jason Salavon's works](#) (especially flayed figure (male), late night triptych).

Komar and Melamid [Most Wanted Paintings](#).

[Moodstats](#).

Related Techniques and Examples

[Lumeta Web Map](#) (Bill Cheswick).

[Atlas of Cyberspace](#)

[Maps of the World Wide Web](#)

[TextArc](#) (Brad Paley)

[Visual Thesaurus](#) (Plumb Design).

[Valence](#) & [Anemone](#) (Ben Fry).

[Hyperbolic Browser](#) (InXight).

[Spacenet](#) (Jared Schiffman).

[Tamara Munzner](#).

[SequoiaView](#) (Jarke [Jack] Van Wijk).

[StarTree Hyperbolic Browser](#) (Ramana Rao, Inxight).

Ahlberg, C., and B. Shneiderman. "[Visual information seeking: Tight coupling of dynamic query filters with starfield displays.](#)" In *Human Factors in Computing Systems CHI '94 Conference Proceedings*. 1994, pp. 313-317.

Bederson, B. B., J. D. Hollan, K. Perlin, J. Meyer, D. Bacon, and G. Furnas. "[Pad++: A zoomable graphical sketchpad for exploring alternate interface physics.](#)" *Journal of Visual Languages and Computing* 7, no. 1 (March 1996): 3-31.

Bier, E. A., M. C. Stone, K. Pier, W. Buxton, and T. DeRose. "[Toolglass and magic lenses: The see-through interface.](#)" In *Proceedings of SIGGRAPH 93*. Anaheim, CA: August 1-6, 1993, pp. 73-80.

Brave, Scott, and Andrew Dahley. "[InTouch: a medium for haptic interpersonal communication.](#)" *Extended Abstracts of CHI'97: Conference on Human Factors in Computing Systems*. ACM Press, 1997, pp. 363-364.

Card, Stuart K., George Robertson, and William York. "[The WebBook and the Web Forager: An Information Workspace for the World-Wide Web.](#)" In *Proceedings of ACM Conference on Human Factors in Computing Systems (CHI'96)*. 1996, pp. 111-117.

Dourish, P. "[Culture and Control in a Media Space.](#)" In *Proc. Third European Conference on Computer-Supported Cooperative Work ECSCW'93 (Milan, Italy)*. Dordrecht: Kluwer, 1993.

Eick, Stephen G., and Graham J. Wills. "Navigating Large Networks with Hierarchies." In *Visualization '93 Conference Proceedings*. San Jose, California: October 1993, pp. 204-210, 25-29.

Feiner, S., and C. Beshers. "[World within world: Metaphors for exploring n-dimensional virtual worlds.](#)" In *Proceedings of UIST '90*. 1990, pp. 76-83.

Feiner, S., B. MacIntyre, M. Haupt, and E. Solomon. "[Windows on the world: 2D windows for 3D augmented reality.](#)" In *Proc. UIST '93 (ACM Symp. on User Interface Software and Technology)*. Atlanta, GA: November 3-5, 1993, pp. 145-155.

Furnas, George, and Benjamin Bederson. "[Space-scale diagrams: understanding multiscale interfaces.](#)" In *CHI '95. Conference proceedings on Human factors in computing systems.* pp. 234-241.

Hill, W. C., J. D. Hollan, D. Wroblewski, and T. McCandless. "[Edit wear and read wear.](#)" In *Proceedings of CHI '92.* 1992, pp. 3-9.

Honkela, Timo, Samuel Kaski, Krista Lagus, and Teuvo Kohonen. "[WEBSOM-Self-Organizing Maps of Document Collections.](#)" In *Proceedings of WSOM'97, Workshop on Self-Organizing Maps.* Helsinki University of Technology, Finland: June 4-6, 1997, pp. 310-315. [The [WEBSOM](#) site].

Ishii, H., and B. Ullmer. "[Tangible Bits: Towards Seamless Interfaces between People, Bits, and Atoms.](#)" In *Proceedings of CHI'97, ACM.* March 1997, pp. 234-241.

Kautz, Henry, Bart Selman, and Mehul Shah. "The hidden web." *AI Magazine* 18, no. 2 (Summer 1997): 27-36. [The [ReferralWeb](#) site]. ([PDF](#))

Munzner, T., and P. Burchard. "[Visualizing the structure of the world wide web in 3D hyperbolic space.](#)" In *Proceedings of the VRML '95 Symposium.* San Diego, CA: December 13-16, 1995, pp. 33-38.

Rennison, E. "[Galaxy of news: An approach to visualizing and understanding expansive news landscapes.](#)" In *Proceedings of UIST '94.* 1994, pp. 3-12.

Robertson, G. G., S. K. Card, and J. D. Mackinlay. "[Information visualization using 3D interactive animation.](#)" In *Communications of the ACM* 36, no.4: 57-71.

Small, David. "[Navigating large bodies of text.](#)" In *IBM Systems Journal* 35 no. 3&4 (1996).

Perception, Cognition and Design

Albers, Joseph. "The Interaction of Color (revised ed.)." New Haven: Yale University Press, 1975.

Arnheim, Rudolph. "Art and Visual Perception." Rev. and exp. ed. Berkeley: The University of California Press, 1974.

Bertin, Jacques. *The Semiology of Graphics.*

Brewster, S. A., P. C. Wright, and A.D.N. Edwards. "[An Evaluation of Earcons for Use in Auditory Human-Computer Interfaces.](#)" In *Proceedings of ACM CHI '93.* April 1993, pp. 222-227.

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Donath, Judith. "Mediated Faces." *Cognitive Technology 2001* (invited paper). ([PDF](#))

Eick, Stephen G. "Engineering perceptually effective visualizations for abstract data".

Nielson, Gregory M., Heinrich Mueller, and Hans Hagen, eds. "Scientific Visualization Overviews, Methodologies and Techniques." IEEE Computer Science Press, February 1997, pp. 191-210.

Social Analysis

Milgram, Stanley. "[Psychological maps of Paris](#)." In *The Individual in a Social World Reading*. MA: Addison-Wesley, 1977.

Ibid. [The familiar stranger](#): an aspect of urban anonymity.

Wirth, Lewis. "[Urbanism as a way of life](#)." *American Journal of Sociology*. Reprinted and abridged in editions by LeGates, R. and Stout, F., eds., *The City Reader*, 1938.

Whyte, William H. "[City: Rediscovering the Center](#)." New York: Doubleday, 1988.

Golder, Scott, and Judith Donath. "[Social Roles in Electronic Communities](#)." Extended abstract of a paper to be presented at AoIR, 2004.