

Collaboration in Information Visualization

Hauptseminar "Information Visualization - Wintersemester 2008/2009"

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Datum

Structure

- ☰ Introduction
- ☰ Differences in Collaboration
 - ☰ Distributed vs. Co-located
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 - ☰ Collaborative tree comparison software
 - ☰ DTLens
 - ☰ ManyEyes
 - ☰ sense.us

Introduction



Images:
G. Mark, K. Carpenter, and A. Kobsa 2003
P. Isenberg and S. Carpendale 2007
P. Isenberg, A. Tang, and S. Carpendale 2008

Time-Place Matrix

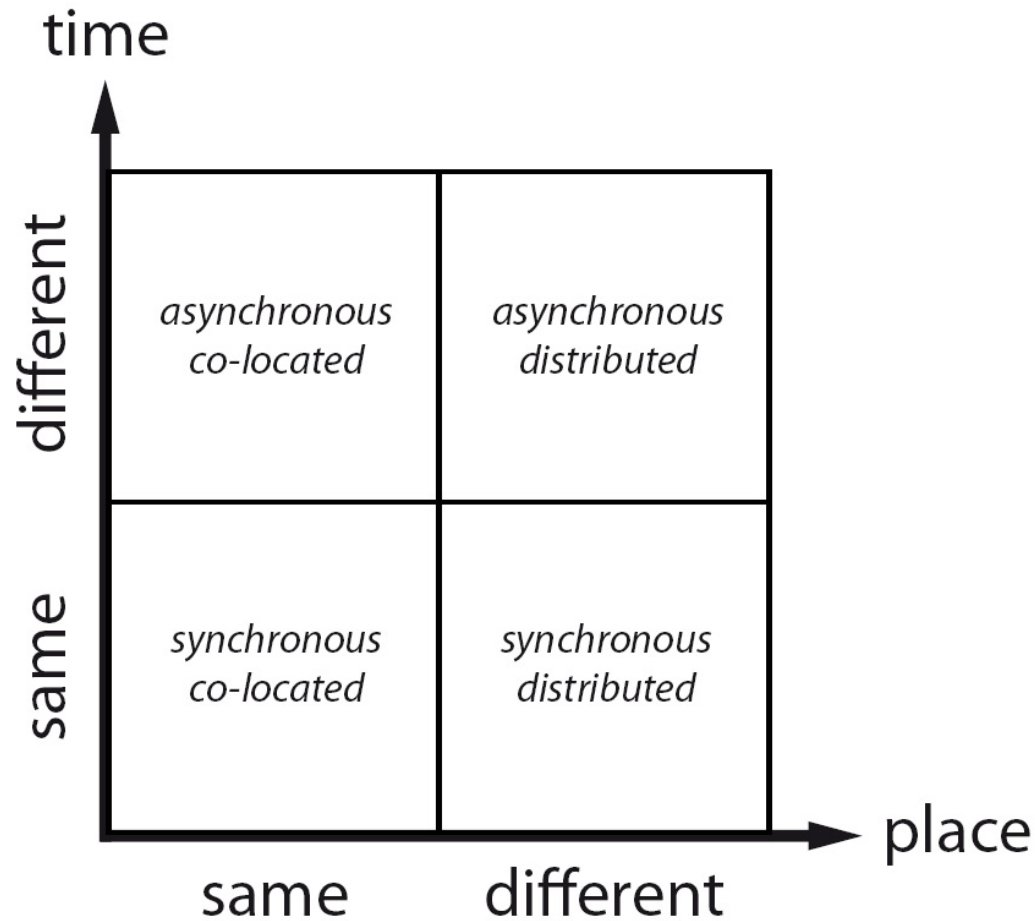


Figure: K. Brodlie, D. Duce, J. Gallop, J. Walton, and J. Wood 2004

More differentiations

- ≡ Transparency of an Information Visualization System
- ≡ Used Data for a Visualization
- ≡ Goals of the Visualization
- ≡ Skills of the Users
- ≡ Size of the group members

Design Guidelines – Co-located

☰ Hardware and System Setup

- ☰ Display size and available screen
- ☰ Means of input
- ☰ Resolution
- ☰ Processing power

☰ Collaborative Information Visualization

- ☰ Freely move interface items / placement of the control widgets
- ☰ Individual and group representations
- ☰ Shared and personal workspace
- ☰ Data analysis history

Design Guidelines – Distributed

☰ Hardware and System Setup

- ☰ Heterogeneous networks (bandwidth, latency, reliability)
- ☰ Heterogeneous displays (size, aspect ratio, resolution, response time, bit depth)

☰ Collaborative Information Visualization

- ☰ Data analysis history
- ☰ Common ground
- ☰ Transparency of the System (web-applications)

Collaborative tree comparison software

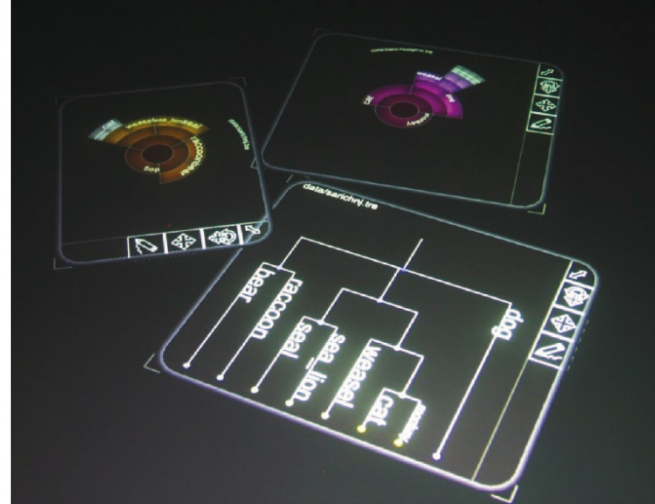
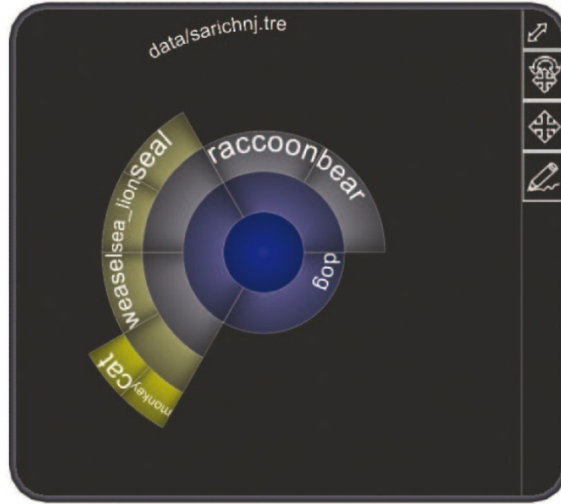


Image: P. Isenberg and S. Carpendale 2007

DTLens

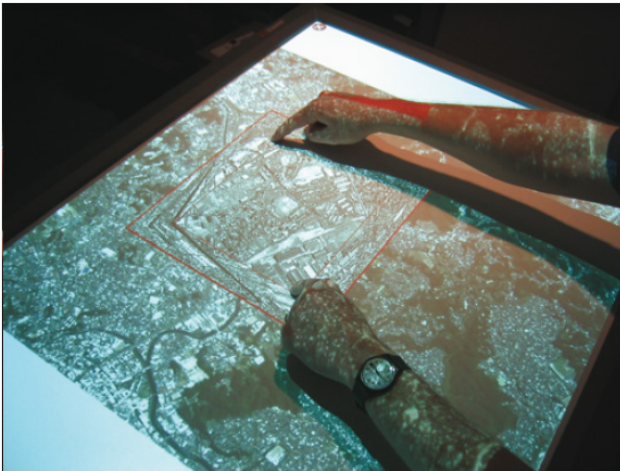


Image: C. Forlines and C. Shen 2005

ManyEyes

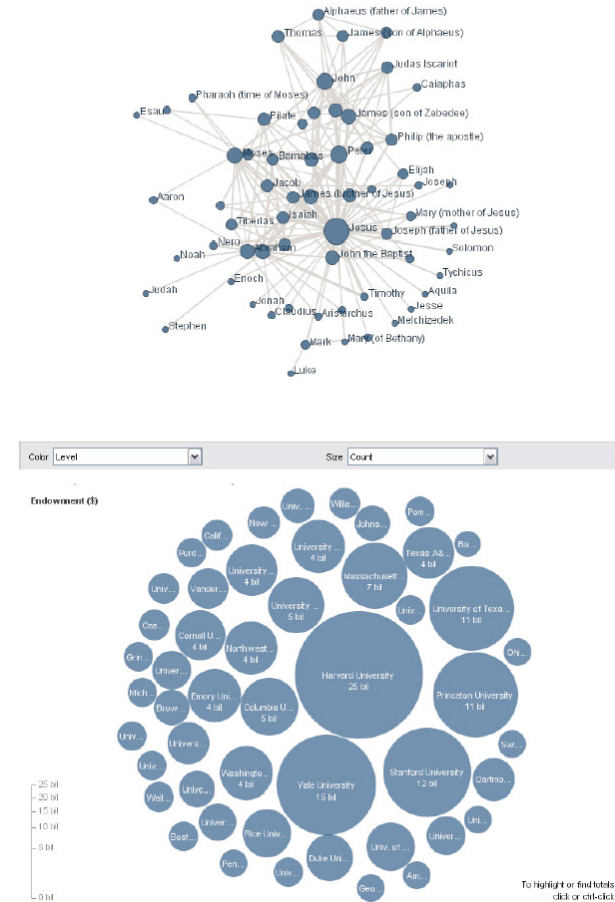
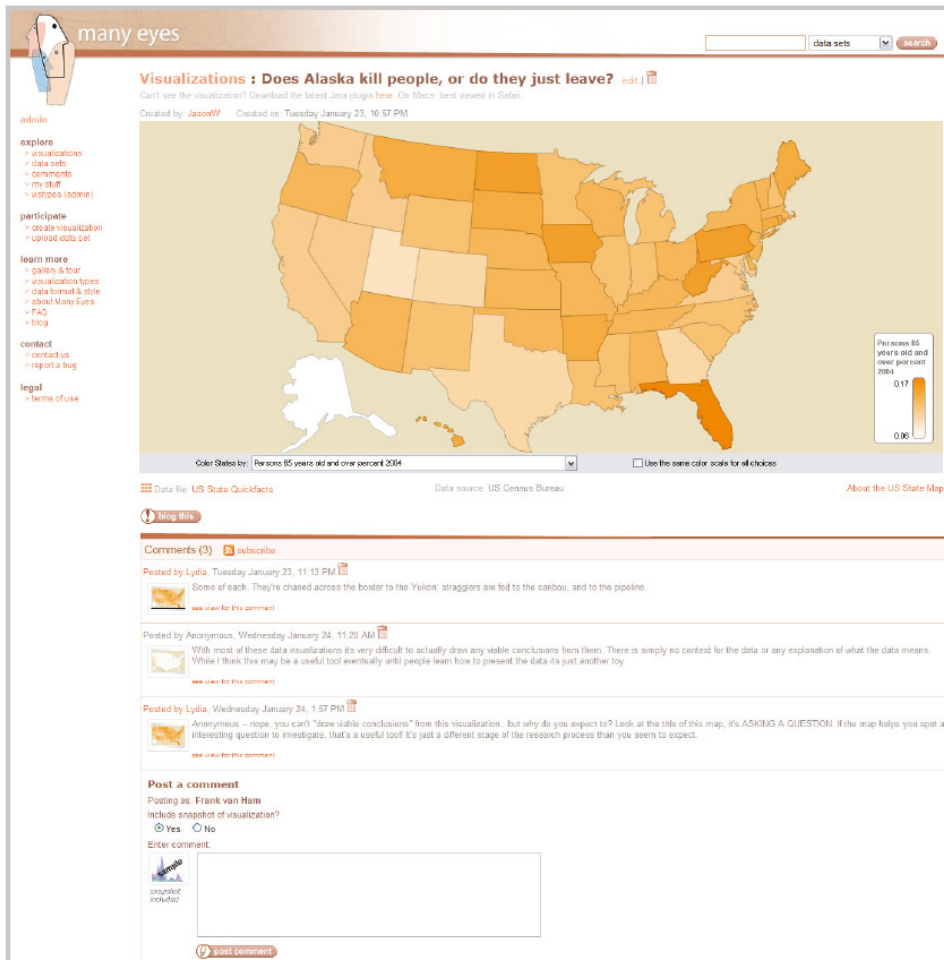


Image: M. Wattenberg, J. Kriss, and M. McKeon 2007

sense.us > jobs - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://sense.us/jobs#scale=1&gender=All&query=military&comment=154

(f)

sense.us / jobs hello, Michael [profile](#) [comments](#) [trails](#) [help](#) [logout](#)

Reported Occupations of U.S. Labor Force, 1850-2000 (source: <http://ipums.org>)

>> military ● all ○ men ○ women % of Work Force ▾

(a)

(b)

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(e)

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here are labels where I would have expected big jumps.

by [Martin Sharp](#) on Fri Jul 21, 2006 10:16 AM

well, there was also the cold war right after ww2, which might be part of the reason why there's such a huge jump after the 40s. It is also interesting that there is such a drop between the 70s and the 80s.

by [Julia Hernandez](#) on Fri Jul 21, 2006 11:01 AM

I guess a lot of it has turned to robots, and the industrial complex, as martin suggested, though it would be interesting to see the comparison of the fall in military personal next to the rise in DOD funding for robots and industry.

by [Jesse O'Brien](#) on Fri Jul 21, 2006 11:51 AM

I think the jumps have more to do with the economy at large rather than any particular military conflict. Lots of money in conflict has already been spent before the conflict starts.

by [Fred Klein](#) on Wed Aug 2, 2006 10:24 AM

reply

is this military info right?

(d)

I would agree with that... also see this: [link](#)

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(c)

Image: J. Heer, F. Viégas, and M.Wattenberg 2007

“Great depression ‘killed’ a lot of brokers”

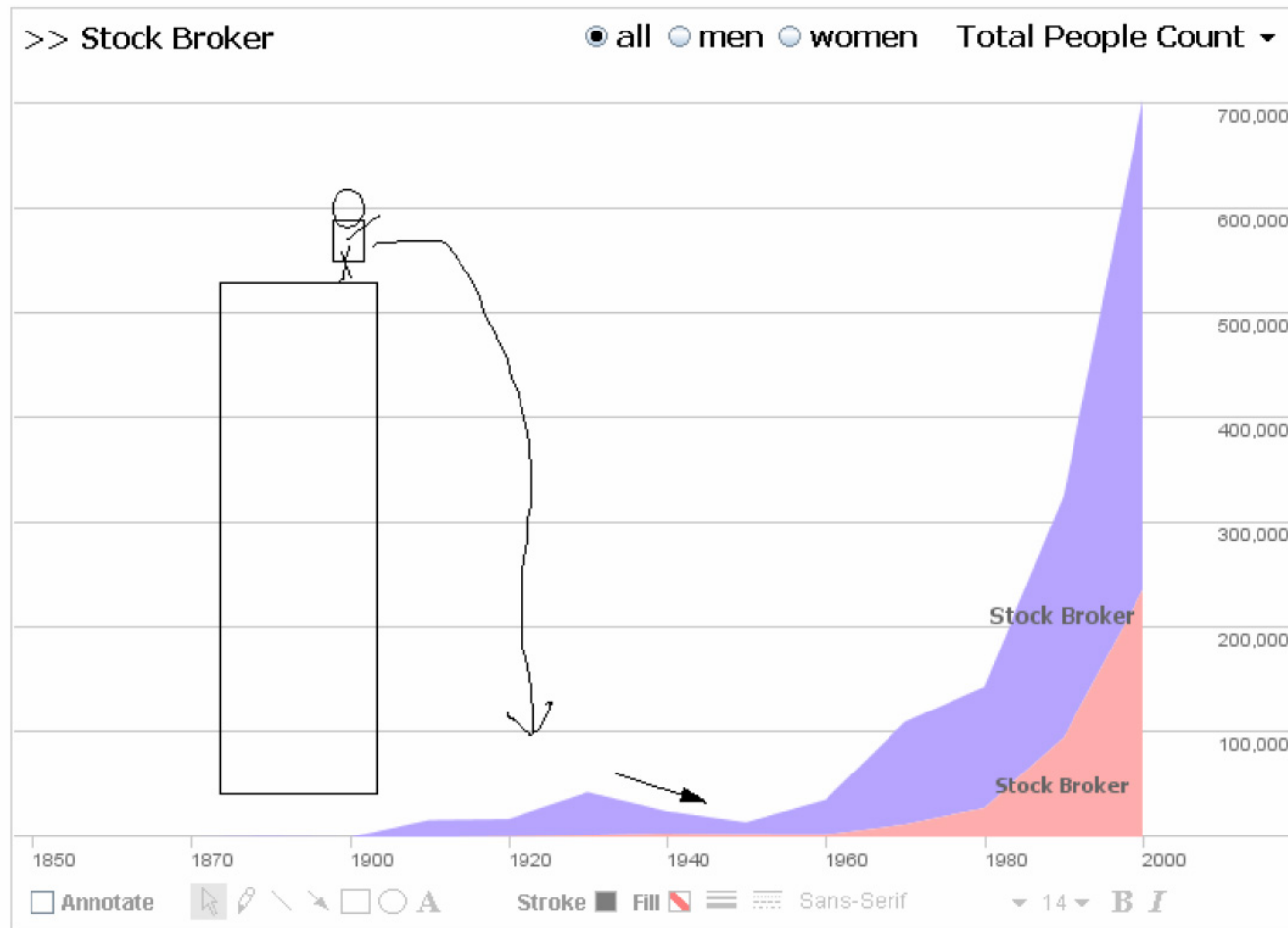


Image: J. Heer, F. Viégas, and M. Wattenberg 2007