CSCW: Colocated-synchronous applications

Melsa Smith

Multiplayer Split Screen

Google Images 1

Surface

Video

Single Display Groupware

- support groups of users collaborating around a single display
- support from multiple input
- all information is by default public

Private Information

- awareness overload [Gutwin, CHI 1998]
- action interference
- competitive gaming
- sensitive information
- social stress

Single Display Groupware - Discussion

Have you experienced social stress when using a collaborative tool?

PDAs

- emulate keyboard and mouse input of PC using PDA [Myers, CSCW 1998]
- shared whiteboard application [Myers, CSCW 1998], [Rekimoto, CHI 1998]
- share private notes, publicly [Greenberg, PT 1999]

PDAs

Advantages:

- can share existing personal artifacts

Disadvantages:

- personal devices distract and draw attention away from main display
- no context for missing information
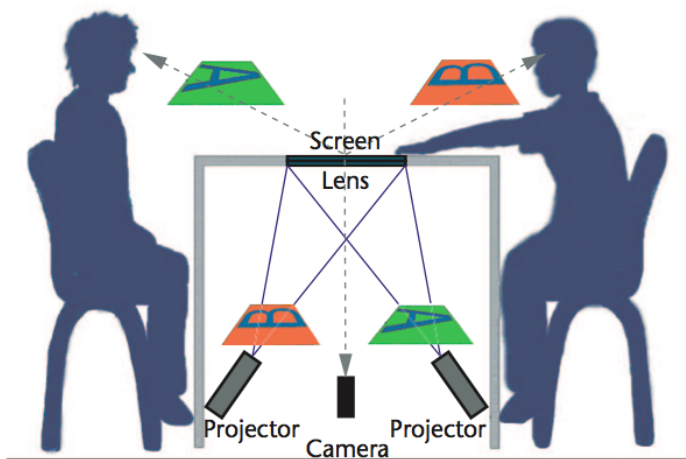
Augmented Views

- shows one view per user using glasses [Shoemaker, CHI 2001]
- multiple projected views are isolated to the viewpoint of a user [Kakehi, IEEE 2004]
- overlay for tabletop, displays information in one direction [Mollers, ITS 2011]
- spherical displays [Bolton, CSCW 2011]
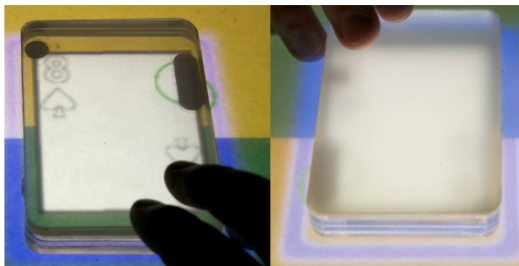
Augmented Views - Glasses

Frame # 1   2   3   4   ...

Time
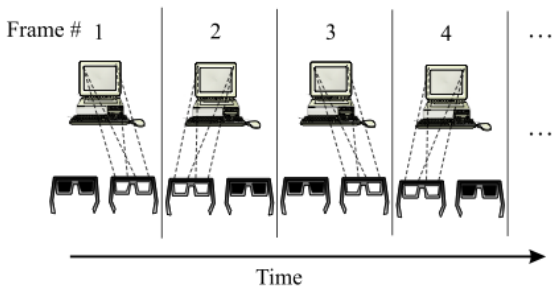
[Shoemaker, CHI 2001]

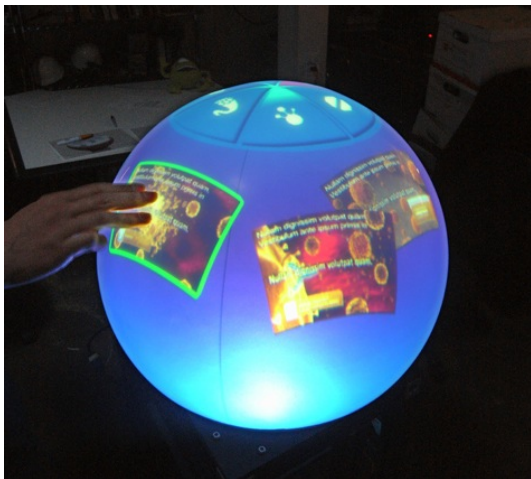# Augmented Views - Projected views

[Kakehi, IEEE 2004]

Augmented Views - Overlay

[Mollers, ITS 2011]

Augmented Views - Spherical

Google Images 2

Augmented Views - Discussion

Which of the augmented view systems do you prefer, and why?

Custom Solutions

Authentication [Kim, CHI 2010]

- less emphasis on PDAs, no evident transition to mobile devices
- augmentations rely less on devices mounted on the user
- private views are used for sensitive information as well as task modularization

- Have you experienced social stress when using a collaborative tool?
- Which of the augmented view systems do you prefer, and why?

Thank You!

References I

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References III

[Mollers, ITS 2011] *TaPS widgets: interacting with tangible private spaces.* http://dl.acm.org/citation.cfm?id=2076369