CSCW: Colocated-synchronous applications

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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
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

[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

[Myers, CSCW 1998] Collaboration using multiple PDAs connected to a PC. http://dl.acm.org/citation.cfm?id=289503


[Kim, CHI 2010] Multi-touch authentication on tabletops. dl.acm.org/citation.cfm?id=1753489