UbiTable (MERL)

Shen, Everitt, Ryall. “UbiTable: Impromptu Face-to-Face Collaboration on Horizontal Interactive Surfaces” UbiComp ‘03
UbiTable (MERL)

- Horizontal table for collaboration during face-to-face meetings
- Uses gradient of private, personal, and public spaces
- Previously, private == invisible only
- Uses “social protocols” as communication instead of traditional gestures
- Orientation designates space/attention
UbiTable (MERL)

- Use your laptop as private and drag things into personal
- Use table for further interactions
- Rotating, moving, markup, editing, digital ink for annotations
- Color == ownership
- Bit crap. Should also use name
UbiTable (MERL)
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• Interaction might be awkward
• Mixed metaphors with laptops
• Laptops != Weiser
• Where should data really live?
• Spare display == Weiser
MediaCup

MediaCup

• 2D Accelerometer
• Cup is stationary
• Drinking from cup
• Fiddling with cup
• Temperature Sensor
• Hot (fresh) and cold
MediaCup

• Cues transmitted via IR
• Location tracked externally
• Data -> “Colleague Awareness”
  • Mapped to ambient background noise (remote presence)
• Part of larger context-awareness
• Needs revamping with different hardware
MediaCup

- Truely using everyday objects
- MediaCup == Weiser
- Smart sensor usage: coffee cups give lots of information for “free” (better if hot beverages are used)
- Could have better networking, geo-location unclear
- No displays for feedback, but cheap
FindIT Flashlight

FindIT Flashlight

• Receivers
  • Small board with PIC, photodiode, response device (LED/buzzer), battery

• Interrogators
  • Send AM search codes via defused laser
FindIT Flashlight

• Cheap, extremely low power, super cool!

• FindIT == Weiser
Face-Responsive Interfaces

• Darrell, Tollmar, Bentley, Checka. Face-responsive interfaces: from direct manipulation to perceptive presence. Ubicomp ‘02
Face-Responsive Interfaces

- Using face recognition techniques, detect
  - Fine-grained Gaze (move pointer on screen)
  - Coarsely-grained Gaze (make the wall react)
- Assumes this is a good thing
- People gaze around, don’t want cursor jumping unintentionally
Face-Responsive Interfaces

- Did experiments to test algorithms accuracy against other systems
- Tested for small and large rotations on standard interface
- Error is same or better than other systems
- Not 0
Face-Responsive Interfaces

• Second experiment: cursor tracking on wall

• “Successful”. Said to be equivalent to novice use of trackball. Users didn’t like linear mapping.
Face-Responsive Interfaces

• Third experiment. Agent dialog
Face-Responsive Interfaces

• Tests for agent interaction:
  • TTT: Talk-to-talk
  • LTT: Look-to-talk
  • PTT: Push-to-talk
Face-Responsive Interfaces

• Roughly split between preference for LTT and TTT, but users often looked anyway (19/30 questions).
• TTT seemed more accurate (actual algo)
• Follows observation of people looking at what they talk to
Fin