Notification Systems

• Notification systems are interfaces that
  – provide reaction to and comprehension of valued information in an efficient and effective manner without introducing unwanted interruption to a primary task
  – are used in any divided-attention, multitasking situation

• Notification systems are not
  – used in extended periods of concentration in an orderly, predictable task-action flow
  – exclusively desktop interfaces

Overall Idea

• Attention—utility theme:
  – The success of a notification system hinges on accurately supporting attention allocation between tasks, while simultaneously enabling utility through access to additional information.
Example platforms

- multiple windows
- multiple displays
- vehicle navigation systems

- wearable displays
- PDAs
- large screen displays

- Notification Systems
- RWIs (bottologues)

- ePoster
- BonziBUDDY
- Info art
- Ambient Fixtures
- Phidgets
- weatherbug
- ESPN’s BottomLine
- klipfolio
- Sideshow
- Scope
Large screen displays

• Many types
  – You have seen them around
    • Classrooms
    • Stadiums (sporting arenas)
    • Times Square

Large screen displays

• Many uses
  – Meetings
  – Showing information
  – Others?
• Unique opportunities
  – Set unused for large portions of the time
Specific Types

- Liveboard
- SMART
- Projection
- Large plasma screens (TVs)
- Many others...

Liveboard

- Xerox- early 90’s now defunct
- Pen-based input
- 52” viewable area
- Poor visibility from angles
SMART Board

- Gained ground in late 90’s, now one of largest producers
- Touch screen input
- 67” viewable area
- Improved visibility from angles
  - But still dark from extreme angles

Projection Systems

- Light projection on various surfaces
  - Walls, boards, ceilings, etc.
- Usually no interaction
- Varying sizes
- Cheaper to set up
- View from any angle
Plasma displays

- Mostly large arenas
  - Sport venues
  - Made of multiple, separate screens
- Non-interactive for the most part
- Expensive
- Large screen TVs
- Can view from any angle

Other Hardware

- LED displays
  - Reliable
  - Largest available
  - No interaction
  - Poor visibility from angles
- Other media (non electronic)
  - Billboards
  - Signs
  - others
Software

- Meeting support/planning
  * Tivoli
  * Clearboard
  * MeetingBoard
  * Data wall

- CSCW & CSCL
  * Notification Collage
  * GAWK
  * Kimura

- Other applications
  * Military planning
  * Mars Lunar Rover
  * Others
Interaction

- Pen-based
- Touch screen
- Gestures (video capture)
- Others (voice, eye/head tracking)
  - Think "Minority Report"