The Aachen Media Space

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Media Computing Group
RWTH Aachen
http://www-media.cs.rwth-aachen.de/
The Media Computing Group

• New group within the CS department at RWTH Aachen, established Oct. 2003
  – Prof. Jan Borchers (head)
  – Rafael Ballagas, Eric Lee (Ph.D. students)
  – Several undergraduate research assistants
  – Growing to ~8 PhD students in the next few years
  – Also involved in Bonn IT Center (*b-it*)

• Mission: Exploring new ways to interact with ubiquitous media
Sample research topics

• Fluid interaction with time-based media
  – Interactive music conducting exhibits
  – Creating an interactive multimedia workspace
  – Audio services for ubicomp environments
• Physical interfaces for media interaction
  – The iStuff physical user interface prototyping toolkit
  – Device and metaphor design in interactive rooms
• User interface design patterns
  – New format to disseminate interaction design experience
  – Applied successfully to interactive exhibits (book)
  – Developing into a new research field in Human-Computer Interaction
Media Space

• 3 main functions:
  – **Testbed** for our research
  – **Everyday** meetings+presentations
  – **Showcase** for visitors

• Part of flexible floor concept for entire group
  – Media Space: displays, disappearing computers
  – Lab: student work areas
    • Fostering small group work activity
  – Office spaces: including electronic whiteboards
  – Completely reconfigurable (hopefully)
    • Mobile walls and furniture
Sample Project Videos

  - **WorldBeat** award-winning interactive music exhibit for the Ars Electronica Center in Linz (Austria)
  - **Personal Orchestra** public exhibit in the House Of Music Vienna to "Conduct the Vienna Philharmonic"

- At [http://iwork.stanford.edu/photos.shtml#iclub](http://iwork.stanford.edu/photos.shtml#iclub)
  - **iClub**: Students turning the Stanford Interactive Workspace into a dance club
Floor Architecture

By 4/2004:
110 m² here
+ 110qm elsewhere

By 2006: 400 m² here
Mobile & foldable desks and computer trolleys

Lab Architecture

Coffee corner

Lab (100 m²)

Small group cells for 4 with interactive wall display

Print&scan, hardware bench
Media Space Architecture

Media Space (75 m²)

Mobile wall displays

Sample use:
8 mobile displays for 360° video project

Personal chairs — with battery power?
Flexible floor design issues

- Raised floor, sub-floor satellite connection nodes & individual floor boxes
- Noise control
- Storage space
- Controllable daylight
- Remote control of all technology
Equipment

• Final state
  – 30–40 Power Macintosh G5 PCs, 2 Xserve Servers
  – 15 group displays
    • e.g., SMART 40" LCDs (or Totoku 9 MPix LCDs?)
  – 5–10 tablets
  – Videoconferencing, surround audio service
  – Gbit Ethernet, 802.11g wireless
  – Lots of cams, mikes, custom UI hardware
• ~500k€ total for lab startup
For more information contact:

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