

Blended Interaction

Research Questions – Breakout Groups

CHI 2013 in Paris



TECHNISCHE
UNIVERSITÄT
DRESDEN



INTERACTIVE
MEDIA LAB
DRESDEN

Themes and Issues

- **Physical vs. Digital Space**
- **Interaction Design**
- **Theory**
- **Technology**
- **Software, Frameworks, Standards**
- **Collaboration**
- **Applications**
- **Philosophy, Sociology, Ethics, Law**

Physical vs. Digital Space

- Important design question: How to decide which parts to realize in the real and the digital domain?
- How to explore the extra power the digital and technology brings to us?
- How can we benefit from the (sensory) richness of our real world?
- How seamless should the blending between physical and digital domain really be?
- How do we make visible to the users which things can be operated or interacted with?

Interaction Design

- How to design the interactions for a particular environment & tasks?
- How to develop and apply interaction models?
- Do we need to learn blended interaction? How can we support learning?
- How do we better address workflows, everyday activities, i.e. a focus on flow of interaction?
- How can we deal with the freedom, sketchy, imprecise, fluent way vs. the frequent need to often exact, reliable, predictable?
- How much human control should we build into future blended systems? Which things should be automated (we don't care, the system does it for us) and which things to explicitly done by the user?

Theory

- What can we learn from conceptual blending theory to develop a better understand of Post-WIMP HCI and to inform design?
- How to apply blended theory to actually designing and developing real systems?
- How can we promote applying theory to not just understanding systems but actually designing them?
- Which guidelines and directions can or should we produce? (e.g. PIBA-DIBA)

Technology

- Where to put displays, devices, projections?
- How do we develop technology allowing rich blended interaction?
- How to achieve sensor and technology fusion in blended spaces?
- How to sense devices and to support cross modal fusion?

Software, Frameworks, Standards

- How do we achieve interoperability, tool support, standards in a diversified technological world? We need tools!

Collaboration

- What happens if we move from individual to collective usage of interfaces?
- How can we design for cooperative, collaborative usage?
- What are challenges of remote collaboration?
- How can we support computer-mediated Human-to-Human Collaboration?
- How does it feel to partly inhabit real and virtual spaces?

Applications

- How can we better understand and analyze our physical, everyday, workflow activities to inform us for designing blends?
 - Information visualization
 - Control rooms (power plant)
 - Meeting spaces (like ICE)
 - Tourism, museums, heritage, digital story telling
 - Collaborative learning
 - Communication
- Typical question: killer app?
- Are there application domains which are particularly benefiting from blended spaces?

Philosophy, Sociology, Ethics

- Do people really want displays everywhere?
- Where does it all lead us?
- Which particular implications will blended spaces have on our social coexistence, on privacy, what are the ecological and ethical issues?
- Will the virtual take over and if so, will that be a problem for humans?
- Are there parts in the world which do not or should not benefit from Blended Interaction?

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- **Discuss issues, challenges, envision the future**

