Innovative UI Design in the Area of Tangible Media

Jörn Loviscach
www.j3L7h.de
What are tangible media?

Media with a tangible interface!

User Interfaces for Tangible Media

Tangible User Interfaces for Media
Playing with Buzzwords on an Image Scanner
Agenda

• Definition? Taxonomy?
• Hot topics, examples
• Vital issues to address
Original Definition

“TUIs will augment the real physical world by coupling digital information to everyday physical objects and environments.”

H. Ishii, B. Ullmer.
Tangible bits: towards seamless interfaces between people, bits, and atoms. CHI 1997
K. P. Fishkin.
A taxonomy for [design] and analysis of tangible interfaces. Pers Ubiquit Comput 2004
Hot Topics, Examples
Wii Remote: a Key Enabler

J.-P. Tiesel, J.L.
A mobile low-cost motion capture system based on accelerometers.
ISVC 2006

S. Heise, M. Hlatky, J.L.
SoundTorch: quick browsing in large audio collections.
125th AES Conv. 2008

S. Heise, J.L.
A versatile expressive percussion instrument with game technology.
IEEE ICME 2008

I.A. Suhardi, J.L.
How to steer characters in group games.
GDTW 2008
Multi-Touch

J.L.
Two-finger input with a standard touch panel.
ACM UIST 2007

Tangible Game Technology

J.L.
Playing with all senses: human-computer interface devices for games.
Advances in Computers, in print
Musical Instruments

C. v. Tycowicz, J.L.
A malleable drum.
SIGGRAPH 2008

S. Heise, J.L.
SpeakerDrum.
In preparation
Location Awareness

D. Black, K. Gohlke, J.L.
EarMarkIt: an audio-only game for mobile platforms.
Audio Mostly 2008

Robots, Kinetic Devices

Students’ project
“Animatronics.”
2007
Vital Issues to Address

... well, some of them, at least
Each task demands yet another gadget?
Each task demands yet another gadget?

Build multi-purpose TUIs?
More complexity through tangibility?
More complexity through tangibility?

TUIs for media!?  

Hide complexity: Combination with intelligent UIs!
Tons of demos, but no master plan

And how to test if these really work?
Thanks for your attention!

Any questions, suggestions, ideas, ...?

Jörn Loviscach
j3L7h.de