

Agile Methods and Visual Specification in Software Development

A chance to ensure Universal Access

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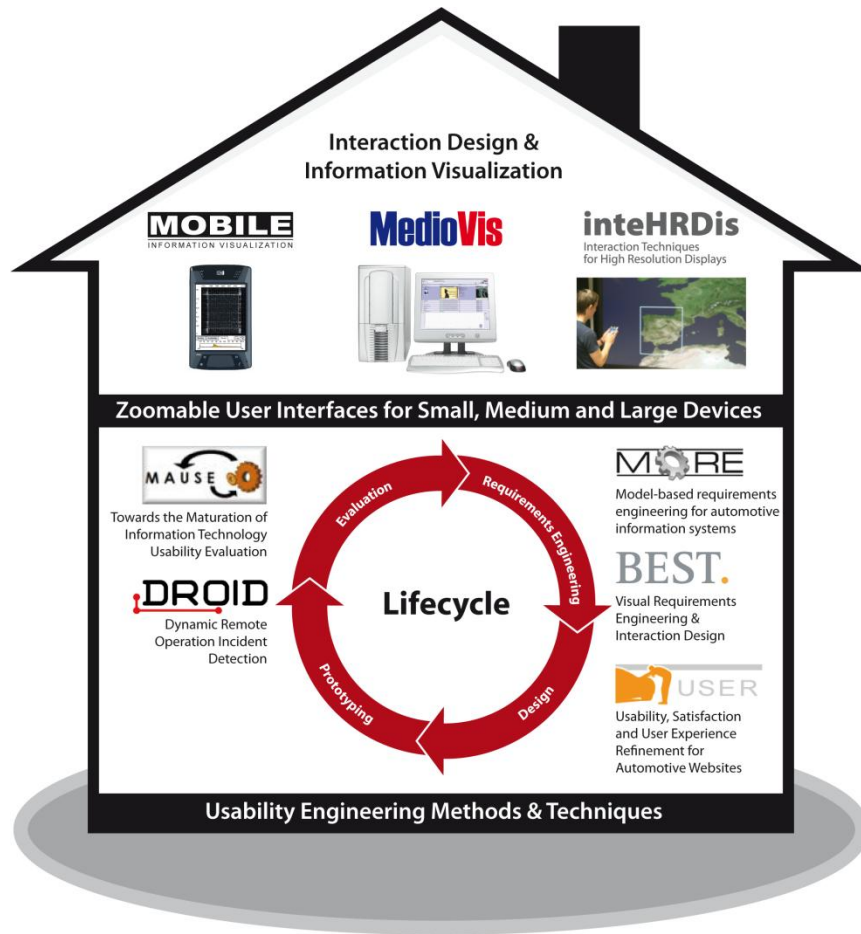
University of Konstanz, Germany

Medical University Graz, Austria

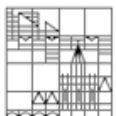
HCII 2007, Beijing



HCI University of Konstanz: Research Topics

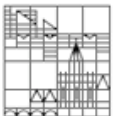


- The research focus is on the specification, design, implementation and evaluation of UIs for various interactive devices
- Digital Libraries, e-Commerce Websites, Visual Information Seeking System, etc.
- New interaction concepts:
Zoomable Object-Oriented Information Landscape.
- Agile Usability Methods
- Visual UI specification



Medical University Graz, Austria

- Dr. Andreas Holzinger
- Expert on user-centered design, (low cost) prototyping
- Famous tutorial also held at HCII 2007 (22 July),
- CV at page 14 of conference program



Universal Access, Agile Methods & Usability

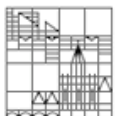
Universal Access

- UI Usability (e.g. user performance)
- UI acceptance (e.g. user experience)
- Avoid need for posteriori adaption

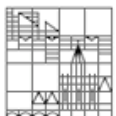
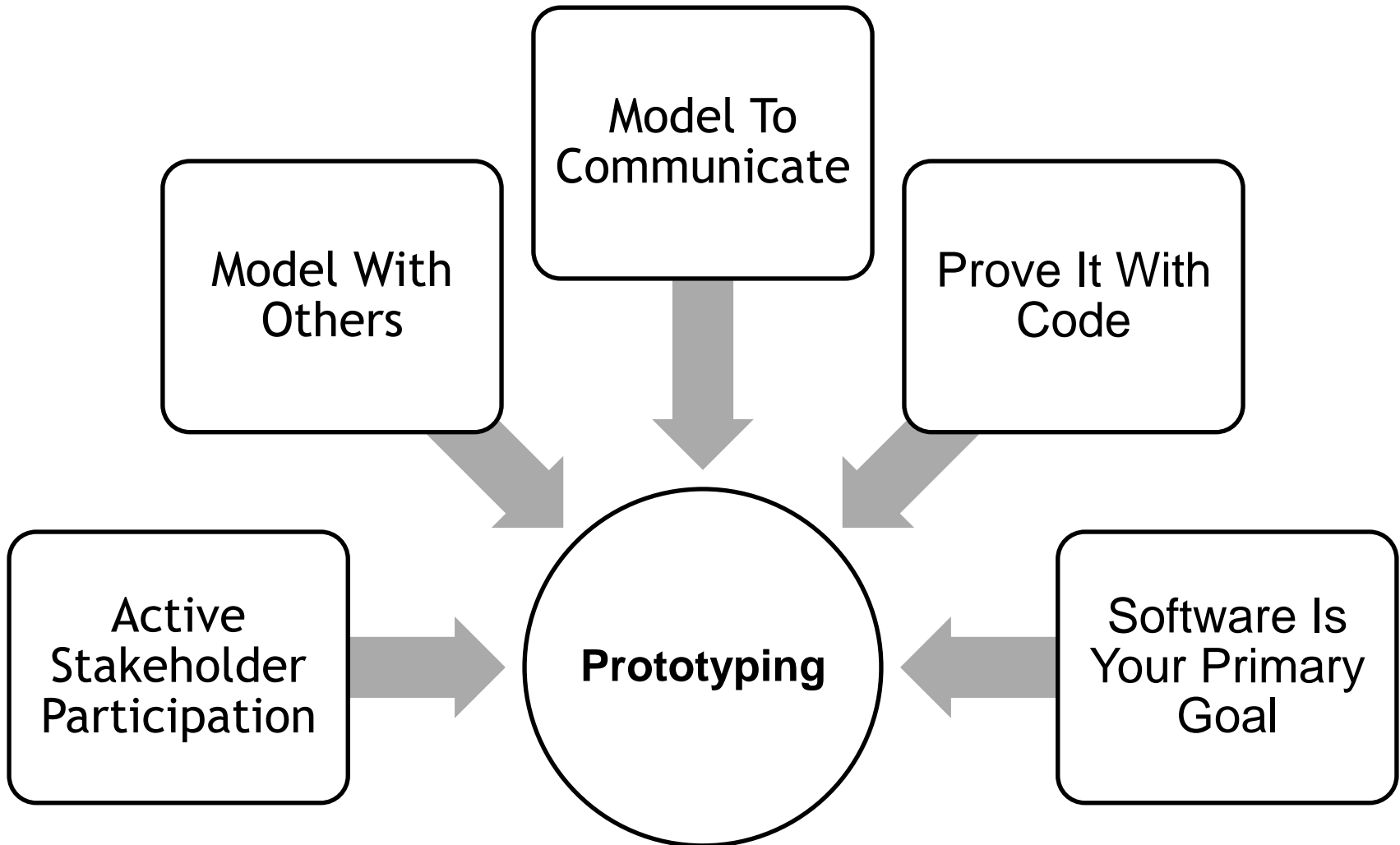
Usability

- Extensive usability up-front can be
- Evaluation has to be done asap
- UI specification needs to be unambiguous

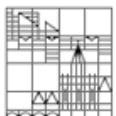
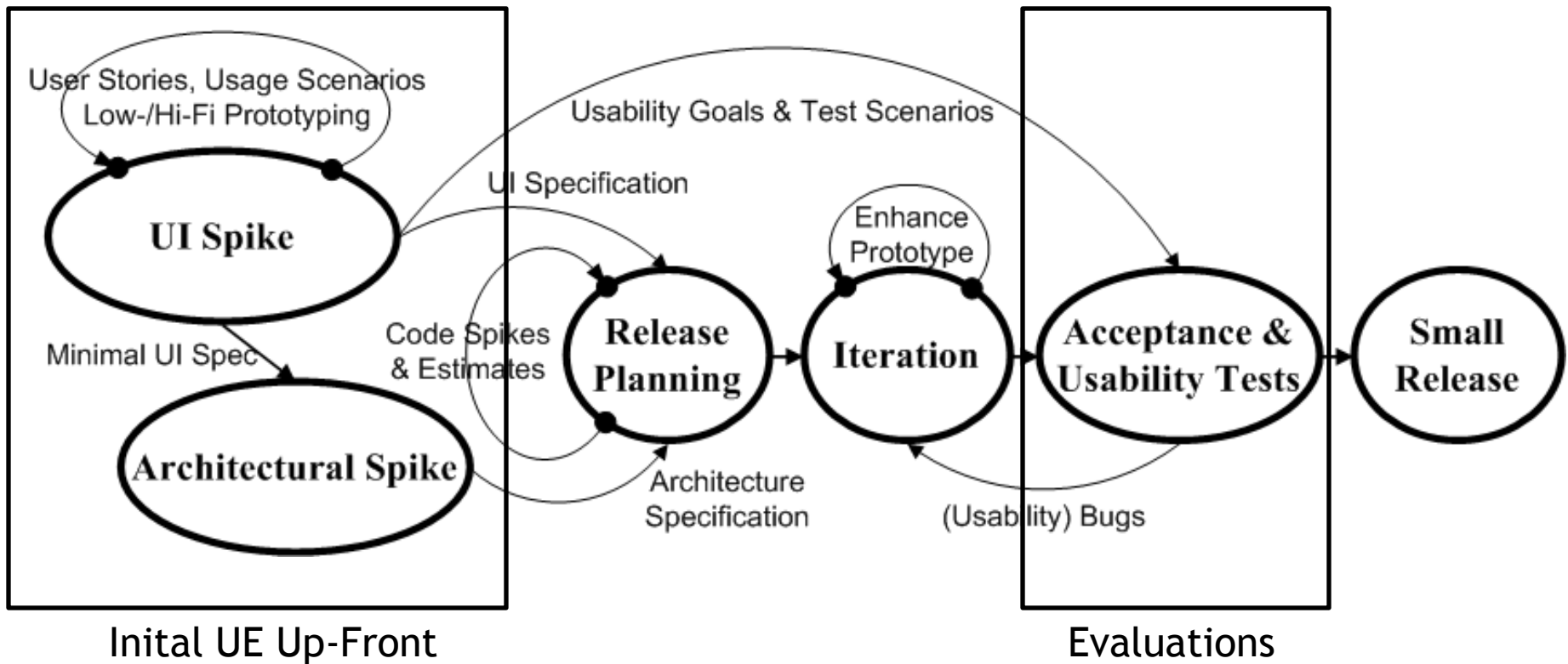
Agile Methods



Propell UI Design Process with Prototyping

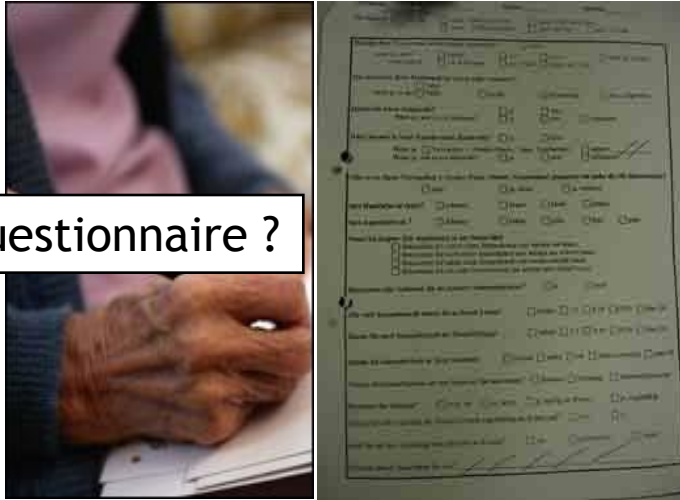


The XP lifecycle extended



MoCoMed-Graz project

Questionnaire ?



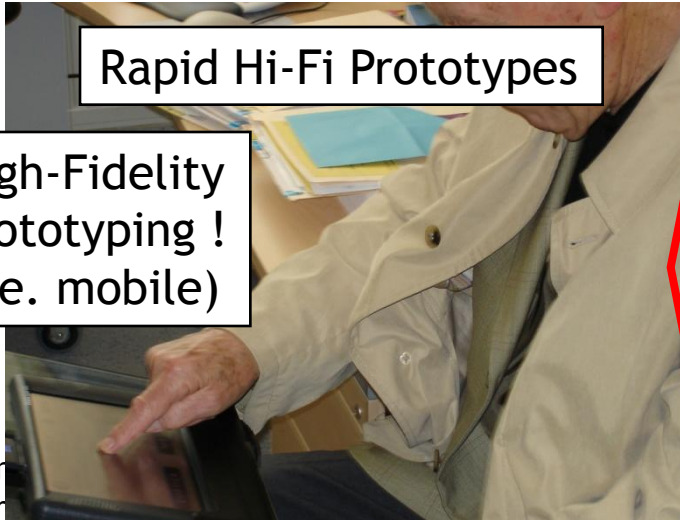
Post-its, Storyboards



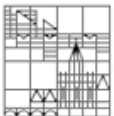
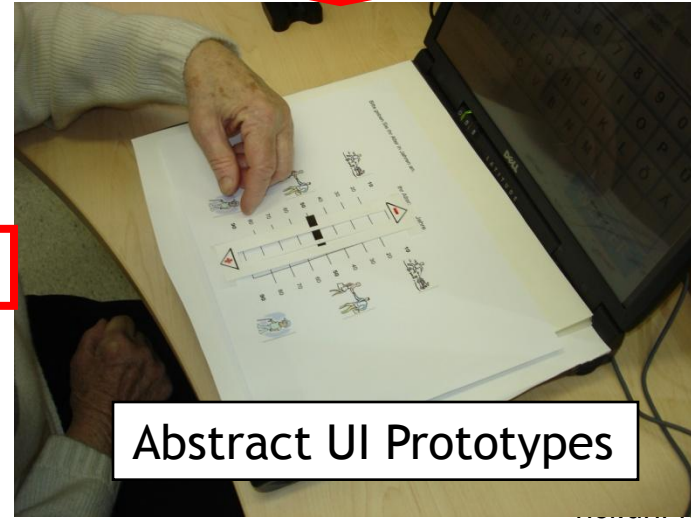
Low-Fidelity Prototyping !

Rapid Hi-Fi Prototypes

High-Fidelity Prototyping !
(i.e. mobile)

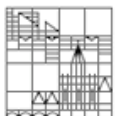


Abstract UI Prototypes

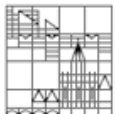
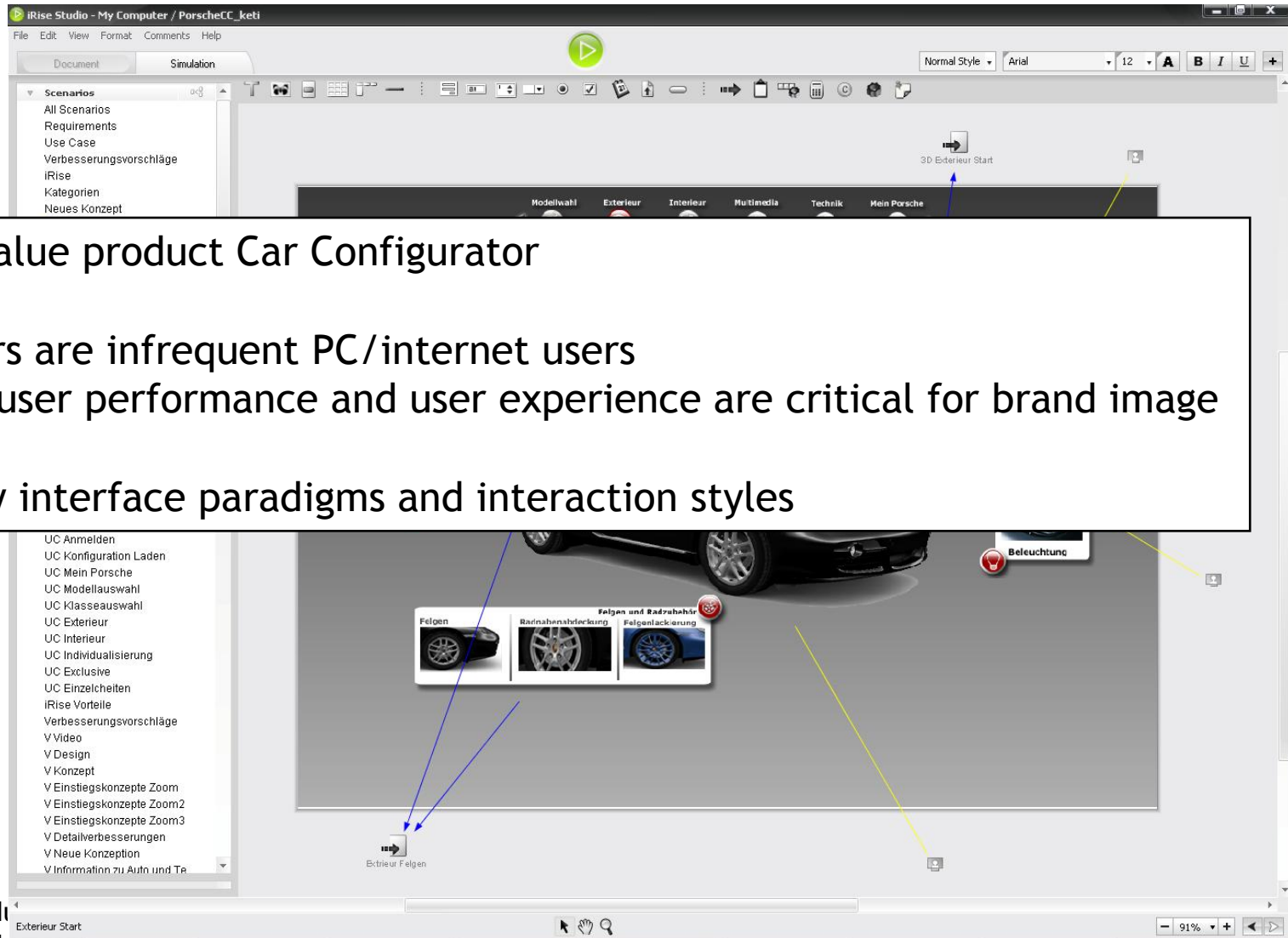


Visual UI Specification for UA

Interactive UI Prototypes	Interactive UI Specifications
Exclusively model the interaction layer	Allow to drill down from UI layer to underlying models
Vehicle for requirements analysis	Vehicle for requirements specification
May be inconsistent with text-based specification and other graphical notations	Integrated modeling layer enables tracing the process of translating requirements into the UI and vice versa.
Fast and cheap when abstract, time-consuming and expensive when detailed	Requires more effort due to consistent modeling, but less effort for generic changes
Either low-fidelity or high-fidelity	Includes low-fidelity prototypes for early, abstract UI design and traceability
Supplements text-based specification	Substitutes text-based UI specification
Design rationale saved in supporting documents	Incorporates design knowledge and design rationale in models

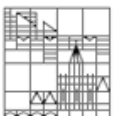


UI Specification example



Summary

- Agile methods and usability can be combined
- Hybrid process allows EARLY and RAPID insights into the behavior of end-users
- Sketches allowed immediate usability feedback
- Detailed prototypes have the advantage that end-users both participated and were studied in a realistic setting
- Lessons learned could be immediately brought into the next prototyping stage
- Agile Tests / UI Evaluation methods (e.g. thinking aloud) can be successfully included
- High-fidelity prototyping can be a partial substitute for any textual UI specification



The End

Thank you very much.

