

# Agile Methods and Visual Specification in Software Development

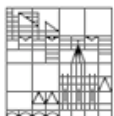
A chance to ensure Universal Access

Thomas Memmel, Harald Reiterer, Andreas Holzinger

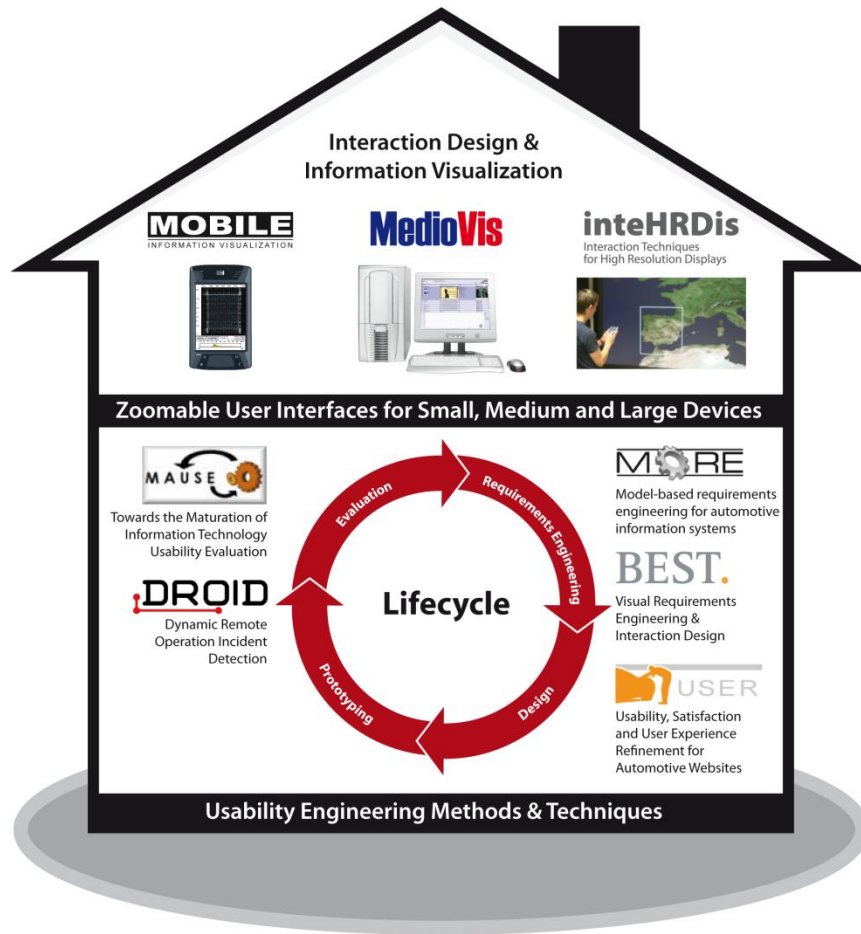
University of Konstanz, Germany

Medical University Graz, Austria

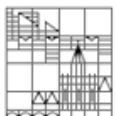
HCII 2007, Beijing



# HCI University of Konstanz: Research Topics

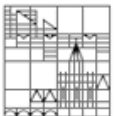


- The research focus is on the specification, design, implementation and evaluation of UIs for various interactive devices
- Digital Libraries, e-Commerce Websites, Visual Information Seeking System, etc.
- New interaction concepts:  
Zoomable Object-Oriented Information Landscape.
- Agile Usability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

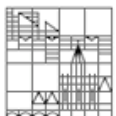
## Universal Access

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

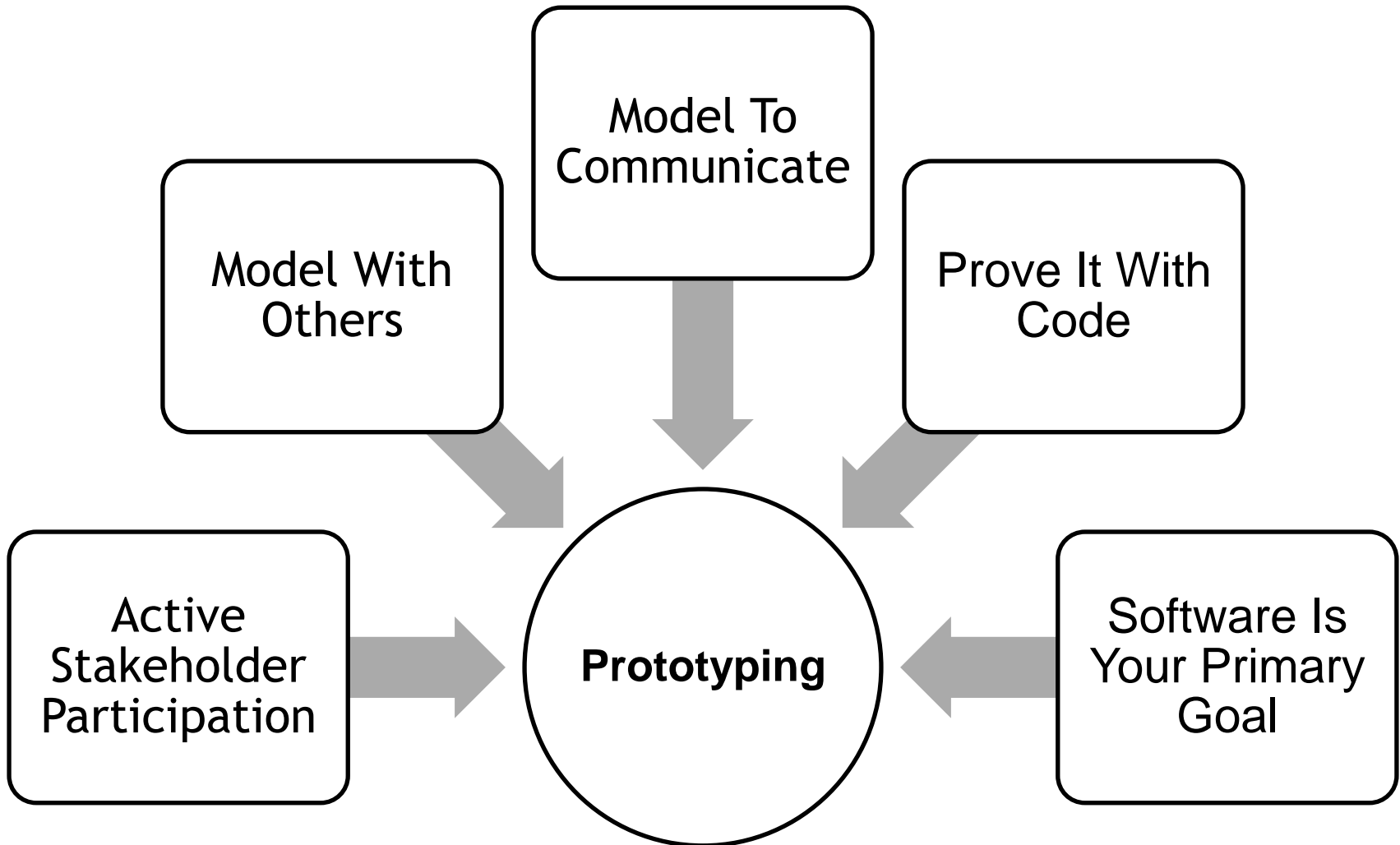
## Usability

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

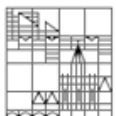
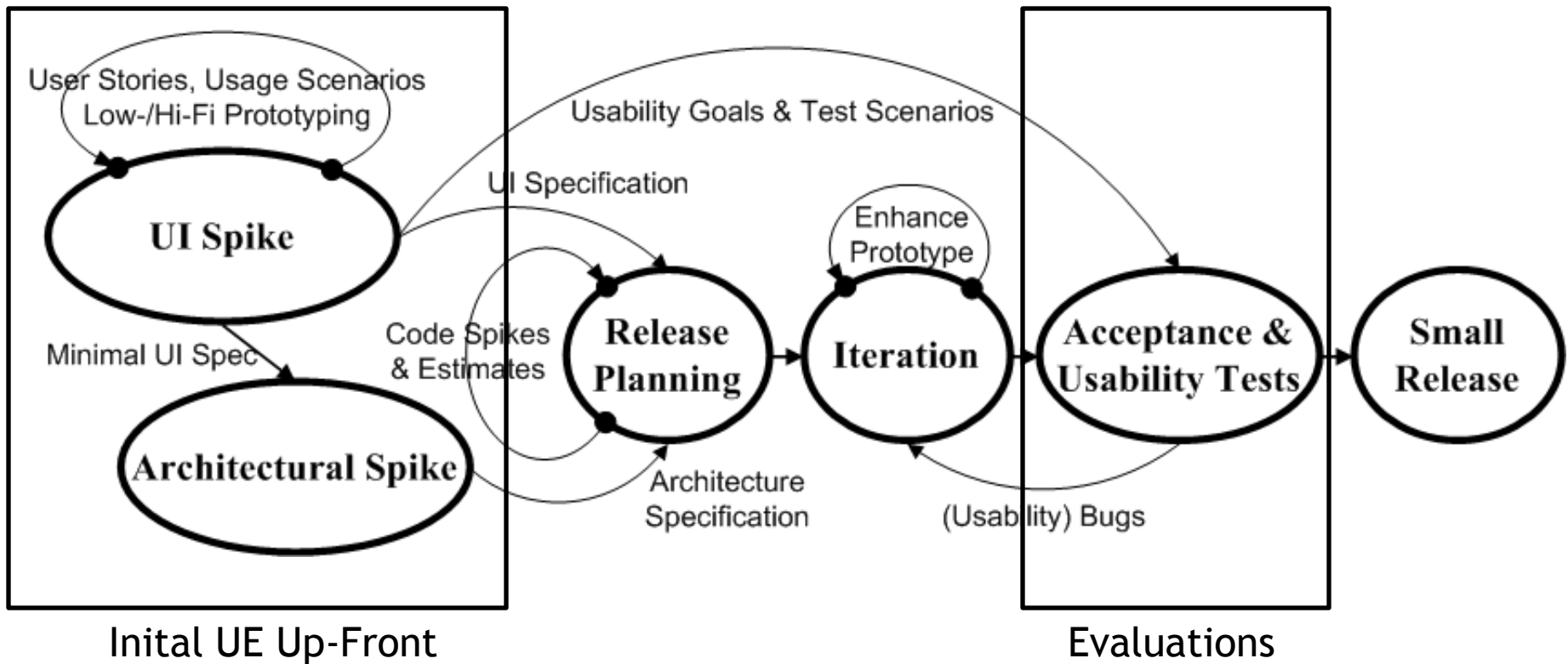
## Agile Methods



# Propell UI Design Process with Prototyping

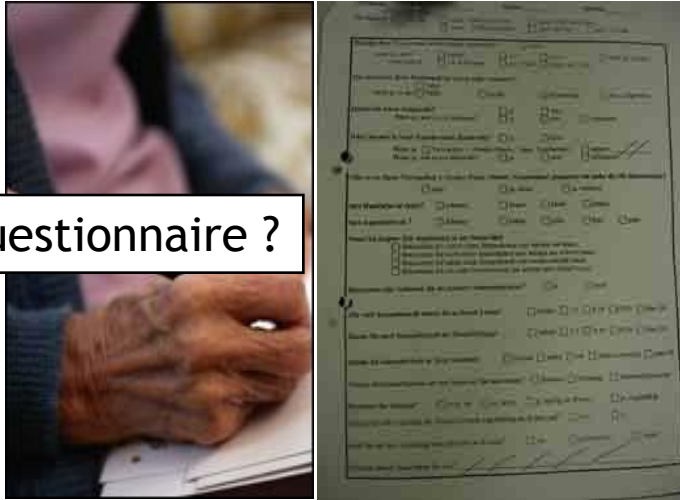


# The XP lifecycle extended



# MoCoMed-Graz project

Questionnaire ?



Post-its, Storyboards



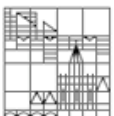
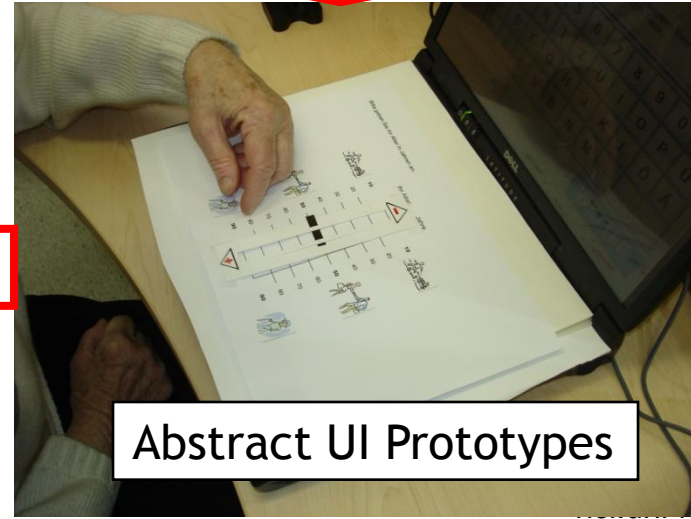
Low-Fidelity Prototyping !

Rapid Hi-Fi Prototypes

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

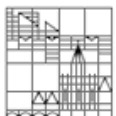


Abstract UI Prototypes



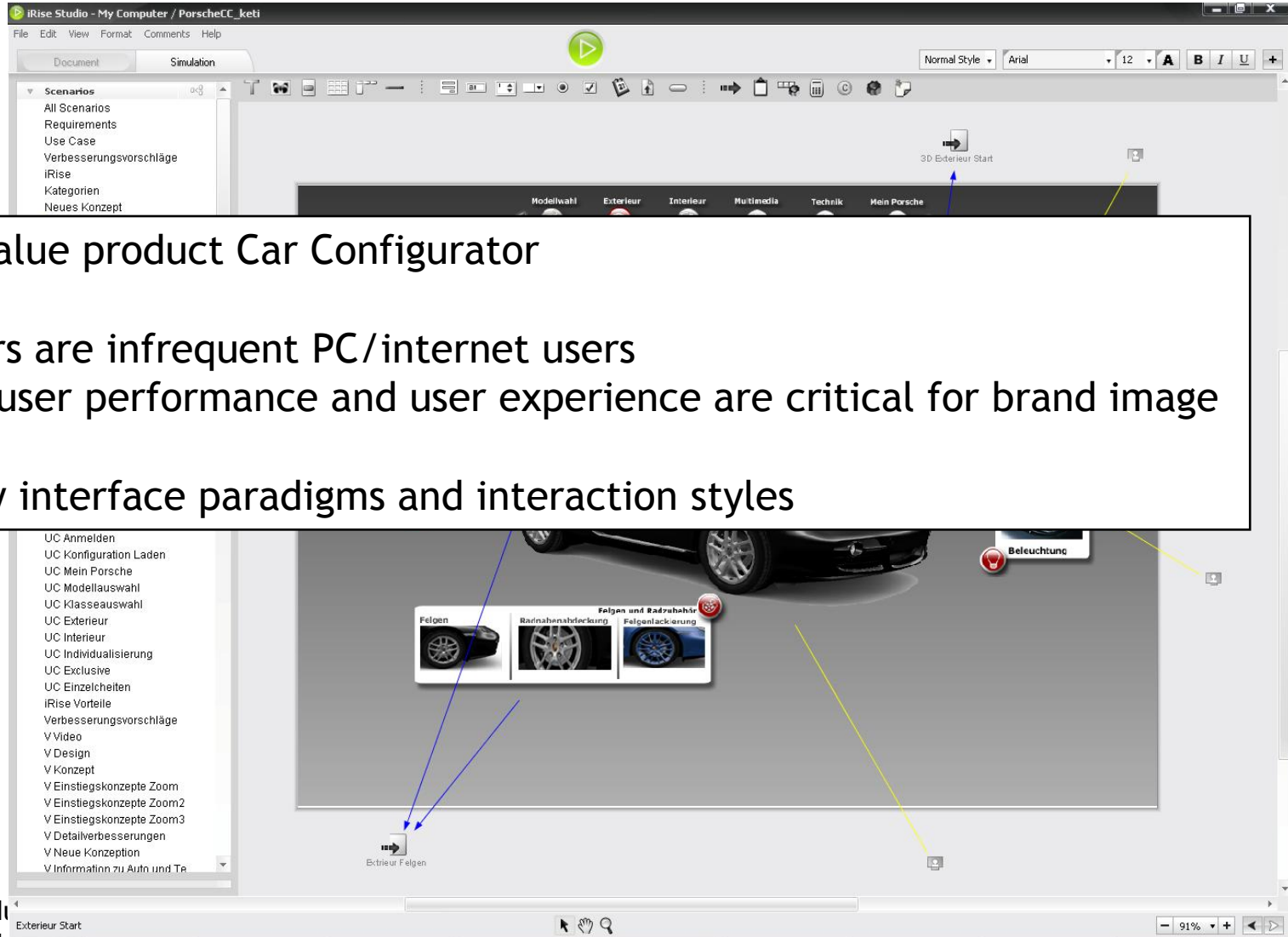
# Visual UI Specification for UA

<b>Interactive UI Prototypes</b>	<b>Interactive UI Specifications</b>
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





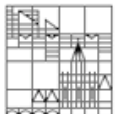
# UI Specification example



## High-value product Car Configurator

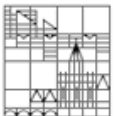
- Buyers are infrequent PC/internet users
- High user performance and user experience are critical for brand image

→ New interface paradigms and interaction styles



# 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.

