Trends and Concepts in the Software Industry II

Development of Enterprise Software

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AGENDA

- Overview
- The Situation & Challenge
- Phases
- Learning Experience
- Grading
- Q&A

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OVERVIEW

- Technological discussions and a design project
- Seminar includes:
  - in-memory database technology
  - software development
  - design thinking process
  - need finding
  - innovation and prototyping methodologies
  - human factors and team dynamics

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THE SITUATION 1
Technology Aspects

- Enterprise application stacks are built to support database technology from 20 years ago
- Current software architectures are built to relieve the database, but new technology offers new opportunities
- Workarounds like caching infrastructures, redundant logic, or redundant data can be rethought
- Reevaluate where to execute which part/type of application logic
- Reevaluate how to organize data (data aging, hot/cold partitioning…)

GOAL: find and resolve workarounds or find new architecture approaches for enterprise applications

THE SITUATION 2a
Current Development Processes

- Software development processes, techniques and models exist for many years
- However, problems with functionality, budgets, timing and quality often arise during projects or during maintenance
- Can communication aspects, technology support or others be enhanced to ensure better team and development performance, easier maintenance, better software quality?

GOAL: find and resolve problems during development

THE SITUATION 2b
Future Development Processes

How would the Software Development Process change if:

- All company data, meta data (statistics, data sizes…), tests, test results, call graphs, flow graphs are available during implementation
- the complete source code is indexed and efficiently searchable,
- Access to the database is lightning fast
- The performance of database schemas and algorithms can be simulated/estimated/calculated and results are available before implementation

GOAL : Evaluate the above ideas and judge their impact on software development

THE SITUATION 2b
Future Development Processes

How would the Software Development Process change if:

- IDEs support the principle of immediate feedback (http://vimeo.com/36579366)
- 3D-Information Graphics for all possible data around the SW development process is available (e.g. in a 3D-Cave: http://www.youtube.com/watch?v=J4PVMJREnDY)
- What else can you think of that influences SW development in the future?

GOAL : Evaluate the above ideas and judge their impact on software development

WITH THE BACKGROUND OF NEW EMERGING TECHNOLOGIES, HOW MIGHT WE ENABLE THE SOFTWARE DEVELOPER TO FASTER DEVELOP HIGH QUALITY SOFTWARE AND PROVIDE HIM WITH A GREAT USER EXPERIENCE?

- What does the developer need during development?
- Where is potential to simplify?
- Is there a need for new architecture approaches?

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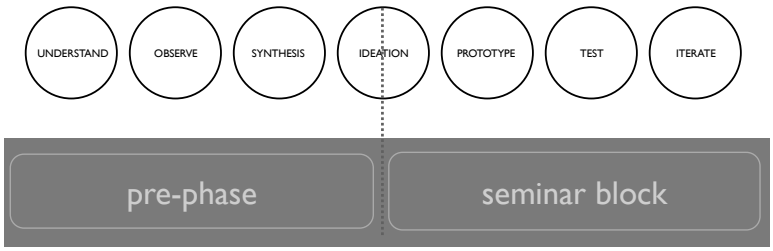
THE DESIGN THINKING PROCESS & PHASES OF THE SEMINAR



OVERVIEW ON THE ELEMENTS OF THE SEMINAR

PRE-PHASE	INTRODUCTION	October	**Intro & information session**
	2-DAY WORKSHOP	28.11. – 29.11.2012	**Design thinking workshop: fast-forward** • Getting to know the method & apply • User research training • Preparation of initial user research
	SELF DEPENDENT GROUP WORK	December January February	**Iterate research, synthesis & ideation** • Given & self assigned user interviews, observations and further desk research • Iteration of user research, synthesis and ideation • Your own schedule
	INTERMEDIATE PRESENTATIONS	11.02.2013	**Present your insights and ideas** • Short presentation and discussion
SEMINAR	IDEATION, PROTOTYPING, TESTING & ITERATION	25.2.-1.3.2013	**Seminar block** • Presentation: user research insights, initial prototype ideas • Expert sessions: technology aspects • Refinement of prototype • Test / evaluation at user site • Final prototyping / presentations • 5 days
POST	DOCUMENTATION	20.03.2013	**Document your work** • Written report • Video or screencast to experience your prototype

LEARNING EXPERIENCE

Participants will

- apply the technical concepts of in-memory database technology to real world use cases,
- observe real users in companies,
- get insights into and apply the design thinking methodology,
- train presentation skills.

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PREREQUISITES

Participants should be familiar with the concept of in-memory database technology

- Have attended Trends and Concepts I
- Self-Study via Online Lecture before the Workshop: https://openhpi.de/course/inmemorydatabases

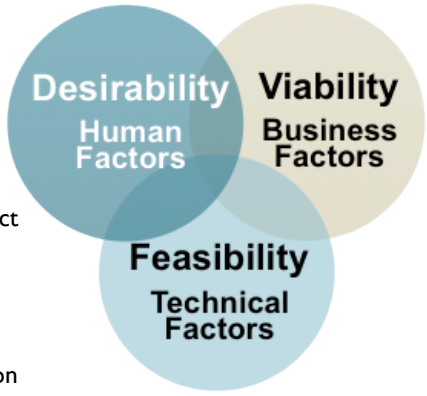
TODOs before Workshop

- Recap or learn about in-memory technology (see preriquisites)
- "Warmaquise": Contact people you know, who might be interesting interview partners for the topic

GRADING

6 ECTS Points

- engagement to discussions, the project and team work, intermediate presentations (30%),
- viability, feasibility, and desirability of project results in the final presentation (40%),
- documentation of the results: 20p. lncs and video/screencast (30%)



Enroll till Oct. 31st, 2012

thank you!
any questions?