

Jan Harmsen

Usability & Software Engineer



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I help companies develop software which provides comprehensive usability and enduring user satisfaction.

Synopsis

As a usability and software engineer with ten years experience, I know both sides of product development: the application side from the user's perspective and the technical side from the developer's perspective. I know exactly what is relevant to user interface design and how to systematically develop products with excellent usability and optimal user experience.

Successful product development demands a clear and detailed understanding of what users want to accomplish. Product context-of-use and users' tasks and requirements are always central to my work.

As team lead of user interface development, I take responsibility for user interface (UI) design and implementation from project start to product delivery. As senior user interface architect and usability engineer, I coach UI development projects and counsel product managers and development teams with respect to usability and user experience.

Degrees

Two university degrees as engineer:

- **Dipl.-Wirt.Ing. (Industrial Engineer)**
FernUni Hagen, Hagen, March 1999
12 semesters
Long-distance university, degree acquired while working fulltime
- **Dipl.-Ing. (Mechanical Engineer)**
Helmut-Schmidt University (UniBw), Hamburg, April 1993
10 trimesters
VDI Hamburg engineering award 1994 for best thesis

Skills

General

- Exceptional analytical abilities
- Languages: German and English fluency
- Proficient in managing and coaching multidisciplinary user interface development teams

Methodological competence

- Usability Engineering / User Experience Design:
 - Human-centered design (ISO 9241-210)
 - Contextual analysis (DAkKS Usability Guideline)
 - UI and interaction design (DIN EN ISO 9241-110)
- Software Engineering:
 - Classic and agile software development methodologies

Software development / Technical standards / Software

- JavaScript, HTML, CSS, XML, JSON
- Object oriented software development, design patterns
- Prototyping tools (Flairbuilder etc.)
- SQL / Relational database management systems
- UML + UML tools (VP-UML)
- Version control + bugtracking software (Subversion, Assembla, Jira)
- Web application architectures / frameworks

Experience

Focus of my projects and ten years professional experience as usability and software engineer:

- **User interface development:** from requirements analysis, interaction design, UI specification & prototype development to usability tests; the complete spectrum of activities relevant for successful UI development.
- **Management and coaching of UI development teams:** establishment of efficient UI development teams which effectively bridge marketing, product management and software development. Coaching of team members with backgrounds in web development, graphic design, interaction design and usability engineering to form competent, motivated and efficient UI development teams.
- **Web applications:** user interface development, architecture of web applications.

Extract from recent usability and software engineering projects:

1. Usability engineering project for web application (02/10, large German telecom company)

- Contextual analysis for determining relevant tasks, needs and requirements.
- Capturing usability problems of web application via ErgoNorm questionnaire.
- Usability analysis of web application.

2. Web application prototype for usability tests (6 months, 10/08 - 03/09 at large insurance company)

- Leading GUI development team.
- Supervising interaction design.
- Designing technical architecture of GUI for web application, selecting JavaScript libraries & designing object model.
- Preparing and finishing web application prototype for usability tests.

Excellent usability of prototype was confirmed and validated via a series of usability tests conducted with

users not acquainted with either the existing application or the prototype.

3. GUI development for web application (19 months, 10/06 - 04/08, health sector)

Project summary:

- Establishment of efficient agile development and release process for GUI of Web Application.
- Managing GUI design and development team comprised of graphic designers, interaction designers and GUI developers.
- Assumption of responsibilities as GUI Build / Release Manager and Bug Dispatcher.

Project description:

Project goals were the establishment of an efficient agile development and release process for the GUI (html, images, css, javascript) of the web application and the management of the GUI design and development team consisting of 8 people (two graphic designers, two interaction designers, three GUI developers and one usability engineer).

As development of the GUI had begun several months earlier, a major restriction while reaching the stated goals was avoiding a slow down in development. Thus the challenge was to maintain development pace while introducing an agile development and release process.

The following achievements led to an agile and highly efficient development process with weekly releases:

- Standardization of working environment for all team members.
- Creation of one common subversion repository for graphic designers, interaction designers, GUI developers, usability engineers.
- Use of Jira issue tracking & project management system for defining tasks / subtasks and managing bugs and releases.
- Introduction of Visio with templates for LoFi Prototypes (Interaction Design Prototypes).
- Optimization of Dreamweaver with templates for HiFi Prototypes / Webapp GUI (valid XHTML / CSS / Images).
- Use of Web-Harvest Data Extraction Tool for extracting data from Jira for the Apache-Ant-controlled release process.
- Creation of one common release process with combined weekly releases of LoFi Prototypes and HiFi Prototypes / Webapp GUI (as part of the release process LoFi Prototypes were exported from Visio to HTML and uploaded to webserver together with Webapp GUI, including release notes and changelog).

Positions of my professional career:

2004 - present Freelancing usability and software engineer
2001 - 2004 Software engineer at Software AG, Darmstadt
1993 - 2000 Naval officer and engineer