Where Web Engineering Tool Support Ends: Building Usable Websites

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Overview

• Goal
• Approach
• Example Setting
• Analysis of WE Solutions
  – Methods
  – Models
  – Tools
• Conclusion
Goal

Examine Web Engineering solutions: How much attention has been paid to usability?

- Methods: Steps to improve usability?
- Models: Can usability issues be modelled?
- Tools: Support for usability aspects from methods/models?
- (Are methods/tools themselves easy to use?)

Will mainly criticise, not provide solutions ;)}
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Approach

- Read UWE and OO-H literature
- Watch demo sessions at ICWE 04
- To get a feeling for issues involved, manually perform a small WE experiment:
  - Modelling of business processes
  - Navigational design
  - Page design
  - (Very simple graphical design)
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Example: Business processes in a travel agency

- Manual conversion of activity models to a website
- Special attention to usability issues
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Methods

- **UWE**: Recommends storyboarding and pure HTML prototypes to improve usability
- **OO-H**: Rapid prototyping makes early and frequent usability testing possible – but no explicit mention of usability in literature
- **OO-H**: Method promotes different navigational models for different users (B2B/home office/small company) – can be problematic
Models (1 of 2)

- UWE/OO-H: Patterns are useful, but too concrete, often only one way to visualise them exists.
  (OO-H: Location pattern adds navigation to pages, but is used in presentation diagram)

- UWE/OO-H: Presentation diagrams hardly more than a template mechanism
Models (2 of 2)

- UWE/OO-H: Cannot express more abstract requirements: “Searching is central to our application, need it everywhere”
- OO-H: Automatic generation implies very detailed, work-intensive models
- UWE/OO-H: Level of detail very high compared to “classical SE”
- UWE/OO-H navigation models: Focus on “web application links”, hardly any mention of issues with “site navigation”
Tools

• OO-H: Tool support for all steps of the development process
  UWE: Only partial support

• OO-H: VisualWADE is an excellent tool, but in part re-invents Dreamweaver
  UWE: No advanced tool support for presentation aspects (UWEXML), possibly better integration with HTML/XML editors

• UWE: Promotes the use of frames, which can be problematic

• OO-H/UWE: No built-in “usability guidelines”
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Conclusion

• Usability issues are not a primary concern for UWE and OO-H

• Need to improve both usability of generated sites and of development process

• Compared to “classical SE”, WE models are more detailed – modelling is work-intensive and complex
Conclusion (Models)

- Subdivision into navigation and presentation model is not ideal: Increased complexity for developer, models need to be kept in sync
- Presentation diagram too concrete to be useful, just additional modelling work
- Cannot draw a line (cf. Location pattern)

...so express everything in one diagram?
Further work

Further work:

- Look at other WE solutions
- What usability aspects can be modelled?
- What can “usability tool support” look like?