

Where Web Engineering Tool Support Ends: Building Usable Websites

Richard Atterer
Ludwig-Maximilians University Munich
Media Informatics Group

richard.atterer@informatik.uni-muenchen.de

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?)

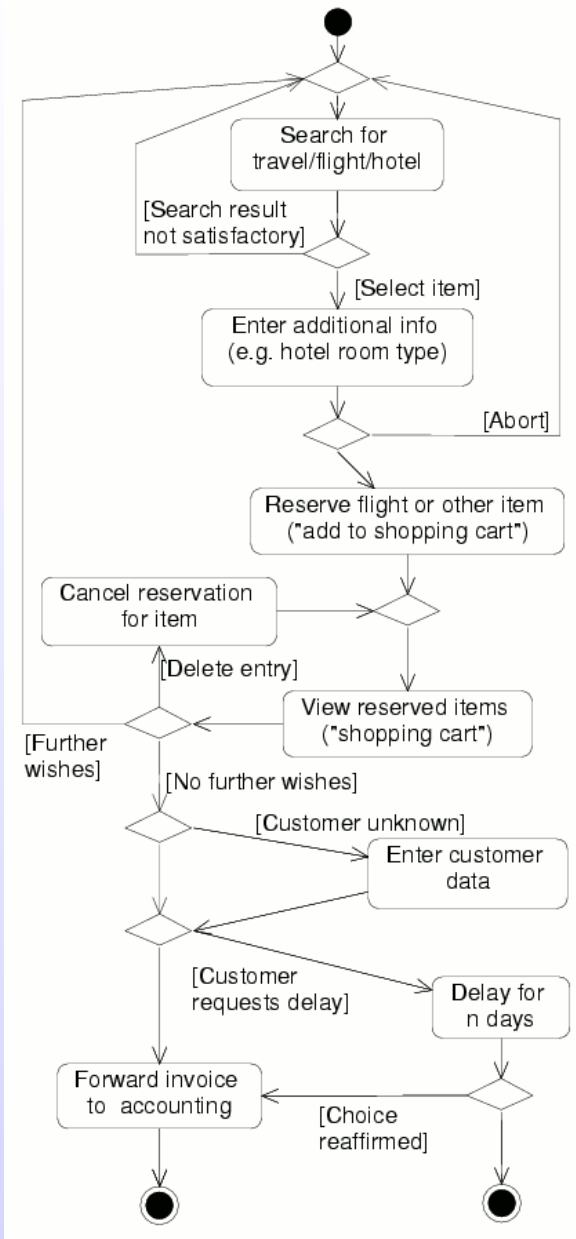
Will mainly criticise, not provide solutions ;))

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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

Reisebüro

Flug Hotel Veranstaltung Auto Service

München Hawaii

Anreise: 29 Mai 2004 Rückreise: 16 Nov 2005

Kundendaten

Personen: 1 Suche

Details zu Ihrer Reise

Art der Reise: flug
Start: München
Ziel: Hawaii
Abreise: 29.5.2004
Rückreise: 16.11.2005
Anzahl Personen: 1

Suchergebnisse:

Lauda Air Von München nach Hawaii	Hinflug: 29.5.2004 Rückflug 16.11.2005	99 Euro pro Person. Gesamtpreis: 99 Euro
Delta Airlines Von München nach Hawaii	Hinflug: 29.5.2004 Rückflug 16.11.2005	259 Euro pro Person. Gesamtpreis: 259 Euro

Optionen Speichern

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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?

