



Context Modeling for Device- and Location-Aware Mobile Web Applications



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<http://www-mmt.inf.tu-dresden.de/Projekte/AMACONT/>

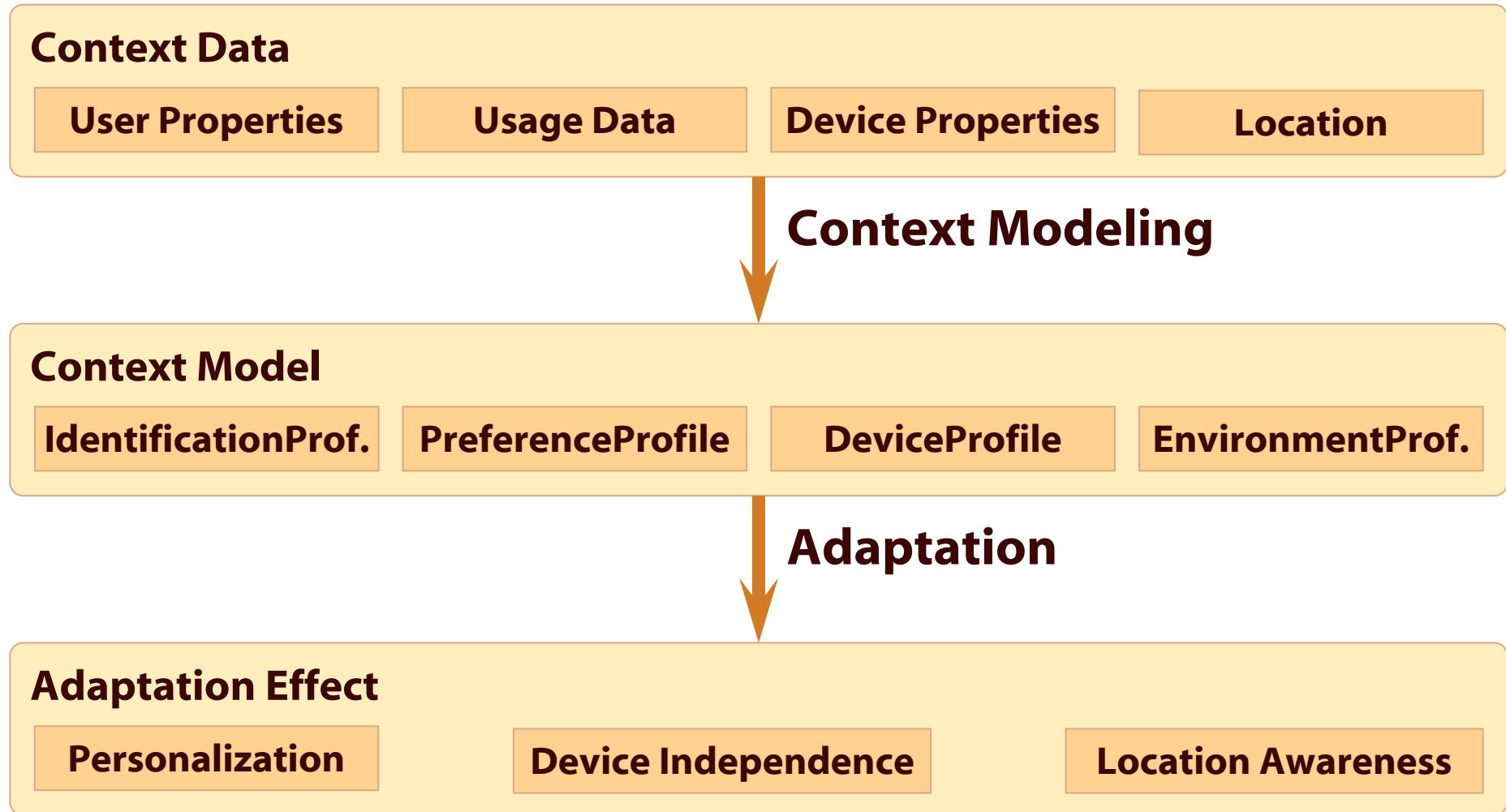
Structure

- Motivation / Introduction
- Context modeling components
 - Device Modeling
 - Location Modeling
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- Integration into a context aware system architecture
- Conclusion and Future Work

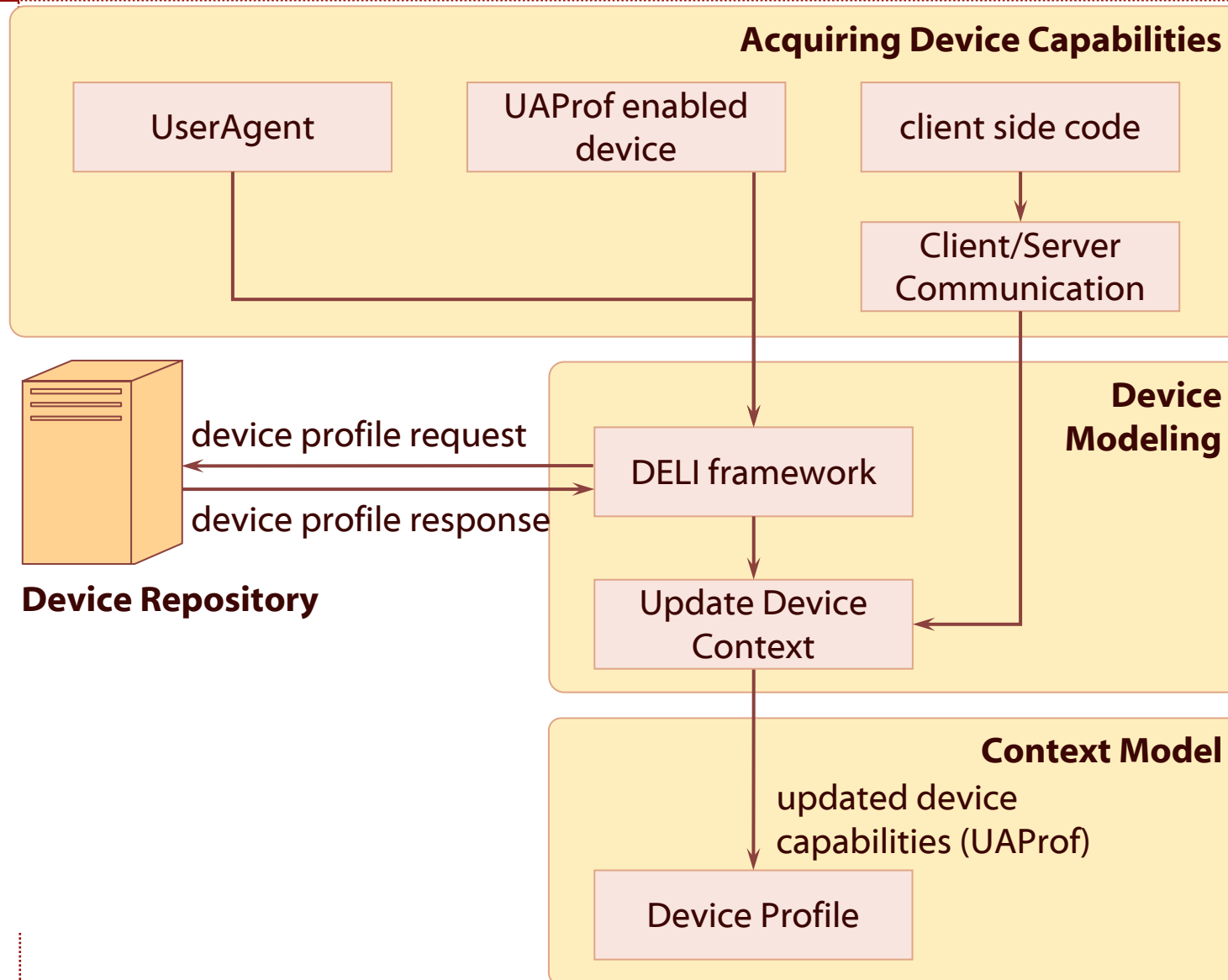
Motivation / Introduction

- Trends
 - Personalization of information
 - Variety of mobile devices
- ➔ Developing personalized applications for the ubiquitous Web
- ➔ Providing personalized user interfaces addressing heterogeneous capabilities of device classes
- Existing approaches restricted to
 - one adaptation scenario (device independence, personalization, LBS)
 - only the modeling of context information, not on the usage
- ➔ Requirements: gathering, processing and sophisticated representing of context information, so that it can be used for adapting Web applications

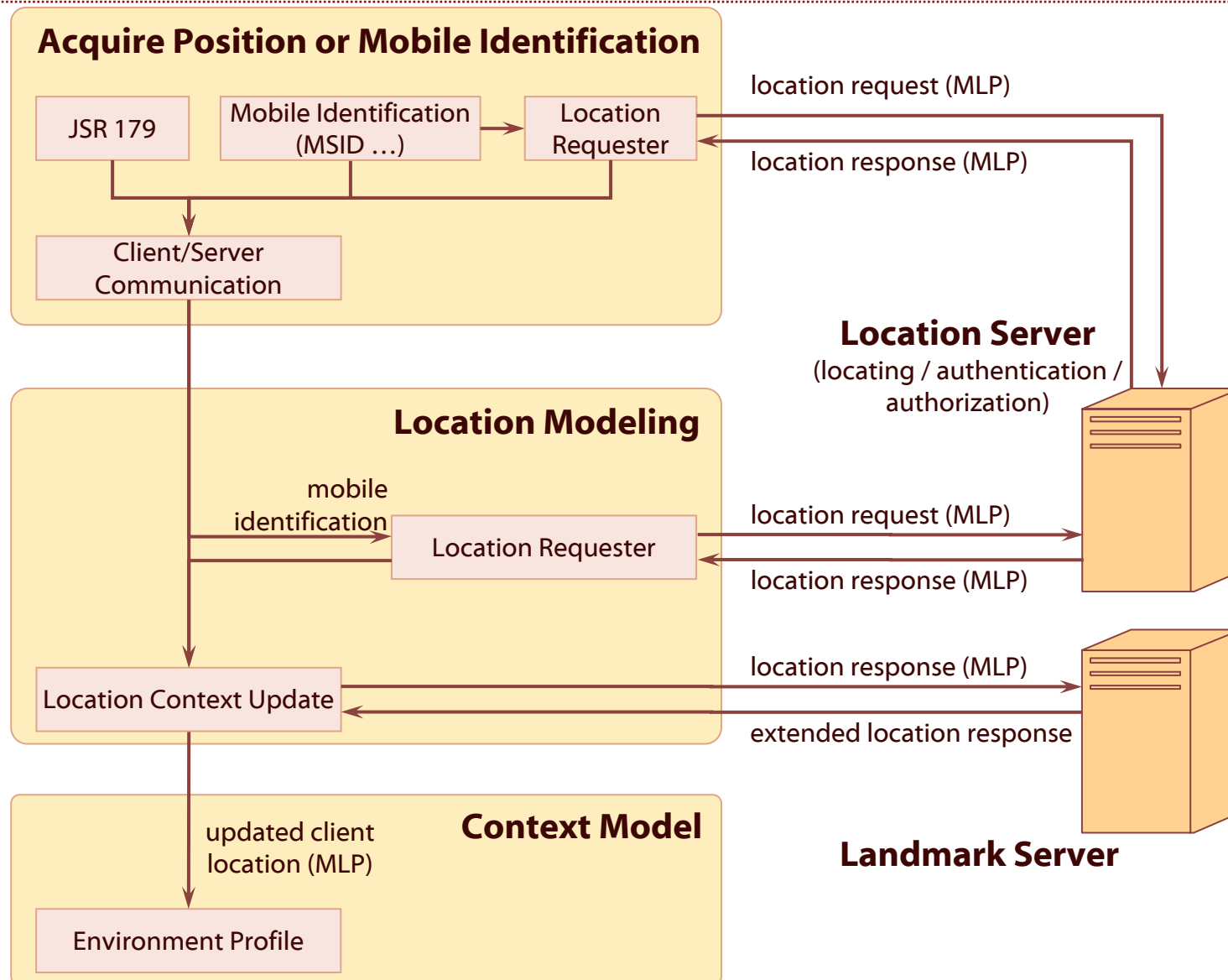
Overview



Device Modeling



Location Modeling



Users Preference Modeling

Three overlapping screenshots of a video library interface illustrating preference modeling. Each screenshot shows a list of movies with details and interactive elements like 'Details' and 'Weiterlesen' buttons.

Screenshot 1 (Left): Shows a list of movies including 'Matrix - Reloaded (FSK16)', 'Stirb Langsam (FSK16)', and 'Welcome to the Jungle (FSK12)'. The 'Matrix - Reloaded' entry is highlighted.

Screenshot 2 (Middle): Shows the same list, but the 'Stirb Langsam (FSK16)' entry is highlighted. A mouse cursor is visible over the 'Action' category label.

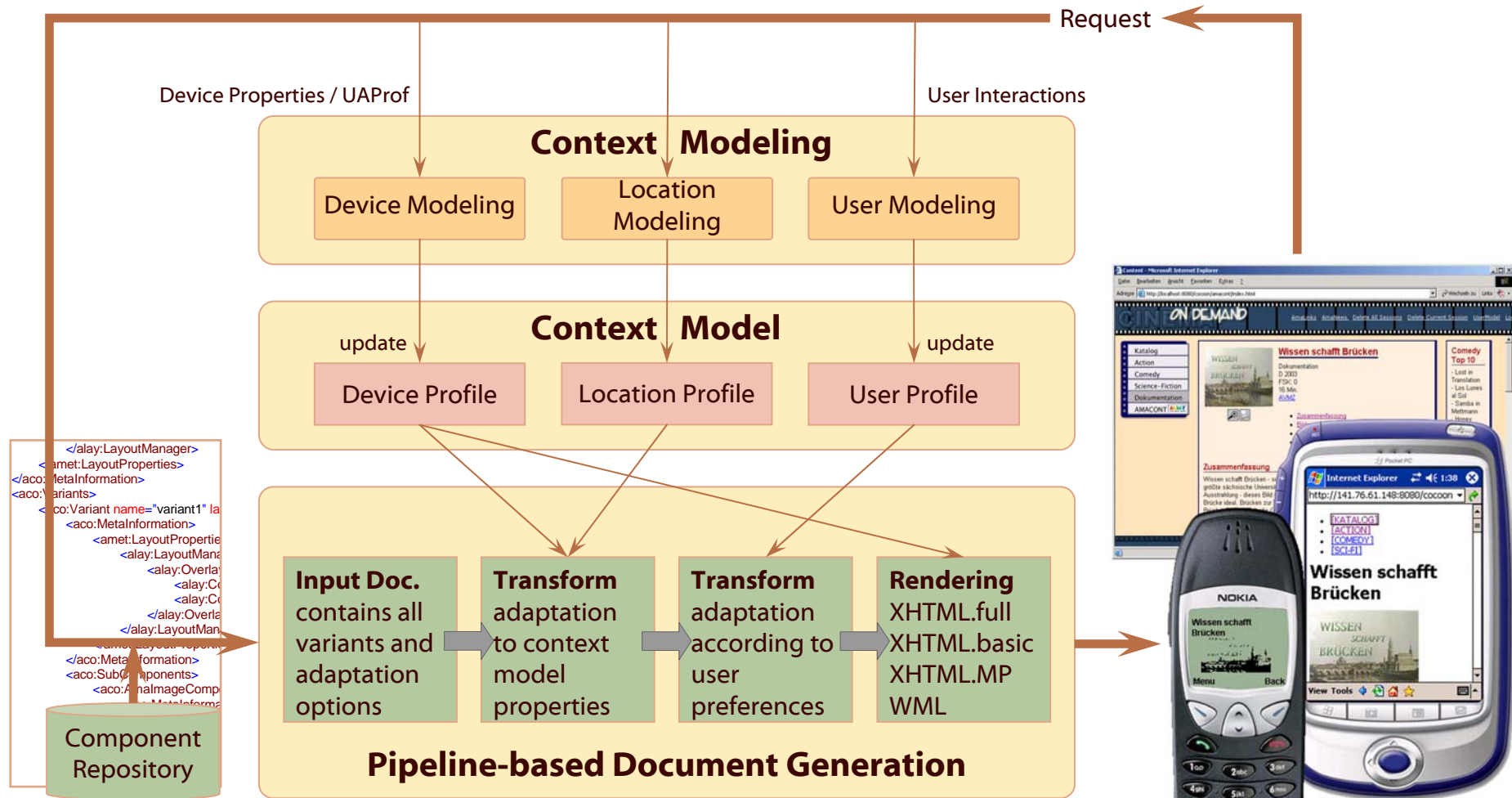
Screenshot 3 (Right): Shows the same list, but the 'Welcome to the Jungle (FSK12)' entry is highlighted.

The interface elements include a search icon, a magnifying glass icon, and a 'Weiterlesen' button with a right-pointing arrow.

Preference Rules

$[((medium \neq picture) \wedge (medium \neq text) \rightarrow noInterest),$
 $((category \neq action) \rightarrow noInterest),$
 $(default \rightarrow interest)]$

Integration into a Web system

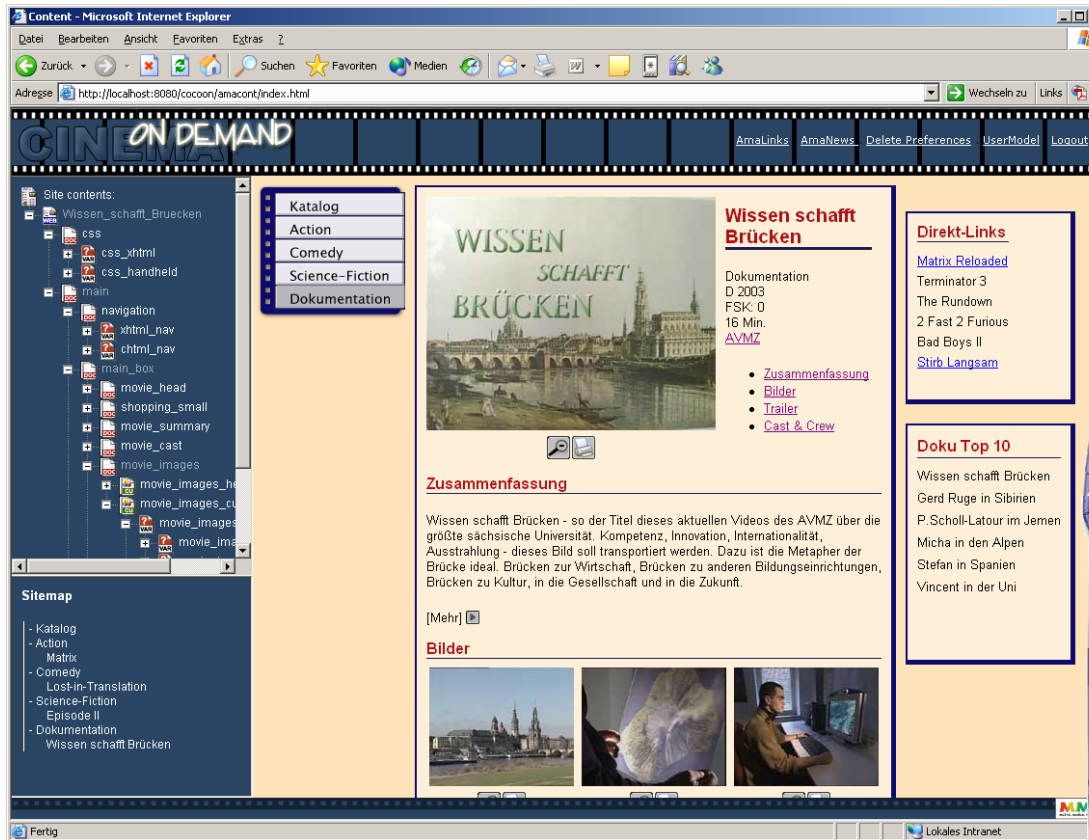


Conclusion / Future Work

- Different context modeling components for different adaptation scenarios
- Personalization, device independence, LBS
- Integration into a context aware system architecture

- Generic support for integrating arbitrary context modeling components
- Performance aspects of the overall system architecture
- Modular framework
 - for design and development of adaptive Web applications in different stages of an authoring process

Prototyp



Users Preference Modeling

