

New Pattern Language Concepts for Designing UbiComp Applications Connecting to Cloud Services

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Abstract: Ubiquitous computing applications that make use of Cloud services need to be designed in a way that the access to the Cloud can be easily performed by the user. We stress that successful design concepts need to be made reusable and combinable with each other in order to construct new kinds of applications. *Design patterns* have proven to be a successful and applied method to describe, capture and structure successful design knowledge.

For the large field of ubiquitous computing, we extend the concepts of the "traditional" pattern languages as well as the pattern structure. The aim is to cover a larger domain of ubiquitous computing applications in this field. Additionally, our approach introduces collaborative features to discuss and refine existing patterns as well as to add new knowledge from different application designers. This way, we want to increase the pattern languages' liveliness.