Towards Deep Adaptivity – A Framework for the Development of Fully Context-Sensitive User Interfaces

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Abstract. Adaptive systems can change various adaptation aspects at runtime, based on an actual context of use (the user, the platform, and the environment). For adaptable systems, the user controls the adaptation aspects. Both adaptivity and adaptability are pre-requisites for context-sensitive user interfaces that accommodate the needs and preferences of persons with disabilities. In this paper, we provide an overview of the various adaptation aspects and describe a general framework consisting of six steps for the process of user interface adaptation. Based on the framework, we describe our vision of combining the GPII and URC technologies to achieve fully context-sensitive user interfaces.

Keywords: Adaptive user interface, adaptable user interface, user interface adaptation, user interface adaptation aspect, context-sensitive user interface, abstract user interface, Universal Remote Console (URC), Global Public Inclusive Infrastructure (GPII), Cloud4all.