

Centralizing the Teaching Process in Intelligent Tutoring System Architectures

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Abstract : There exist a plethora of architectures for ITSs (Intelligent Tutoring Systems). A thorough analysis and comparison of the architectures revealed, that in most cases the architecture extensions are evolutionary grown, reflecting state of the art trends of each decade. However, from the perspective of software engineering, the main aspect of an ITS has not been reflected in any of these architectures, yet. From the perspective of cognitive research, the construction of the teaching process is what makes an ITS 'intelligent' regarding the spectrum of interaction with the students. Thus, in our approach, we focus on a behavior based architecture, which is based on the main teaching processes. To create a new general architecture for ITS, we have to define the prerequisites. This paper analyzes the current state of the existing architectures and derives rules for the behavior of ITS. It is presenting a teaching process for ITSs to be used together with the architecture.

Keywords : intelligent tutoring, ITS, tutoring process, system architecture, interaction process

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