Abstract

Nowadays, a lot of research involves in the area of e-learning with service-oriented architecture. In e-learning systems, the challenges are increase of the complexity and more interoperability between systems in distributed environment. The lacking is reference architecture in which by reusing web services, reusing learning objects and semantics, ontology, etc. A service-oriented reference architecture describes the essence of a software
architecture and the most significant and relevant aspects. Hence, it is proposed to design reference architecture to personalized e-learning systems using Web services and service-oriented architecture. The objective of this paper is to design service-oriented reference architecture for personalized e-learning systems (SORAPES) and validate the architecture. Some of the existing e-learning architectures that serve as the domain model for personalized e-learning system were considered, discussed in details and finally proposed a new architecture which is called SORAPES. The SORAPES was designed by re-using web services and learning objects. It is a layered architecture and highly-scalable for personalized e-learning system. This architecture was evaluated with a list of quality attributes.

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Index Terms

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Key words

E-learning                Personalization                Reference
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