

A novel geo-context model for mobile learning and self-adaptability of Web services

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Abstract. Thanks to development of technology and Web has reached its peak. It touched almost every domain especially the learning. We notice a huge change has occurred in the methodology and means of information especially in the usage of mobile dispositive. Thus, its necessary that we model the mo-bile learning domain so that we can specialize the needs and the modeling rea-lization. In this domain both the context and the geographic position of a mo-bile learning represent the two principal concepts for modeling a mobile learning situation. Our original research is focus on the ontological modeling of a geo-localized context of a mobile learning. Self adaptability of Web services to the context are a solution for the integration of distributed, autonomous, and heterogeneous information systems. Thus impacts can resolve many problems in different system based on service oriented architecture and Web services. We are interested in the study of a certain number of context learning models without forgetting the models of geo-ontology. We suggest a model that allows describing at the same time the context and the geographic position. This model can be integrated in the mobile learning environment and it leads to the semantic description and reuse of information. We show the reasoning and validation of our approach in an archaeological geo-location case study based on self adaptability of Web services to the context.

1 Introduction

The world is always changing, we see the emergence of new technologies for information and communication that mixture between mobile technology and new teaching methods. These technologies give individuals the opportunity to choose when and where they want to learn and thus meet the learners' mobility needs. Thus the adoption of these new technologies will help to rethink education and to meet the demands of our university or school life today. That is