Conditional IMS Learning Design Generation using User Modeling and Planning Techniques

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Abstract

Active modeling is required in learning settings to cope with the dynamic evolution of the knowledge, since learners competences evolves over time as they participate in the course activities. Moreover, one of the main issues in a competence based eLearning process is to deliver personalized instructional designs adjusted to both 1) intrinsic characteristics of users (i.e. learning styles) and 2) the desired and achieved competences in the learning process (i.e. specific and generic competences). This delivery includes the adaptation of the content and the activities in a learning scenario based on a dynamic user model that evolves according to user interactions. In this paper, an approach to support Conditional Plans Generation (IMS Learning Designs) in the context of a virtual learning environment is presented. The process is supported by a pervasive usage of standards and specifications (IMS family of specifications) in conjunction with an integral user modeling.