An Adaptive Learning System Architecture based on a Granular Learning Object Framework

Abstract

Adaptation has been becoming more and more important in modern educational systems. Building an adaptive learning system requires granular and reusable content. In this paper, we proposed a learning content framework using the Learning Object technology. We will particularly examine the granularity approach of Learning Objects (LO) and its impact of...
adaptability in Adaptive Learning Systems (ALS). For this, we study first the concept of Learning Objects. Then, we present some models of educational contents and their limitations in comparative way. Afterward, we discuss the granularity as a fundamental point to achieve adaptability and individualization required in Adaptive Learning System. Later, we propose our own learning resources model that emphasizes on fine-levels granularity to enable course adaptability and therefore facilitate efficient learning to the students. Finally, we present the design and the general architecture of the system ALS-CPL, allowing the integration of the granular LO framework.

Reference

Index Terms

Computer Science  Information Sciences

Key words

Adaptability Learning Content Adaptive
Learning Systems learning object

granularity

learning content model

individualization