An autonomous software approach to enhance information sharing in university course timetable planning

ABSTRACT

One of the major activities of university departments at the beginning of an academic semester is creating a course timetable. During course timetable creation, a department usually needs to book one or more courses from other departments. In order to book courses, a department needs to send request to another department that offers that course and exchange relevant information with it. This information is essential for the department in order to assign the academic provider resource to appropriate timeslot in its own courses timetable which has to satisfy specific conditions. Information sharing during timetable planning in academic departments still faces difficulties due to the low level of cross-department information sharing. These issues seriously restrict and delay the process of collaborative timetabling planning. In order to automate the information sharing between academic providers in timetabling planning we present a prototype of an autonomous and efficient information sharing tool. The aim of this tool is to reduce communication gaps among the departments. The proposed approach is applied on timetable planning for the department of Computer Science (CS) and Software Engineering (SE) at the Universiti of Putra Malaysia (UPM).

Keyword: Information sharing; University course timetabling; Sharing academic resources; Autonomous software; Web-based decision making supporting tool