University-level Automated Course Scheduling by Integrating AI Technique and Group Decision Support System - Group Negot

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ABSTRACT

University-level course scheduling is basically a multiple constraint satisfaction problem. It needs to rely on a preceding process to get a feasible solution satisfactory to almost all constraints and on a nogotiation process to achieve a all- satisfying solution. Researches in autometed course scheduling proposed various algorithms, empirical rules and reasoning thods. Proposals were differentiated by computation time and memory space usage, but they were not guaranteed to succeed in finding a solution. The final stage in course scheduling is achieved by negotiation, precisely, a group decision process. This research proposes a course-specific group decision support system to ease the inherent negotiation activities required for the course scheduling issues. A course- specific group decision support system needs some major functions as information query, group negotiation, course adjustment, course scheduling, explanation, constraint relaxation and system help. A prototype system under this general architecture has been developed, tested and evaluated. The testing and the evaluation of the system has gained positive public opinions.

Keywords : course scheduling ; constraint satisfaction problem ; negotiation

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