Developing and Delivering Intelligent Tutoring Systems in ASPIRE

We invite participation in a one-day workshop to be held at the University of Canterbury on June 13, 2007 (9am-5pm, the Erskine building).

Introduction: Intelligent Tutoring Systems (ITS) are problem-solving environments which adapt to the needs, abilities and knowledge of each individual student. ITSs have proven to be very effective in supporting students' learning. Their power comes from artificial intelligence techniques used for domain modelling, student modelling and adapting instructional sessions in accordance to the student's knowledge. Although ITSs are very effective, there are only a very small number of them being used in classrooms. The reason for that is the huge amount of effort and expertise required to develop such systems. We have been awarded two eCDF grants (sponsored by TEC) to develop ASPIRE, an authoring system that supports the process of developing new ITSs. ASPIRE automates most of the tasks required, making it possible for tertiary teachers to develop ITSs for their courses, without requiring extensive experience in programming and Artificial Intelligence. ASPIRE is freely available on the Internet to all tertiary institutions within New Zealand.

Workshop Structure: This workshop will cover both the theory and practice of developing constraint-based Intelligent Tutoring Systems. The first part of the workshop introduces ITSs, their functionality and some examples. We will present examples of several ITSs developed by the Intelligent Computer Tutoring Group (ICTG), and used regularly in our courses. The evaluation studies of these systems show that they are extremely effective: students learning with these ITS achieve significantly higher results than their peers learning in a traditional classroom situation.

Most of the time would be devoted to ASPIRE, our new authoring system for developing constraint-based ITSs. We will introduce participants to the various components of ASPIRE, describe the roles of various types of users and present examples of systems developed in ASPIRE. The participants will have hands-on opportunity to try out ASPIRE. We will also be interested in discussing opportunities for ASPIRE to be used in participants' courses.

Desired Outcomes: To generate enthusiasm amongst participants for the techniques and technology so that they understand and use them in their own courses.

Audience level: Tertiary teachers interested in eLearning, and eLearning support people in tertiary institutions.

Travel support: We have funds to cover travel expenses for about 10 participants. If you are interested in participating in this workshop, please contact Tanja Mitrovic (Tanja.mitrovic@canterbury.ac.nz) as soon as possible.

Background: Within ICTG, we have been developing ITSs for more than a decade, and have been internationally recognized as one of the leading research groups in the area. The group is led by Associate Professor Tanja Mitrovic. Other members of the groups are Dr Brent Martin, Dr Pramudi Suraweera and a number of PhD and MSc students. For more information, please see http://www.cosc.canterbury.ac.nz/tanja.mitrovic/ictg.html

R.S.V.P to linda.bowman@canterbury.ac.nz by Wednesday 6th June. Limit: 20 participants. Refreshments and lunch will be provided. There is no fee for the workshop.