

iSMART

Intelligent Scheduling Management & Resource
Optimization Technology



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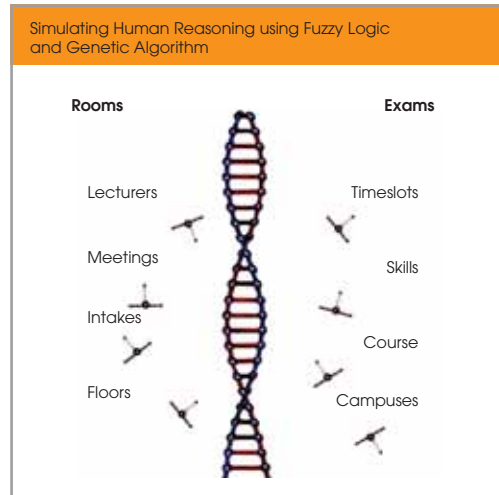
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Intelligent Scheduling Management & Resource
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OVERVIEW

iSMART is a suite of resource planning and scheduling solutions that enables institutes, universities and schools of all sizes to maximize resource utilization, streamline communications and reduce operating costs. These solutions allow for course, lecturer, intake and exam management as well as the timetabling of all educational activities, such as lectures, labs, tutorials, events, staff meetings and exam boards.

iSMART is powered by a sophisticated Genetic-Algorithm and Fuzzy-Logic based engine which automatically plans and assigns all the resources required by an educational institution. Unlike other products, iSMART engine has customisable constraint handling options which can be changed as the institute's business logic changes.

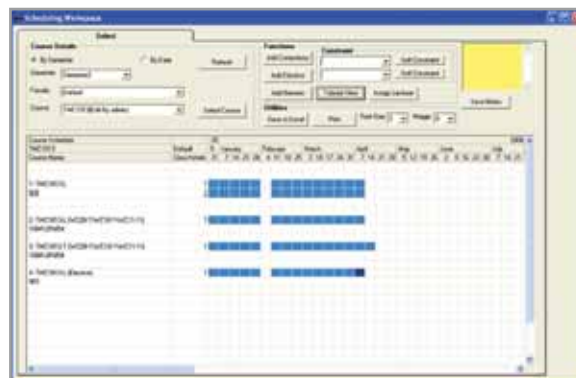


BENEFITS

- Optimization of resources
- Improvement in the level of consistency between schedules
- Increased duration of achievable schedules
- Reduction in the manual work involved in scheduling
- Production of meaningful statistical data on resource management decisions

FEATURES

- **Semester planning.** Create detailed plans of courses, number of enrolments, number of classes per week, holidays, term breaks and exams.
- **Facility management.** Ensure that classes are assigned to the right kinds of room and that the usage of the rooms and other facilities are optimised, thereby reducing operating costs.
- **Lecturer management.** Optimise the lecturers' hours to ensure they teach the subjects they are good at and allow them sufficient blocked time to perform other vital activities such as research.
- **Course management.** Ensure that courses are timetabled so as to support student learning and that there is sufficient provision for popular elective subjects.
- **Exam management.** Produce optimal timetables for exams that prevent barriers to student performance and ensure minimal disruption to other ongoing courses.
- **Meeting and event management.** Ensure that regular and irregular meetings are optimally scheduled whilst taking into account academic commitments.



Semester planning

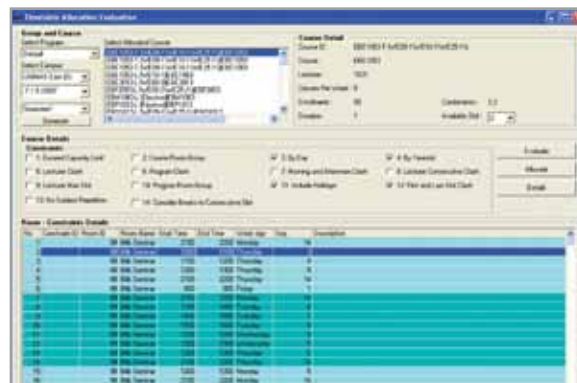
".. We required eight full-time staff just to manage the timetable changes on a daily basis."

- Dr. Peter, UNIMAS

"..Students were dissatisfied with the timing of lectures and the distances they needed to travel between lecture theatres, some students even switched university because of this..."

- Dr. Damith Mudugamuwa, APIIT Sri Lanka

- **Constraint Management.** The system supports over 25 configurable constraints which can be adjusted based on the requirement of the institution
- **Timetable Generation.** Produce the entire timetable within minutes along with suggestions on how to improve it further via *iSMART* timetabling engine.
- **Campus shift slot management.** Provides for the staggering of lectures to ensure that support operations, such as dining, cleaning, security are free of congestion and operate smoothly.
- **Internet ready architecture.** Automatically provides online reports for end users to view their allocations and timetables.



Constraint management



Internet ready architecture

ADVANTAGES OVER OTHER SYSTEMS

- 1 Automated resource planning and allocation engine covering the entire scheduling domain.
- 2 Flexible constraint management adapts to changing business needs.
- 3 Assists educational institutions to prepare optimized long term resource utilization plans

IMPLEMENTATION SUCCESSES

Prior to deploying iSMART UNIMAS had a team of five full-time scheduling personnel and forty part-time personnel from different faculties, with the scheduling process taking four weeks. After implementing iSMART UNIMAS reduced the number of full-time dedicated scheduling staff to just one person.

- Dr. Peter, UNIMAS

"Thanks to iSMART our electricity bills have decreased by 50%"

iSMART has been purchased and installed by secondary and tertiary educational institutes in Malaysia, India, Pakistan and Sri Lanka

TECHNICAL SPECIFICATIONS

Server	<ul style="list-style-type: none">• Pentium 4 with a 3.2 GHz Dual processor and a 40 GB hard drive• Windows 2000 or higher• SQL server 2000 or higher
Workstataion	<ul style="list-style-type: none">• Pentium 4 Machine with a 17 inch monitor preferred.• Windows 2000 or higher

RECOGNITION / AWARDS

Best of Education & Training

WINNER - Multimedia Super Corridor -
Asia Pacific ICT Awards 2004

MERIT AWARD - International Asia Pacific ICT
Awards 2004 Hong Kong



ABOUT CTI

CTI is one of the national leaders in ICT R&D and the subsequent commercialization of products. Our principle area of expertise has traditionally been the development of techniques to extract and represent objects contained in images and the application of Artificial Intelligence techniques to a number of search and recognition problems. CTI is a CMMI Level 3 certified technology development centre and has won more MSC-APICTA and PIKOM-Computimes Awards than any other company or university in Malaysia.



CENTRE OF TECHNOLOGY & INNOVATION

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