

## **Bridging the gap between research and practice: University timetabling in the real world**

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EventMAP Limited was formed in 2002 to exploit the commercial potential of scheduling research carried out by the Automated Scheduling, Optimisation and Planning (ASAP) group at the University of Nottingham. The focus of the company is to develop, market and sell examination and course scheduling software into the Higher and Further Education Sector in Europe, Australia and America. The decision to form a company followed the identification of the obvious market need for a high quality software solution to the scheduling difficulties experienced within the educational sector.

With the introduction of modular course structures by many UK universities, the central production and coordination of the course timetable is essential as more modules have to be timetabled and in such a manner as to offer students maximum flexibility of choice while ensuring teaching space is used effectively. Universities, struggling with rising student numbers have increasingly relied upon automation of this task to produce efficient timetables which satisfy these constraints [1]. Unfortunately, the software assistance currently available is often not effective due to a number of factors.

In many cases systems are specifically designed for the institution in which they were developed [2,3]. Consequently this process often involves significant human interaction. Therefore, within the majority of universities which use "in-house" automated systems, the process of the production of a workable timetable remains firmly with a combination of lecturing and administrative staff. It has been argued elsewhere that this situation has come about due to incomplete investigation of methodologies used by expert timetablers and inadequate representation and utilisation of the knowledge available to automate the process of production of a lecture timetable[8].

Where as commercial off-the-shelf packages, where they have been introduced, have extensive functionality for managing the process, they have not produced the resultant

increase in quality in timetables as originally visualised by the institution. This paper will concentrate on this issue and how the development of eventMAP addresses the issues involved.

The eventMAP product offer the target market a sophisticated and integrated planning tool for the scheduling of academic activities and exams making most effective use of the available time, space and resources. It is readily identifiable that there is a strong need to produce a flexible and user friendly academic scheduling tool which is underpinned with the most up to date technology and design for the resolution of, what effectively is, an age old challenge. The development of eventMAP draws on significant previous research at the interface of operational research and artificial intelligence [4-7] for its automated timetabling engine and follows on from the success of the current examination timetabling product Optime.

## References

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