

GYÁRTÁS-AUTOMATIZÁLÁS FACTORY AUTOMATION

Abstracts



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Cooperation between the University of Pannonia and Flextronics with topic of optimal product planning started in 2011 in the frame of the EnterFlex competition. Flextronics is one of the largest electronics manufacturing services provider in Hungary. Flextronics supports customers in the automotive, clean tech, consumer, computing, enterprise storage, industrial and networking market sectors. Their manufacturing capabilities include design for manufacturing and engineering services, printed circuit board assembly, new product introduction, box-build, high level assembly, build-to-order and configure-to-order services. They provide low volume/high mix assembly, high volume manufacturing and plastics injection molding and assembly capabilities.

Design and scheduling of production are key factors for manufacturing companies to be competitive. The aim of our work was to develop a software tool for production planning supporting Flextronics' processes. First, the business processes of the production steps have been measured using the Business Process Modeling Notations. Several rules were defined and an algorithm was implemented and integrated to the Modeler Framework. This software was implemented earlier for describing business processes, in order to identify the optimum scheduling for supporting the work of managers. The software tool and the algorithm were tested on a large sample data set and the results show very high efficiency. In our presentation Flextronics' production processes, the scheduling algorithm, the implemented software tool and the results will be detailed.