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Talk: "GPenSIM: A New Tool for Modeling and Analysis of Large Industrial Discrete Systems."

Abstract:

At the University of Stavanger, Norway, a tool known as the General Purpose Petri Net Simulator (GPenSIM) was developed to model and simulate large real-life industrial discrete systems. Some major industrial problems in diverse fields were solved using this tool. For example, airport capacity evaluation for the aviation authority, locating and resolving bottlenecks in the fish supply chain, scheduling the drilling processes in the oil and gas industry, optimal scheduling of jobs in grid computing, etc. Some universities worldwide are also using GPenSIM for their research on discrete systems.

In this talk, an overview of the projects carried out using GPenSIM will be presented. Secondly, the design and implementation of GPenSIM will be presented. Thirdly, some of the important features of GPenSIM (e.g., the abstraction of resources, modularization, and parallel execution of modules) will be explained. These features help the modelling of large discrete systems.