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Project Title:	Improving the Usability and Acceptability of a Knowledge Based Support tool for hazard identification
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Department:	Computer Science

Project Description:

The safety of hazardous processing plants is of paramount importance as an accident could cause major damage to properties and/or injury to people. HAZID is a computer system that helps designers and operators of process plants to identify potential design and operation problems given a process plant design. However, there are issues that need to be addressed before such a system will be accepted for common use.

This research project considers how to improve the usability of such a system by developing tools that will ease the task of building models of process plant components and to improve its acceptability by providing tools to test the developed models in order for the users to gain confidence in HAZID's output. The research also investigates the development of computer-aided safety applications and how they can be integrated together.

So far, three novel tools have been developed. The first is called "Model Testbed", which is to test the correctness of models built. The second is called "Safe Isolation Tool", which is to define isolation boundary and identify potential hazards for maintenance work. The third is a Cause & Effect analysis tool that can automatically generate Cause & Effect Table for Process Plants.