(2) Title

A Brief Survey of STAMP-based Hazard Analysis Tools

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Abstract

STAMP(Systems-Theoretic Accident Model and Processes) is a new accident model, and STPA(System Theoretic Process. Analysis) is a STAMP-based hazard analysis method.

STPA is a systematic hazard analysis method. But it requires simple and tedious tasks. It is necessary to use a STAMP dependent data structures, e.g., a control action is assigned to a connection between components and a

process model is defined in a controller. It is also necessary to associate a control action in the control structure diagram with a control action to be analyzed in Step 1. By achieving these simple and tedious tasks manually, it is possible to conduct STPA using a generic drawing tool and a spreadsheet tool. However, by using a STAMP-based tool to support simple tasks, analysts can concentrate on essential analysis, thus some STAMP-based tools are developed.

In this presentation we give a brief survey of existing STAMP base-hazard analysis tools.

Keywords

- (1) STAMP/STPA
- (2) STAMP- based Hazard Analysis Tools
- (3) i-STAMP