CS 6388-01 Model-Integrated Comp | **Petri-Net Design Studio**

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This is a brief introduction to PetriNet Design Studio.

Domain

This studio is developed for Petri-Net model design. Petri-Nets are networks composed of three components: place, transition and arc. The number of tokens in one place is defined as the marking. A transition is said to be enabled if the following two requirements are satisfied: (1) the set of inplaces and the set of outplaces are **both non-empty**; (2) all its inplaces are of at least one token. Fire an enabled transition is to increase one token for each inplace and decrease one token for each outplace. A detailed introduction to concepts regarding Petri-Nets can be accessed at [1].

Usage

Petri-Net is a mathematical modeling language for the description of distributed systems [1]. It is usually applied to model discrete parallel network. An example is website communication: places represent websites and transitions are tunnels or routes. Messages are passed through the network as tokens. Only when one transition is enabled, that is, the transition is connected by a certain number of upstream websites that are holding the information desired by some downstream websites, can this transition be fired. Petri-Nets can also model state machines, marked graphs and workflows.