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Semantic extended representation approach of DEVS model

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Abstract

Based on general theory, DEVS is an effective and module modeling specification. For the problem of lacking capability of current model representation approaches to describe context and support semantics reuse and composition of simulation model, a Semantic Extended DEVS (SEM-DEVS) model representation approach was proposed. On the base of DEVS, experiment frame and semantic extended port of model were extended to SEM-DEVS. Stricter request to describe the behavior of model was proposed in SEM-DEVS. Logic relationship and match method of experiment frame and semantic extended port of model was brought forward base on formal definition of SEM-DEVS. An implement of SEM-DEVS was proposed, in which experiment frame and semantic extended port were both represented by logic formulas.

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Author keywords

DEVS; Model representation; Semantics; Simulation model

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