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Authors:

Rumpa Hazra

Shouvik Dey

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Abstract

Modeling of real time software systems (RTSS) consist of different components with UML 2. 0 leads to a design model using various diagrams. To get a consistent model, a consistency concept for different diagrams type is needed that takes into account real time constraints. Ensuring consistency of The Unified Modeling Language (UML) model is very crucial as it is effect to the quality of UML model and directly gives impact to good implementation of Information System. Although there are increasing researches on consistency management, there is still lack of researches of consistency driven by Use Case. With this motivation, in this paper, we have proposed few consistency rules between Use Case, Sequence and Timing diagrams which focus on the establishment of timing constraints. Elements of each diagram involved in the proposed rules are formalized. Using an example, we show how the diagrams fulfill our proposed consistency rules.

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Index Terms

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Keywords

Real time software systems UML Consistency Real time constraints.