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Journal of Systems and Software

Volume 84, Issue 6, June 2011, Pages 1008-1021

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<https://doi.org/10.1016/j.jss.2011.01.052>

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Abstract

This article presents an integrated framework for the development of home automation systems following the model-driven approach. By executing model transformations the environment allows developers to generate executable code for specific platforms. The tools presented in this work help developers to model home automation systems by means of a domain specific language which is later transformed into code for home automation specific platforms. These transformations have been defined by means of graph grammars and template engines extended with traceability capabilities. Our framework also allows the models to be reused for different applications since a catalogue of requirements is provided. This framework enables the development of home automation applications with techniques for improving the quality of both the process and the models obtained. In order to evaluate the benefits of the approach, we

conducted a survey among developers that used the framework. The analysis of the outcome of this survey shows which conditions should be fulfilled in order to increase reusability.



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Keywords

Home automation; Model driven; Code generation

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