

Title (en)  
AUGMENTATION OF VIRTUAL MODELS

Title (de)  
VERGRÖßERUNG VON VIRTUELLEN MODELLEN

Title (fr)  
AUGMENTATION DE MODÈLES VIRTUELS

Publication  
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Application  
**EP 17733946 A 20170103**

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Abstract (en)  
[origin: WO2017117607A1] A method is disclosed for automatically generating an augmented model of a physical component. The method includes: reading an input model into a processor, the input model describing a nominal mode of operation for a physical component modeled by the input model; parsing with the processor the input model to generate a parse thereof; analyzing with the processor the parse of the input model; and automatically writing with the processor an augmented model for the physical component from the input model based on the analysis, the augmented model describing both (i) the nominal mode of operation for the modeled physical component and (ii) at least one alternate mode of operation for the modeled physical component which is different from the nominal mode of operation. Suitably, the analyzing is conducted according to at least one of a first approach and a second approach. The first approach operates to detect if the input model is susceptible to one or more kind of fault including: (i) catastrophic, (ii) power flow, and (iii) parametric kinds of faults; and the second approach operates to match specific facets of a component's dynamic behavior, and appropriately modify those matched facets to reflect the dynamics of a fault mechanism.

CPC (source: EP)  
**G06F 30/20** (2020.01); **G06F 2111/10** (2020.01)

Citation (search report)  
• [XI] US 2015051890 A1 20150219 - SAHA BHASKAR [US], et al  
• [I] TOMONORI HONDA ET AL: "A Simulation and Modeling Based Reliability Requirements Assessment Methodology", VOLUME 7: 2ND BIENNIAL INTERNATIONAL CONFERENCE ON DYNAMICS FOR DESIGN; 26TH INTERNATIONAL CONFERENCE ON DESIGN THEORY AND METHODOLOGY, 17 August 2014 (2014-08-17), XP055640083, ISBN: 978-0-7918-4640-7, DOI: 10.1115/DETC2014-35482  
• [I] JOHAN DE KLEERR ET AL: "Fault Augmented Modelica Models", PROCEEDINGS OF THE 24TH INTERNATIONAL WORKSHOP ON PRINCIPLES OF DIAGNOSIS, 4 October 2013 (2013-10-04), pages 71 - 78, XP055640461  
• See references of WO 2017117607A1

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