Review of Doctoral Thesis

Thesis Title: Conceptual Modeling for XML

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Review

Introduction

Conceptual modeling for XML is the current research issue. This work provides novel models and describes an improvement of these models.

We can distinguish these four publications in proceedings of international conferences:


; four articles in local proceedings, one technical report, and one local book. Three from these articles cover the main part of this thesis.

In the first chapter, author provides an introduction and motivation for conceptual modeling in world of XML. The second chapter depicts an introduction for conceptual modeling, the third chapter provides the state-of-the-art in the research field. Chapters 4 and 5 include both novel models: platform independent XSEM-ER and platform specific XSEM-H. These models include modeling more complex XML structures as well as a formal background. Chapter 6 shows how to translate XSEM views to a representation in the XML Schema language.

Questions

1. In Chapter 3, author proposes 10 requirements for a conceptual model and he shows that up-to-date ER-based models do not meet all these requirements. In Section 3.4, author provides a comparison of the novel models with UML-based approaches. The UML-based approaches often apply model-driven architecture as well, therefore, it is important that author describes an improvement of the proposed models. However, it is not clear if the novel models meet the mentioned requirements. Can you clear this issue?

2. Can you provide a relation to other works in this research field, e.g.:


3. In Conclusion, author proposes an application of XSEM-ER and XSEM-H for the data normalization. Can you provide a relation to other works in this field, e.g.:


Notice: page 13: Model-Driver Architecture
Conclusion

The text of this work is clear and language is good. This work includes own novel conceptual models for XML. Four articles have been published in proceedings of international conferences, author proved the ability of the stand-alone work. I recommend this work for the defense.

In Ostrava, 26th August 2008