

Author 1, Author n

Title

Technical Report

Advisor University of Heidelberg
Prof. Dr. Barbara Paech, Astrid Rohmann

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Abstract

Place the abstract in this section.

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1 Introduction

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1.1 Subsection

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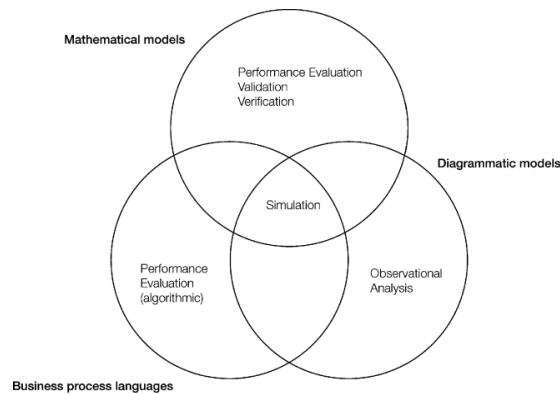


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2 Richtiges Zitieren

1. Die Seminararbeit ist eine eigenständige wissenschaftliche Arbeit und wird auch nach den Regeln einer wissenschaftlichen Arbeit erstellt (vgl. [2]), insbesondere heißt das, dass die Regeln für:

1. Richtiges Zitieren

- Zitierpflicht
- Zitierregeln
- Typen von Zitaten
- Zitierformen

2. Literaturangaben

3. eine gut strukturierte Arbeit

beachtet und eingehalten werden.

3 Chapter

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4 Testing with Transition Systems

4.1 Introduction

Acceptance tests are used to make sure that clients receive exactly the kind of software that they previously specified within the order contract submitted to the software vendor. Oftentimes what was specified and what was implemented in the end does not match entirely. The software vendor therefore faces traceability problems to track which requirements could be covered in which tests. How does one make sure that each atomic functional and robustness requirement specified is covered in the requirements' implementation?

To solve this, the process of formal definition of requirements and matching acceptance tests must be brought closer together, testing should already be possible in early stages of development, to be precise during the specification phase already. To automatically derive test scenarios from means of the specification area transition systems are used. They help to generate test paths through possible combinations of fine-grained functional requirements. An equivalent approach can be used to derive robustness tests as well. In this process requirements can furthermore be tested on their consistency and integration and eventually can be refined further.

For this purpose the two approaches [3] and [4] were analyzed. While [3] was given in advance by the advisors, [4] was discovered through an extensive literature search shown in section 4.2. Both approaches will be explained in the following sections 4.3 and 4.4 and applied to the movie management software example. A comparison between the two approaches will be drawn using a synthesis matrix shown in section 4.5. The main results of testing with transitions systems will be summarized in section 4.6.

Please refer to the glossar in order to receive a common understanding of the following terms used in the sections below: contract, operation, test criterion, test objective, test scenario, use case, use case scenario.

4.2 Literature Search

4.3 Approach 1

4.3.1 Description of Approach 1

4.3.2 Application of Approach 1

4.4 Approach 2

4.4.1 Description of Approach 2

4.4.2 Application of Approach 2

4.5 Comparison

4.6 Conclusion

5 Conclusion

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