Parallel Discrete Event Simulation in Haskell

A functional approach

Jonathan Thaler
Thorsten Altenkirch
jonathan.thaler@nottingham.ac.uk
thorsten.altenkirch@nottingham.ac.uk
University of Nottingham
Nottingham, United Kingdom

ABSTRACT

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1 INTRODUCTION

main message: PDES needs rollback of events which is particularly easily achieved in Haskell because: 1. it has persistent immutable data-structure resulting in a new version after an update where one still can hold the old version, 2. one can restrict side-effects to one which are guaranteed to be able to rollback and not having an effect on the real-world e.g. IO

Contribution: first ones to describe haskells immutable data properties and STM to implement PDES

2 RELATED WORK

In his masterthesis [1] the author investigated Haskells parallel and concurrency features to implement (amongst others) *HDES*, a lazy PDES framework.

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