


Specification, Implementation, and Complexity of Replicated Set with Diff

Hengfeng Wei

State Key Laboratory for Novel Software Technology, Nanjing University, China


hfwei@nju.edu.cn

 <https://orcid.org/0000-0002-0427-9710>

Huang Yu

State Key Laboratory for Novel Software Technology, Nanjing University, China

yuhuang@nju.edu.cn

 <https://orcid.org/0000-0001-8921-036X>

Jian Lu

State Key Laboratory for Novel Software Technology, Nanjing University, China

lj@nju.edu.cn

Abstract

2012 ACM Subject Classification

Keywords and phrases Replicated set

Digital Object Identifier 10.4230/LIPIcs...

1 Introduction

2 Preliminaries

2.1 Observed-Remove Set (OR-Set)

$$\mathcal{F}_{\text{orset}}(\text{rd}, E, \text{op}, \text{vis}, \text{ar}) = \{a \mid \exists e \in E. \text{op}(e) = \text{add}(a) \quad (1)$$

$$\wedge \neg \exists f \in E. \text{op}(f) = \text{rm}(a) \wedge e \xrightarrow{\text{vis}} f\}. \quad (2)$$

3 Replicated Set with Set Difference (Diff-Set)

3.1 Specification

Consider two replicated sets A and B . We define the specification of the set difference $A \setminus B$ on the *product* of the abstract executions of

3.2 Protocol

4 Related Work

5 Conclusion and Future Work

References



© Hengfeng Wei, Yu Huang, and Jian Lu;

licensed under Creative Commons License CC-BY

Leibniz International Proceedings in Informatics

LIPICS Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany