Software Engineering Seminar

Delta Debugging

– DEJAVU –

Description

In *delta debugging*, one tries to isolate a minimal root cause of an occurring error by removing all elements that are not relevant to the failure. In a multi-threaded environment, DEJAVU makes it possible to record a thread schedule and replay it in a deterministic way. Then, comparing successful and unsuccessful schedules, DEJAVU uses delta debugging to narrow down the exact location of the occurred error.

The goal of this topic is to examine delta debugging in a multi-threaded environment and the mechanics of the tool DEJAVU in particular.

References

[1] Jong-Deok Choi and Andreas Zeller. Isolating failure-inducing thread schedules. In *Proceedings of the 2002 ACM SIGSOFT International Symposium on Software Testing and Analysis*, ISSTA '02, pages 210–220, New York, NY, USA, 2002. ACM.

[2] A. Zeller and R. Hildebrandt. Simplifying and isolating failure-inducing input. *IEEE Transactions on Software Engineering*, 28(2):183–200, Feb 2002.

Contacts

Simon Heiden (`heiden@informatik.hu-berlin.de`)
Software Engineering Group
Institut für Informatik
Humboldt-Universität zu Berlin