The Effect of Fault Dropping on Fault Simulation Time

Rong Pan, Nur A. Touba, and Edward J. McCluskey

CRC Technical Report No. 93-5

(CSL TR No. 93-590)

CENTER FOR RELIABLE COMPUTING

Computer Systems Laboratory

Departments of Electrical Engineering and Computer Science

Stanford University, Stanford, California 94305-4055

ABSTRACT

The effect of fault dropping on fault simulation time is studied in this paper. An experiment was performed in which fault simulation times, with and without fault dropping, were measured for three different simulators. A speedup approximately between 8 and 50 for random test sets and between 1.5 and 9 for deterministic test sets was observed. The results give some indication about how much fault dropping speeds up fault simulation. These results also show the overhead of an application requiring a complete fault dictionary.

TABLE OF CONTENTS