

Experiment

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Modeling Cost

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Modeling Fault-detection

- Per-test basis
 - Given a program P and
 - Its modified version P'
 - Identify those tests that are in T and reveal a fault in P' , but not in P , Mod T
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Experimental Design

- 6 C programs
- Test suites for the programs
- Several modified versions



Versions and Test Suites

- Two sets of test suites for each program
 - Edge-coverage based

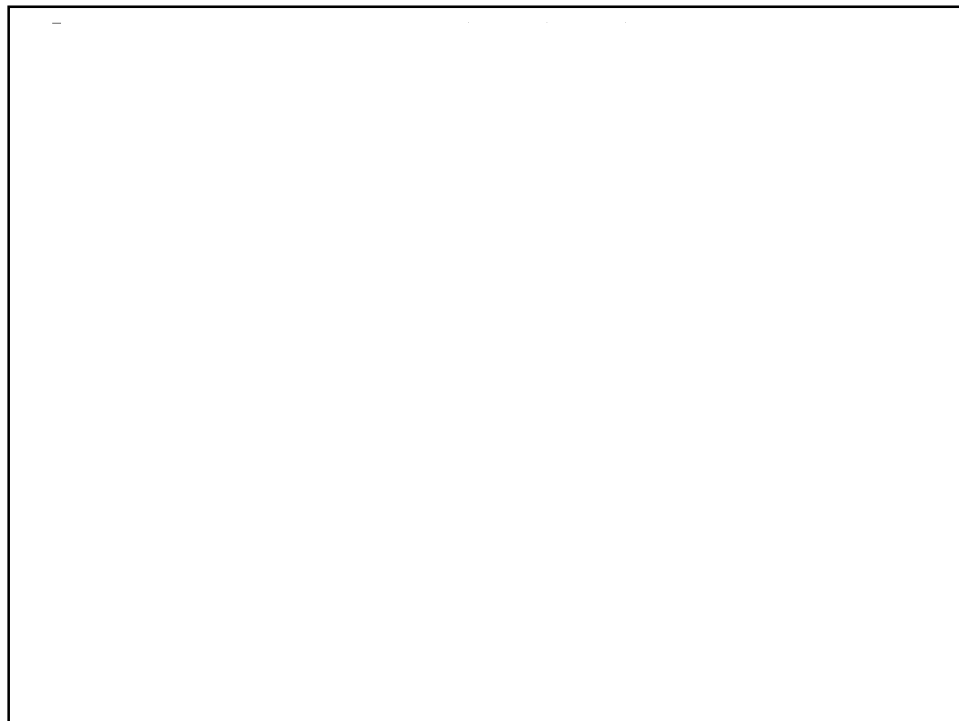
Measured Quantities

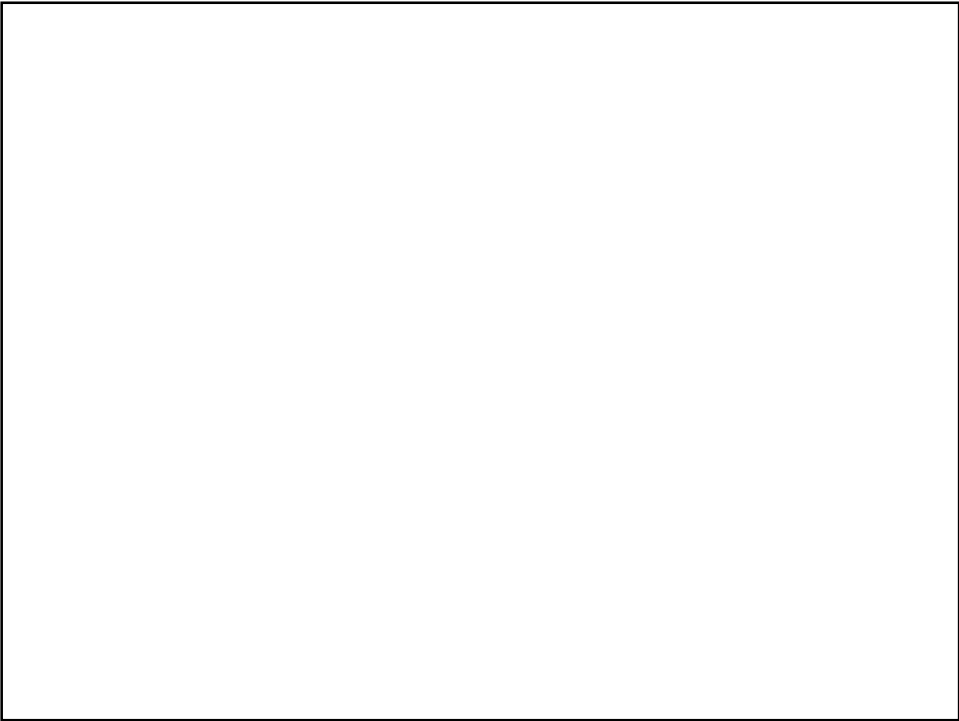
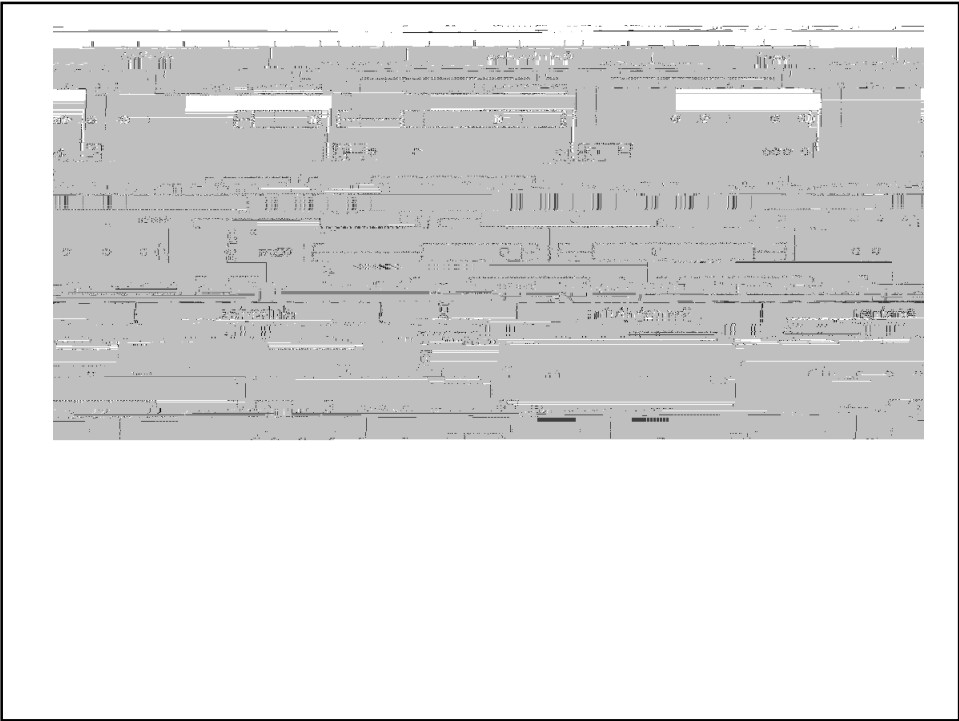
- Each run
 - Program P
 - Version P'
 - Selection technique M
 - Test suite T
- Measured–
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Number of runs

- For each subject program, from the test suite universe
 - Selected 100 edge-co2()0.verage a ed

Fault-detection Effectiveness





Conclusions

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