Early shape analysis work

Research Contributions

The object of our research is to create tools for documenting and reasoning about complex data structure invariants. The data structure has very complex invariant and implementation code is small.

The data structure invariants are effective in finding critical bugs.

The techniques presented on this poster will lead to an effective tool for debugging software.

Future work

Conclusions

The techniques presented on this poster will lead to an effective tool for debugging software.

- Data structure invariants effective in finding critical bugs
- DPLL good test case for developing data structure invariant verification techniques
- Biggest challenge is dealing with productivity issues in developing correctness proofs.
- Without an IDE, we guastimate it takes hundreds of days of verification for each day of development.

Acknowledgements: The author would like to thank Scott Smith, for his feedback on this poster.