

Scaling Formal Verification

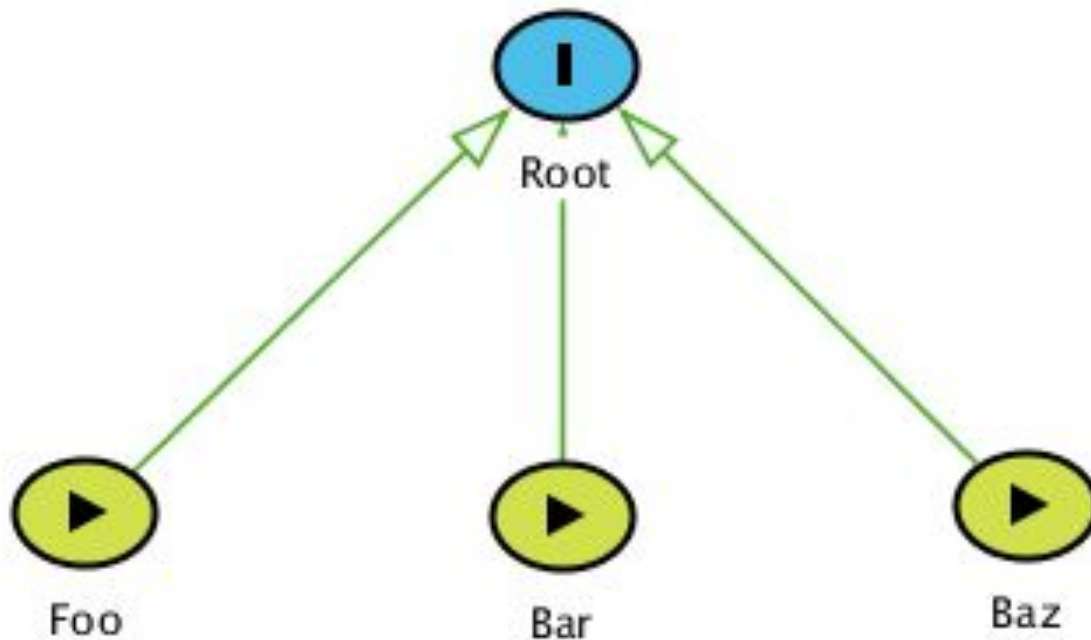
Parallel Analysis of Functions

Inspiration: Infer

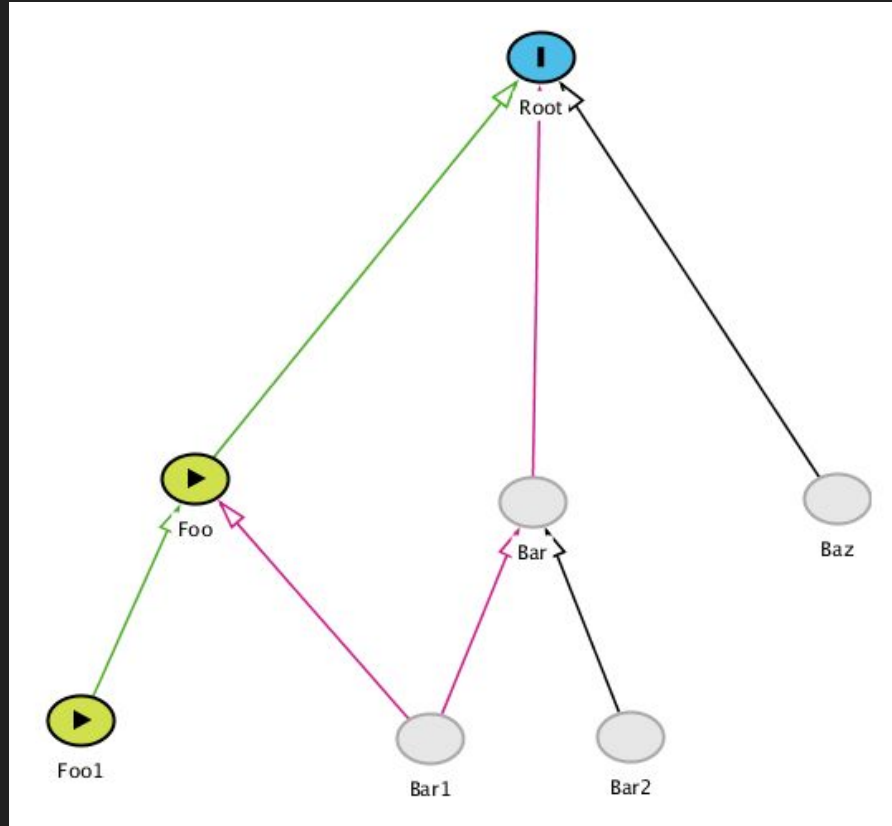
- Static analysis tool developed by Facebook in order to find bugs in mobile apps
- Parallel analysis of functions
- Incremental analysis for CI pipelines



Parallel Analysis



Incremental Analysis



GSOC Contributions

- Extended upon existing block analysis infrastructure to create an Infer-like experience in CPAchecker
- Parallel Decomposition
- We extend upon the infer approach of verification with incremental strengthening of functions
- Currently has support for predicate analysis



Possible future features

- Block granularity controls
- Incremental analysis and storage
- A more robust messaging system to replace our current “actor” model
- Support for more CPAs