CPAchecker-BAM

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Block Abstraction Memoization:
divides a program into blocks (functions, loops),
stores the abstraction for each block in a cache,
reuses cached abstractions whenever possible

Value Analysis:
tracks simple assignments

Predicate Analysis:
uses predicates from interpolants
CPAchecker-BAM

BAM with Value Analysis and Predicate Analysis

Value Analysis Refinement

Predicate Analysis Refinement

Counterexample Check

Value Analysis

Predicate Analysis

spurious

feasible

TRUE

FALSE
SV-COMP’12: BAM + Predicate Analysis

New: Value Analysis supports BAM

New: BAM with an extension for recursion