

The Plan

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The Problem

The Solution (1)

- ▶ counting for arrays
- ▶ restrict our case to arrays with a finite domain (booleans)
- ▶ splitting them with the assumptions made by the model
- ▶ this in the smt preprocessor written in OCaml (codename counting-smt)

The Solution (2)

- ▶ first check that this property probably holds in bmc.
- ▶ second strengthen it so as it is provable via kind.
- ▶ fix sally so as IC3 works with generic smtlib solvers (once the yices-specific bits are sorted out)
- ▶ come up with a plan for IC3 with arrays (as in check there is no surprise)
- ▶ solve it automatically

The Solution (3)

four subsolutions

- ▶ implement that in yices
- ▶ implement that in z3 (?)
- ▶ implement an api in counting-smt
- ▶ forget about speed