

SWORD v0.2

Module-based SAT Solving

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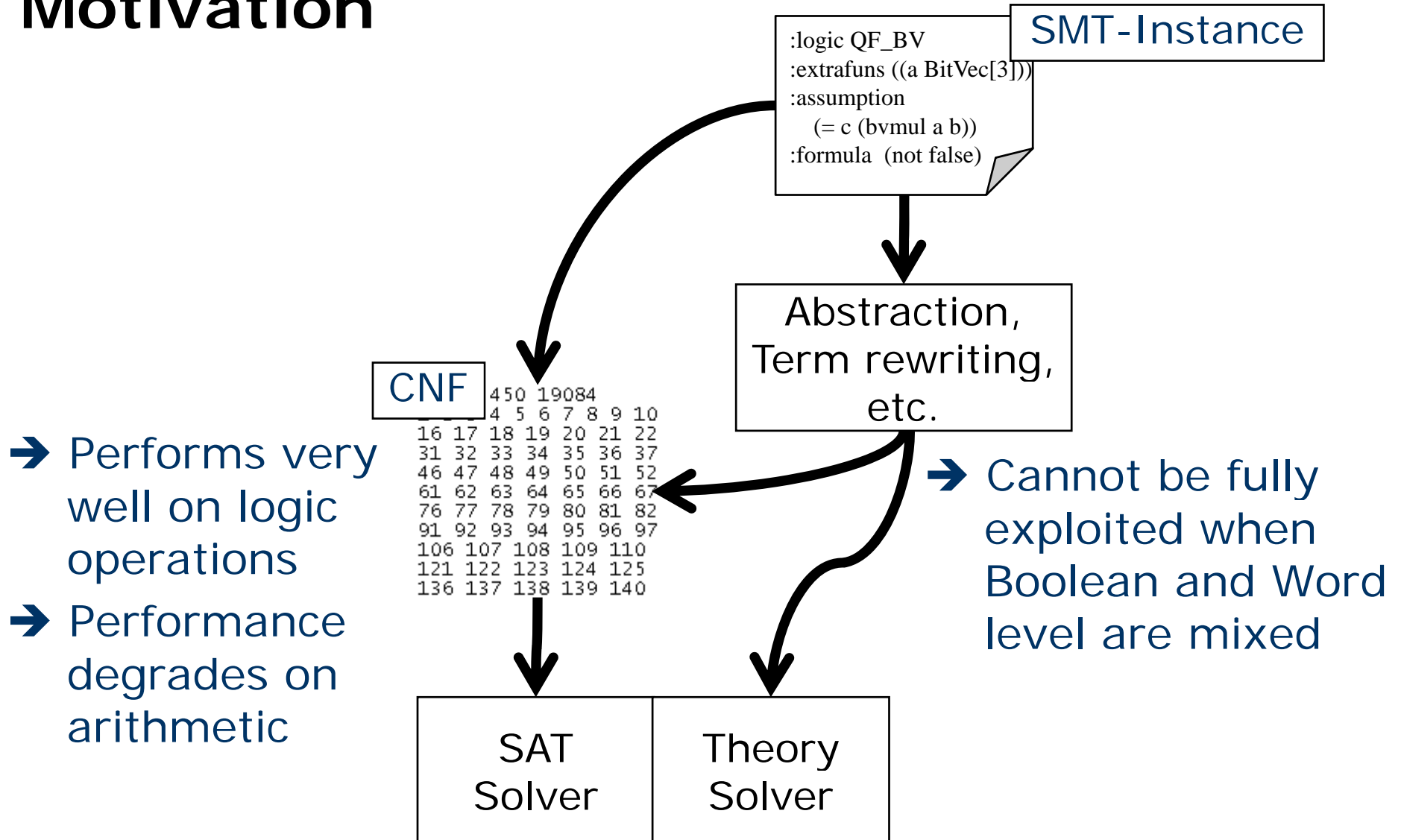
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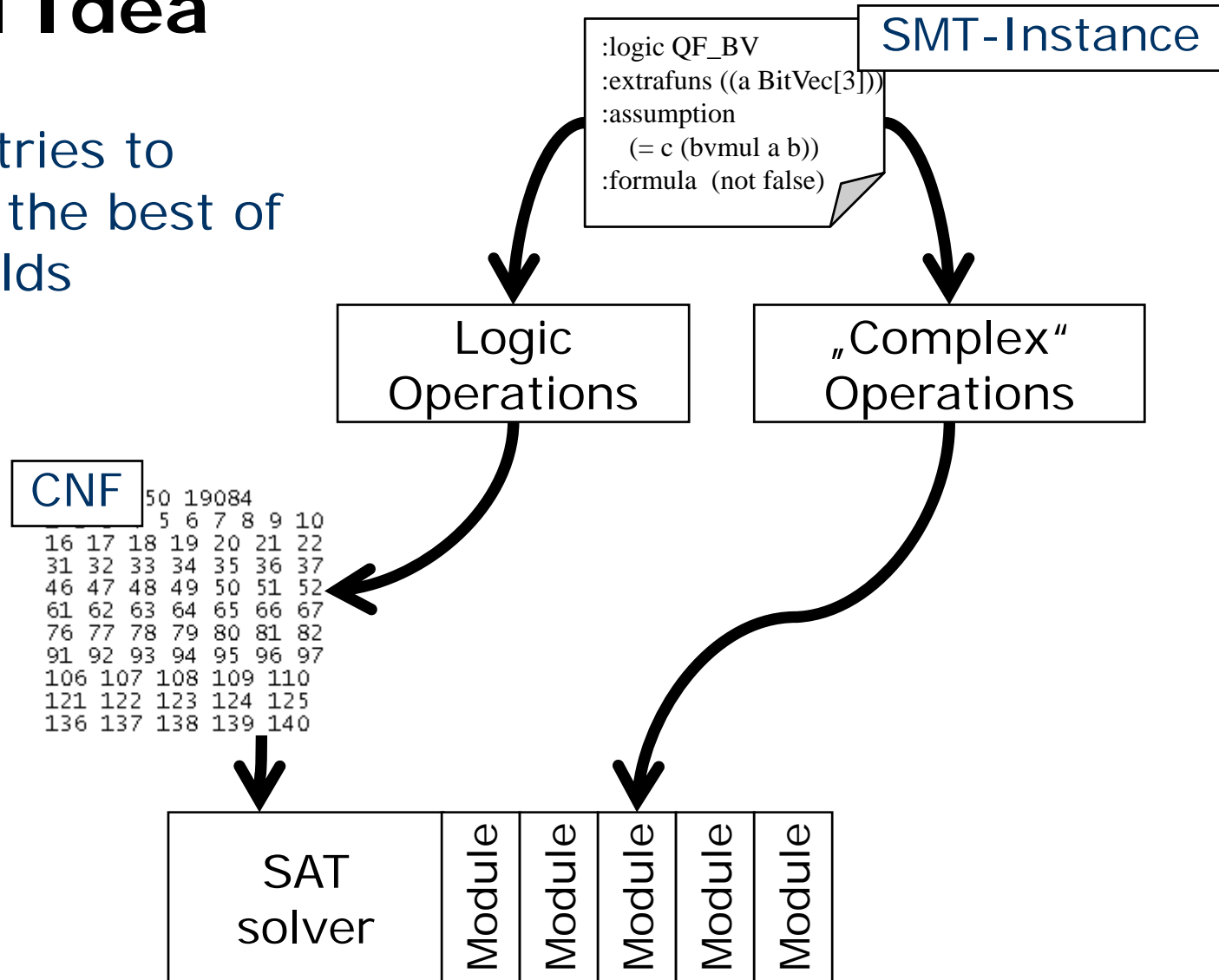


Motivation



General Idea

→ SWORD tries to combine the best of both worlds

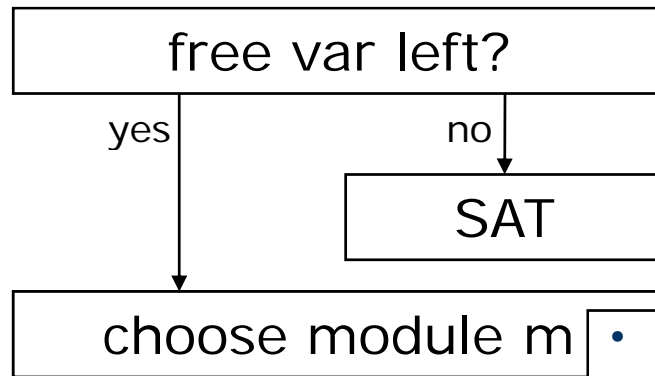


Flow

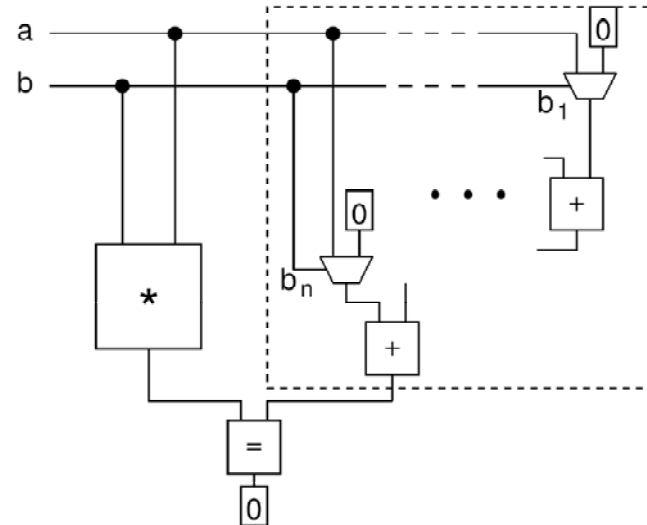
global

interface

local

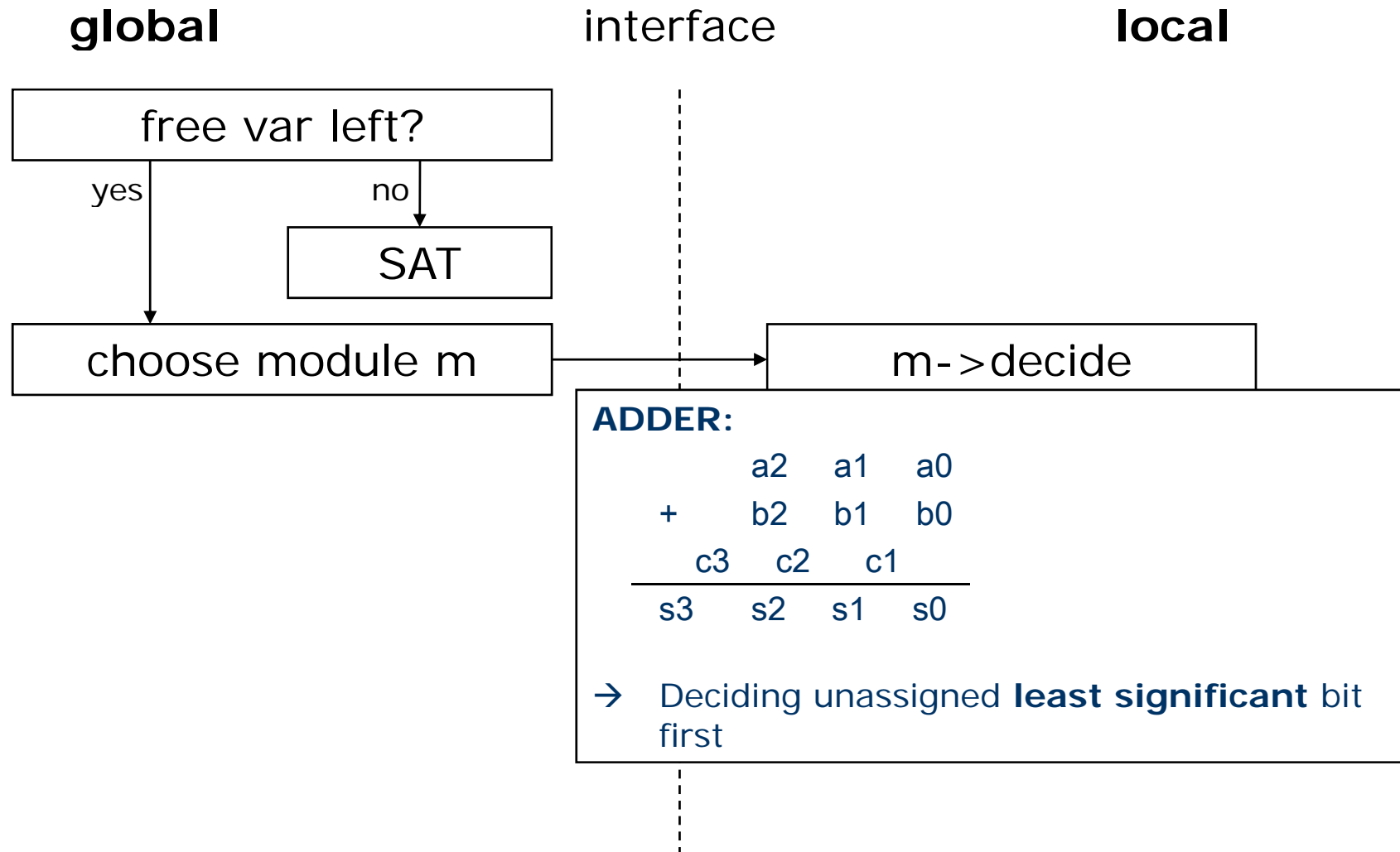


- Which module makes the best decision?

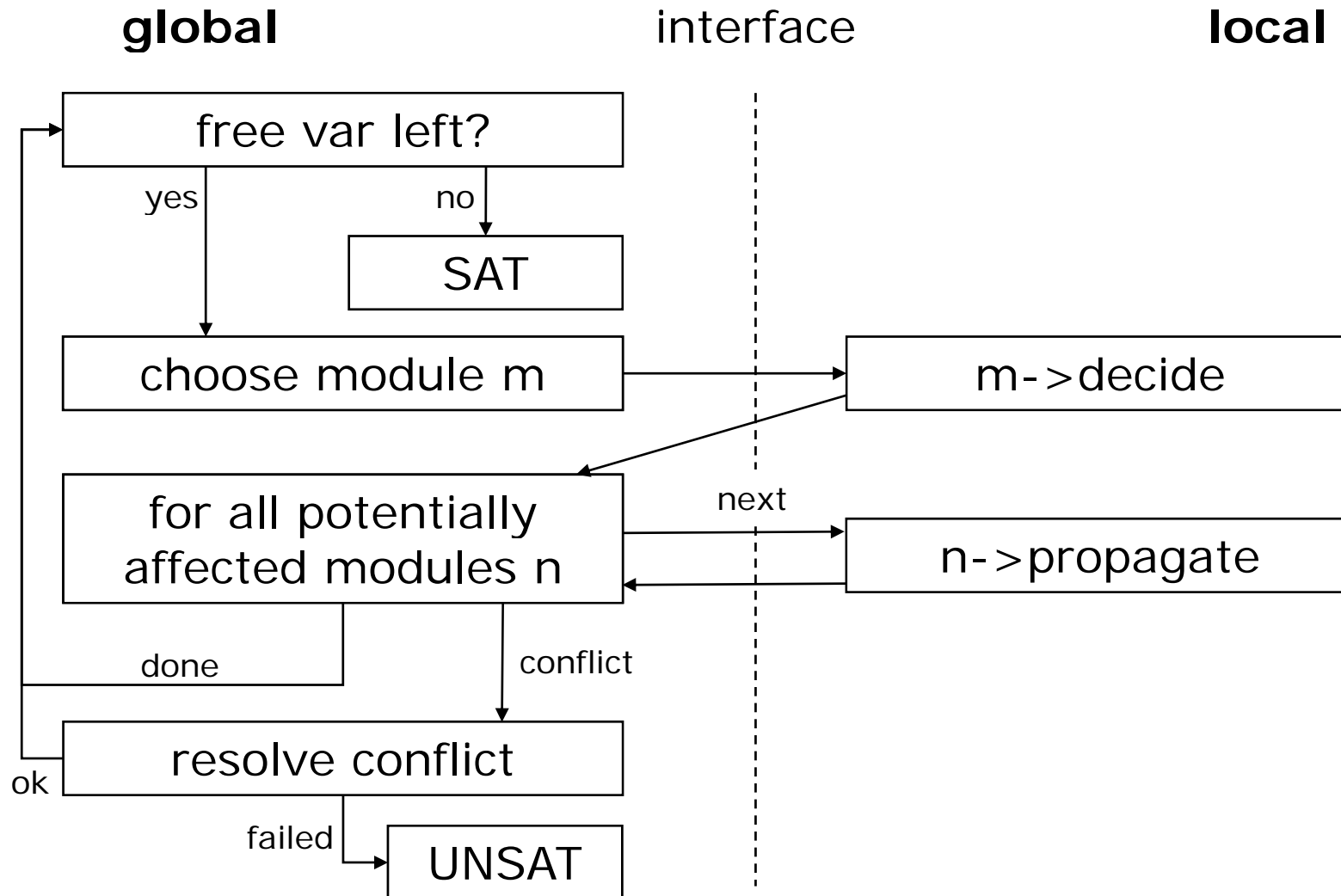


- Multiplier often better than an MUX-gate

Flow



Flow



Implementation Details

- Modules implemented:
 - Addition
 - Multiplication
 - Shift
 - ITE-operation
- MiniSat is used as underlying SAT solver
- Currently no Pre-Process (Abstraction, Term rewriting, etc.) took place
 - ➔ Left for Future Work
- SWORD participates in the QF_BV division

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