One representation to rule them all

Paul Biggar and David Gregg

Department of Computer Science and Statistics
Trinity College Dublin

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One representation to rule them all

SSA
One representation to rule them all
One representation to rule them all
One representation to rule them all

Lovers

Begrudgers
One representation to rule them all

- Fast
- Efficient

*(pick two)*
Conditional Pointer Aliasing and Constant Propagation

Anthony Pioli.
Constant Propagation with Conditional Branches
Mark N. Wegman, F. Kenneth Zadeck
Current

Alias analysis → SSA → SCCP

or

Incremental alias analysis

Alias analysis → SSA → SCCP
Step 1: SSA construction via Symbolic Execution
- (See paper)
- Tested on one 25-line program
- Might actually work in general
Step 1: SSA construction via Symbolic Execution
Step 2: ...
One representation to rule them all

Step 1: SSA construction via Symbolic Execution
Step 2: ...
Step 3: Profit

Thanks

- SSA 2009 participants
- FIT reviewers