

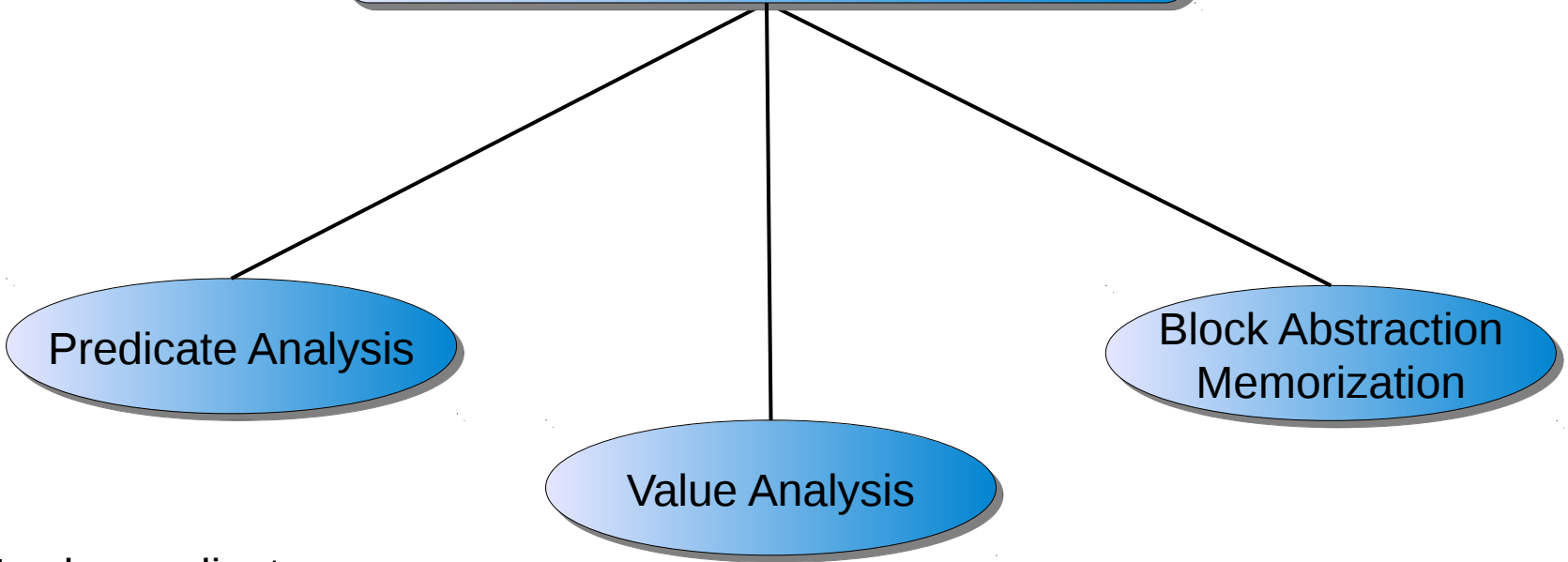
# CPA-BAM-BnB: Block-Abstraction Memoization and Region-based Memory Models for Predicate Abstractions



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**ISPRAS**

# CPA-BAM-BnB



- Tracks predicates

`var > 0 && *p < var`

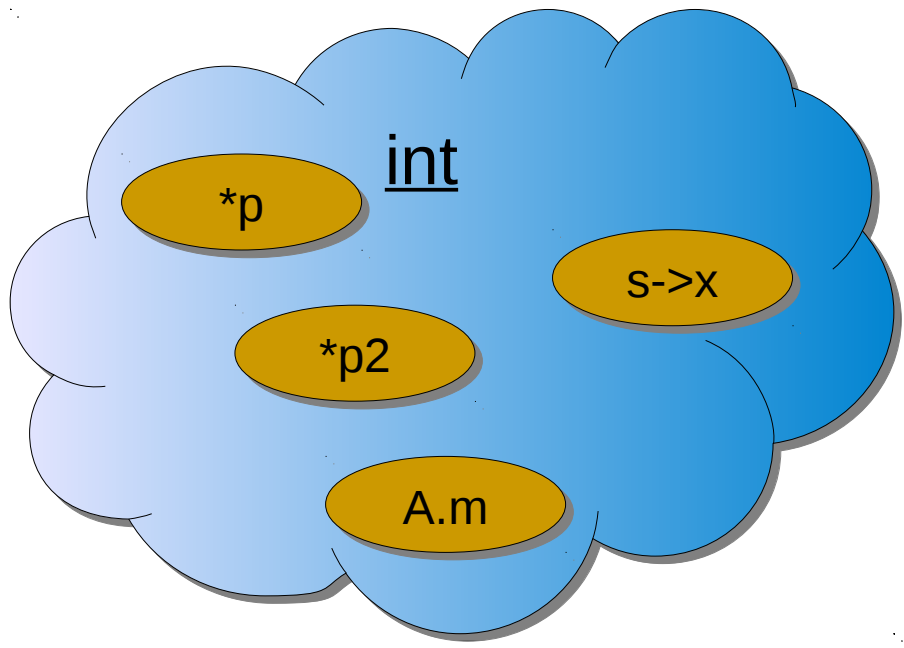
Memory Model

- Tracks explicit values

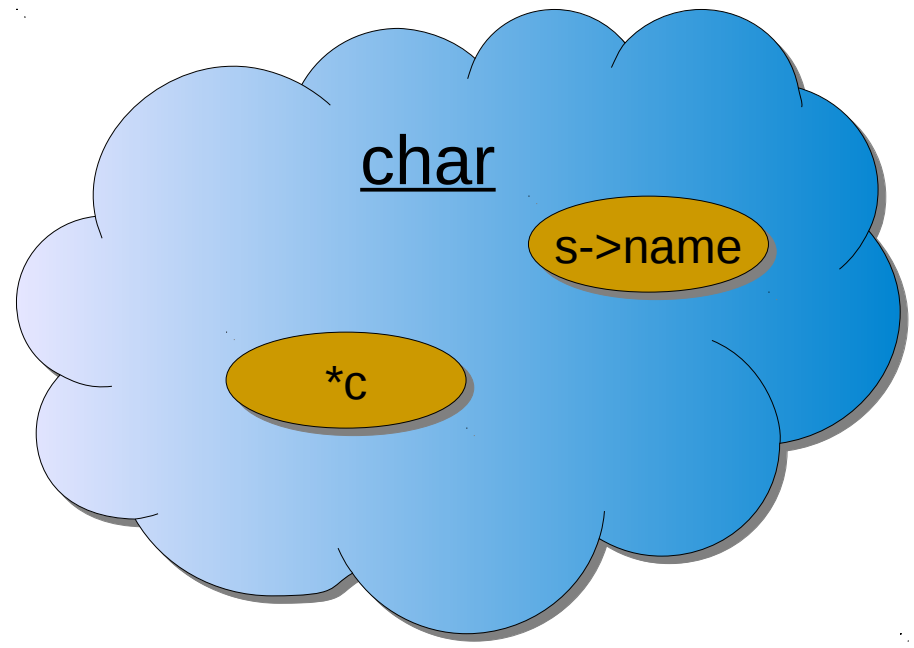
`i = 0 && j = 1`

- Reuses cached abstraction

# Memory Model

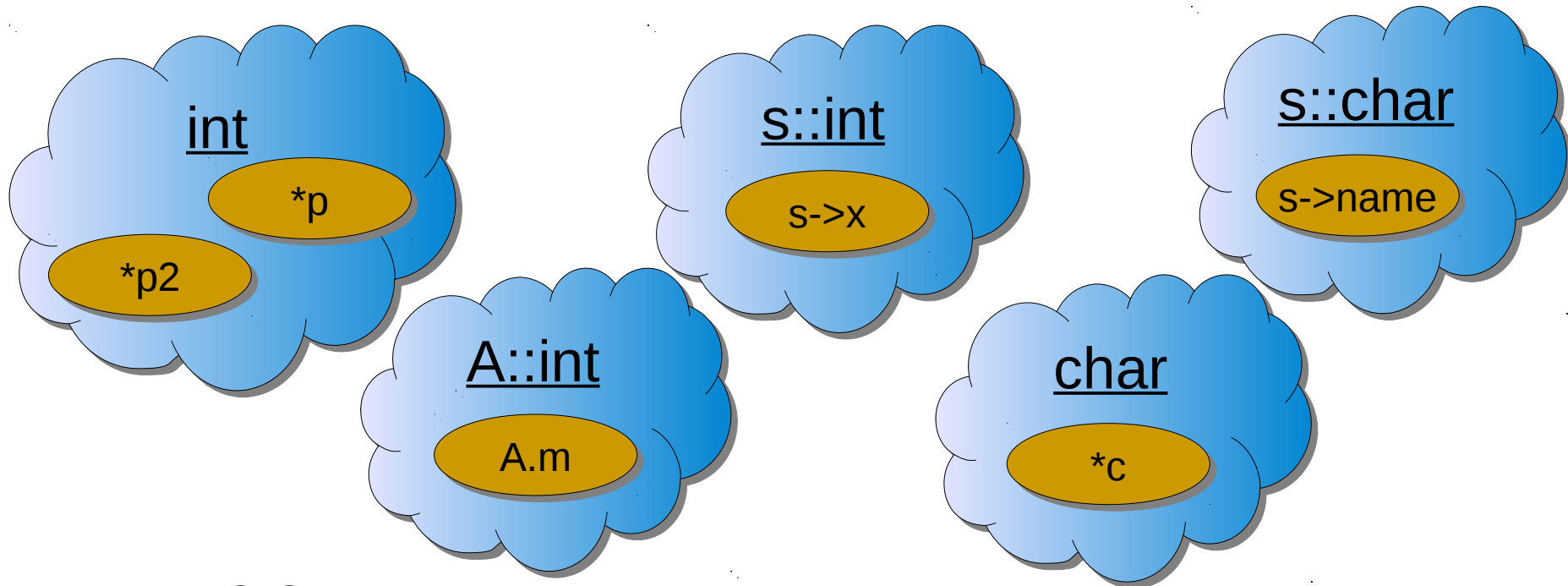


$p \neq p2 \neq \&A.m \neq \&(s \rightarrow x) ?$



$c \neq \&(s \rightarrow name) ?$

# BnB Memory Model



`p ≠ p2 ?`

# CPA-BAM-BnB-17 vs. CPA-BAM-BnB-18

- Fixed bugs
- Witness printing

	sv-comp17	sv-comp18
Total true	2197	2111
Confirmed true	796	1585
Total false	221	181
Confirmed false	47	129