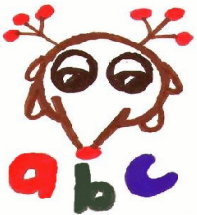


Introducing *abc*

- why we are building it -

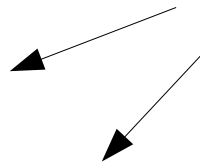


A workbench for AOP research

- Extensions:

- Parametric introductions
- Symmetric class composition (Hyper/J, GenVoca)
- Trace cuts
- Dataflow pointcuts

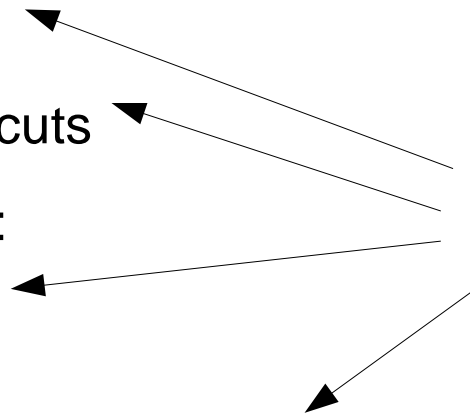
require extensible frontend



- New static checks:

- Pure aspects

require analysis framework



- Optimisations:

- Eliminate runtime overheads for cflow
- Avoid closures in around



Requirements

Syntactic changes should be easy

⇒

Generate parser from grammar

jflex + javacup: parser generator

Frontend framework designed for extensibility:

- Changes to environment type
- Augment existing type objects
- Same override on many existing AST classes
- Override in middle of AST inheritance hierarchy

Polyglot:

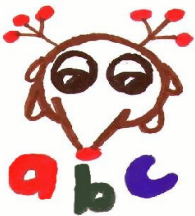
extensible Java compiler

Backend framework:

- Clean intermediate representation
- Rich set of existing analyses
- Easy to plug in new transformations

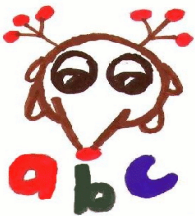
Soot:

*manipulate classfiles,
3-addr IR for analysis and
transformation*



abc team

- Chris Allan - Oxford
(tracecuts)
- Pavel Avgustinov - Oxford
(test harness, privileged, lexer)
- Aske Simon Christensen - Århus
(architecture, decl parents, pattern matcher)
- Laurie Hendren - McGill
(grammar and scanner, initial weaver)
- Sascha Kuzins - Oxford
(around weaver)
- Jennifer Lhoták - McGill
(JavaToJimple, initial weaver)
- Ondrej Lhoták - McGill
(initial weaver, soot class and method handling)
- Oege de Moor - Oxford
(frontend, intertype weaver)
- Damien Sereni - Oxford
(cflow optimisations)
- Ganesh Sittampalam - Oxford
(pointcut matching, advice weaver, optimisations, class and method handling)
- Julian Tibble - Oxford
(EAJ language extensions)



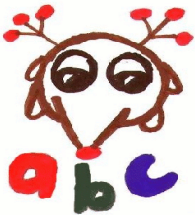
Suggested schedule

Morning:

introductory talks about abc
(why, what and how)

Afternoon: discuss

- difficult points in language design
- plans for future of AspectJ
- opportunities for ajc/abc collaboration



Plan for the morning

- Architecture (Aske Simon Christensen)
- Scanner and Parser (Laurie Hendren)
- Polyglot and frontend (Oege de Moor)
- Introduction to Soot (Ondrej Lhoták)
- Advice weaver (Ganesh Sittampalam)
- Around weaver (Sascha Kuzins)
- Language extensions (Julian Tibble)
- Current status and plans (Oege de Moor)

