abc summary

- where we are and where we're going -
abc and abcTests.xml

abcTests.xml includes all of ajcTests.xml, plus new tests

running abc on abcTests.xml:
865 passed
19 failed (9 from ajcTests.xml)
103 skipped

reasons for failure:
9 abc bugs
6 polyglot bugs
1 javaToJimple/soot bug
3 queries for ajc

reasons for skip:
18 no incremental compilation for aspects & aspect-aware classes
34 options
9 not compiled by javac
2 package dir mismatch
34 “known limitation” of ajc
6 scanner

skipped options: incremental, usejavac, strict, X0codesize, extdirs
skip compile attribute: aspectpath
Initial performance experiments

Speedup factor of abc over ajc (JIT)

5.2.2 discrepancy due to architecture-specific JIT optimisations
Development plans

- Eliminate bugs
- Improve compilation speed
- Java 1.5 support
- *J tagger for performance measurement
- Dava support for decompiling AspectJ to Java
- Visualisation in Eclipse
Future optimisations & analyses

- Further around optimisations:
  - smart cycle breaking, inliner
- Interprocedural analysis for eliminating cflow overheads
- Test for pure aspects
- Slicer for AspectJ
Future language extensions

• Semantic pointcuts:
  – predicted cflow
  – dataflow pointcuts
  – tracecuts

• Feature composition
  – CCC/Plainway ideas integrated with AspectJ