

Compiler test suite working group

General

- All compilers without “good” DWARF should be avoided
 - Like PGI
- DWARF is not for just gdb (debuggers) anymore
 - You need to drag DWARF through the optimization layers
 - Performance tools require DWARF, too
 - Data profiling (see data profiling working group)

Compiler test suites

- All compilers and debuggers have a test suites
- libabigail to compare the quality of DWARF
 - Application with different compilers
 - Compare the object files
 - Checks types, functions and layouts
- No real test suite by the DWARF team
 - DWARF should be on optimized codes
- Small test cases (J. M-C) to check quality of DWARF

“Good” DWARF

- Every function should be in there
 - Even inlined functions
 - Fused operations should not be moved to line 0 in DWARF (LLVM)
- Lambdas (only sometimes listed as inlined functions)
- System libraries should contain DWARFs (libc, libstdc++, libmpi,...)
- Wishlist:
 - Why not also functions that are never called but in source
 - Sun compiler commentary (Cray has something similar)
 - DWARF for exception handlers
 - Some option to get some decent line mapping information that does not significantly reduce performance (one option for analysis HPC codes, one option for debugging HPC codes)