



FLANG UPDATE

Steve Scalpone, LLVM Developers' Meeting, October 7, 2020

FLANG

- ▶ Flang started as a multi-year collaboration between the NNSA labs and NVIDIA
 - ▶ Open-source Fortran compiler since May 2017
 - ▶ Currently supported by the NNSA labs and the DOE ECP project
 - ▶ And supported by many more people, individuals and organizations
- ▶ Flang as an LLVM subproject
 - ▶ Flang was accepted as an LLVM subproject over a year ago
 - ▶ The source code was added to the monorepo last spring, led by Arm
 - ▶ Over 100k lines of code initially, now over 160k lines, including tests

FLANG

Infrastructure

- ▶ CMakefiles upgraded and evolved yet preserving the features important to flang such as out-of-tree builds and the ability to treat warnings as errors.
- ▶ Lit infrastructure and tests
 - ▶ Replaced the original ctest framework
 - ▶ New suites and tests added; every commit gets a test
- ▶ Build bots
 - ▶ Flang is not part of the default build for most developers and build bots
 - ▶ Several build bots created specifically for flang to keep the project “green”

FLANG

Communications

- ▶ Phabricator
- ▶ Doxygen configuration and automation
- ▶ Web page content and automation to create the web pages
- ▶ Mailing lists for flang-dev and flang-commits
- ▶ Regular meetings
 - ▶ Flang Project Discussion bi-weekly meeting
 - ▶ Flang Technical Community bi-weekly meeting

FLANG

Related Projects

- ▶ OpenMP MLIR dialect
- ▶ OpenACC MLIR dialect
- ▶ OpenMP IR Builder to share lowering code between clang and flang
- ▶ LLVM Alias Analysis Technical Call for people working on LLVM alias analysis.

THE FLANG PROJECT

SOURCE CODE

<https://github.com/llvm/llvm-project/flang>

MAILING LIST

flang-dev@lists.llvm.org

PROJECT CALL

Every other Wednesday 8:30am Pacific
See the mailing list for details

TECHNICAL CALL

Every other Monday 8:30 Pacific
See the mailing list for details