



An Introduction to GCC Hacking

Karthik Kumar Viswanathan

Introduction

- GCC stands for 'GNU Compiler Collection'
- Initially written by RMS, an important part of the GNU/Linux revolution
- Under active development by various corporations and the community
- Has a 3 stage release cycle
- Work continues on the mainline
- Extensive test suite and regressions

Mainline, Tags and Branches

- GCC currently uses a Subversion repository
- Might probably shift to GIT soon
- Mainline is from where Releases get Tagged
- Branches are where each set of GCC projects put their changes in
- When Branches are functional, changes get merged into Mainline (new features, improvements)

Steering Committee

- It takes care of attaining certain goals
- Official maintainer of whole project
- Contacts maintainers responsible for appropriate branches
- Approves assignment of work to developers
- Assignment process requires legal work
- Open process based on merit

GCC Summit

- Conference held about GCC every year
- All GCC/Glibc/Binutils related papers and presentations
- Some of them make it into GCC
- SSA/GIMPLE is one such example
- Held this time in Ottawa, Canada
- Deadline for Abstracts: 15 February

Communication

- Mailing Lists (gcc)
- Private Emails between Developers
- IRC ([#gcc](http://irc.oftc.net))

References

- GCC Main Site <http://gcc.gnu.org>
- GCC Wiki <http://gcc.gnu.org/wiki>
- Crosstool <http://www.kegel.com/crosstool/>
- GCC Workshop
<http://www.cse.iitb.ac.in/~uday/gcc-workshop/>

Questions?