Toolchain Working Group Report

EuroBSDCon 2011
The Middle of Nowhere, The Netherlands

Timeline

2006: BSDElfTools started

2007: GPLv3

Clang announced

2010: Clang self hosting

LLVM/Clang imported

World+Kernel bootstraps

2011: libsupc++ licensed

libc++ ported

TODOs

- libc++ in base
- Clang cross build support
- ELF Linker
- Debugger
- ELF crashdumps
- More Architectures (MIPS, ...)
- External toolchain for base
- Switchable ports compiler
- WITH_CLANG_AS_CC

- LLDB port
- Finish libgcc replacment
- FDT replacement
- Unwinding libraray
- GDB server
- as wrapper
- 16-bit ASM support
- libdwarf

Linker Requirements Brainstorming

- BSDL
- Linker Scripts
- LTO framework
- Incremental Linking
- IR embedded in ELF
- IR processing by plugin
- GNU ld computability
- Limited !ELF support
- Alternative hash tables

- Crunch support
- Native cross-arch
- Multipass lookup?
- Fast
- Unit tests
- LLVM coding standards
- Linker is a library
- C/C++ support
- ARM, MIPS, PNaCl, PPC, SPARC?, x86