LTO BoF

Honza Hubička

SuSE ČR s.r.o
Prague

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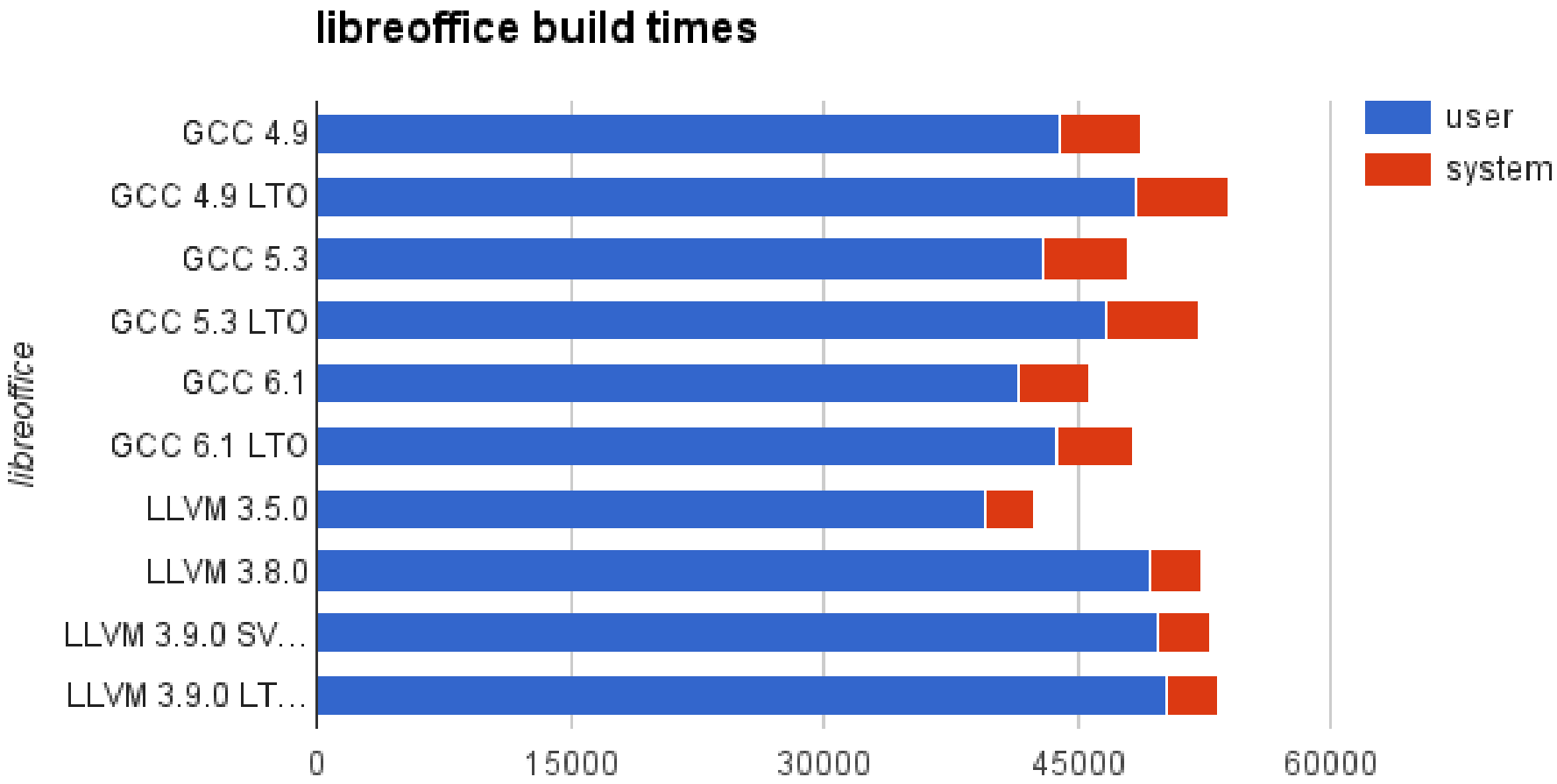
Summary of LTO work in GCC 6

- Duplicated declarations in symbol table (warning/error attributes, `-D_FORTIFY_SOURCE=2`)
- Type merging (C/Fortran interoparibility audit, better TBAA)
- Invalid type punning on global variables and declarations is now reported with `-Wodr-type-mismatch`.
- The size of LTO object files was reduced by about 11% (measured by compiling Firefox 46.0).
- Link-time parallelization improvements (66% for firefox).
- The linker plugin was extended to pass information about type of binary produced to GCC back end.
- Basic support for incremental linking (by producing final code at `ld -r` time).

Libreoffice compile times



Honza's LTO work for GCC 7

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  - better profile estimates (niter improvements) (with Maritn Liška)
  - User relative visibility; audit of LTO passes
  - Inlining across optimization flags
  - Thunk inlining

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- Work in progress:
  - finish support for duplicated declarations in symbol table
  - Incremental IR linking (`ld -r`)
  - Finish merging of `operand_equal_p` and ICF
  - ODR for TBAA
  - Use `sreals` in inliner metrics and profile
  - stronger early optimizations (jump threading, VRP)

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- TODO:
  - move CHKP infastructure to duplicated declarations
  - More type merging fixes for Fortran
  - Tuning/benchmarking in stage3