GHC development flow

walking guide for new contributors

Takenobu T.

NOTE

- This is not an official document by the ghc development team.
- Please refer to the official documents in detail.
- This information is current as of Oct, 2016.



Development layers

Haskell packages

vector

parsec

parallel

network

GLUT

lens

.

GHC compiler + Core Libraries

GHC compiler

Compiler + Runtime system

Main ML: ghc-devs at haskell.org [1] Steering by GHC Committee [2] Haskell Core Libraries

base, array, process,...

Main ML: libraries at haskell.org [3] Steering by Core Libraries Committee [4]

Language Report

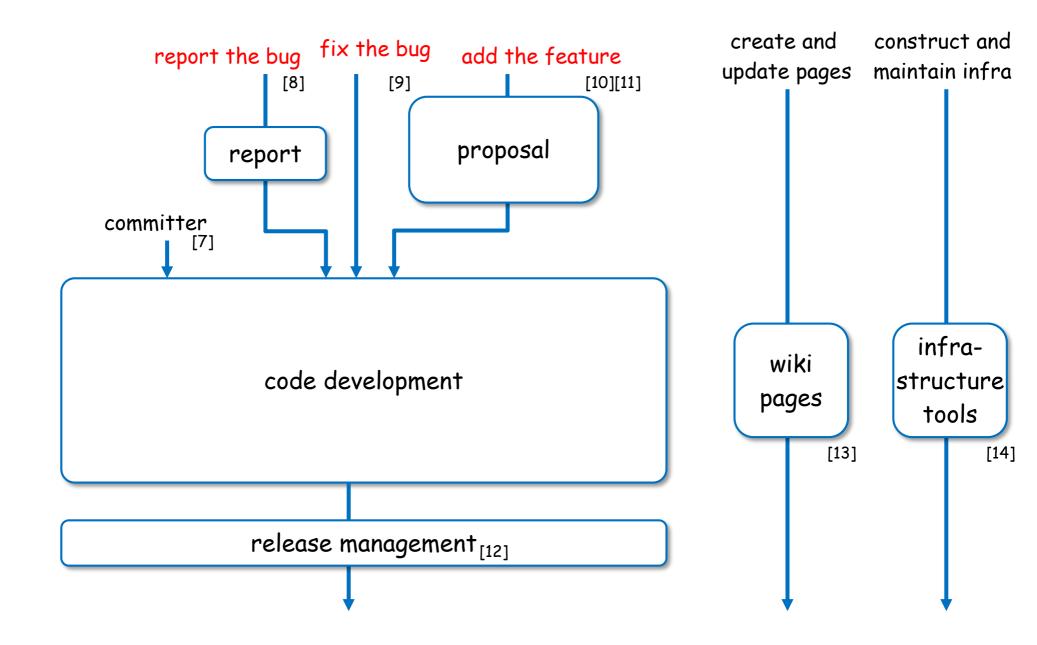
Haskell Language

Haskell 98, Haskell 2010, Haskell 2020

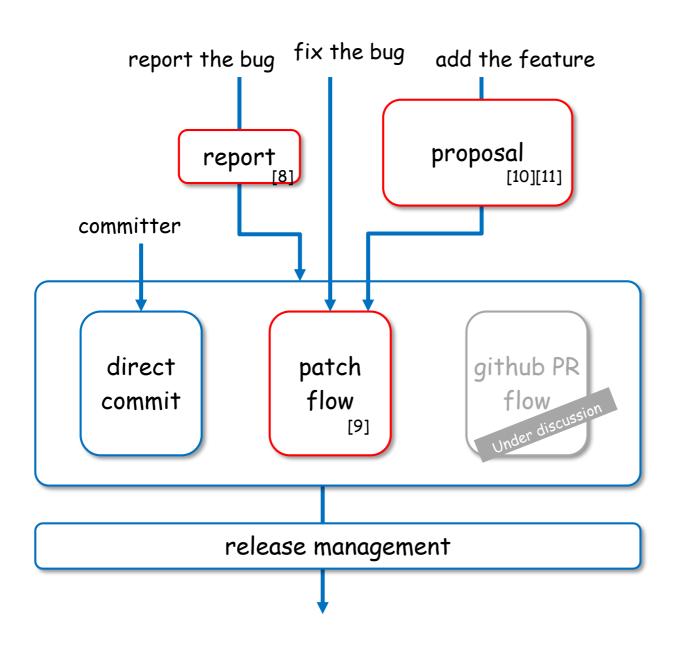
Main ML: haskell-prime at haskell.org [5] Steering by Haskell 2020 Committee [6]



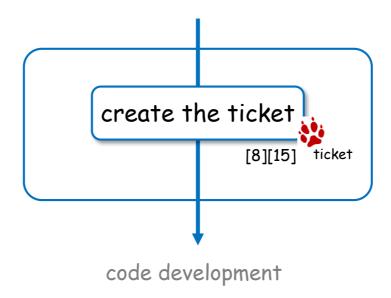
GHC compiler development flow (overview)



GHC compiler code development flow

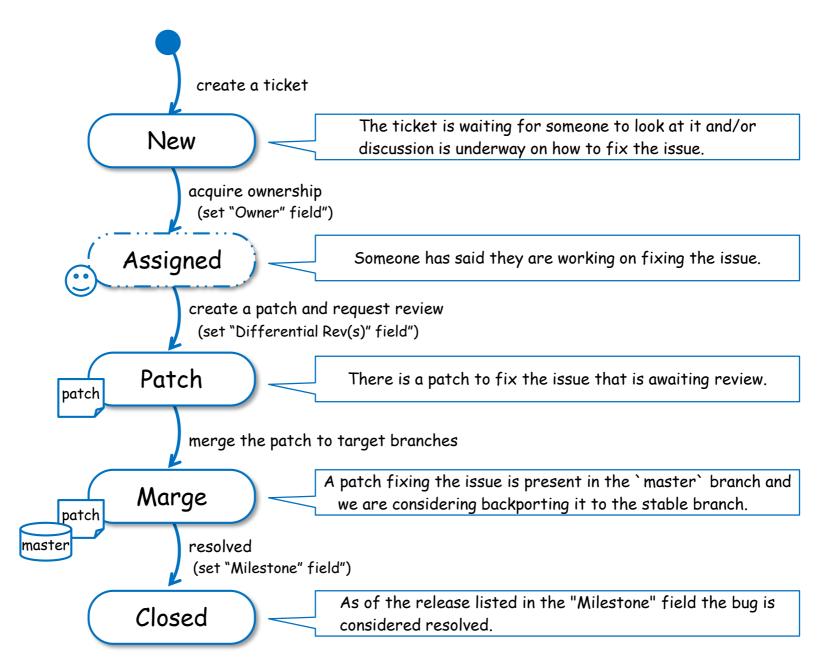


Report flow

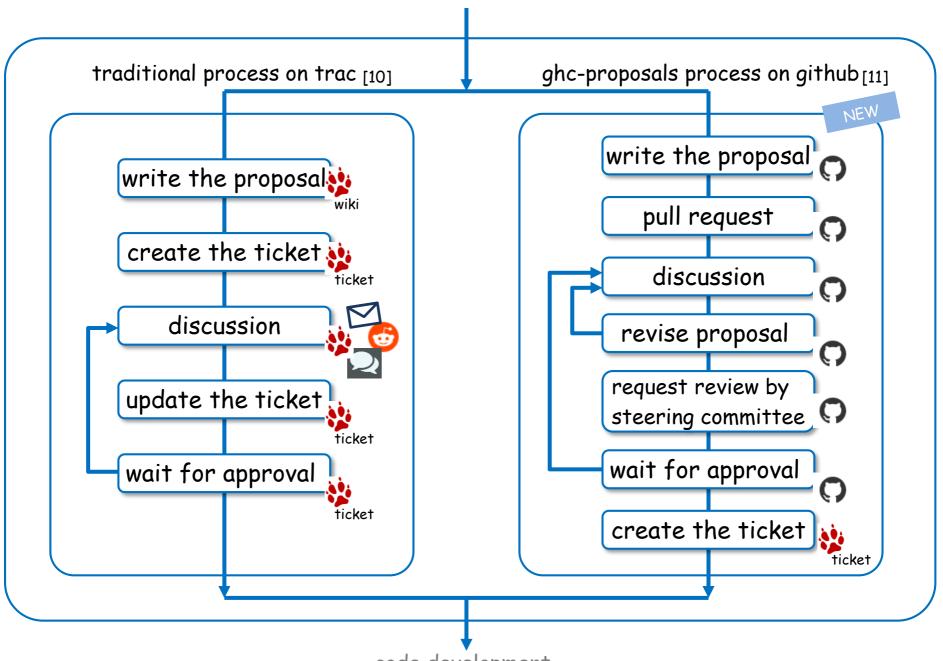


various ticket states of trac [15]



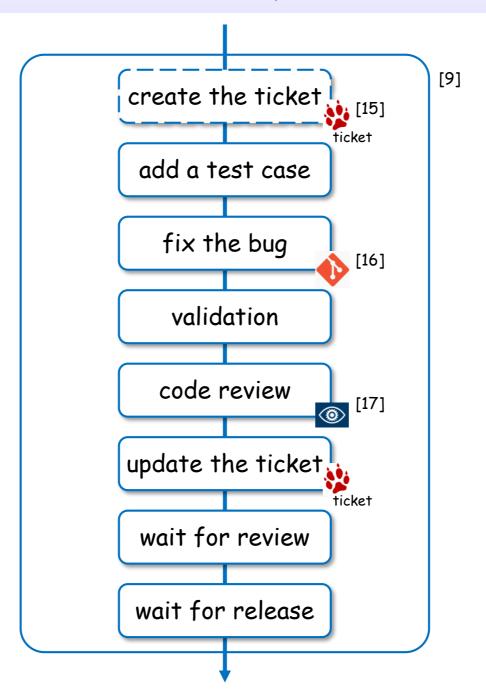


Proposal flow



code development

Patch flow

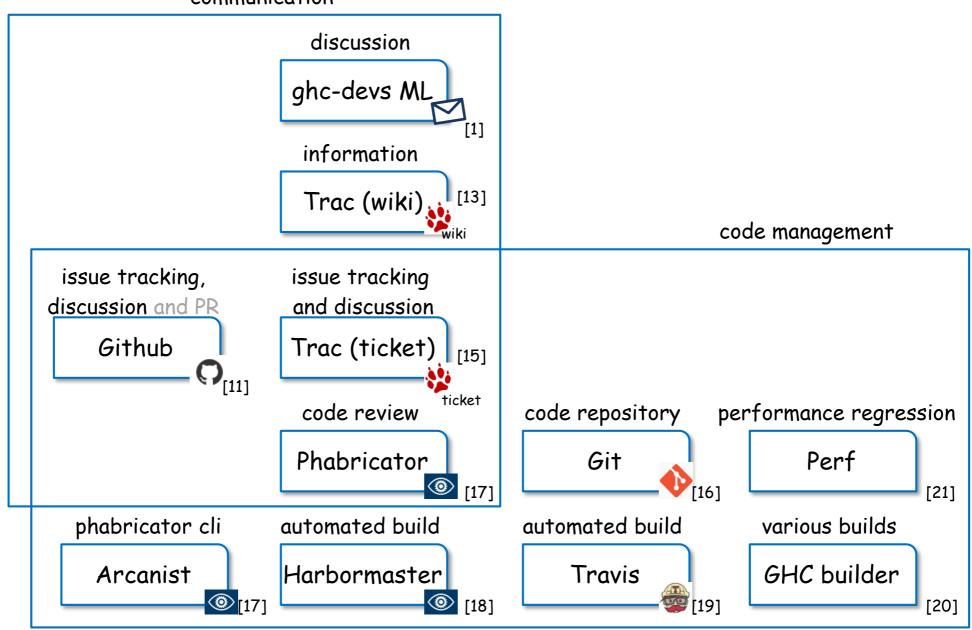


Please refer to the documentation in details.



Tool relation

communication





References

- [1] ghc-devs -- GHC development discussion https://mail.haskell.org/mailman/listinfo/ghc-devs
- [2] Call for Nominations: GHC Steering Committee https://ghc.haskell.org/trac/ghc/blog/steering-committee-cfn
- [3] Libraries -- Discussion about libraries for Haskell https://mail.haskell.org/cgi-bin/mailman/listinfo/libraries
- [4] Core Libraries Committee https://wiki.haskell.org/Core_Libraries_Committee
- [5] Haskell-prime -- Haskell' A Haskell Standard Revision discussion list https://mail.haskell.org/cgi-bin/mailman/listinfo/haskell-prime
- [6] Welcome to Haskell' https://prime.haskell.org/
- [7] The Glasgow Haskell Team
 https://ghc.haskell.org/trac/ghc/wiki/TeamGHC
- [8] Reporting bugs in GHC https://ghc.haskell.org/trac/ghc/wiki/ReportABug
- [9] How to contribute a patch to GHC https://ghc.haskell.org/trac/ghc/wiki/WorkingConventions/FixingBugs
- [10] How to contribute a new feature to GHC https://ghc.haskell.org/trac/ghc/wiki/WorkingConventions/AddingFeatures

References

[11]	GHC Proposals https://github.com/ghc-proposals/ghc-proposals
[12]	Release management and branches https://ghc.haskell.org/trac/ghc/wiki/WorkingConventions/Releases
[13]	Welcome to the GHC Developer Wiki https://ghc.haskell.org/trac/ghc/wiki
[14]	Developer's Infrastructure https://ghc.haskell.org/trac/ghc/wiki/Infrastructure
[15]	The Bug Tracker https://ghc.haskell.org/trac/ghc/wiki/WorkingConventions/BugTracker
[16]	Using git with GHC https://ghc.haskell.org/trac/ghc/wiki/WorkingConventions/Git
[17]	Using Phabricator for GHC development https://ghc.haskell.org/trac/ghc/wiki/Phabricator
[18]	Harbormaster: continuous integration & patch building for GHC https://ghc.haskell.org/trac/ghc/wiki/Phabricator/Harbormaster
[19]	Travis https://ghc.haskell.org/trac/ghc/wiki/Travis
[20]	The GHC Builder https://ghc.haskell.org/trac/ghc/wiki/Builder

References

[21] perf https://perf.haskell.org/ghc/

See also

- [22] Working on GHC https://ghc.haskell.org/trac/ghc/wiki/WorkingConventions
- [23] Resources for newcomers to GHC https://ghc.haskell.org/trac/ghc/wiki/Newcomers
- [24] Haskell:: Reddit https://www.reddit.com/r/haskell/
- [25] IRC Channels
 https://www.haskell.org/irc
 http://ircbrowse.net/ghc