# GHC development flow

*walking guide for new contributors*

Takenobu T.

Rev. 2017-Feb-01

WIP

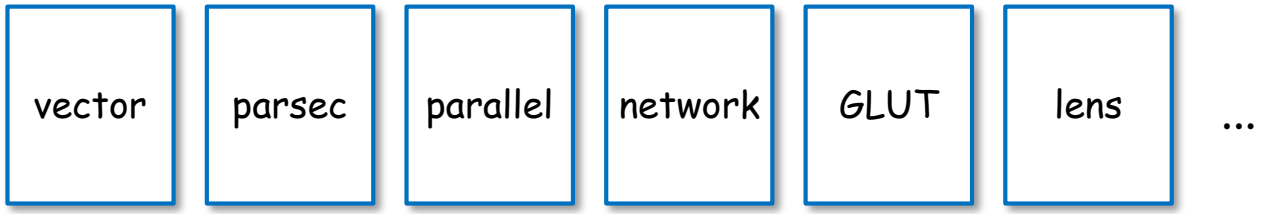
NOTE

- 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 Feb, 2017.

# Overall relationship

# Development layers

Haskell packages




---

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]

---

Haskell Language

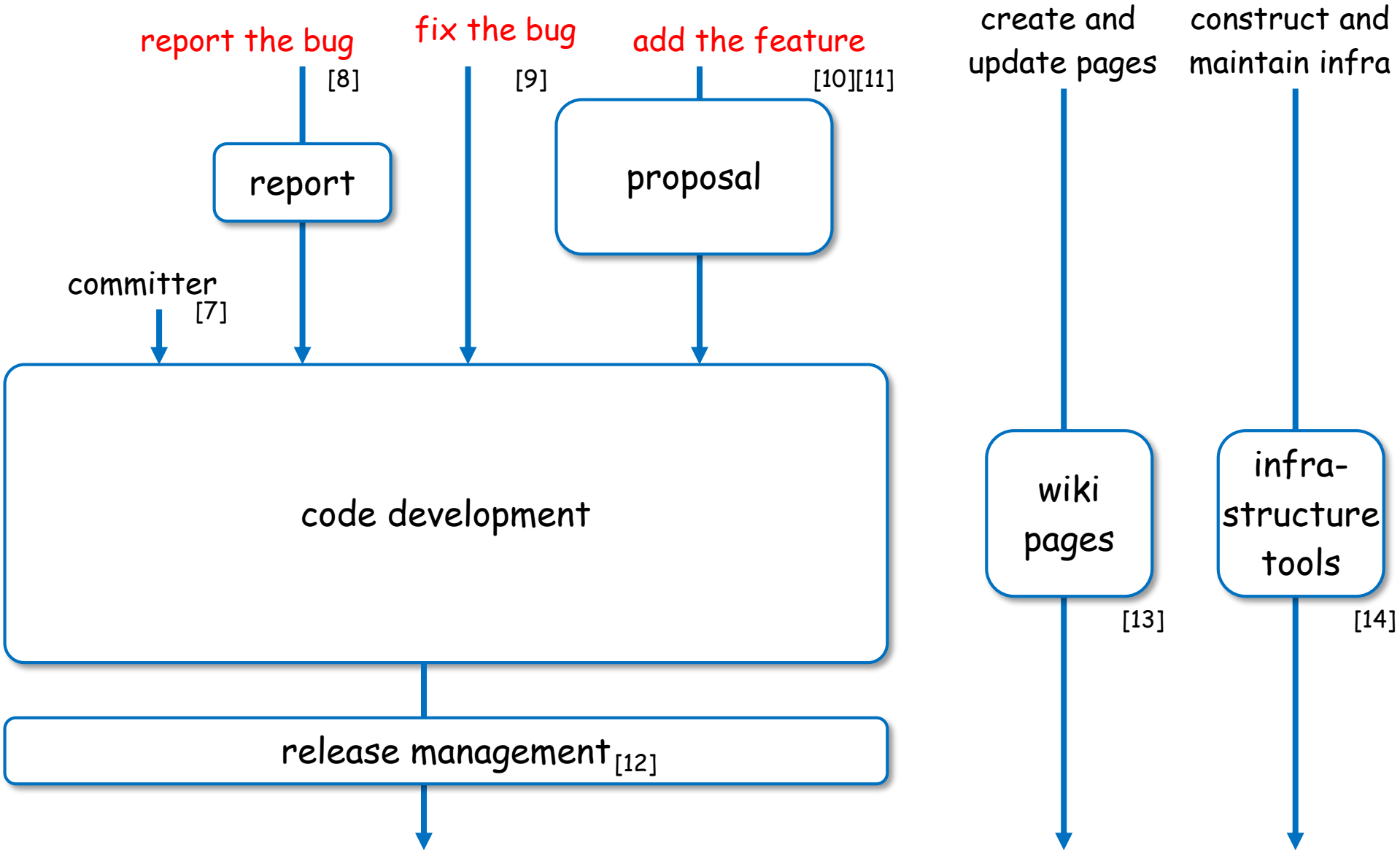
Language Report

Haskell 98, Haskell 2010,
Haskell 2020

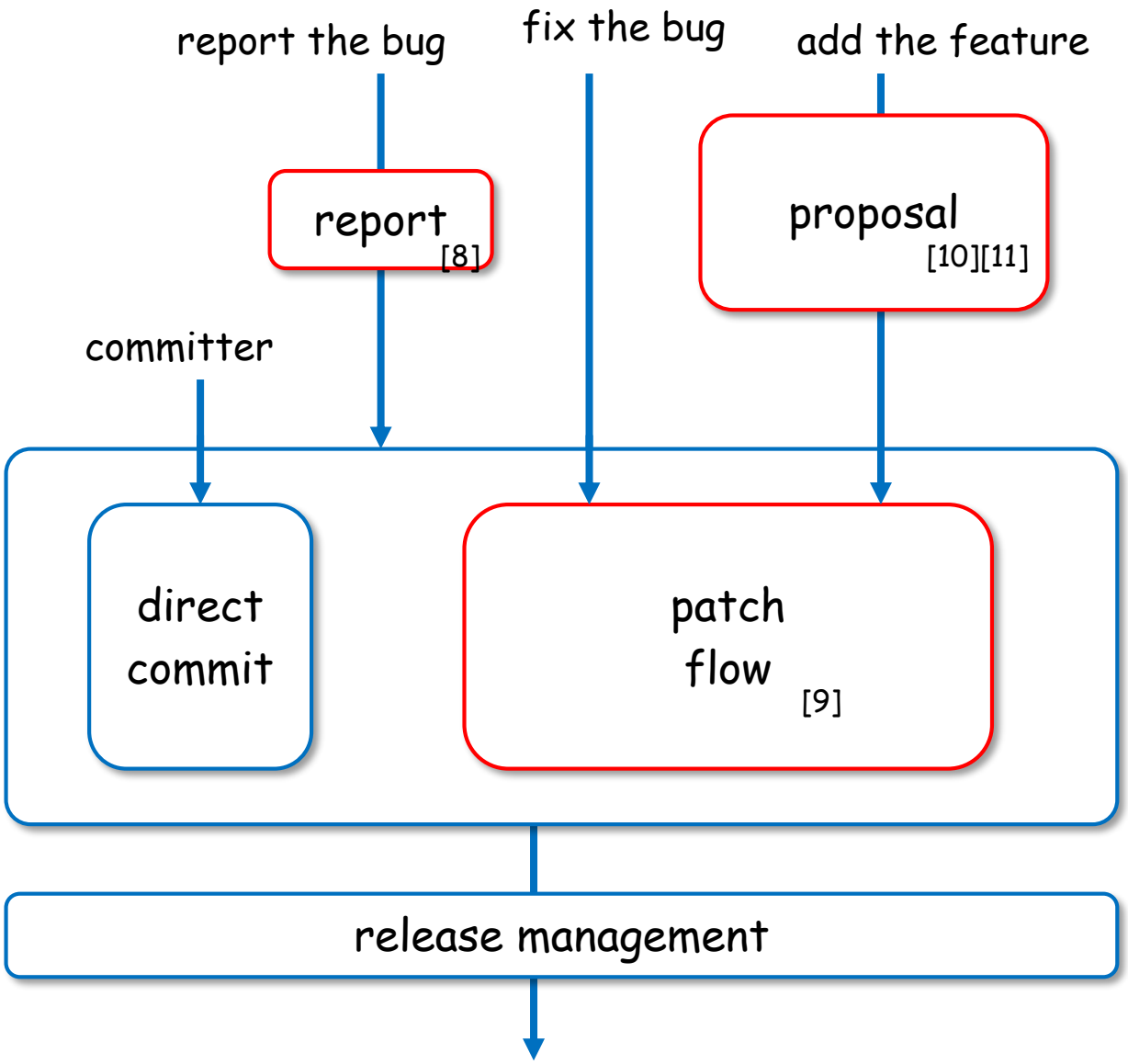
Main ML : haskell-prime at haskell.org [5]
Steering by Haskell 2020 Committee [6]

# GHC compiler development flow

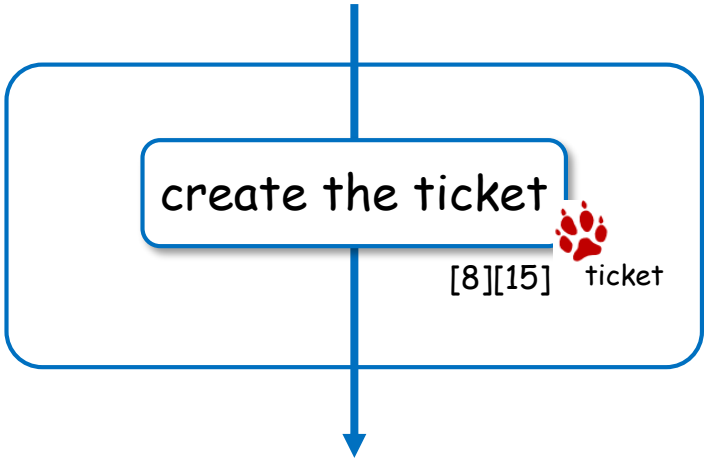
# GHC compiler development flow (overview)



# GHC compiler code development flow



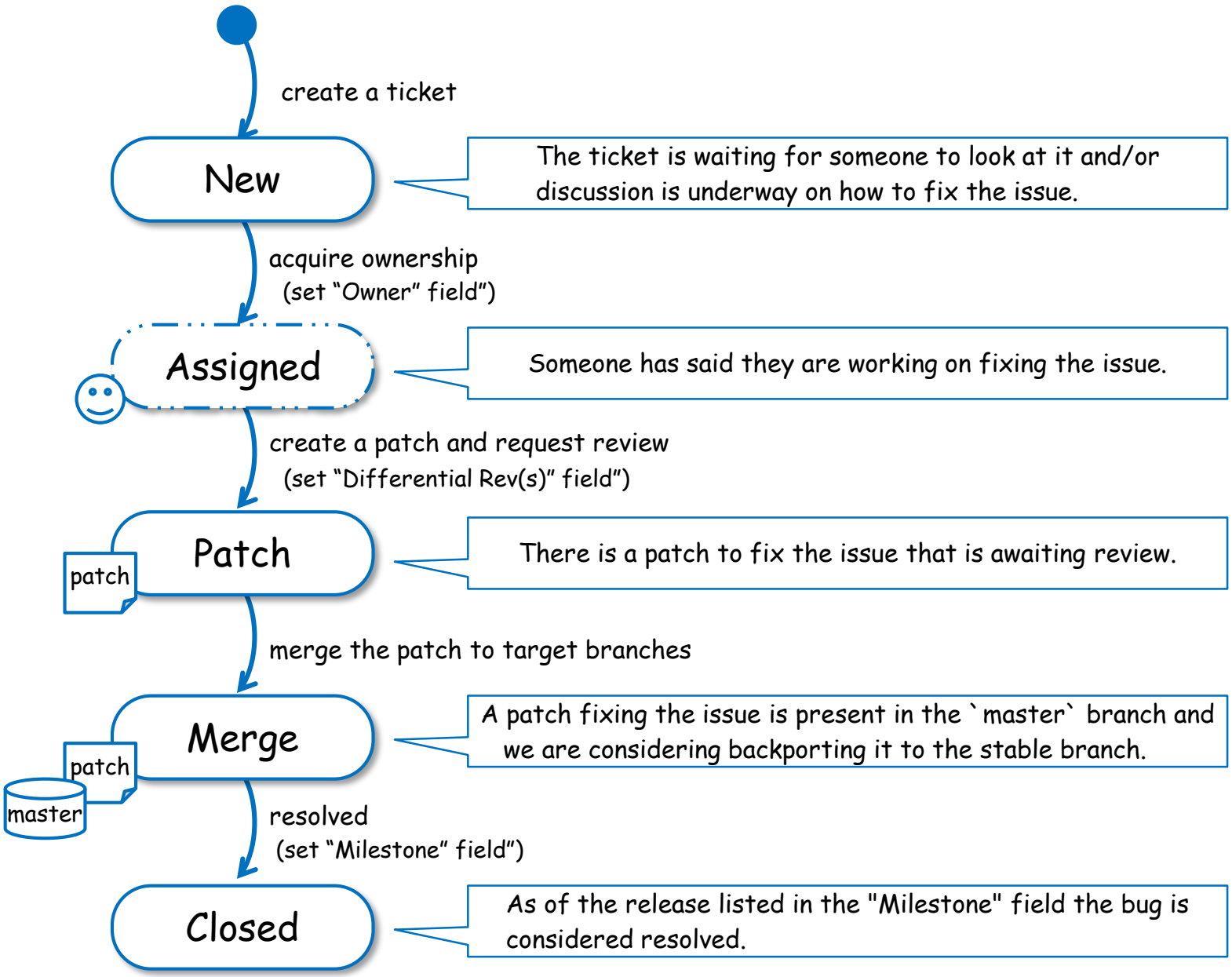
# Report flow



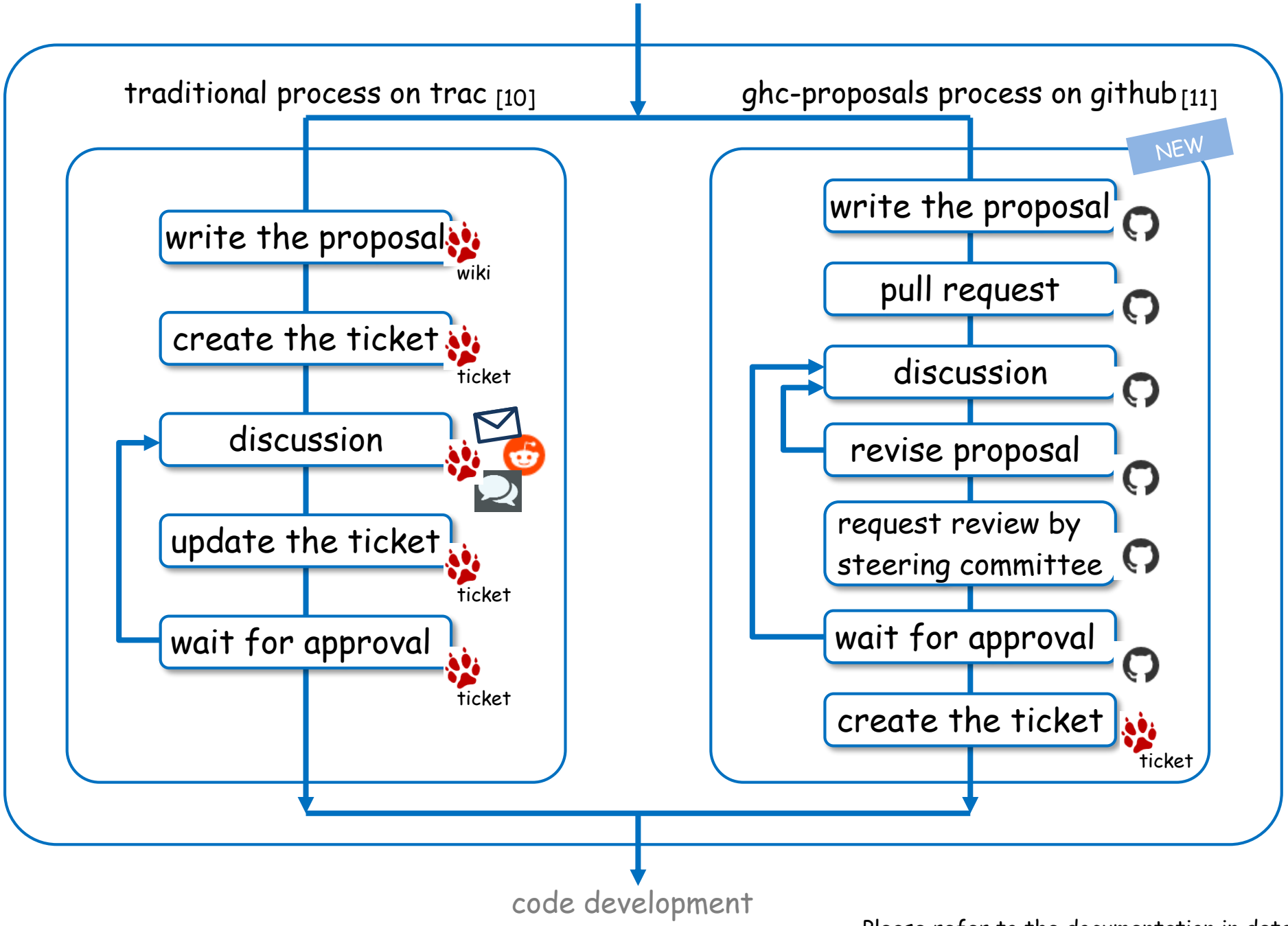

[1]

Please consult ghc-devs ML if you worry.

# Various ticket states of trac [15]

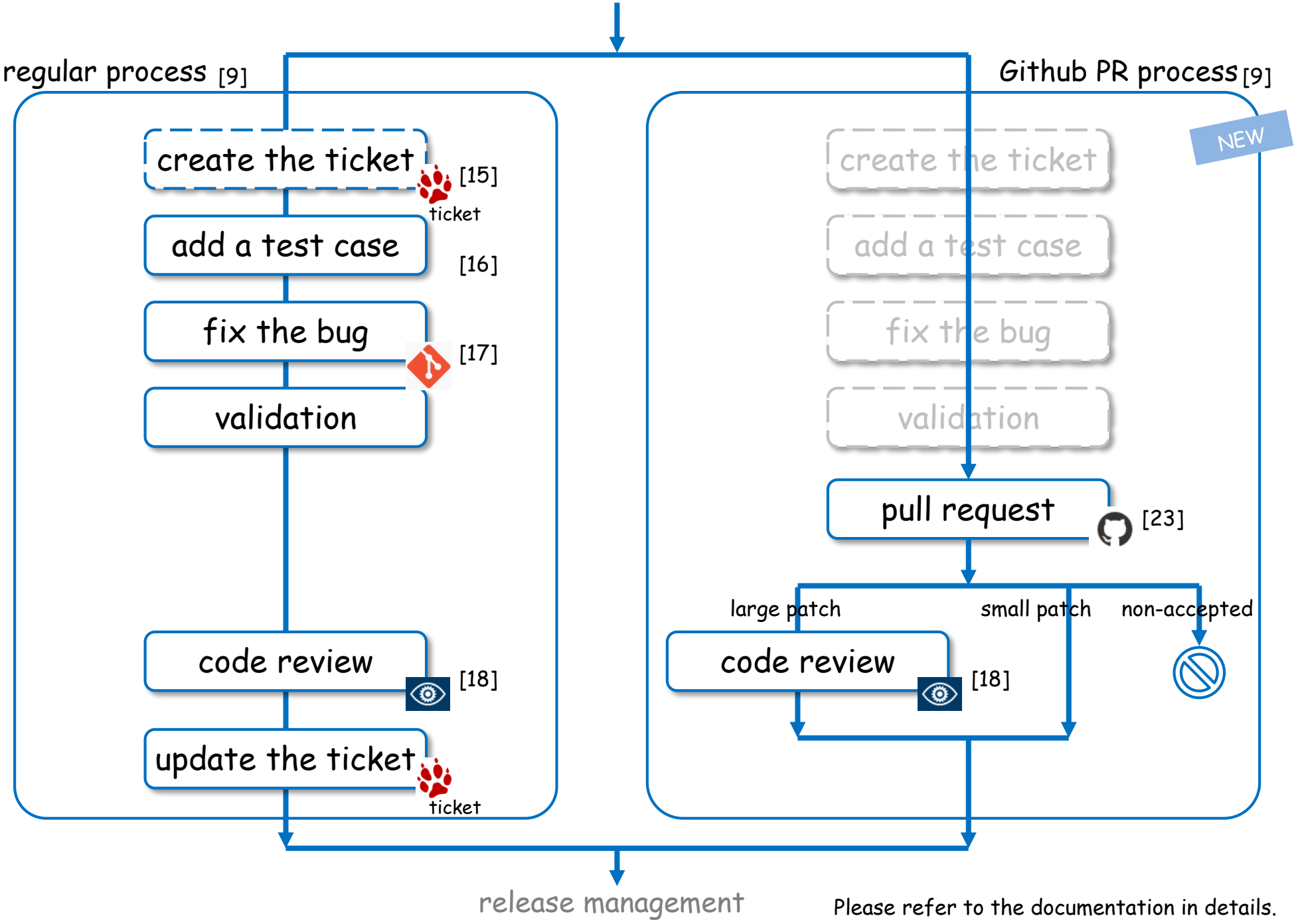


# Proposal flow




Please refer to the documentation in details.

# Patch flow



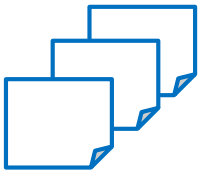

Please refer to the documentation in details.

# Document development flow

# Various documents

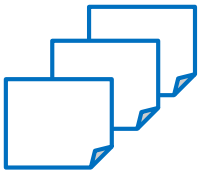
Haskell

Haskell wiki



wiki.haskell.org

Hackage documents



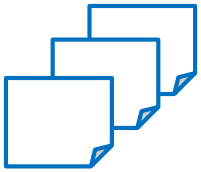
hackage.haskell.org

...

---

GHC

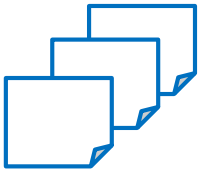
Trac wiki (GHC wiki)



ghc.haskell.org/trac/ghc/wiki
[13]

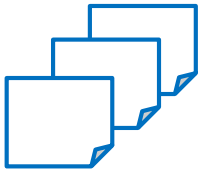
about GHC's implementation
* how GHC works
* how to modify it

The GHC users guide



downloads.haskell.org/~ghc/
latest/docs/html/users_guide
[29]
[32]

Core Libraries documents



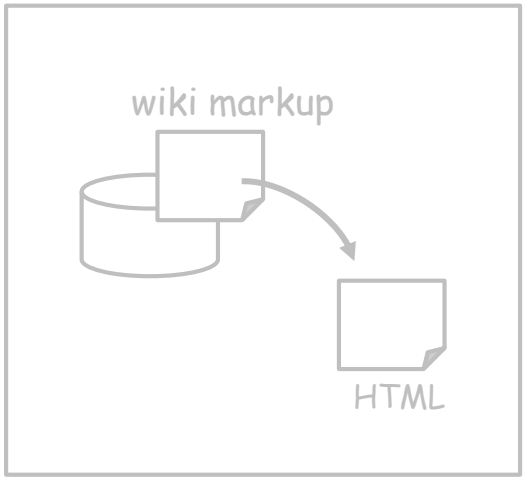
downloads.haskell.org/~ghc/
latest/docs/html/libraries
[31]
[32]

...

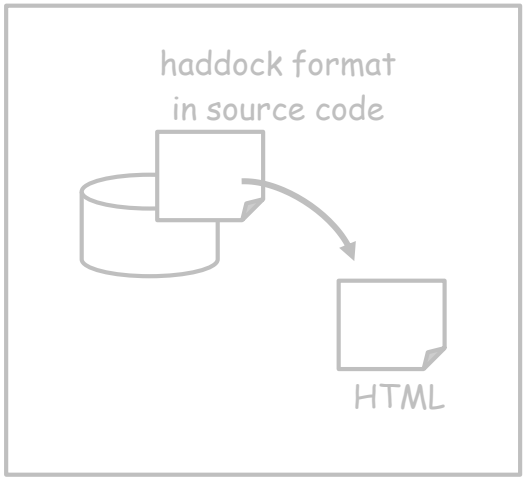
# Document development of GHC

Haskell

Haskell wiki




Hackage documents

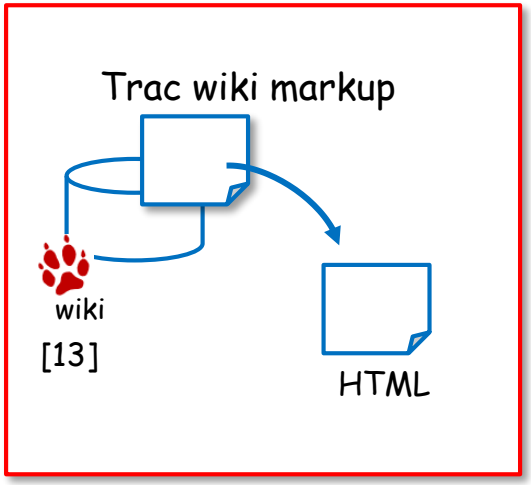



...

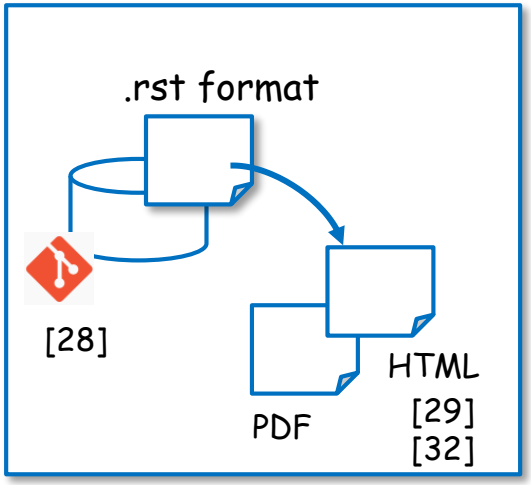
---

GHC

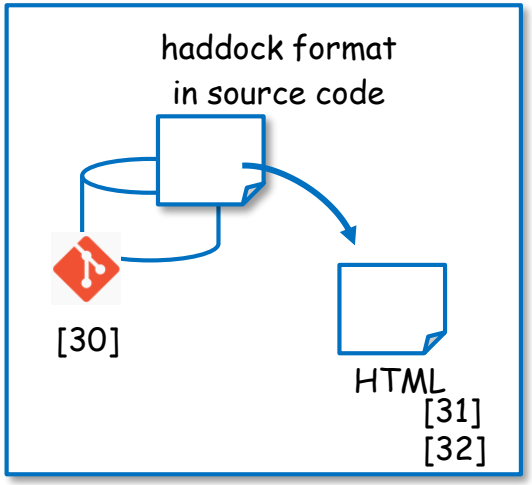
Trac wiki (GHC wiki)




The GHC users guide

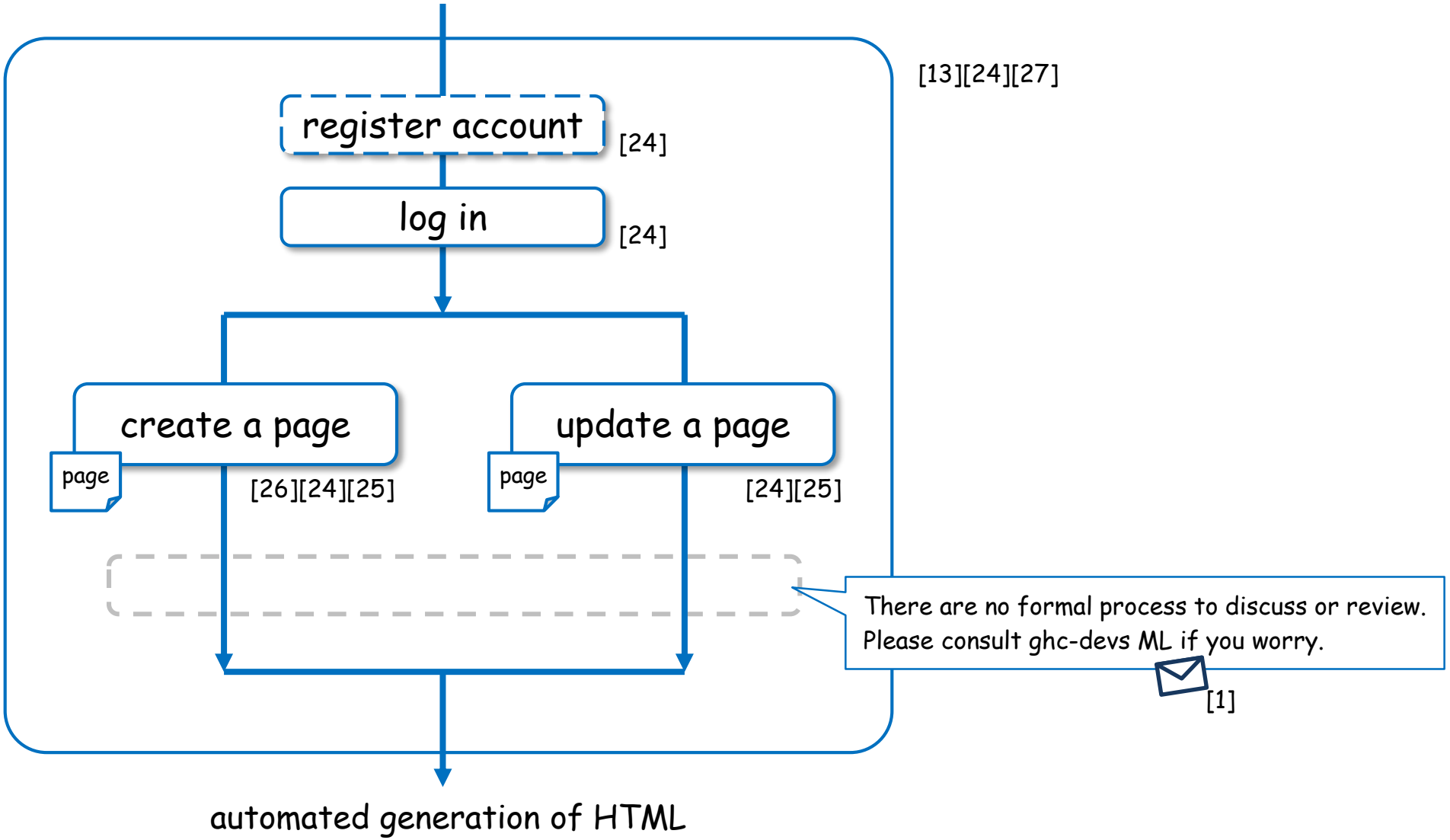



Core Libraries documents



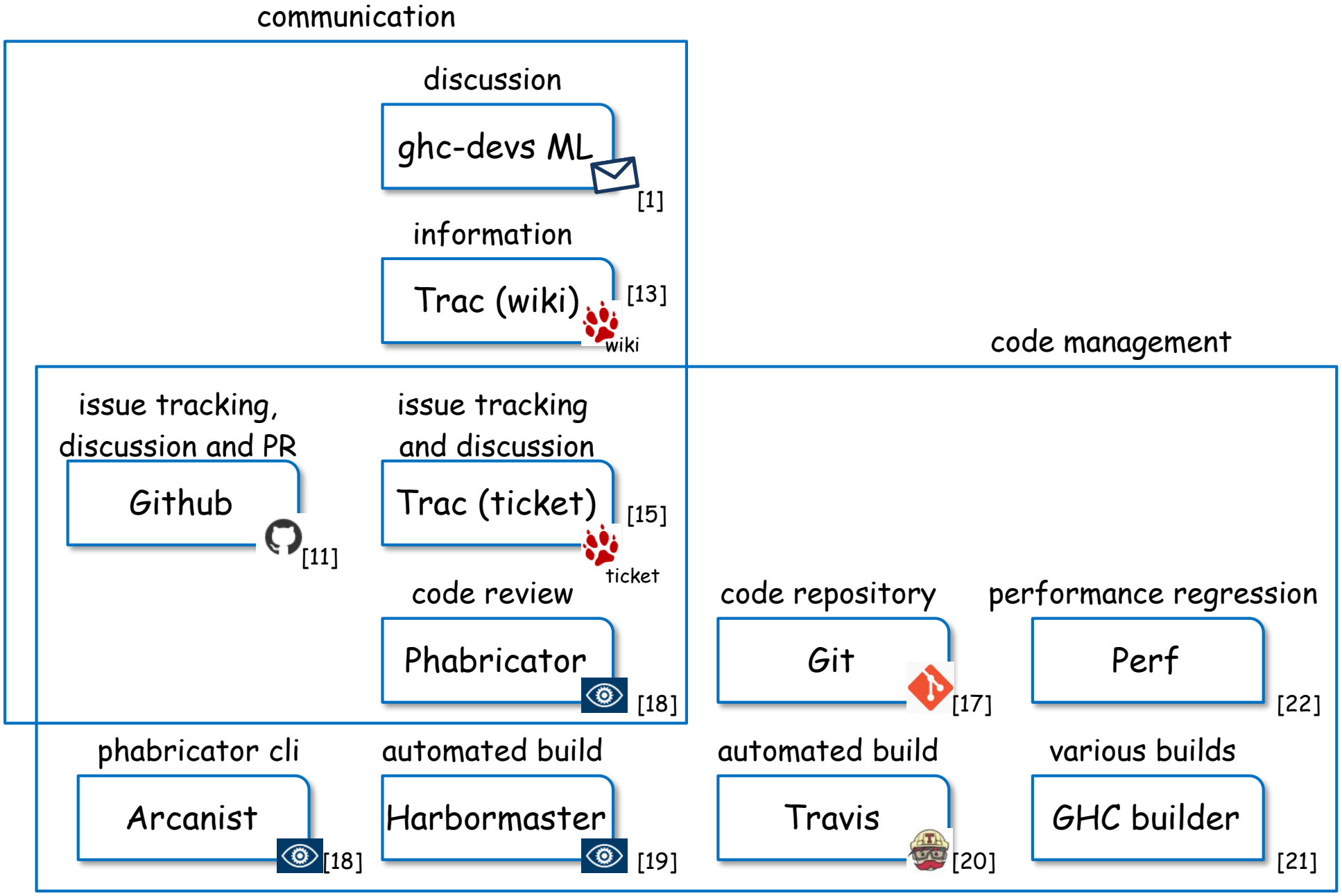

...

# Trac wiki description flow [13]



# Infrastructure tools

# Tool relation



# References

# References


[1] ghc-devs -- GHC development discussion
https://mail.haskell.org/mailman/listinfo/ghc-devs

[2] The GHC Steering Committee
https://github.com/ghc-proposals/ghc-proposals/blob/master/steering-committee.rst

[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] Adding new test cases
https://ghc.haskell.org/trac/ghc/wiki/Building/RunningTests/Adding

[17] Using git with GHC
https://ghc.haskell.org/trac/ghc/wiki/WorkingConventions/Git

[18] Using Phabricator for GHC development
https://ghc.haskell.org/trac/ghc/wiki/Phabricator

[19] Harbormaster: continuous integration & patch building for GHC
https://ghc.haskell.org/trac/ghc/wiki/Phabricator/Harbormaster

[20] Travis
https://ghc.haskell.org/trac/ghc/wiki/Travis

# References


[21] The GHC Builder
https://ghc.haskell.org/trac/ghc/wiki/Builder

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

[23] Accept PRs on GitHub
https://github.com/ghc-proposals/ghc-proposals/pull/11

# References


[24] Notes on Trac Wiki formatting
https://ghc.haskell.org/trac/ghc/wiki/TracWikiMisc

[25] WikiFormatting
https://ghc.haskell.org/trac/ghc/wiki/WikiFormatting

[26] Steps to Add a New Wiki Page
https://ghc.haskell.org/trac/ghc/wiki/WikiNewPage

[27] The Trac Wiki System
https://ghc.haskell.org/trac/ghc/wiki/TracWiki

[28] source:ghc/docs/users_guide
https://ghc.haskell.org/trac/ghc/browser/ghc/docs/users_guide

[29] Glasgow Haskell Compiler Users Guide
https://downloads.haskell.org/~ghc/latest/docs/html/users_guide

[30] source:ghc/libraries
https://ghc.haskell.org/trac/ghc/browser/ghc/libraries

[31] Haskell Hierarchical Libraries
https://downloads.haskell.org/~ghc/latest/docs/html/libraries

[32] How to contribute a patch to GHC
https://ghc.haskell.org/trac/ghc/wiki/WorkingConventions/FixingBugs

# References

See also


[33] Working on GHC
https://ghc.haskell.org/trac/ghc/wiki/WorkingConventions

[34] Resources for newcomers to GHC
https://ghc.haskell.org/trac/ghc/wiki/Newcomers

[35] Haskell :: Reddit
https://www.reddit.com/r/haskell

[36] IRC Channels
https://www.haskell.org/irc
http://ircbrowse.net/ghc