Is Boost Broken?

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Download History for All Files For Boost C++ Libraries
All Time
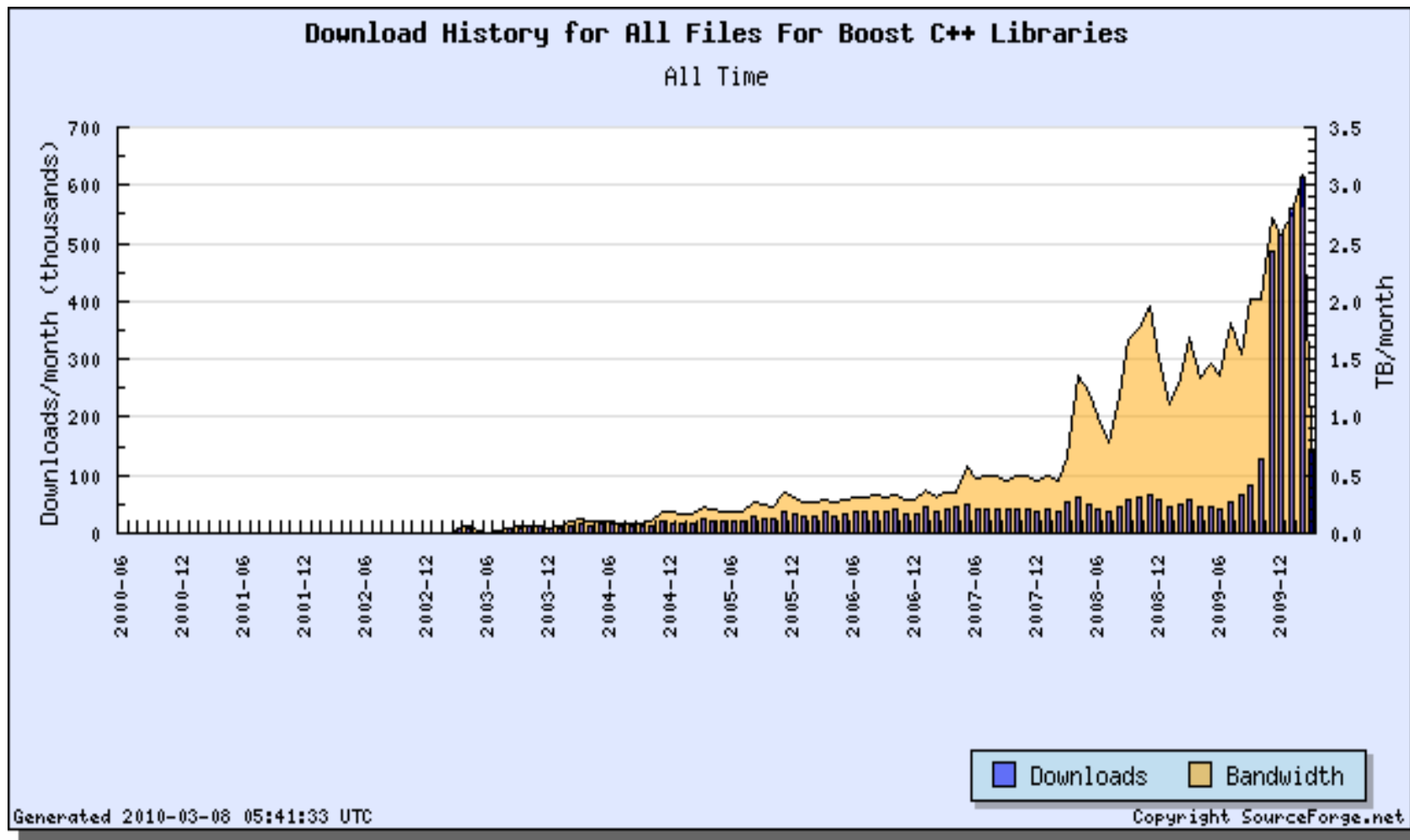
Is Boost Broken?

- Submission
- Discussion
- Review
- Test
- Deployment
- Maintenance

Reviews

- The essence of Boost
  - Reviews
  - Testing
- Not enough reviews
  - Reviewing a library is a lot of work !
  - Most people review a library when they are considering it.
  - Only by chance will this coincide with the formal review period.
- Most reviews focus on documentation and design and to don't touch too much on implementation and code review.
- Once a review ends, the reviews aren't conveniently accessible so the information is effectively "lost"

Reviews – Proposal

Create a two step process for library submissions

- Acceptance
- Certification as an Official Boost Library

Is Boost Broken?

Accepted

Developers

Users

Certified

Library Status Page
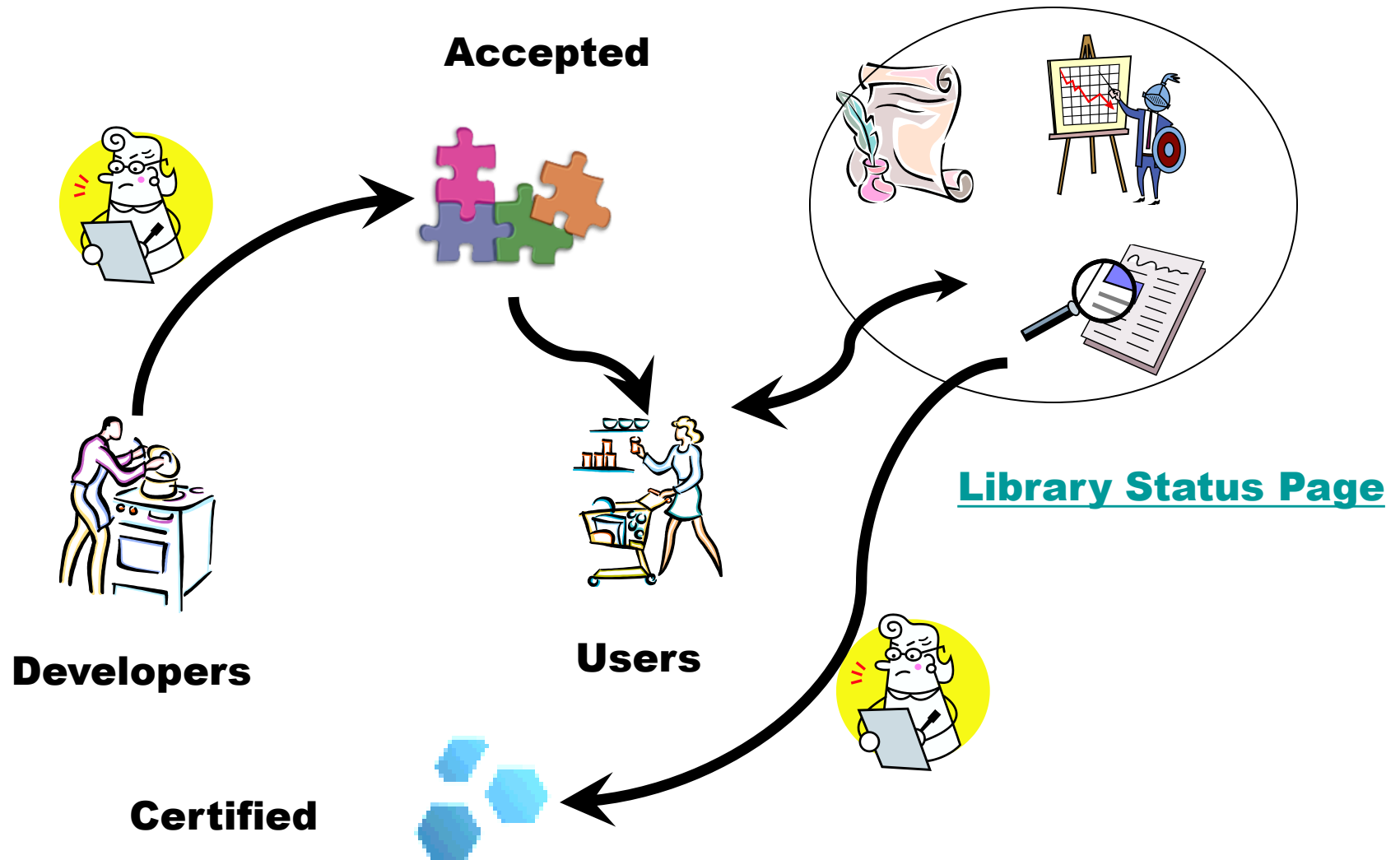
Minimum requirements for acceptance

- Boost License
- Portable C++ Library or Tool
- No namespace or directory structure conflicts
- Includes
    - Build system
    - Tests and demos
    - Usable HTML documentation
- Must install and test on at least two compilers

In short, it must be "shovel ready".

On acceptance:

- Access to the source control system is granted
- New Library Status page is Created

Library is now available for public download and use. Those who use the library may post questions, comments, complaints, suggestions, reviews, bug reports, patches, etc. All this information is accessible via the Library Status page.

Formal Review

- Eventually Library Status page will indicate sufficient interest to justify formal review

- Review would be same as now – BUT, there should already be a number of reviews and comments submitted.

- If the review manager accepts the submission – it's status changes to "Boost Certified"

- Otherwise, it's status is unchanged.

Benefit - More Library Submissions

- The opportunity to earn the coveted "Boost Certified" logo will encourage more developers to submit.

- The "acceptance" process will guarantee a minimal level of functionality/usability.

- The Library Status page will provide a standard form for comparing submissions.

- And don't forget the "advertising panel"

Benefit – More "Boost Certified" libraries

- Improved selection of submissions for review
- Improved review process
    - More user reviews available
    - More information available
    - Deeper user reviews available
- Better and Faster Reviews

Benefit – Provide a place for libraries which aren't good candidates for boost but still useful.

- Too narrow in scope

- Author can't support the library

- Conflicts with current boost functionality

- Sometimes a submission is of good quality – but doesn't cover the scope that reviewer's demand

- The Library Status page will provide a place for the library to improve and be used.

Task List (task key)

(***)A web form for library submissions where an author can check off and explain how each of the minimum requirements has been satisfied. Generates the Library Status page.

(*)Designation of person to verify that minimum requirements have been met, uploads and indexes Library Status page.

Is Boost Broken?

End of Review Proposal

Testing

1) Testing on the trunk tests all libraries together
2) An error in one library may appear as an error in other libraries.
3) A change in one library provokes testing of all other libraries which depend upon it
4) Testing cannot test all combinations of compilers and build variants
5) Boost tools are not tested – at least they don't show up in the test summary

Testing – Proposal.

- Installation of a library on a user's machine should include running of the test suite and posting to the Library Status page.

- Each time a library is tested, results are forwarded to a server which records test results.

- Boost tools should be subjected to the same testing requirements as libraries.

- Each library selects the testing system to use.

- A "Total Test" is just the set of individual tests

Benefits

- Guarantee that all libraries are installed correctly before users go to user's list for help.

- Guarantee that all platforms actually being used are tested and that these results are available to the Boost community.

- Relaxes the requirement that all libraries use the same test/installation procedure.

- Permit ad-hoc inquiry to database of test results

Task List ([task key]( ))

** Testing one library

*** Testing library + pre-requisites

*** Forward user test results to database

** Testing of trunk – run library test on changed libraries

** Testing for release – run library test on all libraries.

End of Testing

Deployment

- Boost is deployed "monolithicly - 1.42, 1.43 etc. as one huge group of libraries.

- There is no convenient way to get a subset.

- Release process is too labor intensive.

- Undiscovered bugs generate demand for a "point release"

- No convenient way for users to update just one library when a fix is checked into release branch.

Deployment - Proposal

- We'll call "Deploy" as download or update/install/test of a library and any pre-requisites.

- The current release version of any particular library should be deployed from it's Library Status page.

- All submissions should be deployable in this way.

Deployment – Proposal (continued)

Some (or many) users want the whole of boost in a way similar to the way they do it now. This desire would addressed by

- Tag current state of release branch –1.47, etc.
- Deploy all the "Boost Certified" libraries to a particular target machine.
- Create giant *.zip/*.tar files from the deployment.

Task List (task key)

(**) Deployment of one library.

(*) Deployment of multiple libraries.

(***) Deployment of whole boost version

End of Deployment

Support

- The same issues on the boost user list come up again and again

- Often when users request support, it's really a question of installation, or something not related to the library itself.

- Specific issues are reported to the Track system which works very well. The library status page is really an enhancement to the track system

Support – Proposed

- Add to the Libraries Track Items menu:
    - Reviews and comment threads
    - User created enhancements
    - Cross posts from developer / user mailing lists
    - Link Library Status page to the Track page

Task List (*?)

Maintenance

- There is no feedback on library usage

Maintenance – proposed

- Library Status page.
- Unsupported Libraries lose Boost Certification – but not Acceptance

Benefits – see benefits for Review

Miscellaneous

- Tools

- Tasks

- Funding

End of Presentation