

WG21 2017-10-27 Telecon Minutes

ISO/IEC JTC1 SC22 WG21 N4705 – 2017-10-30

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Chair: Clark Nelson

Teleconference information:

Date: 2017-10-27
Time: 8:00am N.Am. Pacific Time
Duration: 2 hours

Chair: Herb Sutter

1. Opening and introductions

1.1 Roll call of participants

- Herb Sutter
- Barry Hedquist
- Detlef Vollmann
- Gabriel Dos Reis
- Graham Lopez
- Hal Finkel
- Hans Boehm
- Hubert Tong
- Jeffrey Yasskin
- Titus Winters
- John Spicer
- Jonathan Wakely
- Lois Goldthwaite
- Michael Wong
- Mike Miller
- Olivier Giroux
- P.J. Plauger
- Thomas Plum
- Tom Honermann
- Ville Voutilainen
- Walter Brown

1.2 Adopt agenda

The agenda in [N4704](#) was adopted by unanimous consent.

1.3 Approve minutes from previous meeting (deferred to face-to-face meeting)

1.4 Review action items from previous meeting (deferred to face-to-face meeting)

1.5 Review of project editor and liaison assignments

[Current Status](#) shows assignments.

Reconfirmed assignments.

2. Status, liaison and action item reports

2.1 Subgroup status reports (CWG, EWG, LWG, LEWG)

Core report

Main task is to review NB comments on Modules TS. Voutilainen has triaged the comments and assigned them to the relevant WG. Will co-ordinate between CWG and EWG for comments spanning both.

A number of proposals for C++20, sorted on the wiki page by Jens Maurer. Those will be looked at early in the week, to allow iterating over revisions and make as much progress as possible.

Continue to be concerned with the speed of progress on existing issues. Want to spend some time brainstorming ideas for better issue processing. Tried to do it during telecons, but not enough time to keep up with the rate of new issues. Cancelled one telecon due to insufficient number of participants.

Brown asked about the decision taken to disallow `requires` clauses on ordinary functions, which seems to be against the intended design. Asked if there will be time discussing that decision. Can be discussed if it's brought up, but sounds like a design question for EWG to deal with, as CWG just reviewed what was sent to them by EWG. Brown said it was a decision taken by CWG not EWG. Voutilainen said the ability to constrain an ordinary function was a generalization of the original design proposed by Core, and later deemed to be unnecessary by Core. EWG will discuss it in Albuquerque.

Tong requested a pointer to the relevant wording. Also mentioned note sent to Miller regarding an issue that should be withdrawn from the list of Tentatively Ready issues. Miller confirmed there will be a revision of the list.

Evolution report

Highest priority is to discuss NB comments on Modules TS, which will happen early in the week. Otherwise mostly focussing on new features for C++20. Some discussion of Concepts likely to

happen in Albuquerque but will be avoiding discussing terse syntax, which will be postponed to Jacksonville.

Likely to be lively discussions about feature-test macros.

Tong asked if Contracts had been forwarded to Core, as it isn't on the wiki. Voutilainen said to check if LEWG is finished with it. Dos Reis said LEWG reviewed it in Toronto. Yasskin confirmed LEWG were comfortable with it going to CWG, with some diffs to be re-reviewed by LEWG. Miller to add it to CWG's agenda.

Library report

No report.

Library Evolution report

To discuss feature-test macros early in the week. No updated paper about Modules in the library, so won't be discussing that.

Voutilainen wrote a paper on feature-test macros and plans to hold a joint EWG LEWG session on Monday, while Clark Nelson is available.

Sutter asked about chairing LEWG. Yasskin and Winters haven't worked out exactly how it will work, but Winters likely to be running the meetings, with scheduling jointly arranged.

2.2 Liaison reports

2.2.1 Study Group reports

Reports from the following active SGs:

- **SG1, Concurrency:** Hans Boehm

Giroux to be chairing in Albuquerque. There are 23 papers which are likely to keep SG1 busy. Highest priorities to be Parallelism v2 PDTS out and ensuring progress on executors.

- **SG5, Transactional Memory:** Michael Wong

Not planning to meet face-to-face in Albuquerque. Continue to have bi-weekly meetings, now discussing a simplified TM proposal.

- **SG6, Numerics:** Lawrence Crowl

No report.

- **SG7, Reflection:** Chandler Carruth

No report.

- **SG10, Feature Test:** Clark Nelson

No report. Spicer will take over SG10 chair after Albuquerque.

Voutilainen said the latest SD-6 draft should be reviewed, and should be published regardless of the decision to standardize them.

- **SG12, Undefined and Unspecified Behavior:** Gabriel Dos Reis

Will hold a joint session with WG23 on Tuesday and Wednesday, to try to have some co-ordination between their document and SG12, and ensure C++ is well represented. While Dos Reis is in EWG sessions on Modules Wong will be running the SG12 sessions.

Miller suggested CWG should plan to deal with Core's comments on Modules on Monday, as soon as possible. Sutter requested an evening session on Monday to get additional work done in EWG, due to scheduling conflicts.

Voutilainen said there will be no special scheduling of discussions for the benefit of people who choose to attend only part of a meeting that was announced months in advance.

- **SG14, Low Latency:** Michael Wong

Continue to have monthly telecons. Met at CppCon. Productive incubator for numerous new proposals on heterogeneous computing, exceptionless error handling and many more topics.

Sutter glad to see proposals like expected and other alternatives for error reporting. Wants to make sure that people realise this adds an entirely new kind of error handling strategy, requiring new idioms. This affects how we use the whole language and library, so LEWG should at least report to EWG before forwarding anything to LWG. EWG can schedule discussions on such new programming models.

Note that the following are currently complete and handled in the core subgroups: SG2, Modules; SG3, File System; SG4, Networking; SG8, Concepts; SG9, Ranges; SG11, Databases; SG13, HMI

2.2.2 SC22 report

ISO now requiring registration for meetings.

2.2.3 SC22/WG14 (C) report

Hedquist reported that WG14 are meeting in Albuquerque the week before WG21. Expected to issue a TS with DR fixes very shortly.

Sutter reported that David Keaton, the WG14 chair, is also the new SC22 chair.

Honermann suggested hosting an evening session on Unicode processing. Sutter suggested to coordinate with LEWG chairs.

3. New business

3.1 Review of priorities and target dates

Current Status -- work on Technical Specifications is progressing.

3.2 Review of current mailings

3.3 Any other business

Vollmann was unable to get a paper into the mailing, as emails were not received. Suggested a new channel for paper submission. Sutter said there is ongoing discussion on automating paper submission and tracking. Will circulate a draft describing automated paper handling, via isocpp.org site.

Tong to send requests for revising the minutes to the secretary and convener. Wakely questioned the usefulness of updating the record of discussion, and suggested simply mentioning it at the next meeting so it will be captured in the next record of discussion. Sutter also suggested that the record of discussion could be a P-paper not an N-paper.

4. Review

4.1 Review and approve resolutions and issues

None.

4.2 Review action items

5. Closing process

5.1 Establish next agenda

To be based on current meeting agenda.

5.2 Future meetings (deferred to face-to-face meeting)

5.3 Future mailings (deferred to face-to-face meeting)

5.4 Adjourn

Approved by unanimous consent.