

WG21 pre-Prague tele-con minutes

ISO/IEC JTC1 SC22 WG21 N4851 — 2020-01-31

Nina Dinka Ranns, dinka.ranns@gmail.com

Convener: Herb Sutter
SC22/WG21 pre-meeting telecon
Friday 2020-01-31
08:00 N.Am. Pacific Time

1 Opening and introductions

1.1 Roll call of participants

- Herb Sutter (Herb)
- Inbal Levi (Inbal)
- Tom Honermann (Tom)
- Hana Dusíková (Hana)
- Hubert Tong (Hubert)
- Jens Maurer (Jens)
- JF Bastien (JF)
- John Spicer (John)
- Nina Ranns (Nina)
- Walter Brown (Walter)
- Gabriel Dos Reis (Gaby)
- Hal Finkel (Hal)
- Olivier Giroux (Olivier)
- Barry Revzin (Barry)
- Marshall Clow (Marshall)
- Jonathan Wakely (Jonathan)
- Erich Keane (Erich)
- Roger Orr (Roger)
- Bryce Adelstein Lelbach (Bryce)
- Titus Winters (Titus)
- David Stone (David)
- Daveed Vandevoorde (Daveed)
- Detlef Vollmann

- Michael Wong

1.2 Adopt agenda

No objections to adopting the agenda.

Agenda adopted.

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

- [Status page](#)

Any changes that should be discussed ?

None.

2. Status, liaison and action item reports

2.0 Advisory subgroup status reports

DG, Direction group: Michael Wong

Daveed presents.

DG has released an update to the direction paper, P2000. It's in the mailing.

ARG, ABI review group: Daveed Vandevoorde

Daveed presents.

We have a mailing list. There are currently three active issues, which are under discussion. We plan to suggest a rewrite of the paper to answer those three questions. We will not meet in Prague.

2.1 Pipeline stage 1 groups: Specialist subgroup status reports (Sgs)

SG1, Concurrency: Olivier Giroux

Olivier presents.

Smaller workload than usual, we may be able to finish on Thursday. We expect to work only on C++23 issues. There is no remaining work on NB comments.

SG2, Modules: David Stone

David presents.

We do not have many modules related papers. There are two issues which we will handle in EWG directly. We do not plan to meet in Prague.

SG4, Networking: Jeff Snyder

Update to come on the mailing list

SG5, Transactional memory: Hans Boehm

Update to come on the mailing list.

Jens : From the latest SG5 call I have attended, it sounds as if SG5 will not meet in Prague.

SG6, Numerics: Lisa Lippincott

Update to come on the mailing list.

SG7, Compile-time programming: Hana Dusíková

SG7 will meet on Thursday. We are going to discuss 9 R0 papers and two older ones. Main objective for this meeting is to discuss and hopefully decide what programming model we will prefer for the compile-time programming. We are going to discuss the Circle programming model.

SG10, Feature test: Barry Revzin

Barry presents.

There is currently no need to meet. We have one open issue about co-routine macro.

SG12, Undefined and unspecified behavior: Gabriel Dos Reis

Gaby presents.

SG12 will meet for three days. One day with MISRA, one day with WG23, and one day to discuss SG12 specific papers. We have two new papers, two new revisions, and one paper from Belfast we didn't process.

Hubert : Do we have paper numbers ?

Gaby : They are P0928R1, P1726R2 , P2069R0, P2070R0, and the paper from the last meeting.

SG13, HMI and I/O: Roger Orr

Roger presents.

We have two new papers. P2005R0, a brief 2d graphics review, and P2054R0, audio software use cases, to discuss. We have someone standing in for the author and presenting the first paper, all three authors of the second paper will be at the meeting. We will meet on Wednesday afternoon.

Bryce : will the author of P0267 be there ?

Roger : Guy Davidson will be there. The other author will not be there.

Bryce : perhaps it will be more productive if we discuss P2005R0 when we have both authors of P0267 present.

Roger : We may have an update of P0267 for Varna. It would be helpful to have that for P2005 discussion.

SG14, Low latency: Michael Wong

Michael presents.

We will meet on Friday morning. Most of the papers we already reviewed, some are making their way through LEWG and LEWGI. They may come back to us. Those are algebra papers and freestanding papers.

SG14 and SG19 have published a status report on papers they are tracking as one of our collaborative work items.

We are anticipating a presentation on exception handling in embedded systems. This is work that has been done by the university of Edinburgh. We will probably review that particular work, if there is time.

SG15, Tooling: Bryce Adelstein Lelbach

Bryce presents.

Couple of papers at this meeting, mostly module related. We will probably only meet for half a day.

Tom : I believe we also discussed a presentation of work done by Coverity.

Bryce : Indeed, we may need more than half a day.

Gaby : I'm interested in Coverity's presentation. I also have a late paper, which I would love to present.

Bryce : can you please send the late paper to the mailing list ?

Herb : if you have a late paper, please also attach it to the wiki with a D number in addition to mentioning it on the reflector.

SG16, Unicode: Tom Honermann

Tom presents.

We have had 4 telecon since Belfast, and one more next week. We will meet on Tuesday and Wednesday morning. No NB comments to follow up so we will be focusing on C++23. We have 16 papers tagged with SG16 on GitHub, 7 are awaiting revision, 3 are R0 papers, 6 are revisions are ready for discussion. Of those 6, we will probably not be able to discuss 2. That means there are currently 7 papers on our agenda for Prague.

SG17, EWG incubator: Botond Ballo

Erich presents.

SG17 will meet Tuesday to Thursday. There are about 30 papers, and we expect to see 20-25 of those papers depending on author availability.

SG18, LEWG incubator: Bryce Adelstein Lelbach

Bryce presents.

We have 33 active papers in our queue, 57 papers in total. Some need revision and we do not have an update. We may not use all the time at this meeting, we are a bit lighter on the work than at previous meetings.

We did a joint meeting with numerics at the last meeting, it's possible we will do a joint session again.

We are scheduled to meet for 4 days, but will use at least 3 days of that. I will make the schedule over the weekend.

Will continue to do the guest chairing program for a day or two.

SG19, Machine learning: Michael Wong

Michael presents.

We have 3 papers to discuss: statistical functions, graph data nodes, and automatic differentiation. We will go through at least one more iteration before we progress some of these papers.

Walter : Why is the paper on statistical functions not in numerics SG ?

Michael: It's usually joined with SG6. SG6 comes to SG19 to discuss this paper.

Walter : To me it looks as strictly SG6 paper.

Michael : statistical function is fundamental for machine learning. I agree SG6 should also look at it. We do keep SG6 up to date.

Herb : it's fairly common for the same paper to be seen by more than one SG, and the chairs can decide if the paper should be seen in parallel or serially. I suggest to advertise it as a joint SG6 and SG19 session.

Michael : we have been doing this, but we will make it more obvious in the future.

JF : Would it help if SG6 see it first ?

Walter : I strongly recommend to move this paper to SG6.

Jens : I've scheduled a joint SG6 and SG19 session to discuss this paper.

Herb : I agree SG6, as domain experts, should look at this paper because users often see the problem differently to library designers, and it's useful to have both perspectives.

SG20, Education: JC van Winkel

JC van Winkel reports by e-mail.

SG20 will be meeting in Prague for a day. We have 44 topics defined in 17 modules so far. We aim to determine the graph of topic dependencies and divide the topics over people to fill in the contents of the guidelines for these topics.

We also have a few new papers that we will discuss.

SG21, Contracts: John Spicer

John presents.

We will be meeting Friday afternoon. We will be reviewing some papers that are targeting areas that have been contentious, and that need to be resolved independently of which direction we take.

JF: There is a proposal for a new study group in the mailing.

Herb: We usually get proposals, and it's to the subgroups chairs to decide whether they want to handle those directly in their study group, or spin off a new study group. If they want to recommend spinning of a new study group, they bring it to me and we look into whether there is a quorum, a chair, and then we spin off a study group. I suggest LEWG and EWG talk to SG12 and WG23 chairs about possible overlap.

Bryce: Last time I spoke to the author, he was confused about why the paper was not scheduled.

JF: I have been in contact with the author since; discussions are still ongoing about how to schedule this to get the best feedback.

2.2 Pipeline stage 2 groups: Design subgroup status reports

EWG, Core language evolution: JF Bastien

JF presents.

Majority of the papers that have come in have been scheduled. The schedule is on GitHub: <https://github.com/cplusplus/papers/projects/18>

We have 5 NB comments left, we will handle them probably after plenary or in the afternoon on Monday.

We will have a joint session with LEWG on Monday about ABI. There is a paper in the mailing which is the required reading for the joint session – P2028.

LEWG, Library evolution: Titus Winters

Titus presents.

There are currently 97 papers targeting LEWG. We will not go through them all, we will probably get through 40-45 of those. We will have a joint meeting with EWG on Monday

afternoon. We will finish processing 3 contentious NB comments. We will discuss a lot of policy questions. Wednesday will be dedicated to executors. At the end of the meeting we will move onto the new C++23 features.

The end of my tenure is approaching, I will probably start having trial run for other chairs starting from this meeting. Check the wiki for the details on that.

2.3 Pipeline stage 3 groups: Wording subgroup status reports

CWG, Core language wording: Mike Miller

Mike Miller reports by e-mail.

Our primary focus, of course, will be on resolving NB comments. CWG currently has 27 open comments (and there are 5 for EWG that I assume might end up on our plate in some form). We resolved 43 in Belfast and already have drafting to review for a half dozen or so.

We will also prioritize issue processing in order to have as clean a draft as possible. In particular, we will look at P1787R3, the reformulation of lookup rules, early in the week to see if adoption for C++20 is feasible; that addresses dozens of open issues.

As time permits, we will also look at papers approved by EWG for C++23. The list is on the CWG wiki and on GitHub, thanks as always to Jens. There are currently a half dozen or so papers in this category, mostly small tweaks, and we doubtless will collect more as EWG does its work.

LWG, Library wording: Marshall Clow

Marshall presents.

We will do NB comments handling. We have around 80 open NB comments. About 30 of them are either issues or papers that we looked at in Belfast but did not move in Belfast.

We have 10 priority 1 issues. Priority 1 means we need to resolve it before we ship the standard. Several of them are in up for votes status.

We have 2 new papers that are mandating papers. One is very small, one is large.

We may have an evening session.

We don't know how many additional NB comments will come our way. At least 2 NB comments are to adopt substantial papers.

2.5 SC22 report

Herb Sutter presents.

There were recent emails about CoC and coronavirus. We will be following up on that.

2.6 SC22/WG14 (C) report

Michael : there is a continuing discussion on pointer zap and pointer provenance.

Hubert : we are worried about P1726 not being seen again in SG12. On the C committee reflector there has been a lot of traffic regarding this paper.

Gaby : It is scheduled for Wednesday. JF, would you like SG12 recommendation on the topic ? So far we didn't take a poll on the paper, we just encouraged paper author to do more work.

Olivier : SG1 is recommending to zap the zap.

3. New business

3.1 Review of priorities and target dates

- [Status page](#)
- [P1000](#)

Herb presents. We plan to finish C++20 at this meeting. We are in good shape to do so.

Hubert : With regards to zap paper - is there any intent for it targeting C++20 ?

JF : No. It may be handled as a DR against C++20 in the future.

Herb : even though we no longer accept new features to C++20, an issue can still be raised as a DR against C++20 and we can apply those retroactively. There is no time limit for that. This allows us to service the product that is already in use.

3.2 Any other business

Hal : to comply with the new CoC, I need to re-do the layout of the attendance sheet. If you have any ideas, please do let me know.

Tom : today's meeting was not on my radar. Thank you for the reminder. Can we send a meeting invitation email next time ?

4. Review

4.1 Review and approve resolutions and issues

No discussion.

4.2 Review action items

Herb to remind Jeff to send SG4 update to the reflector.

Herb to remind Hans to send SG5 update to the reflector.

Herb to remind Lisa to send SG6 update to the reflector.

Bryce to let Jens know about how long SG15 plans to meet.

Gaby to send the late SG15 paper to the mailing list and attach it to wiki.

Walter to remind Lisa there is an SG6 joint session with SG19 on Friday.

Herb to send an invitation email for telecon in the future.

5. Closing process

5.1 Establish next agenda

Herb proposes the same agenda.
No objections to the proposed agenda.

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

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

5.4 Adjourn

Meeting adjourned at 09:16 N.Am. Pacific Time.