

WG21 2026-06 Brno Admin Telecon Minutes

ISO/IEC JTC1 SC22 WG21 N5049 — 2026-06-03

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SC22/WG21 pre-meeting telecon

Convener: Guy Davidson

Date: Wednesday 2026-05-27

Time: 16:00 UTC

1. Opening and introductions

Guy Davidson opens the meeting at 16:05 UTC

1.1. Roll call of participants

- Andreas Weis
- Ben Boeckel
- Braden Ganetsky
- Bronek Kozicki
- Detlef Vollmann
- Guy Davidson
- Hana Dusíková
- Hubert Tong
- Inbal Levi
- Jeff Garland
- Jens Maurer
- Jonathan Müller
- J. Daniel Garcia
- Li Yihe
- Matthew Butler
- Michael Spencer
- Nevin Liber
- Ruslan Arutyunyan
- Timur Doumler
- Walter E Brown

1.2. Adopt agenda

No objections.

Agenda adopted.

Question: When will the DIS ballot occur?

Answer: We will transmit the DIS to the committee, then there will be 12 weeks of ballot period. The ballot period will be approximately early July to September.

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](#)

Status page is up to date.

2. Status reports

2.1. Logistics and advisory subgroup status reports

- **Meeting logistics:** Jens Maurer

Hosting us in Mendel University. We have great facilities available. All study group chairs should register their interest for their room usage at their earliest convenience.

We will have a Sunday evening 6:00 PM introductory meeting, as usual. We will have a collective walk from the preferred hotel to the university at 5:30 PM.

The usual pre-meeting “read all the papers” email, as soon as the minutes from this meeting are available.

- **AG**, Admin group: Nevin Liber

The post-Croydon mailing was on time, containing 4 N-papers and 161 P-papers.

The pre-Brno mailing had to be postponed for a day. It contained 4 N-papers and 112 P-papers.

All papers approved in Croydon have been in a mailing.

The post-Brno mailing is scheduled for July 15th.

The attendance sheet will be out this week.

- **DG**, Direction group: Daveed Vandevoorde

We have published an update to P5000 in the pre-Brno mailing: It suggests directions for the next standard.

We also plan to publish a revised P2000 for longer-term suggestions. We continue to meet over Zoom every other week (with occasional skips). The DG members who will be in Brno will also meet there in person for a lunch (traditionally, Wednesday).

- **ARG**, ABI review group: Daveed Vandevoorde, Jason Merrill

No new business.

2.2. Pipeline stage 1 groups: Specialist subgroup status reports (SGs)

SGs 2, 3, 5, 8, 11, 12, 13, and 21 are currently dormant and handled in the main subgroups. The 15 active SGs are:

- **SG1**, Concurrency: Ruslan Arutyunyan, Gonzalo Brito

SG1 did not meet since Croydon.

We will definitely meet in Brno, planning to look at the papers and work on the schedule this week.

- **SG4**, Networking: Jeff Snyder, Gašper Ažman

Nothing to report.

- **SG6**, Numerics: Matthias Kretz, Lisa Lippincott

SG6 Numerics did not meet since Croydon. For Brno, SG6 has 9 papers and 1 LWG issue on the agenda. Topics like "extensible math functions for C++" and "Floating-Point Support Annex for C++" should be on everyone's radar. It is expected that we will take our time to "study" these topics and flesh them out before passing the papers on to the evolution groups. Thus, we plan for 2 days (4 half days) for SG6.

- **SG7**, Compile-time programming: Hana Dusíková, Jeff Snyder

SG7 did not meet since Croydon, and will not meet in Brno. We have 2 papers that will be seen in Brno.

- **SG9**, Ranges: Jonathan Müller, Zach Laine

SG9 did not meet since Kona.

We plan to meet in Brno to make progress on our two big papers, Unicode transcoding views, and numeric (parallel) range algorithms, as well as give feedback on the other 12 smaller papers on various views, new range concepts, and a few bug fixes.

- **SG10**, Feature test: Barry Revzin, Jonathan Wakely

Nothing to report.

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

SG14 does not plan to meet in Brno and continues to meet online monthly. We are working on games and networking proposals.

- **SG15**, Tooling: Michael Spencer, Ben Boeckel

SG15 has not met since Corydon. There is 1 paper in the mailing. We plan to meet for a half day in Brno.

- **SG16**, Unicode: Steve Downey, Peter Bindels

The new chair team for SG16, Steve Downey and Peter Bindels, have begun regular telecons for the study group. The group has met twice since Croydon and picked up review of P2728: Unicode in the Library, Part 1: UTF Transcoding, the base paper for Unicode in C++29. SG16 does not plan to meet in Brno, as the expertise of the regular attendees is needed in other groups.

- **SG17**, EWG incubator: Erich Keane, James Touton

SG17 will not be meeting.

- **SG18**, LEWG incubator: Billy Baker, Nevin Liber

SG18 has not met since Croydon. There will likely be 2 afternoons for meeting in Brno.

- **SG19**, Machine learning: Michael Wong, Phil Ratzloff

SG19 does not plan to meet in Brno and continues to meet online monthly. We are working on Stats and Graph proposals.

- **SG20**, Education: JC van Winkel, Florian Sattler

SG20 met once since Croydon. In that meeting, we discussed and reviewed 7 requests for new teaching topics, 6 of which were agreed upon, so the EMEA and American subgroups can start working on them. Furthermore, we continued our discussions about a better C++ newcomer environment and refined the teaching topic structure.

SG20 plans to meet for half a day in Brno.

- **SG22**, C/C++ liaison: Timur Doumler, Jan Schultke, JeanHeyd Meneide

SG22 has met twice on telecons since Croydon. In these two telecons, we opined on four papers. We had consensus in favour of three of those papers (P0085, P3568, P3935) and no consensus for one (P3677); feedback to the authors for how to improve their papers was provided.

SG22 is now operating under new leadership: the new chair is Timur Doumler and the new assistant chair is Jan Schultke. Thank you very much to Nina Ranns for serving as the SG22 chair until recently!

SG22 is planning to continue to meet regularly in telecons going forward. However, we do not normally meet during WG21 meetings. Consequently, we are not planning to meet in Brno.

In 2026, WG14 met virtually twice; minutes of these meetings are available in [N3857](#) and [N3856](#). WG14 is planning two hybrid meetings later this year: Ottawa in August and Brazil in November (colocated with WG21). WG14 now has a published schedule for C2y, available in [N3827](#). WG14 also has a new C Floating Point (CFP) chair, Rajan Bhakta, after long time

chair Jim Thomas retired. Finally, Robert Seacord has been nominated as US Candidate for WG14 Convenor for a second term.

- **SG23**, Safety and Security: Roger Orr, Matthew Butler

SG23 attempted to meet once between meetings but abandoned the meeting for lack of a scribe. We have a few papers targeting SG23 and plan to meet for a half day to 1 day in Brno. One of the papers P4049R0 ("A plan for profiles") is a direction paper which we hope may inform the overall activity of SG23 for C++29.

2.3. Pipeline stage 2 groups: Design subgroup status reports

- **EWG**, Core evolution: Erich Keane, Hana Dusíková, Jeff Snyder

Evolution will be meeting as normal, with all chairs available in person for the first time in quite a while. We intend to meet Monday, Tuesday, and Wednesday until all of our paper backlog is exhausted. Additionally, we will be having a 'joint session' with LEWG on _BitInt on Friday morning. Additionally, if we have any 'send back' papers from CWG/etc and quorum, we will be meeting Friday afternoon to get to those as well.

- **LEWG**, Library evolution: Inbal Levi, Fabio Fracassi, Andreas Weis

LEWG will meet the full week. We have a policy session on Tuesday morning, and our joint session with EWG on Friday. We are looking at fixes and library issues, and the other papers according to the order of submissions. If an author is there in-person, we can schedule things differently on request.

2.4. Pipeline stage 3 groups: Wording subgroup status reports

- **CWG**, Core working: Jens Maurer, Jason Merrill, Shafik Yaghmour

CWG has had teleconferences approximately every 10 days since Croydon, and we have mostly processed issues. As a result, 20 issues are in "Tentatively Ready" status coming into Brno.

In terms of papers, no objections were raised with regards to P3248R4 (Require [u]intptr_t).

Paper P3596 (Undefined Behavior and IFNDR Annexes) is progressing; please give feedback in advance of Brno.

We also had a look at P3125R5 (constexpr pointer tagging); LEWG is asked to affirm whether the implied implementation-defined behavior is intentional.

For Brno, we will start reviewing C++29 papers. We have about 35 papers pending.

- **LWG**, Library working: Jonathan Wakely, Jeff Garland, Dietmar Kühl, Bryan St. Amour, Christian Trott

LWG took a break from telecons after Croydon, but resumed two weeks ago to do some issue processing. We will meet all week in Brno and start looking at C++29 papers. There is already a tentative schedule, mostly focused on C++29 papers.

2.5. SC22 report

SC22 has not met since the last meeting.

3. New business

3.1 Review of priorities and target dates

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

3.2 Any other business

Item 1:

Hana Dusíková, the host for the Brno meeting, shared photos of the meeting rooms at the university.

Item 2:

- Question about fully AI generated papers. Is it up to the chairs on what to schedule?
- ISO forbids fully generated papers in their directive.
- However, our P-papers are not ISO papers. We will leave it up to the chairs, and not have a blanket policy on the matter. We hope that people are reading the papers they are submitting, and not wasting the time of the chairs.
- Note, there are many papers marked “info” or are assigned all of WG21, from a small set of authors. These have not been assigned to a particular subgroup. Skimming the titles of the papers, they don’t propose a change to the working draft, which is the goal of papers. If the chairs wish to process those papers later, please assign a subgroup label. All tracking items in GitHub will be closed for papers that are not assigned to a subgroup. If a paper is not assigned to a subgroup, then it’s not worth seeing.
- We should take into consideration the time of the room, especially if these would be joint sessions. If there is no actual change that makes sense or wording, it can go back to the authors. The time of our participants is most valuable. Feel free to send it back and ask the authors for additional rationale.
- The ISO directives also say that we don’t feed free AI tools with public materials. Our papers are public, but our draft technically is not. Wording should not be generated.
- The Direction Group paper says to not use AI for wording. The author needs to own the content regardless of how it was generated. One primary author has generated many of these papers, and does not own the content very well. Having talked to this author, the intent of those information papers is just that. It isn’t meant to take time from any subgroup. Subgroup chairs should feel free not to spend time on those papers, as their intent is not to spend time in the subgroups
- Can we convey that there are other venues for information, like blog posts?
- Yes, we can convey this. WG21 is a very busy committee, and people will not continue to read those papers.

- If a paper proposes a change, supporting material can be given in the form of blog posts. That's a totally fine paper to look at. A paper would need pointers, not a large number of papers, or a huge paper going on tangents.
- The mailing is an official WG21 avenue, and thus gives a spotlight.

Conclusion: We have not seen widespread abuse of AI, and will keep an eye on it. It will be up to each chair to decide whether to see a paper.

4. Review

4.1 Review and approve resolutions and issues

4.2 Review action items

5. Closing process

5.1 Establish next agenda

The next agenda will look a lot like this agenda, with corrected names for chairs and co-chairs.

5.2 Future meetings (deferred to full meeting)

5.3 Future mailings (deferred to full meeting)

5.4 Adjourn

Meeting adjourned at 16:40 UTC