1. Opening activities

John Spicer opens the meeting at 08:03 AM N.Am. Pacific Time

1.1 Opening comments (PL22.16)

John Spicer presents.

1.2 Meeting guidelines

John Spicer presents.

Meetings are not public, but are open to visitors. Please refrain from live tweeting, blogging, taking photos or videos.

Every participant is responsible for understanding and abiding by the following:

- The INCITS Antitrust Guidelines (PL22.16)
- The INCITS Patent Policy (PL22.16)
- The ISO Code of Conduct
- The INCITS Code of Conduct (PL22.16)
- The IEC Code of Conduct
- The WG21 Practices and Procedures, and Code of Conduct

John Spicer presents the meeting guidelines. We expect everyone to be familiar with these rules. These apply to the plenary and to all the subgroup meetings.

If you have any questions or concerns about CoC issues, please approach a committee officer or a NB representative and bring it to their attention. If you have any technical issues or concerns, please bring them up as soon as possible.
1.3 The ISO Code of Conduct

ISO requires that, through 2020, committees provide an opportunity to discuss the code of conduct. John Spicer presents ISO CoC slides.

Please report any CoC violation to @conduct even if you also report it to the subgroup chair.

1.4 Membership, voting rights, and procedures for the meeting (PL22.16)

John Spicer presents voting rights.

If you are representing an organization that is considering formally joining PL22.16, or your organization is already a member and you wish to change your voting status, please inform an officer.

Hal Finkel presents. When registering for the call, please make sure you use the name that is registered in the global directory.

John Spicer presents how to vote using the telecon client.

1.5 Introductions

Officers introduce themselves.
New members introduce themselves.

John Spicer welcomes new members.

Herb Sutter: We have 18 national bodies present at this virtual meeting.

1.6 Agenda review and approval (PL22.16 motion, WG21 poll)

The meeting goals described above are derived from the schedule adopted in 2020 and described in: P1000R4

The primary goal of this meeting will be to provide any necessary status updates and conduct straw polls proposed for working draft changes.

John Spicer presents the agenda.

PL22/16 motion to approve the meeting agenda
Barry Hedquist Moves
Jonathan Wakely seconds.
The motion is unanimously approved by PL22/16.
WG21 motion to approve the meeting agenda, with the changes to the agenda as discussed. The motion is unanimously approved by WG21.

1.7 Editor's reports, approval of working drafts

<table>
<thead>
<tr>
<th>Document</th>
<th>Editor's report</th>
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<tbody>
<tr>
<td>C++23 Standard</td>
<td>N4879</td>
<td>N4878</td>
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<tr>
<td>Library Fundamentals TS</td>
<td>N4874</td>
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WG21 motion to approve the working drafts. The motion is unanimously approved by WG21.

1.8 Approval of the minutes of the previous meetings (PL22.16 motion, WG21 poll)

<table>
<thead>
<tr>
<th>Meeting</th>
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<tr>
<td>WG21 November Virtual</td>
<td>N4877</td>
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<td>PL22.16 November Virtual</td>
<td>pl22.16-2020-00009</td>
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<tr>
<td>WG21 pre-February Virtual administrative telecon</td>
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PL22/16 motion to approve the minutes.
Daveed Vandevoorde moves.
Nevin Liber seconds
The motion is unanimously approved by PL22/16.

WG21 motion to approve the minutes. The motion is unanimously approved by WG21.

2. Liaison reports, and WG21 study group reports (see pre-meeting WG21 telecon minutes)

3. WG progress reports (Core, Evolution, Library, Library Evolution; see pre-meeting WG21 telecon minutes)

4. New business requiring action by the committee

No discussion.
5. Discussion and Straw Polls

5.1 CWG Polls

1. Accept as Defect Reports the following issues (all issues resolved by P1787R6 (Declarations and where to find them), adopted at the November, 2020 meeting):

   |   |   |   |   |   |   |   |   |   |   |
---|---|---|---|---|---|---|---|---|---|
36 | 110| 138| 191| 255| 271| 279| 338| 360| 386|
399| 405| 418| 536| 554| 562| 563| 600| 607| 852|
952| 102| 120| 125| 129| 147| 150| 161| 172| 177|
181| 182| 182| 182| 182| 182| 183| 183| 183| 184|
188| 189| 189| 190| 190| 190| 193| 200| 200|   |
4  | 4  | 6  | 8  | 0  | 7  | 8  | 6  | 7  | 9  |
205| 206| 207| 216| 219| 221| 233| 237| 239|   |
241| 2  | 5  | 0  | 5  | 9  | 3  | 1  | 0  | 6  |

No discussion.

No objection to unanimous consent.

Motion passes.

2. Accept as Defect Reports all issues in P2313R0 (Core Language Working Group "tentatively ready" Issues for the February, 2021 meeting) and apply the proposed resolutions to the C++ working paper.

No discussion.

No objection to unanimous consent.

Motion passes.

3. Apply the changes in P1102R2 (Down with ()! to the C++ working paper.

No discussion.

No objection to unanimous consent.

Motion passes.

5.2 LWG Polls

Issues
1. Apply the changes for all Tentatively Ready issues in P2315R0 (C++ Standard Library Issues to be moved in Virtual Plenary, Feb. 2021) to the C++ working paper.

No discussion.

No objection to unanimous consent.

Motion passes.

C++23

2. Apply the changes in P2259R1 (Repairing input range adaptors and counted_iterator) to the C++ working paper.

No discussion.

No objection to unanimous consent.

Motion passes.

3. Apply the changes in P2212R2 (Relax Requirements for time_point::clock) to the C++ working paper.

No discussion.

No objection to unanimous consent.

Motion passes.

4. Apply the changes in P2162R2 (Inheriting from std::variant) to the C++ working paper.

There are objections in the room.

Discussion in the room.

After discussion there are no objections to unanimous consent.

Motion passes.

5. Apply the changes in P2160R1 (Locks lock lockables) to the C++ working paper.

No discussion.

No objection to unanimous consent.
Motion passes.

6. Apply the changes in P2017R1 (Conditionally borrowed ranges) to the C++ working paper.

No discussion.
No objection to unanimous consent.
Motion passes.

7. Apply the changes in P1682R2 (std::to_underlying for enumerations) to the C++ working paper.

No discussion.
No objection to unanimous consent.
Motion passes.

8. Apply the changes in P0533R7 (constexpr for cmath and cstdlib) to the C++ working paper.

There are objections in the room.
Herb Sutter clarifies the rules of voting
John Spicer clarifies how to vote.

In favour: 31
Opposed: 22
Neutral: 18

No consensus. Motion doesn’t pass.

5.3 LEWG Polls

Motion 1

Move to apply the changes in P1919R3 (Expanding the Rights in SD-8) to Standing Document 8 (SD-8: Standard Library Compatibility).

No discussion.
No objection to unanimous consent.
Motion passes.
6. Closing activities

6.1 Other business

Jonathan Wakely reminds attendees to update their virtual meeting client.

6.2 PL2.16 motions, if any

John Spicer reminds of voting rights for PL22.16

1. TR 18015 National Review

Barry Hedquist moves.
Davis Herring seconds.

No objection to unanimous consent.

Motion approved.

7 Plans for the future (PL22.16)

7.1 Next and following meetings

Herb Sutter presents.

(virtual) 2021-06-07: Zoom virtual plenary meeting
(virtual) 2021-10-04: Zoom virtual plenary meeting

2022-02-07 to 12: Portland, OR, USA; Intel
2022-07: New York, NY, USA; Bloomberg
2022-11-07 to 12: Kona, HI, USA: Standard C++ Foundation

7.2 Mailings

Note: These are the closest regular mailings and not special pre/post meeting mailings.

2021-06-15: Post-Summer
2021-09-15: Pre-Autumn

8. Adjournment (PL22.16 motion)

Daveed Vandevoorde moves
9. Attendance

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<tr>
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Guy Davidson
United States Dept of Energy
USA

Hal Finkel
United Kingdom

Hana Dusíková
Czech Republic

Hans Boehm
Google
USA

Harish Naik
Aquatic Group LLC
USA

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Microsoft Corporation
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Howard Hinnant
Ripple Labs
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Mitsuhiro Kubota
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Nathan Sidwell
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Nemanja Boric
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Nevin Liber
Argonne National Laboratory
USA

Nicolai Josuttis
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Nina Ranns
United Kingdom
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