

Document Number: WG21/N0660

X3J16/95-0060

Date: 20 March 1995

Project: Programming Language C++

Reply to: Dan Saks

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Minutes

ISO/IEC JTC1/SC22/WG21 Meeting No. 12

5 - 10 March 1995

Radisson Hotel  
Austin, TX 78701 USA

1 Opening and Introductions

Harbison convened the meeting at 18:00 (CST) on Sunday, 5 March 1995.  
Saks was the secretary.

1.1 Welcome from the Host

1.2 Call Roll of Technical Experts

The attendance list appears as Appendix A.

1.3 Select Meeting Chair

Harbison offered to chair the meeting.

1.4 Select Meeting Secretary

Harbison affirmed that Saks is the secretary for WG21.

1.5 Select Language

Harbison suggested that WG21 conduct this meeting in English, and no one objected.

1.6 Select Drafting Committee

Saks (as secretary) is a standing member of the drafting committee.  
Harbison asked others to serve on the drafting committee for this meeting, including at least one WG21 member whose native language is not English. As usual, Corfield, Hartinger, and Unruh volunteered.

1.7 Adopt Agenda

Harbison submitted SD-0 == 94-0003R2 (26 September 1994) as the meeting agenda, with these additions:

3.1 Review NB (National Body) Comments on CDR Ballot

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3.2 Schedule

3.3 Editing and review committee

3.4 Disposition of comments

WG21 accepted the agenda with these changes.

## 1.8 Recognize Documents

Harbison introduced a summary of CD registration ballot issues (N0652 = 95-0052). Plauger introduced a review of the C++ draft from WG14 (N0659 = 95-0059).

## 1.9 Approve Minutes from Previous Meeting

Saks submitted N0596 = 94-0209 for approval as the minutes of the previous meeting, which WG21 accepted.

## 2 Status, Liaison and Action Item Reports

### 2.1 Liaison Reports

#### 2.1.1 SC22 Report

No report.

#### 2.1.2 SC22/WG11 (Binding Techniques) Report

No report.

#### 2.1.3 SC22/WG14 (C) Report

Deferred to the joint meeting with X3J16.

#### 2.1.4 SC22/WG15 (POSIX) Report

No report.

#### 2.1.5 SC22/WG20 (Internationalization) Report

No report.

### 2.2 Review Action Items from Previous Meetings

No items from previous meeting.

## 3 New Business

### 3.1 Review NB (National Body) Comments on CDR Ballot

Harbison explained that he has an obligation as convener to respond to comments on the ballot. He asked WG21 members for their reaction to various comments.

#### 1) Splitting the language and library into separate work items.

Harbison explained that two NBs, France and Netherlands, suggested splitting the C++ library into a separate work item. Bruck said Sweden opposed it. Lajoie said Canada opposed it. Corfield said that if splitting the library out would lead to an earlier language standard, the UK would support the split. Hartinger said Germany had not decided on a position. Kamimura said Japan preferred to keep the language and library as one work item.

Harbison said if we decide against a split at this meeting, but then decide to do it sometime later, we will probably need another CD ballot.

After a little more discussion, Harbison observed that the reason for splitting is that we hoped it might change two votes (France and Netherlands) from "no" to "yes". However, since two NBS (Canada and Sweden) said they'd change their votes from "yes" to "no" if we did, then there's nothing to gain.

- 2) Rearrange the library presentation order
- 3) Make some parts of the library optional (non-normative)

No one spoke in favor of either suggestion. Plum suggested that this merits a detailed reply because of the strength of the comments.

- 4) Reject all further proposals for new features

Several members suggested that we can't take a completely hard line on no extensions. We need liberty to make extensions to correct flaws.

Plum said we should reject any proposal to revise the foundations of the language (such as the definition of a byte from 8 to 4 bits). It causes too much upheaval.

Stroustrup suggested abolishing the Extensions ad hoc WG at the end of this WG21+X3J16 meeting.

- 5) Establish an ad hoc WG to define fundamental language concepts

Harbison asked if we should set up such a WG. Bruck and Lajoie said "no". Lajoie added that the Core WGs are already doing this work. Lajoie also said she didn't see what the alleged problem(s) with the type system was, and needed help from those with these concerns to tell her what the problem(s) are.

Harbison asked about rearranging the draft to be more like the C standard (R-1.a in N0652 = 95-0052), specifically, partitioning each section into syntax, constraints, semantics, and example. Plum observed that C's separation of constraints and semantics doesn't always work out well. Unruh noted that the restructuring would be good for C++ because it would point out places where features are defined by example.

Harbison suggested that we acknowledge this concern, and that we will avoid defining by example, and explicitly delimit examples.

Koenig said there's no way he can review the entire draft before CD ballot. He said all that we need to submit the draft for CD is proper technical content in grossly-correct form. He suggested taking the ballot comments under advisement and that we'd do what we can about the format of the draft between CD and DIS.

### 3.2 Schedule

Harbison suggested that he, Lenkov, Koenig and Plum meet during the week to discuss the schedules for editing the draft and for the US public review.

Lenkov wondered how WG21 would react if the US were left without enough time to conduct a public review. Would WG21 just go ahead and let the US vote "no"?

Stroustrup said nothing has changed since we discussed this issue in November at Valley Forge. He suggested that Harbison just "read the riot act" -- the committee should not approve "unfunded mandates" (vague proposals to revisit the draft, phrased in ways that leave too much work for the editor). He also suggested running motions past Koenig to catch any unfunded mandates.

Harbison said he'd announce an abbreviated editing schedule during the WG21+X3J16 meeting later in the week.

Lenkov asked again what would happen if the US were late. Koenig said it won't be late; he'll ship whatever he's got done on time.

### 3.3 Editing and review committee

Harbison suggested deferring this discussion to a WG21+X3J16 steering committee meeting.

### 3.4 Disposition of comments

Harbison asked each NB present that submitted ballot comments to let him know where they stand on those comments. He asked for this information by the end of this week. Lajoie also asked if a WG21+X3J16 ad hoc WG can also reply to an NB that the WG has already discussed the NB's concern. Harbison said they could.

Harbison said he will prepare a report on the disposition of comments. NBs may ask to review it before he sends it to SC22.

## 4 Review/Approval of Resolutions and Issues

None.

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N0660 = 95-0060

## 5 Closing Process

### 5.1 Select Chair for Next Meeting

Harbison offered to prepare the agenda for the next meeting and act as chair.

### 5.2 Establish Next Agenda

Same old stuff.

### 5.3 Future Meetings

Deferred to the joint meeting with X3J16.

### 5.4 Future Mailings

Deferred to the joint meeting with X3J16.

### 5.5 Assign Document Number(s)

None.

### 5.6 Review Action Items

None.

5.7 Thanks to Host

WG21 thanked Motorola for hosting the meeting.

5.8 Adjournment

WG21 recessed at 08:35 on Sunday and reconvened in session with X3J16. See the corresponding WG21+X3J16 meeting minutes (N0661 = 95-0061).

Appendix A - Attendance

Name	Affiliation; (*) = Head of Delegation
Lajoie, Josee	Canada (*)
Harbison, Sam	Convener
Stroustrup, Bjarne	Courtesy
Hartinger, Roland	Germany (*)
Unruh, Erwin	Germany
Ichiro Koshida	Japan
Tsutomu Kamimura	Japan (*)
Bruck, Dag	Sweden (*)
Corfield, Sean	UK
Rumsby, Steve	UK (*)
Lenkov, Dmitry	USA
Plum, Thomas	USA (*)
Koenig, Andrew	USA/Project Editor
Saks, Dan	USA/Secretary
Plauger, P. J.	WG14 Convener (ex officio)

