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## Minutes of ANSI J16 and ISO WG21 Co-located Meeting, April 30 – May 4, 2001

Motions are recorded as follows:

*Motion (mover, seconder)*

[passed|failed] J16 (# in favor, # opposed, # abstaining, # not present or not voting, total eligible to vote)

[passed|failed] WG21 (# in favor, # opposed, # abstaining)

**Monday, April 30, 9:00am-5:30pm**

### **1. Opening activities**

Clamage called the meeting to order on Monday, April 30, 2001, at 9:00am CET.

#### **1.1 Opening comments**

#### **1.2 Introductions**

#### **1.3 Membership, voting rights, and procedures for the meeting**

Clamage reviewed the rules as usual.

#### 1.4 Agenda review and approval

Austern suggested that we add an item to the agenda to discuss the creation of a proposed new work item to prepare a TR on library extensions.

It was decided that this agenda item will be added to "New Business."

Simonsen suggested that we add an item to the agenda to discuss the preparation and approval of a press release that will report this results of this meeting.

It was decided that this agenda item will be added to "New Business."

Brown moved to approve the agenda. Simonsen seconded. Lots approved. None opposed.

#### 1.5 Distribution of position papers, WG progress reports, WG work plans for the week, and other documents that were not distributed before the meeting.

#### 1.6 Approval of the minutes of the previous meeting

**Motion (Van Winkel, Vollmann) passed (lots, 0, 0).**

#### 1.7 Report on the WG21 Sunday meeting

Plum reported the events of the WG21 Sunday meeting. Due to confusion concerning the location of the meeting, the Russian delegation was unable to attend but, as Tom was pleased to note, they were in attendance at the Monday session.

Plum reviewed discussion of the library TR proposal and the suggestion that a press release by issued following the end of this meeting.

Plum also reported that formatting and preparation of the TC was discussed in some detail. In particular, Plum noted that the text is now compatible with groff and is therefore widely portable. Furthermore, Plum noted that the document's current form is "a marvel of document editing."

Plum also reminded the committee that an evening session concerning the future of C++ will be conducted Tuesday night.

#### 1.8 Liaison reports

Simonsen reported that WG20 has recently issued a ballot concerning an advanced locale specification. Simonsen felt that WG21 should review the specification and consider its appropriateness to C++. Simonsen also noted that WG20 will be meeting next week. WG20 has discussed the preparation of a C++ binding to their work and has suggested that this may be an appropriate project to consider for publication in the proposed library TR.

Benito reported that WG14 met last week here in Denmark. WG14 is currently publishing a technical corrigendum to their 1999 standard. They are also preparing to publish a TR on embedded C, and processing defect reports.

Simonsen reported that WG11 is revising the language independent data types standard. Furthermore, WG11 is soliciting the assistance of WG21/J16 in the preparation of a C++ binding to their work.

There was more discussion. This document will be available on the SC22 web site.

#### 1.9 New business requiring actions by the committee

Austern recalled that in Toronto a vote was taken in which we approved the drafting of a work item proposal that will be sent to SC22. Austern indicated that he hoped we would be able to vote on the draft proposal before the end of the meeting. The purpose of the TR will be to specify libraries that might be considered for inclusion in a later revision of the standard.

Simonsen discussed a plan to issue a press release reporting the activities of the committee this week. Stroustrup, Glassborow, and Simonsen have already volunteered to participate and other volunteers were invited. Simonsen intends that this press release will be issued to *Dr. Dobb's Journal* and similar trade and technical publications.

Stroustrup observed that the committee would benefit from the participation of individuals in the management of public perception of the C++ language and the work of the committee. Stroustrup referred specifically to online discussion groups.

## **2. Organize subgroups, establish working procedures.**

### **3. WG sessions (Core, Library, Performance).**

**The Core and Library groups will work on Defect Reports. Performance will set its own agenda.**

**Tuesday, May 1, 8:00am-5:30pm**

#### **4. WG sessions continue.**

**Tuesday, May 1, evening**

#### **4. C++ Future Directions session.**

**Wednesday, May 2, 8:00am-5:30pm**

#### **5. WG sessions continue.**

**The WG chairs will arrange for any DRs ready to be proposed for resolution to be written up in motion form, and made available in printed form by the end of the day.**

**Thursday, May 3, 8:30am-11:30am**

#### **6. General session.**

Clamage called the general session to order on Thursday, May 3, 2001, at 9:25am CET. Working group chairs will present proposed Defect Resolutions (DRs) and we will take straw polls.

#### **6.1 WG status and progress reports.**

Miller presented J16/01-0016 = WG21 N1302 "Core WG Defect Resolutions." Since Toronto, 25 new issues were opened via the committee reflector and comp.std.c++, not including 3 or 4 raised in Toronto. At this meeting the Core WG is recommending 16 DRs with solutions. Besides moving new DRs, one of the DRs voted in Toronto has a change of status; the Core WG is proposing to ask the editor to withdraw issue 209 as a DR and to mark it instead as Not a Defect (NAD). Also, implementing the intent of Issue 152 also requires additional changes.

Austern presented the Library WG issues. The issues that were in Ready status in the pre-Copenhagen mailing are being proposed to be raised to DR status. Most are fixing typos; three were called out for particular attention because they were once controversial, 103 (set's iterator vs. const\_iterator), 186 (bitset::set() second parameter should be bool), and 265 (pair::pair() effects overly restrictive).

The Library WG is also proposing a motion to submit a New Work Item proposal to SC22 for library extensions; a copy of the proposed Form 4 was circulated. Austern pointed out, and the committee discussed, a potential patent issue regarding a patent held by Rogue Wave on specific template metaprogramming techniques. In particular, the check box on Form 4 was understood to mean that the intent of the work item was to standardize a particular patented technique, and that is not what the Library group is intending to do. Also, it's not clear to what extent, if any, the Rogue Wave patent is related to things that the Library group might want to cover. A straw poll was taken and there were none in favor of checking "concerns known patented items: yes" on Form 4, and lots in favor of checking "concerns known patented items: no."

#### **6.2 Presentation and discussion of DRs ready to be voted on. Straw votes taken.**

No straw votes were taken.

Plum proposed use of the –extensions reflector for discussion of new directions for C++0x. We will include a point covering evolution/extensions on the agenda for the next meeting.

At 10:10am, Clamage recessed the general session until 9:00am tomorrow morning.

#### **Thursday, May 3, 1:00pm-5:30pm**

**7. WG sessions continue. DR motions modified as needed, made available in printed form by the end of the day.**

#### **Friday, 4, 8:00am-Noon**

#### **8. Review of the meeting**

##### **8.1 Formal motions, including DRs to be resolved.**

Motion 1: “Move that we submit to the Project Editor as Potential Defect Reports all those issues in J16/01-0016 = WG21 N1302 ‘Core WG Defect Resolutions’.”

**Motion (Crowl, Adamczyk) passed J16 (13, 0, 0, 13, 26) and WG21 (9, 0, 0).**

Motion 2: “Move that we request the Project Editor to remove Core Language Issue 209 from the list of Defect Reports.”

**Motion (Nelson, Caves) passed J16 (13, 0, 0, 13, 26) and WG21 (9, 0, 0).**

Motion 3: “Move that we submit to the Project Editor as Potential Defect Reports the following library issues in J16/01-0005 = WG21 N1291 ‘C++ Standard Library Active Issues List (revision 17)’: 103 118 136 153 165 171 183 184 185 186 214 221 234 237 243 248 251 252 256 260 261 262 263 265 268.”

**Motion (Austern, Plauger) passed J16 (13, 0, 0, 13, 26) and WG21 (8, 0, 1).**

Motion 4: “Move that we submit to SC22 a proposal for a new work item with the title ‘Technical Report of Type 2 on C++ Library Extensions (based on ISO/IEC 14882)’, with the scope ‘Library extensions of broad interest to users of C++ (possible examples include hashtables, regular expressions, and extensions for C99 compatibility), and potential future directions for the standard C++ library.’, and with Matthew Austern as proposed Project Editor.”

**Motion (Brown, Ward) passed J16 (13, 0, 0, 13, 26) and WG21 (8, 0, 1).**

Nelson moved that the committee thank the host. There was applause.

##### **8.2 Review of action items, decisions made, and documents approved by the committee**

##### **8.3 Issues delayed until Friday**

Koenig requested confirmation of his understanding of motions 1, 2, and 3. He wanted to establish that items 1 and 3 did not advance Defect Reports to the project editor with the intention that they be included in the upcoming TC. Furthermore, he wanted to establish that item 2 was intended prevent the Defect Report named “Issue 209” from being included in the TC. Koenig’s understanding with respect to these three motions was confirmed by the committee.

Koenig furthermore requested assistance in proof reading the TC. Finally, Koenig invited informal discussion before the next meeting concerning the presentation of the technical content of the TC in the TC document.

Maurer asked about the preparation of formal responses to formal Defect Reports that have been issued to the committee. Plum responded that the Committee is only obligated to provide formal responses to formal DRs, and the only formal DRs that exist to date are those designated as such in response to Committee action (that is, no national bodies have raised DRs). Consequently, there is no need for a Record of Response on closed issues.

Unruh requested that a working draft of the TC be widely available to all members of the committee so that they may proofread it on an informal, best effort basis. Koenig responded that the proofreading draft will be made available on the committee web site.

Simonsen reported that he has collected text from members of each of the subgroups to include into the text of a press release concerning the achievements of the committee at this meeting. He proposed that the text be polished and be made available to the committee by means of the -admin reflector for proofreading.

Plum mentioned his suggestion, communicated earlier this week, that the -ext reflector be used to continue discussions regarding the future evolution of C++ until formal mechanisms for maintaining these discussions are established.

Stroustrup mentioned that his presentation will be placed onto his web site. It will not be possible to reach this presentation by following links from the home page. The URL will be posted on the reflectors next week.

Plum noted that he and Clamage must remember to add items to the agendas for the next meeting to permit discussion of C++ evolution.

Miller reported that this meeting is his last as chair of the core working group and vice chair of J16. Adamczyk has volunteered to replace Miller as working group chair. Nelson has volunteered to replace Miller as vice chair of J16.

## **9. Plans for the future**

### **9.1 Next meeting**

Caves reported that he is identifying more alternative hotels for committee members to stay at in Redmond. Committee members will be provided a catered lunch during each of the days of the meeting. The Sunday evening meeting will be located at the main hotel. Caves requested confirmation that three breakout rooms will be required by the committee at this meeting. The committee confirmed that three breakout rooms are required.

### **9.2 Mailings**

Miller reported that the post-meeting mailing deadline is May 18, 2001.

Miller reported that the pre-Redmond meeting mailing deadline is September 11, 2001.

Miller reported that the post-Redmond meeting mailing deadline is November 9, 2001.

### **9.3 Following meetings**

Plum noted that there was tentative discussion among J11 of holding an October 2002 meeting in Nashua, New Hampshire. The potential sponsor of an October 2002 meeting in Nashua is Oracle. As usual, there is a desire to hold the C++ meeting at the same location as the C meeting, so J16 will endeavor to find a sponsor in the Nashua/Boston area for an October 2002 meeting.

Motion to Adjourn:

**Motion (Glassborow, Charney) passed J16 (lots, 0, 0) and WG21 (lots, 0, 0).**

**J16 Attendance List**

<b>Name</b>	<b>Company</b>	<b>Mon</b>	<b>Tue</b>	<b>Wed</b>	<b>Thu</b>	<b>Fri</b>
William M Miller	self	A	A	A	A	A
Clark Nelson	Intel	V	V	V	V	V
Steve Adamczyk	Edison Design Group	V	V	V	V	V
John Spicer	Edison Design Group	A	A	A		
Daveed Vandevoorde	Edison Design Group	A	A	A	A	A
Jason Merrill	Red Hat	V	V	V	V	V
Reg Charney	OpenWave	A	A	A	A	A
Nathan Myers	Zembru	A	A	A	A	
Lawrence Crowl	Sun Microsystems	V	V	V	V	V
Tom Plum	Plum Hall	V	V	V	V	V
Andrew Koenig	AT&T	V	V	V	V	V
Jonathan Caves	Microsoft	V	V	V	V	V
Bjarne Stroustrup	AT&T Labs	A	A	A	A	A
Beman Dawes	self	V	V	V	V	
Tana Plauger	Dinkumware, Ltd.	A	A	A		A
P. J. Plauger	Dinkumware, Ltd.	V	V	V		V
Pete Becker	Dinkumware, Ltd.	A	A	A		A
Jeremy Siek	University of Notre Dame	V	V	V	V	
Richard Corden	Programming Research	V	V	V	V	V
Michael Spencer	Programming Research	A	A	A	A	A
Erwin Unruh	Fujitsu Siemens Computers	A	A	A	A	A
Bill Seymour	self	A	A	A	A	A
Jon Benito	Perennial	V	V		V	V
John Wiegley	Borland	V	V	V	V	
Marc Paterno	Fermi National Accelerator Lab.	A	A	A	A	A
Walter Brown	Fermi National Accelerator Lab.	V	V	V	V	V
Judy Ward	Compaq Computer	V	V	V	V	V
Robert Klarer	IBM	V	V	V	V	V
Jamie Schmeiser	IBM	A	A	A	A	A
Greg Comeau	Comeau Computing	V	V	V	V	V
Herb Sutter	PeerDirect		V	V	V	
Matt Austern	AT&T	A	A	A	A	A
Steve Clamage	Sun Microsystems	A	A	A	A	A
David Abrahams	Altra Broadband	A	A	A	A	
Brendan Kehoe	self	A	A	A	A	A
Greg Colvin	Oracle	V	V	V	V	V