

Doc No: SC22/WG21/N3647
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Project: JTC1.22.32
Reply to: Kyle Kloepper
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Minutes

PL22.16 Meeting No. 59
15-19 October 2012 Portland, Oregon, USA

1. Opening activities

Clamage opened the meeting and welcomed the newcomers.

1.1 Opening comments, welcome from host

Clark Nelson welcomes the attendees and provides organizational information.

1.2 Introductions

Clamage has the attendees briefly introduce themselves.

1.3 Meeting guidelines (Anti-Trust)

- http://www.incits.org/pat_slides.pdf
- <http://www.incits.org/inatrust.htm>

Clamage presented the anti-trust links and clarified that he is not allowed to explain the anti-trust documents nor answer questions on them.

1.4 Membership, voting rights, and procedures for the meeting

Nelson explained the membership and voting rights and clarified that the rights apply to formal votes but not to straw polls taken.

1.5 Agenda review and approval

Clamage entertained a motion to approve the agenda (document PL22.16/12-0063 = WG21/N3373), moved by Crowl, seconded by Liber. Unanimous.

1.6 Approval of the minutes of the previous meeting

Moved by Nelson, seconded by Hedquist, unanimous.

1.7 Editor's report, approval of draft

Du Toit summarized the editor's report, saying that there were 50 core issues and two dozen library issue resolutions added to the working draft.

Draft [N3376](#) approval moved by Du Toit, seconded by Halpern, unanimous.

1.8 Liaison reports (including WG21 study groups)

Sutter reports on SC22 status

Sutter then introduced isocpp.org.

Plum then made a short report about the C committee.

For WG23 (security/vulnerabilities), Plum reported.

1.9 WG21 progress reports and work plans for the week

Progress Reports

Each Working Group chair presents group progress and plans for the coming week.

Core Working Group (CWG)

Miller gave the status report for Core.

Library Working Group (LWG)

Meredith gave the status report for LWG

Evolution Working Group (EWG)

Stroustrup then gave his report

SG1 – Concurrency

Boehm summarized the SG1 status.

SG2 – Modules

Gregor briefly reported that the modules study group has been mostly dormant.

SG3 – File System

Dawes said that filesystem is progressing nicely.

SG4 – Networking

Gustafsson covered for Kloepper for SG4.

SG5 – Transactional Memory

Wong said that SG5 is aiming for a TS shipping alongside approximately 2014.

SG6 – Numerics

Crowl said that SG6 has a handful of papers to look at.

1.10 New business requiring actions by the committee

2. Organize subgroups, establish working procedures.

Clamage give room information.

3. WG21 sessions (Core, Library, Concurrency, and Evolution).

The committee broke into the working groups and study groups.

Tuesday 16 October 8:30 a.m. – 5:30 p.m.

4. WG21 sessions continue.

Wednesday 17 October 8:30 a.m. - 5:30 p.m.

5. WG21 sessions continue.

Thursday 18 October 8:00 a.m. - 12:00 p.m.

6. WG21 sessions continue.

Thursday 18 October 1:30 p.m. – 5:30 p.m.

7. General session.

7.1 WG21 status and progress reports.

Clamage explained the purpose of the meeting to newcomers, which is to save time on Friday.

Core Working Group

Miller presented his Core Report.

Library Working Group

Meredith presented his Library report.

Evolution Working Group

Stroustrup presented EWG status, and announced two new study groups, for reflection (SG7) and concepts (SG8).

SG4 – Networking

Gustafsson presented SG4 status.

SG3 – File System

Dawes presented SG3 status.

SG1 – Concurrency

Boehm presented SG1 status.

SG5 – Transactional Memory

Wong presented SG5 status.

SG2 – Modules

Gregor presented SG2.

SG6 – Numerics

Crowl presented SG6.

7.2 PL 22.16

Hedquist leads a discussion of the PL22.16 resolutions and motions.

Miller asked what exactly it means that the library TR1 (TR 19768:2007) is used but still being withdrawn, and Plauger and Hedquist explained that the technical content of it is still being used.

Straw Poll: Withdraw TR1 (TR 19768), confirm Performance TR (TR 18015): Unanimous.

Straw Poll: Approve recommendation of member emeritus status for Beman Dawes and Walter Brown: Unanimous.

Straw Poll: Approve proposed US delegation to WG21 for calendar year 2013. Unanimous.

7.3 Presentation and discussion of proposed responses to public comments. Straw votes taken.

Sutter gave a brief presentation about subgroups and ISO stages.

8. WG21 sessions continue.

Friday 19 October 8:30 a.m. – 12:00 p.m.

9. WG21 sessions continue

Friday 19 October 1:30 p.m. – 5:30 p.m.

10. Review of the meeting

Clamage calls the meeting to order. Roll call shows 22 PL22.16 and 7 WG21 voting members present.

10.1 Motions

Core motions

Motion 1

Move we accept as Defect Reports all issues in "DR" status from N3383:

moved by Miller, seconded by Hedquist

.16 unanimous, wg21 unanimous

Motion 2

Move we apply N3323, "A Proposal to Tweak Certain C++ Contextual Conversions, v3," to the C++ Working Paper.

moved by Miller, seconded by Wong

.16 unanimous, wg21 unanimous

Motion 3

Move we accept as Defect Reports all issues in "ready" status from N3382, except for issues 129, 240, 240, 312, 1013, 1328 and 1417, and apply their proposed resolutions to the C++ Working Paper:

moved by Miller, seconded by Smith

Miller clarified that 1328 has been removed from the motion, and it will be moved in Bristol

.16 unanimous, wg21 unanimous

Library motions

Motion 1

Move we apply the resolutions of all issues in "Ready" and "Tentatively Ready" status from N3438 to the C++ Working Paper.

moved by Meredith, seconded by Clow

.16 unanimous, wg21 unanimous

Motion 2

Move we apply N3421, Making Operator Functors greater<>, to the C++ Working Paper.

moved by Meredith, seconded by Clow

.16 unanimous wg21 5-1-1 (favor-against-abstain)

Motion 3

Move we apply N3462, std::result_of and SFINAE, to the C++ Working Paper.

moved by Meredith, seconded by Hinnant

.16 unanimous wg21 5-1-1 (favor-against-abstain)

Motion 4

Move we apply the following papers, applying constexpr in the standard library, to the C++ Working Paper:

N3302 Constexpr Library Additions: complex, v2
N3470 Constexpr Library Additions: containers, v2
N3469 Constexpr Library Additions: chrono, v3
N3471 Constexpr Library Additions: utilities, v3

moved by Meredith, seconded by Clow

.16 unanimous wg21 6-0-1 (favor-against-abstain)

10.3 PL22.16

RESOLUTION #1:

PL22.16, the US TAG to SC22/WG21, APPROVES the following recommended answers to the Systematic Review Questions for TR 19768:2007 and TR 18015:2006.

ISO/IEC TR 19768:2007, Extensions to the C++ Library

1. Recommended action?

Withdraw

Comment:

TR 19768:2007 has been incorporated into two separate ISO/IEC Standards.

TR 19768:2007, Section 5.2, Mathematical Special Functions was adopted as ISO/IEC 29124:2010, Extensions to the C++ Library to Support Mathematical Special Functions.

The remaining Sections of TR 19768 were incorporated into ISO/IEC 14882:2011, Programming Language C++.

2. Has this International Standard been adopted or is it intended to be adopted in the future as a national standard or other publication?

NO

3. Is the national publication identical to the International Standard or was it modified?

N/A

4. Is this International Standard used in your country without national adoption or are products used in your country based on this standard?

YES

5. Is this International Standard, or its national adoption, referenced in regulations in your country?

NO

ISO/IEC TR 18015:2006, Technical Report on C++ Performance

1. Recommended action?

Confirm

2. Has this International Standard been adopted or is it intended to be adopted in the future as a national standard or other publication?

NO

3. Is the national publication identical to the International Standard or was it modified?

N/A

4. Is this International Standard used in your country without national adoption or are products used in your country based on this standard?

YES

5. Is this International Standard, or its national adoption, referenced in regulations in your country?

NO

MOTION #1: PL22.16 APPROVES RESOLUTION #1 AS STATED ABOVE. (Hedquist/Crowl)

Roll Call Vote: (22-0-0-7)

Apple -	Yes
Bloomberg LLC -	Yes
BoostPro -	Yes
CERT Coordination Center -	Absent
Cisco Systems Inc -	Absent
DRW Holding LLC -	Yes
Dinkumware Ltd -	Yes
Edison Design Group -	Yes
Embarcadero Technologies -	Absent
Fermi National Accelerator Laboratory	Absent
Fujitsu Laboratories of America -	Absent
Gimpel Software -	Yes
Google -	Yes
Hewlett-Packard Company -	Yes
IAR Systems AB - Advisory -	Absent
IBM Corporation -	Yes
Indiana University -	Yes

Intel Corporation -	Yes
Microsoft Corporation -	Yes
NVIDIA Corporation -	Yes
Oracle -	Yes
Perennial -	Yes
Plum Hall Inc -	Yes
Red Hat -	Yes
Riverbed Technology -	Absent
Roundhouse Consulting Ltd -	Yes
Seymour -	Yes
Symantec -	Yes
Texas A&M University -	Yes

RESOLUTION #2 - Member Emeritus Status

PL 22.16 NOMINATES MR. BEMAN DAWES AND DR. WALTER BROWN FOR APPOINTMENT AS EMERITUS MEMBERS TO PL22.16.

Criteria

1. Ten years or longer as a member of PL22.16.
2. Dates of Membership/Last Organization(s) represented.
3. History of Contributions to the Committee
4. Retirement from the ICT Industry - date.

Beman Dawes

Beman Dawes was a member of PL22.16 during the period 1992 to 2010, representing himself (DAWES). During this period Mr. Dawes made immeasurable and significant contributions to the development of 1998, 2003, and 2011 ISO/IEC Standards for the Computer Programming Language C++; 2006 ISO/IEC Technical Report on C++ Performance; and the 2007 ISO/IEC Technical Report on Extensions to the C++ Library. Mr. Dawes also served as Chairman of the SC22/WG21 Library Working Group. Mr. Dawes retired in 2010. PL22.16 wishes to continue to benefit from Mr. Dawes's considerable talents and expertise in carrying out its ongoing program of work, and recommends he be appointed Emeritus Member status.

Dr. Walter E Brown

Dr. Walter E Brown has been a member of PL22.16, representing Fermi National Accelerator Laboratory, from 2000-2012. During that period, Dr. Brown made numerous and significant contributions in the development of the 2003, and 2011 ISO/IEC Standards for the Computer Programming Language C++; 2009 ISO/IEC 29124, Programming Language C++ Mathematical Special Functions; 2007 Technical Report on Extensions to the C++ Library. Dr. Brown is the Project Editor for ISO/IEC 29124, Programming Language C++ - Mathematical Special Functions and served as a member of the US Delegation to JTC1 SC22/WG21. Dr. Brown retired from Fermi National Accelerator Laboratory in March 2012. PL22.16 wishes to continue to benefit from Dr. Brown's considerable talents and expertise in carrying out its ongoing program of work, and recommends he be appointed Emeritus Member status.

MOTION #2:

PL22.16 APPROVES RESOLUTION #2 AS STATED ABOVE. (Hedquist/Stroustrup)

RESULTS: APPROVED - UNANIMOUS

MOTION #3

PL22.16 designates the following voting members of PL22.16 as the US delegation to JTC1 SC22/WG21 for any and all WG21 meetings and teleconferences for calendar year 2013. (Hedquist/Liber)

Barry Hedquist - Perennial
William 'Mike' Miller – Edison Design Group
Howard Hinnant – Apple Computer
Steve Clamage - Oracle
Lawrence Crowl - Google
Thomas Plum – Plum Hall, Inc.
Bjarne Stroustrup – Texas A&M
Clark Nelson - Intel

RESULT: APPROVED - UNANIMOUS

10.3 Review of action items, decisions made, and documents adopted by the committee

None.

10.4 Issues delayed until today.

Clamage asks if there are other issues. Sommerlad announces a call for papers for a refactoring tools conference that will be taking place in Rapperswil, Switzerland.

11. Plans for the future

11.1 Next and following meetings

Sutter presented the future meetings, noting that Bristol will be a six-day meeting. Liber said Chicago will be last week of september or first week of october. Sutter stated that two meetings per year has benefits, we never have to worry whether ballots fit, and there's some room for study group meetings. Kühl reminded that ACCU is before the Bristol meeting in Bristol. Orr said that the reservation website should be the same for ACCU and the WG21 meeting, and said that it should be possible to do a single booking. Talbot asked whether it would be a good idea to push back the meeting in Chicago, to have a more balanced distribution of meetings during a year, and thought that it's better to sit indoors during bad weather than during good weather.

Meredith recommended SG chairs to cooperate with Sutter if they need face-to-face meetings.

11.2 Mailings

Nelson reviewed the following mailing deadlines:

- Post-Portland: 2 November 2012
- Pre-Bristol: 15 March 2013

12. Adjournment

Becker moved to thank the host. Seconded by the whole committee, unanimous approval.

Clamage entertained a motion to adjourn.

Moved by Crawl, seconded by Hedquist. Unanimous.

Attendance

Company/Organization	NB	Representative	Mo	Tu	We	Th	Fr	Sa
Apple		Howard E. Hinnant	V	V	V	V	V	
Apple		Doug Gregor	A	A	A	A	A	
Bloomberg		John Lakos	V	V	V	V	V	
Bloomberg		Alisdair Meredith	A	A	A	A	A	
Bloomberg		Dietmar Kühl	A	A	A	A	A	
BoostPro Computing		David Abrahams	V	V	V	V	V	
BoostPro Computing		Eric Niebler	A	A	A	A	A	
BoostPro Computing		John Wiegley	A	A	A	A		
Dinkumware		P. J. Plauger	V	V	V	V	V	
Dinkumware		Tana Plauger	A	A	A	A		
DRW Holdings		Nevin Liber	V	V	V	V	V	
Edison Design Group		Jens Maurer	A	A	A	A	A	
Edison Design Group		William M. Miller	A	A	A	A	A	
Edison Design Group		John H. Spicer	V	V	V	V	V	
Edison Design Group		Daveed Vandevoorde	A	A	A	A	A	
Gimpel Software		James Widman	V	V	V	V	V	
Google		Lawrence Crowl	V	V	V	V	V	
Google		Matthew Austern	A	A	A	A	A	
Google		James Dennett	A	A	A	A	A	
Google		Chandler Carruth	A	A	A	A	A	
Google		Richard Smith	A	A	A	A	A	
Google		Jeffrey Yasskin	A	A	A	A	A	
Hewlett-Packard Development		Hans Boehm	V	V	V	V	V	
IBM	CA	Michael Wong	V	V	V	V	V	
IBM		Paul E. McKenney	A	A				
IBM		Maged Michael		A	A	A		
Indiana University		Jeremiah Willcock	V	V	V	V	V	
Indiana University		Larisse Voufo	A	A	A	A	A	
Intel		Clark Nelson	V	V	V	V	V	

Company/Organization	NB	Representative	Mo	Tu	We	Th	Fr	Sa
Intel		Pablo Halpern	A	A	A	A	A	
Intel	CA	Stefanus Du Toit	A	A	A	A	A	
Intel		Tatiana Shpeisman			A	A		
Intel		Justin Gottschlich		A	A	A		
Intel		Robert Geva			A	A	A	
Intel		Marius Cornea			A			
Microsoft		Jonathan Caves	V	V	V	V		
Microsoft		Herb Sutter	A	A	A	A	A	
Microsoft		Artur Laksberg	A	A	A	A		
Microsoft		Niklas Gustafsson	A	A	A	A		
Microsoft		Stephan Lavavej	A	A	A	A	A	
Louisiana State University		Hartmut Kaiser	A	A	A			
NVidia		Vinod Grover	V	V	V	V		
NVidia		Olivier Giroux	A	A	A	A	A	
NVidia		Jaydeep Marathe	A	A	A			
NVidia		Jared Hoberock	A	A	A	A		
Oracle		Stephen D. Clamage	V	V	V	V	V	
Oracle		Mark Moir		A	A	A		
Perennial	US	Barry Hedquist	V	V	V	V	V	
Plum Hall		Thomas Plum	V	V	V	V	V	
Programming Research Group		Christof Meerwald	V	V	V	V	V	
Red Hat		Jason Merrill	V	V	V	V	V	
Red Hat		Benjamin Kosnik	A	A	A	A	A	
Roundhouse Consulting		Pete Becker	V	V	V	V	V	
Seymour		Bill Seymour	V	V	V	V	V	
Symantec		Mike Spertus	V	V	V	V	V	
Texas A&M University		Bjarne Stroustrup	V	V	V	V	V	
PL22.16 Non-members								
HSR	CH	Peter Sommerlad	N	N	N	N		
Basho Technologies		Jesse Williamson	N	N	N	N	N	
CERN	CH	Axel Naumann	N	N	N	N	N	

Company/Organization	NB	Representative	Mo	Tu	We	Th	Fr	Sa
Electro Scientific		Scott Schurr	N	N	N	N	N	
LTK Engineering		Alan Talbot	N	N	N	N	N	
Integrable Solutions	FR	Gabriel Dos Reis	N	N	N	N	N	
University Carlos III	ES	J. Daniel Garcia	N	N	N	N	N	
Vollmann Engineering	CH	Detlef Vollmann	N	N	N	N	N	
	FI	Ville Voutilainen	N	N	N	N	N	
	UK	Roger Orr	N	N	N	N	N	
		Faisal Vali	N	N	N	N	N	
		Beman G. Dawes	N	N	N	N		
		Walter E. Brown	N	N	N	N		
		Robert Klarer	N	N	N		N	
MIT		Charles E. Leiserson	N	N	N	N		
Qualcomm		Marshall Clow	N	N	N	N	N	
Research in Motion		Tony Van Eerd	N	N	N	N	N	
POCO		Aleksandar Fabijanic	N	N	N	N	N	
		Mike Winterberg		N	N	N		