

PL22.16 2014-06 Rapperswil Minutes

ISO/IEC JTC1 SC22 WG21 N4054 - 2014-07-03

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WG21 Meeting No. 63
June 16-21, 2014 – Rapperswil, Switzerland

The following members attained voting status in this meeting:

- AMD
- CERT Coordination Center
- Sandia National Labs

1. Opening activities

Monday, June 16, 9:00am-noon

Clamage opened the meeting at 9:10am and briefly reminded about the SC22 procedure changes.

1.1 Opening comments, welcome from host

1.2 Introductions

Nelson summarized the changes in the attendance sheet. Sutter clarified that P-member representatives should have a letter in the box next to their name. Clamage had the people in the room introduce themselves.

1.3 Meeting guidelines (INCITS Patent and Anti-Trust policies)

<http://www.incits.org/standards-information/legal-info>

<http://www.incits.org/dotAsset/63b6e457-53b9-4933-9835-7c74e77ca2fd.pdf>

(ISO meeting guidelines)

http://www.iso.org/iso/codes_of_conduct.pdf

Clamage pointed to the policies and instructed interested people to take a look at them.

1.4 Membership, voting rights, and procedures for the meeting

Sutter briefly explained the WG21 membership changes; no delegations and no heads of delegation; all members listed in the ISO Global Directory will vote in WG21 motions. Sutter also pointed out that PL22.16 votes do not need to be taken separately unless there are PL22.16-internal votes.

Clamage said that Nelson can clarify the ISO Global Directory membership, and Nelson pointed out that the letter indicator in the attendance sheet will indicate that.

Lavavej asked whether multiple representative of a single PL22.16 member company can vote in WG21 motions, and Sutter clarified that that is the case, as is the case for multiple members designated by the same National Body.

Sutter also clarified that there's no longer a need for a mover and a seconder for WG21 motions.

1.5 Agenda review and approval

Motion: adopt the agenda in N3979, mover: Nelson seconder: Sutter.

The motion to adopt the agenda in N3979 was unanimously approved.

1.6 Approval of the minutes of the previous meeting

Motion: adopt the previous meeting minutes agenda in N3902, mover: Nelson seconder: Sutter.

The motion to adopt the minutes of the previous meeting in N3902 was unanimously approved.

1.7 Editors' reports, approval of drafts (C++ Standard, and TS's)

Smith reminded that there's no new draft since the ballot is ongoing and thanked Du Toit for his work as the previous editor.

Sutter clarified that the usual business goes on even during ballot resolution, but there will be no motions to modify the main working draft.

N4023, Library Fundamentals Working Draft, was unanimously approved.

N3940, Filesystem Working Draft, was unanimously approved.

N3989, Parallelism Working Draft, was unanimously approved.

1.8 Liaison reports, and WG21 study group reports

Plum reported the WG14 liaison status.

1.9 WG progress reports and work plans for the week

Each working group reported their status.

1.10 New business requiring actions by the committee

None.

2. Organize Working Groups and Study Groups, establish working procedures.

3-7. WG and SG sessions.

Monday, June 16 from afternoon break until 5:30pm. From Tuesday, June 17 to Thursday, June 19 8:30am-5:30pm. Friday, June 20 8:30am-noon.

8. General session

Friday, June 20, 1:30pm-5:30pm

8.1 WG and SG status and progress reports.

Miller gave the CWG report.

Meredith gave the LWG report.

Yasskin gave the LEWG report.

Stroustrup gave the EWG report.

Boehm summarized SG1 progress.

Gregor summarized SG2 (Modules) progress.

Carruth summarized SG7 (Reflection) progress.

Nelson summarized SG10 progress.

Sutter summarized SG13 progress.

8.2 Presentation and discussion of proposals. Straw votes taken.

Straw poll to adopt N3936 as the working draft was approved by unanimous consent.

LWG Motions

Straw poll, LWG Motion 1, Move we apply the resolutions of the issues in document N4080 to the Filesystem TS Working Paper

LWG Motion 1 was approved by unanimous consent.

Straw poll, LWG Motion 2, Move we apply the resolutions of the following issues in document N4079 to the C++ Library Fundamentals Working Paper:

- **LWG 2371 No template aliases defined for new type traits**
- **LWG 2374 Remarks for optional::to_value are too restrictive**
- **LWG 2389 function::operator= is over-specified and handles allocators incorrectly**
- **LWG 2390 Invocation types and rvalues**
- **LWG 2395 Preconditions: is defined nowhere**
- **LWG 2409 SFINAE-friendly common_type / iterator_traits should be removed from the fundamental-ts**

LWG Motion 2 was approved by unanimous consent.

Straw poll, LWG Motion 3, Move we apply to the Library Fundamentals TS Working Paper the edits requested in document N4078 optional corrections and rvalue qualifiers

LWG Motion 3 was approved by unanimous consent.

Straw poll, LWG Motion 4, Move we apply to the Library Fundamentals TS Working Paper the edits requested in document N4077 Experimental shared_ptr for Library Fundamentals TS

and

the edits requested in document N4067 Experimental std::function etc.

LWG Motion 4 Straw poll results were

In Favor: 36 Opposed: 4 Abstain: 19

Sutter declared consensus, motion approved.

Straw poll, LWG Motion 5, Move we accept N4071 as the Working Paper for the C++ Extensions for Parallelism TS and that we apply to the C++ Extensions for Parallelism Working Paper the edits requested in document N4063 On Parallel Invocations of Functions in Parallelism TS

LWG Motion 5 was approved by unanimous consent.

Straw poll, LWG Motion 6, Move we apply to the C++ Extensions for Parallelism Working Paper the edits requested in document N4070 Improving the specification of the vector execution policy in Parallelism TS

LWG Motion 6 was approved by unanimous consent.

Straw poll, LWG Motion 7, Move we adopt N4076 A proposal to add a generalized callable negator for a future C++ Library Fundamentals TS

LWG Motion 7 was approved by unanimous consent.

Straw poll, LWG Motion 8, Move we adopt N4075 Centralized Defensive-Programming Support for Narrow Contracts for a future C++ Library Fundamentals TS

LWG Motion 8 straw poll results were

In favor: 9 Opposed: 38 Abstain: 12

Motion not carried.

The motion was removed from the formal motions page.

Ballot Motions

Straw poll, Ballot Motion 1, Move to appoint an editing committee composed of Alisdair Meredith, Daniel Krugler, and Jonathan Wakely to approve the correctness of the Filesystem working paper as modified by the motions approved at this meeting, and to direct the Convener to transmit the approved updated working paper to ITTF for DTS ballot.

Ballot Motion 1 was approved by unanimous consent.

Straw poll, Ballot Motion 2, Move to appoint an editing committee composed of Alisdair Meredith, Daniel Krugler, and Marshall Clow to approve the correctness of the C++ Library Fundamentals working paper as modified by the motions approved at this meeting, and to direct the Convener to transmit the approved updated working paper to SC22 for PDTS ballot.

Ballot Motion 2 was approved by unanimous consent.

Straw poll, Ballot Motion 3, Move to appoint an editing committee composed of Alisdair Meredith, Pablo Halpern, and Daniel Krugler to approve the correctness of the C++ Extensions for Parallelism working paper as modified by the motions approved at this meeting, and to direct the Convener to transmit the approved updated working paper to SC22 for PDTS ballot.

Ballot Motion 3 was approved by unanimous consent.

Straw poll, Ballot Motion 4, Move to create a working paper for "C++ Extensions for Library Fundamentals Version 2" with N4076 "A proposal to add a generalized callable negator" as its initial content.

Other things that are coming for Fundamentals v2 include

- N3976 Multidimensional bounds, index and array_view,
- N3913 Greatest Common Divisor and Least Common Multiple
- N4017 Non-member size() and more
- N3939 Extending make_shared to Support Arrays
- N3254 Allocator-aware regular expressions
- N4007 Delimited iterators
- N4009 Uniform Container Erasure

Ballot Motion 4 was approved by unanimous consent.

LEWG Motions

Straw poll, LEWG Motion 1, Move that we ask the project editor to remove Clause 2 ("Executors and Schedulers" [executors]) from the Concurrency Technical

Specification working paper.

LEWG Motion 1 was approved by unanimous consent.

The agenda item 12.1 was handled in the Friday session**Next and following meetings**

Sutter summarized the forthcoming meetings.

9-10. WG and SG sessions continue

Saturday, June 21, 8:30am-noon

11. Review of the meeting

Clamage opened the meeting.

Sutter asked if anyone wants to reopen any of the straw polls for discussion of new information and to retake the poll. There were no requests, so the Friday motion approvals stand unchanged.

Motion: INCITS/PL22.16 votes to approve all LWG, LEWG and ballot motions as presented during the June 16-21, 2014 meeting (see section 8.2 of the minutes). Mover: Nelson
seconder: Sutter.

The motion to to approve all LWG, LEWG and ballot motions as presented during the June 16-21, 2014 meeting was unanimously approved.

11.1 WG21 motions**11.2 PL22.16 motions****11.3 Review of action items, decisions made, and documents adopted by the committee****11.4 Issues delayed until today**

No issues.

12. Plans for the future**12.1 Next and following meetings****12.2 Mailings**

July 4th is the post-meeting mailing deadline. Pre-Urbana deadline is October 10th.

13. Adjournment

Meeting adjourned by unanimous consent at 14:15.

14 Attendance

The column "WG21" designates official PL22.16 or WG21 status ("P", "A", "E", "M")

The column "PL22.16" indicates organizations eligible to vote by "V".

An "x" marks a day attended, for days unattended, the field is blank.

14.1 PL22.16 members

Company/Organization	NB	Representative	M	T	W	R	F	S	WG21	PL22.16
AMD		Robin Maffeo	x	x	x	x	x	x	P	V
Apple		Doug Gregor	x	x	x	x	x	x	P	V
Argonne National Lab		Hal Finkel	x	x	x	x	x	x	P	V
Bloomberg		John Lakos	x	x	x	x	x	x	P	V
Bloomberg	UK	Alisdair Meredith	x	x	x	x	x	x	A	
Bloomberg	UK	Dietmark Kühl	x	x	x	x	x	x	A	
CERT Coordination Center		Aaron Ballman	x	x	x	x	x	x	P	V
Cisco Systems		Lars Gullik Bjønnes	x	x	x	x	x	x	A	
Dinkumware		P.J. Plauger	x	x	x	x	x	x	P	V
Dinkumware		Tana Plauger	x	x	x	x	x	x	A	
DRW Holdings		Nevin Liber	x	x	x	x	x	x	P	V
Edison Design Group		John H. Spicer	x	x	x	x	x	x	P	V
Edison Design Group		Daveed Vandevoorde	x	x	x	x	x	x	A	
Edison Design Group		Jens Maurer	x	x	x	x	x	x	A	
Edison Design Group		William M. Miller	x	x	x	x	x	x	A	
Gimpel Software		James Widman	x	x	x	x	x	x	A	
Google		Chandler Carruth	x	x	x	x	x	x	A	
Google		Geoffrey Romer	x	x	x	x	x	x	A	
Google		Hans Boehm	x	x	x	x	x	x	A	
Google		James Dennett	x	x	x	x	x	x	A	
Google	NL	JC van Winkel	x	x	x	x	x	x	A	
Google		Jeffrey Yasskin	x	x	x	x	x	x	A	
Google	UK	Richard Smith	x	x	x	x	x	x	A	
Google		Thomas Koeppe	x	x	x	x	x	x	A	
IBM	CA	Michael Wong	x	x	x	x	x	x	P	V
Intel		Clark Nelson	x	x	x	x	x	x	P	V
Intel		Pablo Halpern	x	x	x	x	x		A	
Microsoft		Jonathan Caves	x	x	x	x	x	x	P	V
Microsoft		Artur Laksberg	x	x	x	x	x		A	
Microsoft		Gabriel Dos Reis	x	x	x	x	x	x	A	
Microsoft		Herb Sutter	x	x	x	x	x	x	A	
Microsoft		Niklas Gustafsson	x	x	x	x	x		A	
Microsoft		Stephan T. Lavavej	x	x	x	x	x	x	A	
Morgan Stanley		Bjarne Stroustrup	x	x	x	x	x	x	P	
NVidia		Olivier Giroux	x	x	x	x	x	x	A	
Oracle		Paolo Carlini	x	x	x	x	x	x	P	V
Oracle		Maxim Kartashev	x	x	x	x	x		A	
Oracle		Stephen D. Clamage	x	x	x	x	x	x	A	

Perennial		Beman G. Dawes	x	x	x	x	x		A	
Plum Hall		Thomas Plum	x	x	x	x	x		P	V
Plum Hall	FI	Ville Voutilainen	x	x	x	x	x	x	A	
Programming Research Group		Richard Corden	x	x	x	x	x	x	P	V
Programming Research Group		Christof Meervald	x	x	x	x	x	x	A	
Qualcomm		Marshall Clow	x	x	x	x	x	x	P	V
Red Hat		Jason Merrill	x	x	x	x	x	x	P	V
Red Hat	UK	Jonathan Wakely	x	x	x	x	x	x	A	
Red Hat		Torvald Riegel	x	x	x	x	x		A	
Riverbed Technology		Oleg Smolsky	x	x	x	x		x	P	V
Sandia National Labs		Carter Edwards	x	x	x	x	x		P	V
Seymour		Bill Seymour	x	x	x	x			P	V
Symantec		Mike Spertus	x	x	x	x	x	x	P	V

14.2 Other WG21 members

Company/Organization	NB	Representative	M	T	W	R	F	S	WG21	PL22.16
Mozilla	CA	Botond Ballo	x	x	x	x	x	x	M	
CERN	CH	Axel Naumann	x	x	x	x	x	x	M	
Vollmann Engineering	CH	Detlef Vollmann	x	x	x	x	x	x	M	
HSR	CH	Peter Sommerlad	x	x	x	x	x	x	M	
Bruker Daltonics		Daniel Krügler	x	x	x	x	x	x		
think-cell Software	DE	Fabio Fracassi	x	x	x	x	x	x	M	
TU Dresden	DE	Peter Gottschling			x	x	x		M	
University Carlos III	ES	J. Daniel Garcia	x	x	x	x	x	x	M	
Cryptotec	FI	Mikael Kilpeläinen	x	x	x	x	x	x	M	
	UK	Cassio Neri	x	x	x	x	x			
PDT Partners	UK	Jeff Snyder	x	x	x	x	x			
	UK	Jonathan Coe	x	x	x	x	x	x		
	UK	Roger Orr	x	x	x	x	x	x		

14.3 Participating non-members

Company/Organization	NB	Representative	M	T	W	R	F	S	WG21	PL22.16
		Anass Sarih	x	x	x	x	x			
		Andreas Hermann			x	x				
University of Akron		Andrew Sutton	x	x	x	x	x	x		
		Andrew Tomazos	x	x	x	x	x			
		Dinka Ranns	x	x	x	x	x	x		
		Faisal Vali	x	x	x	x	x			
		Felix Fontein	x	x	x	x	x	x		
University of Nice		Jean-Paul Rigault	x	x	x	x	x			
		JF Bastien	x	x	x	x	x			
		Loïc Joly	x	x	x	x	x			

		Manuel Klimek	x	x	x	x	x	x		
		Maurice Bos	x	x	x	x	x	x		
		Nat Goodspeed	x	x	x	x	x			
Spot Trading LLC		Nathan Wilson		x	x	x	x			
		Nicolai Josuttis	x	x	x	x	x			
		Oliver Kowalke	x	x	x					
		Saeed Amrollahi Boyouki	x	x	x	x	x	x		
		Thomas Corbat	x	x	x	x	x			
Technische Universität München		Thomas Neumann	x	x	x	x	x			
Siemens		Tobias Schuele	x	x	x	x	x			
Blackberry		Tony Van Eerd	x	x	x	x	x	x	P	
think-cell Software		Edgar Binder	x	x	x	x	x	x		
Taller Technologies		Daniel Gutson	x	x	x	x	x			
University of Athens		George Makrydakis			x	x	x	x		
		Vicente Botet				x	x	x		
		Christopher Kormanyos			x	x				