Minutes, WG21 Teleconference 2012-10-5

1. Opening and introductions

The meeting is called on 2012-10-5 at 15:12 UTC.

1.1 Roll call of participants

The following persons are in attendance:

name	country
Aleksandar Fabijanic	USA
Alisdair Meredith	USA
Barry Hedquist	USA
Bjarne Stroustrup	USA
Clark Nelson	USA
Daniel Garcia	Spain
Detlef Vollmann	Switzerland
Espen Harlinn	Norway
Hans Bohem	USA
Herb Sutter	USA/Canada/Convener
Kyle Kloepper	USA
Lawrence Crowl	USA
Michael Wong	Canada
William Miller	USA
Nevin Liber	USA
P.J. Plauger	USA
Tana Plauger	USA
Stephen Clamage	USA
Thomas Plum	USA
Ville Voutilainen	Finland
William Miller	USA

1.2 Adopt agenda

Sutter asks for objections to adopting the agenda N3321 for this meeting. With no objections N3321 is adopted as the agenda for this meeting by unanimous consent.

1.3 Approve minutes from previous meeting

Sutter asks for objections to approving minutes from WG21 teleconference 2012-01-27 (N3379). With no objections N3379 is approved by unanimous consent.

1.4 Review action items from previous meeting

No previous action items.

1.5 Review of project editor and liaison assignments

Sutter states that project editor role is Stefanus Du Toit. Du Toit is unable to attend this teleconference, but has passed along notes to Sutter. Lawrence Crowl remains backup editor. Sutter directs participants to section 4.2 of document N3393 in the pre-meeting mailing.

Sutter asks if there are any changes to be made to N3393 section 2.3. No response gives unanimous consent to affirm liaisons.

2. Status, liaison and action item reports

2.1 Small group status reports

Core Working Group

Miller reports CWG is more active with 93 new issues. The August teleconference to review drafting was useful. Moved 8 items to tentatively ready that will be moved ready in Portland and approved in Bristol. Includes five new items that have been added since Kona. 9 out of the 93 are more or less resolved. There are two resolutions in ready status that will be moved in Portland.

Miller brings up new business: Out of the 57 items approved in Kona, how many should be regarded as fixes to C++11 and how many should be new features for C++1Y? This is important for determining the command line switch that compilers

do. There should be a formal recognition by the committee to designate these as one or the other. The plan is to retroactively review 57 items to classify them as defect reports to indicate bug fixes. Is this the appropriate way to dispose of these changes?

Herb asks if there will be a separate bug fix bucket for the DRs and a technical corrigendum created.

Miller answers that DRs would also appear in TC, but his intention is to classify them for implementers.

Lawrence says there are a couple of thins that come through that he does not aggree with such as expansions to return type deductions. Advocate for third bucket: things that we intend to latch onto early. Worried that we will be accused of back door invention through defect process.

Miller states that part (974, 975) has not been approved. Have been flagged as extensions and taken in by EWG. This raises another question as to what we would do in a TC. Would we issue a revised standard or a TC like WG14 has done.

Herb explains what belongs in an ISO TC. There is a JTC1 doc that talks about it more. The main two things to update a standard are a TC and an addendum. C++03 was a corrected reprint. The TC can be stand-alone that does not modify the original document. That would give an easy idea of the diff.

Miller says that stating all 57 would be approved that was too broad. We will look at all items individually.

Herb says we will not making decision on this call. But to save time we should make recommendation. If we are target 2017, CD in 2014, how much of our time will be spent only on defects? Will there be a significant batch done in the next 12-18 months for publishing a TC? Looking specifically to Miller and Meredith.

Miller says there are two meetings worth of data to analyze on that. CWG is averaging 60 issues per meeting to be resolved. We would have 200-300 issues resolved in that time frame. Most of those are small. Only two or three are major. High volume and low weight.

Stroustrup says EWG could handle a dozen.

Meredith says there was a clean issues list when 11 shipped (<30). Averaging 60 per meeting and going in with over 130 issues. Only resolving 10 per meeting. It would

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be easy to apply a filter when we ship a TC to see which fit. Our Working paper would not look like TC paper.

Herb says this will be discussed in Portland. We do have material for TC? Last remaining gate is managing working paper. Not sure of capacity to vote in both DR and not DR issues if they are targeted at different papers. Do not want to maintain parallel papers. No TC if we are keeping CD. Don't think we have approved any non-DR changes to working draft since C++11 shipped (need to check). Do you think w will have non-DR changes applied?

Miller says there are 67 issues applied to working paper. But we will review changes in Portland to make sure they are all DR. There might be some (3-4) that are not.

Meredith says LWG would not be asking the question when working. There are issues that have gone into working paper.

Herb says With more data and info, let me throw out suggestion: Hearing two things have bunch of DR would like to issue TC. We have the meat for it. Second, I am hearing there are other changes we have made would like to make, but don't know how to distinguish between TC or DR. Would like to have TC for quality and because we have material ready. On the other hand we would not like to waste time to decide what is a TC (like in the 90s "oh what is an object"). We can discuss this in Portland, but what if we did a TC in TC time frame, but we call it an amendment. That way we are not limited to DR only. Might have minor changes. Nothing major, but we don't waste time on defining what a TC is.

Stroustrup clarifies by asking how big a feature is too big a feature. For example is the separators in numerical issue too big?

Meredith says adding a single API to existing classes should not go into a new

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  - Alisdair: Adding a single API to existing class should not go into a new standard is the approach that LWG takes.
  - Bjarna: Member function foo() can not add an overload. But calling it bar() is OK?
  - Alisdar: Bar() is definitly out of bounds, but foo() is wrangling.

Sutter says we would like a TC, but don't want the time of parsing what is exactly a DR. There will not be any major features that can be agreed upon in the next two meetings.

Plum is in support of minimizing unproductive overhead of discussing if something is in one category or another category. Would make another suggestions. Have seen such a variation in the degree to which compiler provides C++11 features. Make a proposal that we have one category that is targeted for C++17 and that's the only category. Just to have an alternative on the table. The degree to which people include those in the C++11 switch are market decisions to leave to the producer. Would one day like to be more precise, but it is premature to spend that time now.

Nelson says he must not be understanding what Plum is suggesting. To have only one category is to have no category. Are you suggesting not producing TC?

Plum says yes, no TC before CD in 2017.

Sutter summarizes the three proposals:
-   Do only that (Plum) Status quo
-   Do TC sooner than that (next 1.5 year)
-   Call it amendment (Sutter) but in TC time frame

Meredith says that LWG will have a large proposal in the next 12 months (i.e. filesystem). Which train will that be pushed on or will that have its own TS.

Sutter says that is a separate issue as study groups are completely decoupled from main standard. He agrees that filesystem should be a TS first as it is completely independent.

Crowl observes DRs and status are available on web. People get an idea of what to work on. So a formal document is not as needed to get people on board. When we issue a document we get a lot more press.

Sutter says we have been burned by implementing something before the ink is dry.

Plum says it will be several years before someone can answer the question if a standard program is portable.

Stroustrup comments that there is a large group of users that can write a large group of portable programs now. Getting every little corner cleaned up is less of a concern for most users. Plum agrees.

While Sutter agrees as well he says it is not quite as rosy (initializer list, variatics) that shipping compilers do not support. EDG is poster child and missing features. There is no conforming compiler yet. Like to keep tabs on where various groups are. What I

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said in committee is still true. I expect to have multiple conforming compilers in the next year. If there not 100% test suite they are functional for users (e.g. simulating variatics with overloads). Next year we will have multiple conforming compilers in the next year or so. It is not that bad for the standard to be ahead. Think of it as firming up what is industry support.

Stroustrup says we are still ahead of adoption schedule he proposed that he was being laughed at in Madrid for. We are doing very well. He is concerned at class of problems that can be addressed with things that are definitely extensions from C++11. Thinks like deduce return type from function. Don't have user defined suffixes in library. Two core issues. Separators in literals (almost gone in at least twice). Would like to know if we can address these without feature creep. These are a class of problems that people keep running into.

Sutter says having something before C++1Y that is more than a TC. Something that would be best served by amendment.

Sutter asks Miller what they have done to be so productive.

Miller says teleconference (thanks Intel) to review drafting produced from Kona meeting. Nothing fancier than going through wording.

Sutter asks for update on LWG (since Kona).

Library Working Group

Meredith reports much of work is happening in study groups for new features. Crippling workload in Portland. There are 20 papers directly addressed to it. Interest in another 20 to SGs and EWG. There 135 issues still open. We need stronger focus to address this list.

Sutter asks how the burn down rate has been between meetings on issues list.

Meredith says there has been no work between meetings. After Madrid there was much less pressure. People go off and do their own work. There has been much work on FS library over last 6 months. Part of the trouble is there was one LWG now there are six SGs and no central sync. Not sure what is coming to ballot on Friday.

Sutter says nothing will be coming from SGs. It will all come through Meredith. They should have talked with you first.

Meredith is not sure if something will come in the next meeting or so.
Sutter says Dawes has let both of us know that he hopes to have a draft brought at this meeting. But hopefully have a TS draft that can be adopted at Bristol. Never going to see Thursday or Friday formal motion from SG.

Evolution Working Group

Stroustrup is worried we are forging full speed with no thought of language. That works for library, but working on specific proposals without knowing where language will be in 10 years. Would like talk of directions, but we will not be able to agree. Would like to split. What need to complete C++11 and then major issues about future direction. Major emphasis on concurrency (3-4 directions). Big features (concepts or meta programming). Control structures at all?

Stroustrup says the plan is to have these discussions and then give floor to SG chairs. Do not think there is enough time to go through all papers that have been pushed forward. Worried we are working on 5 or 6 of the things of which I said we could manage 2. Fearing fragmentation.

Study Groups

Bohem reports that meeting in Redmond in may with almost 40 people. Whole bunch of issues. Would benefit from discussion and guidance about scope. We have many proposal and could easily use up available time. Concerned we might not have enough time to cover overlap between SG1 and SG5.

Sutter says SG5 has much activity, but there are fundamental issues to work out before brining to group.

Wong is hoping to use meeting to see if we can make progress on the issues. Don't quite agree that it is at brand new stage. We are waiting for C++ input. Probably got with SG1 and then move to EWG. People only going to be there Tuesday and Wednesday

Sutter reports not much has gone on in SG2 modules.

Meredith reports that there may be a TS for SG3 [filesystem] to vote out in Bristol.

Kloepper reports that SG4 is planning to have teleconfrences after Portland meeting to keep up progress between face to face interaction. Kloepper may not be at Portland as he is expecting his first child to be born in the next few days. He will talk to someone about chairing in his absence.

2.2 Liaison reports

2.2.1 SC22 report

Sutter reports on plenary in Copenhagen. ISO seems to think that doing work over the Internet is good, would like to mandate the use of one size fit all web solution. This is non-starter. Some NB will not require logging in at central place. A number of SC chairs (our own Rex Jaeschke included) is putting papers against this. There is much administrative work going on.

2.2.2 SC22/WG14 (C) report

No WG14 reports. Will be co-locating with C for the Portland meeting.

3. New business

3.1 Review of priorities and target dates

Nothing more to discuss in this area

3.2 Review of current mailings

Group reviews current pre-Portland mailing to make sure all papers are being handled by correct subgroup.

Sutter suggests that if there is no one present at a meeting to present a paper then do not spend time on it.

Group reviews post-Kona mailing to make sure no papers are missed.

3.3 Any other business

Sutter opens by asking what our guidance should be to the US national body on disposition of following things:

- 18015 (performance TR)
- 19767 (library TR1)

ISO requires that no more than 5 years can pass without saying a standard should be persisted, revised, or withdrawn. The easiest thing to say is affirm. To revise or withdraw is work. To withdraw takes ISO balloting. Cannot revise without folks wiling to do work. Any discussion?

Meredith says BSI has appetite for review, but should not be done now.

Hedquist thinks affirm is what we should do. Stroustrup agrees. Sutter states that US has its guidance.

Sutter continues to TR1, everything is now in standard with modifications.

Hedquist states that there was a similar case in WG14 and they elected to withdraw document. Intention was to avoid creating confusion about two documents saying different things. Also did not want to maintain two documents.

Meredith says BSI came to recommendation of withdraw. Crowl agrees.

Sutter asks if there are any objections to withdrawal. No response give unanimous consent

Sutter brings up isocpp.org and asks if there are any comments on email portion.

Vollmann states he already commented about mailing lists and wants a message number that can be referred to when writing offline.

Sutter asks if there is support for reflectors being public moving forward.

Stroustrup suggests that this should be discussed in a wider forum.

Sutter makes the point that will take a bit of committee time and asks if that is reasonable. There are no objections. He goes on to thank everyone for the feedback and encouragement so far

4. Review

4.1 Review and approve resolutions and issues

No resolutions or issues.

4.2 Review action items

Action item: take a poll as to whether or not to make reflectors public.

5. Closing process

5.1 Establish next agenda

Sutter asks if there is any objection to using this agenda for the next meeting? No response give unanimous consent.

5.2 Future meetings

Next teleconference will be Friday 5 April 2012 the Friday a week before face to face meeting; after mailing, but before travel to face to face meeting.

Next face to face meeting is 15-19 October in Portland.

5.3 Future mailings

Nelson says post-Portland mailing deadline is 2 November.

Nelson also asks if the mid-term mailing should be re-established due to increasing paper volume.

Sutter proposes a self serve process, given that the ISO C++ site will be live soon, where the website would give a number and take submission. Aggregating all the submitted papers between two dates would generate a mailing. He goes on to suggest the possibility of having a between meeting teleconference that is not just administrative and that having paper submissions in by a certain date would be the cutoff.

Plum thinks it is a good idea. Meredith is concerned about technical feasibility of large teleconference.

5.4 Adjourn

Meeting adjourned at 2012-10-5 17:23 UTC.