

**WG14 N2054**  
**Meeting notes**

**C Floating Point Study Group Teleconference**

2016-04-26  
9 AM PDT / 12 PM EDT

**Attendees:** Rajan, Jim, Fred, Mike, David, Ian,

**New agenda items:**

None.

**Last meeting action items:**

Ian: Talk to Lawrence Crowl regarding proposing this IEEE-754: 2008 binding to C++ as well. - In process.

Lawrence thought C++ may accept the TS's by reference, but will need changes to point to C++ sections.

Can talk to IBM C++ representative to get help on getting C++ changes.

For DFP, C++ make it classes or template classes which made it not interoperable with C.

Mike: Need a C++ champion for DFP/this.

Ian: Retiring in 1.5-2 years.

Ian: Update and check the items listed and flagged under Feature\_List\_Part\_1. - Not done.

Jim: Post updated versions (post publication) of TS parts on the wiki. - Not done.

May not be the right thing to do anymore.

David: Note about our group work from the IEEE - Done.

Rajan presented it to WG14.

Jim: Possible Defects: Part 2: Change set 2 (feature macros and tgmath.h): Create a new DR paper for requiring the macro to be defined before tgmath.h inclusion. - Done.

Jim: Possible Defects: Part 1: Change set 1 (typos): Change to make it 'fe'testexceptflag as the typo fix. - Done.

Rajan: Talk to David Keaton to get this paper discussed when Mike is present (Monday). - Done.

Mike could not make it.

**New action items:**

Mike: Monitor the Part 5 DTS ballot to determine whether or not to put it in the IEEE-754 revision bibliography.

Jim: Get a backup of the CFP wiki.

Fred: Contact David Keaton and Keld to see what we can do about getting hosting for our wiki and backups for it.

Rajan: Follow up with David (cc Jim) to see how long this TS can live and whether or not it needs to be withdrawn or made into an IS after some period of time.

Jim: Invite David Keaton to help with the new C revision discussion.

**Next Meeting:**

May 24th, 2016, 12:00 EST, 9:00 PDT  
Same teleconference number.

## Discussion:

IEEE 754 revision:

Nothing new.

Continuing to move along. Expect to converge in a couple of months.

Latest draft has the 4 parts of this TS in the bibliography. Should part 5 be in the bibliography as well?

Jim: Is there a draft with all the changes since 2008? Or is it incremental.

Mike: Each draft is based off the starter document which is 2008. Expects people will just do a diff if they want to see the changes.

Arith23:

July 10-13.

Jim will be presenting our work in a 30 minute segment. Rajan and Mike to review the slide deck.

WG14:

Rajan and Fred attended.

IEEE 754 note read out and added to the minutes.

Part 5: Accepted as 2 month DTS ballot. No objects.

Parts 1-4: All proposed defects accepted or declared editorial. All suggested changes accepted as proposed changes. Defects in Open state.

N2016: Passed at 18/1/5 vote. Requested a new paper with more details and syntax/semantics.

The name is the benefit.

- Still don't see a use for it.

- Macros for limits is the only thing that might give it use.

- Regrettable that the issues of int were not learned or forgotten.

- Use it as an underlying typedef.

- Might be worth looking at stdint or other types like that which can save a lot of headaches and problems.

DR477: No debate. Moved to review.

Documents submitted to ballot need to be password protected/encrypted.

Can be in a web page that is password protected so the documents there don't need to be.

2 people have taken the C standard source from NROFF and converted it to LaTeX.

Automated tools.

The C standard will be moving to LaTeX.

Can have proposals for the next C standard starting next meeting.

Part 5:

Now out for DTS ballot that will close in June.

Parts 1-4:

In the past the editor of the C Standard made a single DR with an entire list of all the editorial changes he made.

What happened in part 3? Was the last one a defect or not?

Talk to David Keaton to see if we should just update the TS or make a TC with listing only the changes.

Wiki cleanup:

Do we have a backup?

How do we handle hosting in the future?

\*Jim: Get a backup of the wiki.

Can put it up on Mike or David's site or the WG14 site.

WG14 probably has a solution for storing backups. We can piggy back on that.

\*Fred: Contact David Keaton and Keld to see what we can do about getting hosting for our wiki and backups for it.

Jim: The documents update action item: We need to keep in sync with the DR resolution. Do we keep them as drafts of future revisions?

What should be proposed for the C standard:

Should we make proposals as a group or individually?

Have this as the main item for next meeting.

Need clarification on how long a TS can live.

\*Rajan: Follow up with David (cc Jim) to see how long this TS can live and whether or not it needs to be withdrawn or made into an IS after some period of time.

Jim: The C99 standard did have a large effort to bring it up to date with IEEE pre this 2008 binding. Should something similar happen here?

Around 1990, a numerical C extensions group was formed (floating point, complex, etc.) Some of it was put into C99. It was taken over by WG14 as well and produced TR's with many parts where some were included as part of C99 (complex, floating point for example).

These TR's were not written as changes to C so there was lot of work to get it integrated. Was a large group then.

We can try to get the TS (all parts) into SD3 (Standing Document 3).

Standing document 3 (from <http://www.open-std.org/jtc1/sc22/wg14/>): <http://www.open-std.org/jtc1/sc22/wg14/www/docs/n1826.htm>

Preliminary charter for C2x: <http://www.open-std.org/jtc1/sc22/wg14/www/docs/n2021.htm>

Rajan: Perhaps propose parts 1 and 2 as main body of the standard and the other parts as conditionally normative annexes?

Ian: Part 3 literal syntax is essential to make parts 1 and 2 useful.

Jim: There are no new types in part 1 so it doesn't need it, and part 2 has it's own constant suffixes.

Other parts of the standard do have conditional parts (ex. Atomics, threads) as well.

The TS's weren't written as annexes. They were written as changes to the main standard.

Part 4 doesn't need to be in the language part of the standard, just in the library part.

Part 5 would need to be mixed and matched.