

WG14 N2703

C Floating Point Study Group Teleconference

March 24, 2021

11:00 AM EDT, 8:00 AM PDT, 3:00 PM UTC

Join from PC, Mac, Linux, iOS or Android:

<https://iso.zoom.us/j/91743398933?pwd=SVV2NVJYbTErdXR2dk14dWF2c3ltdz09>

Password: 365905

Or iPhone one-tap :

US: +16699006833,,91743398933# or +12133388477,,91743398933#

Or Telephone:

Dial(for higher quality, dial a number based on your current location):

US: +1 669 900 6833 or +1 213 338 8477 or +1 408 638 0968 or +1 669 219 2599 or +1 253 215 8782 or +1 346 248 7799 or +1 602 753 0140 or +1 720 928 9299 or +1 971 247 1195 or +1 206 337 9723 or +1 470 381 2552 or +1 646 518 9805 or +1 646 876 9923 or +1 651 372 8299 or +1 786 635 1003 or +1 267 831 0333 or +1 301 715 8592 or +1 312 626 6799 or +1 470 250 9358 or 888 788 0099 (Toll Free) or 877 853 5247 (Toll Free)

Meeting ID: 917 4339 8933

Password: 365905

International numbers available: <https://iso.zoom.us/u/abVrU5QtXu>

Or Skype for Business (Lync):

<https://iso.zoom.us/skype/91743398933>

CFP Wiki: <http://wiki.edg.com/twiki/bin/login/CFP/WebHome>

Draft Agenda

Meeting logistics

Note taker, mail out notes

Introduction of attendees

Approval of agenda

Notes from 2021-02-17 meeting

Posted on CFP wiki

Study group logistics

Next meeting dates: Wednesday, April 14?

C++ liaison

Issues?

WG14 meeting report

C23 integration

Latest C2X drafts:

<http://www.open-std.org/jtc1/sc22/wg14/www/docs/n2596.pdf>

<http://www.open-std.org/jtc1/sc22/wg14/www/docs/n2573.pdf>

<http://www.open-std.org/jtc1/sc22/wg14/www/docs/n2478.pdf>

Part 1

Part 2

Part 3

Part 4ab

Part 5abcd

IEC 60559:2020 support

Carry-over action items

Jim/Fred: Go through all the CFP proposals submitted to ensure they were put in the C standard draft (N2596) correctly.

Action items from 2021-02-17 meeting

David H.: Look at each use of "numerically equal" and "equivalent" and see what should be changed in the C standard.

- [\[Cfp-interest 1927\] action item: suggest rewordings for F9.2 of n2596.pdf](#) *David Hough CFP*

David H: Rewrite the conclusion in CFP 1920 so it matches surrounding text and says $\text{hypot}(x, +-0)$ is correctly rounded when x is a number along with the CFP 1920 proposed text.

- [\[Cfp-interest 1926\] action item: usage of "when x is a number" in n2596.pdf](#) *David Hough CFP*
- [\[Cfp-interest 1928\] action item: suggest wording for hypot](#) *David Hough CFP*
 - [\[Cfp-interest 1929\] Re: action item: suggest wording for hypot](#) *Paul Zimmermann*
 - [\[Cfp-interest 1931\] Re: action item: suggest wording for hypot](#) *Jim Thomas*
 - [\[Cfp-interest 1930\] Re: action item: suggest wording for hypot](#) *David Hough CFP*

Fred: Make CFP 1896 into a proposal for WG14 removing the word "NOTE" in change 1, and doing the change questioned in 7.31.8.

- [\[Cfp-interest 1938\] Re: WG14 IEEE 754-C binding meeting minutes 2021/02/17](#) *Fred J. Tydeman*

Fred: Send out the email numbers for handling the CFP 1891 action item.

- [\[Cfp-interest 1923\] Submissions on preferred quantum - came up in current teleconference](#) *David Hough CFP*
- [\[Cfp-interest 1944\] Fwd: \(SC22WG14.19047\) Preferred quantum exponent for default-initialized 0](#) *Fred J. Tydeman*
 - [\[Cfp-interest 1945\] Re: Fwd: \(SC22WG14.19047\) Preferred quantum exponent for default-initialized 0](#) *Fred J. Tydeman*

Fred: When presenting CFP 1891 to WG14, ensure that the hypot case is said to not apply.

Jim: Submit the document in CFP 1901 to WG14.

[N2670](#) 2021/02/27 Thomas, C23 proposal - zeros compare equal

Jim: Submit the paper in CFP 1903 to WG14.

[N2671](#) 2021/02/27 Thomas, C23 proposal - negative values

David H: Look to see if `setpayload{sig}` in IEEE 754 says anything about the sign bit.

- [\[Cfp-interest 1925\] action item: 754-2019 setpayload and setpayloadsig vs. sign bit](#) *David Hough CFP*

Jim: CFP 1908: Change "fk == 0" to "fk = 0".

Jim: CFP 1908: Make a change to put NaNs before infinities: "not floating point numbers, such as NaNs and (signed or unsigned) infinities."

Jim: CFP 1908: Remove the bit-representation paragraph's second sentence.

Rajan: Review Jim's update to CFP 1908 before submission to WG14.

[N2672](#) 2021/02/27 Thomas, C23 proposal - 5.2.4.2.2 cleanup

Mike: Bring forward the IEEE errata (CFP 1914) after removing the third item to CFP before bringing it to IEEE.

- [\[Cfp-interest 1937\] Re: Errata for IEEE 754-2019](#) *Fred J. Tydeman*
 - [\[Cfp-interest 1942\] Re: Errata for IEEE 754-2019](#) *Mike Cowlshaw*

Fred: See if "cr_" as a prefix is reserved or in the process of being reserved.

[\[Cfp-interest 1936\] Re: WG14 IEEE 754-C binding meeting minutes 2021/02/17](#) *Fred J. Tydeman*

- [\[Cfp-interest 1939\] Re: WG14 IEEE 754-C binding meeting minutes 2021/02/17](#) *Jim Thomas*
 - [\[Cfp-interest 1940\] cr](#) *Fred J. Tydeman*
 - [\[Cfp-interest 1941\] Re: cr](#) *Jim Thomas*

Jim: Get permission from WG14 to revise TS 18661-5 along the lines of what is proposed for TS 18661-4 in CFP 1856.

- [\[Cfp-interest 1907\] AI re permission for TS 18661-5 revision](#) *Jim Thomas*

Fred: Follow up with the WG14 editor about the changes in CFP 1874.

Jim: Combine CFP 1880 and CFP 1885, and update CFP 1885 to address the and/or ambiguity in the first suggested change and put it in the form of a proposal.

- [\[Cfp-interest 1908\] AI about 5.2.4.2.2 cleanup](#) *Jim Thomas*

Other issues

Range errors

- [\[Cfp-interest 1841\] C math errors](#) *Jim Thomas*
 - [\[Cfp-interest 1842\] Re: C math errors](#) *Fred J. Tydeman*
 - [\[Cfp-interest 1843\] Re: C math errors](#) *Jim Thomas*
- [\[Cfp-interest 1873\] Range error](#) *Fred J. Tydeman*
- [\[Cfp-interest 1912\] Re: C math errors](#) *Jim Thomas*
- [\[Cfp-interest 1913\] Re: C math errors](#) *Fred J. Tydeman*

Parameterization of interfaces

Floating-point accuracy in C

- [\[Cfp-interest 1932\] Re: Fix the inaccuracy of j0f/y0f/j1f/y1f](#) *Paul Zimmermann*
 - [\[Cfp-interest 1934\] Re: Fix the inaccuracy of j0f/y0f/j1f/y1f](#) *Vincent Lefevre*
 - [\[Cfp-interest 1933\] Re: Fix the inaccuracy of j0f/y0f/j1f/y1f](#) *Mike Cowlshaw*

Others?