WG14 N2584
Meeting notes

C Floating Point Study Group Teleconference
2020-09-23
8 AM PDT / 11 AM EDT / 3 PM UTC

 Attendees: Rajan, Jim, Fred, Mike, Damian, David O., Ian, David H.

 Carry over action items:
  None.

 Last meeting action items: All done. Discussed below.
   Jim: Submit the Annex B update (CFP 1743) to WG14.
   Jim/Rajan: Create a slide deck for WG14 showing the substantial changes for Annex X (TS part 3) based on CFP 1754.
   Jim: Submit CFP 1737's paper to WG14.
   Jim/David H: Submit a proposal based on CFP 1732 to WG14.
   David H: Check that the IEEE references in CFP 1749's paper are in an acceptable form.
   Fred: Make CFP 1675 into a paper without the addition of 'triple' to the index.
   Jim: Create a WG14 proposal for the discussion in CFP 1736 (footnote 296).
   Fred: Rewrite the paper based on CFP 1754 including changes to paragraph 4.

 New action items:
   Fred: Get a paper number and submit CFP 1760 to WG14.
   Jim: Submit CFP 1758 with the addition of a reference to the property referenced in Problem 2.
   Fred: Rework CFP 1759 to better word and position the footnote.
   Jim: Remove default argument promotion from slide deck and proposal for Part 3 as an Annex. Submit them as WG14 updated papers.

 Next Meeting(s):
   Wednesday, October 21st, 2020, 8 AM PDT / 11 AM EDT / 3 PM UTC
   ISO Zoom teleconference

   Please notify the group if this time slot does not work.

 C++ liaison:
   None.

 C2X Integration:
   Latest C2X draft: https://drive.google.com/file/d/1IbngZ8StYVVYASd3WWuC4Uu9Xs39AF_N/view?usp=sharing
    Link on CFP wiki
   Latest C2X draft diffmarks: https://drive.google.com/file/d/1x4-eIBbQU3aXuORoNPSixbbl_ZKKfWfu/view?usp=sharing
   Previous C2X draft: http://www.open-std.org/jtc1/sc22/wg14/www/docs/n2478.pdf
   Part 1
   Part 2
   Part 3
   Part 4ab

Part 5abcd
IEEE 754-2019 support
Jim: The latest C2X draft (Part 1, 2, 4a, IEEE-754:2020 min/max) has a number of our new proposals in it. Fred and I have given comments.

Action item details
Jim: Submit the Annex B update (CFP 1743) to WG14.
  [Cfp-interest 1762] AI to submit proposal for Annex B with prototype forms
  On agenda for October WG14 meeting.

Jim/Rajan: Create a slide deck for WG14 showing the substantial changes for Annex X (TS part 3) based on CFP 1754.
  [Cfp-interest 1766] AI to create a slide deck for TS3 annex update
  Some changes considered below, which may update the slides.

Jim: Submit CFP 1737's paper to WG14.
  [Cfp-interest 1765] AI to submit proposal about feature and WANT macros for Annex F functions
  On agenda for October WG14 meeting.

Jim/David H: Submit a proposal based on CFP 1732 to WG14.
  [Cfp-interest 1763] AI to submit proposal about short hex strings
  On agenda for October WG14 meeting.

David H: Check that the IEEE references in CFP 1749's paper are in an acceptable form.
  [Cfp-interest 1756] ISO Standard citation
  [Cfp-interest 1757] ISO predecessor
  Looks good. Just removed IEEE from the list of organizations.

Fred: Make CFP 1675 into a paper without the addition of 'triple' to the index.
  [Cfp-interest 1760] Re: WG14 IEEE 754-C binding meeting minutes 2020/08/19
  Jim: Include the reference document in the list of changes when submitting
  AI: Fred: Get a paper number and submit CFP 1760 to WG14.

Jim: Create a WG14 proposal for the discussion in CFP 1736 (footnote 296).
  [Cfp-interest 1758] AI about sufficient formatting precision
  Mike: Don't like having case being a discriminator, but it's fine.
  Jim: David H, Can you look at problem 2 property and find a reference in the literature for it?
    David H: It's old, communications in ACM in the late 60's may have it. I can dig up the reference. Can check with some other people as well.
    AI: Jim: Submit CFP 1758 with the addition of a reference to the property referenced in Problem 2.

Fred: Rewrite the paper based on CFP 1754 including changes to paragraph 4.
  [Cfp-interest 1759] Exact subnormal results
  Jim: My change to the footnote is to better fit what's in the text of the standard in that context.
    Fred: Seems good to me.
    Fred: DBL_MAX + DBL_MAX is exact, but not full precision. Is that a range error for double-double?
      Ian: It may or not be exact.
      David H: It is like a gradual overflow.
  Jim: The footnote may be better in the paragraph about underflow (near footnote 245).
  Jim: Raising a really good point about overflow that needs to be looked at. Perhaps do both underflow and overflow.
    Fred: Underflow is undefined, implementations can do whatever, while overflow has requirements.

    AI: Fred: Rework CFP 1759 to better word and position the footnote.
    Jim: Can raise other issues to for the CFP group.

Other issues
  Updating C2X to IEC 60559:2020
   [Cfp-interest 1764] C2X update to IEC 60559:2020 Jim Thomas
   On the WG14 agenda.

  TS3 Annex update
   [Cfp-interest 1761] TS 18661-3 annex update submitted Jim Thomas Comments from Joseph Myers
   [Cfp-interest 1768] Re: (SC22WG14.18328) Comments on N2561 (TS 18661-3 as Annex update)
   Looking at slide deck.
   Rajan: Currently doesn't address Joseph's comments.
   CFP 1768:
    David O: Not tied to it, so good either way. If we change, I will change the C++ proposal to match CFP.
    Jim: Recommend removing it from our proposal.
    AI: Jim: Remove default argument promotion from slide deck and proposal for Part 3 as an Annex.
    Fred: The subset statement X.2.3#2 is beyond what 754 says.
    Tgmath updates look good.
    Agree with the example updates as well.

  Prep for WG14 October meeting
   Papers on agenda:
   5.x Tydeman, Missing DEC_EVAL_METHOD [N 2546]
   5.x Tydeman, Missing 'const' in decimal getpayload functions [N 2547]
   5.x Tydeman, intmax_t and math functions [N 2548]
   5.x Thomas, F.3 editorial cleanup for rounding macros [N 2552]
   5.x Thomas, C2X proposal - Annex B with prototype forms [N 2558]
   5.x Thomas, C2X proposal - Update to IEC 60559 2020 [N 2559]
   5.x Thomas, C2X proposal - FP hex formatting precision [N 2560]
   5.x Thomas, C2X proposal - TS 18661-3 annex update [N 2561]
   5.x Tydeman, Range errors and math functions [N 2564]
   5.x Thomas, C2X proposal - Feature and want macros for Annex F functions [N 2570]

Others?
  For emails, especially Jim, try to send to CFP instead of CFP and cc the original author when replying to emails. This may stop the duplicate notes.