WG 14 N1791

WG14 CFP meeting minutes for the meeting of 2014/01/07

2014/01/07, 12:00 EST:
  Attendees: Jim, Rajan, Fred, David, Ian, Mike

  New agenda items:
    Preliminary responses to Joseph Myers emails
    Previously undone action items
    Discussion of email from Paul Eggert regarding names in part 4

  Old action items:
    Jim: Look into using the Wiki as a backup for the documents in Word format. - Most current version has been put up with PDF as well. Keep this item open. - Continuing to be done
    Jim: Part 4: Look for opportunities for shortening function lists by removing suffixes. - Not done
    Jim: Part 4: Send a note to the IEEE-754 group to get review of the draft from them. - Done

    Jim: Part 3: Bring up the clause letter numbering issue at the WG14 meeting and get direction on where to put it (since the C Standard editor is normally there). - Not done
    Jim: Part 3: Get a WG14 document number and post it and ask for review from the 754 group as well. - Done
    Jim: Part 4: Page 5: Fred's note first comment (2013/12/12 note) - Jim to fix. - Done
    Jim: Part 4: Page 6: Fred's note second comment (2013/12/12) - Add to the description of atan2pi that atan2pi is atan2/pi. - Done
    Jim: Part 4: Page 10: Leave issue 2 but add in other log*p* naming suggestions made as part of the issue. - Done as issue 1
    Jim: Part 4: Page 11: See if the issue 3 comment can fit in the binding clause. - Done as clause 6
    Jim: Part 4: Page 13: Add in the comment from 754 describing where this powr function comes from. - Done
    Jim: Part 4: Page 15: Lines 14, 20 boundaries should be -1 not 0. Also the x should be lower case (including line 26). - Done
    Jim: Part 4: Page 16: Make the change to the sum range to follow C indexes. Applies to later functions using similar notation (up to page 19). - Done
    Jim: Part 4: Page 18: Line 17: sumabs -> sumprod. - Done
    Fred: Part 4: Page 18: sumprod: See if the arrays have to be non-overlapping and to see if we need to add restrict here. - Done. No restrict needed.

Jim: Part 4: Page 21: Line 10: Change (sum) -> (each of which is a sum) - Done

David: Part 4: Page 21: Email other suggestions to the group for action item above. - Done

Jim: Part 4: Add in the 754 operation to C function name binding table as in previous parts into this part. - Done as a separate table

Jim: Part 4: Get a WG14 document number and post it and ask for review from the 754 group as well. - Done

Next Meeting:
February 13th, 2014, 12:00 EST, 9:00 PDT
Same teleconference number.

New action items:
Jim: Backup the documents in Word format. - Most current version has been put up. Keep this item open.

Current files: http://wiki.edg.com/twiki/pub/CFP/WebHome/cfp1.docx
Current files: http://wiki.edg.com/twiki/pub/CFP/WebHome/cfp2.docx
Current files: http://wiki.edg.com/twiki/pub/CFP/WebHome/cfp3.docx
Current files: http://wiki.edg.com/twiki/pub/CFP/WebHome/cfp4.docx
Note: Should also keep versions that are equivalent to PDF's.

Jim: Part 4: Look for opportunities for shortening function lists by removing suffixes.

Jim: Part 3: Bring up the clause letter numbering issue at the WG14 meeting and get direction on where to put it (since the C Standard editor is normally there). Jim will email Larry about this since he will not make the meeting.

Jim: Part 3: Page viii: Reword to make the double format types clearer. (Joseph's 2014/01/06 email)

Jim: Part 3: Fix the typo's listed by Joseph. (Joseph's 2014/01/06 email)

Jim: Part 3: Page 3: Add in the macro as suggested. (Joseph's 2014/01/06 email)

All: Part 3: Page 9: Look at this and decide what we should do for decimal floating types. (Joseph's 2014/01/06 email)

All: Part 3: Page 11: Look at this and decide what we should do for the _FloatN* types and how to make it clearer what we want. (Joseph's 2014/01/06 email)

Jim: Part 3: Page 32: Item 2: Mark this as an open issue. (Joseph's 2014/01/06 email)

Jim: Part 3: Page 32: Item 3: Check and add if needed. (Joseph's 2014/01/06 email)

Jim: Part 3: Page 34-36: Check and add if needed. (Joseph's 2014/01/06 email)

Jim: Part 4: Create a spreadsheet of log and exp functions and list the alternatives to see which conventions are being broken.

All: Part 4: Group to review the spreadsheet above and choose the best (least worse) naming scheme.

Jim: Part 4: Attempt to make the changes as described in the "General comment" part of the email. (Joseph's 2014/01/07 email)

Jim: Part 4: Fix the typo's listed by Joseph. (Joseph's 2014/01/07 email)

Jim: Part 4: Page 3: Item 2: Look into how to address this. (Joseph's 2014/01/07 email)

Jim: Part 4: Page 14: Add in a footnote to the end of the description saying "cr" stands for correctly rounded. (Joseph's 2014/01/07 email)

Jim: Part 4: Page 16: Item 2: Look into rewording (ex. remove NaN specifications) to make this clearer. (Joseph's 2014/01/07 email)

Discussion:

Part 1: Out for ISO DTS ballot. Ballot ends March 5th, 2014.
No updates.

Part 2: Out for first ISO ballot (PDTS). Ballot ends March 10th, 2014.
No updates.

Part 3: (http://wiki.edg.com/twiki/pub/CFP/WebHome/n1784.pdf)
Joseph's 2014/01/06 email:

Jim: Addressing the complicated layout can be doing the C11 + all changes draft idea we have talked about before. It could be done as a project for an intern.

Fred: Larry has a very modified version of the standard source. It would be very hard for anyone else to do it.

Page viii: A rewording here should handle this.

*Jim: Part 3: Page viii: Reword to make the double format types clearer.

*Jim: Part 3: Fix the typo's listed by Joseph.

*Jim: Part 3: Page 3: Add in the macro as suggested.

Page 9: We need to make the decision on whether to include the extended decimal types as decimal floating types.

Decimal floating types is a defined term whereas binary floating types is not so no parallel there.

*All: Part 3: Page 9: Look at this and decide what we should do for decimal floating types.

Page 11: Similar to the last comment.

All: Part 3: Page 11: Look at this and decide what we should do for the _FloatN types and how to make it clearer what we want.

Page 32: The macros were not intended as feature test macros even though they could be used that way.

Rajan: Any other ones like this in the C standard? Complex is close but not the same (since it is a group of types).

Basically, we should follow the C standard policy/format for these.

*Jim: Part 3: Page 32: Item 2: Mark this as an open issue.

*Jim: Part 3: Page 32: Item 3: Check and add if needed.

*Jim: Part 3: Page 34-36: Check and add if needed.

Page 41: By keeping the names reserved, it helps implementations that supports the types. It should only apply if the TS macro is specified of course.

*Jim: Part 3: Page 41: Find a way to say the names should be reserved (if adhering to this TS) even if the types do not exist to enhance portability.

Part 4:

Naming of log21p: Underscore is an option.

Jim: The reduction and scaled functions with underscores are specialized family but the general point about no underscores is still valid.

*Jim: Part 4: Create a spreadsheet of log and exp functions and list the alternatives to see which conventions are being broken.

*All: Part 4: Group to review the spreadsheet above and choose the best (least worse) naming scheme.

Joseph's 2014/01/07 email (first):

Jim: There has been no attempt to go through the math functions and go through the potential errors for the IEEE formats

Fred: I want the main body to also do what Joseph wants.

Jim: Unlikely to happen since the statement of the error conditions is very tricky.

Jim: If you don't conform to Annex F you have a huge latitude to what you can do and we are doing that for the new functions as well.

General comment: Agree in general.

*Jim: Part 4: Attempt to make the changes as described in the "General comment" part of the email.

*Jim: Part 4: Fix the typo's listed by Joseph.

The error cases: The C standard doesn't normally list this explicitly as suggested so it is not done here. Still need review the items though.

Page 3: Jim: The functions aren't declared unless the types are. We can make this an explicit statement.

Also the style in Part 3 and this (part 4) need to be consistent.

*Jim: Part 4: Page 3: Item 2: Look into how to address this.

Page 14: Jim: Ideally we would like to define them, and am surprised we have not said that already somehow.

It fits what is already there in 7.31 (like cerf in 7.31.1).

*Jim: Part 4: Page 14: Add in a footnote to the end of the description saying "cr" stands for correctly rounded.

Page 15: Symmetries need to be reviewed to ensure they are in Annex F.

Page 16: Item 1.2: 754 says compoundn(x, 0) should return 1 for x >= -1, for x = inf, and x = qNaN.

Jim has sent out a note asking 754 why NaN does not give NaN.

Item 2: The NaN case is not intended to raise invalid. All numbers excludes NaN's.

*Jim: Part 4: Page 16: Item 2: Look into rewording (ex. remove NaN specifications) to make this clearer.

   We can use cr_ as correctly rounded function prefix.

   Joseph's 2014/01/07 email (second): Valid comment. We need to make it clearer.

Regards,

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