**CFP Teleconference Minutes**
**WG 14 N1900**

2014/10/16, 12:00 EST:
  **Attendees**: Rajan, Jim, David, Fred, Ian


  **New agenda items:**
    WG14 liaison reporting - Rajan and Fred going (See part 5)
    No new documents to present.
    If the C standard is moved to Latex, we have a chance at applying the changes to C11.
    *ToDo: Rajan/Fred: Find out what is happening with the LaTeX migration in terms of timing.


    New words for liaison reporting:
      Parts 3 and 4 are ready for final ballot pending the resolution of the comments received in
        the PDTS as decided upon in this meeting.
      Part 5 is proceeding using the original #pragma syntax plan because there is no approval for
        any of the alternatives proposed. See paper n1841 for this discussion.
        The other aspects of Part 5 are being discussed as well.


    Part 5 email discussion (See part 5)


  **Sticky action items:**
    David: Part 5: Complete exception specification with the full syntax dealing with scope and sub-
      exceptions. Include a discussion document with reasons choices and alternatives. -
      Partially done (more of an outline. Sent on 2014/05/12). Keep open.
    David: Part 5: SUBSTITUTEXOR -> SUBSTITUTE_XOR. Pending issue resolution. - Leave
      open


  **Last meeting action items:**
    ToDo: Part 3: Jim: Formatting to accurately reflect source document. - Not done. Close it
      anyways since it is not present in the actual source document.
    ToDo: Part 3: Jim: pg. vii: Part 2 should not have "this document" (line 15). It should be moved
      (or removed entirely) to Part 3 (line 19). - Done.
    ToDo: Part 3 (Comment 2): Jim: Combination needs to be added. - Done.
    ToDo: Part 3 (Comment 3): Jim: Note describing why we are not adding implementation
      defined. - Done.
    ToDo: Part 3 (Comment 5): Jim: Draft up a few sentences to add to F.3 describing how to do
      the convertFormat operations in C. - Done.


    ToDo: Part 4: Jim: pg. vii: Part 2 should not have "this document" (line 15). It should be moved
      (or removed entirely) to Part 4 (line 19). - Done.
    ToDo: Part 4 (Comment 9): Jim: Set the response for this comment to: scaled_prodsum and
      scaled_proddiff functions can have p and q overlap so they should not have restrict
      specified. - Done. Upon discussion with WG14 we did add restrict.
    ToDo: Part 4: Jim: Missed another missing argument: Page 22 line 13: reduc_sumprod last
      bullet has n,p instead of n,p,q as the arguments. - Done.


    ToDo: David: Check for UK call in numbers (or other countries) and check with Mike on access
      need.


  **New action items:**
    ToDo: Rajan/Fred: Find out what is happening with the LaTeX migration in terms of timing.

ToDo: Rajan: Update liaison words as discussed in the meeting.
ToDo: Part 5: Evaluation Formats: Jim: Should be "value of FLT_EVAL_METHOD".
ToDo: Part 5: Evaluation Formats: Jim: "Use of other values of width" -> "Use of unsupported
values of width"
ToDo: Part 5: Value changing optimizations: Jim: Remove
FENV_ALLOW_WIDER_INTERMEDIATE_RESULTS and say that the #pragma STDC
FENV_FLT_EVAL_METHOD width takes care of it.

**Next Meeting:**
December 2nd (Tuesday), 2014, 12:00 EST, 9:00 PDT
Same teleconference number.
Note: Future meetings (2015) will be using Rajan's teleconference number.

**Discussion:**
Part 1: Published.

Part 2: Final draft sent to ISO for review. Will come back to Jim for final check (still not sent
back from ISO).
Date will need to be set in the macro portion of the text. We will need to do the same for parts
3 and 4.

Part 3: Comment resolution:
Suggested resolution documents provided in WG14 meeting mailing.
Draft, assuming all suggested responses are accepted, is ready. We can tell the committee
that the documents are ready for voting and only need document numbers.

Part 4: Comment resolution:
Suggested resolution documents provided in WG14 meeting mailing.
Draft, assuming all suggested responses are accepted, is ready. We can tell the committee
that the documents are ready for voting and only need document numbers.

Part 5: (Email discussion based on email from Jim today)
Evaluation formats:
ToDo: Part 5: Evaluation Formats: Jim: Should be "value of FLT_EVAL_METHOD".
ToDo: Part 5: Evaluation Formats: Jim: "Use of other values of width" -> "Use of
unsupported values of width"
Issue #1: OK
Issue #2: No.
Value changing optimizations:
Issue #3: Leave open.
Points brought up: Consistency with other STDC pragmas, more descriptive to use
ALLOW/DISALLOW, long name to type.
Issue #4: Remove/reword text as it is invalid.
The optimizations can consist of converting division to multiplication so it is not just type
changing.
Issue #5: No.
Usually binary and DFP are in different sections so they can use the #pragma for those
sections. i.e. They are usually not interspersed.
Issue #6: Leave separate for now.
The IEEE standard is explicit about both of these so even though FP_CONTRACT covers it
we will leave it in.
Allow wider intermediate results:

The FENV eval method takes care of this.
ToDo: Jim: Remove it and say that the #pragma STDC FENV_FLT_EVAL_METHOD width takes care of it.
Issue #7: Keep open.
Should we say a general rule that more specific pragma's override the general ones?
Perhaps group them or list the interactions?
Issue #8: Open in modified form.
The division one is important.
The question is whether to provide it to give the same syntax for everyone or leave it open for implementations to decide including potentially incompatible ones.
Compiler's would probably prefer to have less to implement.
Users would probably prefer more control.
List the ones we consider important and list the rest as ones considered.
Reproducible results:
Must use correctly rounded functions, no wider format evaluation, etc. If something else is used, you don't have reproducible results.
Math functions that are not correctly rounded? Have a separate directive for transcendental functions?
Issue #9: More to talk about next time.
For which parts:
All implementations with the same parts?
Disallow/Diagnose non-reproducible constructs:
One view is to turn off things that could affect reproducibility, other is to diagnose things that may be not reproducible.
Should be generating reproducible code.

Regards,

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