

WG14 N3085
Meeting notes

C Floating Point Study Group Teleconference

2023-01-18 (continuation of 2023-01-04,05 meeting)
8 AM PST / 10 PM EST / 4 PM UTC

Attendees: Rajan, Jim, Fred, David H, Damian

New agenda items

(https://wiki.edg.com/pub/CFP/WebHome/CFP_continuation_meeting-20230118.pdf):

None.

2023-01-04,05 meeting minutes:

- [\[Cfp-interest 2594\] WG14 IEEE 754-C binding meeting minutes - 2023/01/04-2023/01/05 Update](#) *Rajan Bhakta*

Next Meeting:

February 14th, 2023, 4PM

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

Note: The next WG 14 meeting is January 23-27, 2023

Last meeting carry over action items:

David H: Get an example for the scaled reduction functions (perhaps by asking Jason or Jim or looking into the IEEE references).

<https://754r.ucbtest.org/background/traps-and-wraps.txt>

Deferred

David H: Get an example for the augmented arithmetic functions (perhaps by asking Jason or Jim D or looking into the IEEE references).

Deferred

Last meeting action items:

All: Review CD comments related to CFP.

Done

New action items:

Jim: Update N3081, highlight changes, email to CFP for fast review, and submit to WG 14.

C++ liaison:

Rounding direction specific functions – Did not get to this item.

C23 integration:

CD ballot done (https://wiki.edg.com/pub/CFP/WebHome/ISO-IEC_JTC_1-SC_22_N5777_Text_for_CD_9899.pdf).

- [\[Cfp-interest 2558\] C23 CD](#) *Jim Thomas*

Continued review:

Following https://wiki.edg.com/pub/CFP/WebHome/CFP_continuation_meeting-20230118.pdf

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- [\[Cfp-interest 2595\] draft CFP response for NB comments and N3071](#) *Jim Thomas*
Reviewed statement of CFP response to GB-286, GB-287. Agreed.
- [\[Cfp-interest 2597\] Re: draft CFP response for NB comments and N3071](#) *Joseph Myers*
The CD adds to C18 the requirement for errno setting when overflow occurs in a nondefault rounding mode. Requires diagnosing overflow when a finite result is delivered. Accommodation for constexpr wasn't stated correctly.
- [\[Cfp-interest 2601\] Re: draft CFP response for NB comments and N3071](#) *Jim Thomas*
Reviewed Fred's comments in CFP 2600 about constexpr examples, and Jim's fixes. Agreed.
- [\[Cfp-interest 2603\] Re: draft CFP response for NB comments and N3071](#) *Jim Thomas*
N3081 was submitted to WG14. Reviewed ...
GB-164
Prefer no change, but Ok with: Requiring errno setting only in default rounding mode, but requiring exception regardless of rounding mode. Either no change or both proposed changes.
GB-279
Reviewed N3081 statement of CFP response. Agreed.
GB-287
Reviewed N3081 statement of CFP response. Agreed.
- [\[Cfp-interest 2607\] Re: \[SC22WG14.22883\] N3071 exactly representable](#) *Jim Thomas*
"compatible" versus "same" -- agreed with N3081 wording.
Change complex SNAN example to be "ok". Agreed.
Also, add constexpr to static case in 5.2.4.2.2#21 (initialization with SNaN macros). Agreed.
- [\[Cfp-interest 2605\] Fwd: \[SC22WG14.22874\] CFP views on CA-N3073-006](#) *Jim Thomas*
Reviewed CA comment.
Prefer no change to 5.2.4.2.2 and normalized and EPSILON.
Noted possible fallback loosening "normalized".
- [\[Cfp-interest 2615\] Re: \[SC22WG14.22900\] CFP views on CA-N3073-006](#) *Jim Thomas*
Reviewed remarks about proposal. Agreed.
- [\[Cfp-interest 2616\] Re: \[SC22WG14.22918\] CFP views on CA-N3073-006](#) *Hubert Tong*
Reviewed response to [Cfp-interest 2615].
Agreed on recommending no change.
Appreciated concern that existing programs might end up with different results due to these changes from C18.
- [\[Cfp-interest 2610\] Re: \[SC22WG14.22886\] N3071 exactly representable](#) *Jens Gustedt*
Discussed translation time vs before startup.

For needed change in 5.2.4.2.2 #21 (noted above), liked the suggestion to refer to translation time evaluation instead of listing static, thread, and constexpr as in F.8.4 and F.8.5.

Jim Thomas and Fred Tydeman