

WG14 N2544
Meeting notes

C Floating Point Study Group Teleconference

2020-06-17

8 AM PDT / 11 AM EDT / 3 PM UTC

Meeting logistics

Note taker: Fred Tydeman

Attendees:

Jim Thomas (host)

Fred Tydeman (note taker)

David Olsen

Ian McIntosh

Mike Cowlshaw

Damian McGuckin

Rajan Bhakta

David Hough

Carry over action items

David: duplicated CFP messages - mailman was updated - done

Action Items

Jim: Let WG14 know that 60559:2020 was published - done

Jim: Get new paper numbers about 60559:2020 - done

All: review Part 3 as annex - done

Jim: Check WANT macro issue in CFP 1581 - open

Next meeting - July 22

C++ liaison

C++ [David Olsen]

Paper out for review [CFP 1638]. Would like feedback from us.

Jim: How to constants with suffixes?

David: Can do some.

C2X integration

New editors working on rebuilding WG14 N2478.

AI details

David: Mailman has been updated. Things appears to be fixed.

Jim: WG14 has been told about ISO/IEC 60559:2020 publication.

Jim: New paper numbers for IEEE 2019 has been done

All: Review Part 3 as Annex

Links in minutes do not work. Depends upon how create PDF from Word.

new AI: Need ideas on how to convert Word to good PDF with links.

cutepdf -- might work

google docs -- has some problems

Missing some conversions = CFP email 1640. Problem is binary-decimal conversions; need support for hex in all cases.

%a: binary to hex can be exact. Then hex to decimal can be done with one rounding error (with enough hex digits).

Jim: email with Micheal Hack: common struct with both binary and decimal of same value with enough precision. Jim should send to Hack about use of hex.

%a is already part of C and can be big enough for exact representation.

New AI Jim: add hex to annex draft.

This annex part 3 depends upon Annex F. Should that be optional?

For example allow, IBM S/360 hex can be float and double, and also IEEE-754 FP types via extended types. No need in market place.

Jim: Check WANT macro issue of CFP 1581. Still Open.

Other Issues

Missing 'const' in *payload. Editorial or new paper?

AI: Fred - write paper saying missed.

Expression eval footnote.

AI: Fred - write paper on DEC_EVAL_METHOD. Nothing about static vs auto.

Email: CFP 1643: Rnd ties away issue.

AI: Jim: rewrite.

David Olsen: Promotions for small binary interchange types to double.

Jim: email 1634 has proposed words.

Fred: Might be issue with float imaginary vs _Float32 imaginary.

AI: Jim+Fred: no prototype vs varargs prototype. Find where in C where float is promoted to double.

intmax_t removal: *from* return FP type same as argument.

Fred: compoundn, rootn: use large long long int implies result is 0, 1, or inf. [Corrected after meeting: only true for rootn]

Jim: when longer int is converted to long long int, result is unspecified when out of range.

Fred: Use FP type instead of intmax_t.

David: Needs to be an integer.

NOTE: Needs to be on agenda for next meeting.

WANT macros annex F only functions.

Mixture to impl defines macros and user WANT macros. Need synopsis for both binary and decimal.

Fred: Maybe also for part4a decimal math functions: asinpid32 needs both decimal and extra functions.

NOTE: Needs to be on agenda for next meeting.

Others

None.