WG 14 N1714

WG14 CFP meeting minutes for the meeting on 2013/05/16

Attendees: Ian, Jim, Fred, David, Mike, Marius, Rajan

Last meeting action item: F.3 as a footnote - Done
   Email sent on April 12th, 2013

Next meeting: June 13th, 2013, 12:00 EST, 9:00 AM PDT
   Continuing with the Oracle teleconference number

Action items:
  *AI*: Formatting and reference changes made to part 1 have to be made to part 2
  *AI*: Jim to send an email to WG14 asking for the one term change of "generic" to "traditional".
     Can also list the terms we rejected.
  *AI*: Mike to respond to Jim's reset email

Next C pre-meeting mailing is September 2nd, 2013
   We need to have any documents we want to be discussed at the C meeting in the mailing at
   that time

Part 1:
   Made all changes from the comments submitted + some other other editorial ones that were
   found
      The final changed version has been posted on the Wiki (n1711)
      First ISO ballot (3 month) will be on that document
      We will need to respond to comments on that ballot

Part 2:
   Comment by Willem regarding changes made to Annex F by all the parts being confusing
   Jim sent messages regarding minimal changes in part 2 and part 3 to Annex F so this does not
   seem to be too much of a problem
  *AI*: Formatting and reference changes made to part 1 have to be made to part 2

Rajan's "quantum exponent return type" email comments:
   Fred: Why not use long long?
   Jim: _Decimal1024 would be larger than int64. We'd still have a built in limitation
   Jim: Prefers option 2, though it wouldn't work for extended types for large exp vs significands.
   We could make this a limitation on extended types
   Jim: Also not compatible to the decimal TR
   Rajan: Maybe allow the base cases (32, 64, 128) with int return types, and option 2 for larger
   types
   Mike: Or a new name for the option 2 types with the basic ones (32, 64, 128) staying the
   same as the TR so the common case is fast and easy to implement and the new name for all
   types including extended ones. We may want to review other functions to see if they can return a
decimal type if int is constraining it
   Choose Option 2 with the mod suggested by Mike.
   Naming: Look at precedence like ilogb for something like dquantexpdN

Part 3:
   The term interchange type caused a lot of confusion in the committee
   Sentiment was not to have types for interchange encodings, especially with the similar names
like _FloatN (with _Float16 as a special case)

Mike: Data only types are not really fitting from the C point of view
Ian: I disagree with having _Float16 as a mandatory type. Very few groups have hardware
_Float16
Marius: Intel supports _Float16 to some extent on 3rd gen Cores, limited to store now, with
_Float32 evaluation
Jim: We can come back to _Float16
Mike: Do we want to make the arithmetic vs non-arithmetic distinction in C?
Rajan: Can we remove non-arithmetic types?
*AI*: Mike to respond to Jim's reset email
Jim's "reset part 3" email comments:
5) generic -> general
"general" could mean any floating point type
How about classic, traditional, standard, basic floating?
We could just not use the term and list the types wherever we have generic
*AI*: Jim to send an email to WG14 asking for the one term change of "generic" to
"traditional". Can also list the terms we rejected.
Can we not make an allowance of float32/64 being float/double and macro definition of the
functions to allow the "traditional" type functions to be used (can be done for extended types as
well)
Would not work with constant rounding modes and macro suppression
Require the new types, but allow #defines, or make them optional to simplify Part 3, or keep it
the way it is with the encoding change?

Regards,

Rajan Bhakta