Date: March 5, 2018 Document Number: N4731

Title: SC22 WG14 Liaison Report (C Standard)

Reply to the Attention of: Barry Hedquist, PL22.16/PL22.11 IR

Email: beh@peren.com

The following is a brief summary of what has been happening with the C Standards Committee, ISO/IEC JTC1 SC22/WG14.

WG 14 is about to publish a revision to C 2011. The revision is the resolution of defect reports that have been submitted since C 11 was published, up to April 2017. In addition, the published C11 Standard has been converted to LaTeX. Submission of the revision to C11 was approved by WG 14 in Albuquerque, NM, November 2017. In addition, the published C11 Standard has been converted to LaTeX.

WG 14 has also been developing a list of items that were originally submitted as defect reports but cannot be handled as such as they are actually requests for 'new features' to the C language. These items are contained in a document known as SD 3 (Standing Document 3), and are subject for consideration for a follow-on revision to the C Standard sometime early in the 2020's (C2X). Consideration of these items for inclusion into C 2X will begin at the next WG14 meeting in Brno, CZ, April 23 - 28, 2018.

WG 14 has developed a five part Technical Specification (TS), for C bindings to the new IEEE Floating Point Standard (IEEE 754:2011). Parts 1 and 2 of the TS (see below) will likely be added to C2X, Annex F, along with portions of parts 3 - 5.

TS 18661.1 - C Binding for Binary Floating Point Arithmetic. To be added to Annex F for C2X.

TS 18661.2 - C Binding for Decimal Floating Point Arithmetic. To be added to Annex F for C2X.

TS 18661.3 - C Binding for Interchange and Extended Types.

TS 18661.4 - C Binding for Supplementary functions. These functions provide operations recommended by IEEE 60559 but not required.

TS 18661.5 - C Binding for Supplementary attributes.

Other areas under consideration include C/C++ harmonization issues, such as deleting trigraphs and introducing attributes to C. There have been discussions and presentations by Intel on CPLEX, however there are no plans to add CPLEX to C2X at this time.