P1541

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Type of Project: Revision to IEEE Standard 1541-2002
PAR Request Date: 11-Jul-2016
PAR Approval Date: 22-Sep-2016
PAR Expiration Date: 31-Dec-2020
Status: PAR for a Revision to an existing IEEE Standard
Root Project: 1541-2002

1.1 Project Number: P1541
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use

2.1 Title: Standard for Prefixes for Binary Multiples
Changes in title: IEEE Standard for Prefixes for Binary Multiples

3.1 Working Group: Unit Symbols Subcommittee (SASB/SCC14/SCC14.3)
Contact Information for Working Group Chair
Name: James Frysinger
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Contact Information for Working Group Vice-Chair
None

3.2 Sponsoring Society and Committee: IEEE-SASB Coordinating Committees/SCC14 - Quantities, Units, and Letter Symbols (SASB/SCC14)
Contact Information for Sponsor Chair
Name: Gary Hoffman
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Contact Information for Standards Representative
None

4.1 Type of Ballot: Individual
4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 01/2017
4.3 Projected Completion Date for Submittal to RevCom
Note: Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.: 08/2017

5.1 Approximate number of people expected to be actively involved in the development of this project: 21
5.2 Scope: This standard defines prefixes and letter symbols that denote multiplication of a unit by the binary multiplier 1024 (equal to 2^10) and integral powers thereof. The prefixes and letter symbols are for use with all units and their symbols, in all fields where multiplication by a binary multiplier is found to be appropriate.
Changes in scope: This standard defines prefixes and letter symbols that denote multiplication of a unit by the binary multiplier 1024 (equal to 2^10) and integral powers thereof. The prefixes and letter symbols are for use with all units and their symbols, in all fields where multiplication by a binary multiplier is found to be appropriate.

5.3 Is the completion of this standard dependent upon the completion of another standard: No
5.4 Purpose: The prefixes kilo, mega, giga, etc. are defined by the SI Brochure, "International System of Units", and other international standards to stand solely for powers of 10. Using them to stand for binary multiples, such as powers of 1024, is internationally deprecated. Alternative but conveniently similar prefixes standing for multiples of 1024 are provided by the ISO/IEC 80000 standard series, "Quantities and Units", and by NIST, with which this standard is consistent.
Changes in purpose: The prefixes kilo, mega, giga, etc., are sometimes defined to the denote SI Brochure, "International System of Units", rather than other international standards to stand solely decimal for multiples powers of 10. The Using them to stand for binary usage multiples, such as powers of 1024, is internationally deprecated. This Alternative proposed but conveniently similar prefixes standing for multiples of 1024 are provided by the ISO/IEC 80000 standard will series, "Quantities consistent with Units", and will support NIST, with recently which adopted this IEC standard onis the subject consistent.
5.5 **Need for the Project:** This standard will provide prefixes to be used where using SI prefixes as given in IEEE/ASTM Std SI 10, "American National Standard for Metric Practices", would be inappropriate, thus avoiding misuse of SI prefixes.

5.6 **Stakeholders for the Standard:** Those involved in engineering, design, manufacturing, and management of computers, computer peripherals, data transmission, and other fields dealing with binary data management.

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**Intellectual Property**

6.1.a. **Is the Sponsor aware of any copyright permissions needed for this project?:** No

6.1.b. **Is the Sponsor aware of possible registration activity related to this project?:** No

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7.1 **Are there other standards or projects with a similar scope?:** No

7.2 **Joint Development**

   **Is it the intent to develop this document jointly with another organization?:** No

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**8.1 Additional Explanatory Notes:** The changes to the Scope (5.2) were made for the sake of completeness. The current standard necessarily contains symbols and the PAR ought to reflect that. The phrase fragment "1024 (equal to" was added for the sake of clarification, as was suggested by a member of the PAR study committee.

The changes to the Purpose (5.4) mostly reflect the change in seminal documentation in this area. The original standard was based on an IEC letter which has been superseded by ISO/IEC 80000 series and is now reflected in the SI Brochure and NIST publications. Some of the phrasing in this revised Purpose section reflects phrasing in those seminal references. To have kept the original Purpose would have been anachronistic and thus incorrectly stated.