**Submitter Email:** d.lawrence@computer.org

**Type of Project:** Modification to Approved PAR

**PAR Request Date:** 26-Feb-2008

**PAR Approval Date:** 19-May-2008

**PAR Expiration Date:** 31-Dec-2009

**Status:** Modification to a Previously Approved PAR for the Revision of a Standard, Std 1028-0

**Project:**

**Root Project:** 1028-0

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1.1 **Project Number:** P1028

1.2 **Type of Document:** Standard

1.3 **Life Cycle:** Full Use

1.4 **Is this project in ballot now?** No

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2.1 **Title:** Standard for Software Reviews and Audits

**Old Title:** Standard for Software Reviews and Audits

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3.1 **Working Group:** Std for Software Reviews Working Group (C/S2ESC/1028_WG)

**Contact Information for Working Group Chair**

J Dennis Lawrence

Email: d.lawrence@computer.org

Phone: 541-344-4800

**Contact Information for Working Group Vice-Chair**

None

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3.2 **Sponsoring Society and Committee:** IEEE Computer Society/Software & Systems Engineering Standards Committee (C/S2ESC)

**Contact Information for Sponsor Chair**

Paul Croll

Email: pcroll@csc.com

Phone: 540-644-6224

**Contact Information for Standards Representative**

None

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4.1 **Type of Ballot:** Individual

4.2 **Expected Date of Submission for Initial Sponsor Ballot:** 11/2007

4.3 **Projected Completion Date for Submittal to RevCom:** 10/2008

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5.1 **Approximate number of people expected to work on this project:** 40

5.2 **Scope:** This standard provides minimum acceptable requirements for systematic software reviews, where systematic includes the following attributes:

a) Team participation

b) Documented results of the review

c) Documented procedures for conducting the review

**Old Scope:** The scope remains unchanged from the 1997 version of the document and is as follows:

This standard provides minimum acceptable requirements for systematic software reviews, where systematic includes the following attributes:

a) Team participation
Reviews that do not meet the requirements of this standard are considered to be nonsystematic reviews. The standard is not intended to discourage or prohibit the use of nonsystematic reviews. The definitions, requirements, and procedures for the following five types of reviews are included within this standard:

a) Management reviews
b) Technical reviews
c) Inspections
d) Walk-throughs
e) Audits

This standard does not establish the need to conduct specific reviews; that need is defined by other software engineering standards or by local procedures. This standard provides definitions, requirements, and procedures that are applicable to the reviews of software development products throughout the software life cycle. Users of this standard shall specify where and when this standard applies and any intended deviations from this standard.

This standard may be used with other software engineering standards that determine the products to be reviewed, the timing of reviews, and the necessity for reviews. This standard is closely aligned with IEEE Std 1012-2004 [B5], but can also be used with IEEE Std 1074-2004 [B10], IEEE Std 730-2002 [B1], ISO/IEC/IEEE 12207:2008 [B14], and other standards. A useful model is to consider IEEE Std 1028 as a subroutine to the other standards. Thus, if IEEE Std 1012 were used to carry out the verification and validation process, the procedure in IEEE Std 1012 could be followed until such time as instructions to carry out a specific review are encountered. At that point, IEEE Std 1028 would be called to carry out the review, using the specific review type described herein. Once the review has been completed, IEEE Std 1012 would be returned to for disposition of the results of the review and any additional action required by IEEE Std 1012.

This standard may also be used as a stand-alone definition of software review and audit procedures. In this case, local management must determine the events that precede and follow the actual software reviews and audits.

In this model, requirements and quality attributes for the software product are parameter inputs to the review and are imposed by the caller. When the review is finished, the review outputs are returned to the caller for action. Review outputs typically include anomaly lists and action item lists; the resolution of the anomalies and action items are the responsibility of the caller.

5.3 Is the completion of this standard dependent upon the completion of another standard: No

5.4 Purpose: The purpose of this standard is to define systematic reviews and audits applicable to software acquisition, supply, development, operation, and maintenance. This standard describes how to carry out a review. Other standards or local management define the context within which a review is performed, and the use made of the results of the review. Software reviews can be used in support of the objectives of project management, system engineering (for example, functional allocation between hardware and software), verification and validation, configuration management, quality assurance and auditing. Different types of reviews reflect differences in the goals of each review type.

b) Documented results of the review
c) Documented procedures for conducting the review

Reviews that do not meet the requirements of this standard are considered to be nonsystematic reviews. The standard is not intended to discourage or prohibit the use of nonsystematic reviews. The definitions, requirements, and procedures for the following five types of reviews are included within this standard:

a) Management reviews
b) Technical reviews
c) Inspections
d) Walk-throughs
e) Audits

This standard does not establish the need to conduct specific reviews; that need is defined by other software engineering standards or by local procedures. This standard provides definitions, requirements, and procedures that are applicable to the reviews of software development products throughout the software life cycle. Users of this standard shall specify where and when this standard applies and any intended deviations from this standard.

It is intended that this standard be used with other software engineering standards that determine the products to be reviewed, the timing of reviews, and the necessity for reviews. This standard is closely aligned with IEEE Std 1012, but can also be used with IEEE Std 1074, IEEE Std 730, ISO/IEC 12207:1995, and other standards. Use with other standards is described in Annex A. A useful model is to consider IEEE Std 1028 as a subroutine to the other standards. Thus, if IEEE Std 1012 were used to carry out the verification and validation process, the procedure in IEEE Std 1012 could be followed until such time as instructions to carry out a specific review are encountered. At that point, IEEE Std 1028 would be called to carry out the review, using the specific review type described herein. Once the review has been completed, IEEE Std 1012 would be returned to for disposition of the results of the review and any additional action required by IEEE Std 1012.

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Systematic reviews are described by their defined procedures, scope, and objectives. in the goals of each review type. Systematic reviews are described by their defined procedures, scope, and objectives.

5.5 Need for the Project: There was a successful reaffirmation ballot for this standard in 2002. Several issues were mentioned in the ballot that should be considered during a revision to the standard.

5.6 Stakeholders for the Standard: The stakeholders are software engineers in business, government and other organizations (such as universities and non-profits), their management and their customers.

Intellectual Property

6.1.a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR prior to the PAR submittal to the IEEE-SA Standards Board? Yes
If yes, state date: 05/28/2005

6.1.b. Is the Sponsor aware of any copyright permissions needed for this project? No
6.1.c. Is the Sponsor aware of possible registration activity related to this project? No

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

7.2 International Activities

a. Adoption
Is there potential for this standard (in part or in whole) to be adopted by another national, regional or international organization? No
Organization:
Technical Committee Name:
Technical Committee Number:
Contact Person Name:
Contact Person Phone:
Contact Person Email:

b. Joint Development
Is it the intent to develop this document jointly with another organization? No
Organization:
Technical Committee Name:
Technical Committee Number:
Contact Person Name:
Contact Person Phone:
Contact Person Email:

c. Harmonization
Are you aware of another organization that may be interested in portions of this document in their standardization development efforts? No
Organization:
Technical Committee Name:
Technical Committee Number:
Contact Person Name:
Contact Person Phone:
Contact Person Email: