



Sherry
Hampton/STDS/STAFF/
US/IEEE

10/02/2007 09:31 PM

To pcroll@csc.com

cc d.lawrence@computer.org, Malia Zaman/STDS/STAFF/US/IEEE,

bcc

Subject Approval of Project - P1028

02 October 2007

Paul R Croll
Computer Sciences Corporation
5166 Potomac Drive
King George, VA 22485-5824
pcroll@csc.com

Re: P1028 - Standard for Software Reviews and Audits

Dear Paul:

I am pleased to inform you that on 27 September 2007 the IEEE-SA Standards Board approved the above referenced project until 31 December 2009. A copy of the file can be found on our website at <http://standards.ieee.org/board/nes/projects/1028.pdf>.

Now that your project has been approved, please forward a roster of participants involved in the development of this project. This request is in accordance with the IEEE-SA Operations Manual, Clause 5.1.2i under Duties of the Sponsor which states:

"Submit annually to the IEEE Standards Department an electronic roster of individuals participating on standards projects"

Rosters can be submitted in any format to the NesCom Administrator (nescom-admin@ieee.org). Please forward this list to the NesCom Administrator via e-mail at nescom-admin@ieee.org no later than 26 December 2007.

Or, for your convenience, you can manage your standards development roster in myProject. Instructions are as follows:

- Go to myProject - <https://development.standards.ieee.org/my-site>
- Login using your IEEE Web Account username and password.
- Once logged into myProject, go to "Manage Committees"
- Drill down to the project by clicking the (+) on the left to expand each level. The actual project will be highlighted in yellow
- Click "Manage Committees" for that project. A list of individuals enrolled in the Committee/Project will appear. On this screen you can assign whether a person is a Participant, a Non-Voting Member or a Voting Member of the project group. You may also view contact information for that individual.

Please visit our website, IEEE Standards Development Online (<http://standards.ieee.org/resources/development/index.html>), for tools, forms and training to assist you in the standards development process. Also, we strongly recommend that a copy of your draft be sent to this office for review prior to the final vote by the working group to allow for a quick review by editorial staff before sponsor balloting begins.

If you should have any questions, please contact the NesCom Administrator via e-mail at nescom-admin@ieee.org or via telephone at +1 732 562 3806.

Sincerely,

NesCom Admin
Standards Activities
Email: nescom-admin@ieee.org

PAR Request Date: 15 July 2007

PAR Approval Date: 27 September 2007

PAR Signature Page on File: Yes

Type of PAR: Modification to Approved PAR

Status: Modification to a Previously Approved PAR for the Revision of a Standard - P1028, 11 August 2005

Root Project: IEEE Std 1028-1998

1.1 Project No.: **1028**

1.2 Type of Document: Standard

1.3 Life Cycle: Full-Use

1.4 Is this document in ballot now? No

2.1 Title

Standard for Software Reviews and Audits

3.1 Working Group Name [Std for Software Reviews Working Group](#)

Working Group Chair

[Lawrence, J. Dennis](#)

Phone: +1 541 344 4800

Email: d.lawrence@computer.org

Working Group Vice Chair

3.2 Sponsor

[IEEE Computer Society Software & Systems Engineering Standards Committee \(C/S2ESC\)](#)

Sponsor Chair

[Croll, Paul R](#)

Phone: 540-644-6224

Email: pcroll@csc.com

Name of Standards Liaison Representative (if applicable)

3.3 Joint Sponsor

4.1 Type of Ballot: Individual

4.2 Expected Date of Submission for Initial Sponsor Ballot: April 2009

4.3 Projected Completion Date for Submittal to RevCom: October 2009

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

5.2 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 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. This 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, 1 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. 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.”

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 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. This 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, 1 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. 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 document contingent upon the completion of another document? No

5.4 Purpose: The purpose of this standard is to define systematic reviews 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, and quality assurance. Different types of reviews reflect differences in the goals of each review type. Systematic reviews are described by their defined procedures, scope, and objectives.

Old Purpose: The purpose of this standard is to define systematic reviews 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, and quality assurance. Different types of reviews reflect differences 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.

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 Presented Date: 2005-05-28

If no, please explain:

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

If yes, please explain:

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

If yes, please explain:

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

If yes, please explain:

Sponsor Organization:

Project/Standard Number:

Project/Standard Date: 0000-00-00

Project/Standard Title:

7.2 Is there potential for this standard (in part or in whole) to be adopted by another national, regional, or international organization? ? Do not know at this time

Technical Committee Name and Number:

Contact person:

Contact person Phone Number:

Contact person Email Address:

7.3 Will this project result in any health, safety, security, or environmental guidance that affects or applies to human health or safety? No

7.4 Additional Explanatory Notes:

This modification is simply to change the title from "Standard for Software Reviews" to "Standard for Software Reviews and Audits." The reason for this change is to be consistent with the 2007 version of IEEE P12207, which distinguishes between reviews and audits.

8.1 Sponsor Information:

Is the Scope of this project within the approved scope/definition of the Sponsor's Charter? Yes

If no, please explain:

[Email This Letter](#)

11 August 2005

Paul R Croll
Computer Sciences Corporation
5166 Potomac Drive
King George, VA 22485-5824
pcroll@csc.com

Re: P1028 - Standard for Software Reviews

Dear Paul:

I am pleased to inform you that on 11 August 2005 the IEEE-SA Standards Board approved the above referenced project until 31 December 2009. A copy of the file can be found on our website at <http://standards.ieee.org/board/nes/projects/1028.pdf>.

Now that your project has been approved, please forward a roster of participants involved in the development of this project. This request is in accordance with the IEEE-SA Operations Manual, Clause 5.1.2i under Duties of the Sponsor which states:

"Submit annually to the IEEE Standards Department an electronic roster of individuals participating on standards projects"

For your convenience, an Excel spreadsheet for your use has been posted on our website at <http://standards.ieee.org/guides/par/roster.xls>. Please forward this list to me via e-mail at j.haasz@ieee.org no later than 09 November 2005.

Please visit our website, IEEE Standards Development Online (<http://standards.ieee.org/resources/development/index.html>), for tools, forms and training to assist you in the standards development process. Also, we strongly recommend that a copy of your draft be sent to this office for review prior to the final vote by the working group to allow for a quick review by editorial staff before sponsor balloting begins.

If you should have any further questions, please contact me at 732-562-6367 or by email at j.haasz@ieee.org.

Sincerely,

Jodi Haasz
Program Manager
International Stds Programs and Governance
Standards Activities
Phone +1 732 562 6367
FAX +1 732 875 0695
Email: j.haasz@ieee.org

CC: d.lawrence@computer.org

PAR FORM

PAR Status: Revision PAR
PAR Approval Date: 2005-08-11
PAR Signature Page on File: Yes

1. Assigned Project Number: P1028

2. Sponsor Date of Request: 2005-06-17

3. Type of Document: Standard for

4. Title of Document:

Draft: Standard for Software Reviews

5. Life Cycle: Full-Use

6. Type of Project:

6a. Is this an update to an existing PAR? No

6b. The Project is a: Revision of Std 1028-1998

7. Working Group Information:

Name of Working Group: Working Group for Software Reviews

Approximate Number of Expected Working Group Members:5

8. Contact information for Working Group Chair:

Name of Working Group Chair: J. Dennis Lawrence

Telephone: +1 541 344 4800 **FAX:**

Email: d.lawrence@computer.org

9. Contact information for Co-Chair/Official Reporter, Project Editor or Document Custodian if different from the Working Group Chair:

Name of Co-Chair/Official Reporter, Project Editor or Document Custodian:

Telephone: **FAX:**

Email:

10. Contact information for Sponsoring Society or Standards Coordinating Committee:

Name of Sponsoring Society and Committee: IEEE Computer Society Software & Systems Engineering Standards Committee

Name of Sponsoring Committee Chair: Paul R Croll

Telephone: 540-644-6224 **FAX:** 540-663-0276

Email: pcroll@csc.com

Name of Liaison Rep. (if different from the Sponsor Chair):

Telephone: **FAX:**

Email:

Name of Co-Sponsoring Society and Committee:

Name of Co-Sponsoring Committee Chair:

Telephone: FAX:

Email:

Name of Liaison Rep. (if different from the Sponsor Chair):

Telephone: FAX:

Email:

11. The Type of ballot is: Individual Sponsor Ballot

Expected Date of Submission for Initial Sponsor Ballot: April 2009

12. Projected Completion Date for Submittal to RevCom: October 2009

Target Extension Request Information for a Modified PAR whose completion date is being extended past the original four-year life of the PAR:

13. Scope of Proposed Project:

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
- 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. This 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, 1 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.

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.”

Is the completion of this document contingent upon the completion of another document?

No

14. Purpose of Proposed Project:

The purpose of this standard is to define systematic reviews 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, and quality assurance. Different types of reviews reflect differences in the goals of each review type. Systematic reviews are described by their defined procedures, scope, and objectives.

15. Reason for the Proposed 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. The stakeholders are software engineers in business, government and other organizations (such as universities and non-profits), their management and their customers.

16. Intellectual Property:

- a. Has the IEEE-SA policy on intellectual property been presented to those responsible for preparing/submitting this PAR?** Yes 2005-05-28
- b. Is the sponsor aware of copyright permissions needed for this project?** No
- c. Is the sponsor aware of trademarks that apply to this project?** No
- d. Is the sponsor aware of possible registration activity related to this project?** No

17. Are there other documents or projects with a similar scope? Yes

IEC project 56/61160 is developing a standard for design reviews. There is some commonality, but the overlap is not great. Many of the items in the IEC draft are intentionally not in this standard; instead, they are left for other IEEE Software Engineering Standards. This standard is directed at how to carry out reviews, not on what reviews should be carried out or when.

Similar Scope Project Information:

SimSP: IEC SimProjNo: 56/61160 SimProjD: 2004 SimTitle: Design Review

18. Is there potential for this document (in part or in whole) to be adopted by another national, regional or international organization? Do not know at this time

If yes, the following questions must be answered:

Organization Name?**Technical****Committee****International****Contact****Information?**

19. Will this project result in any health, safety, or environmental guidance that affects or applies to human health or safety? No

If yes, please explain:

20. Sponsor Information

a. Is the scope of this project within the approved/scope/definition of the Sponsor's Charter? Yes

If no, please explain:

b. The Sponsor's procedures have been accepted by the IEEE-SA Standards Board Audit Committee? Yes

21. Additional Explanatory Notes: (Item Number and Explanation)

Several years ago, S2ESC (then SESC) carried out quite a few reaffirmation projects. These were completed and approved by SA (RevCom), but with the proviso that we carry out revision projects for the various standards. In particular, we agreed to consider all comments that accompanied the negative ballots.

1028 was one of these. During the reaffirmation, we received several sets of comments, some accompanying negative ballots, some accompanying positive ballots. We decided to consider both types of comments. Most of these are for minor corrections, such as the date of a referenced standard.

Upon consideration, we have decided that the standard itself is basically correct; the purpose of the project (as contrasted with the purpose of the standard) is to consider all the ballot comments. The IEC Draft Standard referred to above in item 17 has a draft title "IEC 61160: Design Review."

The standards that are referenced in the PAR are as follows:

IEEE Std 1074-1997, IEEE Standard for Developing Software Life Cycle Processes; IEEE Std 1012-2004, IEEE Standard for Software Verification and Validation; IEEE Std 730-2002, IEEE Standard for Software Quality Assurance Plans; and ISO/IEC 12207:1995, Information technology -- Software life cycle processes.