

IEEE-SA Standards Board

Project Authorization Request (PAR) Form (2004)

The submittal deadlines for the Year 2004 are available.

1. Assigned Project Number P (Please leave blank if not available)

2. Sponsor Date of Request: 2004-07-13

3. Type of Document (Please check one.)

Standard for {document stressing the verb "shall"}

Recommended Practice for {document stressing the verb "should"}

Guide for {document in which good practices are suggested, stressing the verb "may"}

4. Title of Document: Draft Standard System C Language Reference Manual

5. Life Cycle

Full-Use

Trial-Use

6. Type of Project:

New document

Revision of an existing document (indicate number and year existing document was published in box to the right): (####-YYYY)

Amendment to an existing document (indicate number and year existing document was published in box to the right): (####-YYYY)

Corrigendum to an existing document (indicate Number and year existing document was published in box to the right): (####-YYYY)

Modified PAR (indicate PAR Number and Approval Date here: P -

Is this project in ballot now? Yes No

State reason for modifying the PAR in Item #19.

7. Working Group Information:

Name of Working Group(WG) : SystemC Standardization WG

Approximate Number of Expected Working Group Members: 50

8. Contact information for Working Group Chair (must be an IEEE-SA member as well as an IEEE and/or Affiliate Member)

Name of Working Group Chair: First Name: Victor Last Name: Berman

Telephone: 978 262 6560

FAX: 978 262 6636

EMAIL: vberman@cadence.com

9. Contact Information for Co-Chair/Official Reporter, Project Editor or Document Custodian if different from the Working Group Chair (must be an IEEE-SA member as well as an IEEE and/or Affiliate Member)

Name of Co-Chair/Official Reporter (if different than Working Group Chair):

First Name: Guido Last Name: Arnout

Telephone: 408 392 8502

FAX: 408 436 4720

EMAIL: guido@coware.com

10. Contact information for Sponsoring Society or Standards Coordinating Committee

Sponsoring Society and Committee: Computer Society Design Automation

Sponsor Committee Chair:

Dr. Peter J. Ashenden
Ashenden Designs Pty. Ltd.
PO Box 640
Stirling, SA 5152
Australia

peter@ashenden.com.au
www.ashenden.com.au
Ph/Fax: +61 8 8370 9106
Mobile: +61 414 70 9106

Telephone: +61 8 8339 7532

FAX: +61 8 8339 2616

EMAIL: peter@ashenden.com.au

Standards Coordinator (Power Engineering Society only):

First Name: Last Name:

Telephone:

FAX:

EMAIL:

If this project is being sponsored by two Sponsors, please complete the information below:

Sponsoring Society and Committee: Corporate Advisory Group

Sponsor Committee Chair: Chuck Adams

First Name: Last Name:

Telephone: 914-765-4382

FAX: 914-765-4420

EMAIL: wcadams@us.ibm.com

Standards Coordinator (Power Engineering Society only):

First Name: Last Name:

Telephone:

FAX:

EMAIL:

11. Sponsor Balloting Information (Please choose one of the following):

Individual Balloting

- Entity Balloting
 Mixed Balloting (combination of Individual and Entity Balloting)

Expected Date of Submission for Initial Sponsor Ballot: 2005-03-01

Please review the PAR form three months prior to submitting your draft for ballot to ensure that the title, scope and purpose on the PAR form match the title, scope and purpose on the draft. If they do not match, you will probably need to submit a modified PAR.

Additional communication and input from other organizations or other IEEE Standards Sponsors should be encouraged through participation in the working group or the invitation pool.

12. Projected Completion Date for Submittal to RevCom: 2005-09-01

If this is a MODIFIED PAR and the completion date is being extended past the original four-year life of the PAR, please answer the following questions.

If this is not a modified PAR, please go to Question #13.

- a. Statement of why the extension is required:
- b. When did work on the first draft begin?
- c. How many people are actively working on the project?
- d. How many times a year does the working group meet in person?
- e. How many times a year does the working group meet using electronic means (i.e. teleconference, e-mail, web-based meetings)?
- f. How frequently is a draft version circulated to the working group?
- g. How much of the Draft is stable (Format: NN%)? %
- h. How many significant working revisions has the Draft been through?
- i. Briefly describe what the development group has already accomplished, and what remains to be done.

13. Scope of Proposed Project

Please detail the projected output including technical boundaries. Please be brief (less than 5 lines). This standard defines SystemC as a system and hardware design ANSI Standard C++ class library, leveraged from the OSCI SystemC 2.0.1 LRM FOR REVISED DOCUMENTS ONLY – Please detail the projected output including the scope of the original document, amendments and additions.

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

- Yes (with detailed explanation below) No

14. Purpose of Proposed Project:

Please clearly and concisely define “why” the document is being done. Please be brief (less than 5 lines).

The purpose of this project is to provide a C++-based standard for designers and architects who need to address complex systems that are a hybrid between hardware and software.

FOR REVISED DOCUMENTS ONLY – Please include the purpose of the original document and reason for the document’s revision.

14a. Please give the specific reason for the standardization project, with particular emphasis on the problem being solved, the benefit to be received and target users or industries.

As the electronics industry builds more complex systems involving large numbers of components including software, there is an increasing need for a design language that can manage the complexity and size of these systems. SystemC provides a mechanism for managing this complexity with its facility for modeling hardware and software together at multiple levels of abstraction. This capability is not available in traditional hardware description languages.

15. Intellectual Property (Please answer each of the questions below)

a. Has the Sponsor reviewed the IEEE-SA patent material (<http://standards.ieee.org/board/pat/pat-material.html>) with the working group?

Yes No

b. Is the Sponsor aware of copyright permissions needed for this project?

Yes No

If yes, please explain: Copyright currently held by The Open SystemC Initiative (OSCI). Will be transferred to IEEE.

c. Is the Sponsor aware of trademarks that apply to this project?

Yes No

If yes, please explain: The SystemC trademark is owned by OSCI. It will be made available for use at no charge.

d. Is the Sponsor aware of possible registration of objects or numbers to be included in or used by this project?

Yes No

If yes, please explain:

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

Yes (with detailed explanation below) No

There are others languages including VHDL (P1076), Verilog (P1364), SystemVerilog (P1800) and 'e' (P1647) that are used for designing hardware systems. The current project differs from these in that the SystemC language emphasizes the architectural and software aspects of design rather than the implementation aspects emphasized in VHDL and Verilog. One aspect of this project is to provide information for interfacing between this new standard and the existing standards so that they can interoperate effectively. The intent is to broaden the usability of these standards, not replace them. There are a number of other system level design projects (Ptolemy, UML, SDL, SpecC, Matlab, etc.) but none of these provide a C++ class library for system design. In addition, many these have C++ code generation capabilities, which permit interoperability with SystemC

If Yes, please answer the following:

Sponsor Organization:

Project Number:

Project Date:

Project Title:

17. Future Adoptions

Is there potential for this document (in part or in whole) to be adopted by another national, regional or international organization?

Yes.

If Yes, the following questions must be answered:

Technical Committee Name and Number: [IEC TC93/WG2](#)

Other Organization Contact Information:

Contact Name - First Name: Alex

Contact Name - Last Name: Zamfirescu

Contact Telephone Number: +1 650-473-1067

Contact FAX Number: +1877-332-0676

Contact E-mail address: alex.zamfirescu@gmail.com

18. If the project will result in any health, safety, or environmental guidance that affects or applies to human health or safety, please explain, in five sentences or less.

No

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

None

I acknowledge having read and understood the **IEEE Code of Ethics** (http://www.ieee.org/portal/index.jsp?pageID=corp_level1&path=about/whatis&file=code.xml&xsl=generic.xsl). I agree to conduct myself in a manner which adheres to the IEEE Code of Ethics when engaged in official IEEE business.

The PAR Copyright Release and Signature Page must be submitted by FAX to +1-732-875-0695 to the NesCom Administrator (<http://standards.ieee.org/people/staff.html#haasz>) before this PAR will be forwarded to NesCom and the Standards Board for approval.

IEEE-SA Standards Board
Working Guide for the Project Authorization Request (PAR) Form

This guide has been prepared to assist in the submittal of the PAR for consideration by the New Standards Committee (NesCom) and approval by the IEEE-SA Standards Board as an IEEE Standards Project. Submitters should also refer to the latest edition of the IEEE-SA Standards Board Operations Manual.

A PAR must be received by the IEEE-SA Standards Department at least 40 calendar days before the next IEEE-SA Standards Board meeting. Submittal deadlines for the year are available. Please note that the PAR may be approved via our continuous processing program. For more information on this program, please go to our website at <http://standards.ieee.org/faqs/contproc.html>.

1. Assigned Project Number

New Standards Projects: Leave blank.

Standards Revision/Update: Enter document number from existing document.

Note: New project numbers are assigned by the IEEE Standards Department. Please confer with IEEE staff if a specific project number is desired.

2. Sponsor Date of Request

Enter the date when the PAR is submitted to the IEEE-SA.

3. Type of Document

For the submitter's reference, standards are documents with mandatory requirements and are generally characterized by the use of the verb "shall."

Recommended practices are documents in which procedures and positions preferred by IEEE are presented and are generally characterized by the use of the verb "should."

Guides are documents in which alternative approaches to good practice are suggested, but no clear-cut recommendations are made. They are generally categorized by the use of the verb "may."

4. Title of Document

Enter the title of the document.

The project title should include the type of document. For example:

1. Draft Standard Test Method for...

2. Draft Recommended Practice for...
3. Draft Guide for...

The title should not contain the acronym "IEEE". This is added to the title when published.

All acronyms shall be spelled out.

5. Life Cycle

A document can be designated trial-use or full-use.

A document can be designated for trial-use when a draft satisfies the standards-developing group (i.e., subcommittee or working group), but needs input from a very broad constituency. This is a preferred alternative to the widespread distribution of unapproved drafts. Such a draft requires a letter ballot of the sponsor and approval by the IEEE-SA Standards Board as a trial-use document. Trial-use documents are effective for not more than two years from the date of publication. In the absence of comments received in the trial period, the document is subject to adoption as a full-use document upon receipt of written recommendation from the sponsor and approval by the IEEE-SA Standards Board.

6. Type of Project

Indicate whether this work will result in a new document, a revision of an existing document (indicate document number and year), an amendment (formerly supplement) to an existing document (indicate document number and year), or a corrigendum (indicate document number and year). Amendments are additions to existing documents and may contain substantive corrections and/or errata to the document. Corrigenda are substantive corrections and/or errata to a document.

If this is a modification to an existing PAR, indicate the original PAR number, approval date and ballot status.

If this is a modified PAR or a PAR to revise an existing standard, please provide a short explanation of the changes to the original PAR. The rationale **MUST** be submitted under Item #19.

7. Working Group Information

Name of Working Group (WG):

Please enter the full name of the working group. Please place any numerical/alphabetical designations in parentheses after the name of the working group [e.g., Working Group 1 (WG1)].

Approximate Number of Expected Working Group Members:

Please enter the approximate number of members of the working group during document development.

8. Contact Information for Working Group Chair

Indicate the Name, Telephone Number, FAX Number and E-mail address of the Working Group (WG) Chair. The Working Group Chair must be an IEEE-SA member as well as an IEEE and/or Affiliate Member. IEEE/IEEE-SA membership number is required.

9. Contact Information for Co-Chair/Official Reporter, Project Editor or Document Custodian

Indicate the Name, Telephone Number, FAX Number and E-mail address of the Official Reporter, Project Editor or Document Custodian if different from the Working Group Chair. The Official Reporter must be an IEEE-SA member as well as an IEEE and/or Affiliate Member. IEEE/IEEE-SA membership number is required.

10. Contact Information for Sponsoring Society or Standards Coordinating Committee

Please choose the correct acronym for your Sponsor Society/Technical Committee or SCC responsible for the development and coordination of the project and for the maintenance of the document after approval by the Standards Board. For an acronym list, please click [here](#). Please enter the information for the Sponsor Chair.

If this project is from the Power Engineering Society, please also enter the Standards Coordinator's information on the PAR form, as requested.

If this project is sponsored by two committees, please choose the correct acronym for the second Sponsor Society/Technical Committee or SCC and enter the information for the Sponsor Chair.

11. Sponsor Balloting Information:

Is the balloting group for this project expected to be composed of individuals, of entities (persons representing corporations/government bodies/academic institutions, or SDO's), or a combination of both? See Section 5.4.1 in the IEEE-SA Standards Board Operations Manual for further explanation.

For the expected date of submission for initial balloting entry, enter the date the draft document is planned to be submitted to the IEEE for balloting.

Additional communication and input from other organizations or other IEEE Standards Sponsors should be encouraged through participation in the working group or the invitation pool.

12. Projected Completion Date for Submittal to RevCom

Enter the date the draft document is planned to be submitted to RevCom for processing (not to exceed four years from the date of PAR submission). Cutoff dates for submitting draft documents to RevCom are generally in February, May, August and October. Check the appropriate calendars for the specific date as the draft matures. Use a best estimate for the PAR.

If this is a modified PAR and the completion date is being extended past the original four-year life of the PAR, please answer questions a through i.

13. Scope of Proposed Project

The submittal should clearly and concisely define the scope of the document. The scope generally describes "what" will be done, i.e. the technical boundaries of the project. For example:

"Scope: This project will develop a standard protocol for the control of printers. This protocol will be independent of the underlying datastream or page description language used to create the printed page. This protocol will be usable by all classes of printers. This project is limited to management and control of printers and will not include management or control of printing systems or subsystems."

The Scope of a revision to a document or a revision to the Scope of an existing PAR shall represent the new Scope. If the Scope is different from the original Scope, provide an indication of the differences in Item #19.

If the completion of this document is dependent upon the completion of another document, please answer the question "Yes" with an explanation. Your explanation should include how the document is dependent on the completion of another document and, if applicable, why a PAR request is being submitted if the document currently under development that this PAR is dependent on is not yet complete.

14. Purpose of Proposed Project

The submittal should clearly and concisely define the purpose of the document. The purpose generally describes "why" a project will be done. For example:

"Purpose: There is currently no defined, independent standard for controlling printers. Each vendor builds some control into the underlying page description language or datastream. Without an independent, openly defined protocol, applications and operating systems cannot automatically determine the type of printer being addressed. This protocol will provide a minimum implementation subset which will allow automatic identification and configuration of printers and vendor extensibility to provide for growth and product differentiation."

The purpose of the document should be consistent with the description of the document in Item 3, the title in Item 4, and the scope in Item 13. If the title of the document is "Guide for...", it is inconsistent if the purpose states "This document will describe standard criteria..."

The scope, purpose and/or title indicated on the PAR should agree in principle with the scope, purpose and/or title stated in the document at the time of submittal to the IEEE-SA Standards Board.

If this is a PAR to revise the document, explain here why changes are being made to the document. This may be due to a change in industry, the introduction of new technology, etc.

The Purpose of a revision to a document or a revision to the Purpose of an existing PAR shall represent the new Purpose. If the Purpose is different from the original Purpose, provide an indication of the differences in Item #19.

14a. The submittal should clearly define why the document is being developed, the specific problem that the document will resolve, the benefit that users will gain by the publication of the document and the approximate number of end users of the document.

15. Intellectual Property

a. Has the Sponsor reviewed the IEEE-SA Patent Material with the Working Group?
The Sponsor shall review the IEEE-SA patent material with the working group. For information and instructions, please go to <http://standards.ieee.org/board/pat/pat-material.html>.

b. Is the Sponsor aware of Copyright Permissions Needed for this Project?
If the answer to this question is “Yes”, please include a description of the copyrighted material to be included in the document.

If the proposed document uses copyrighted material, copyright releases must be obtained by the working group and included in the final package submitted to the IEEE-SA Standards Board. Additionally, remember that during development of your approved project, the proper IEEE copyright notices must be maintained on all drafts.

c. Is the Sponsor aware of Trademarks that apply to this Project?
If the answer to this question is “Yes”, please include a description of the trademarked terms to be included in the document.

If the proposed document uses any trademarked terms, permission for use must be obtained from the owner. Refer to Section 6 of the IEEE-SA Standards Board Operations Manual for IEEE patent, copyright, and trademark policies.

d. Is the Sponsor aware of possible Registration of Objects or Numbers to be included in this Project?
If the answer to this question is “Yes”, please include a description of the registration of objects or numbers to be included in the document.

If the proposed document will require the unique identification of objects or numbers by the IEEE for use in industry, this shall be indicated on the PAR form along with an explanation. An example of this type of registration is the unique manufacturer ID, known as Organizationally Unique Identifier (OUI). Please visit the IEEE Registration Authority website (<http://standards.ieee.org/regauth/index.html>) for more information.

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

Identify any document(s) or project(s) of similar scope(s), both within or outside of the IEEE, and explain the need for an additional document in this area.

17. Future Adoptions

If the project is intended to be submitted to another national, regional or international organization as the basis of or for inclusion in another document, or if this document is intended to be adopted by another national, regional or international organization, this question should be answered “Yes” and must include the Technical Committee Name and Number and Other Organization Contact information.

18. If this document is intended to contain subject matter that addresses significant health, safety or environmental issues that affects or applies to human health or safety, please identify the issues in less than five lines

If this document contains any intended significant health, safety or environmental issues, as they apply to human health, then please explain this. This does NOT apply to safety of the equipment, building, etc. that does not directly relate to human health.

19. Additional Explanatory Notes:

If this is a modified PAR or a PAR for the revision of a document, a short explanation of the changes to the original PAR and rationale MUST be submitted under this item.

If you know of any further information that may assist NesCom in recommending approval for your project, please include this information here.

Copyright Form (separate page)

The copyright form, the last page in the electronic PAR form (and a separate page), must be submitted by FAX to the IEEE-SA office before the PAR can be approved. In order to comply with US copyright law, the IEEE and its legal counsel request that a copyright agreement be signed by the Official Reporter, who is usually the chair of the working group. This signed copyright agreement is an official part of the IEEE Standards Project Authorization Request (PAR). The PAR will not be submitted to the IEEE-SA Standards Board until the copyright agreement is signed by the proper person.

If you have any questions, please contact the NesCom Administrator (<http://standards.ieee.org/people/staff.html#haasz>).