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23 August 2007

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

Re: P15026 - Standard for Systems and Software Engineering - Systems and Software Assurance

Dear Paul:

I am pleased to inform you that on 22 August 2007 the IEEE-SA Standards Board approved the above referenced project until 31 December 2010. A copy of the file can be found on our website at <http://standards.ieee.org/board/nes/projects/15026.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 [s.hampton@ieee.org](mailto:s.hampton@ieee.org) no later than 20 November 2007.

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 +1 732 562 6003 or by email at [s.hampton@ieee.org](mailto:s.hampton@ieee.org).

Sincerely,

Sherry Hampton  
Administrator, Governance  
Standards Activities  
Phone +1 732 562 6003  
FAX +1 732 875 0695  
Email: s.hampton@ieee.org

CC: pcroll@csc.com BCC: s.hampton@ieee.org, t.t.lee@ieee.org

**PAR Request Date:** 26 June 2007**PAR Approval Date:** 22 August 2007**PAR Signature Page on File:** Yes**Type of PAR:** Modification to Approved PAR**Status:** Modification to a Previously Approved PAR P15026, 08 June 2006**Root Project:** New Project**1.1 Project No.:** **15026****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 Systems and Software Engineering - Systems and Software Assurance

**3.1 Working Group Name**[Systems and Software Engineering - Systems and Software Assurance Working Group](#)**Working Group Chair**[Croll, Paul R](#)

Phone: 540-644-6224

Email: pcroll@csc.com

**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:** August 2007**4.3 Projected Completion Date for Submittal to RevCom:** June 2009**5.1 Approximate number of people expected to work on this project:** 20

**5.2 Scope:** This International Standard provides requirements for the life cycle including development, operation, maintenance, and disposal of systems and software products that are critically required to exhibit and be shown to possess properties related to safety, security, dependability, or other characteristics. It defines an assurance case as the central artefact for planning, monitoring, achieving and showing the achievement and sustainment of the properties and for related support of other decision making. The interaction of the requirements for the assurance case with life cycle processes implies a normative interpretation of the processes from ISO/IEC 15288 ISO/IEC 12207. Finally, the standard provides requirements, in addition to those of ISO/IEC 15289, for information artefacts that result from those processes.

**Old Scope:** This Standard provides life cycle processes expectations and their associated outcomes for systems and software that must satisfy critical requirements. It specifies activities that must be undertaken, to ensure that systems and software are acquired, developed, and maintained in such a way that is likely to satisfy these requirements, and to provide assurance that the implemented system or software does in fact satisfy these requirements throughout its life cycle. The following life cycle processes expectations and their associated outcomes are covered by this Standard: a) Plan assurance activities, b) Establish and maintain the assurance case, and c) Monitor and control assurance activities and products. No assumption is made in this Standard as to the specific nature of the critical requirements. This Standard applies to whatever risk dimensions are relevant to the system or software (e.g. safety, security, prevention of financial loss). This Standard is intended to occupy a position between domain-specific standards, such as IEC 61508 for the safety of programmable electronic systems, and ISO/IEC 15443, Parts 1-3, Framework for IT Security Assurance, and the system and software life cycle framework standards, IEEE Std 15288, System Life Cycle Processes, and IEEE 12207, Software Life Cycle Processes.

**5.3 Is the completion of this document contingent upon the completion of another document?** No

**5.4 Purpose:** The purpose of this International Standard is to assist users who wish to apply the provisions of ISO/IEC 15288 and ISO/IEC 12207 to systems required to possess critical properties. It is intended to give relevant requirements and guidance in addition to those of the two life cycle standards.

**Old Purpose:** The life cycle process standards for the system and software life cycles do not adequately address specific process expectations and outcomes for system and software assurance. This Standard provides a life cycle approach to system and software assurance, consistent with, and amplifying the the requirements of IEEE 15288, System Life Cycle Processes and IEEE 12207, Software Life Cycle Processes, and providing specific process expectations and outcomes for system and software assurance.

**5.5 Need for the Project:** The life cycle process standards for the system and software life cycles do not adequately address specific process expectations and outcomes for system and software assurance. Although the safety, security, and dependability communities of practice all have domain-specific standards addressing facets of the system and software assurance problem, none take a full life cycle approach that is completely consistent with IEEE Standards 15288 and 12207. As the community of practice has sought consistency in a life cycle approach to system and software assurance, they have expressed a desire for a framework Standard, specifically for system and software assurance, that would bridge the gap between the life cycle process standards and the domain specific standards. This standard is a response to the community of practice's desire to bridge that gap.

**5.6 Stakeholders for the Standard:** Banking and finance, medical, manufacturing, military, power generation and distribution, public utilities, space, telecom, transportation

**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:** 2006-05-22

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? ? Yes**

**Technical Committee Name and Number:** ISO/IEC JTC1 SC7 WG7

**Contact person:** [James W Moore](#)

**Contact person Phone Number:** +1 703 983 7396

**Contact person Email Address:** james.w.moore@ieee.org

**7.3 Will this project result in any health, safety, security, or environmental guidance that affects or applies to human health or safety? Yes**

The resulting standard may include provisions relevant to safety and security. The draft will be submitted for review by legal counsel prior to completion.

**7.4 Additional Explanatory Notes:**

The title was changed to match titling conventions of JTC1/SC7. The scope and purpose were clarified as a result of initial drafting activity. The titles referenced in Item 5.2 are as follows: ISO/IEC 15288, System Life Cycle Processes; ISO/IEC 12207, Software Life Cycle Processes; and ISO/IEC 15289, Software Life Cycle Process Information Products (Documentation) 7.2 ISO/IEC JTC1/SC7 has agreed to coordinate development with IEEE so that both organizations adopt the same standard.

**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](#)

08 June 2006

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

Re: P15026 - System and Software Engineering - System and Software Assurance

Dear Paul:

I am pleased to inform you that on 08 June 2006 the IEEE-SA Standards Board approved the above referenced project until 31 December 2010. A copy of the file can be found on our website at <http://standards.ieee.org/board/nes/projects/15026.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:

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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 [s.hampton@ieee.org](mailto:s.hampton@ieee.org) no later than 06 September 2006.

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 +1 732 562 6003 or by email at [s.hampton@ieee.org](mailto:s.hampton@ieee.org).

Sincerely,

Sherry Hampton  
Administrator, Governance  
Standards Activities  
Phone +1 732 562 6003  
FAX +1 732 875 0695  
Email: [s.hampton@ieee.org](mailto:s.hampton@ieee.org)

CC: [pcroll@csc.com](mailto:pcroll@csc.com)

**PAR Request Date:** 24 May 2006**PAR Approval Date:** 08 June 2006**PAR Signature Page on File:** Yes**Type of Project:** New IEEE Standard**Status:** PAR for a New IEEE Standard**Root Project/PAR:****1.1 Project No.:** **P15026****1.2 Type of Document:** Standard**1.3 Life Cycle:** Full-Use**1.4 Is this document in ballot now?** No**2.1 Title**

System and Software Engineering - System and Software Assurance

**2.1 Amendment/Corrigenda Title****3.1 Working Group Name** [System and Software Assurance Working Group](#)**Working Group Chair**  
[Croll R Paul](#)  
Phone: 540-644-6224  
Email: pcroll@csc.com**Working Group Vice Chair****3.2 Sponsor** [IEEE Computer Society Software & Systems Engineering Standards Committee \(C/S2ESC\)](#)**Sponsor Chair**  
[Croll R Paul](#)  
Phone: 540-644-6224  
Email: pcroll@csc.com**3.3 Joint Sponsor****4.1 Type of Ballot:** Individual**4.2 Expected Date of Submission for Initial Sponsor Ballot:** 2008-06-00**4.3 Projected Completion Date for Submittal to RevCom:** 2009-06-00**5.1 Approximate number of people expected to work on this project:** 10

**5.2 Scope:** This Standard provides life cycle processes expectations and their associated outcomes for systems and software that must satisfy critical requirements. It specifies activities that must be undertaken, to ensure that systems and software are acquired, developed, and maintained in such a way that is likely to satisfy these requirements, and to provide assurance that the implemented system or software does in fact satisfy these requirements throughout its life cycle. The following life cycle processes expectations and their associated outcomes are covered by this Standard: a) Plan assurance activities, b) Establish and maintain the assurance case, and c) Monitor and control assurance activities and products. No assumption is made in this Standard as to the specific nature of the critical requirements. This Standard applies to whatever risk dimensions are relevant to the system or software (e.g. safety, security, prevention of financial loss). This Standard is intended to occupy a position between domain-specific standards, such as IEC 61508 for the safety of programmable electronic systems, and ISO/IEC 15443, Parts 1-3, Framework for IT Security Assurance, and the system and software life cycle framework standards, IEEE Std 15288, System Life Cycle Processes, and IEEE 12207, Software Life Cycle Processes.

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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:**

**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: