

IEEE Reliability Society Standard Status Report

14 July 2013

The IEEE Reliability Society Standards Committee is developing 2 new standards and sustaining 5 existing standards. The 5 existing standards that are being sustained are:

1. IEEE 1332-2012, Standard Reliability Program
2. IEEE 1413-2010, Standard Framework for Reliability Prediction of Hardware
3. IEEE 1413.1-2002, Guide for Selecting and Using Reliability Predictions Based on IEEE 1413
4. IEEE 1624-2008, Standard for Organizational Reliability Capability
5. IEEE 1633-2008, Recommended Practice on Software Reliability

During the first half of 2013, there were accomplishments in continuing the development of the new Prognostics and Health Management (PHM) standard, IEEE P1856, and the new reliability growth standard, IEC/IEEE P61014. There were also accomplishments in the sustainment of 2 existing standards, IEEE 1332 and IEEE 1633. These accomplishments are summarized as follows:

1. IEEE P1856 (New PHM standard) is continuing new draft creation stage in accordance with the approved PAR. Several updated drafts have been provided to the working group by the working group vice-chair, Dr Sony Mathew from the University of Maryland. The working group is meeting monthly to develop draft technical content and peer review with the working group members.
2. IEEE P61014 is a new joint standard IEC/IEEE P61014 (New Reliability Growth Standard). The IEEE and IEC agreed to collaborate on this joint standard and base this development on 2 existing IEC standards: IEC standard 61164 and IEC standard 61014. IEC 61014 is the standard titled: "Programmes for reliability growth". IEC 61164 is titled: "Reliability Growth – Statistical Test and Estimation Methods". These International Standards specify requirements and guidelines for the exposure and removal of weaknesses in hardware and software items for the purpose of reliability growth. This new IEC / IEEE P61014 will be titled: "Standard for Programs for Reliability Growth". The working draft was created by the IEC working group and was received by IEEE RS SC on June 20th. The IEEE RS SC chair, Mr. Louis Gullo, distributed the IEC draft to the IEEE-RS reliability growth standard working group to review and ballot. If approved by the working group, the draft will be submitted for IEEE SA ballot. If the IEEE RS working group does not approve the draft, the working group chair will work with IEEE and IEC to resolve the issues.
3. IEEE P1332 (Reliability Program Standard) completed the final draft and the ballot package was submitted to the RevCom for approval in December 2012. The P1332 4th

draft was approved by the IEEE Standards Board and IEEE 1332-2012 was published in January 2013.

4. IEEE P1633 (Recommended Practice on SW Reliability) working group has been organized by Ann Marie Neufelder (WG Chair) and Lance Fiondella (WG Vice Chair). The WG chair submitted the draft PAR to the NesCom of the IEEE Standards Board for approval in March. The NesCom approved the PAR in May 2013. The PAR for the 1633 revision is planned to complete in 2018. This PAR is the first revision to this standard since it was originally published in 2008.

A new PAR is being created by the reliability prediction working group vice-chair, Dr. Diganta Das for modification of IEEE 1413.1. After the PAR is submitted and approved by the IEEE Standards Board, the IEEE 1413.1 working group will be contacted and engaged in the standard modifications.

If you have an interest in maintaining an existing Standard, participate in one of the new Standards under development, or want to propose and develop a new Standard, please contact Lou Gullo, IEEE RS Standards Committee Chair, email lougullo@comcast.net.

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