

## **IEEE Reliability Society Standards Committee (IEEE RS SC) Status**

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### **Introduction to the IEEE Reliability Society Standards Committee**

The IEEE Reliability Society (IEEE RS) working together with the IEEE Standards Association (IEEE SA) develops new IEEE standards and sustains existing IEEE standards. IEEE RS submits Project Authorization Request (PAR) forms to the IEEE SA to gain approval to form working groups and develop standards. IEEE RS and IEEE SA form Working Groups (WGs) under the direction of the RS Standards Committee to lead the standard development projects. The IEEE Reliability Society Standards Committee (IEEE-RS-SC) is currently developing 3 new IEEE standards, updating 2 existing IEEE standards, planning to develop 1 new standard, and sustain 4 IEEE standards. The IEEE RS SC has 6 RS WGs actively working to develop these standards.

### **IEEE RS Standards Development:**

There are five (5) IEEE RS Standards currently in development. Two of these are updates to existing standards, and three are developing new IEEE standards, as shown:

1. IEEE P1413.1, revision to IEEE Standard 1413.1-2002, Guide for Selecting and Using Reliability Predictions Based on IEEE 1413
2. IEEE P1624, revision to IEEE Standard 1624-2008, Standard for Organizational Reliability Capability
3. IEEE P2818, Reliability Component Stress Analysis and Derating Specification
4. IEEE P3106, Standard for Telecommunication System Reliability Indices
5. IEEE P7009, Standard for Fail-Safe Design of Autonomous and Semi-Autonomous Systems

There is one (1) IEEE RS Standard planning to be developed:

1. IEEE P1856.1, Recommended Practice for Prognostics and Health Management (PHM) Systems based on IEEE 1856-2017; a PAR requesting IEEE SA approval to start work on this standard was submitted; awaiting PAR approval by the end of the year to start the WG's standard development effort.

### **IEEE RS Standards Sustainment:**

There are four (4) standards that are being sustained:

1. IEEE 1332-2012, Standard Reliability Program; revision is planned when WG completes revision to IEEE P1413
2. IEEE 1413-2010, Standard Framework for Reliability Prediction of Hardware; revision is planned when WG completes revision to IEEE P1413.1

3. IEEE 1633-2016, Recommended Practice on Software Reliability; planning for a revision in 2026
4. IEEE 1856-2017, Standard Framework for Prognostics and Health Management (PHM) of Electronic Systems; planning for a revision in 2024

### **Joint IEEE Society Standards Development:**

The IEEE Reliability Society (IEEE RS) working together with the IEEE Computer Society (IEEE CS) and IEEE Standards Association (IEEE SA) are developing 2 standards. There are two (2) IEEE CS Standards in development, working together with the IEEE RS SC and the IEEE CS Systems and Software Engineering Standards Committee (IEEE CS S2ESC):

1. IEEE P1228 (WG Collaboration with IEEE RS); revision to IEEE Standard 1228-1994, Standard for Software Safety Plans
2. IEEE P982.1 (Joint sponsor development with IEEE-RS); revision to IEEE Standard 982.1-2005, Standard for Measures of the Software Aspects of Dependability

The IEEE RS SC has begun collaboration with the Power and Energy Society (PES) Smart Grid (SG) Program to work on RS-SG related standards through their respective WGs. The IEEE RS SC is attending meetings scheduled by the IEEE P2030 WG and the Smart Grid Interoperability Reference Model (SGIRM) Sub-Group. The IEEE RS SC has also started attending meetings of the Standards Coordinating Committee (SCC21), which oversees the development of standards in the areas of fuel cells, photovoltaics, dispersed generation, and energy storage. SCC 21 sponsors several standards, which include:

### **IEEE 1547 Series of Standards:**

- [1547-2018](#) and [Amendment to 1547-2018](#)
- [1547.1-2020](#)
- [1547.2-2008](#) (Revision in progress)
- [1547.3-2007](#) (Revision in progress)
- [1547.4-2011](#)
- [1547.6-2011](#)
- [1547.7-2013](#)
- [P1547.9](#) (In progress)

### **IEEE 2030 Series of Standards:**

- [2030-2011](#)
- [2030.2-2015](#)
- [2030.2.1-2019](#)
- [2030.3-2016](#)
- [2030.9-2019](#)

### **IEEE Standards WG Involvement**

If you have an interest in being involved in maintaining an existing Reliability Standard, want to participate in one of the new Reliability Standards under development, or want to gain IEEE approval for the development of a specific new Reliability Standard, please contact Lou Gullo, IEEE RS Standards Committee Chair.

To learn how to join the IEEE standards develop, access the link:

<http://standards.ieee.org/develop/index.html>