

P1057

Submitter Email: wbovern@centurylink.net

Type of Project: Revision to IEEE Standard 1057-2007

PAR Request Date: 24-Apr-2014

PAR Approval Date: 12-Jun-2014

PAR Expiration Date: 31-Dec-2018

Status: PAR for a Revision to an existing IEEE Standard

Root Project: 1057-2007

1.1 Project Number: P1057

1.2 Type of Document: Standard

1.3 Life Cycle: Full Use

2.1 Title: Standard for Digitizing Waveform Recorders

Changes in title: ~~IEEE~~ Standard for Digitizing Waveform Recorders

3.1 Working Group: Waveform Recorder Subcommittee (IM/WM&A/WRSC)

Contact Information for Working Group Chair

Name: William Boyer

Email Address: wbovern@centurylink.net

Phone: 505-899-3044

Contact Information for Working Group Vice-Chair

None

3.2 Sponsoring Society and Committee: IEEE Instrumentation and Measurement Society/TC10 - Waveform Generation Measurement and Analysis (IM/WM&A)

Contact Information for Sponsor Chair

Name: Steven Tilden

Email Address: s.j.tilden@ieee.org

Phone: 14086354851

Contact Information for Standards Representative

Name: Steven Tilden

Email Address: s.j.tilden@ieee.org

Phone: 14086354851

4.1 Type of Ballot: Individual

4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 03/2018

4.3 Projected Completion Date for Submittal to RevCom: 10/2018

5.1 Approximate number of people expected to be actively involved in the development of this project: 20

5.2 Scope: This standard defines specifications and describes test methods for measuring the performance of electronic digitizing waveform recorders, waveform analyzers, and digitizing oscilloscopes with digital outputs. The standard is directed toward, but not restricted to, general-purpose waveform recorders and analyzers.

Special applications can require additional manufacturer information and verification tests not covered in this standard.

IEEE Std 1057(TM) has many similarities to IEEE Std 1241(TM)-2000 [B24],1 which applies to analog-to-digital converters (ADCs). However, IEEE Std 1057 shall be used for waveform recorders, and IEEE Std 1241-2000 shall be used for ADCs.

5.3 Is the completion of this standard dependent upon the completion of another standard: No

5.4 Purpose: The main purpose of this standard is to ensure that manufactures and users of waveform recorders have a well-defined set of specifications and test methods so they can understand, describe, and compare the performance of these recorders using a common language.

5.5 Need for the Project: Digitizing waveform recorders are complex instruments. Sophisticated tests are required to quantify performance and identify sources of error. This standard describes these tests as well as much of the underlying theory behind them. There is also a continuing need to standardize terminology and definitions pertaining to waveform recorder performance. In the past different entities have applied significantly different meanings to the same performance parameter terms.

Many of the terms and test methods in 1057 are also used in the IEEE Std 1241 on Analog to Digital Converters. However various subcommittee members have noted several discrepancies between the two standards. Thus the initial work of this PAR will be to modify 1057 to be as compatible as possible with 1241. We will also wish to make changes to the test methods to reflect advancements in the state of the art in waveform recorder testing.

5.6 Stakeholders for the Standard: Users and manufacturers of waveform recorders. Waveform recorders have generally replaced the oscilloscope as a test instrument and thus are used in virtually all areas of electronics.

Intellectual Property

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

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

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

7.2 Joint Development

Is it the intent to develop this document jointly with another organization?: No

8.1 Additional Explanatory Notes (Item Number and Explanation): 5.2. The full title of IEEE Std 1241-2010 is IEEE Standard for Terminology and Test Methods for analog-to-Digital Converters.