Submitter Email: nicholas.paulter@nist.gov
Type of Project: Revision to IEEE Standard
PAR Request Date: 07-Mar-2008
PAR Approval Date: 19-May-2008
PAR Expiration Date: 31-Dec-2012
Status: Revision to an Existing IEEE Standard, Std 181-2003
Project:
Root Project: 181-2003

1.1 Project Number: P181
1.2 Type of Document: Standard
1.3 Life Cycle: Full Use
1.4 Is this project in ballot now? No

2.1 Title: Standard on Transitions, Pulses, and Related Waveforms
Old Title: IEEE Standard on Transitions, Pulses, and Related Waveforms

Contact Information for Working Group Chair
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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)
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Thomas Linnenbrink
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4.1 Type of Ballot: Individual
4.2 Expected Date of Submission for Initial Sponsor Ballot: 04/2011
4.3 Projected Completion Date for Submittal to RevCom: 04/2012

5.1 Approximate number of people expected to work on this project: 12
5.2 Scope: This standard defines terms pertaining to transitions, pulses, and related signals and defines procedures
Old Scope: The scope of this revised PAR is limited to revising the title of P181. See item 18 for additional explanatory notes. The scope of the previous PAR is: ‘Revise and combine IEEE standards 181-1977 and 194-1977 into a single standard which define terms...
for estimating their parameters. pertaining to transitions, pulses and related signals and defines procedures for estimating their parameters.'

### 5.3 Is the completion of this standard dependent upon the completion of another standard:

**No**

### 5.4 Purpose:

The purpose of the standard is to unambiguously and accurately define terms pertaining to transitions, pulses, and related signals and the algorithm for their computation. This helps to communicate requirements between vendors and users, improves understanding and readability of instrument performance specifications, and provides a common ground for parameter and performance comparisons.

**Old Purpose** The purpose of this revised PAR is to change the title (see Item 18). The purpose of the previous PAR is: 'IEEE Standards 181-1977 and 194-1977 have been withdrawn. Manufacturers and users of pulse generators, waveform recorders, and high-speed digital circuits require clear concise terms for effective communication.'

### 5.5 Need for the Project:

The industries that use pulse technology are immense, vary in technologies, frequency ranges, signal types, applications, etc. Often each industry sector will use their own jargon to describe signals. This standard provides common terminology and algorithms that can assist in reducing miscommunication within and between industry sectors and in reducing disagreements on the values of parameters used to describe instrument performance or measured data.

### 5.6 Stakeholders for the Standard:

The stakeholders for this standard are the aerospace industry, the computing industry, data communications industry, telecommunications industry, test and measurement instrument manufacturers, the biomedical industry, automotive industry, manufacturers, scientific research organizations, other standards development organizations, and the military.

### Intellectual Property

**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**

If yes, state date: **03/07/2008**

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

**6.1.c.** 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?

**Yes**

If yes, please explain: The IEC standards listed below are verbatim copies of the now obsolete IEEE Stds 194-1977 and 181-1977. (IEEE Std. 181-2003 is the result of the compilation of these two IEEE standards.) The IEC is in the end of their maintenance cycle for their standards, and we are working with them to get adoption of the IEEE Std 181-2003 as their starting document.

and answer the following:

- **Sponsor Organization:** IEC TC-85
- **Project/Standard Number:** IEC 60469-1, -2
- **Project/Standard Date:**
- **Project/Standard Title:** IEC60469-1 Ed.2.0: Pulse techniques and apparatus. Part 1: Pulse terms and definitions and IEC60469-2 Ed.2.0: Pulse techniques and apparatus. Part 2: Pulse measurement analysis, general considerations

### 7.2 International Activities

a. **Adoption**

Is there potential for this standard (in part or in whole) to be adopted by another national, regional or international organization? **No**

- **Organization:**
- **Technical Committee Name:**
- **Technical Committee Number:**
- **Contact Person Name:**
- **Contact Person Phone:**
- **Contact Person Email:**

b. **Joint Development**

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

- **Organization:**
- **Technical Committee Name:**
- **Technical Committee Number:**
- **Contact Person Name:**
- **Contact Person Phone:**
- **Contact Person Email:**
c. Harmonization
Are you aware of another organization that may be interested in portions of this document in their standardization development efforts? No

Organization:
Technical Committee Name:
Technical Committee Number:
Contact Person Name:
Contact Person Phone:
Contact Person Email:

8.1 Additional Explanatory Notes: (Item Number and Explanation) none made