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**P181**

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**Submitter Email:** nicholas.paulter@nist.gov  
**Type of Project:** Revision to IEEE Standard 181-2011  
**Project Request Type:** Initiation / Revision  
**PAR Request Date:** 16 Oct 2020  
**PAR Approval Date:** 10 Feb 2021  
**PAR Expiration Date:** 31 Dec 2025  
**PAR Status:** Active  
**Root Project:** 181-2011

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**1.1 Project Number:** P181  
**1.2 Type of Document:** Standard  
**1.3 Life Cycle:** Full Use

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**2.1 Project Title:** Standard for Transitions, Pulses, and Related Waveforms  
**Change to Title:** ~~IEEE~~ Standard for Transitions, Pulses, and Related Waveforms

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**3.1 Working Group:** Transitions, Pulses, and Related Waveforms Working Group(IM/WM&A/SCOPT)

**3.1.1 Contact Information for Working Group Chair:**

**Name:** N Paulter  
**Email Address:** nicholas.paulter@nist.gov

**3.1.2 Contact Information for Working Group Vice Chair:**

None

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

**3.2.1 Contact Information for Standards Committee Chair:**

**Name:** N Paulter  
**Email Address:** nicholas.paulter@nist.gov

**3.2.2 Contact Information for Standards Committee Vice Chair:**

**Name:** William Boyer  
**Email Address:** db1505@comcast.net

**3.2.3 Contact Information for Standards Representative:**

None

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**4.1 Type of Ballot:** Individual

**4.2 Expected Date of submission of draft to the IEEE SA for Initial Standards Committee Ballot:** Feb 2023

**4.3 Projected Completion Date for Submittal to RevCom:** Aug 2023

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**5.1 Approximate number of people expected to be actively involved in the development of this project:** 5

**5.2 Scope of proposed standard:** This standard defines terms pertaining to transitions, pulses, and related waveforms and defines procedures for estimating their parameters.

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

**5.4 Purpose:** This standard 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.

**Change to Purpose:** ~~The purpose of the~~ This standard is to unambiguously and accurately define terms pertaining to transitions, pulses, and related ~~waveforms~~ 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.

**5.5 Need for the Project:** Minor changes have been considered/suggested to make the standard less prescriptive on certain analysis methods and, instead, require the user of the standard to specify how that analysis is done and what information is needed to ensure that that analysis can be reproduced. Additionally, the standard should conform to the IEEE current standards format.

**Change to Need for the Project:** ~~The~~ Minor industries changes that have use been pulse ~~considered/suggested~~ technology to are make immense, ~~the standard vary less in~~ prescriptive

~~technologies, on frequency certain ranges, analysis signal methods types and , applications instead , etc. require the Often user each of industry the sector will use their own jargon standard to describe specify signals. how that This analysis standard is provides common terminology done and algorithms what that information can is assist needed in reducing miscommunication within and to between ensure industry that sectors that and analysis in can reducing be disagreements reproduced. on Additionally, the values standard of should parameters used conform to describe instrument the performance IEEE or current measured standards data format .~~

**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.

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## 6.1 Intellectual Property

**6.1.1 Is the Standards Committee aware of any copyright permissions needed for this project?**

No

**6.1.2 Is the Standards Committee aware of possible registration activity related to this project?**

No

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**7.1 Are there other standards or projects with a similar scope?** Yes

**Explanation:** The IEC standard listed below is a verbatim copy of the IEEE Std 181-2003.

**Change to Explanation:** ~~The IEC standards standard 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 a IEC is in the verbatim end of their maintenance cycle for their standards, and we are working with them to get adoption copy of the IEEE Std 181-2003 as their starting document.~~

**7.1.1 Standards Committee Organization:** International Electrotechnical Commission (IEC)

**Project/Standard Number:** IEC 60469

**Project/Standard Date:**

**Project/Standard Title:** IEC60469: Transitions, pulses and related waveforms - Terms, definitions and algorithms

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

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## 8.1 Additional Explanatory Notes: