

IEEE SA STANDARDS BOARD NEW STANDARDS COMMITTEE (NesCom)

DRAFT MEETING MINUTES

09 December 2024

Hybrid: Bridgewater, NJ (USA) and Teleconference

8:30 a.m. – 12:00 p.m. ET (UTC-5)

Attendees

Members Present:

Lei Wang, Chair
Guido Hiertz, Vice Chair
Kit August
Sara Biyabani
Xiaofeng (Alfred) Chen
Yuan Chi
Stephen Dukes
Doug Edwards
Darren Galpin
Hao Hu
Johnny Lin
Daleep Mohla
Jon Rosdahl
Daidi Zhong

Members Absent:

Ramy Fathy
Howard Li

IEEE Staff:

Christy Bahn
Adrien Bastos
Teresa Belmont, Administrator
Hermann Brand
Kim Breitfelder
Matt Ceglia
Sri Chandrasekaran
Ravindra Desai
Karen Evangelista
Josh Gay
Dalisa Gonzales
Jodi Haasz
Matthew Herdlein
Yvette Ho Sang
Usha Jagannathan
Patrycja Jarosz
Anja Kaspersen
Soo Kim

Michael Kipness
Vanessa Lalitte
Jiajia Liu
Greg Marchini
Sandra Maru
Karen McCabe
Suzanne Merten
Munir Mohammed
Erin Morales
Karen Mulberry
Christian Orlando
Shana Pepin
Dave Ringle
Pat Roder
Anasthasie Sainvilus-Cantrell
Jennifer Santulli
Rosalinda Saravia
Rudi Schubert
Tom Thompson
Michelle Turner
Malia Zaman
Tony Zertuche
Meng Zhao

Guests:

Hassan Abouseada
Avinash Agarwal
Neha Agarwal
Abira Altvater
Edward Au
Dennis Brophy
Philip Crothers
Aparna Dey
Azza Eltraify
James Gilb
Latonia Gordon
Gary Hoffman
Ron Hotchkiss
Tyler Jaynes
Aleksandra Jeremic
Jason Kahn
Yousef Kimiagar
Thomas Koshy
David Law
Joseph Levy
Ming Li
Xiaohui Liu
Haiying Lu
Kevin Lu
Meng Lu
Maike Luiken

Hiroshi Mano
Yukimasa Nagai
Paul Nikolich
Lydia Ouedraogo
Glenn Parsons
Alexandrus Psyrris
Annette Reilly
Robby Robson
Dan Sabin
Mark Siira
Robby Simpson
Dorothy Stanley
Gary Stuebing
Claire Topp, IEEE Outside Legal Counsel
Chenhui Wang
Keith Waters
Constance Weise
Philip Winston
Don Wright

1. CALL TO ORDER

Chair Lei Wang called the meeting to order at 8:30 a.m. ET (UTC-5). There was a round of introductions.

It was noted that the meeting was quorate.

2. REVIEW OF AGENDA

Chair Wang reviewed the agenda.

There was a motion to approve the agenda, including the consent agenda. In the absence of objection or abstention, the motion was approved.

2.1 Consent Agenda

2.1.1 Administratively Withdrawn PARs

Note: The approval of this list of expired PARs to be administratively withdrawn was included in the approval of the agenda and consent agenda. The following PARs have been administratively withdrawn:

P2413.1 (BOG/CAG)

Standard for a Reference Architecture for Smart City (RASC)

P802.1CQ (C/LAN/MAN)

Standard for Local and Metropolitan Area Networks: Multicast and Local Address Assignment

P1484.1 (C/LT)

Guide for Conceptual Model for Learning Technology Systems (CM4LTS)

P1394 (C/MSC)

Standard for a High-Performance Serial Bus

P7131 (C/SABSC)

Standard for Quantum Computing Performance Metrics & Performance Benchmarking

P1931.1 (COM/MobiNet-SC)

Standard for an Architectural Framework for Real-time Onsite Operations Facilitation (ROOF) for the Internet of Things

P1951.1 (COM/NetSoft-SC)

Standard for Smart City Component Systems Discovery and Semantic Exchange of Objectives

P2953 (CTS/SDSC)

Standard for Technical Requirements for Industrial Smart Terminal Devices

P11073-10426 (EMB/11073)

Health Informatics -- Device Interoperability -- Part 10426: Personal Health Device Communication -- Device Specialization - Home Healthcare Environment Ventilator

P2864 (EMB/Std Com)

Guide for a Software Change Control System for Three-Dimensional (3D) Bioprinting of Tissue-Engineered Medical Products (TEMPs)

P2673(EMB/Std Com)

Standard for Patient Digital Biomedical Data Files with 3D Topological Mapping of Macroanatomy and Microanatomy for Use in Big Data and Augmented Intelligence Systems

P2727 (EMB/Std Com)

Standard for General Vocabulary for Conformity Assessment of Medical Devices with Measuring Function

P2727.1 (EMB/Std Com)

Standard for Conformity Assessment Testing of Cardiac Defibrillators for Legal Metrology Purposes

P2792 (EMB/Std Com)

Therapeutic Electrical Stimulation Waveforms

P2650 (EMB/Std Com)

Standard For Enabling Mobile Device Platforms To Be Used As Pre-Screening Audiometric Systems

P3007.2 (IAS/ICPS)

Recommended Practice for the Maintenance of Industrial and Commercial Power Systems

P21451-002 (IES/IES)

Recommended Practice for Low-Power Smart Transducers Applications

P1588f (IM/ST)

Standard for a Precision Clock Synchronization Protocol for Networked Measurement and Control Systems
Amendment: Enhancements for latency and/or asymmetry calibration

P21451-1-5 (IM/ST)

Standard for a Smart Transducer Interface for Sensors, Actuators, and Devices - Simple Network Management Protocol (SNMP) for Networked Device Communication

P1451.5 (IM/ST)

Standard for a Smart Transducer Interface for Sensors and Actuator - Wireless Communication Protocols and Transducer Electronic Data Sheet (TEDS) Formats

P1095 (PE/EDPG)

Guide for the Installation of Vertical Generators and Generator/Motors for Hydroelectric Applications

P807 (PE/EDPG)

Recommended Practice for Unique Identification in Hydroelectric Facilities

P666 (PE/EDPG)

Design Guide for Electric Power Service Systems for Generating Stations

P2800.1 (PE/EDPG)

Guide for Test and Verification Procedures for Inverter-Based Resources Interconnecting with Associated Transmission Electric Power Systems

P97 (PE/EM)

Diagnostic Test Methods for Testing the Insulation of AC Electric Machinery Using Direct Voltage

P510 (PE/PSIM)

Guide for Electrical Safety in High-Voltage Testing

PC37.101 (PE/PSRCC)

Guide for Generator Ground Protection

PC62.38 (PE/SPDLV)

Test Methods and Preferred Values for Hybrid Integrated Circuit Components Containing Gas Discharge Tube and Metal Oxide Varistor Technologies

P2656 (PE/SUB)

Guide for Functional Specification of Voltage-Sourced Converter for HVDC Stations

P1243 (PE/T&D)

Guide for Improving the Lightning Performance of Transmission Lines

PC135.62 (PE/T&D)

Standard for Zinc-Coated Forged Anchor Shackles

P2520.4.1 (SEN/SC-SC)

Standard for Performance of Machine Olfaction Devices and Systems for Chemical Manufacture

P2520.3.1 (SEN/SC-SC)

Standard for Machine Olfaction Devices and Systems Used for General Indoor Odor Monitoring

P2520.2.2 (SEN/SC-SC)

Standard for Landfill Odor Monitoring Devices and Systems

P2520.2.1 (SEN/SC-SC)

Standard for Machine Olfaction Devices and Systems Used for General Outdoor Odor Monitoring

P2030.1.2 (VT/ITS)

Standard Technical Specifications for Ultra-High-Power Electric Vehicle Chargers

2.1.2 Standards Committee Transfer

Note: The approval of this Standards Committee change request was included in the approval of the agenda and consent agenda and the following thirteen PARs and eleven standards have been moved from IEEE Computer Society/Standards Activities Board Standards Committee (C/SABSC) to IEEE Computer Society/Digital Content Technology Standards Committee (C/DCTSC)

Standards

2888.1-2023

IEEE Standard for Specification of Sensor Interface for Cyber and Physical Worlds

2888.2-2023

IEEE Standard for Actuator Interface for Cyber and Physical Worlds

2888.4-2023

IEEE Standard for Architecture for Virtual Reality Disaster Response Training System with Six Degrees of Freedom (6 DoF)

2888.5-2024

IEEE Standard for Virtual Training System Evaluation Methods

3079-2020

IEEE Standard for Head-Mounted Display (HMD)-Based Virtual Reality (VR) Sickness Reduction Technology

3079.3-2023

IEEE Standard for a Framework for Evaluating the Quality of Digital Humans

3333.1.1-2024

IEEE Standard for the Quality of Experience (QoE) and Visual Comfort Assessments of Three-Dimensional (3D) Contents Based on Psychophysical Studies

3333.1.2-2024

IEEE Standard for the Perceptual Quality Assessment of Three Dimensional (3D), Ultra-High Definition (UHD) and High Dynamic Range (HDR) Contents

3333.1.3-2022

IEEE Standard for the Deep Learning-Based Assessment of Visual Experience Based on Human Factors

3333.1.4-2022

IEEE Recommended Practice for the Quality Assessment of Light Field Imaging

3333.2.1-2015

IEEE Recommended Practice for Three-Dimensional (3D) Medical Modeling

PARs

P2888.1a

IEEE Standard for Specification of Sensor Interface for Cyber and Physical Worlds Amendment: Binary Representation of Data Formats for Interfacing Sensors and their Capabilities

P2888.2a

IEEE Standard for Actuator Interface for Cyber and Physical Worlds Amendment: Binary representation of data formats, application programming interfaces and definition of additional actuators

P2888.3

Standard on Orchestration of Digital Synchronization between Cyber and Physical World

P2888.5a

IEEE Standard for Virtual Training System Evaluation Methods Amendment: Physiological evaluation method for virtual training systems

P2888.6

Standard for Holographic Visualization for Interfacing Cyber and Physical Worlds

P2888.7

Standard for Architecture of a Digital Twin System for Carbon Emission Management

P3079.1

Motion to Photon (MTP) Latency in Virtual Environments

P3079.2

Standard for Mixed Reality (MR) Framework for Motion Training

P3079.2.1

Standard for a Basic Framework for Motion Training Systems

P3079.2.2

Standard for UI (User Interface)/UX (User Experience) Framework for Motion Training

P3079.3.1

Standard for Service Application Programming Interfaces (APIs) for Digital Human Authoring and Visualization

P3079.3.2

Standard for a Framework for Privacy Protection through Identifiability Management Arising from Avatar Interaction

P3079.4

Standard for the Visual Quality Assessment of Auto-Stereoscopic Displays

3. APPROVAL OF MINUTES FROM THE 30 October 2024 MEETING

There was a motion to approve the [30 October 2024 meeting minutes](#). In the absence of objection or abstention, the motion was approved.

4. PARS FOR DISCUSSION

Unless indicated otherwise, the motions were approved unanimously.

4.1 Withdrawal Requests

There was a bucket motion to approve P1913, P2418.3, P1450.6, P1687.1, and PC62.55 based on the fact that preliminary votes have no objections to recommending approval and there are no unresolved NesCom member comments. In the absence of objection or abstention, the motion was approved.

IEEE Communications Society/Virtualized and Software Defined Networks, and Services Standards Committee P1913

YANG Model for Software-Defined Quantum Communication

Recommendation: Approve PAR withdrawal.

IEEE Computer Society/Standards Activities Board Standards Committee

P2418.3

Standard for the Framework of Distributed Ledger Technology (DLT) Use in Agriculture

Recommendation: Approve PAR withdrawal.

IEEE Computer Society/Test Technology

P1450.6

Standard Test Interface Language (STIL) for Digital Test Vector Data-Core Test Language (CTL)

Recommendation: Approve PAR withdrawal.

P1687.1

Standard for the Application of Interfaces and Controllers to Access 1687 JTAG Networks Embedded Within Semiconductor Devices

Recommendation: Approve PAR withdrawal.

IEEE Power and Energy Society/Surge Protective Devices/Low Voltage

PC62.55

Guide for Surge Protection of DC Power Feeds to Remote Radio Heads

Recommendation: Approve PAR withdrawal.

4.2 Modified PARs

There was a bucket motion to approve P2975.1, P2825, and P3308 based on the fact that preliminary votes have no objections to recommending approval and there are no unresolved NesCom member comments. In the absence of objection or abstention, the motion was approved.

IEEE Computer Society/Smart Manufacturing Standards Committee

P2975.1

Standard for Industrial Artificial Intelligence Data Attributes

Recommendation: Approve modified PAR.

IEEE Power and Energy Society/Substations Committee

P2825

Guide for Static Synchronous Series Compensator General Requirements and Test Methods

Recommendation: Approve modified PAR.

IEEE SA Board of Governors/Entity Collaborative Activities Governance Board

P3308

Moving Picture, Audio and Data Coding by Artificial Intelligence—Object and Scene Description v1.0

Recommendation: Approve modified PAR. (Recuse: Dukes)

4.3 Extension Requests

There was a bucket motion to approve P1431, P1720, P1925.1, P1926.1, P1927.1, P1916.1, P1950.1, P2784, P2961, P3220.01, P3222.01, P3223.01, P3230.03, P3232.01, P3270.01, P3270.02, P2416, P2881, P2957, P1708, P2731, P3006.1, P62.2, P1719, P63197, P1187, P1188, P2962, P495, P1142, P1186, P1300, P1511, P1511.1, P317, P833, P487a, P1711.1, P2658, P2030.12, PC37.1.2, PC37.90, PC37.300, P2418.5, P525, P979, P998, P1818, PC62.220, PC37.10, PC37.100.1, PC57.13.9, PC57.16, PC57.93a, PC57.98, PC57.162, PC57.166, P18, P751, P824, P1409, P1410, P2856, P2974, P2751, P2940, P2958, P2973, P62704-1, P62704-2a, P62704-3, P63184, PC95.1-2345, and P1 based on the fact that preliminary votes have no objections to recommending approval and there are no unresolved NesCom member comments. In the absence of objection, the motion was approved.

IEEE Aerospace and Electronic Systems Society/Gyro Accelerometer Panel

P1431

Standard for Specifying and Testing Coriolis Vibratory Gyros

Recommendation: Approve request for an extension until 31 December 2026.

IEEE Antennas and Propagation Society/Antennas and Propagation Standards Committee

P1720

Recommended Practice for Near Field Antenna Measurements

Recommendation: Approve request for an extension until 31 December 2026.

IEEE Communications Society/Green ICT Standards Committee

P1925.1

Standard for Energy Efficient Dynamic Line Rate Transmission System

Recommendation: Approve request for an extension until 31 December 2025.

P1926.1

Standard for a Functional Architecture of Distributed Energy Efficient Big Data Processing

Recommendation: Approve request for an extension until 31 December 2025.

P1927.1

Standard for Services Provided by the Energy-efficient Orchestration and Management of Virtualized Distributed Data Centers Interconnected by a Virtualized Network

Recommendation: Approve request for an extension until 31 December 2025.

P1928.1

Standard for a Mechanism for Energy Efficient Virtual Machine Placement

Recommendation: Approve request for an extension until 31 December 2025.

There was a motion to approve the recommendation of P1928.1. In the absence of any objection or abstention, the motion was approved.

P1929.1

An Architectural Framework for Energy Efficient Content Distribution

Recommendation: Approve request for an extension until 31 December 2025.

There was a motion to approve the recommendation of P1929.1. In the absence of any objection or abstention, the motion was approved.

IEEE Communications Society/Virtualized and Software Defined Networks, and Services Standards Committee

P1916.1

Standard for Software Defined Networking and Network Function Virtualization Performance

Recommendation: Approve request for an extension until 31 December 2025.

P1950.1

Standard for Communications Architectural Functional Framework for Smart Cities

Recommendation: Approve request for an extension until 31 December 2026.

P2784

Guide for the Technology and Process Framework for Planning a Smart City

Recommendation: Approve request for an extension until 31 December 2026.

IEEE Computer Society/Artificial Intelligence Standards Committee

P2961

Guide for an Architectural Framework and Application for Collaborative Edge Computing

Recommendation: Approve request for an extension until 31 December 2026.

IEEE Computer Society/Blockchain and Distributed Ledgers

P3220.01

Standard for Consensus Framework for Blockchain System

Recommendation: Approve request for an extension until 31 December 2025.

P3222.01

Standard for Blockchain-based Digital Identity System Framework

Recommendation: Approve request for an extension until 31 December 2026.

P3223.01

Standard for Blockchain-based Electronic Evidence Interface Specification

Recommendation: Approve request for an extension until 31 December 2025.

P3230.03

Standard for Blockchain Service Capability Evaluation

Recommendation: Approve request for an extension until 31 December 2025.

P3232.01

Standard for Blockchain System Governance Specification

Recommendation: Approve request for an extension until 31 December 2026.

P3270.01

Standard for Blockchain-based Digital Asset Exchange Model

Recommendation: Approve request for an extension until 31 December 2026.

P3270.02

Guide for the Application of Non-Fungible Token (NFT) Based Digital Asset

Recommendation: Approve request for an extension until 31 December 2027.

IEEE Computer Society/Design Automation

P2416

Standard for Power Modeling to Enable System-Level Analysis

Recommendation: Approve request for an extension until 31 December 2025.

IEEE Computer Society/Learning Technology

P2881

Standard for Learning Metadata Terms

Recommendation: Approve request for an extension until 31 December 2025.

IEEE Computer Society/Online Gaming Standards Committee

P2946

Guide for Electronic Sports (Esports) Integrity

Recommendation: Approve request for an extension until 31 December 2026. (Abstain: 1)

There was a motion to approve the recommendation of P2496. In the absence of any objection, the motion was approved. (Abstain: 1)

P2947

Guide for Broadcasting Electronic Sports (Esports) Events

Recommendation: Approve request for an extension until 31 December 2026.

There was a motion to approve the recommendation of P2947. In the absence of any objection or abstention, the motion was approved.

IEEE Computer Society/Simulation Interoperability Stds Organization/Stds Activity Committee

P1516

Standard for Modeling and Simulation (M&S) High Level Architecture (HLA)-- Framework and Rules

Recommendation: Conditional approval of request for an extension until December 2025, subject to the SASB not approving the December 2024 RevCom submittal of P1516. (Vote: 11=Yes, 2=No [Mohla])

P1516.1

Standard for Modeling and Simulation (M&S) High Level Architecture (HLA)-- Federate Interface Specification

Recommendation: Conditional approval of request for an extension until December 2025, subject to the SASB not approving the December 2024 RevCom submittal of P1516.1. (Vote: 11=Yes, 2=No [Mohla])

P1516.2

Standard for Modeling and Simulation (M&S) High Level Architecture (HLA)-- Object Model Template (OMT) Specification

Recommendation: Conditional approval of request for an extension until December 2025, subject to the SASB not approving the December 2024 RevCom submittal of P1516.2. (Vote: 11=Yes, 2=No [Mohla])

There was a motion to conditionally approve the recommendations of P1516, 1516.1, and 1516.2 subject to the SASB not approving their submittals to RevCom. (Vote: 11=Yes; 2=No [Mohla]). [The condition was met.]

IEEE Computer Society/Software & Systems Engineering Standards Committee

P7003

Algorithmic Bias Considerations

Recommendation: Approve request for an extension until 31 December 2025.

There was a motion to approve the recommendation of P7003. In the absence of any objection or abstention, the motion was approved.

IEEE Computer Society/Standards Activities Board Standards Committee

P2957

Standard for a Reference Architecture for Big Data Governance and Metadata Management

Recommendation: Approve request for an extension until 31 December 2026. (Recuse: Rosdahl)

IEEE Electromagnetic Compatibility Society/Standards Development Committee

P1128

Recommended Practice for Radio-Frequency (RF) Absorber Evaluation in the Range of 30 MHz to 40 GHz

Recommendation: Approve request for an extension until 31 December 2025. (Abstain: Rosdahl)

There was a motion to approve the recommendation of P1128. In the absence of any objection, the motion was approved. (Abstain: Rosdahl)

IEEE Engineering in Medicine and Biology Society/Standards Committee

P1708

Standard for Wearable Cuffless Blood Pressure Measuring Devices

Recommendation: Approve request for an extension until 31 December 2025.

P2731

Standard for a Unified Terminology for Brain-Computer Interfaces

Recommendation: Approve request for an extension until 31 December 2026.

IEEE Industry Applications Society/Industrial & Commercial Power Systems Standards Development Committee

P3006.1

Recommended Practice for Reliability Planning and Design of Industrial and Commercial Power Systems

Recommendation: Approve request for an extension until 31 December 2025.

IEEE Industry Applications Society/Petroleum & Chemical Industry

P80005-3

Utility Connections in Port - Part 3: Low Voltage Shore Connection (LVSC) Systems - General Requirements

Recommendation: Approve request for an extension until 31 December 2025. (Abstain: 1)

There was a motion to approve the recommendation of P80005-3. In the absence of any objection, the motion was approved. (Abstain:1)

IEEE Power and Energy Society/Electric Machinery

P62.2

Guide for Diagnostic Field Testing of Electric Power Apparatus - Electrical Machinery

Recommendation: Approve request for an extension until 31 December 2025.

P1553

Standard for Voltage Endurance Testing of Form-Wound Coils and Bars for Hydrogenerators

Recommendation: Approve request for an extension until 31 December 2025.

There was a motion to approve the recommendation of P1553. In the absence of any objection or abstention, the motion was approved.

P1719

Guide for Evaluating Stator Cores of AC Electric Machines Rated 1 MVA and Higher

Recommendation: Approve request for an extension until 31 December 2025.

IEEE Power and Energy Society/Energy Development & Power Generation

P63197

Standard Terms and Definitions for Turbine Governing Systems

Recommendation: Approve request for an extension until 31 December 2026.

IEEE Power and Energy Society/Energy Storage & Stationary Battery Committee

P1187

Recommended Practice for Installation Design and Installation of Valve-Regulated Lead-Acid Batteries for Stationary Applications

Recommendation: Approve request for an extension until 31 December 2026.

P1188

Recommended Practice for Maintenance, Testing, and Replacement of Valve-Regulated Lead-Acid (VRLA) Batteries for Stationary Applications

Recommendation: Approve request for an extension until 31 December 2025.

P2962

Recommended Practice for the Installation, Operation, Maintenance, Testing, and Replacement of Li-ion Batteries in Stationary Applications

Recommendation: Approve request for an extension until 31 December 2025.

IEEE Power and Energy Society/Insulated Conductors

P495

Standard for Testing Faulted Circuit Indicators

Recommendation: Approve request for an extension until 31 December 2025.

P1142

Guide for the Selection, Testing, Application and Installation of 300 V to 500 kV Cables Having Radial-Moisture Barriers and/or Longitudinal Water Blocking

Recommendation: Approve request for an extension until 31 December 2025.

P1186

Recommended Practice for Applicability of Methods for the Evaluation of Low-Voltage and Medium-Voltage Installed Cable Systems in Nuclear Facilities

Recommendation: Approve request for an extension until 31 December 2025.

P1300

Guide for Cable Connections for Gas-Insulated Substations

Recommendation: Approve request for an extension until 31 December 2025.

P1511

Guide for Investigating and Analyzing Power Cable, Joint, and Termination Failures on Systems Rated 2.5 kV Through 46 kV

Recommendation: Approve request for an extension until 31 December 2025.

P1511.1

Guide for Investigating and Analyzing Shielded Power Cable Failures on Systems Rated 2.5 kV Through 46 kV

Recommendation: Approve request for an extension until 31 December 2025.

IEEE Power and Energy Society/Nuclear Power Engineering Committee

P317

Standard for Electric Penetration Assemblies in Containment Structures for Nuclear Power Generating Stations

Recommendation: Approve request for an extension until 31 December 2025.

P833

Recommended Practice for the Protection of Electric Equipment in Nuclear Power Generating Stations from Water Hazards

Recommendation: Approve request for an extension until 31 December 2025.

IEEE Power and Energy Society/Power System Communications and Cybersecurity

P487a

Standard for the Electrical Protection of Communications Facilities Serving Electric Supply Locations -- General Considerations Amendment: New Annex J- Guidance for Determining the Ground Potential Rise and Induced Voltages for the Design of Communications Installations at Electric Supply Locations

Recommendation: Approve request for an extension until 31 December 2026.

P1711.1

Standard for a Cryptographic Protocol for Cyber Security of Substation Serial Links: Substation Serial Protection Protocol

Recommendation: Approve request for an extension until 31 December 2025.

P2658

Guide for Cybersecurity Testing in Electric Power Systems

Recommendation: Approve request for an extension until 31 December 2026.

IEEE Power and Energy Society/Power System Relaying and Control

P2030.12

Guide for the Design of Microgrid Protection Systems

Recommendation: Approve request for an extension until 31 December 2025.

PC37.1.2

Guide for Databases Used in Utility Automation Systems

Recommendation: Approve request for an extension until 31 December 2025.

PC37.90

Standard for Relays, Relay Systems, and Control Devices used for Protection and Control of Electric Power Apparatus – General Requirements and Tests

Recommendation: Approve request for an extension until 31 December 2026.

PC37.251

Standard for Common Protection and Control Settings or Configuration Data Format (COMSET)

Recommendation: Approve request for an extension until 31 December 2025.

There was a motion to approve the recommendation of PC37.251. In the absence of any objection or abstention, the motion was approved.

PC37.300

Guide for Centralized Protection and Control (CPC) Systems within a Substation

Recommendation: Approve request for an extension until 31 December 2025.

IEEE Power and Energy Society/Smart Buildings, Loads and Customer Systems

P2418.5

Guide for Blockchain in Power and Energy Systems

Recommendation: Approve request for an extension until 31 December 2025.

IEEE Power and Energy Society/Substations Committee

P81

Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Grounding System

Recommendation: Approve request for an extension until 31 December 2025.

There was a motion to approve the recommendation of P81. In the absence of any objection or abstention, the motion was approved.

P525

Guide for the Design and Installation of Cable Systems in Substations

Recommendation: Approve request for an extension until 31 December 2025.

P979

Guide for Substation Fire Protection

Recommendation: Approve request for an extension until 31 December 2025.

P998

Guide for Direct Lightning Stroke Shielding of Substations

Recommendation: Approve request for an extension until 31 December 2025.

P1534

Recommended Practice for Specifying Thyristor-Controlled Series Capacitors

Recommendation: Approve request for an extension until 31 December 2025.

There was a motion to approve the recommendation of P1534. In the absence of any objection or abstention, the motion was approved.

P1818

Recommended Practice for the Design of Low-Voltage Auxiliary Systems for Electric Power Substations

Recommendation: Approve request for an extension until 31 December 2025.

IEEE Power and Energy Society/Surge Protective Devices Committee

P2770

60099-11 Surge Arresters - Part 11: Metal-Oxide Line Surge Arresters to Protect Power Line Insulation

Recommendation: Approve request for an extension until 31 December 2027.

There was a motion to approve the recommendation of P2770. In the absence of any objection or abstention, the motion was approved.

PC62.21

Guide for the Application of Surge Voltage Protective Equipment on AC Rotating Machinery 1000 Volts and Greater

Recommendation: Approve request for an extension until 31 December 2025. (Vote: 9=Yes; 2 =No (Rosdahl))

There was a motion to approve the recommendation of P62.21. The motion was approved. (Vote: 9=Yes; 2=No (Rosdahl)).

IEEE Power and Energy Society/Surge Protective Devices/Low Voltage

PC62.220

Guide for the Application of Surge Protective Devices for the Smart Grid

Recommendation: Approve request for an extension until 31 December 2026.

IEEE Power and Energy Society/Switchgear

PC37.10

Recommended Practice for Investigation, Analysis, and Reporting of Failures of AC High-Voltage Circuit Breakers and Circuit Switchers with Rated Maximum Voltage Above 1000 V

Recommendation: Approve request for an extension until 31 December 2025. (Abstain: Edwards)

PC37.41

Standard for Design Tests and Specifications for High-Voltage (> 1000 V) Fuses and Accessories

Recommendation: Approve request for an extension until 31 December 2025. (Abstain: Edwards)

There was a motion to approve the recommendation of P37.41. In the absence of any objection, the motion was approved. (Abstain: Edwards)

PC37.100.1

Standard of Common Requirements for High Voltage Power Switchgear Rated Above 1000 V

Recommendation: Approve request for an extension until 31 December 2026. (Abstain: Edwards)

IEEE Power and Energy Society/Transformers

PC57.13.9

Standard for Power-Line Carrier Coupling Capacitors and Coupling Capacitor Voltage Transformers

Recommendation: Approve request for an extension until 31 December 2025.

PC57.16

Standard for Requirements, Terminology, and Test Code for Dry-Type Air-Core Series-Connected Reactors

Recommendation: Approve request for an extension until 31 December 2025.

PC57.93a

IEEE Approved Draft Guide for Installation and Maintenance of Liquid-Immersed Power Transformers

Amendment: Cold Start of Power Transformers filled with Natural Ester Fluids

Recommendation: Approve request for an extension until 31 December 2025.

PC57.98

Guide for Transformer Impulse Tests

Recommendation: Approve request for an extension until 31 December 2026.

PC57.162

Guide for the Interpretation of Moisture Related Parameters in Liquid Immersed Transformers and Reactors

Recommendation: Approve request for an extension until 31 December 2025.

PC57.166

Guide for Acceptance and Maintenance of Insulating Liquids in Transformers and Related Equipment

Recommendation: Approve request for an extension until 31 December 2026.

IEEE Power and Energy Society/Transmission and Distribution

P18

Standard for Shunt Power Capacitors

Recommendation: Approve request for an extension until 31 December 2025.

P751

Guide for Wood Structures Used for Overhead Electric Transmission Lines

Recommendation: Approve request for an extension until 31 December 2026.

P824

Standard for Series Capacitor Banks in Power Systems

Recommendation: Approve request for an extension until 31 December 2025.

P1409

Guide for Technology Methods for Power Quality Improvement in Electric Power Systems

Recommendation: Approve request for an extension until 31 December 2026.

P1410

Guide for Improving the Lightning Performance of Electric Power Overhead Distribution Lines

Recommendation: Approve request for an extension until 31 December 2025.

P2856

Guide for the Definition of Resiliency and Measuring the Resiliency of the Electrical Distribution System

Recommendation: Approve request for an extension until 31 December 2026.

P2974

Guide for System Commissioning of Medium and Low (750 V to ± 50 kV) Voltage Direct Current Distribution Network

Recommendation: Approve request for an extension until 31 December 2025.

IEEE Robotics and Automation Society/Standing Committee for Standards

P2751

3D Map Data Representation for Robotics and Automation

Recommendation: Approve request for an extension until 31 December 2025.

P2940

Standard for Measuring Robot Agility

Recommendation: Approve request for an extension until 31 December 2026.

IEEE SA Board of Governors/Entity Collaborative Activities Governance Board

P2958

Standard for a Decentralized Identity and Access Management Framework for Internet of Things

Recommendation: Approve request for an extension until 31 December 2026.

P2973

Guide for Field Calibration System for Current Carrying Capacity of Overhead Transmission Lines

Recommendation: Approve request for an extension until 31 December 2026.

IEEE SA Board of Governors/International Committee on Electromagnetic Safety

P62704-1

Standard for Determining the Peak Spatial Average Specific Absorption Rate (SAR) in the Human Body from Wireless Communications Devices, 30 MHz to 6 GHz. Part 1: General Requirements for Using the Finite Difference Time Domain (FDTD) Method for SAR Calculations

Recommendation: Approve request for an extension until 31 December 2025.

P62704-2a

Standard for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body from Wireless Communications Devices, 30 MHz to 6 GHz -- Part 2: Specific Requirements for Finite Difference Time Domain (FDTD) Modelling of Exposure from Vehicle Mounted Antennas Amendment 1

Recommendation: Approve request for an extension until 31 December 2025.

P62704-3

Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body from Wireless Communications Devices, 30 MHz - 6 GHz Part 3: Specific Requirements for Using the Finite Difference Time Domain (FDTD) Method for SAR Calculations of Mobile Phones

Recommendation: Approve request for an extension until 31 December 2026.

P63184

Assessment Methods of the Human Exposure to Electric and Magnetic Fields from Wireless Power Transfer Systems - Models, Instrumentation, Measurement and Numerical Methods and Procedures (Frequency range of 1 kHz to 30 MHz)

Recommendation: Approve request for an extension until 31 December 2025.

PC95.1-2345

Standard for Military Workplaces -- Force Health Protection Regarding Personnel Exposure to Electric, Magnetic, and Electromagnetic Fields, 0 Hz to 300 GHz

Recommendation: Approve request for an extension until 31 December 2026.

IEEE SA Board of Governors/Strategic and Emerging Standards Committee

P1

Recommended Practice - General Principles for Temperature Limits in the Rating of Electrical Equipment and for the Evaluation of Electrical Insulation

Recommendation: Approve request for an extension until 31 December 2026

4.4 New PARs

There was a bucket motion to approve P1961, P1901.3.1, P1936.15, P1936.18, P3507, P3511, P3540, P3549, P3240.06, P3537, P802.11bq, P2675.1, P3552, P3831, P3832, P2089.3, P3539, P3553, P4007, P3548, P3542, P3543, P3544, P1591.1-2023/Cor 1, P3545, and P3547 based on the fact that preliminary votes have no objections to recommending approval and there are no unresolved NesCom member comments. The motion was approved.

IEEE Communications Society/Edge, Fog, Cloud Communications with IOT and Big Data Standards Committee

P1961

Recommended Practice for Framework of Integrated Energy Data Collection and Perception

Recommendation: Approve new PAR until December 2028.

IEEE Communications Society/Power Line Communications

P1901.3.1

Standard Test Procedures for IEEE Std 1901.3 Standard for Medium Frequency (less than 12 MHz) Power Line Communications with a Hybrid Power Line Communications/Radio Frequency Physical Layer

Recommendation: Approve new PAR until December 2028.

P1957

Standard for a Satellite-based Emergency Communication System Supporting Electric Power Generation and the Power Grid

Recommendation: Conditional approval of a new PAR until December 2028, subject to a Working Group Chair accepting the role within the myProject system. (Vote: 8=Yes, 3=Abstain). [Note: The condition has been met.]

There was a motion to defer P1957 because the working group chair information was missing within myProject. The motion failed. (Vote: 6=Yes; 6=No; 0=Abstain)

There was a motion to conditionally approve the recommendation of P1957 based upon a Working Group chair accepting the role within myProject. The motion was approved. (Vote: 8=Yes; 0=No; 3=Abstain) [Note: The condition has been met.]

IEEE Communications Society/Unmanned Aerial Vehicles Communications Standards Committee

P1936.15

Standard for a Transmission Protocol for Equipment Status and Control Data for Remote Sensing Networks that Use Unmanned Aerial Systems

Recommendation: Approve new PAR until December 2028

P1936.18

Standard for Unmanned Aerial System-Based Multi-Sensor Data Fusion for Power Line Anomaly Detection Applications

Recommendation: Approve new PAR until December 2028

IEEE Computer Society/Artificial Intelligence Standards Committee

P3507

Standard for Multimodal Large Language Models Platform for Automotive Services

Recommendation: Approve new PAR until December 2028.

P3511

Standard for Risk Management Guidelines for Generative Artificial Intelligence Systems

Recommendation: Approve new PAR until December 2028.

P3540

Standard for Technical Requirements of Artificial Intelligence Personal Computer

Recommendation: Approve new PAR until December 2028.

P3549

Standard for Inference Optimization Systems of Large Language Models

Recommendation: Approve new PAR until December 2028.

IEEE Computer Society/Blockchain and Distributed Ledgers

P3240.06

Standard for Blockchain-based Hourly Time-matching Green Power Trading

Recommendation: Approve new PAR until December 2028.

IEEE Computer Society/Design Automation

P3537

Standard for 3Dblox--Chiplet Connectivity and Physical Properties Description Language

Recommendation: Approve new PAR until December 2028.

IEEE Computer Society/LAN/MAN Standards Committee

P802.11bq

IEEE Standard for Information Technology--Telecommunications and Information Exchange between Systems - Local and Metropolitan Area Networks--Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications Amendment: Enhancements for Integrated Millimeter Wave Wireless LAN

Recommendation: Approve new PAR until December 2028.

IEEE Computer Society/Software & Systems Engineering Standards Committee

P2675.1

Standard for System Reliability Engineering—Building Automation to Support Continuous Operations

Recommendation: Approve new PAR until December 2028.

IEEE Computer Society/Standards Activities Board Standards Committee

P3552

Guide for Enterprise Data Assets Assessment Model

Recommendation: Approve new PAR until December 2028.

IEEE Consumer Technology Society/Digital Finance and Economy Standards Committee

P3831

Standard for Reference Architecture and Technical Requirements for Electricity Data Asset Management Platform

Recommendation: Approve new PAR until December 2028.

P3832

Standard for General Requirements for Distributed Banking Financial Core Business Systems

Recommendation: Approve new PAR until December 2028.

IEEE Consumer Technology Society/Emerging Technology Standards Committee

P2089.3

Standard for Online Parental Consent

Recommendation: Approve new PAR until December 2028.

P3539

Standard for General Requirements for Refueling Robot Systems

Recommendation: Approve new PAR until December 2028.

IEEE Engineering in Medicine and Biology Society/Standards Committee

P3553

Standard for Unique Electronic Health Record Identification System

Recommendation: Approve new PAR until December 2028.

IEEE Geoscience and Remote Sensing Society/Standards Committee

P4007

Standard for Uplift Monitoring of Public Structures in Permafrost Regions Using Synthetic Aperture Radar

Recommendation: Approve new PAR until December 2028.

IEEE Industry Applications Society/Industrial & Commercial Power Systems Standards Development Committee

P3548

Recommended Practice for the Structural Design of Distribution Grid in Photovoltaic-Energy Storage-DC-Flexible Integrated Buildings

Recommendation: Approve new PAR until December 2028.

IEEE Industry Applications Society/Industrial Power Conversion Systems Department

P3542

Standard for Efficiency Classification of 15 kW-500 kW Fully Integrated Motor Drives when Fed from Three Phase Supplies Up to 500 VAC

Recommendation: Approve new PAR until December 2028.

P3543

Standard for Power Quality Requirements for 15 kW-500 kW Fully Integrated Motor Drives when Fed from Three Phase Supplies Up to 500 VAC

Recommendation: Approve new PAR until December 2028.

P3544

Standard for Data Exchange Requirements for Power Factor Correction in Distributed Variable Frequency Motors Drives

Recommendation: Approve new PAR until December 2028.

IEEE Intelligent Transportation Systems Society/Standards Committee

P3538

Guide for Metadata on Road Accidents in Low and Middle Income Countries and Regions

Recommendation: Approve new PAR until December 2028. (Vote: 5=Yes; 3=No (Mohla); 1=Abstain)

There was a motion to approve the recommendation of P3538. The motion was approved. (Vote: 5=Yes; 3=No (Mohla); 1=Abstain)

IEEE Power and Energy Society/Power System Communications and Cybersecurity

P1591.1-2023/Cor 1

IEEE Standard for Testing and Performance of Hardware for Optical Ground Wire (OPGW) - Corrigendum 1

Recommendation: Approve new PAR until December 2028.

IEEE Power and Energy Society/Substations Committee

P3546

Guide for Arc Flash Safety Program for Substations and Underground and Overhead Lines

Recommendation: Approve new PAR until December 2028.

There was a motion to approve the recommendation of P3546. In the absence of any objection or abstention, the motion was approved.

IEEE Vehicular Technology Society/High Speed Train and Maglev Standards Committee

P3545

Guide for Digital Twin Modeling and Analysis of 27.5 kV High Voltage Systems of High-Speed Trains

Recommendation: Approve new PAR until December 2028.

P3547

Recommended Practice for Using Commercial-Off-The-Shelf Electronic System and Software for Rail Safety Related Application

Recommendation: Approve new PAR until December 2028.

4.5 PARs for the Revision of Standards

There was a bucket motion to approve P1801, P15289, P24765, P26512, P125, PC62.41.1, PC62.45, P316, PC37.09, P951, and P1653.6 based on the fact that preliminary votes have no objections to recommending approval and there are no unresolved NesCom member comments. In the absence of objection or abstention, the motion was approved.

IEEE Computer Society/Design Automation

P1801

Standard for Design and Verification of Low Power, Energy Aware Electronic Systems

Recommendation: Approve PAR for the revision of a standard until December 2028.

IEEE Computer Society/Software & Systems Engineering Standards Committee

P15289

Systems and software engineering—Content of life-cycle information items (documentation)

Recommendation: Approve PAR for the revision of a standard until December 2028.

P24765

Systems and software engineering--Vocabulary

Recommendation: Approve PAR for the revision of a standard until December 2028.

P26512

Systems and software engineering - Requirements for acquirers and suppliers of information for users

Recommendation: Approve PAR for the revision of a standard until December 2028.

IEEE Power and Energy Society/Energy Development & Power Generation

P125

Recommended Practice for the Specification of Hydraulic Turbine Governing Systems

Recommendation: Approve PAR for the revision of a standard until December 2028.

IEEE Power and Energy Society/Surge Protective Devices/Low Voltage

PC62.36

Standard Test Methods for Surge Protectors and Protective Circuits Used in Information and Communications Technology Circuits and Smart Grid Data Circuits

Recommendation: Approve PAR for the revision of a standard until December 2028.

There was a motion to approve the recommendation of PC62.36. In the absence of any objection or abstention, the motion was approved.

PC62.41.1

Guide for the Surge Environment in Low-Voltage (1000 V and less) AC Power Circuits

Recommendation: Approve PAR for the revision of a standard until December 2028.

PC62.45

Recommended Practice for Surge Testing of Equipment Connected to Low-Voltage (1000 V and less) AC Power Circuits

Recommendation: Approve PAR for the revision of a standard until December 2028.

IEEE Power and Energy Society/Switchgear

P316

Standard Requirements for Direct Current Instrument Shunts

Recommendation: Approve PAR for the revision of a standard until December 2028. (Abstain: Edwards)

PC37.09

Standard for Test Procedures for AC High-Voltage Circuit Breakers with Rated Maximum Voltage Above 1000 V

Recommendation: Approve PAR for the revision of a standard until December 2028. (Abstain: Edwards)

IEEE Power and Energy Society/Transmission and Distribution

P951

Guide for the Assembly and Erection of Metal Transmission Structures

Recommendation: Approve PAR for the revision of a standard until December 2028.

IEEE SA Board of Governors/Entity Collaborative Activities Governance Board

P2857

Standard for Wireless Smart Utility Network Field Area Network

Recommendation: Approve PAR for the revision of a standard until December 2028. (1=Abstain (Biyabani))

There was a motion to defer P2857. The motion failed.

There was a motion to approve the recommendation of P2857. In the absence of any objection, the motion was approved. (1=Abstain (Biyabani))

IEEE Vehicular Technology Society/Traction Power Systems Standards Committee

P1653.6

Recommended Practice for Grounding of DC Equipment Enclosures in Traction Power Distribution Facilities

Recommendation: Approve PAR for the revision of a standard until December 2028.

5. Old Business

There was no old business.

6. New Business

There was no new business.

7. Next Meeting

The next meeting will be a teleconference meeting. It was originally scheduled for 29 January with submittal information sent by 22 January. However, the NesCom has been moved to **Thursday, 30 January 2025** to avoid the RevCom meeting and Chinese New Year. NesCom members should submit new topic ideas for the January meeting no later than 23 January 2025 along with any supporting documentation to the NesCom Administrator.

8. Adjournment

The meeting was adjourned at 11:48 a.m. ET (UTC-5).