

# An Update of Approved Standards

By William Lumpkins

The following IEEE Standards were approved at the end of 2013:

- ▼ **P643-2004/Cor 1/Draft D3** (PE/PSC): *Guide for Power-Line Carrier Applications—Corrigendum 1: Modal Analysis Power Equation Correction*
- ▼ **P738-2012/Cor 1/Draft 2** (PE/T&D): *Standard for Calculating the Current-Temperature Relationship of Bare Overhead Conductors—Corrigendum 1*
- ▼ **P802.11ac/Draft 7.0** (C/LM): *Standard for IT—Telecommunications and Information Exchange between Systems—LAN/MAN—Specific Requirements—Part 11: Wireless LAN Medium Access Control and Physical Layer Specifications—Amendment 4: Enhancements for Very High Throughput for Operation in Bands below 6 GHz*
- ▼ **P802.11af/Draft 6.0** (C/LM): *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 5: TV White Spaces Operation*
- ▼ **P1484.13.2/Draft 10** (C/LT): *Recommended Practice for Learning Technology—Metadata Encoding and Transmission Standard (METS) Mapping to the Conceptual Model for Resource Aggregation*
- ▼ **P1547.7/Draft 11** (SASB/SCC21): *Guide to Conducting Distribution*

## Manual

*Impact Studies for Distributed Resource Interconnection*

- ▼ **P1584.1/Draft 5** (IAS/PCI): *Guide for the Specification of Scope and Deliverable Requirements for an Arc-Flash Hazard Calculation Study in Accordance with IEEE 1584*
- ▼ **P1609.0/Draft 7** (VT/ITS): *Guide for Wireless Access in Vehicular Environments (WAVE)—Architecture*
- ▼ **P1613.1/Draft 48** (PE/SUB): *Standard Environmental and Testing Requirements for Communications Networking Devices Installed in Transmission and Distribution Facilities*
- ▼ **P1653.6/Draft 12** (VT/RTSC): *Recommended Practice for Grounding of Direct Current Equipment Enclosures in Traction Power Distribution Facilities*
- ▼ **P1696/Draft 10** (IM/WM&A): *Standard for Terminology and Test Methods for Circuit Probes*
- ▼ **P1726/Draft 16** (PE/T&D): *Guide for the Functional Specification of Fixed Transmission Series Capacitor Banks for Transmission System Applications*
- ▼ **P1857.3/Draft 3** (C/SAB): *Standard for System of Advanced Audio and Video Coding*
- ▼ **P1874/Draft D0.2** (CES/SC): *Standard for Documentation Schema for Repair and Assembly of Electronic Devices*
- ▼ **P3001.5/Draft 4** (IAS/TBCC): *Recommended Practice for Application of Power Distribution Apparatus in Industrial and Commercial Power Systems*

- ▼ **P43/Draft 19** (PE/EM): *Recommended Practice for Testing Insulation Resistance of Electric Machinery*
- ▼ **P80/Draft 10** (PE/SUB): *Guide for Safety in AC Substation Grounding*
- ▼ **P145/Draft D3** (APS/A): *Standard Definitions of Terms for Antennas*
- ▼ **P638/Draft 10** (PE/TR): *Standard for Qualification of Class 1E Transformers for Nuclear Power Generating Stations*
- ▼ **P933/Draft 6** (PE/NPE): *Guide for the Definition of Reliability Program Plans for Nuclear Generating Stations and Other Nuclear Facilities*
- ▼ **P980/Draft D3** (PE/SUB): *Guide for Containment and Control of Oil Spills in Substations*
- ▼ **P1127/Draft 9** (PE/SUB): *Guide for the Design, Construction, and Operation of Electric Power Substations for Community Acceptance and Environmental Compatibility*
- ▼ **P1187/Draft 14** (PE/SB): *Recommended Practice for Installation Design and Installation of Valve-Regulated Lead-Acid Batteries for Stationary Applications*
- ▼ **P1482.1/Draft D2.2** (VT/RTSC): *Standard for Rail Transit Vehicle Event Recorders*
- ▼ **P1686/Draft D15** (PE/SUB): *Standard for Intelligent Electronic Devices (IEDs) Cyber Security Capabilities*
- ▼ **PC37.20.3/Draft D13** (PE/SWG): *Standard for Metal-Enclosed Interrupter Switchgear (1 kV–38 kV)*



**FIGURE 11.** An NTT Docomo Inc. hostess showing off NTT Docomo Inc.'s famous mushroom character.

heavy research environment, where a powerful host processor or cloud computing component exists with the special IR camera system that does not require the host system to leave the laboratory or research environment (Figure 10). In Figure 11, the NTT Docomo Inc. hostess displays the trademark NTT Docomo figurine. Many



**FIGURE 12.** A 4K television. (Photo courtesy of O & S Services.)

Japanese companies use cute figurines or dolls to represent their company to attract young ladies and children.

Another dominant topic at the show was “4K” televisions. As you all know, 4K refers to televisions with 4,000-pixel resolution in one of the coordinates, e.g.,  $4,096 \times 2,560$ , which is called 4K ultra-high definition (UHD). The industry can

be a bit flexible with the absolute value, e.g., 4K UHD also has a possible resolution of 3,840 pixels  $\times$  2,160 lines (8.3 mp, aspect ratio 16:9); there are many variants as well. Figure 12 shows one of the various 4K 70-in televisions models now available. This unit costs between US\$6,999 and US\$4,999 depending on where you shop.

The CEATEC show was a lot of fun, and it was great to see so many insightful examples of Japanese merging western and eastern technologies into innovative products. It also allowed us some foresight into the famous western trade show held in Las Vegas every year, the Consumer Electronics Association's Consumer Electronics Show. As always, I look forward to your feedback and ideas of other topics for our magazine to cover. Feel free to reach me at [xillia@ieee.org](mailto:xillia@ieee.org)

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## Standards (continued from page 58)

- ▼ **PC37.98/Draft D5.1E** (PE/PSR): *Standard for Seismic Qualification Testing of Protective Relays and Auxiliaries for Nuclear Facilities*
- ▼ **PC37.122.6/Draft 9** (PE/SUB): *Recommended Practice for the Interface of New Gas-Insulated Equipment in Existing Gas-Insulated Substations Rated Above 52 kV*
- ▼ **PC57.96/Draft 6.3** (PE/TR): *Guide for Loading Dry-Type Distribution and Power Transformers*
- ▼ **PC57.134/Draft 2.1** (PE/TR): *Guide for Determination of Hottest-Spot Temperature in Dry-Type Transformers*.

Of all the standards approved in 2013, of course, the dearest to our hearts is IEEE 1874/Draft D0.2 *Standard for Documentation Schema for Repair and Assembly of Electronic Devices*. This is the IEEE Consumer Electronics (CE) Society's first standard in over 50 years. We are proud of the 1874 working group and the CE Standards Committee's dedication in getting this standard “out the door”; normally, it takes a working group

between two and three years to finish a standard. IEEE 1874 was completed within one year, a new record for IEEE. We had help from plenty of people including Kyle Wiens, Timothy Asp, Mark Schaffer, Daniel Beardsley, Daniel Eisenman, Robert Sanitate, Cornelius Van Rensburg, Nathan Nossal, Daniel Wiens, and myself.

As I am sure you all remember, IEEE 1874 (also called “The O Manual specification”) is an XML-based package format for distributing procedural manuals. A manual can describe a collection of procedures or just a single procedure. This specification describes the O Manual bundle file format (a collection of structured files), a file manifest XML format, a topic XML format, and a procedure XML format; the specification may be expanded in the future to enable additional types of documents [1].

The purpose of IEEE 1874 is to provide the structure for repair manuals so that they have the same look and feel across multiple platforms, like tablets/

slates or portable viewing devices. The hope is that by allowing the spread of repair manuals, it will enable consumers to extend the product life cycles of their purchased products, thus reducing unnecessary waste and unneeded electronic trash cluttering up our planet. The IEEE 1874 team is now in the promotion phase of the life of standard, meaning we are trying to get the word out near and far and getting as many companies as possible to adopt its use. We will also be working on a new set of standards within IEEE 1874 for design for reparability and reuse as well as other “green friendly” orientated concepts to help in this regard.

As always, if you would care to reach me or help in our endeavors, please contact me at [xillia@ieee.org](mailto:xillia@ieee.org).

## REFERENCE

- [1] oManual. (2014). [Online]. Available: [www.omanual.com](http://www.omanual.com)
- [2] W. Lumpkins, “The formation of the P1874 ‘O Manual’ Working Group,” *IEEE Consumer Electron. Mag.*, vol. 2, no. 1, pp. 52–54, Jan. 2013.

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