



Consejo de Armonización de Normas Electrotécnicas de las Naciones en las Américas
Council for Harmonization of Electrotechnical Standards of the Nations in the Americas

82nd IEC General Meeting South Korea, 22-26 October 2018

On behalf of the members of CANENA, thank you for your kind invitation to attend the SMB meeting and to provide a written update on our most recent activities.

The 2018 CANENA Annual Meeting (AGM) highlighted the U.S. electrotechnical standardization system and the role it plays regional, and international level. This year's program focused on Underwriters Laboratories, Inc. (UL), an accredited American National Standards Developer (SDO), and on product certification, electrical installation code, and conformity assessment in the U.S.

Key Takeaways:

- 1. Need for Rapid Standards Development.** A noted trend in conformity assessment is the need to rapidly develop standards for emerging technologies; one example is self-balancing scooters/hoverboards. These devices were recalled in the U.S. over concerns with overheating, posing a fire and explosion risk. To assist regulators when no product standard for electrical safety exists, national standards developers were called upon to quickly develop an outline of investigation that could serve as the basis for the issuance of certification and then develop as time permits into a formal standard. This particular outline of investigation developed requirements for the design and construction of the lithium-ion battery packs and associated electrical charger using in-house expertise having competency in related battery and charging standards applying risk base principles, that when applied in the evaluation and verification of compliance can result in the issuance of a certification. As we found out, outlines of investigations may not be accepted by all U.S. jurisdictions increasing the urgency to turn an outline of investigation into a national standard for safety.
- 2. Internet of Things (IOT):** Internet of things (IOT) is driving significant investment in infrastructure replacement. Connected devices associated with Smart City, Smart Grid and Smart Appliances is growing at 33% per year, or around 5 million devices per year. And given that by 2050 there will be 2.5 Billion new urban residents (or a new Chicago every month for 30 years), the growth of interconnected devices will challenge market dynamics associated with power generation, transmission and distribution. As more of these interconnected devices are used in the electrical infrastructure, users will be at the forefront of using these advanced product designs to unlock new opportunities. However, this evolution can also expose design and construction vulnerabilities. To ensure the safe application and installation of these devices there needs to be a renewed focus on the development and harmonization of standards, installation codes and installation enforcement.
- 3. Rapid Pace of Urbanization:** Speaker Ken Boyce (UL) reported on the urbanization, i.e., the mass movement of people to cities, poses challenges to urban planners and will impact existing market dynamics associated with a wide range of industries. By 2050, the degree of urbanization is expected to reach as high as 80%, necessitating the construction of a string of

new megacities, especially in south and east Asia. Predicting the transportation, sanitation and determining infrastructure requirements will taxed urban developers and require creative solutions. Coinciding with urbanization is the phenomena of population shrinkage and need to modernize the infrastructure of cities with roads and buildings there were already in place before the electrical system was developed. These urban areas will need to be design for sustainable growth and readily incorporation of new technology in an appropriate, energy-efficient and environmentally sustainable fashion. In conclusion, new technologies and products will need to be created to address the unprecedented rate and scale of urbanization across the developing world.

4. **Smart City:** The focus of the Smart City concept is on livability, workability and sustainability as well as safety and security. The challenge is to use the new technology in a smart way. This will require establishing good metrics to ensure smart devices are producing a return on investment. A Smart City initiative in Dubai looked at different payment system for transportation. Germany is undergoing an energy transformation by replacing its nuclear power by 2022 with renewables. In order to meet fluctuations in energy demand and maintain grid balancing, Germany will rely on virtual power plants and on the use of distributed energy resource. These new opportunities present new challenges, such as the hacking of the Ukraine power grid or standardizing the operation of new technology so that its performance is understood over its lifetime. Regarding the latter, the existing cycle of standards development is sharply focused on a regional audience and it then moved into the international arena and then adopted as a national standard once it is made consistent with national installation requirement. One example is UL 5500, Standard for Safety for Remote Software Updates. The standard concerns the remote updating of software via the manufacturer's recommended process of software elements having an influence on safety and on compliance with the particular end product safety standard. It is being proposed as a new work item in IEC.
5. **Standards Spotlight:** CANENA is a volunteer based organization focused on electrotechnical standards harmonization activities within the Americas, helping to facilitate trade. As of December 31, 2017, there were forty-three (43) electrotechnical standards harmonization committees operating under CANENA. Those committees have published fifty-seven (57) harmonized standards jointly by ANCE, CSA and UL; and an additional twenty-six (26) published jointly by CSA and UL. Regarding the publication of harmonized standards that used an IEC standard as the base document, there was a total of nine (9) harmonized standards published jointly by ANCE, CSA and UL; and an additional six (6) standards published jointly by CSA and UL. The publication of these standards brings the total number of harmonized standards jointly published to ninety-eight (98). The following are the most recent standards being pursued for harmonization under CANENA:

1. Binational: [Canada and U.S.]: EVSE DC Fast Charging Standards (CSA 22.2 No.107.1 IEC 61851 -1 and -23 UL 2202)
2. Binational: [Canada and U.S.]: Low-voltage AC and DC power circuit breakers (CSA 22.2 No. 268-16, UL 1066)
3. Binational: [Canada and U.S.]: Power Supplies (Adoption of IEC 62040-1 and 62477-1)
4. Binational: [Canada and U.S.]: LV Circuit Breakers (CSA 22.2 No. 268-16, UL 1066)

The publication of these documents reflects the continuing SDO commitment to the CANENA harmonization efforts.

Goals and Strategic Objectives for the Coming Year

1. **Future Direction of CANENA Looking Bright:** CANENA is approaching its first quarter century with ninety-eight (98) harmonized, electrotechnical standards in its portfolio. Regional harmonization of electrotechnical safety standards, undertaken in support of the North American Free Trade Agreement has now been accomplished. Manufacturer, product standard developer, certification and testing organization and end-users alike are realizing long-term economic benefits to harmonized standards, and now wish to advance CANENA as a premier player in the highly competitive standards arena. Therefore, our challenge ahead is to sustain progress. In 2017, the CANENA Board of Directors empowered a task force to formulate a new vision and a new mission for CANENA. Moving toward international harmonization is now a CANENA goal.

Issues, Barriers, Concerns or Opportunities

1. **27th CANENA Annual Meeting:** In preparation for the 2019 Annual Meeting, CANENA's Planning Committee will survey members for ideas on theme and content. The committee will consist of Maria Jimenez (Chair), Michael Wilson, Donald Harris, Valara Davis, Juan Rosales, Louis Ivan Hernandez and Joel Solis.

Regarding 2019, we would welcome IEC to participate at the 28th CANENA Annual Meeting, to be held February 27-28, 2019 in Mexico City. The reasoning for selecting Mexico City as the 2019 meeting venue is the anticipation of an updated North American Free Trade Agreement and to meet with political appointees of Mexico's Dirección General de Normas (DGN). We greatly value the close relationship our Council enjoys with IEC, and are always open to exploring greater areas of cooperation.

CANENA is not an accredited standards development organization in any country. It is an industry-driven process dedicated to enhancing free trade through the harmonization of standards, installation codes and other technical requirements in the countries of our members. Membership in CANENA is individual, by company or industry association and not by country. CANENA Technical Harmonization Committees have defined scopes, and the documents they produce are taken into the separate national approval processes by the participating accredited SDOs. Through separate agreements and procedures established between the participating SDOs, harmonized national standards are then published. CANENA's published Cooperation and Communication Strategy ensures transparency of the process, and is our commitment towards acting in a complementary manner with each official national, regional and international standardization entity. To obtain more information about CANENA, go to www.CANENA.org

Thank you once again for inviting CANENA to participate in the COPANT 2018 General Assembly. To obtain a copy of CANENA's most recent newsletter, click on the following link: <https://www.canena.org/canena-connects-july-17-2018-vol-2/>