Deciding to harmonize

The term “harmonization” is thrown around a lot these days. It’s a peaceful term with its root “harmony” defined in our context as “Agreement in feeling or opinion; accord. A pleasing combination of elements in a whole.” In any context, achievement of harmony requires commitment, resolve and prolonged effort by all interested parties with a common goal in mind.

For the greatest number of CANENA members, those directly involved in the detailed technical or operational aspects of particular scopes of harmonization, the key contributing factor in deciding whether or not to embark on a harmonization program may be very narrowly seen as a matter of procedural efficiency. As testimony to this, having successfully harmonized more than eighty electrotechnical standards through the CANENA process, a great deal of focus over the past two years has been placed on improving procedures and establishing efficiency metrics. Of course, this is vitally important to sustaining the level of harmonization that has been achieved, accommodating new technologies into already harmonized standards and to assimilating new harmonization efforts into the process. But has sufficient attention been given recently to the broader strategic drivers for harmonization?

We’ve learned a lot over the past twenty years about best practices for ‘how’ to harmonize standards. Perhaps it’s time to take a fresh look at ‘why’ we continue to invest so many resources: time, money and technical capital, in harmonization efforts. By taking a step-by-step tour through a model decision process we may discover broader value propositions, better methods for setting priorities and the means to encourage higher level strategic involvement in the decision process.

The idea to harmonize

Every idea or innovation needs a catalyst and someone to champion the cause. In terms of standardization, globalization of markets is perhaps the most profound catalyst of our generation.

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From the President

CANENA has now reached the 20 years mark and has achieved many significant milestones. The most impressive of these are the realization of an internationally relevant portfolio of harmonized standards, many of which have gone through several revision cycles and new editions, and the proven commitment by an expanding international pool of technical experts living and evolving the notion of a regional cooperation in consensus-based standards development.

Internally, during this year we have reached a level of membership of over 300 members, approximately twice the previous year's level. We have implemented a managerial tool to follow and report on the status of all our harmonization projects. We have reviewed all committees' memberships to actualize rosters. We have implemented training programs for our committee leaders and we are still improving.

Externally, CANENA has deepened our cooperative relationship with the key electrotechnical standardization entities throughout the region and globally. We have mutually affirmed and supplemented commitments to our endeavors in particular with our trade association partners. We continue to work side-by-side with our participating standards development organizations, ANCE, CSA and UL, towards a more seamless interface in their separate national processes. We have presented opinions on the evolution of electrical safety codes and standards in Canada to the highest level of Federal Government and we have displayed our strong engagement in promoting the harmonization of electrical safety standards and codes in Mexico and further South.

Even though the last year was fertile in positive developments, challenges still abound.

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Transparency of programs and operations is a hallmark of the CANENA process. Raising the bar even further, CANENA’s Procedural Operations Subcommittee rolled out a new project tracker tool during 2012. Based on the project schedule plan required to be established at the outset of each CANENA work program, the project tracker enables anyone to quickly view the progress of a work program according to the plan and steps in the standardized CANENA harmonization procedures.

According to CANENA Secretary General Joel Solis, “There is a growing realization that the conduct of CANENA work programs has an impact on the industry outside of CANENA including the Standards Development Organizations with whom we directly interface. While our committees have a great deal of autonomy in setting their priorities and timelines, it is important that once they are set, that they diligently follow through according to schedule. This new tracking model provides public access to view progress on each project without adding significant burden to the committee leadership.”

The project tracker was designed with a great deal of input from CANENA Technical Harmonization Committee (THC) secretaries. Bill Buckson, secretary of the CANENA Procedural Operations Subcommittee is also secretary for several CANENA THCs. "The success of the tracker requires direct data input from each THC. Having experience as a THC secretary myself allowed me to contribute to the development of the tracker to ensure it would not be cumbersome for our THCs to maintain. There was a great deal of feedback provided from other THC secretaries as well”, said Buckson.

Procedural Operations Subcommittee Chair Mike Wilson of CSA Group stated "There has been a tremendous amount of cooperation during the development of this tool. NEMA has provided significant resources and many CANENA members and representatives from ANCE and CSA have worked tirelessly to make the tracker a terrific project management tool.”

The individual CANENA members whose efforts are focused on the technical work of standards harmonization will also benefit from the project tracker. It is an excellent tool for planning and scheduling resources and for reporting to their funders and managers.

### Dates to Remember

- CANENA Annual General Meeting “Putting Regional Standardization in a Global Perspective-Focus on Canada” — February 27–28, 2013, Montreal, Quebec, Canada
- CANAME-PEMEX-CFE Electrical Forum — April 17-18, 2013, World Trade Center, Boca del Rio, Veracruz, Mexico
- CPANT General Assembly Meeting — April 21-26, 2013, Gros Islet, St. Lucia
- CSA Annual Conference and Committee Week — June 16-18, 2013, Calgary, Alberta, Canada
- CANAME Latin American Symposium of Energy 2013– August 14-15, 2013, BANAMEX Centre, Mexico City, Mexico
- 62nd Annual SES - Conference — August 11-15, 2013, Savannah, Georgia USA
- 77th IEC General Meeting — October 21-25, 2013, New Delhi, India
Anti trust considerations in CANENA programs

Laws addressing anti-competitive activities and anti-trust may be objectively similar in most countries but the intensity of enforcement and penalties for violators can vary widely from country to country. All participants in multi-national standardization processes such as CANENA need to have a fundamental understanding of their responsibilities in this area and risks they face from inappropriate behavior.

CANENA Technical Harmonization Committees that have a NEMA staff member as their secretary know that a routine part of their meeting agenda includes a presentation by the secretary summarizing key elements of discussion topics to be avoided. A NEMA pamphlet titled “Guidelines for Conducting NEMA Meetings” may even have been distributed. NEMA staff has been extensively trained to monitor agendas and discussions at meetings and alert participants when discussions approach sensitive areas. Importantly, laws addressing anti-competitive activities and anti-trust extend to all committee participants even outside of the formal committee discussions.

It might seem ironic to some, given that a fundamental driver for standardization is to provide ready access to markets and to level common areas of the competitive playing field, that inappropriate discussions might take place or side agreements might be reached between participants that breach anti-trust laws somewhere. However, whenever marketplace competitors or combinations of influential stakeholders get together, this is always a possibility. Participants need to be keenly aware and avoid any activities that can be construed as anti-competitive in nature.

The following questions have been asked periodically about the conduct of participants at CANENA meetings “Which anti-trust laws are in force when meetings are held alternately in different countries?” and “Is a NEMA staff member required to be present at all CANENA meetings?” On the first question, NEMA’s Legal Counsel Clark Silcox offered the following guidance: “First, the antitrust laws of a given country typically have application based on whether commerce in that country is restrained by the conduct of a group and can be applied even if the conspiratorial meetings giving rise to the restraint of trade occur wholly outside that country. Second, the antitrust laws of more than a single country can apply to the same conspiratorial behavior, potentially exposing the conspirators to legal actions in more than one country. This is quite common in international cartel cases where, for example, you might find the U.S., Brazil, the European Union, and Asian countries all making claims arising out of the same events with respect to the economic impact of the restraints in their specific countries.”

As to the second question, while many CANENA committees fund NEMA staff members as their secretaries, CANENA’s Standardization Procedures grant its committees the right to choose their support services including their secretary. Therefore, a NEMA staff member may not always be present. The mere presence of a NEMA staff member at a meeting, of itself does not ensure adherence to appropriate guidelines with respect to anti-trust activities. It is the responsibility of the committee’s chairman and every participant to understand the rules and manage their risks in this area.

In order to be proactive in this area, the CANENA Executive Committee intends to work closely with its trade association partners to formulate consolidated guidelines for CANENA committee participants. In the future CANENA will consider offering an online facility for on demand training.

Secretary General Report

This past year has been one of great challenges and opportunities and perhaps an indicator of what to come. The most pressing need has been membership retention and recruitment and ensuing dues revenue. After considerable efforts by the THC/THSC Secretaries and the CANENA Registrar, reviewing THC/THSC membership rosters and rectifying them with the list of members in good standing, the Registrar carried out an active campaign to more rigorously enforce the CANENA membership dues policy. The result was to increase significantly the recorded number of CANENA members in good standing, including individual members and company and association members, now over 300, and to nearly double much needed membership revenues year over year. This enabled the Executive Committee to hold individual and company membership dues steadily in 2013 for the fourth consecutive year. This significant increase is a true reflection of CANENA’s active membership and strong indicator of the continued relevancy of CANENA.

While you may not have noticed, the back end platform used to host the CANENA website has changed. It is now being managed by an off the shelf software product know as WordPress, a content management system. This migration over to a content management system means that all of the website’s pages, files, images, audio, etc., are all contained within an organized, easy to update web platform. The change will lessen the demand for an HTML programmer to do most changes to the website.

In 2012, a great deal of effort has gone into the procedural and operations aspects of the CANENA standards harmonization process. The most evident of these has been the roll out of the CANENA Project Tracker. This software tool, used to determine the real time status of a harmonization project by providing full transparency, has been implemented and for all harmonization projects is being updated regularly. By all accounts, the implementation of the Project Tracker has been a tremendous success, allowing THCs/THSCs to better manage their standards projects. CANENA’s Procedural Operations Subcommittee, chaired by Michael Wilson of CSA Group, is developing training tools which will address the roles and (Continued on page 7)
With the completion of three new harmonization projects during 2012, the total number of harmonized standards produced through the CANENA process now stands at eighty-seven. Considered separately, this amounts to two-hundred twenty-five national standards that are now maintained through CANENA technical committees. More than fifty of these have advanced at least to their second edition.

The most recent standards to be harmonized are:

Tri-national:
- UL 1008/CSA C22.2 No. 178.1/NMX-J-672-ANCE - Transfer Switch Equipment

Bi-national:

New editions of two previously harmonized tri-national standards were also published in 2012:
- UL 514B/CSA C22.2 No. 18.3/NMX-J-017-ANCE, Conduit, Tubing, and Cable Fittings

The charts to the right provide a snapshot of both harmonization accomplished and work in progress.

The commitment to the ongoing support of harmonized standards is a responsibility each CANENA THC/THSC undertakes when they are formed. An important feature of the Project Tracker described earlier in this report is that it enables viewers to easily determine the stage of each project, as well as the timing of the next scheduled revision cycle of existing harmonization standards. This is an important tool that permits committee leadership and members to schedule their time in advance and better prepare for active participation. This publically available information also hopefully will encourage others to become actively engaged in CANENA work programs thus creating a natural succession of participants.

Meet the CANENA Executive Committee:

- Pierre Desilets
  Canada
  President

- Joel Solis
  United States
  Secretary General

- Christel Hunter
  United States
  Treasurer

- Carlos Rodriguez
  Costa Rica
  Vice-President

- Michael Smith
  Canada
  Vice-President

- Julian Yarza
  Mexico
  Vice-President

- William Hansen
  United States
  Vice-President

- Rafael Yañez
  Mexico
  Immediate Past-President

- Timothy McNeive
  United States
  Ambassador-at-Large

- Rafael Nava
  Mexico
  Ambassador-at-Large

- Bill Bryans
  Canada
  Member-at-Large

- Noe Garcia
  Mexico
  Member-at-Large

- Greg Steinman
  United States
  Member-at-Large

- Luis Ivan Hernandez
  Mexico
  SDO Representative-ANCE

- Michael Wilson
  Canada
  SDO Representative-CSA

- Sonya Bird
  United States
  SDO Representative-UL

- Stephen Brown
  Canada
  Audit Committee Chair
Deciding to harmonize- Continued from Page 1

From experience, we’ve learned that harmonization of standards can serve a number of objectives in a market development strategy. Certainly cost efficiencies are attainable through harmonization but also the alignment and pooling of technical resources adds perspectives that result in better standards and the resource for their sustainability. Reduction or elimination of technical differences and for some creation of entire portfolios of standards where none previously existed, is an important enabler for increased cross border trade and an important tool in the battle against the introduction of unsafe and counterfeit products into the marketplace. An effective, systematic approach to harmonization can advance globalization objectives, particularly where underlying technological or cultural differences exist. Forward thinking objectives might even consider drivers both internal and external, that resulted in the differences in the first place and look at strategies to address those that might generate new differences in the future.

Choosing a scope

Ultimately, the scope of work and priorities within each CANENA THC/THSC and its active work programs is decided by the members of that committee and is presumed to reflect actual market demands. The CANENA Council or its Executive Committee is given no title to leverage influence in this regard on any THC or THSC. The harmonization objective and business case will often have the greatest influence on determining the scope of a standards harmonization project.

Making the commitment

In general, CANENA harmonization priorities are market driven. This can be described as a demonstrated demand sufficient to warrant placement of high enough priority among stakeholders to commit necessary resources in order to accomplish mutually agreed objectives. Establishment of a CANENA Technical Harmonization Committee and ensuing harmonization work programs is a demonstration of priority and commitment by CANENA members.

Return on Investment (ROI)

In the world of standardization, including standards harmonization, increasingly a solid business case is needed before committing to the effort. In simple terms “What’s in it for me?” must be answered. While this may seem to some as exceedingly selfish, investments made by each stakeholder must be justified and the return on that investment (ROI) increasingly today must be measurable. As with any investment, measurement of ROI in standardization has a time element, particularly when the resource being invested has alternative uses. Investors measure the expected benefit in comparison with the cost over a given time period. ROI models for standardization often don’t follow those for typical investments. Attainable objectives, deliverables, for each stakeholder may vary widely. In addition to their own investment, standards development organizations (SDO), the process owners, depend heavily on volunteer and other resources to drive standardization processes. So it is the accumulation of many investments and often different ROI models that forms the business case for a given scope of standardization.

Stakeholder Representation

The term “stakeholders” is often used to describe those who will be affected by a standard either directly or indirectly. It is often presumed that each stakeholder group will invest, although perhaps not equally in a worthy standardization program. Unfortunately, this is often not the case. An important reality that cannot be ignored is that among the often broad spectrum of stakeholders for a given standard or set of standards, there is an equally broad spectrum of motivations, willingness and ability to invest, expertise to contribute and other factors all of which add to the complexity in setting standardization priorities and carrying them out. The bottom line is that in order to accomplish meaningful priorities in standardization, some must invest more than others while all must benefit in some way. For this reason, membership in CANENA THCs is not typically representative of the broad spectrum of stakeholders who may be affected by the resulting standard. Leadership in a THC must act on behalf of all investors in the work program. While effectively employing all available process tools, the THC leadership must also seek to ensure that the views of the broader spectrum of stakeholders in each represented country, despite their level of investment, is considered. Of course, those that invest more will naturally have more influence in setting priorities, the pace of standardization, the processes and the results.

Market driven – a demonstrated demand sufficient to warrant placement of high enough priority among stakeholders to commit necessary resources in order to accomplish mutually agreed objectives.

Approving and Prioritizing

Once stakeholders agree to the worthiness of a particular standardization program and the resources that will be needed, if the ROI is insufficient to attract the necessary or desired pool of resources, there are essentially two ways to improve the ROI. Reduce the cost or increase the benefit. One way to affect both is to reduce the development and delivery time. In this way, theoretically the benefit is delivered earlier and at reduced cost. It’s important to consider here though that cost per unit of time saved may be higher since resources may need to be more fully dedicated and additional coordination necessary if typical processes will be somehow circumvented. One avenue for increasing the payback on investment is to build into the overall program strategy, incremental achievements that deliver some benefits earlier rather than later.

It should also be recognized that the motivation for a given standardization program might not always be immediate opportunity. In such cases, smaller investments over a greater period of time, is a very viable consideration.

Without a sufficient spectrum of stakeholder engagement and investment throughout the process, the foreseen benefit of the resulting harmonized standard may be diminished including less than planned return to actual investors. A draft harmonized standard that is built on a weak consensus may face challenges and delays in the latter stages of the process, thus increasing costs to both investors and process owners. In addition, once published the standard may not be broadly employed and is likely to face early amendment proposals as non-investing stakeholders seek to catch up. Ironically, such reactive investments are costly for all stakeholders and must easily be justified for the late-comers.

Laying the Groundwork

The final step before embarking on the “heavy lifting” of harmonization, the detailed technical deliberations, is to ensure that the committee is equipped to succeed. Committee leadership, administrative support and draft working documents all need to be in place. CANENA operating procedures now require that a standardized work program schedule, developed by the THC/THSC, be submitted through the assigned SDO Publication Coordinator. This schedule will become the basis for tracking the project so that progress is visible to all interested stakeholders and investors in the project. It has been proven time and again that well refined draft working documents are key to a good project start. It is recommended that development of these take place before officially engaging in the CANENA process. This need not delay the start of a work program. Successful committees have conducted such developmental activities through small working groups in a timeframe in parallel with other organizational activities. “Paying forward” in this fashion is an investment worth making. And a final recommendation to committee leadership and members alike: Assume nothing!
**NTC 2050—1998 National Electrical Code of Colombia**

The country of Colombia has a long history of actively addressing the safety of electrical installations. In cooperation with the National Fire Protection Association (NFPA) in the United States, NFPA 70, the National Electrical Code®, was first translated into Spanish in 1943. The first official edition of the National Electrical Code of Colombia, NTC 2050, was published in 1985.

The announcement of NTC 2050-1985 was accompanied by the following engineering presentation which contains very profound statements of value and purpose.

“Technical standardization is a discipline that offers many benefits. A standard must, without a doubt, contain benefits related to the guarantee of safety provided to the consumer for the products, goods or services covered by the standard. The effect of putting in order what is in disorder, to replace the complexity by simplicity, to establish minimum quality levels, is the role of technical standards providing a comprehensive structure of quality and safety for the people as well as for production means and capital goods.

This standard is named a “Code” because of its range of coverage. It is a document that has been developed with technical bases and international recognition. All the while efforts were made to avoid diverse specifications while fully acknowledging the infrastructure and the applicability of those specifications in our country. To achieve this objective, the responsible professionals began the study of the document in March 1983 beginning with a scrupulous analysis of the background, the USA Code and the one from Venezuela. The draft standard was then submitted to public consultation between the relevant country sectors.

Ratification of the Code by the Board of Directors took place on June 5, 1985. At that time, the importance of the Code as a guide for residential and industrial installations was highlighted as a key element for decreasing risk related to safety. It was emphasized that the application and enforcement of the Code needs to be promoted with the understanding that this action of ratifying the Code is a commitment in favor of the people and their environment.”

**ICONTEC International** is the publisher the National Electrical Code of Colombia and coordinates all related technical activities. Since 1963, ICONTEC International has been the focal point in Colombia for electrotechnical standardization. ICONTEC is a non-profit organization with wide international coverage. Its stated purpose is to satisfy the needs of various economic sectors through services that contribute to the development and competitiveness of their clients through the trust generated in their products and services.

NTC 2050 was last updated in 1998 and its content is based on NFPA 70-1996. Since that time, ICONTEC has provided for NFPA, the Spanish translation of the NFPA 70-1999 and -2008 editions. This has been a significant contributor to the recognition of NFPA 70 throughout the region. And it has served to contribute to overall electrical safety since much of the installed electrical distribution infrastructure in the region is reflective of the requirements in NFPA 70.

The relationship between NTC 2050-1998 and legal regulation in Colombia was established in 2004. At that time the Ministry of Mines and Energy (MinMinas) issued the Technical Regulation for Electrical Installations (RETIE). The official text tying NTC 2050 to the regulation is contained in Section 36.1 and reads as follows:

“Since the first update of NTC 2050, (Colombia’s Electrical Code), November 25, 1998, which is based on NFPA 70, with a point of view of having a technical regulation and considering it applies to the utilization of electric energy, compliance is declared obligatory providing aspects do not go against the next Annex and the seven first chapters with its related charts (issued in the Official Gazette No. 45,592 June 27, 2004) that in summary includes:

Chapter 1. Definitions and general requirements of the electrical installations.
Chapter 2. Wiring and protection requirements.
Chapter 3. Installation methods and materials.
Chapter 4. Requirements for equipment and elements for general use.
Chapter 5. Requirements for special environments.
Chapter 6. Requirements for special equipment.
Chapter 7. Special conditions of installations.

For the proper application of these chapters, it is necessary to take into account the considerations established in section 90 (Introduction); the qualified personnel that use the standard should take into account all the considerations and exceptions applicable in each case.”

ICONTEC has been a member of CANENA for more than five years and regularly attends the CANENA annual meeting. Visit this link for more information about ICONTEC www.icontec.org and visit this link for more information on MinMinas www.minminas.co.gov.

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**William (Bill) Beile Retires**

One of CANENA’s founding fathers, and the longest standing CANENA Technical Harmonization Chair, has decided to retire. Bill, a 20 year CANENA member from the United States, represented Allied Tube and Conduit, An Atkore Company, and the metal conduit industry as Chair of THC 23A, Metal Electrical Conduit, and Fittings for Conduit and Cable, as well as Chair of several 23A THSCs covering a scope of electrical metal conduit and tubing. Under his leadership, the committees he chaired harmonized tri-national standards for Electrical Rigid Metal Conduit and Electrical Metallic Tubing. Bill recalls that “When the THSCs first started, metal conduits were not even considered electrical products in Mexico. Besides harmonizing deeply rooted legacy requirements in separate standards, the industry had to simultaneously establish a completely new culture for the products and their important role in electrical safety.”

Bill taught us all a lot about the value of harmonization in support of trade opportunities. His dedication and leadership will be missed but his many CANENA and industry friends wish Bill a long and well deserved retirement.
Secretary General Report – Continued from Page 3

responsible of the THC/THSC Chairman, the THC/THSC Secretary and the Publication Coordinator, from project initiation to the publication of a standard’s project. The first comprehensive review of the Project Trackers is expected to occur at the next CANENA Chair and Secretary Meeting.

The CANENA Procedural Operations Subcommittee is also focusing on process improvements, the goal of which is to reduce the number of steps needed to revise an existing harmonized standard. They will begin by mapping out the standards harmonization process to identify opportunities for improvement and then reengineer the process. The intent is to reduce the overall time and complexity associated with standards harmonization and maintenance. In addition, this subcommittee will be addressing specific member concerns regarding proposals to revise an existing harmonized standard submitted outside the normal revision cycle period and also intends to reengineer and simplify the project initiation process.

The subcommittee has already begun developing web based training modules for all harmonization procedures and tools and will be coordinating with the CANENA Marketing and Communications Subcommittee to standardize and compact the modules. The goal is to have all the modules ready and implement all at the same time.

Let me conclude by personally thanking all the contributors and volunteers that support CANENA and its activities.

From the President – Continued from Page 1

Throughout the region and the world new technology is materializing faster than we can write standards and codes. As our industry addresses this challenge, we need to evolve CANENA into a more supple and resilient process always to be considered part of the solution. Globalization of economic activity is reflected in the standards world. Our North American standards based electro-technical infrastructure is immense and well developed requiring great effort to maintain while at the same time becoming more actively engaged in IEC activities. Other developed regions of the globe are more aligned towards legacy European and IEC standards based infrastructures while the many emerging economies are considering the important decisions on standardization for both the short- and the long-term. Increasingly, CANENA technical activities are taking on more of a global scope being asked to consider the value of harmonizing legacy North American practices with sometimes quite diverse options employed in IEC.

If I may reflect on our demographics, I realize that many colleagues in CANENA have seen the birth of CANENA 20 years ago and many of CANENA’s founders have since retired. I call for those who have been joining CANENA in the last few years to affirm and deepen your commitment to consensus-based standards and to start involving yourselves in the future CANENA, through more active memberships and creation of new harmonization projects, but also in our governance Committees. CANENA is a volunteer organization, it will become what the members, those involved, will forge it to be.

Please sustain and support your CANENA.

Pierre Desilets

Without you the inherent challenges in harmonizing electrotechnical requirements in the Americas would remain a vision of the future and not the reality we enjoy today.

Joel Solis

Thanks to the 2012 CANENA Supporting Company & Association Members

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