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FOCUS ON: REGIONAL PARTNERSHIPS

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USNC Elects Kevin Lippert as its New President!

by Tony Zertuche, General Secretary of the USNC



As many of you may know, Mr. John Thompson retired at the end of 2018, leaving his role at Underwriters Laboratories, Inc. and vacating the position of USNC President. Following the announcement of John's retirement, the USNC immediately took action to fill this crucial role in order to avoid any gaps in representation and leadership.

I am pleased and honored to announce that Mr. Kevin Lippert of Eaton Corporation has been elected as the new USNC President by our Council and Voting Members. Kevin J. Lippert is the Manager, Codes & Standards with Eaton Corporation in Moon Township, PA. He is responsible for their electrical sector's overall

codes & standards domestic and international strategic direction.

Mr. Lippert will immediately take over John's unexpired term (2019) as USNC President and will serve a complete first, three-year term (2020-2022). As the USNC President, Mr. Lippert will also serve as the USNC Member of the IEC Council Board and leader of the USNC delegation at all meetings and events.

Thank you for your support throughout this transition process and we look forward to continuing our successful partnerships under the leadership of our new USNC President!

USNC 2019 IEC YOUNG PROFESSIONALS COMPETITION



The IEC's Young Professionals Workshop will again be held this year at the 83rd IEC General Meeting in Shanghai, China, 21-25 October 2019. An in-depth, multi-day workshop will bring together young professionals from around the world who are at the start of their careers in electrotechnical standardization and conformity assessment, and who have each been selected and recognized by their IEC National Committees.

Criteria and Nomination Process

Nominations (in PDF form) should be submitted to Kendall Szulewski-Francis (ksfrancis@ansi. org), USNC Sr. Program Administrator, as soon as possible.

Cooperation in the Americas

By Amaury Santos, Regional Director of IEC - Latin America Regional Centre



Since it opened in 2007, the IEC Latin America Regional Centre (IEC-LARC) has served as the focal point for IEC activities in the region.

Based in Sao Paolo, Brazil, LARC actively encourages the participation in IEC activities on international standards and conformity assessment systems. It serves as the local hub for IEC national committee (NC) members in Latin America and the Caribbean region, which includes seven member countries—Argentina, Brazil, Chile, Colombia, Cuba, Mexico and Peru. In this role, LARC seeks to ensure that stakeholders understand the importance of standardization and conformity assessment for the development of a market offering quality products and to enhance participation in IEC committees.

LARC also provides support to the 24 countries in the IEC Affiliates Country Programme which aims to provide developing countries with the opportunity to participate in IEC work without the financial costs. These countries can initially select up to 200 international standards for adoption, are encouraged to set up national electrotechnical committees (NECs), and participate in IEC technical committee work. In some cases, this programme has served as a stepping stone towards IEC membership. This was the case for Peru, an affiliate country since 2002, which became a member of the IEC in December 2017.

In the past year, LARC has noticed an increase in the number of enquiries about the IEC Conformity Assessment Systems in relation to concerns about the quality of products. This is, in part,



the result of the increased awareness about the importance of international standards and conformity assessment. LARC makes a concerted effort to offer training, seminars and workshops on topics of interest in the region, like conformity assessment. Other topics that have been addressed include electricity access, energy efficiency and smart energy.

LARC also cooperates extensively with regional organizations involved in standardization work to help promote the importance of standardization and conformity assessment. This includes organizations such as Pan American Standards Commission (COPANT), the Council for Harmonization of

Electrotechnical Standards of the Nations in the Americas (CANENA), AMN-Mercosur and the Andean Community.

In May 2018, the IEC and the Caribbean Community (CARICOM) Regional Organization for Standards and Quality (CROSQ) signed a memorandum of understanding in which they agreed to exchange information on standardization and promote communication, facilitate the use of IEC Conformity Assessment Systems, and participate in annual meetings and workshops.

LARC also participates in the activities of the Forum of the IEC National Committees of the Americas (FINCA).

Established in 2007, FINCA members include Argentina, Brazil, Canada, Chile, Colombia, Mexico, United States and, most recently, Peru since it became an IEC member. Other IEC members in the region as well as affiliate countries are encouraged to participate in its meetings.

In addition to working together to promote the importance of standardization and conformity assessment, the IEC and FINCA seek to ensure that the standardization process is aligned with the demands of the market and to increase the participation of experts in the Americas within various IEC committees. A cooperation agreement between the IEC and FINCA was signed in October 2017.

While Canada and the United States are outside of the region covered by LARC, cooperation between LARC and these countries remains essential. Both are an integral part of the Americas with wide influence and vast experience that can be shared with IEC members in the Latin American and Caribbean region.

Cooperation with Canada and the United States is prevalent in regional organizations such as FINCA, COPANT, and CANENA where IEC supports the opportunity to encourage dialogue about IEC standardization and conformity assessment activities.

In addition, both Canada and the United States have worked directly with NCs in the Latin American region. For example, the IEC mentoring programme between CROSQ and the USNC provided mentored countries with the opportunity to learn more about successful standardization and conformity assessment practices in the United States.

This year, LARC plans to emphasize dialogue among IEC members and affiliates in the region, seeking greater participation and integration in the decisions taken at the international level of the IEC. Moving forward, we will continue to stress the importance of strengthening our representation in IEC standardization and conformity assessment activities not only in quantitative terms but more significantly, in terms of qualitative presence.

As countries become increasingly interconnected, international standards and conformity assessment have a key role in opening markets and ensuring the quality, safety and interoperability of products. Finding opportunities to share information and learn from each other allows everyone in the Americas—from the north to the south—to benefit.

UPCOMING EVENTS

April	APCF & PASC
8-11	Wellington, New Zealand
April	IEC Processes and Procedures Training
29	Rockwell Automation, Milwaukee, WI
April	TAG Leadership Workshop
30	Rockwell Automation, Milwaukee, WI
April 30–	CAPCC/TMC/Council Meeting
May 2	Rockwell Automation, Milwaukee, WI
May	COPANT
6-10	Cartagena, Colombia
May	National Committee Secretary Mid-Year Forum
14–15	New York, New York
June	IECEE MC
5–6	Santiago, Chile
June	SMB/CAG Meeting
16–17	Geneva, Switzerland
June	IEC/SMB and ISO/TMB Joint Meeting
18	Geneva, Switzerland
June	CAB/CAG Meeting
17–18	Geneva, Switzerland
June	IEC Council Board
19	Geneva, Switzerland
September	CAPCC/TMC/Council
10-12	AAMI, Arlington, VA
September	IECEx MC
25-27	Dubai, UAE
September	FINCA
25-27	Lima, Peru
October	83 rd IEC General Meeting
21-25	Shanghai, China
November	World Standards Week
4-8	Washington, DC

Global Dynamics Confronting the United States Electrical Industry

By Joel Solis, General Secretary of CANENA



"One thing about which fish know exactly nothing is water, since they have no antienvironment which would enable them to perceive the element they live in." - Marshall

McLuhan, War and Peace in the Global Village (1968)

The Beginning of Electricity

The genesis of the electrical industry occurred in 1882 when Thomas Edison pioneered the first electrical distribution system based on Direct Current (DC) to produce and distribute electricity to customers in New York's financial district. The use of DC as the basis for electrical distribution swept the country but came with technological limitations which restricted its range. Nikola Tesla solved the range limitation of a DC distribution system through his invention, the induction motor, commonly referred to as the Brushless Alternating Current (AC) Motor and transformer. The three phase AC motor could efficiently convert electrical power to mechanical power and vice versa. The transformer could step up and down AC voltages thereby allowing for the transmission of AC power by exponentially longer distances than a DC distribution system.

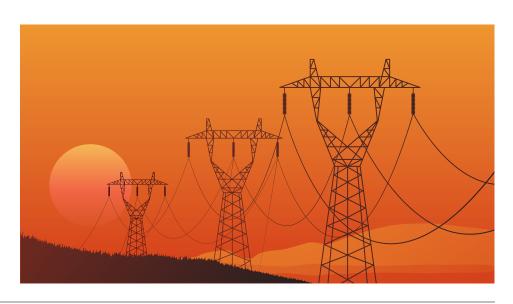
In order for Tesla's inventions to have the significant impact in commerce that he had envisioned, he would need funding to manufacture on a large scale and to market it to consumers. George Westinghouse, who founded the Westinghouse Electric Company in 1886, placed his faith in Tesla's AC system. To demonstrate the value and practicality of Tesla's AC system to the world, Westinghouse Electric deliberately underbid and won the contract to light the 1893 Chicago World's Columbian Exposition. The event quickly converted skeptics to Tesla's AC system, placing electricity at the center of everyday life.

Westinghouse Electric, having stretched its financial resources as a result of a prolonged fight over standardizing electrical generation and distribution based on Tesla's AC system, was released from its obligation of paying royalties to Tesla for the use of his induction motor. Emil Moritz Rathenau, having obtained the rights to Edison's patent for the incandescent light, formed a company which was to become known as the "Allgemeine Elektricitäts-Gesellschaft" (AEG). AEG quickly diversified into providing AC transmission systems, made possible by Nikola Tesla

having abandoned his patents. AEG quickly became the largest German electrical company, spreading the use of Tesla's AC system to the rest of the continent, and established the German electrical industry as the main competitor to the U.S. electrical industry. Standardizing on electrical generation and distribution based on Tesla's AC system was a significant achievement for North America and Europe. Electricity has since become recognized as the most important invention of all time. It has been the key to unlocking discovery and enabling invention in all fields of learning, making it the engine of the modern economy.

Electricity in the World Today

Today, there are two predominate types of power transmission and distribution systems that serve as the foundation of systems used throughout the developed world, i.e. the North American and European



system; visually distinguishing between the two is difficult since both systems are comprised of similar components and technology such as poles, transformers, conductors, etc. The differences between the two systems effects electrical equipment design which has to take into account installation practices, transmission frequency, single vs three phase voltage, distribution voltage level, receptacle type, and grounding system.

There is only one example where the two types of power transmission and distribution systems have been deployed under a single national umbrella. Eastern Japan, which includes Tokyo, Kawasaki and Yokohama, uses the European 50 Hz AC system model. Western Japan, which includes Osaka, Kyoto and Hiroshima, use the North American

60 Hz AC system model. The decision to deploy the two types of electrical power grids originates with Tokyo purchasing generators from AEG in Germany in 1895. The following year, Osaka purchased generators from General Electric. Interconnection between the two regions has been made possible through the use of High Voltage Direct Current (HVDC) transmission lines and substations at the boundary of the two regions. The substations are costly to operate due to conversion losses. Differences between European and North American AC systems have affected the electrical safety systems developed to support each approach.

The U.S. electrical industry engages in self-regulation through voluntary efforts to develop electrotechnical safety standards and installation codes. Much of the electrotechnical

safety work is undertaken by Underwriters Laboratories (UL). Its standards panels are made up of representatives from authorities having public safety responsibilities, electrical shock experts, electrical fire experts, casualty experts, and electrical manufacturers. The same can be said regarding installation code work undertaken by the National Fire Protection Association (NFPA). The result is that the U.S. electrical industry continues to meet the challenges of satisfying ever evolving consumer needs and maintain electrical safety through voluntary collaboration. Following the signing of the North American Free Trade Agreement (NAFTA), the U.S. electrical industry sought to extend the model of voluntary collaboration to its counterparts in Canada and Mexico. The result was the formation

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of the "Council for Harmonization of Electrotechnical Standards of the Nations in the Americas" (CANENA). CANENA's objective is to advance regional harmonization of electrotechnical product safety standards for equipment intended for use in the North American-type distribution system. This is done by reducing technical barriers to trade caused by differing national conformity assessment and product installation criteria. Regional cooperation efforts such as CANENA have not been promoted as international standardization.

In 1985, Europe implemented its "New Approach" of adopting legislation (EU Directives) that defines essential requirements in relation to safety. Europe relies on the European Commission to issue standardization mandates to its European Standardization Organization, i.e., CENELEC, in a public-private partnership to prepare standards. An ambition of CENELEC is to shape internationalization by promulgating European Standards as International Electrotechnical Commission (IEC) standards given its technical cooperation agreement with IEC. The EU policy, known as "primacy of international standardization," is to closely link European and IEC standards in order to provide a competitive advantage for the European electrical industry. The policy is embedded in the EU's various trade agreements, under their Technical Barriers to Trade Chapter, which requires IEC standards be followed.

Given the electrical industry was born here, it would seem U.S. standards and product installation codes would be the predominate choice used throughout the world. While U.S. standards and installation practices are world class, meeting the principles of international standards as laid out

by the World Trade Organization's Technical Barriers to Trade (WTO TBT), they lack the support of a national standardization policy to promote the system of U.S. electrotechnical safety standards and installation codes as international standards bodies. The U.S. electrical safety system has had limited success in being incorporated into the International Electrotechnical Commission (IEC) standards. As an example, North American wire gauge "AWG" and kcmil conductor sizes, fundamental to the North American electrical system model, are not recognized cables in IEC 60228, Conductors of Insulated Cables. IEC 60228 is a fundamental building block for all IEC cable product standards. According to IEC Technical Committee 20 (TC 20), Electrical Cables, "...the inclusion of non-metric cables would be a backward step" and "...the best estimates are that between 80 and 90 percent of the usage of AWG sizes is in one country, USA." The view, while divorced of a rational safety argument, is understandable when one considers the makeup of TC 20 is dominated by EU member countries that are bounded tightly together by a common market, making up approximately 40 percent of its membership.

The WTO TBT principles for international standards have failed to address representation by countries that have formed a common market, allow for the free movement of goods, services, capital and persons, sharing a common currency, in effect acting as a unified economy. The result has left the U.S. at a competitive disadvantage in the global arena, posing as an insurmountable obstacle to expanding the market of U.S. electrical system beyond North America.

According to the "Worldwide Threat Assessment of the U.S. Intelligence Community," it is reported that

"China and Russia are expanding cooperation with each other and through international bodies to shape global rules and standards to their benefit and present a counterweight to the United States and other Western countries." "They seek to use the [International Organization for Standardization] to gain advantage for their national industries and move toward more state-controlled Internet governance."

The future of the U.S. electrical industry to adapt, improve, and gain greater acceptance worldwide will depend on its ability to influence national policy that enhances its competitive advantage to serve the electrical needs of a world that is rapidly urbanizing. The growing urbanization in Asia and Africa offers enormous opportunities to those having a sense of urgency to get policy, and specifically standardization, right in the near term. But for the industry to have greater market access, it must consider taking fundamental action in one of two approaches demanding greater incorporation of the North American electrical system requirements into IEC standards and/or propose policy which supports the designation of North American regional standards as international standards.

Unlike Marshall McLuhan saying that a fish knows nothing of water since it has no anti-environment to enable it to perceive the element it lives in, the U.S. electrical industry needs to decide on how best to bridge the differing environments in which it operates to promulgate standards to best shape internationalization.

Driving Value

The participation by stakeholders is contingent on whether the

problem or the activities within committee is something they care about and the impact it has on them. The members get real value when they are able to promote knowledge sharing and develop solutions together. The committees need to change the conversation and focus on outcomes versus outputs. The secretary could assist in facilitating the knowledge sharing process by identifying the right audience and setting up the framework for a collaborative environment. A chair could empower his or her committee to serve in leadership roles such as assigning a vice-chair, identifying a researcher, an editor, knowledge managers, etc., while still encouraging collaboration in a way that achieves their final outcome. Empowerment and leadership also promotes connectedness and members are more likely to value their participation in committees who value their personal contributions.

Ease of Participation

The committees need to have a clear process and procedures for prospective participants to join the committee, onboarding training, and

support during their involvement within the committee. The ease of participation is important for stakeholder's retention and to keep them engaged. Members find it very difficult to work with a committee with disorganized information, very little or no process and procedures, and very little or no training to get them up to speed when they join.

Sometimes, there are operational challenges for members to be involved with the work such as funding, time, and skills. There are situations where a member might not be able to attend a meeting as the meeting is scheduled internationally or somewhere far from their home location, the meeting time/date is in conflict with other commitments, or they just do not have the time to participate, and/ or they might not have the right skills and need to consult internally to provide responses.

It is easy for members to participate when the goals and objectives of the committee are clearly outlined, frequent progress reports are provided, and the committees allow them to participate effectively.

Outcomes

The outcomes must be created together so it is a win for all. Therefore, it is extremely important to follow the consensus process with transparency. Instead of return on investment, members should instead focus on the importance of return on engagement. The chair and secretary play a very important role in driving the right outcomes for the committee. They must work closely together to understand the goals and objectives, needs of the members, and follow the procedures to achieve the correct outcomes. There should also be a way to measure these outcomes and informing members periodically about these outcomes.

In conclusion, the standards development process is successful when members see a value to their participation in the work, barriers to participation are low, and they see a potential to achieve outcomes by collaborating and sharing knowledge. IoT emerging technologies such as augmented reality and artificial intelligence could also play a big role in keeping committees healthy.

DECISION DEPOT

This column provides easy access to recent decisions that have been made regarding IEC and USNC policies and procedures that directly affect our members. Click the links below to access the recent decisions.



SMB/6680/DL

List of decisions taken at SMB meeting 164, held on 19 February 2019 in Montreux, Switzerland.

Important Decisions to note:

- » SMB Decision 164/13 Proposal from the Belgium NC for a new TC on Personal e-Transporters (PETs)
- » SMB Decision 164/14 Proposal from the Japanese NC for a new PC on Binary Generation Systems
- » SMB Decision 164/15 SyC AAL Active Assisted Living

Standards in the New York Times

Joe Bhatia, President & CEO of the American National Standards Institute (ANSI)



Dear colleagues, I'm pleased to share this link to an article published in last week's Sunday edition of the New York Times focused on the U.S.

voluntary standards and conformity assessment system.

This opinion piece was written by Andrew Russell and Lee Vinsel, two academics and technology experts who have been engaged with ANSI and the standards community, but submitted the article independently. Prior to publication, ANSI's communications department was contacted by the Times for verification of some of the facts about the Institute's history and role in the standardization system.

ANSI is very pleased with the positive tone and accuracy of this article, highlighting the critical importance and ubiquitous impact of standards, "the silent and often forgotten foundations of technological societies." It's a fitting tribute in a premier news source to the outstanding collaborative



work of the tens of thousands of standards and conformity assessment professionals, experts, and volunteers helping to drive U.S. competitiveness and innovation for the benefit of all citizens. We encourage you to share the article and help spread the word about "the Joy of Standards." And we thank you for your continued engagement with ANSI and the standardization community.

USNC LINKEDIN



Would you like to stay updated with the news and events of the USNC? Join our LinkedIn Group to keep updated on and provide input on all issues electrotechnical that can affect your life from your own home to the other side of the globe! If you have any information to share on the LinkedIn, please contact Kristen Palma (kpalma@ansi.org).

COPANT

By Kory Eguino, Executive Secretary of COPANT



About COPANT

The Pan American Standards Commission (COPANT) is a non-profit civil association that brings together the national standards

bodies (NSBs) of the Americas, which currently have 32 active members and 9 adherent members. The vision of the Commission is to promote cooperation for the development of the region through efficient and relevant national standardization, active participation in international standardization, and the use of conformity assessment procedures in accordance with international practices.

To this end, COPANT works on the following strategic priorities:

Capacity building: This consists of identifying, promoting and supporting activities to build the standardization

infrastructure and capacities of COPANT members, motivating communication, cooperation, and mutual collaboration.

Increase participation in international work in specific economic areas: This consists of strengthening the ability of COPANT members to prioritize and effectively participate in the work of the ISO and IEC technical committees, identifying strategic areas of importance to each member body.

Promote effective conformity assessment services: Seeks to facilitate the use of international practices, addressing the needs of members

In accordance with the foregoing, COPANT is the benchmark for standardization and conformity assessment of the countries of the Region and their international peers. To that extent, COPANT promotes the development of

all its members through mutual cooperation and providing support to its members. This leads to greater visibility and active participation in the development of international standards, reflecting the reality of each country, and thus generating opportunities to access new markets by improving the quality and safety of products and processes.

The economy of the Americas comprises more than 1 billion people, representing an important market for international trade. The wealth of the states in the Americas varies, although the poorest are well above the poorest states of other continents in terms of GDP and living standards.

However, the participation and involvement of the American countries in the developing of international standards is still very limited; even if the majority of our members were also members of ISO, their participation in the technical work is restricted. This



Participants of the Workshop in Lima, November 2017

situation is even worse in the case of IEC, where most COPANT members only participate in the IEC Affiliate Countries Programme.

This poses a great challenge to COPANT and how we can support our members to be more active and efficient in their international involvement.

As COPANT, we develop training programs to support capacity building inside NSBs, but also among their stakeholders.

Specifically—with regard to promoting a greater level of preparation, coordination, and participation of the countries members of COPANT in the International Committees of IEC—we have organized some events for this purpose, and there are several in the pipeline.

COPANT Focal Group on IEC

Recently, we have created a COPANT Focal Group on IEC to generate forums for the exchange of information and analysis on the IEC Technical Committees of interest to COPANT, as well as organizing dissemination and training events according to the needs of the region. This Focus Group replaces the technical committee of COPANT 151 on Electrotechnics and Smart Grids.

On its first meeting, on October 9, 2018 in Mexico City, it was decided that this focal group will also be in charge of **coordinating a training program** so that members of the IEC Affiliate Program receive more training and will be able to participate more proactively in the IEC activities.

It was proposed to extend the training in the following topics:

- » Participation in IEC;
- » Affiliates: Rights, obligations, access, adoption of standards, operation of NECs, among others;
- » Adoption of international standards;
- » IEC conformity assessment schemes; and
- » Specific technical training on participation, in particular IEC Technical Committees

In order to carry out these activities, COPANT has the strong support of the IEC regional office for Latin America and the Caribbean, and also of the members of FINCA, the Forum of National IEC Committees of the Americas.

COPANT Workshops on IEC involvement

On the other hand, together with IEC-LARC, and the support of a regional project, with funding from PTB, we organized several workshops in the region to support Latin American and Caribbean countries in their activities to increase their participation in the IEC's standardization work and to share the advantages from participating in the IEC Affiliate Program.

We had our first event in Paraguay, then Costa Rica, and the last one took place in Peru.

The regional workshop was aimed at the personnel of the national standards organizations, regulators, or responsible national policies in electrotechnics and energy in their respective countries.

The general topics addressed during this workshop were:

» The importance of conformity assessment for public policies to protect the consumers, users,

- and markets against bad quality products and systems
- » IEC product certification schemes
- » Renewable energy schemes and conformity assessment for sustainable energy—IECRE

The main themes analyzed during the workshop were:

- » Update of IEC activities and of the affiliate country programme
- » Peru's participation in the IEC and their experience in establishing a NEC (National Electrotechnical Committee)
- » The importance of promoting the work of the NEC at the national level, and how to do it
- » How to structure a mirror TC, and why it is important for the country
- » National adoptions of IEC international standards in Mexico, and a process for making comments on working documents
- » Experience of participating in a mentoring program

Future Activities

COPANT is proposing a 3-year project to IEC – Affiliate Country Program, in order to achieve our main goal of promote a greater level of preparation, coordination and participation of the countries members of COPANT in the International Committees of IEC. If this project is approved, we will have a work plan, with the necessary budget, to carry out coherent and continuous activities that allow us to achieve the objectives we have set for ourselves.

Regardless of obtaining approval for this project, we have already scheduled a series of activities for this year that include virtual training and promoting the participation of Affiliates in FINCA meetings.

Save the date!

IEC 2022 General Meeting, Host City: San Francisco

Sponsor the IEC 2022 General Meeting, hosted by the USNC

For only the seventh time since 1904, the United States is gearing up to host the IEC General Meeting, 31 October – 4 November, 2022, in San Francisco. Organizations with a stake in all areas of electrotechnology are invited to demonstrate their commitment to international standardization and conformity assessment through sponsorship of the 10-day event.

For more information, see the **IEC 2022 Sponsorship Brochure** or contact Kendall Szulewski-Francis at: **ksfrancis@ansi.org** or 212-642-4965.

Thank you to the organizations already on board as IEC 2022 sponsors!























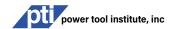














ABOUT THIS PUBLICATION

The USNC Current newsletter is distributed to the constituency of the U.S. National Committee (USNC) of the International Electrotechnical Commission (IEC). It provides updates on technical activities and other information of interest to members of the electrotechnical community. Some articles are reprinted with permission from the IEC News log.

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Contributions are gladly accepted for review and possible publication, subject to revision by the editors. Submit proposed news items to: Kristen Palma, **kpalma@ansi.org**