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PEER TO PEER

What skill should someone entering the standardization field focus on developing?

By Elisa Celada

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When we hear the word standardization, we immediately think about engineering, mathematics, and other science-based disciplines. But I truly believe that the social sciences are an important part of standardization as well.

The social sciences have been invaluable in helping me navigate and succeed in this complex world. To achieve success in standardization, certain skills must be developed—and the social sciences can assist in that process.

For instance, in standards development working groups, the people who can most accurately and compellingly advocate for their own interests are those who have the power to persuade, which is an important skill in negotiating and building consensus. In the same way, those who network well and understand the environment find it easier to establish relationships and meet their work objectives.

Of course, technical knowledge is important, but if people cannot share technical information effectively, their knowledge will have no impact. Poor communication skills can frustrate people with expert knowledge of certain products or processes but who cannot build or find consensus with colleagues.

Consensus is the main point of standardization. This is not an individual activity; standardization is a mix of ideas, points of view, and realities. Accomplishing consensus can necessitate long discussions and the exchange of ideas and experiences.

Soft skills thus are critical to facilitating work in this field, yet these skills are often disregarded. Those pursuing engineering-related careers in standardization often learn that the social sciences have a place in this field as well.

Every human being has special and unique proficiencies. The wonder of this subject is cultural and academic diversity applied to technical and human approaches.

Standardization is a way of life; it is a form of continuous improvement for all the processes that have to do with our day-to-day lives.

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Communication and Leadership

By Alexis Shoemaker

Underpinning successful leadership is effective and impactful communication. Communication "fosters trust, cohesion, inclusiveness, and psychological safety, which are all attitudes essential for fruitful collaborations" (Benishek et al. 2014) within and outside of a team.

In this article, I will address communication to equip leaders with the tools to kick-start meaningful and lasting change. First, I will discuss the characteristics of effective communication more generally. Armed with this foundation for impactful communication, I will then focus on how best to convey guiding principles and vision.

CHARACTERISTICS OF EFFECTIVE COMMUNICATION

Well-executed communication is a vital facet of successful leadership. Messages of any kind should be translated succinctly into written and verbal forms to boost impact and resonance. To this end, Floris van der Leest (2022) provides a useful framework for crafting effective communication, explaining the necessity for "clear, correct, complete, concrete, concise, courteous, coherent, consistent, and creative communication." Benishek et al. (2014) expand on this to include openness (not holding back) and adaptability.

Ultimately, communication "allows teams to mitigate information overload as well as handle and adapt in dynamic situations, predict team members' needs, foster seamless coordination, and execute plans efficiently" (Benishek et al. 2014). Incorporated into this view of communication are timely and precise feedback and leaving room for processing changes and adapting to new contexts, all of which "lead to functional outcomes for the entire team" (Benishek et al. 2014).

So, you have your message, but how do you effectively spread it? Leveraging existing information exchange protocols or information highways to foster presentation, recall, and shared understanding of the message is key. To do this, leaders should focus on the flow of information (such as brainstorms, workshops, regular meetings, interactive websites, and boundary spanners) and work to improve these flows (Benishek et al. 2014). Those leaders "who employ information exchange protocols have greater team attendance, greater satisfaction, and a decrease in missed information" (Benishek et al. 2014).

Additionally, leaders should consider using closed loop communication, "a process of acknowledging and clarifying information with the sender of the communicated message to assure that the recipient did receive and comprehend the information in the same manner it was originally intended" (Ben ishek et al. 2014). This method of communication is a process of quality assurance and is necessary when first articulating and communicating new concepts (whether concrete or abstract). Ultimately, the combination of effectively

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developing and thoughtfully spreading communication sets the stage for lasting impact.

COMMUNICATING GUIDING PRINCIPLES AND A VISION

Once the guiding principles and vision have been developed and refined, and information highways have been identified and fine-tuned, it's time to spread the word. John Kotter (2011) explains that the leader should use "every vehicle possible to communicate the new vision and strategies. Teaching new behaviors by example of the guiding principles." Kotter identifies three actions of executives who communicate well:

First, these successful leaders incorporate their vision messages into hour-by-hour activities, seeking opportunities to tie ideas, decisions, and actions back to their guiding principles and vision. This process of message articulation and regular reiteration engrains the direction into the fabric and daily behaviors of the team.

Second, they effectively use every possible channel, especially those being wasted on nonessential information, to communicate their vision. For example, "they take ritualistic, tedious quarterly management meetings and turn them into exciting discussions of the transformation."

Finally, and perhaps most importantly, leaders "consciously attempt to become a living symbol of the new corporate culture," communicating not just verbally or in writing, but by truly embodying their message. Essentially, "communication comes in both words and deeds, and the latter are often the most powerful form. Nothing undermines change more than behavior by important individuals that is inconsistent with their words."

CONCLUSION

Developing impactful written and verbal communication is the first step toward ensuring a message's resonance. With a well-written message in hand, understanding the current communication highways is the natural next step. This takes time and effort and involves inquiring with team members about current communication habits and areas for improvement. However, this is time well spent, as it is these information exchange protocols that the leader will later leverage.

With guiding principles and a vision crafted into easily communicated bites and information highways identified and fine-tuned, it's time to unleash the message and begin the process of integrating the desired changes into the fabric of the team. At this point, the message has been sent both verbally and in writing, it is constantly linked to daily activities, and the team begins to shift. Now and in the future, the leader must consistently embody the change they wish to see, leading by example.

The next column in this series will discuss team development as it pertains to change leadership. Specifically, it will cover strategies aimed at enhancing the outcomes of teams both large and small amid change.

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PEER TO PEER

New Standards Needed to Fight Cancer in the Fire Service Industry

By Chandler Probert

In my research in the Textile Protection and Comfort Center at North Carolina State University, I work to better understand firefighters' chemical exposures. I was initially drawn to this industry after learning that firefighters have an increased risk of cancer. The fire service industry is investing significant resources to better understand firefighters' chemical exposures. While conducting my research, I have been working with standards and standards development processes to create methods that evaluate new decontamination methods and commercial products.

Firefighters, fire investigators, and other first responders often work in dangerous situations and occasionally life-threatening scenarios. Historically, thermal exposures have been the primary killer of firefighters. However, the introduction of the modern turnout (the protective ensemble worn by firefighters) has allowed firefighters to operate in dangerous environments with fewer injuries. The modern turnout is extremely protective and, when combined with mitigation strategies and protocols, can significantly lower the risk of injury. This has greatly reduced fatal injuries, although the number has remained at approximately 100 annually for the past few years.

Thermal exposures are an immediate threat, but chemical exposures have emerged as a more dangerous threat of late. The chemical exposures to which firefighters are subjected during a fire are not well understood. Older generations of firefighters would show off their dirty gear to new recruits, treating it as a badge of honor. Unfortunately, the "dirt" so proudly boasted about is often particulate matter that can house carcinogenic chemicals and is harmful if ingested or inhaled.

Over the past 30 years, researchers have studied firefighters' chemical exposures, cancer incidence, and mortality rates. Several studies have established that firefighters have higher rates of testicular, lung, and prostate cancer (to name a few) than the general public (Tsai et al. 2015; Ma et al. 2006; Daniels et al. 2014; Demers et al. 1994; Kang et al. 2008). Recently, in the summer of 2022, the International Agency for Research on Cancer declared that firefighters' occupational exposures are carcinogenic (Demers et al. 2022).

This confirmation of the negative health effects that occur from occupational exposures has prompted the fire service industry to acquire a better understanding of firefighters' exposures and develop strategies to mitigate these exposures. As researchers and firefighters better understand the chemical exposures that can occur on the fireground, the behaviors of firefighters will slowly begin to change. Traditional mindsets are slowly changing, and new practices that encourage routine cleaning are becoming ever more popular.

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In an effort to reduce firefighters' chemical exposures, several skin cleansing wipe products and soaps/detergents have hit the market. The main idea behind these products is to remove contaminants before returning to the fire station to minimize absorption through the skin. Although many companies have good intentions with such products, firefighters are left with more questions than answers—questions such as "Are these products effective?" and "Are these products safe?" and "Which product is best for me?" The research to answer these questions has not been able to catch up to the rapid adoption of these products by some fire stations.

At this moment, some data are available on some of these products, but there are some questions surrounding the data. The largest question is the relevance of the data, since it is not generated from a standardized test method. This is due to the fact that there is no standardized test method for wipe efficacy for fireground contaminants because of the complexity of human skin and the fact that fireground contaminants are mostly particulate matter or gases. To assess whether a wipe can or cannot remove a contaminant from human skin, a material with physical and chemical properties similar to those of human skin must be used in conjunction with a particulate or gaseous contaminant or surrogate. In the absence of such a material, any methods used to test wipe efficacy will fail to incorporate these critical variables, which play a large role in dermal absorption.

I have been working to identify a synthetic material that mimics the physical and chemical properties of human skin as well as develop a way to contaminate surfaces with particulate matter. My goal is to validate both the synthetic skin model and contaminants so that a standardized test method can be developed to determine the efficacy of decontamination products. This will enable firefighters to make informed decisions about which product may be best for them and reduce their exposures to harmful fireground contaminants.

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RESEARCH-ARTICLE

Technology in Agriculture

By Bruce Hawkins

The primary challenges facing production agriculture today are the following:

- an ever-growing global population;
- climate trends that affect growing seasons;
- the availability of water, seeds, fertilizer, and other resources; and
- a present and continuing labor shortage.

Population. The Earth's population continues to grow, with current predictions indicating farmers will need to feed 9.7 billion people by 2050 (as shown in Figure 1). This is a 50% increase in demand for food when compared to today.

Climate trends. Climate trends are also affecting agriculture. These trends include increased variability in temperature and rainfall.

Temperatures are generally increasing. On the positive side, this increases the length of growing seasons; on the negative side, higher temperatures can lead to drier conditions and less favorable growing seasons.

Rainfall patterns are also changing. Some areas are receiving less rain than in the past, while some are receiving more. The incidence of rainfall events is also changing, with more frequent occurrences of high rates of rainfall, resulting in runoff and the potential for higher rates of soil erosion.

Resource availability. The aforementioned changes are driving producers of agricultural products to look for any means available to meet the increasing demands of growing populations while using resources more efficiently. This is being done by trying to make every seed count, every drop of fertilizer and herbicide count, every drop of water count, and every grain harvested count.

Labor shortage. The population in agricultural areas continues to decrease. More automation and autonomy will be needed to help existing producers continue to grow more food in an efficient and sustainable way.

HOW ARE STANDARDS INVOLVED?

Traditionally, operator safety and protection, vehicle dynamics, tractor/implement compatibility, and performance testing have been the primary areas in which standards are applied to agricultural equipment. Advancements in automation and autonomy are expanding the need for new standards development in agriculture.

In the field, advanced technology is being used to face the challenges facing agriculture. The intent of this approach is to manage each square meter of soil in a manner that will optimize food production given the climate conditions while also optimizing resource use. Figure 2 illustrates the concept that advanced technology provides the means to manage a field in increments of a square meter or smaller.

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Figure 1.

This approach to optimization is applied to all operations in the field. The operations shown in Figure 3 include tillage, planting, applications of agricultural chemicals (including fertilizer, herbicides, fungicides, and insecticides), and harvesting.

Smart machines. Traditionally, increased productivity has come from larger and faster machines. In the future, productivity increases will come from the use of data in creating a smart machine. Technology is being applied to control machines and to create, gather and communicate data related to machine use and field use. This data is organized on a field-by-field basis.

These smart machines must know where they are going, what they are doing, and where they have been. A farmer can monitor what machine is in what field, what operation is being performed, and the machine's condition, such as fuel use and machine health. Figure 4 illustrates the application of this technology.

Data from machines can also be included in the soil optimization effort. This data can pertain to seed type, fertilizer type and amount, weed type, and yield data. A farmer can set up these systems ahead of time to ensure that the right seeds and other resources are applied to the right field by simply using a phone app.

Technology is also capable of dividing the field into small segments and assigning information to each segment. This information can include the following types:

- soil fertility, including nitrogen, phosphorous, potassium, and organic matter;
- the yield of any crop previously grown; and
- weed and plant disease history.

Figure 5 shows an example of a yield map. This map gives the farmer an indication of the yield on a segment-by-segment basis.

This type of information allows a farmer to vary the rate applications of resources. Each segment can be given the optimum levels of

Figure 2.

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Figure 3.

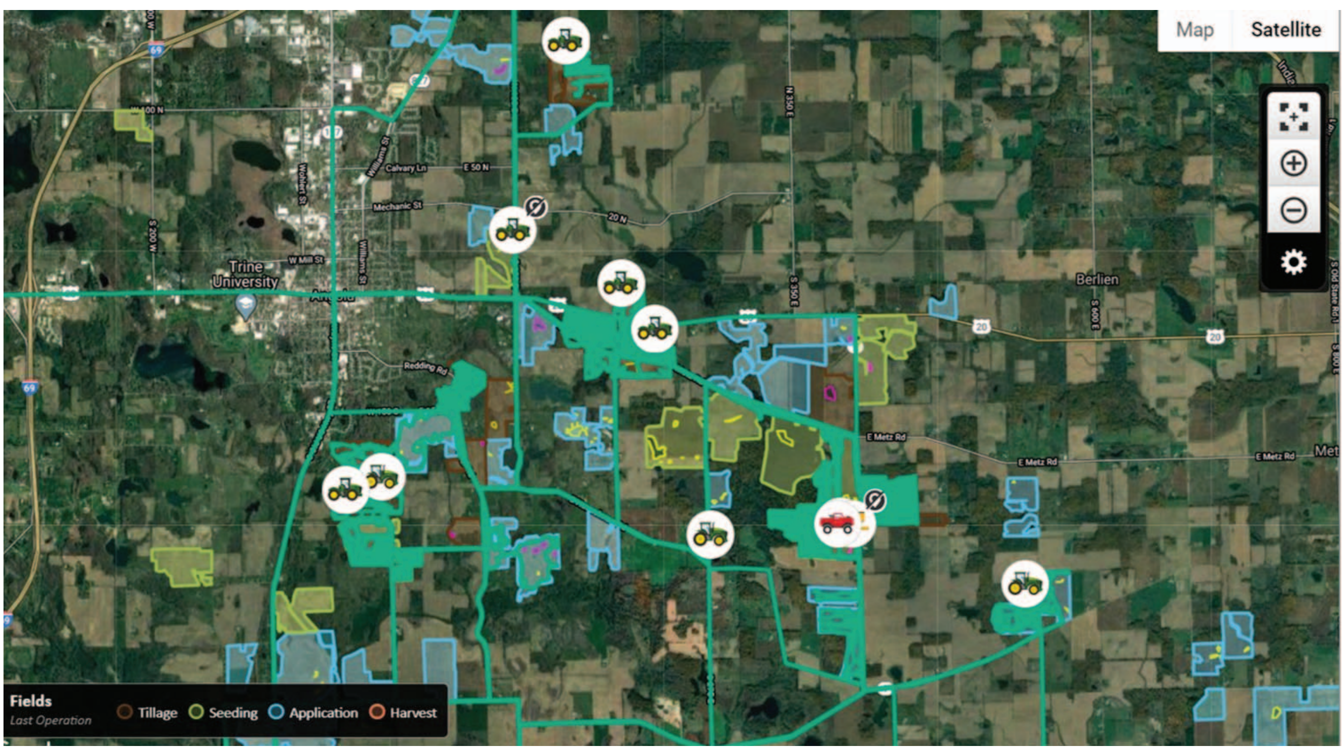

Figure 4.

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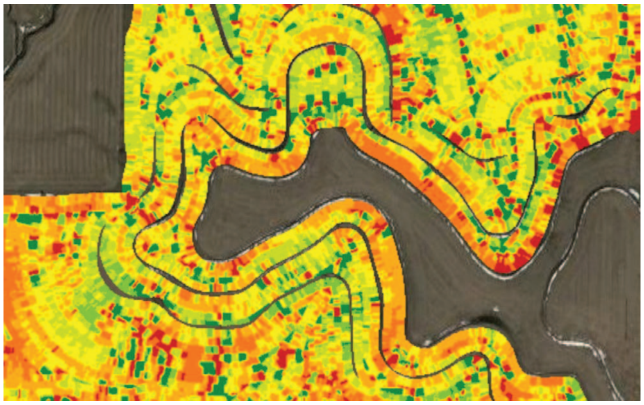

Figure 5.

resources that the soil can support, and the plants can utilize.

Tillage. Tillage consists of a tillage implement being pulled by a tractor driven by an operator. The tractor uses GPS, which allows for auto-guidance. Auto-guidance, used with the addition of the implement width, improves operating efficiency by controlling implement overlap from adjacent passes.

Auto-guidance, available since around 2000, automates the steering while the tractor is working in the field, but not when turning around at the end of the field. Recently, however, the turning function has become partially automated. New technology is also allowing full autonomy with no operator.

This tractor utilizes a vision system, artificial intelligence (both machine learning and rule based), sensors, and ultra-fast GPU processors to safely drive the tractor through the field. A farmer can not only monitor field activity but start a tractor in the field and supervise it with a cell phone or from the home office.

Planting. Planting involves a tractor pulling a planter. The tractor can use auto-guidance, just as used for tillage.

The planter is another complex smart machine, consisting of 24 to 60 electrically powered row units. Each row unit is controlled independently and can select one seed at a time and position each seed in a row at a precise distance from other seeds while traveling up to 15 km/hour.

Figure 6.

Independent control allows for row units to stop planting in areas that have already been planted, as illustrated in Figure 6. The planter can also apply fertilizer, herbicide and insecticide, all at variable rates.

Application. Application involves spraying a water and chemical solution on a field to eliminate plants that compete with the seeded crop for nutrient and water resources. Application is performed by a machine called a sprayer. The sprayer base unit is similar to that of a tractor, but it also contains a sprayer attachment with a foldable boom that can be up to 36 m in width. There are multiple nozzles positioned along the boom, and each nozzle can be controlled independently.

Today's smart machines also have cameras mounted on the boom. These smart machines use vision systems and artificial intelligence to identify plants that don't belong in the field and can spray an herbicide on that plant (and that plant only). The machine also can record the type of plant that was sprayed as well as the location of the plant in the field. This process is illustrated in Figure 7.

Again, the use of GPS machine positioning and knowing the boom width enables coverage of the field to be tracked. Individual nozzles can be shut off to prevent applying the solution to the same area twice.

Harvesting. Harvesting is performed by a combine, a self-propelled machine that cuts

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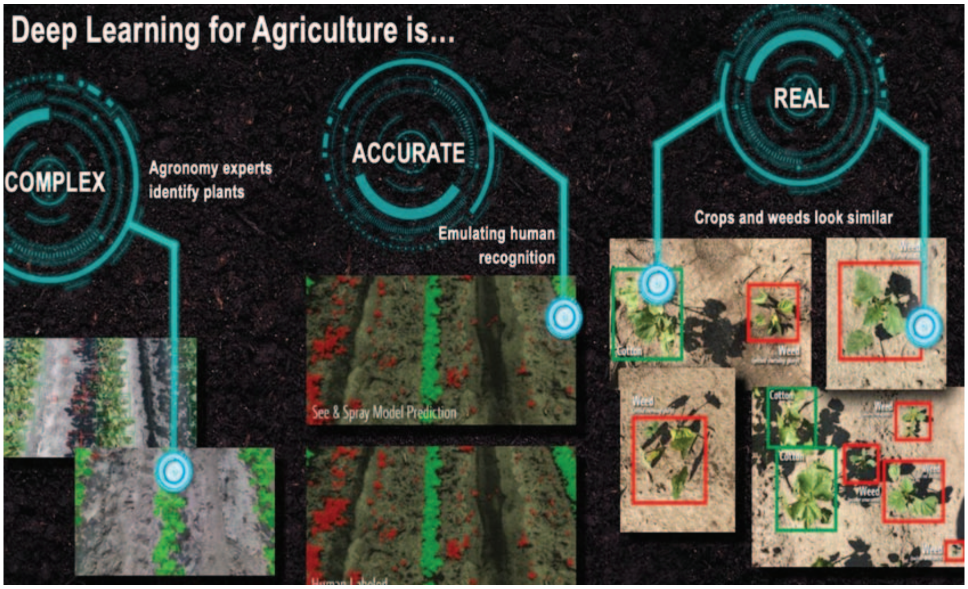

Figure 7.

and gathers grain and crop material from the field, as shown in Figure 8. The machine then separates the grain from the crop material and temporarily stores the grain prior to unloading.

This type of machine has many adjustments that historically were made by the operator once or twice a day as harvesting conditions changed. These adjustments were made while the machine was not operating. The adjustments are made either in the cab or in different areas of the machine itself. With a smart combine, these adjustments are made in real time as the machine harvests the field. They are made without any input from the operator and are displayed as shown in Figure 9.

Grain condition and grain cleanliness, along with other harvesting parameters, are

Figure 8.

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Figure 9.

continuously monitored using vision systems and sensors mounted inside the machine. Machine learning programs are used to analyze the grain moving through the machine and can calculate and implement the harvesting adjustments needed to be made.

In addition, combines utilize GPS and automated steering to guide the machine through the field. Yield data can also be continuously recorded and assigned to the position in the field where the yield was recorded, producing a yield map.

STANDARDS IN THE FUTURE

Today and continuing into the future, standards development and application are occurring in the following areas of agriculture: functional safety, data connectivity and security, robotics and automation, artificial intelligence, image processing and perception systems, sustainability, and high voltage electrification.

Participants in standards development and application include John Deere and other agricultural equipment manufacturers, academic institutions, trade associations, and regulatory bodies. As food demand increases, agriculture will continue to seek and apply new technologies to meet that demand, thereby driving the need for additional standards.

Bruce Hawkins is a staff standards engineer at John Deere. He participates in developing standards applicable to agricultural equipment and provides guidance to U.S. national standards programs related to agricultural machinery.

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RESEARCH ARTICLES

Shining a Light on Flashlights: A Standards Story

By Andrei Moldoveanu, CStd

The need for many standards is directly linked to marketplace realities. As discussed in an article published in the May/June 2021 issue of *Standards Engineering* SES publication, there is often an optimum time during which standards can help an industry. One particular case discussed in that article is what I termed "Normal Market Growth" case.

New products often fill unmet customer needs, resulting in strong initial growth. During the early stages, the key to success is differentiation through product performance or service. Standards at this stage are clearly not welcomed; in most cases, they would stifle innovation and slow the response to customer needs.

As time passes, competitors enter the market, addressing the same needs differently. That can create confusion or uncertainty about performance claims. At some point, such confusion or uncertainty threatens the overall market growth. That's when standards are called for help. They can address performance definitions (so customers can compare apples with apples) or interoperability (assuring that product A could be replaced with product B with no major disruption or expenditure).

As industries approach the need to standardize, several options exist to make that process manageable. SES has looked at many such processes and developed *SES 2: Procedure for the Development of Standards*, which is designed to guide standards professionals as well as newcomers through options at each stage of the process.

The following case study from the flashlight industry is a good example of challenges that were successfully addressed by adopting a flexible standardization process.

THE WILD WEST

Early in 2007, a couple of National Electrical Manufacturers of America members from the battery products section approached NEMA technical management with an interesting proposition about a product they made: flashlights. The situation they described was essentially that of a well-established industry starting to be seriously upended by new technologies and market developments that were transforming it into the Wild West!

One challenge was that LEDs were starting to make some serious inroads as very low-energy and long-lasting alternatives to the familiar incandescent bulb. The immediate consequence for flashlights was the substantive lengthening of the battery life.

Another development in the light source area was very high intensity discharge lamps that could project light substantially farther than light bulbs.

The Wild West manifested itself with commercial claims along the lines of "This flashlight can stay ON forever!" and "This flashlight can put a spot of light on the moon!"

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There was obviously no way to verify either claim.

Other performance characteristics, such as improved beam profile, light quantity or brightness, waterproof resistance, and drop resistance, were also advertised, but without any indication of how they were tested. Some "big box" stores started to look into ways to test products in their labs without the necessary expertise on hand for such a task. Additionally, the market started to be inundated with cheap imports that didn't make any performance claims but were sold at very low prices.

NEMA TO THE RESCUE

These were the reasons our members asked NEMA to come to the rescue. They knew that NEMA is a standards developing organization (and an ANSI-accredited SDO at that). They thought that a document standardizing the evaluation of flashlight-specific performance characteristics would restore some normalcy in the industry.

NEMA was indeed a good place to ask for such support. NEMA has at least two product groups involved in a flashlight: one for batteries, another for light sources. Another product group is involved with enclosures, and that could obviously be of help.

However, there were some complications. For starters, each NEMA product group traditionally writes their own product standards. There was no organizational precedent for a product involving two distinct product sections. Once NEMA management agreed to support the project, a solution to this problem was found by creating an ad hoc technical committee, the Flashlight Standardization Committee (FSC), dedicated to creating the standard sought by the flashlight industry.

The next step was to determine the nature of the document needed. Since the challenge the industry faced was to convince the market that most products will meet their advertised performance claims, members opted to develop an American National Standard (ANS). By the nature of its process, an ANS tends to achieve faster acceptability in the marketplace. The basic principles guiding the development of an ANS—primarily balance, openness, lack of dominance, and consideration of views and objections—are solid building blocks for gaining credibility in the marketplace. NEMA could have written the standard by itself, but since the target audience was the user community, inviting other key stakeholders into the drafting process was a key consideration.

ON TO THE RACES

Once the scope of the project was defined, the next step was to find flashlight manufacturers (other than the few original NEMA members) that were willing to spend time, and some money, developing the standard.

One complication NEMA faced was the fact that, by nature, its members belong to only one of the key stakeholder categories demanded in an ANSI standard development process: manufacturers, or "producers." To allow the manufacturers to secure an industry consensus and be able to defend it with other stakeholders less invested in the technology, NEMA proposed an alternative path. Producers would work within the NEMA ad hoc group to develop a standard draft and separately set up a consensus group to evaluate and approve it as the ANS they were interested in creating.

For a group of quite diverse product manufacturers that had never worked together, this process gave the industry a chance to establish its own set of positions that, later in the process, it could defend with solid arguments.

Having a good scope, a basic organization structure, and a plan was essential to the next stage of the process: recruitment. In addition to the fairly clear industry benefits, the pitch to manufacturers included two not-so-obvious ones.

One was the learning element. People not involved in standardization work often

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underestimate the huge learning opportunity it offers. You're sitting at the table with some of the best professionals in your field, debating the merits of each relevant product characteristic. The experience is priceless!

The other benefit is avoiding the potential for harm from not being at the table when standards requirements are being developed. Inadvertently, consensus requirements may negate an advantage of your product, or a requirement proposed by competitors may force you to redesign your product or impose new (and perhaps expensive) testing requirements on your company. Being there is the best offense and defense!

Using available industry reference lists and active help from the initial NEMA members, project staff recruited 15 flashlights manufacturers. Interestingly, the market leader declined to join the project. That's actually somewhat expected in these types of situations. Market leaders get to be leaders by pushing the envelope hard; to them, consensus looks like slowing down to the lowest common denominator, which is anathema to their marketing experts.

As the manufacturers gathered for their first meeting, they realized that the industry had branched out into several different application segments with very different needs, including general use, spotlights, headlamps, underwater flashlights, tactical (used with weapons), safety, industrial, sporting goods, (cycling, mountain climbing, etc.) and others. They needed some organization to bring order to the project.

At the first face-to-face meeting, FSC members refined the product scope, established the project flowchart, agreed on the structure of the standard, and clarified the financial aspects of the activity. They also agreed to a set of operating procedures, examples of which can be found in the SES 2 document.

Another agreement that turned out to be helpful was an initial agreement on the document format. The SES 1 Recommended Practice for the Designation and Organization of Standards document offers such a template.

The momentum had begun to build. There was no stopping it now!

STANDARD DEVELOPMENT

Members agreed to meet at first face-to-face to get to know each other and establish the level of trust necessary to such endeavor. They agreed to set the meetings pace such as to complete the project within two years.

In addition to the main operating procedures, several other procedural matters were agreed upon. One was the requirement for a quorum. To ensure meetings run smoothly and progress is consistently made, FSC members approved a quorum requirement based on attendance at the current meeting and the previous two meetings. Members not attending two consecutive meetings were not counted in the quorum determination. Attending a meeting restored their voting status.

Committee members also agreed to use semi-formal agreements on each standard requirement they drafted to avoid re-visiting the same item during the development of the standard unless initial premises had changed. This turned out to be harder to enforce than expected but would have been catastrophic if not in place! Dated versions of the draft and good meeting minutes were helpful in that endeavor.

As mentioned, there was quite a range of diversity in the products' designs. Reaching consensus between manufacturers of the flashlights sold at supermarkets and manufacturers that make military grade products took time, process discipline, diplomacy, and a lot of patience!

The final ballot consisted of a number of separate ballots, one for each requirement. This offered the group the flexibility to address divergences of positions only on items identified as having them.

ANSI PROCESS

About halfway through the second program year, members felt there was enough

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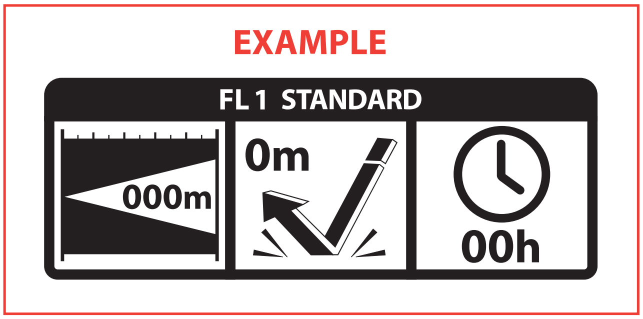

Examples of flashlight icons: Beam distance, Impact and Run time.

light at the end of the standards tunnel to start organizing the consensus group that would review and approve the group's standard draft. NEMA staff notified ANSI through their Project Initiation Notification System (PINS) that a project on the flashlight topic was afoot.

FSC members provided NEMA staff with names of organizations that might be interested in participating in the ANSI consensus group. They also suggested specific benefits that could entice the other stakeholder categories to commit to participate.

Members agreed to limit the number of stakeholders to the minimum three categories often used in the development of an ANS: producers, users, and general interest. Major "big box" stores such as REI, Cabela's, and Dick's Sporting Goods were included in the User category. Testing laboratories were also targeted for participation and included in the General Interest category, as they possessed the desired level of interest and expertise and would likely be the first to put the new standard to use, once finalized.

The invitation to participate was also extended to other producers that didn't participate in the FSC group. That included, by the way, the market leader, which declined again to get involved.

THE DELIVERABLES

The standard delivered what the project had been created to accomplish:

- Definitions of the relevant flashlight performance characteristics, such as beam distance, run time, pick beam intensity, impact resistance, and enclosure protection against water penetration ratings
- Testing methods for these performances
- Consensus on markings, which was probably one of the most consequential outcomes of the project. Members designed icons to be printed on product packages and literature to educate consumers about product performance, see examples in Figure 1.

LIFE AFTER PUBLICATION

Good signs that the standard served a useful purpose started to show up not many months after its publication. Manufacturers were at the ready with product certification and markings. Some big box retailers had panels with the icons posted in the flashlight section to help consumers with product selection based on verifiable information. Some went even further and required their flashlight vendors to begin using these icons. (One of the first pieces of proof the standard was timely and needed was the fact that the market leader was one of the first to display the icons!)

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