

Geoffrey Peckham



Geoffrey Peckham

“You have a very powerful way to demonstrate that safety is a priority in your workplace.”
Geoffrey Peckham

PS: When it comes to safety signs and sign systems, where is the opportunity for the SH&E professional in terms of elevating the culture of safety within an organization?

Geoffrey: A certain pride comes with having done a job really well, especially in our field. We see it every day because we’re working with safety professionals in so many different industries. Last week, for example, we were creating safety signage for the spearfishing industry to help reduce the risk of drowning from shallow water blackout, manufacturing new instructional safety plates that will go in military helicopters and on ground missile launch controls, and finishing the development and installation of new safety signage at 15 municipal pools in Maryland. The difference that’s taking place here is that we’re helping to elevate safety to the forefront, instead of the background, using new standards-based warnings technology. Now everyone who comes to enjoy those pools, including the staff who supervise them, will see that safety is a visible priority.

The same holds true for those purchasing the spearfishing equipment, operating the helicopters and launching the missiles. It’s fascinating work and the SH&E professionals we’re working with fully understand the positive difference the new sign systems are making in their efforts to reduce risk and protect lives.

PS: Semiotics isn’t a word you hear every day. What is it?

Geoffrey: Semiotics is the science behind how signs and symbols communicate. It’s estimated that the average person sees 3,000 to 4,000 signs each day. As we apply semiotics to safety, the goal is to have this particular set of signs, labels and markings stand out above all of these other messages so critical safety messages can be easily identified and comprehended. Understanding how semiotics works and the elements that go into semiotics—color, shape, graphical symbols, text, size, anticipated viewing distance—are key ingredients to creating effective signage systems.

PS: How does semiotics and using the latest warnings technology apply to workplace safety?

Geoffrey: SH&E professionals don’t often give safety signs a second thought. They’re so used to seeing the same old signs, many of which have been in place for decades. They’re not aware

of new methodologies that use the latest best-practice standards as the basis for better communicating safety. It’s critical that safety professionals utilize this new technology because it’s an incredibly powerful tool for communicating safety in workplaces and public areas. Safety signage, when done well, can have a dramatic effect on reducing injuries and incidents.

Looking at old signage versus new signage (Figure 1), you can see how text-only signs are not as visually striking as the new types of signage that use symbols to help convey an important part of the sign’s message across language barriers. In addition, the new signs provide more information; they inform people about what the hazard is *and* how to avoid it so that well-informed decisions can be made. More often than not, the lack of information on older signs thwarts communication because so much is left unsaid, and because the signs cannot communicate to anyone who cannot read English.

PS: How have the roles of signs and labels in workplace safety changed over time?

Geoffrey: Over the past three decades, U.S. courts have developed theories of liability that place an ever-increasing emphasis on the duty to warn. Manufacturers of products that have residual risks were the first to be held to this legal bar for responsibility. Ask any expert in the field of products liability and s/he will tell you that inadequate warnings and the failure to warn are now, by a very wide margin, the leading allegations in product liability lawsuits in the U.S.

What’s also interesting currently is that the legal duty to warn is moving into workplaces and public areas. Professionals in charge of safety must now understand that the liability and risk to their company can be tremendous. This is especially true when it comes to areas where subcontractors or visitors are allowed on public or private premises. Our first goal with every sign system we create is to ensure that accidents don’t happen. But if they do, these systems give organizations the ability to say that they provided proper warnings, which helps them reduce their risk of liability exposure.

The second big difference relates to the courts’ decisions that create a responsibility to provide adequate warnings: society’s and our own expectations to be protected from harm. Most of us want to be able to make informed decisions with our lives, especially when our safety may be at risk. The older safety signs don’t do this job well enough. The new sign systems do.

Geoffrey Peckham is a longtime member of ASSE and president of Clarion Safety Systems, a company with more than 20 years of expertise in designing and manufacturing safety signs and labels. He is chair of both the ANSI Z535 Committee and the U.S. Technical Advisory Group to ISO Technical Committee 145—Graphical Symbols. Over the past 2 decades he has played a pivotal role in the harmonization of U.S. and international standards pertaining to safety signs, colors, formats and symbols. For more information about safety signs and symbols, visit www.clarionsafety.com.

PS: We typically don't think about safety signs as anything more than a sign on a wall or on a product. What do you mean by a safety sign system?

Geoffrey: There are three levels of what could be considered systems in the U.S. The first is that a safety sign based on the latest standards is a system in itself. It's made up of various elements (color, text, borders, shape, size, graphical symbols) that are intended to work together to effectively communicate the intended safety message.

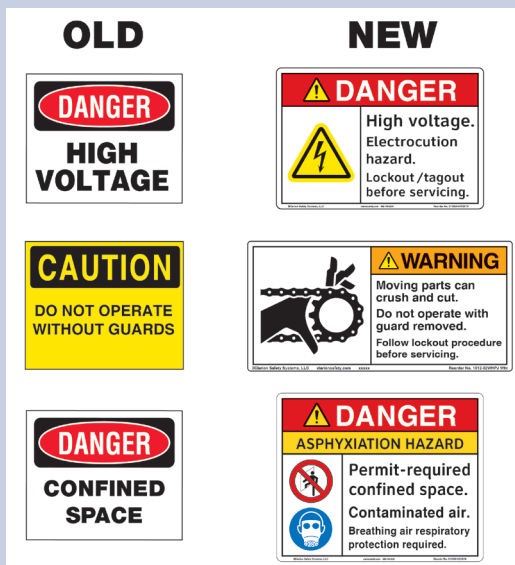
Second, each safety sign needs to work within the larger system of every sign in a facility or environment, each reinforcing the other with consistent communication and uniform design principles. Third, the use of the latest standards is creating a system of safety signage that is growing to become both national and international in scope, effectively creating a new global language—a global system for safety communication. It's an incredible thing to watch happen. I predict within the next 10 years we'll see the old signage be replaced with what I'm talking about here, it's that much better.

PS: How does the ANSI Z535 system of sign categories work?

Geoffrey: The ANSI Z535 standards use signal words to clearly define three different categories of safety signs. The first category is called *hazard alerting signs* that use the signal words DANGER, WARNING and CAUTION to alert people to various levels of potential personal injury hazards. Then, there are NOTICE signs used to convey general safety policies and nonpersonal injury-related safety information. Finally, SAFETY INSTRUCTION signs can

Figure 1

Comparing Safety Signs: Old vs. New



©CLARION SAFETY SYSTEMS

New ANSI and ISO best-practice standards in safety signs and labels use elements of semiotics—combinations of color, signal words, precise text messaging and graphical symbols—to better communicate safety and reinforce safety training. According to the latest best-practice standards, four elements must be defined in a hazard alerting sign: 1) type/nature of the hazard; 2) consequence of interaction with the hazard; 3) how to avoid the hazard; and 4) severity level of the hazard.

Severity level is communicated by the signal word panel; the other elements are communicated by the use of text messages and/or graphical symbol(s). Then the question is how best to use color and symbols, as well as clear and concise messaging and text, to communicate the intended meaning. Various choices can be made in how this content is displayed. Understanding how to properly craft this content comes from practice and experience, and understanding how the standards were written and how they are meant to be applied.

be used to convey longer instructional safety messages; this helps to make hazard alerting signs concise so they have less of a chance of being ignored for having too much content.

A fourth category of signs doesn't use signal words. These are safety and fire equipment location signs (e.g., fire extinguishers, first-aid kits, eyewash stations, AEDs). Here, again, we're introducing a positive change by using the ISO graphical symbols on these equipment signs because our goal is that they be understood by a global audience so that anyone in the world can rapidly find fire and safety equipment.

PS: You've been involved with these standards-writing committees for more than 20 years. Why are you so committed to this work?

Geoffrey: Good question. It reminds me of something I was told years ago. There are two things you don't want to watch being made: sausage and standards—because of all the stuff that goes into each of them. All kidding aside, I've worked directly with many great safety professionals (many of them ASSE members) in an incredible variety of industries, all in the effort to better communicate safety and reduce

risk. I see my role in the standards world as an opportunity to give back what I learn from this ongoing experience. My goal is to keep the standards relevant and applicable to today's workplace safety issues. The way I see it, the last thing you want in a standard is something that looks good on paper but is unrealistic or irrelevant to put into practice.

PS: How do you see the use of the newer safety sign standards best taking place?

Geoffrey: It's going to take action from safety professionals to invest the time to define the expanded content of their new safety signs and to start thinking of them as a cohesive system for reinforcing training and the overall safety culture.

Everyone in our industry shares the same goal: zero harm. As more safety-committed companies adopt the latest safety sign standards, I'm convinced that the new warnings technology will become the norm. This has already taken place with product safety labeling—the latest ANSI and ISO safety-labeling standards are followed 99% of the time. It's really just the workplace and public area safety signage that are still out of date.

Figure 2

Signal Words & What They Mean

	DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury .
	WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury .
	CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury .
	NOTICE indicates information considered important but not hazard-related.
	SAFETY INSTRUCTIONS (or equivalent words) indicate specific safety-related instructions or procedures.

©CLARION SAFETY SYSTEMS

ANSI Z535.2, Standard for Environmental and Facility Safety Signs defines signal words. ANSI Z535.2 and ISO 3864 use the definitions of severity (as depicted) that match today's methodologies for risk assessment and risk reduction. In contrast, OSHA's regulations pertaining to safety signage do not reflect these latest advances in safety sign technology. Typical OSHA-style signs only use one risk factor, probability, which does not take into account the severity of the possible injury.

adopt GHS, the U.N. Globally Harmonized System of Classification and Labeling of Chemicals. When everything is in place in the U.S., we will have a single worldwide labeling system for chemical products that uses nine standardized symbols, each of which stands for a specific chemical hazard.

The GHS system also defines, word for word, standardized phrases for use on chemical labels to describe specific hazards and the precautionary statements to avoid them. Although this is a chemical labeling standard to be implemented by chemical product manufacturers, employers with hazardous chemicals in their workplaces must train employees on the new GHS system symbols and labeling components by December 2013.

The major development in the U.S. is that OSHA, in its own words, has gone beyond giving employees the *right to know* and is giving employees the *right to understand* potential chemical hazards. That's exactly what we're doing at Clarion when it comes to communicating information related to all types of hazards—mechanical, electrical, chemical, thermal, every way you can think of getting hurt. In essence, OSHA's ratifying what we're doing, it's just that the agency hasn't extended it to all types of safety signage yet.

PS: What is your perspective on standards harmonization?

Geoffrey: *Standards harmonization* is a term used in almost every industry, as companies, countries and regions of the world recognize that it is beneficial to use a uniform set of principles to achieve consistency in whatever is being standardized.

When it comes to safety signage and product safety labeling, harmonization plays an important role. It allows products to be shipped across borders and allows people around the world to have the same opportunity to comprehend safety messages.

As a simple example to illustrate the point, when you go to various airports,

PS: How might an SH&E professional convince organizational decision makers to implement a new safety sign system?

Geoffrey: There are two ways to look at justifying the time, effort and cost of implementing a new safety sign system. The first is to add up the cost of possible injuries/deaths and compare it to the cost of the signage. I can tell you the cost of new signage is minimal by comparison.

The second reason, as every safety professional knows, is that it's the moral imperative; it's the right thing to do. The new safety sign technology is simply better and more capable of reducing workplace incidents. How can I say this? It's because our experience of having installed more than 44 million safety signs and labels on primarily industrial equipment over the past 2 decades and not a single allegation of a failure to warn gives credence to the idea that when the ANSI Z535 standards are applied well, they work.

Those in charge of a company understand that safety must be a top priority and that workplace safety training is important. But, at the time and place when someone could potentially interact with a hazard, if that training is not front of mind, an incident can occur. This is where safety signs come

into play. The new-era signs do a better job of conveying safety, of reminding people about hazards and the precautions they must take to avoid them. The signs also convey that their company cares about them, about them returning home at night in one piece. No one wants to work for a company that has a lax attitude toward safety.

It's important to keep in mind that the new signage is not a Band-Aid approach to accident reduction. Safety sign systems are the result of a well-thought-out risk reduction process that uses semiotics and best-practice national and global standards as their foundation. Add those components together, create a great sign system and you've got a powerful way to demonstrate to your people that safety occupies the top spot in your company's priorities. That should resonate with your company's decision makers.

PS: How does OSHA's adoption of GHS factor into this? What does GHS mean for workplace safety communication?

Geoffrey: This is really a watershed event in the world of safety communication in the U.S. and the entire world. After years of debate and public comment, OSHA just finalized its new HazCom regulations in May 2012 to

you don't see 15 different types of signs that point you to the baggage claim, you see one. This is because international harmonization has led to a single baggage claim graphical symbol. The same thing is coming about with exit signage and the running man exit symbol, and all types of safety signage. That's the cutting edge. And that's where you want to be when you're communicating safety. Anything less than that is parochial.

Another example can be seen at beaches. Clarion designed Hawaii's new beach safety signs using the latest standards, symbols and formatting principles, all to safeguard the state's international visitors (Figure 3). While this is being kicked off in Hawaii, you'll see similar beach safety signage installed in other parts of the U.S. and around the world as we're working with many other entities including commercial hotel and resort property owners.

PS: What's the next step for SH&E professionals who wish to update signage to use a systems approach to safety communication?

Geoffrey: It's not simply follow three steps and you're done. You need to define each sign's intended audience, then accurately define each sign's intended message.

With this information in hand, you then need to look at the variety of standards that may be relevant. At Clarion, we're primarily using the ISO, IEC, NFPA, ANSI, UL and SEMI standards,

and the International Building Code and municipal codes when they apply, to develop safety sign systems that work. The ultimate goal is to reduce risk and protect people.

Figure 3
Beach Safety



It is important to use global principles because safety is an international issue and so is safety signage. Workplaces are diverse and people travel. They need to see, recognize and understand the same systems for safety signage. This can be achieved by using common elements. This safety sign is officially designed to safeguard the beaches of Hawaii, and alert international visitors to ocean hazards through best-practice standards for sign content and format, clear and precise language, and internationally formatted graphical symbols.

©CLARION SAFETY SYSTEMS

ASP/CSP/OHST/CHST/CHMM EXAM PREP



SPAN international
Safety Workshops
www.SpanSafetyWorkshops.com

"SPAN SAFETY WORKSHOPS ARE GUARANTEED!"

ASP Workshop Schedule

St Louis MO.....	Oct 2-4, 2012
Houston TX.....	Oct 10-12, 2012
Pittsburg PA	Oct 29-31, 2012

CSP Workshop Schedule

Anchorage AK.....	Sept 7-9, 2012
Houston TX.....	Oct 15-17, 2012
Orlando FL.....	Oct 18-20, 2012
St Louis MO.....	Oct 24-26, 2012
Pittsburg PA	Nov 1-3, 2012

CHMM Workshop Schedule

Springfield MO.....	April 22-24, 2013
Springfield MO.....	Aug 7-9, 2013

OHST/CHST Workshop Schedule

Anchorage AK.....	CHST Sept 14-16, 2012
-------------------	-----------------------

Materials are Updated to Current Exam Blueprints

SPAN is the world leader for preparatory Workshops, Self Study Workbooks, and Software for the leading EHS Certifications:

ASP, CSP, OHST, CHST, CHMM

Workshop Review Courses and materials are designed by experts integrating the entire math into the 3 day workshop, not a separate math course as offered by other providers.

Volume I Workbook is used in workshops as a guide to review the areas covered on each individual exam; discuss testing strategy; review reference material and review over 350 targeted questions with full answer explanations.

Volume II Workbook contains 400 additional self study self-examinations and provides multiple sets of questions, answers, explanations and practice examinations.

EXAM PREP Software features over 700 flashcards, practice and exam simulation modes designed to optimize your study efforts.

Workshops.....	\$950.00
Workbooks (set of Vol I & II)	\$275.00
SPAN Exam Prep Software	\$275.00
Workbooks & Software CD's	\$400.00

Workshops include the set of workbooks, software CD, scientific calculator, and expert guidance to pass the exam the first time!!

PASS THE FIRST TIME!!!!

Order and Register Online!

www.spansafetyworkshops.com

SPAN Safety Workshops

Phone: 1-888-589-6757 Fax: 1-417-724-2883

E-mail: info@spansafetyworkshops.com

Delivering Professional Excellence Since 1990