



On Your Mark is a monthly column written by Geoffrey Peckham, President of Clarion Safety Systems and chair of both the ANSI Z535 Committee and the U.S. Technical Advisory Group to ISO Technical Committee 145- Graphical Symbols. Over the past two decades he has played a pivotal role in the harmonization of U.S. and international standards dealing with safety signs, colors, formats and symbols.

as seen in 

Who, What and Where

BY GEOFFREY PECKHAM

This column is primarily a resource for the safety symbols you place on the products you design. This time, let's step back a bit and ask the question, "What are we doing here?" To answer this, I want to show you a similarity between the overturned cruise ship, *Costa Concordia*, and the products under your design control.

Appropriately enough, I recently returned from a January ISO committee meeting in London where we put the finishing touches on a set of standards that improve the graphic design and installation guidelines for safety sign systems used onboard ships. The committee consists

of safety sign experts from national maritime organizations like the U.S. Coast Guard, ship builders, marine risk management organizations, and companies that specialize in the field of symbol-based safety signs, like Clarion. The goal: to provide the International Maritime Organization (IMO) with

updated standards they can use to define best practices for shipboard safety sign systems.

To set the stage for this comparison, imagine you were aboard the *Costa Concordia*, ready to enjoy your first cruise experience. As you sail



Figure 1: Your product safety label system



Figure 2: The *Costa Concordia* rescue effort
(Photo Credit: Associated Press/Giuseppe Modest)

from port, you are told that a safety evacuation drill will occur later that evening. Before the drill takes place, the ship's hull is torn open when it collides with underwater rocks and the next several hours are filled with chaos and loss of life.

The *Costa Concordia* (like all cruise ships, commercial vessels, tankers, and ferries) was outfitted with a system of ISO/IMO standardized safety signs meant to reinforce training that crew and passengers receive in order to be better prepared should an emergency situation occur. The signs for passengers point the way to specifically designated assembly stations where they are to be met by crew. The assembled group then follows another set of signs to specifically designated debarkation stations where they climb inside the lifeboats (now called "survival craft"). Once inside the lifeboats, another set of safety signs is used by trained crew both on the ship and in the lifeboat to

properly lower it into the water and separate it from the ship. Inside the lifeboat is another set of signs that locate safety equipment like flares, radio beacons and first aid supplies.

While participating in this ISO meeting, it occurred to me that, when implemented properly, the safety labels you place on your products operate much like safety signs used on ships. First, they must be created and installed as a *system*. This means they must be planned and designed in ways that will best communicate critical safety information. Try to convey too much information and you risk people not bothering to read your signs; too little information runs the risk of people not being able to make informed and correct decisions. Think of your product's safety labels as if they were a shipboard sign *system*. Your job is to provide people with the information they need at the right point of anticipated interaction. Not before,

and not after. For instance, onboard ships assembly station directional signs are placed in the hallways and gathering spaces, not inside cabins. And safety equipment location signs are placed inside lifeboats, not outside the lifeboats. Similarly, the safety labels that appear on your products should be placed where people could most likely interact with the hazard, not assembled all together in one spot 50 feet away on the electrical panel (though best practices for machinery safety labeling do include placing certain location-specific warnings on control stations and electrical panels).

Second, both shipboard safety signs and your product safety labels should make use of graphical symbols so their messages can be conveyed quickly and across language barriers. If possible, standardized ISO symbols should be used for international acceptance of your warnings. If customized symbols need to be developed, standardized

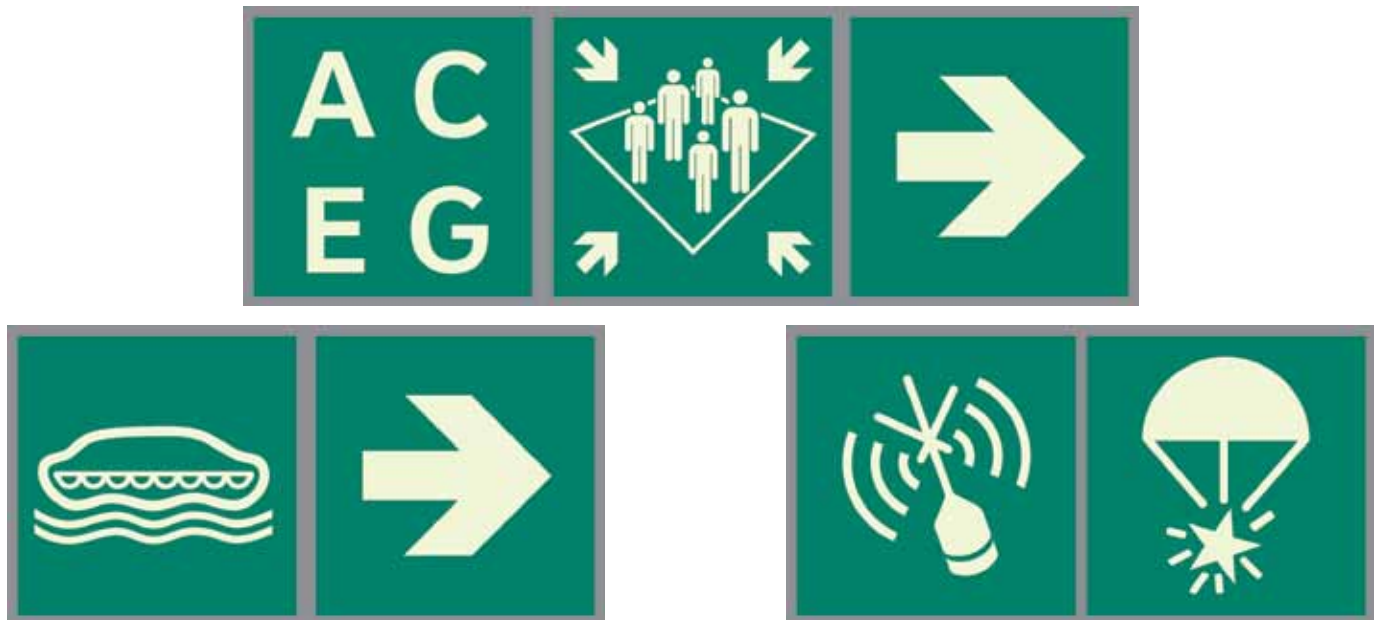


Figure 3: Three shipboard safety signs: Directional assembly station sign (top), directional lifeboat sign (bottom left), safety equipment signs for radio beacon transmitter and parachute flare (bottom right)



Correct: A safety label placed at the point of possible interaction with a mechanical hazard.



Incorrect: All safety labels placed in a single location.

Figure 4: Location of safety labels is important. The top photo shows a safety label placed at the point of possible interaction with a mechanical hazard. The bottom photo shows the incorrect placement of all safety labels in a single location.

illustration methods should be used. The point is consistency of message, both internally on your equipment, and externally to help ensure that your products fit into the global language of safety used in the worldwide marketplace.

Third, like shipboard safety signs meant for both crew and passengers, your product's safety labels are often used to convey safety messages to people who have had various levels of training. Some of your labels are meant for your product's users, while other labels are for those who perform maintenance. Knowing who your audience is will help you craft the messages on your safety labels so they properly convey the right information.

Finally, like the evacuation drill that occurs on ships, your safety labels often serve to reinforce a broader scope of safety information provided in your product manual. In this capacity, they serve as critical reminders of training (see the February 2012 *On Your Mark* column on how to tie manuals and safety labels together).

The point is that your safety signs and markings need to be planned, they need to function as a system, and they need to serve a well-defined set of objectives that take into account *who* they are intended to communicate to, *what* they should say, and *where* they are to be placed. Lastly, do not reinvent the wheel – use best practice methods, formats, and symbols as much as possible so your resulting system of signs and labels has the best chance at being both effective and in compliance with the latest standards.

For more information about safety signs and symbols, visit www.clarionsafety.com. 