



On Your Mark is a quarterly column written by Geoffrey Peckham, CEO of Clarion Safety Systems. Mr. Peckham is chair of both the ANSI Z535 Committee for Safety Signs and Colors 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. This article is courtesy of Clarion Safety Systems © 2015. All rights reserved.

## Understanding Symbols

### PPE and Universal Head Shape

BY GEOFFREY PECKHAM

In last year's On Your Mark columns, we discussed key elements in helping to achieve your goal of creating the most effective safety labels possible. One of these critical building blocks is symbols. This year, we'll explore symbols in more depth – how they've changed over time to become more universally recognized and standardized – by honing in each quarter on specific examples. This month's topic: the symbols for PPE and the use of a universal head shape.

As a product engineer, you know that using well-designed symbols on your safety labels help them to more universally communicate your safety messages. It's important to make sure that the symbols you use are well-designed – which means, in this day and age, that they've been developed using design principles standardized by ISO, the global standards body in charge of safety symbols. You should not reinvent the wheel. As chair of the ANSI Z535 committee in charge of the U.S. standards for safety colors, signs, symbols, labels, tags and safety information, and chair of the ISO committee in charge of international standards for safety signs, colors and symbols, I've been engaged in the process of global standardization of symbols. I'd like to share a few of those stories with you in this year's columns, to give insight on symbols you should be using on your warnings.

### PPE SYMBOLS IN FOCUS

Looking at personal protective equipment (PPE) symbols is a great place to start. As PPE is one of the ways in which people avoid hazards in a multitude of workplace settings, its use crosses all industries. The human head and face is a necessary part of many of the symbols that indicate the use of PPE. In this article, we'll concentrate on the family of symbols oriented around two templates for the human head: 1) a profile view and 2) a front view.

### EARLY BEGINNINGS

A little over ten years ago, the ISO

committee in charge of safety symbols, ISO/TC 145 – Graphical Symbols, Subcommittee 2, met in Berlin. The committee's Asian delegation brought to the attention of the committee that the existing human head-shaped graphical symbol was not appropriate for a global audience. It was noted that, from an Asian cultural perspective, the existing safety symbols for PPE related to face shield, eye protection, ear protection and respiratory protection (see Figure 1) used human head shapes that were Caucasian in nature.

What was meant by "Caucasian"? Basically it was thought that the older



Figure 1: Old ISO-formatted symbols for "Wear Face Shield," "Wear Eye Protection," "Wear Ear Protection," and "Wear Respiratory Protection".

symbols often had a squared-off chin, an elongated (rather than round) head, and locks of hair – all of which looked Caucasian. A new human head template was proposed at that meeting. See Figure 2.

## SIMPLICITY MATTERS

The intention of ISO symbols is that they be recognized globally. This is especially important when it comes to safety. Lives may be on the line when safety messages need to be understood quickly and across all cultures. The more general, rounded nature of the new head shape corresponds better with the idea of a non-culturally specific head shape and it matches well with the human figure that has been standardized by ISO for some time. Both are simple and can be consistently used across cultures.

Extraneous detail (like hair) is not necessary to be able to identify the new head. In fact, extra detail can have the opposite effect – it can make legibility, viewing and comprehension more difficult and time-consuming. Compare the old and new “face shield” symbols shown in Figures 1 and 3. Because of its simpler, solid form shapes, the newer symbol conveys its message quicker than the older symbol.

ISO 3864-3 is the ISO standard for the design of safety symbols. It says: “The graphical symbol should have



Profile View



Front View

**Figure 2: New ISO head shape templates depict a general, rounded head form.**

only as much detail as is required to communicate the intended message”... it should “be simple in order to facilitate comprehension and reproduction.”

## NEXT STEPS FOR STANDARDIZATION – AND IMPROVED COMMUNICATION

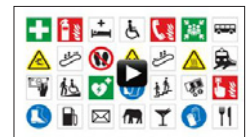
ISO/TC 145 SC2 accepted the new head shape proposals. The thought process was that they are more universal in their depiction, more simplistic in form, and are expected to have improved recognition across cultures. The PPE safety symbols using the head shape were redesigned and went through the ISO symbol registration process. In 2007, ISO standardized the universal head shape in ISO 3864-3

*Design principles for graphical symbols for use in safety signs.* See the images in Figure 3, which show the updated PPE symbols, using the standardized universal head, and compare them with the old symbols from Figure 1.

At Clarion, we use the ISO-standardized head shape templates to design PPE-related safety labels and new symbols on a regular basis – whenever a symbol needs to be used within a label to show a precautionary measure or when a new symbol needs to be created to help a client with a custom need. The benefit brought by using the latest graphical symbol design principles gives credibility to the final result and consistency to the visual communication of a company’s safety messages in line with global best practices.

Symbols do change and revisions to safety labeling standards occur. It’s important to stay up-to-date. This is true for a wide variety of product safety label messages, not just PPE. Stay tuned for the next article in this year’s *On Your Mark* series which will explore the history and progress in standardized symbols related to static electricity. [IN](#)

For more information on best practices related to ISO symbols, watch a short, educational video produced by Clarion Safety Systems.



**Figure 3: Current ISO symbols for “Wear Face Shield,” “Wear Eye Protection,” “Wear Ear Protection,” and “Wear Respiratory Protection”.**