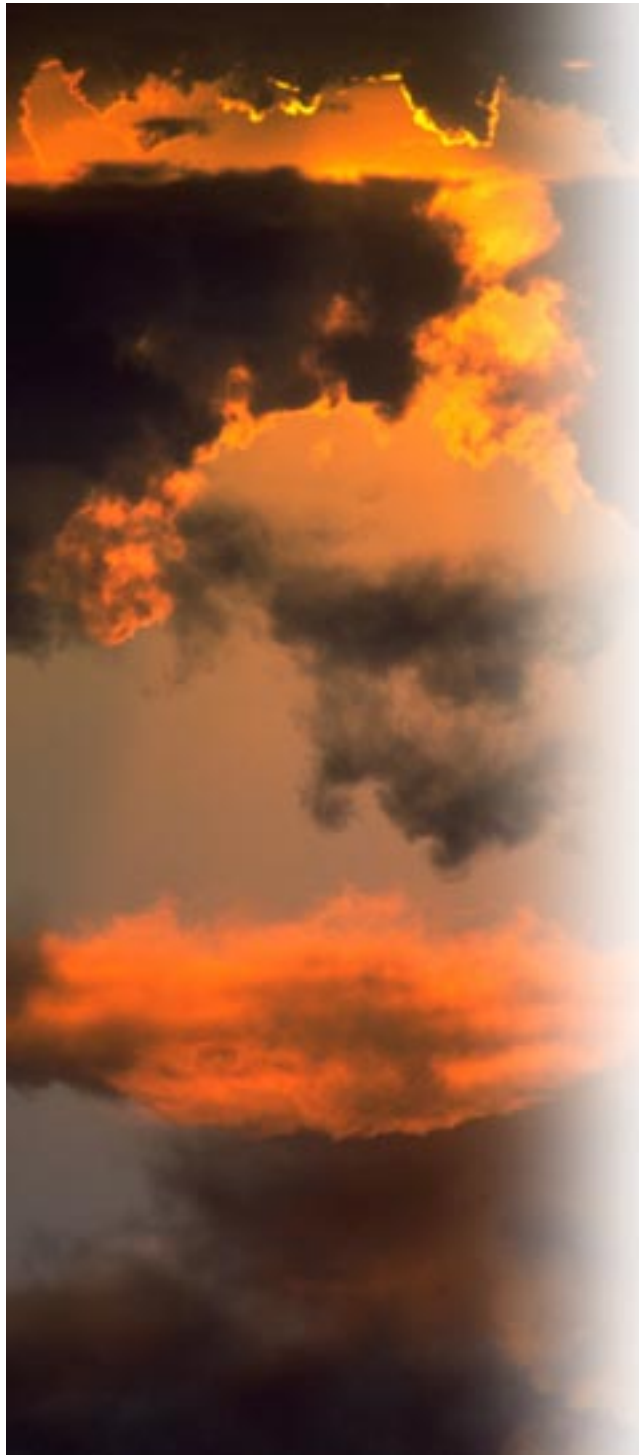




# *Environmental, Safety and Health News*

Fall 2002

The official publication of the Environmental, Safety & Health Special Interest Group of the Society of Technical Communicators © 2002 ES&H SIG



## **Should ES&H, Science Merge?**

# **SIG**nificant Other?

by Hillary Hart

For the last couple of years, I have been talking informally with ES&H SIG members about the possibility of merging with the Science SIG. Why? Well, for one thing, our SIG is pretty small – it’s actually the smallest Special Interest Group within STC, fluctuating somewhere around 300 members. This size makes it difficult to rally volunteers or resources to be as effective as we could be for our membership. The second reason is that many ES&H members are members of both SIGs and are unclear, as are the managers, about what the differences really are. Medical writing probably belongs in Science Communication, but what about writing that focuses on the relationship between public health and prescription drugs. Is that health and safety writing or is it medical? What about writers at the national labs? A lot of environmental work goes on there, but surely they are “science” writers?

**What Do You Think?**  
Should the Science and ES&H SIGs merge?  
[Click here to take our quick survey](#)

What are the benefits of combining the two SIGs? Answer: more resources. And thereby, more stability. Geoff Hart, recently appointed manager of the Science SIG, says, “. . . given the small sizes of our two SIGs, it might make sense to merge and pool our resources.” Geoff cites these advantages of a merger: “More bodies, more dialog within the SIG, and more of a presence at STC, which means more security. STC’s budget has been hit reasonably hard by the dotcom meltdown and the travails of the high-tech industry, and they’re looking to trim costs wherever possible. Small SIGs are an obvious target . . .”

See **Merge** on page 5

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### *Environmental Safety & Health SIG*

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The Environmental, Safety, and Health Communication SIG allows technical communicators to stay current on developments in this growing area of technical communication. This specialty includes writers and designers in fields ranging from space-related to archaeological, medical, industrial hygiene, transportation, water management and hazardous materials.

### *Environmental Safety and Health News*

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ES&H news is published twice a year by the Environmental, Safety, and Health Communication Special Interest Group (ES&H SIG) of the Society for Technical Communication. The ES&H SIG assists members in the effective communication of the broad aspects of environmental quality, and safety and health aspects of occupational and outdoor environments. The Society for Technical Communication assumes no responsibility for the statements and opinions advanced by the contributors to the Society's publications. Editorial views do not necessarily represent the official position of STC.

# Bushwhacking:

Creating a major where none exists

by Kathy Hall

Throughout my academic career, I have carved a niche where none existed. My bachelor's degree in Journalism was heavy on population ecology. My master's in Communications focused on occupational illness. Now I have embarked on a PhD in Health Communication at a University that doesn't offer such a major. You could call my approach "self-directed study" — or you could call it "bushwhacking."

Like any off-the-path orienteering, a good compass is essential. In my case, the compass includes a supportive boss, creative faculty from four departments, and a good sense of my own direction.

There are easier ways to get a degree in health communication. One way is to start with a university that offers such a major, such as the University of Wisconsin, the joint program between Emerson College and Tufts University School of Medicine, or James Madison University.

For me, the ideal place for a degree is the University of Washington Department of Communication. I'm what they call a "place bound student" — I'm tailoring a degree at the university that pays my salary. The university's tuition exemption program will pay my tuition for up to six credits a quarter. Working full-time in the School of Public Health and Community Medicine and going to school half-time pays for my education, and also allows me to synthesize ideas from social sciences and health sciences.

Going back to school after 16 years was challenging. I could hardly lift the bookstore bag for my first communication course — 10 books

crammed with theory. I was soon at the eye doctor's for reading glasses. Time management is essential — all-nighters aren't as easy as they were 20 years ago. On the positive side, personal experience adds a depth I didn't fathom in my first or second rounds of college.

I have designed an eclectic program of study in occupational health and safety communication. It incorporates political communication and labor studies as well as health behaviors and communication. My core courses include mass communication, media effects, qualitative and quantitative research methods — especially survey design and ethnography — political communication, health behaviors, preventive medicine, and probably at least one course in labor studies.

Where will I go with a PhD in Communication? I expect to continue managing publications and Web sites in the Department of Environmental Health, while developing more health communication content. I want to be involved in research design, bringing a social sciences perspective to my department's public health and public policy research. If I were to teach, I'd want to help bridge the divide between communication and science

There has never been a single career path in environmental safety and health or science communication. Practitioners and researchers have entered this field from many directions. Sometimes we find that a self-styled program of study provides the best route to our specific niche.

-Kathy Hall

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# PEOPLE, AWARDS IN ES&H

Technical writer **Phil von Hake** of Denver has founded PvH Communications, a communications consulting firm focusing on Sustainability issues. Specialty areas include air quality, energy, transportation, land use, waste management, and water. He can be reached at: [philvh@aol.com](mailto:philvh@aol.com) or <http://ouray.cudenver.edu/~pmvonhak/PvH>.



**Bruce Green, James Snyder, Wendy Littman** are the recipients of an STC Distinguished International Award for their online demonstration of Wind Power Animation award winners in the field of scientific, health, and environmental communication at [www.eren.doe.gov/power/consumer](http://www.eren.doe.gov/power/consumer). Other STC International Awards in the fields of Environmental Safety & Health include:

## Reference Material

Dusti Annan, Kevin Kurtz  
*The South Carolina Aquarium's Standards-Based K-8 Online Curriculum* Excellence

Mike Hellem, Louis Burkhardt, Kamolrat Therawat  
*The Medical Disability Advisor, Fourth Edition* Merit

## Tutorials/Training

Laura Bain, BAI Team,

Click2Learn Team  
*Robbery Training* Merit

## User Support Tools

WellMed, Inc., Brad Bowman, MD, Philip Marshall, MD, MPH  
*The WellMed Personal Health Manager (Web)* Merit

## Cover Design

Vickie Conner, Mike Farrell  
*Terrestrial Ecosystems Research Facility (TERF)* Distinguished

Kathy Petty, Bruce Boulineau  
*2000 Occupational Injury & Illness Annual Summary Report* Merit

## Informational Materials Design

Daniel F. Sarro  
*Argonne's Enrico Fermi Centennial Exhibit* Distinguished

Judy Wyrick, Elizabeth Martin, Denise Casey  
*Genomes to Life: Accelerating Biological Discovery* Merit

## Informational Poster Design

Michael Vittitow, Designer, Randy Montoya, Photographer  
*Stockpile Stewardship Program Posters* Excellence

## Interpretative Illustration

Inky Whelan, John Simone, Richard Vasconi  
*The LCIS & DCIS Breast Cancer Fact Book* Excellence

## Photography

George J. Joch  
*In the Well* Distinguished

George J. Joch  
*Tumor-Detecting Gamma-Ray Lens* Merit

## Promotional Materials Design

Kimberly Meeh, Nedra Johnstone  
*Center for Applied Biodiversity Science at Conservation International Information Folder* Distinguished

## Promotional Poster Design

Tina Curry, LeJean Hardin, Walter Koncinski  
*From Science to Market* Merit

## Books

Los Alamos Science Team  
*Los Alamos Science, No. 26: Challenges in Plutonium Science* Distinguished

Alison B. Grieggs, Cerro Grande Fire Book Team  
*Cerro Grande: Canyons of Fire, Spirit of Community* Distinguished

Mike Hellem, Louis Burkhardt  
*The Medical Disability Advisor, Fourth Edition* Distinguished

## Informational Materials

Tabitha Powledge, Writer; Ann Dieffenbach, Editor and Project Officer; Laurie Tompkins, PhD, Scientific Reviewer  
*Genetic Basics* Distinguished

Alisa Zapp Machalek  
*The Structures of Life* Excellence

Nadine Shea, Maureen Oakes, Jay Tracy  
*The Laboratory in a Changing World: A Los Alamos Chronology* Excellence

North Carolina AHEC Program  
*NC Health Careers 2001-2003* Merit  
Denise Casey, Betty Mansfield, Judy Wyrick  
*Genomes to Life: Accelerating Biological Discovery* Merit

## Magazines

Science & Technology Review Staff, Andrew Quong, Tom Isaacs  
*Science & Technology Review* Excellence

Carolyn Krause, Deborah Barnes, Jane Parott  
*Oak Ridge National Laboratory REVIEW (Vol 33,3,2000, Vol 34,1,2001, and Vol 34,2,2001)* Merit

## Newsletters

Melinda Wallach, RN, Managing Editor; David Grimes, MD, Executive Director; Emily Stetser, Art Director  
*The Contraception Report* Distinguished

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## ANSI Standards for Warnings, Labels

# Warnings of Change Ahead

by **J. Paul Frantz, Ph.D.**

**Stephen L. Young, Ph.D.**

Applied Safety and  
Ergonomics, Inc.

Ann Arbor, MI

The American National Standards Institute (ANSI) produces a series of standards, entitled ANSI Z535, for warning labels and signs. This standard was first adopted in 1991, and published in April 1992. The ANSI Z535 series consists of five standards:

- **Z535.1** - Safety Color Code
- **Z535.2** - Environmental and Facility Safety Signs
- **Z535.3** - Criteria for Safety Symbols
- **Z535.4** - Product Safety Signs and Labels
- **Z535.5** - Accident Prevention Tags (for Temporary Hazards).

There are also several annexes, which are not officially part of the standard, but provide further guidance for developing safety information.

In December 2001 the main committee met for two days to discuss the comments and negatives votes received in the letter ballots about the five proposed standards (the standards were last revised in 1998). Though some changes are proposed, the primary content remains the same for the three standards receiving the most attention during this revision (Z535.2, Z535.3, and Z535.4). For example, the standards for signs and labels will continue to specify

a three-tier system of signal words (Danger, Warning, and Caution) and associated colors (red, orange, and yellow). The basic format of signs and labels will be the same. This article discusses changes to the standards, issues for future consideration, and points of debate among committee members.

## Warnings in Product Manuals

In December 2001, the committee considered a new proposed standard (ANSI

Z535.6) dealing with safety communications in product-accompanying literature such as owner's manuals and assembly instructions. In the past, some manufacturers have referred to the recommendations outlined in ANSI Z535.4—1998 (the standard for on-product warnings) for guidance on presenting safety information in collateral materials. However, this standard was not designed for such purposes and is not particularly suited for application to these materials. Many of the committee members in attendance expressed interest in the idea of creating a Z535 standard to deal with collateral materials. In April 2002, a new subcommittee, Z535.6, was formed to address safety information in collateral materials.

## International Labeling vs. ANSI Z535.4

Another issue that has received attention in recent years is

the extent to which ANSI Z535.4 should be "harmonized" with international standards for on-product warnings. Specifically, the International Standards Organization (ISO) 3864—Safety Colours and Safety Signs—allows safety signs that consist solely of symbols, with no text messages or signal words (or headers). Harmonization of ANSI Z535.4 with ISO 3864 would require resolution of the issue of symbol-only signs. No final decisions have been made regarding such harmonization, except that the present revision (2002) will not allow symbol-only signs. It is anticipated that the next revision of the Z535.4 standard will reflect further developments on harmonization with ISO 3864.

## Using Symbols in Labels and Signs

At the December 2001 meeting, only one major change was proposed to the Z535.2 standard—the use of symbols in safety signs. In its 1998 revision, Z535.2 stated that safety symbols should generally be used in conjunction with a word message and that symbols should not be used to replace word messages unless they have been "validated for recognition." Symbol "recognition" was defined as "inclusion in U.S. or international standards, achievement through training, or meeting the comprehension test criteria outlined in ANSI Z535.3—1998 Annex B." At the December 2001 meeting, it was recognized that symbols may sometimes need to be used without a word mes-



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# Nashville is Music to Attendee's Ears

by Kris Freeman

Opryland and Opportunity came together at the 49th annual STC conference in Nashville May 5-8, 2002. SIG members discussed trends in scientific and environmental writing, and the future of the SIG at a SIG luncheon and a membership meeting. During the meeting, many non-SIG members expressed interest in scientific communication, making recent efforts to increase the SIG presence in the program both timely and appreciated.

Several of our members presented papers in Nashville, including:  
**From Gobbledygook to Great Documents: Three Success Stories**

*Janice Redish, Dana Howard Botka, Gail Hughes, Caroline Jarrett*

These speakers described how three groups have successfully made legal documents work for users.

**Scientific Publication Issues: Authorship and Duplicate Publishing in the Age of the Web**

*David Armbruster, Lottie Appenwhite*  
 Authorship of scientific articles and the moving target of publishing on the Web first vs. in paper journals were explained from the standpoint of the responsibilities of author's editors to authors.

**Intellectual Property and the Web**

*Hillary Hart, David Armbruster, John Pearce*

Publication of scientific data and findings on the Web poses potential problems for researchers. This session explored strategies for protecting intellectual property and integrity of data on the Web.

Download the PDF at [http://www.stc.org/49thConf/Session\\_Materials/show\\_IE.asp](http://www.stc.org/49thConf/Session_Materials/show_IE.asp).

*www.stc.org/49thConf/Session\_Materials/show\_IE.asp.*

**Designing for Information Overload**

*Kris Freeman, George Cassidy, Ben Kauffman, Jennifer Lambe, Neelam Singh*

These speakers described test plans, techniques for interviewing subject matter experts, recent research on text and design characteristics, and the principles of minimalist documentation to improve quality, credibility, and readability.

**Scientific Writing and Editing: Problems, Pitfalls, and Pratfalls**

*Elaine Firestone*

Elaine described various situations and problems scientific editors and writers encounter every day.

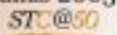
Participants had an opportunity to voice their peeves, issues, concerns, problems, and expertise to contribute to the lively discussion.

Download the PDF at [http://www.stc.org/49thConf/Session\\_Materials/show\\_IE.asp](http://www.stc.org/49thConf/Session_Materials/show_IE.asp).

**Localization and Barriers of Language and Culture**

*Kris Freeman, Teresa Mulvihill, Sedef Olcer*

These presenters explained how to overcome barriers of language and culture, and to prepare a localization kit.

Looking Ahead to Dallas 2003  
 See Page 6 

## Merge ES&H, Science Sigs?

Continued from page 1

The Science SIG is a lot larger, about 800 members, so a combined SIG ought to have a membership of slightly over a thousand. We cannot seem to determine, easily, how many of you are members of both SIGs, but I suspect at least 20%. So we might not break 1,000 in membership, but that's still a 300% increase for ES&H. And you'll only have to join one SIG next year!!

A merger means a bigger budget and more leaders within the SIG to serve you. Science has a terrific content-laden newsletter (but no web site); ES&H has a terrific-looking and functional web site (but a very irregular newsletter). As long as we make sure both website and newsletter contain content relevant to environmental, safety, health, and science writers — to those working in a regulatory environment and those working in a research or science environment — the merger should provide significant advantages.

At the last STC annual conference, in Nashville, I informally polled about thirty members of both SIGs and found good enthusiasm for a proposed merger. *But we want to hear from you!* Please let us know your thoughts about the merger. We can make this happen before the end of the membership year (February '03), but we need to know that the great majority of you are in favor and there is not some major drawback we haven't thought about. Let me know your thoughts, whether pro or con.

# Looking Ahead: 2003 in Dallas

STC's golden anniversary conference promises to be quite a show. It will be May 18-21, 2003, in Dallas. Information is at [http://www.stc.org/50thConf/fact\\_sheet.html](http://www.stc.org/50thConf/fact_sheet.html). The following four sessions were proposed to STC as being of interest to environmental, safety, and science communicators at the 2003 conference. We will update you in the next newsletter as to which of these proposals were accepted.

## Certifications and Credentials for Scientific Editors

Elaine R. Firestone, ELS (moderator); Tony Caruso; Barbara Simmons, ELS; Sushil K. Oswal, Ph.D.; Earlene Hammock, Ph.D.; Michael Ebinger, Ph.D.

This session will explore credentials and certifications that can help further the careers of scientific editors. These speakers, five of whom are heavily involved in scientific editing, will discuss training, degrees, experiences, and societal affiliations specific to this field.



## Breaking into the Pharmaceutical Industry

Julia Marguiles and Joan Katsareas

Technical and scientific writers within the pharmaceutical industry perform many interesting jobs. Two technical communicators from Merck & Co., Inc. will present a survey of these opportunities.

## The Environmental Impact of What We Do

Diana Barkley (moderator), Bonnie Yelverton, and Alan Watts

These panelists will discuss how the technical communication field affects the environment and how it can lessen its impact while exploring available "green" resources. Panelists will give both a local and an international perspective.

## Communication and Participation: The Importance of Involving Stakeholders

James Conklin, Hillary Hart, and two other panelists

The thesis of this session is that participation is communication - even if you produce great communication deliverables (manuals, press releases, etc.), without effective and meaningful participation you increase the risk of poor user acceptance and ultimate project failure.

These four proposed sessions are in several stems (Management, Writing and Editing, and Professional Development), so they should provide something for many different communicators at the STC conference. Keep your fingers crossed for these proposals and look for updates on how to find them at the conference in May.

If you know of other proposed sessions in the fields of environmental, health, or science communication, let us know: [hart@mail.utexas.edu](mailto:hart@mail.utexas.edu).

## People, Awards

### Continued from page 3

Karla McMaster, Kathy Pickel, Kim Gordon  
*PET Physician Referral Packet* Excellence

Martin-Schaffer, Inc. *Invitrogen GIBCO*  
*Cytogenetics Campaign* Merit

### Scholarly/Professional Articles

Janet Yagoda Shagam, Ph.D. (author), Katie Racette, MA, ELS *Extracorporeal Shock Wave Lithotripsy* Excellence

### Technical Reports

Reeta Garber, Sandia National Laboratories -  
ASCI Program; Michael Vittitow, Creative  
Arts; Phil Brittenham, Creative Arts  
*ASCI Technology Prospectus* Distinguished

Barbara Brickman, Westat; Karen Moyes,  
Westat *1997 Health and Health Care of the*  
*Medicare Population* Excellence

### Training Materials

Annette Dennis McCully, Editor; Betty Hageman, Graphic Designer; Gene White, Author *Going Global Activity Guide: A Project to Educate and Involve American Students in Hunger Issues* Excellence

Oricom Original Communications Inc.  
*Integrated Regulatory Information System (IRIS)*  
Award of Excellence in the Alberta Chapter

# Warnings

Continued from page 4

sage, even when the symbol fails to meet the comprehension criteria outlined in the Annex of ANSI Z535.3 (85% correct comprehension with less than 5% critical confusions). A proposal was submitted to allow symbols to be substituted for all or part of a word message if the symbol has been demonstrated to be satisfactorily comprehended (e.g., meeting a test such as that outlined in Annex B of ANSI Z535.3) or there are methods (e.g., instructions, training materials, or manuals) to inform people of the symbol's meaning. This Z535.2 has an unresolved negative ballot and will need to be re-balloted.

## Minimum Suggested Type Size in Product Labeling

Annex B of Z535.4 states that .08 inch type is the suggested minimum type size for use on product safety labels. Earlier in the revision of the 1998 standard, a proposal was made to allow .06-inch type "for products smaller than 2 square feet surface area." In the December 2001 meeting, it was proposed that the "smaller than 2 square feet surface area" be changed to "except for small products." However, this change did not result in a resolution of the negative ballot. Because the issues do not involve a substantial change to the standard, it will not have to be re-balloted.

## Selection of Safety Colors

As of the 1998 edition, ANSI Z535.1 required safety colors for labels and signs using color systems that were not easy to specify. Because of this difficulty,

it was thought that users would select the closest approximation to the specified colors using the Pantone system. The committee decided that ANSI should specify the closest Pantone color that matches the ANSI specifications for safety red, orange, yellow, etc. This standard is complete and ready for publication.

## Basis for Assessing Symbol Comprehension

The 1998 standard states "a symbol used without demonstrated understandability shall be reinforced by a word message explaining the intent of the symbol" (Section 7.2). While no specific criteria in the body of the standard suggest what would constitute "understandability," Annex B suggests using 85% correct responses with a maximum of 5% critical confusions. A negative ballot at the December 2001 meeting questioned the foundation for the 85%/5% criteria and a proposal was made to include a citation to an Australian standard (AS 2342, Part 3, 1980 Test Procedures for Evaluating Graphic Symbols and Symbol Signs—1981) as a source of information. This negative ballot remains unresolved, but the standard will not have to be re-balloted.

## Hang Tags and Barricade Tapes (for Temporary Hazards)

The major change to this standard is the inclusion of barricade tapes. The new proposed title of the standard is "Safety Tags and Barricade Tapes (for Temporary Hazards)." A proposed change to this standard—which had implications for all the standards—was the definition of the term "accident." It

was proposed that "accident" be defined as "an occurrence in a sequence of events that produces unintended death, injury, *illness* or property damage" (*illness* or property damage" (*italics added*)). Historically, the issue of "illness" has not been addressed by the Z535 standards. At its December 2001 meeting, the committee decided to eliminate the term "illness" from the proposed standard and consider the issue further in the next revision of the standards. To date, this standard has an unresolved negative ballot, but it will not need to be re-balloted.

## Summary and Conclusions

Four of the five standards appear likely to be finalized and published without additional voting by the main committee. ANSI Z535.2 is the only standard that requires revision and re-balloting. Those wishing to obtain copies of the standard should contact the National Electrical Manufacturers Association ([www.nema.org](http://www.nema.org)).

## About the Authors

**J. Paul Frantz**, PhD, CPSM, CPE, is a Principal Research Engineer at Applied Safety and Ergonomics, Inc. in Ann Arbor, Michigan. He also represents the American Society of Safety Engineers on the ANSI Z535 Committee and is the chairperson of the newly formed ANSI Z535.6 committee addressing warnings in product literature. **Stephen L. Young**, PhD, is a Senior Research Scientist at Applied Safety and Ergonomics, Inc. He also represents the Alliance of American Insurers on the ANSI Z535 Committee and is a member of the newly formed ANSI Z535.6 committee addressing warnings in product literature.

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**ES&H**  
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COMMUNICATION  
SPECIAL INTEREST GROUP

**STC**  
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