SPSP 2023 Webinar Series

Presenting Safety Information in Instructions and Electronic Media

November 8, 2023

1:00 – 2:00 p.m. EST

Sponsored by Sedgwick Brand Protection

SPSP Webinar Speakers

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- Consultant, Human Factors
- Vice-Chair of the American National Standards Institute (ANSI) Z535 Committee on Safety Signs and Colors
- Involved with the ISO counterpart to ANSI Z535, ISO Technical Committee 145 on graphical symbols

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Applied Safety & Ergonomics, A Rimkus Company

- Consultant, Human Factors
- Teaches Safety Management in the College of Engineering at the University of Michigan
- Certified Human Factors Professional

Kenneth Ross
Bowman and Brooke LLP

Agenda

- Introduction
- Legal Basis for Instructions
- ANSI Z535.6
- ANSI Z535.7
- Evaluation of Warnings/Instructions
- Questions

Definitions

- **Warnings** alert users and consumers to the existence and nature of product risks so that they can prevent harm either by appropriate conduct during use or consumption or by choosing not to use or consume the product.
- **Instructions** inform persons how to use and consume products safely.

U.S. Law re: Instructions

- A court has held that warnings, standing alone, may have no practical relevance without instructions and that instructions without warnings may not be adequate.
- In discussing the adequacy of instructions, the cases only say that manuals should be “adequate, accurate and effective” and “clear, complete and adequately communicated.”
- Whether warning goes on product or in manual is decided on a case-by-case basis
- What about multi-lingual – no case law

Legal Requirements and Their Effect

- Laws, regulations and standards that have been enacted by or adopted by **governments**

  - ✓ **Mandatory and must be complied with**. Failure to do so might require that the manufacturer report non-compliance to a government agency who may require that the product be recalled. Non-compliance can be used to argue that the product is defective and violates the law.

  - ✓ **Compliance may not protect manufacturer in a product liability case.** Jury might rule that the manufacturer should have exceeded laws, regulations, and standards.

  - ✓ Plaintiff needs to prove that product should have been made safer and that failure to do so proximately caused the injury.

Legal Requirements and Their Effect

- For **voluntary consensus standards** adopted by standards development organizations
  - ✓Compliance is voluntary.
  - ✓Non-compliance can be used to argue that product could have and should have been made safer especially if competitors comply and arguably have a safer product.
  - ✓Compliance may not protect manufacturer in product liability case.
    - But plaintiff needs to prove that product's failure to comply with standard **proximately caused** the injury (i.e., if product had been safer, accident would not have happened.)

ANSI Z535
An Overview

The ANSI Z535 Series of Standards

Z535.1 – Safety Colors

Z535.2 – Environmental Facility Safety Signs

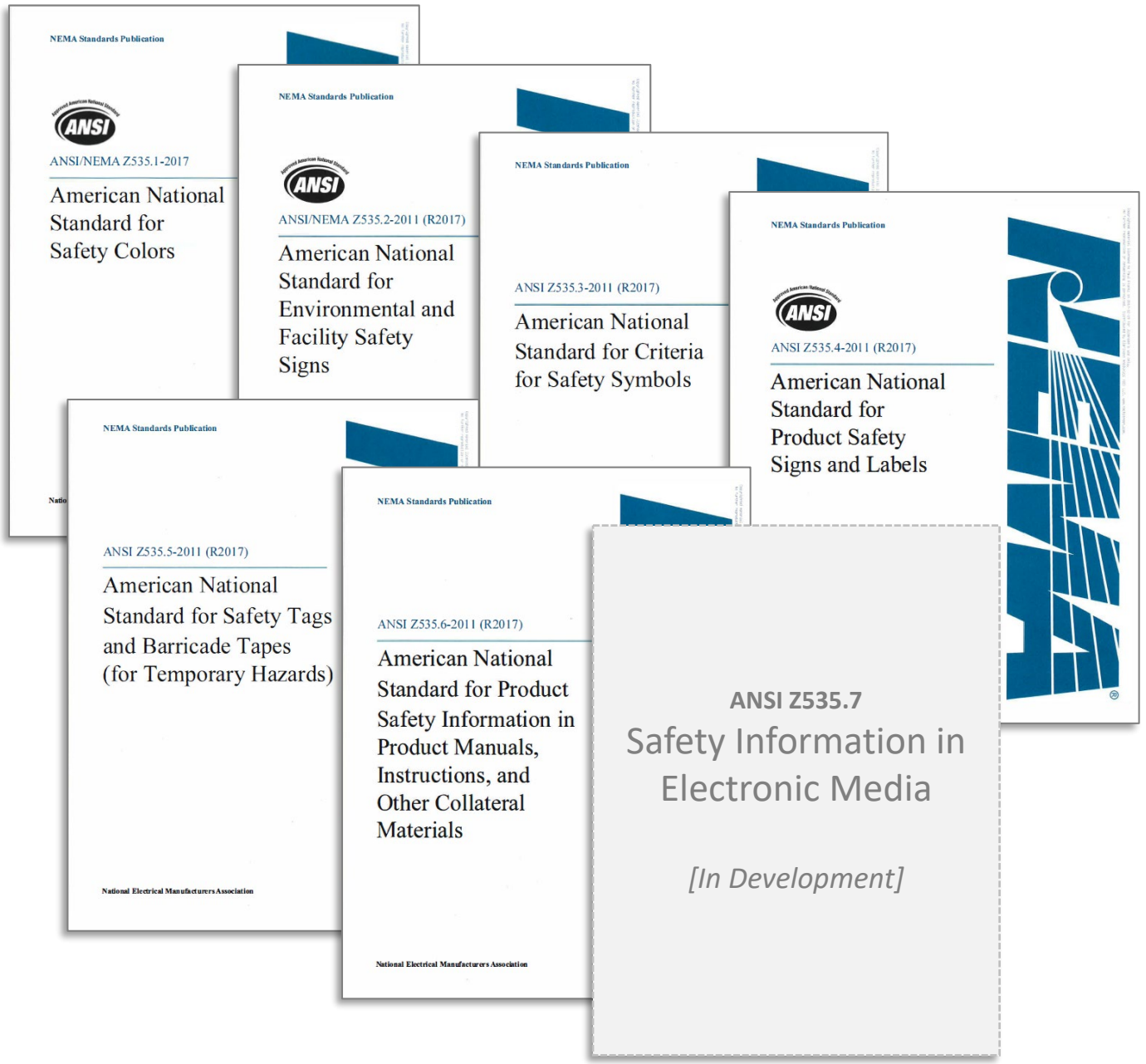
Z535.3 – Criteria for Safety Symbols

Z535.4 – Product Safety Signs and Labels

Z535.5 – Safety Tags and Barricade Tapes

Z535.6 – Product Safety Information in Product Manuals, Instructions, and Other Collateral Materials

Z535.7 – Safety Information in Electronic Media *[In Development]*



Current Leadership

Chair
Steve Hall

AppliedSafety +Ergonomics | A Rimkus Company

Vice-Chair
Judith J. Isaacson

AppliedSafety +Ergonomics | A Rimkus Company

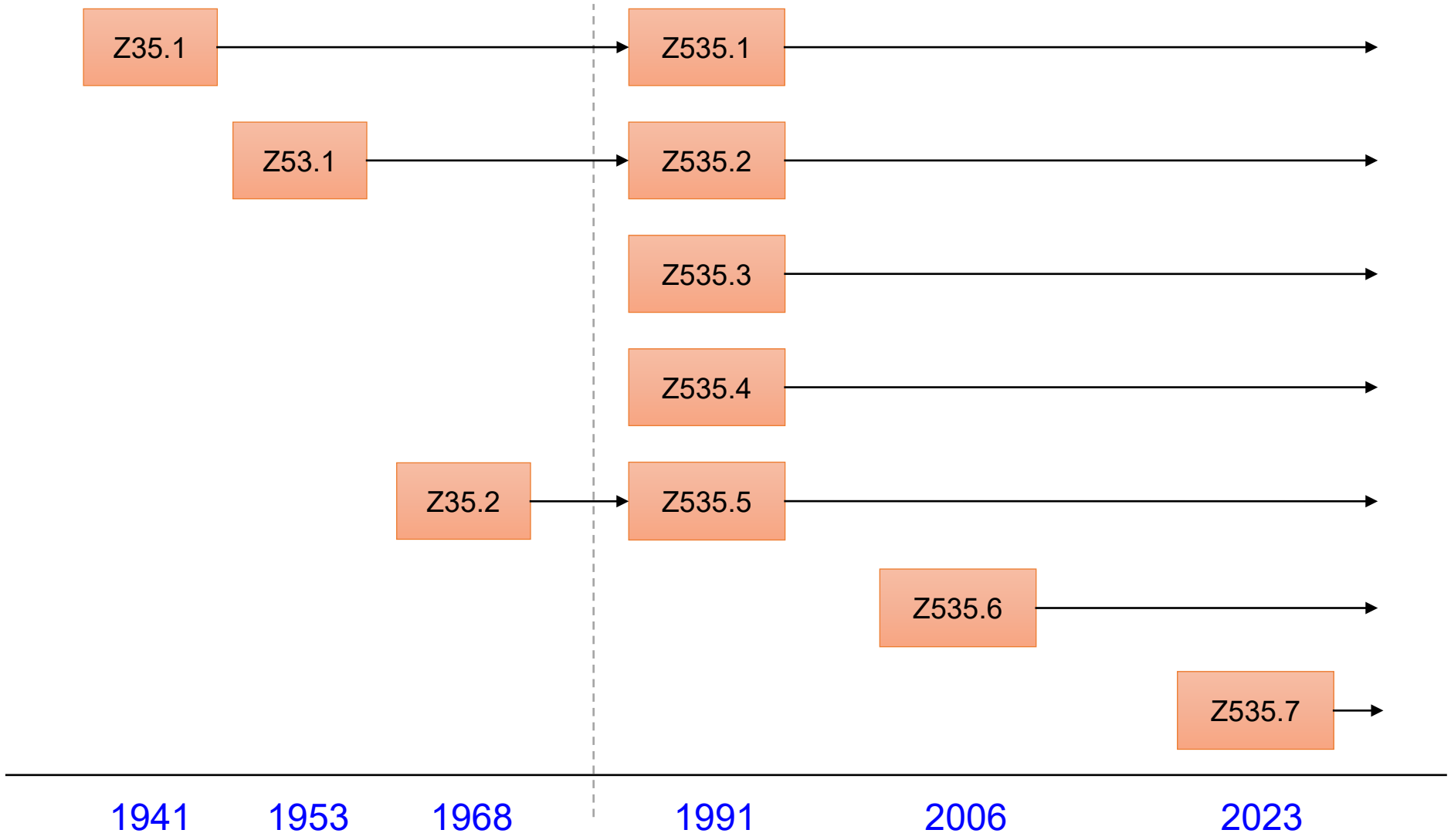
32 Current Member Organizations

including:

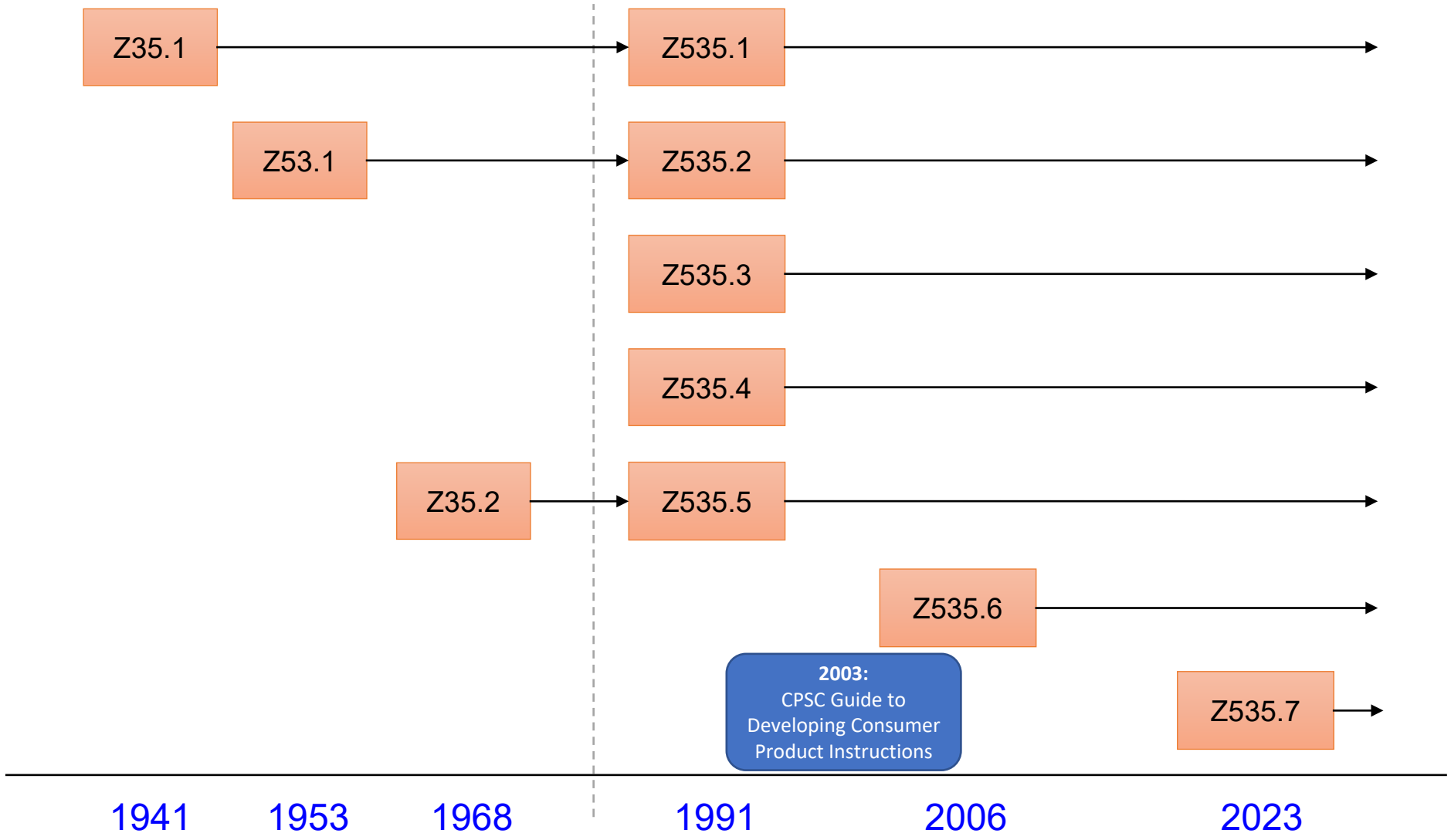
ASSP, AWS, Applied Materials, AppliedSafety +Ergonomics | A Rimkus Company, AMT, AEM, BRP, CAT, Clarion, EEI Edison Electric Institute, Human Factors and Ergonomics Society, UL Solutions, ISEA International Safety Equipment Association, ISANTA, gpi, NMC National Marker Company, NEMA, pti power tool institute, inc

The ANSI Z535 Committee

History of ANSI Z535 Standards



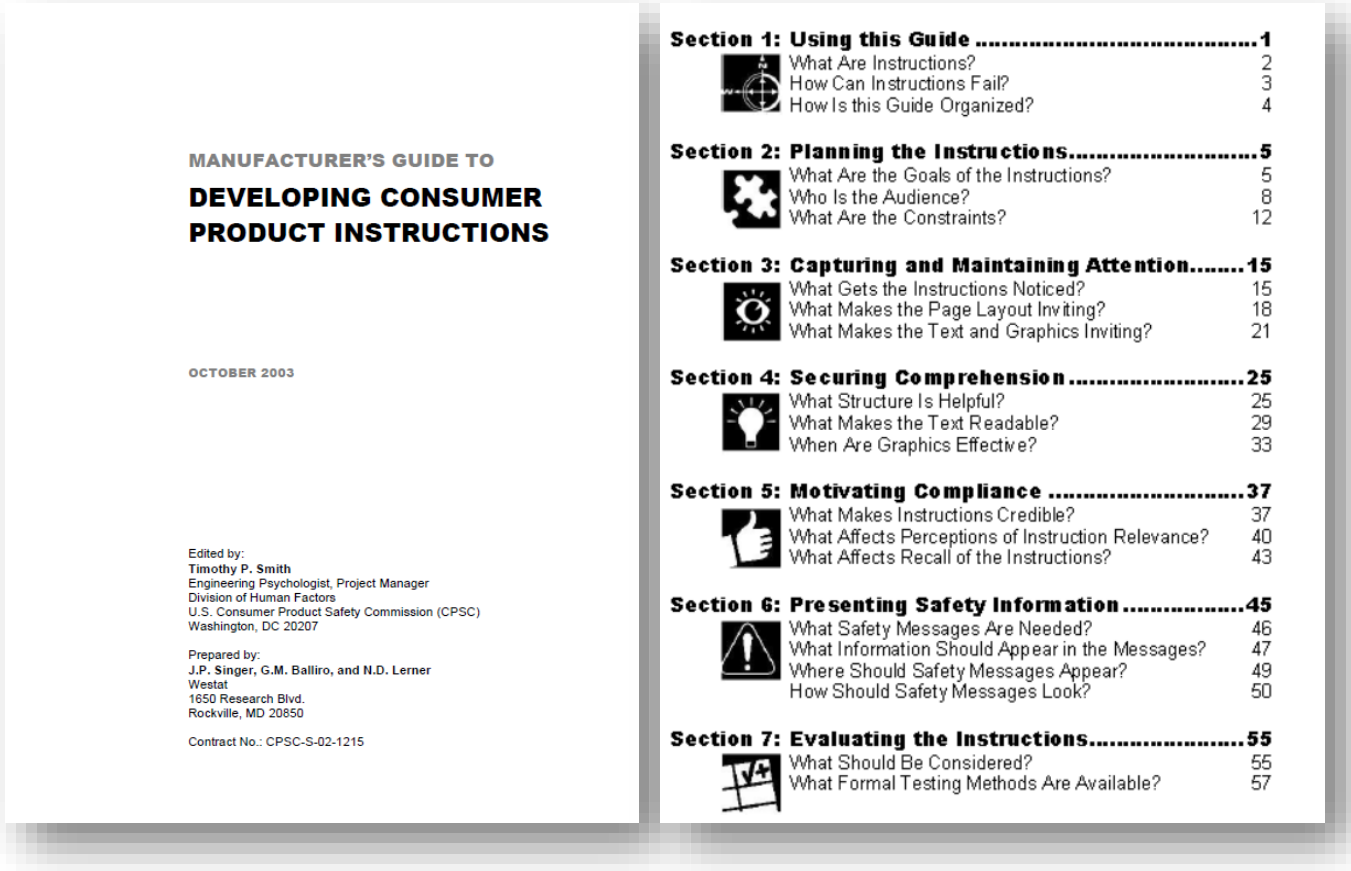
History of ANSI Z535 Standards



CPSC Guide to Developing Consumer Product Instructions

- Provides practical guidance, e.g.,
  - Safety information
  - Instructions
  - Usability
  - Comprehension
  - Evaluation
  - Avoiding overwarning
- Provides useful summary of literature
- Some aspects now outdated (e.g., old definition of signal word “CAUTION”)
- PDF here or

  scan this QR code:



MANUFACTURER'S GUIDE TO

DEVELOPING CONSUMER PRODUCT INSTRUCTIONS

OCTOBER 2003

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Contract No.: CPSC-S-02-1215

Section 1: Using this Guide 1
What Are Instructions? 2
How Can Instructions Fail? 3
How Is this Guide Organized? 4

Section 2: Planning the Instructions 5
What Are the Goals of the Instructions? 5
Who Is the Audience? 8
What Are the Constraints? 12

Section 3: Capturing and Maintaining Attention 15
What Gets the Instructions Noticed? 15
What Makes the Page Layout Inviting? 18
What Makes the Text and Graphics Inviting? 21

Section 4: Securing Comprehension 25
What Structure Is Helpful? 25
What Makes the Text Readable? 29
When Are Graphics Effective? 33

Section 5: Motivating Compliance 37
What Makes Instructions Credible? 37
What Affects Perceptions of Instruction Relevance? 40
What Affects Recall of the Instructions? 43

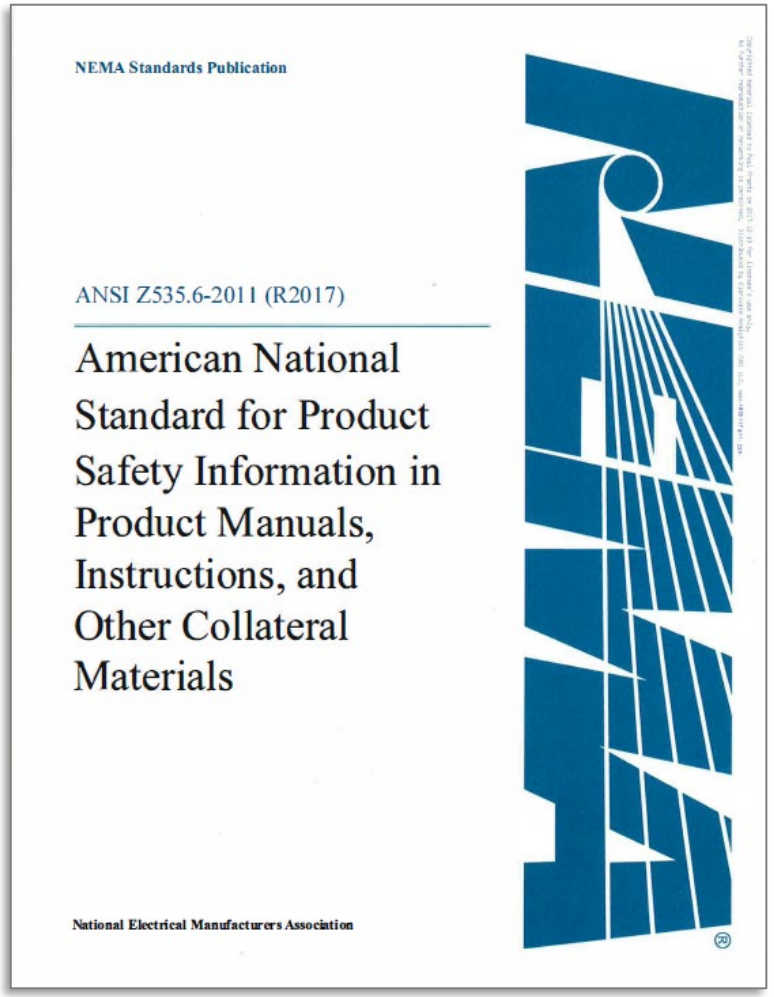
Section 6: Presenting Safety Information 45
What Safety Messages Are Needed? 46
What Information Should Appear in the Messages? 47
Where Should Safety Messages Appear? 49
How Should Safety Messages Look? 50

Section 7: Evaluating the Instructions 55
What Should Be Considered? 55
What Formal Testing Methods Are Available? 57

Purpose of ANSI Z535 Standards

Example from ANSI Z535.6:

- Increase uniformity of product safety information in literature.
- Assist manufacturers in providing safety information.
- Promote efficient development of safety messages in collateral materials.
- Consensus standard, not required.



Limitations of ANSI Z535

- Not magic.
- Is superseded by other sources with conflicting mandatory requirements (e.g., regulations, mandatory standards).

Example: Required formatting that does not conform with ANSI Z535.

ANSI Z535.6

Product Safety Information in Product Manuals, Instructions, and Other Collateral Materials

Before Z535.6

⚠ WARNING: Read the Operator's Manual and Follow All Warnings And Safety Instructions. Failure To Do So Can Result In Serious Injury.

CAUTION: Read Rules for Safe Operation and All Instructions

FOR YOUR SAFETY: READ ALL INSTRUCTIONS CAREFULLY

IMPORTANT

For your own safety, before assembling and operating this unit, read this Operator's Manual carefully and completely. Learn the operation, applications and potential hazards peculiar to this unit.

⚠ DANGER

Your unit was built to be operated according to the rules for safe operation in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. If you violate any of these rules, you may cause serious injury to yourself or others.

WARNING : DO NOT ATTEMPT TO OPERATE THIS TOOL UNTIL YOU HAVE READ THOROUGHLY AND UNDERSTAND COMPLETELY ALL INSTRUCTIONS, SAFETY RULES, ETC. CONTAINED IN THIS MANUAL. FAILURE TO COMPLY CAN RESULT IN ACCIDENTS INVOLVING FIRE, ELECTRIC SHOCK, OR SERIOUS PERSONAL INJURY. SAVE OWNERS MANUAL AND REVIEW FREQUENTLY FOR CONTINUING SAFE OPERATION, AND INSTRUCTING POSSIBLE THIRD-PARTY USERS.

⚠ WARNING

Failure to follow Instructions and warnings can result in serious injury.

- **Before installing, operating, or servicing the VE272FS Tool read this Manual and all warning labels on the tool.**
- **Always wear safety glasses and foot protection.**

If you need additional copies of the manual or have any questions about the safe operation of this tool, contact Victaulic Tool Company, P.O. Box 31, Easton, PA 18044-0031, 610-559-3300.

Why Not Just Always Use ANSI Z535.4 Formatting for Manuals?

- Not designed to be integrated with other text
- Not designed to convey hierarchical structure
- Does not help navigation
- Not designed for multiple pages of safety information
- Wastes space
- Difficult to integrate into procedures

⚠WARNING

This Smoke/CO Alarm cannot operate without a working battery. Remove the battery for any reason, or failing to replace the battery at the end of its service life, removes your protection.

⚠WARNING

NEVER ignore any alarm. Refer to Chapter 3 for more information on how to respond to an alarm. Failure to respond can result in injury or death.

⚠WARNING

The Silence Feature is for your convenience only and will not correct a problem. See Chapter 3 for details on using the Silence Feature.

⚠WARNING

Test this Carbon Monoxide/Smoke Alarm once a week. If it ever fails to test correctly, have it replaced immediately! If the alarm is not working properly, it cannot alert you to a problem.

⚠WARNING

Do not paint over the Smoke/CO Alarm. Paint may clog the openings to the sensing chamber and prevent the sensors from operating properly.

What are “Collateral Materials?”

Includes:

- Owner’s manuals
- Instructions
- User’s guides
- Maintenance or service manuals
- Assembly instructions
- Safety manuals
- Instructions on product packaging
- …and similar information about a product, its uses and functions, and/or other user-related interactions.”

DOES NOT Include:

- Product signs
- Labels
- Labeling
- Safety data sheets (SDSs)
- Advertising and promotional materials
- Audio and video materials, or
- Dynamic or electronic media (e.g., electronic documents with animation, sound or other features that are not printable).

What are “Safety Messages?”

Includes:

- Word messages that provide information about:
  - nature of the ***hazard***;
  - ***consequences*** for not avoiding the hazard; and/or
  - method(s) for ***avoiding*** the hazard
- When hazard, consequence, and/or avoidance are readily inferred, or provided by context, they may be omitted from the safety message.
- Safety symbols and other graphics may be used to supplement or substitute for part or all of a word message.

DOES NOT Include:

- Information that does not have direct safety implications and that clarifies steps, procedures, or other information in collateral materials.
  - e.g., “Note…”
- Procedures or instructions that are referred to in safety messages, typically as a means of avoiding a hazardous situation.
  - e.g., if a safety message instructs users to install a safety device, the instructions would not be considered a safety message.
- Procedural or descriptive information that is subordinate to a grouped safety message or section safety message, or adjacent and related to an embedded safety message.

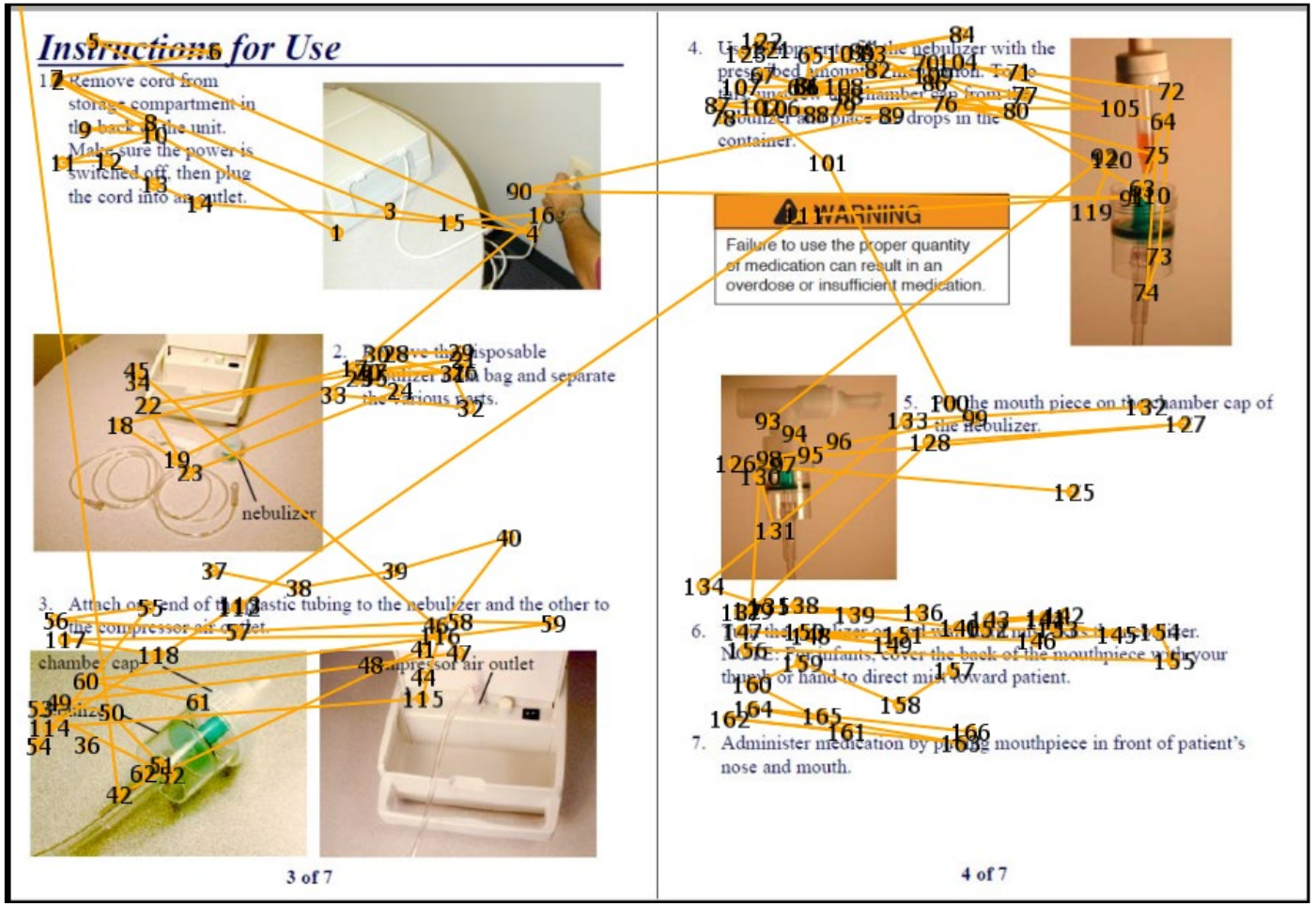
Types of Safety Information

1. Supplemental Directives
2. Grouped Safety Messages
3. Section Safety Messages
4. Embedded Safety Messages

Types of Reading Activities

- Reading to learn
- Reading to do
- Skimming
- Searching
- Problem solving
- Etc.

Example eye tracking map from one participant



Types of Safety Information:

1. Supplemental Directives

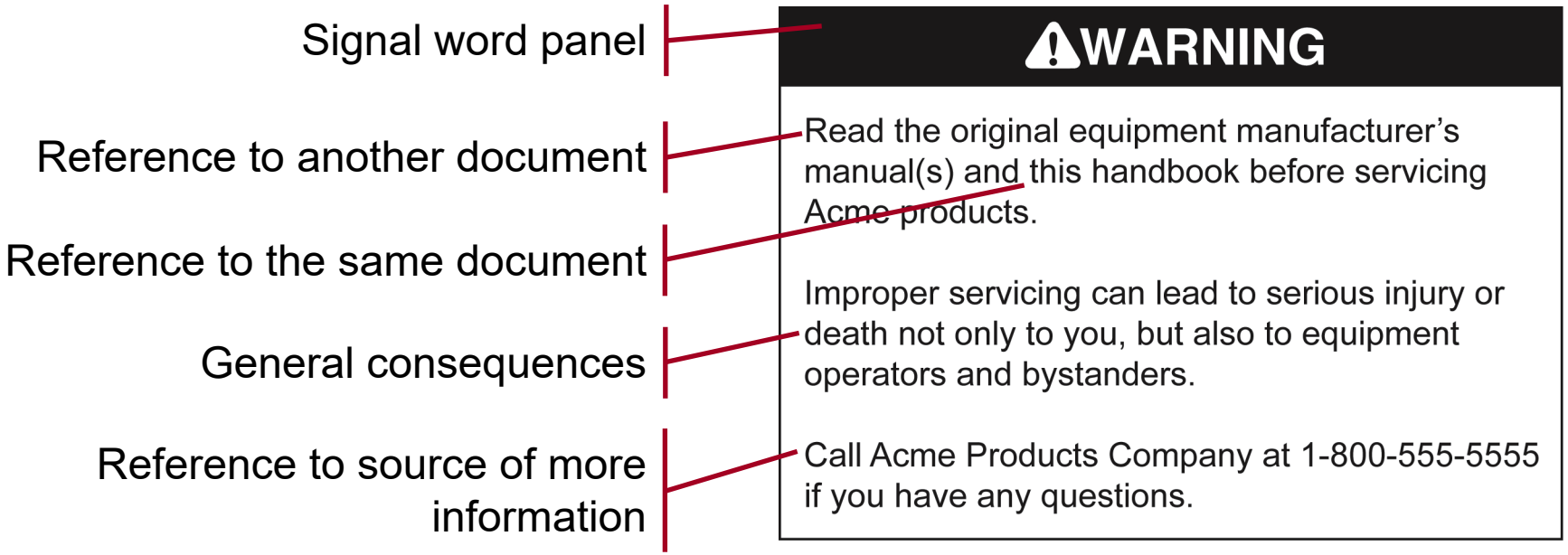
Description:

- Provide information about the safety information, but they don't contain safety information.
- Do not usually address specific hazards or consequences.
- Typical messages:
  - Read this manual
  - Read another manual (e.g., maintenance manual)
  - Be trained or qualified (e.g., electrician)
  - Store this document in specified location (e.g., keep with product)
  - Give this document to others (e.g., users, future owners)

Types of Safety Information:

1. Supplemental Directives

Examples:



Types of Safety Information:

2. Grouped Safety Messages

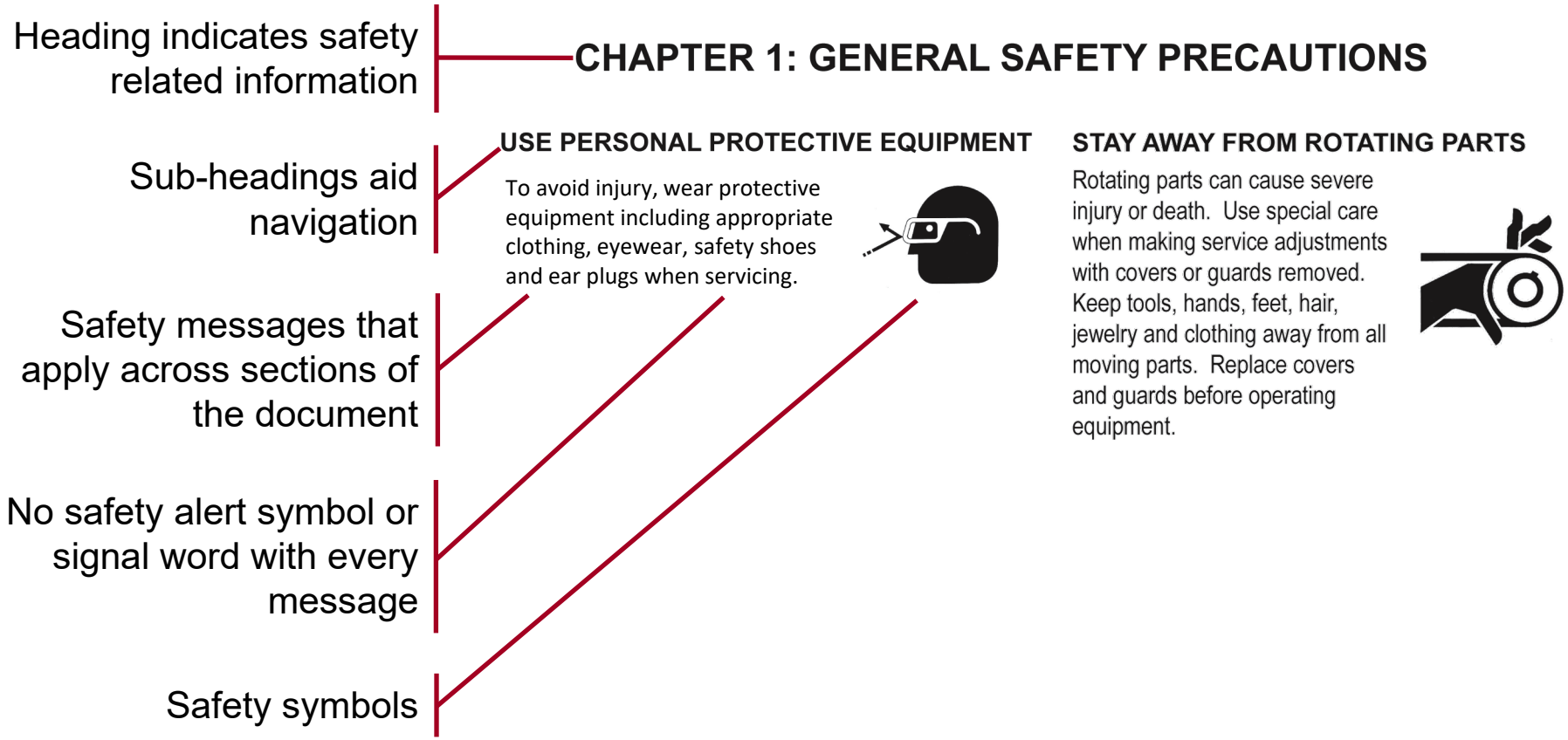
Description:

- Provide safety messages in one location.
  - Makes it easy to find safety messages.
  - Reduces need to repeat safety messages in the document.
- Typically located near the beginning of a document.
- Frequently signal words and safety alert symbols are not used.

Types of Safety Information:

2. Grouped Safety Messages

Examples:



Types of Safety Information:

3. Section Safety Messages

Description:

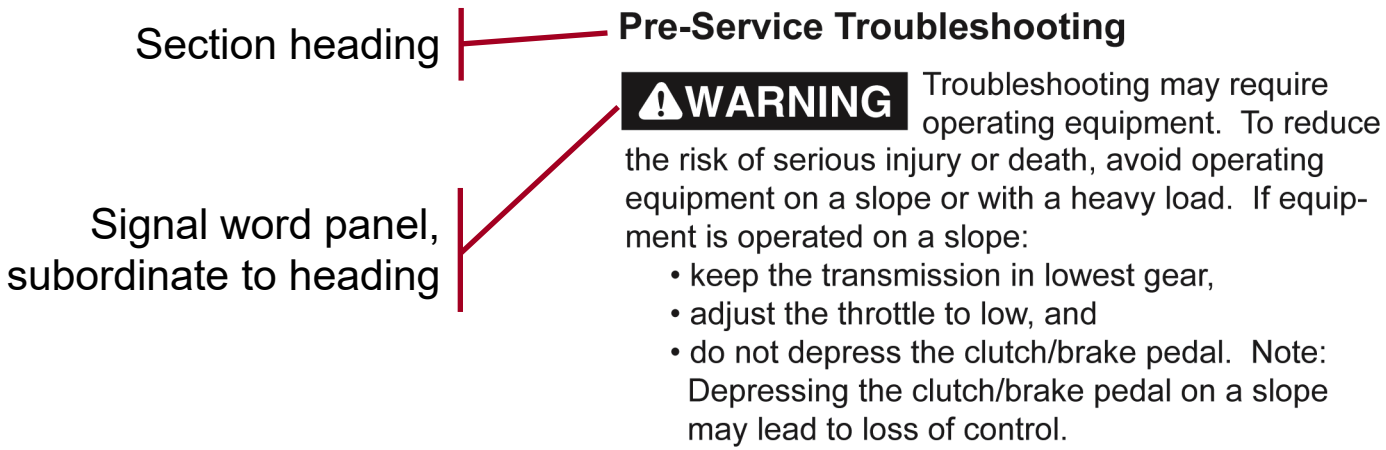
- Applies to an entire section; reduces the need to repeat a safety message within the section.
- Typically located at the beginning of a section.
- Apply to larger units of information than embedded safety messages.

Types of Safety Information:

3. Section Safety Messages

Examples:

- Formats can support hierarchical structure



Types of Safety Information:

3. Section Safety Messages

Examples:

SECTION HEADING

⚠ This is a section safety message. This is a section safety message. This is a section safety message. This is a section safety message. This is a section safety message.

General text general text general text general text general text general text general text general text general text general text general text.

SECTION HEADING

⚠ This is a section safety message. This is a section safety message. This is a section safety message. This is a section safety message. This is a section safety message.

General text general text general text general text general text general text general text general text general text general text general text.

SECTION HEADING

⚠ This is a section safety message. This is a section safety message. This is a section safety message. This is a section safety message. This is a section safety message.

General text general text general text general text general text general text general text general text general text general text general text.

SECTION HEADING

⚠ WARNING

This is a section safety message. This is a section safety message. This is a section safety message. This is a section safety message. This is a section safety message. This is a section safety message.

General text general text general text general text general text general text general text general text general text general text general text.

SECTION HEADING

⚠ WARNING This is a section safety message. This is a section safety message. This is a section safety message. This is a section safety message. This is a section safety message.

This is a section safety message. This is a section safety message. This is a section safety message.

General text general text general text general text general text general text general text general text general text general text general text.

SECTION HEADING

General text general text general text general text general text general text general text general text general text general text.

⚠ WARNING This is a section safety message. This is a section safety message. This is a section safety message. This is a section safety message. This is a section safety message. This is a section safety message.

General text general text general text general text general text general text general text general text general text general text general text.

Types of Safety Information:

4. Embedded Safety Messages

Description:

- Are intended to be integrated within procedures or other text with the intent of allowing the user to encounter the safety message in the course of reading the procedure or text.

- Apply to smaller units of information compared to section safety messages.

Types of Safety Information:

4. Embedded Safety Messages

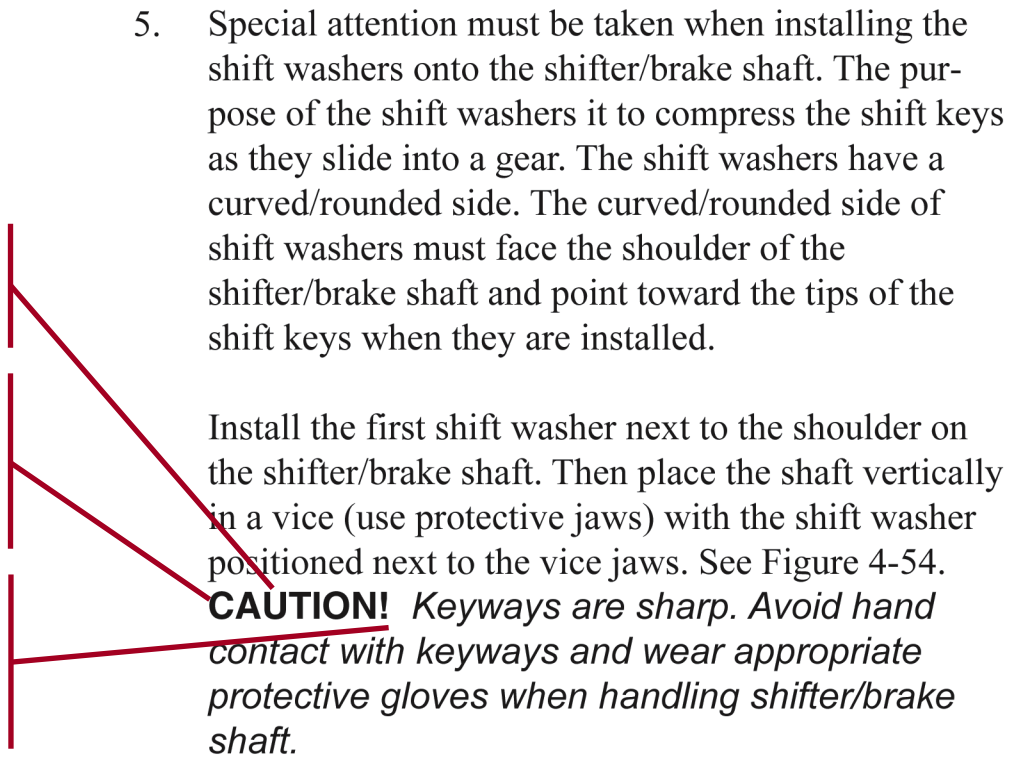
Examples:

Sans serif, upper case signal word

Safety message integrated into flow of text (same paragraph)

Exclamation point used instead of safety alert symbol

Additional text style (italic) can be used to differentiate safety message



5. Special attention must be taken when installing the shift washers onto the shifter/brake shaft. The purpose of the shift washers it to compress the shift keys as they slide into a gear. The shift washers have a curved/rounded side. The curved/rounded side of shift washers must face the shoulder of the shifter/brake shaft and point toward the tips of the shift keys when they are installed.

Install the first shift washer next to the shoulder on the shifter/brake shaft. Then place the shaft vertically in a vice (use protective jaws) with the shift washer positioned next to the vice jaws. See Figure 4-54.
CAUTION! *Keyways are sharp. Avoid hand contact with keyways and wear appropriate protective gloves when handling shifter/brake shaft.*

Types of Safety Information:

4. Embedded Safety Messages

Examples:

Installing Motor Boost Accessory

1. Park machine on level surface
2. Turn off and lock out the ignition of the loader.
3. **WARNING! Wear eye protection and make sure engine is cool before performing this and all following steps.** Open access port near the exhaust outlet of the motor. (…)

Installing Motor Boost Accessory

1. Park machine on level surface
2. Turn off and lock out the ignition of the loader.

⚠ **Wear eye protection and make sure engine is cool before starting the next and all following steps.**

3. Open access port near the exhaust outlet of the motor. (…)

General text general text general text general text.
WARNING! This is an embedded safety message. This is an embedded safety message. This is an embedded safety message.
General text general text general text.

General text general text general text general text general text general text general text general text general text general text. **WARNING! This is an embedded safety message. This is an embedded safety message. This is an embedded safety message.** General text general text general text.

General text general text general text general text general text general text general text general text general text general text general text.

⚠ This is an embedded safety message. This is an embedded safety message. This is an embedded safety message. This is an embedded safety message.

General text general text general text general text general text general text general text general text general text general text general text.

Summary: Types of Safety Information

	Definition	Formats	Typical Locations
Supplemental Directive	Messages about other safety messages	▪ Signal word ▪ Safety alert symbol ▪ No formatting	▪ Cover ▪ First page ▪ Before safety messages
Grouped Safety Messages	Safety messages collected in one document or section	▪ Title ▪ Section headings ▪ Minimize individual message formatting	▪ Separate or distinct location within document ▪ Separate document
Section Safety Messages	Safety messages that apply to entire sections	• Signal word panel • Safety alert symbol	Beginning of the section to which it applies
Embedded Safety Messages	Safety messages that apply to specific procedures, sentences, steps, etc.	▪ Signal word ▪ Safety alert symbol ▪ No formatting	Integrated with the non-safety information

Does ANSI Z535.6 Tell Me What to Say?

- No.

- Users of the standard should consider two simple questions:
  - ***What do you want people to know?***
  - ***How do you expect them to know it?***

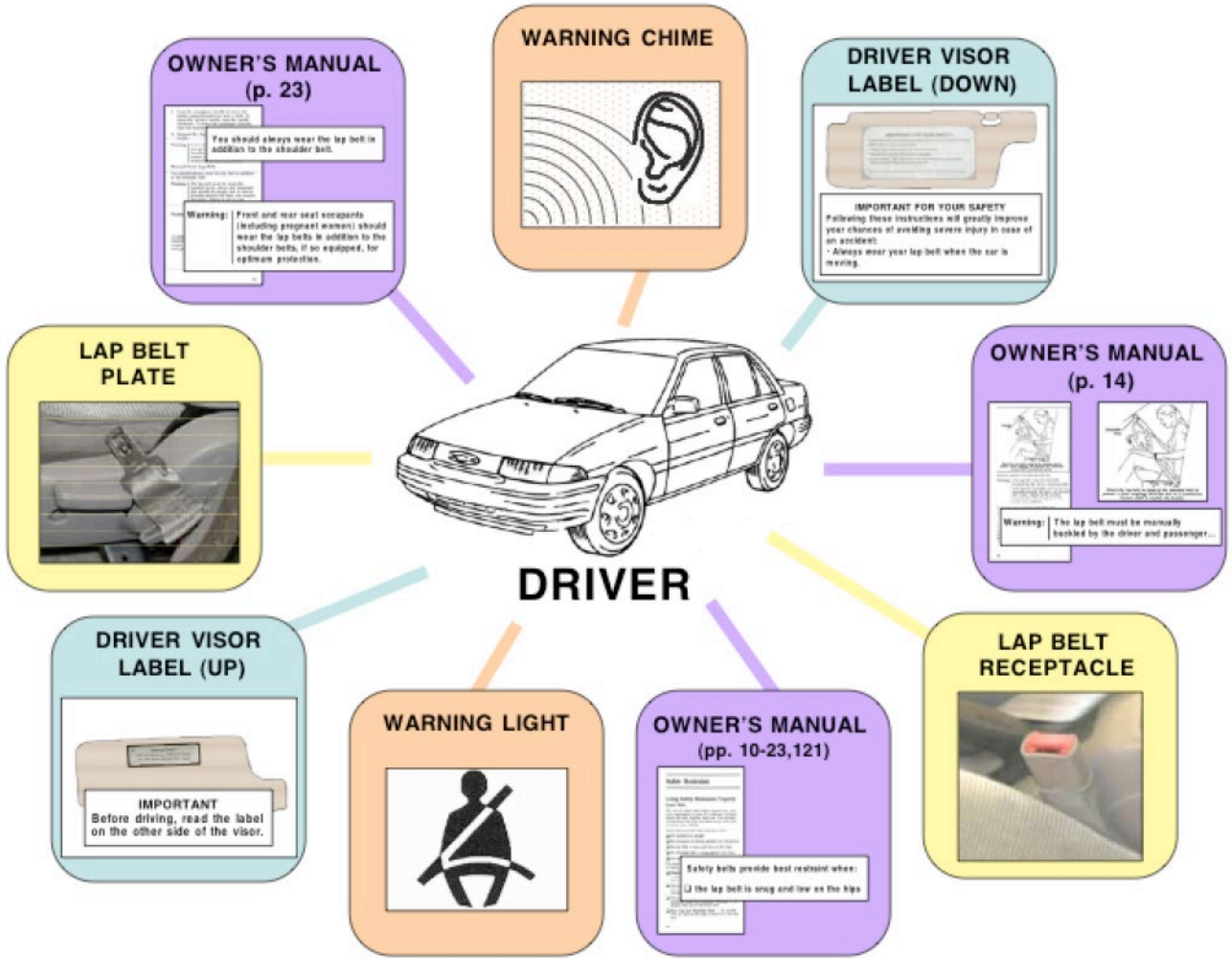
Consider: The Audience

- Service manuals vs. user manuals
  - Reader's background/assumed knowledge
  - Consider who might access
  - Reliance on supplemental directives
- Bulletins and other printed communications with users
  - Consider purpose
- Catalogs/brochures (when applicable)
  - When/what to include safety information

Consider: The System of Information

System of information:
A set of information regarding a product, its uses and functions, and/or other user-related interactions. A product's system of information can include components such as: on-product labels, product manuals, other collateral information, point-of-purchase information, and electronic media (e.g., product videos, information on the manufacturer's website).

(Definition from upcoming ANSI Z535.7)



Practical Steps to Apply Z535.6 to Existing Manuals

1. Review manual and find all potential safety messages
2. Verify messages have direct safety implications
3. Assess
   - Hazard
   - Consequence(s)
   - Method(s) To Avoid Hazard
4. Determine location and type of safety message
5. Develop formatting style
6. Apply formatting

ANSI Z535.6 Takeaways

- Consider revisiting existing documents and formats.
- The standard is very flexible, so each manufacturer can choose formats that are appropriate for their documents.
- Expect that you will need to explain the rationale behind formatting decisions.

ANSI Z535.7
Safety Information in Electronic Media

Subcommittee Leadership

Eric Boelhouwer
Chair

Paul Crampton
Secretary

Subcommittee Members Preparing ANSI Z535.7

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John Mackenzie
Schneider Electric

Timothy Smith
U.S. Consumer Product Safety Commission

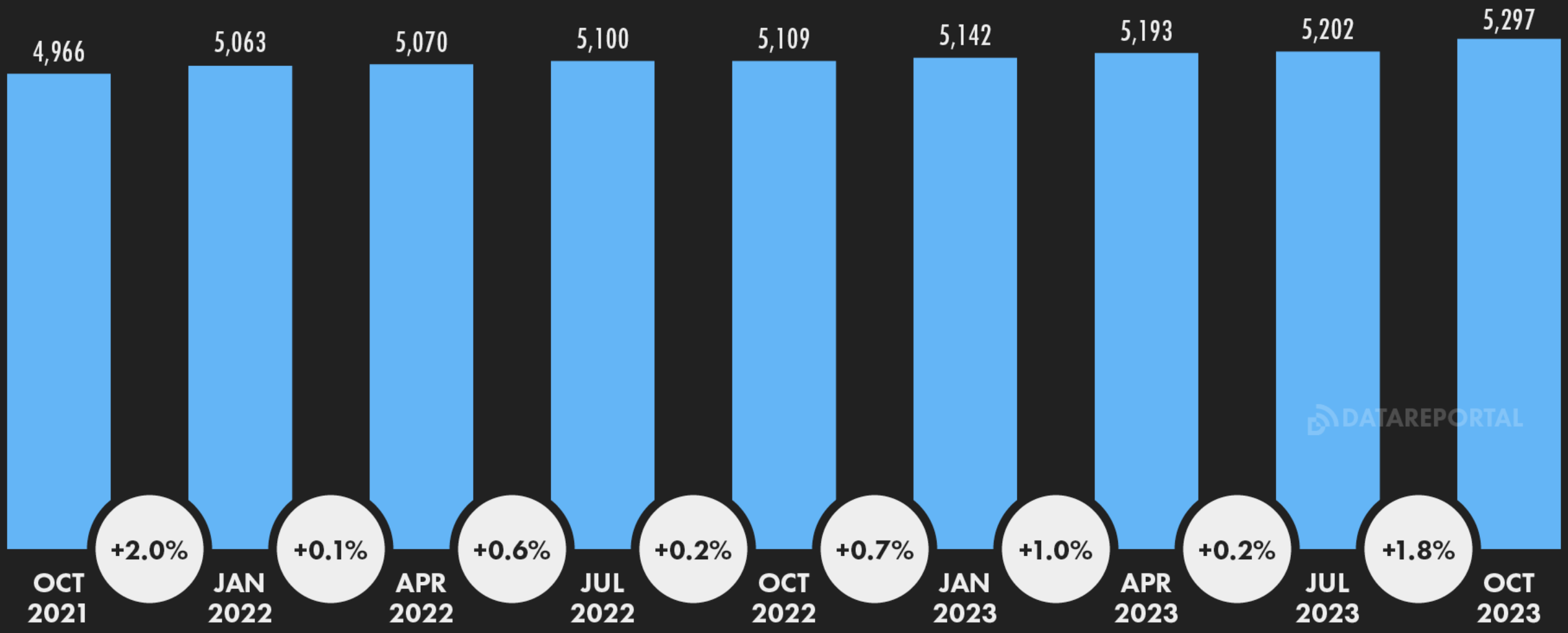
Current ANSI Z535.7 Subcommittee Members

OCT 2023

INTERNET USE OVER TIME (QOQ)

NUMBER OF INDIVIDUALS USING THE INTERNET (IN MILLIONS) AND QUARTER-ON-QUARTER CHANGE

GLOBAL OVERVIEW



SOURCES: KEPIOS ANALYSIS; ITU; GSMA INTELLIGENCE; EUROSTAT; WORLD BANK; GOOGLE'S ADVERTISING RESOURCES; CIA WORLD FACTBOOK; CNNIC; NIELSEN; LOCAL GOVERNMENT AUTHORITIES; UNITED NATIONS. **NOTES:** ALL FIGURES USE THE LATEST AVAILABLE DATA, BUT SOME SOURCE DATA MAY NOT HAVE BEEN UPDATED IN THE PAST YEAR. THE TIME REQUIRED TO COLLECT, PROCESS, AND REPORT INTERNET USER RESEARCH DATA MAY MEAN THAT USER FIGURES AND GROWTH TRENDS FOR RECENT PERIODS UNDER-REPRESENT ACTUAL VALUES. SEE NOTES ON DATA FOR FURTHER DETAILS. **COMPARABILITY:** SOURCE AND BASE CHANGES. FIGURES MAY NOT MATCH OR CORRELATE WITH FIGURES PUBLISHED IN PREVIOUS REPORTS.

we are social
Meltwater

OCT 2023

ESSENTIAL DIGITAL HEADLINES

OVERVIEW OF THE ADOPTION AND USE OF CONNECTED DEVICES AND SERVICES

GLOBAL OVERVIEW

TOTAL POPULATION

8.06 BILLION

URBANISATION

57.2%

UNIQUE MOBILE PHONE SUBSCRIBERS

5.60 BILLION

vs. POPULATION

69.4%

INDIVIDUALS USING THE INTERNET

5.30 BILLION

vs. POPULATION

65.7%

SOCIAL MEDIA USER IDENTITIES

4.95 BILLION

vs. POPULATION

61.4%

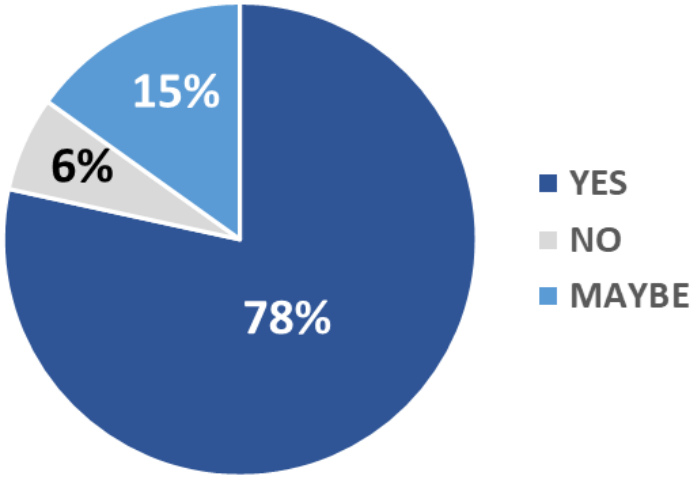
SOURCES: UNITED NATIONS; GOVERNMENT BODIES; GSMA INTELLIGENCE; ITU; WORLD BANK; EUROSTAT; CNNIC; NIELSEN; CIA WORLD FACTBOOK; COMPANY ADVERTISING RESOURCES AND EARNINGS REPORTS; OCDH; BETA RESEARCH CENTER; KEPIOS ANALYSIS. **ADVISORY:** SOCIAL MEDIA USER IDENTITIES MAY NOT REPRESENT UNIQUE INDIVIDUALS. **COMPARABILITY:** SIGNIFICANT REVISIONS TO SOURCE DATA, INCLUDING COMPREHENSIVE REVISIONS TO POPULATION DATA. FIGURES ARE NOT COMPARABLE WITH PREVIOUS REPORTS. ALL FIGURES USE THE LATEST AVAILABLE DATA, BUT SOME SOURCE DATA MAY NOT HAVE BEEN UPDATED IN THE PAST YEAR. SEE NOTES ON DATA FOR FULL DETAILS.

Consumers Expect Safety Information to be Available Online

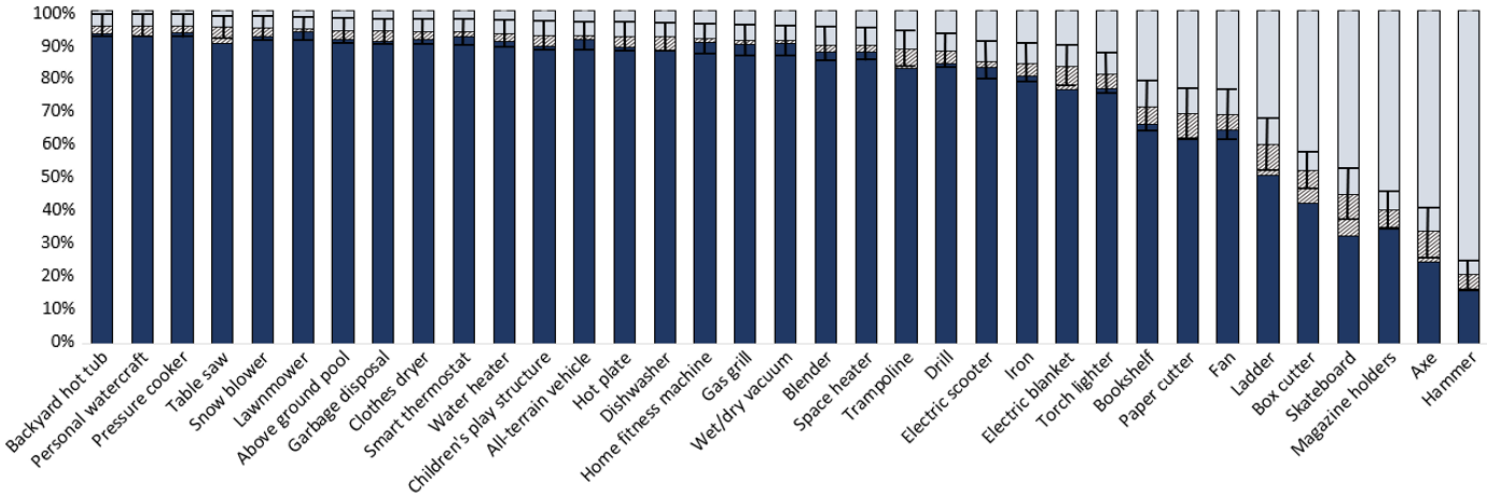
Source:
Hall, S.M., Isaacson, J.J., Shah, R.J., & Ward, A.C. (2022). **Consumer expectations for owner's manuals—safety information & online availability.** Poster presentation at the *13th International Conference on Applied Human Factors and Ergonomics*. New York, NY. July 27, 2022.

If you purchased a drill…

Would you expect the drill manual to be available online?

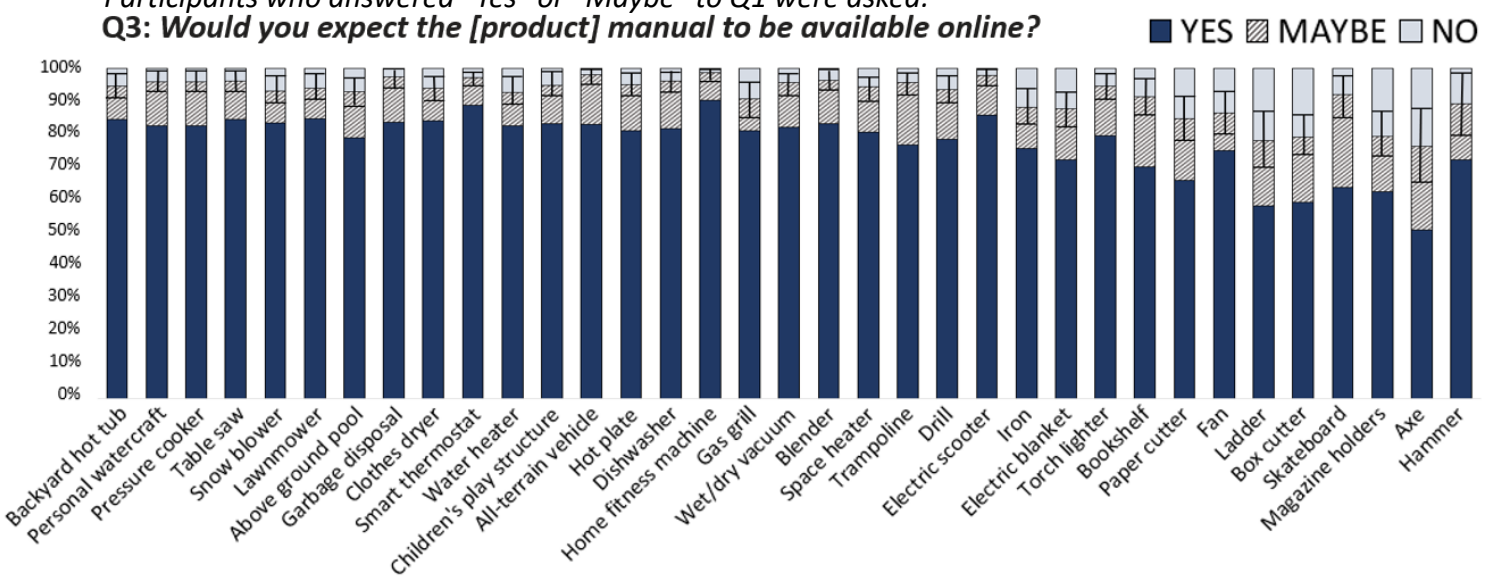


Q1: ***If you purchased a [product], would you expect there to be a manual (e.g., user's manual, instruction leaflet, or other instructions not printed on the product itself)?***



Participants who answered "Yes" or "Maybe" to Q1 were asked:

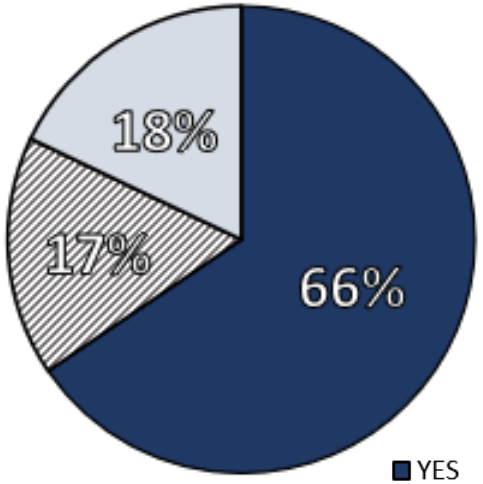
Q3: ***Would you expect the [product] manual to be available online?***



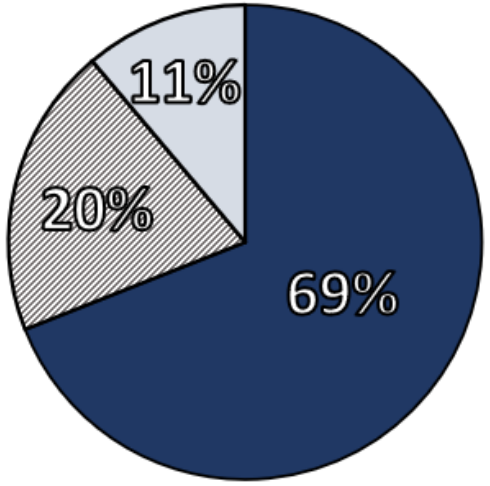
Many Consumers Able to Access Online Safety Information

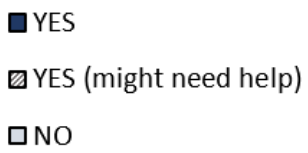
Ability to access manuals online

Q6: ***Able to access online manual using QR code?***



Q7: ***Able to access online manual using a URL?***

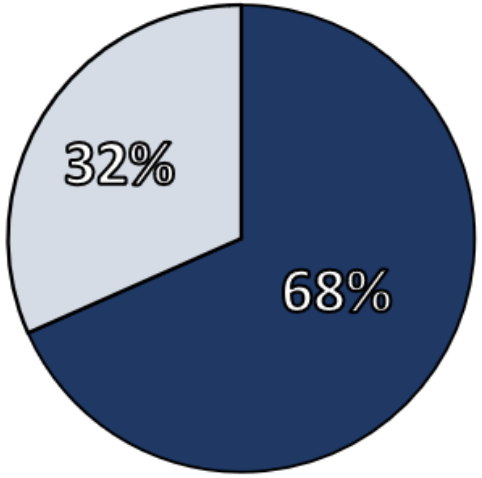




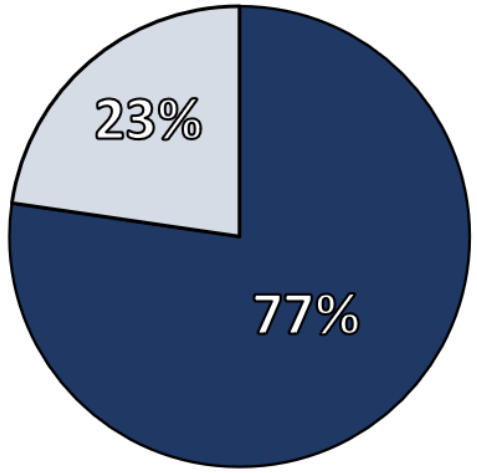
Most participants (91%) reported that they would be able to access an online version of a product manual using a QR code or URL, though some might need help.

Use of videos for assembly or repair

Q8: ***Ever consulted a video when assembling a product?***



Q9: ***Ever consulted a video when fixing a product?***



Most participants (79%) reported having consulted a video when assembling or fixing a product.

Source:

Hall, S.M., Isaacson, J.J., Shah, R.J., & Ward, A.C. (2022). Consumer expectations for owner's manuals—safety information & online availability. Poster presentation at the *13th International Conference on Applied Human Factors and Ergonomics*. New York, NY. July 27, 2022.

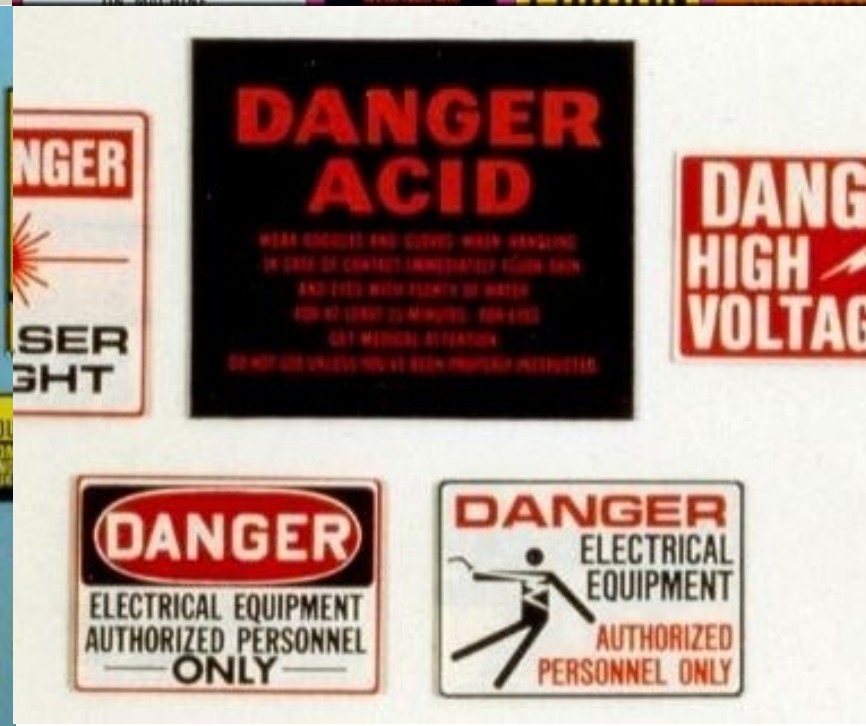
WARNING
THIS MACHINE IS AUTOMATICALLY CONTROLLED AND MAY START AT ANY TIME
WARNING
THIS EQUIPMENT STARTS AUTOMATICALLY
WARNING
MOVING MEMBER UNDER THIS GUARD
KEEP HANDS AND FINGERS CLEAR
WARNING
NEIGHBORHOOD CRIME WATCH
WARNING
UNDER NO CIRCUMSTANCES ARE THESE MACHINES TO BE OPERATED UNLESS ALL SAFETY GUARDS ARE IN PLACE
WARNING
WHEN ALARM SOUNDS LEAVE AREA

WARNING
NOT FOR ELECTRICAL FIRES
WARNING
This Machine is Automatically Controlled
IT MAY START AT ANY TIME
WARNING
UNAUTHORIZED REMOVAL OF LOAD BINDERS OR CHAINS - MINIMUM PENALTIES $500.00 DOLLARS OR 6 MONTHS IN JAIL
WARNING
DISCHARGE OF HARMFUL WASTE TO SEWER IS PROHIBITED. IF IN DOUBT, ASK YOUR SUPERVISOR
WARNING
NOISE AREA
WARNING
POWDER ACTUATED TOOL TO BE USED ONLY BY A QUALIFIED OPERATOR AND KEPT UNDER LOCK AND KEY WHEN NOT IN USE

HAZARDOUS AREA
TRAINED PERSONNEL ONLY
TO SEWER IS PROHIBITED. IF IN DOUBT, ASK YOUR SUPERVISOR
GREASE ONLY WHEN NOT OPERATING
DANGER
HIGH VOLTAGE
KEEP MACHINE GUARDS IN PLACE
SAFETY GLASSES REQUIRE
CAUTION
DO NOT USE AROUND ELECTRICAL EQUIPMENT
HIGH VOLTAGE
CAUTION
CONTROLS OPERATED BY AUTHORIZED PERSONNEL ONLY
DANGER
WATCH FOR FLOOR OPENINGS
CAUTION
NEVER START ENGINE WITH FULL OPEN THROTTLE
USE OF THIS VEHICLE IS AT YOUR OWN RISK
WARNING
DANGER
TURN OFF ELECTRICAL, DISCONNECT SWITCH BEFORE WORKING
DANGER
ACID
POISON

ALL WIRES SHOULD BE CONSIDERED DANGEROUS
BE ALERT!
WATCH YOUR FINGERS
STAY A '10'
DO NOT TALK TO OPERATORS OF MACHINERY
TO DISTRACT THEIR ATTENTION MIGHT CAUSE A SERIOUS ACCIDENT
DRIVERS
CLOSED AREA
AUTHORIZED PERSONNEL ONLY

NO LIFT TRUCKS BEYOND THIS POINT
IF YOU MUST REMOVE
REPLACE AS SOON AS POSSIBLE
ALWAYS
CHOCK WHEELS
NOT AN EXIT
POISON
NO ADMITTANCE
AUTHORIZED PERSONNEL ONLY
KEEP MACHINE GUARDS IN PLACE
GOGGLES REQUIRED INSIDE YELLOW LINE
HARD HAT AREA
HIGH VOLTAGE


DANGER
ACID
DANGER
ELECTRICAL EQUIPMENT AUTHORIZED PERSONNEL ONLY
DANGER
ELECTRICAL EQUIPMENT
AUTHORIZED PERSONNEL ONLY

WARNING

WARNING:

WARNING:

WARNING:

:WARNING:

WARNING

WARNING

WARNING

WARNING

CAUTION

CAUTION:

CAUTION:

CAUTION:

Caution:

CAUTION

CAUTION - MOTION SICKNESS

WARNING – Electric Shock

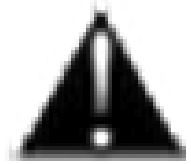
WARNING - ELECTRIC SHOCK

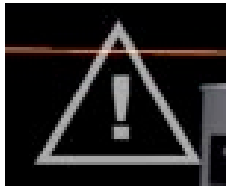
WARNING

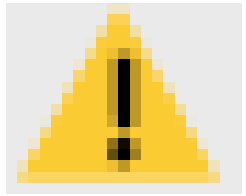
IMPORTANT:

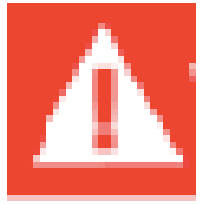
NOTE:

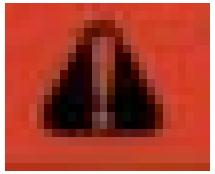
CAUTION – Motion Sickness





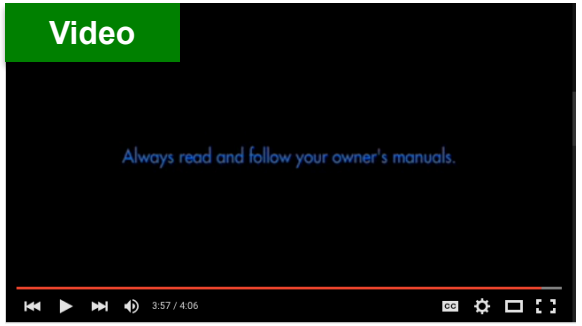






Support Alerts

Read Important Safety Information



Example Visual Components in ANSI Z535.7

Colors

Signal Words

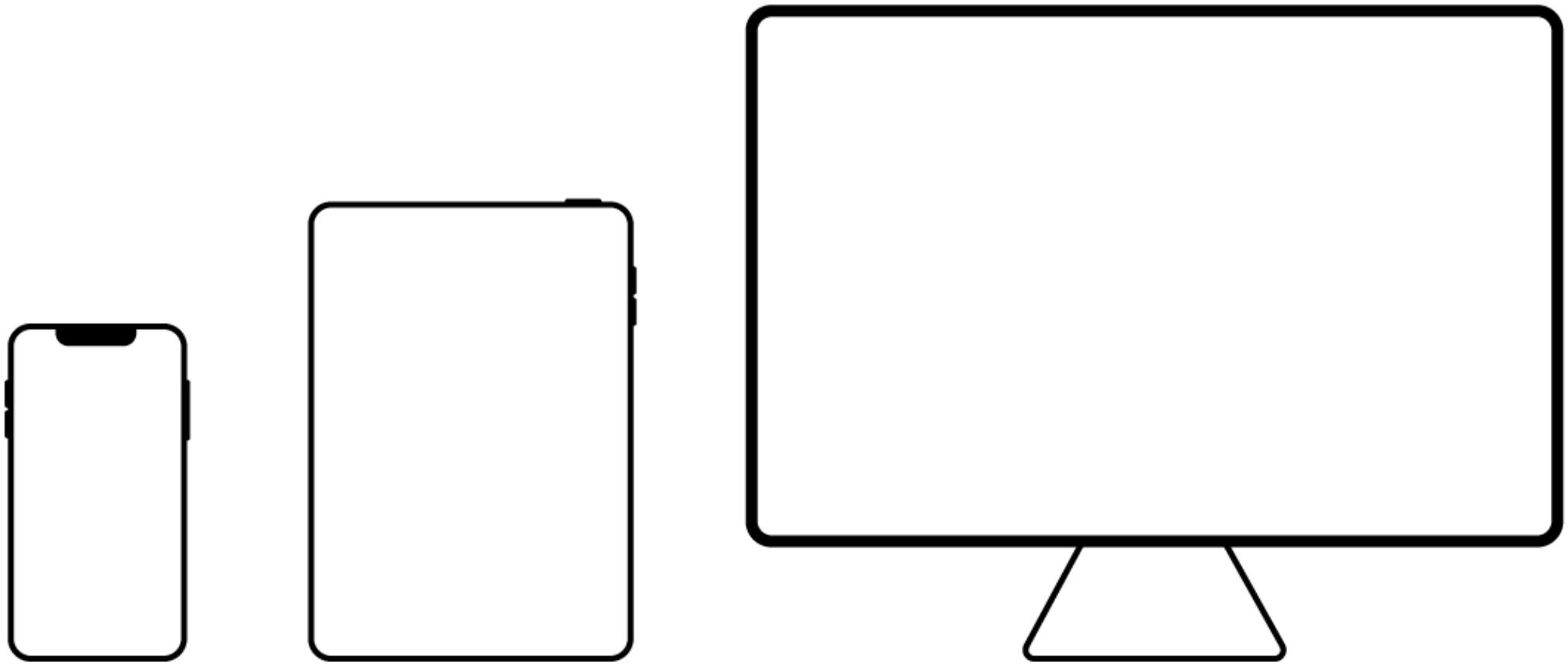
Other Concepts Addressed in Existing Z535 Standards

- Type size
- Safe viewing distance
- Type style
- Contrast
- Durability, expected life

Safety Symbols

Safety Alert Symbol

Consider: Size(s) of Platform(s)



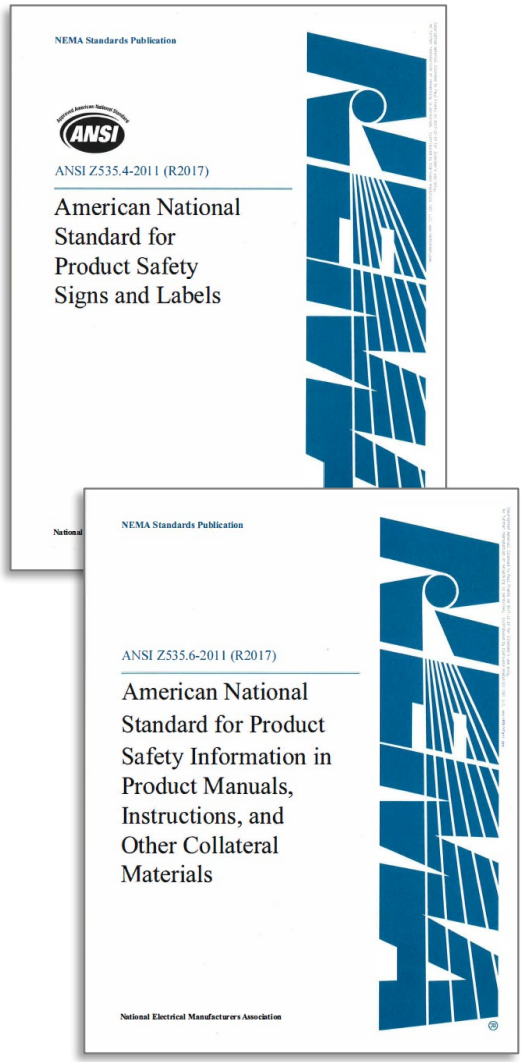
Consider: Electronic Durability and Maintenance

Google

404. That's an error.

The requested URL /maintainyourlinks was not found on this server. That's all we know.

ANSI Z535.7 Addresses Gap Between Z535.4 and Z535.6



ANSI Z535.4

4.12 safety sign: A visual alerting device in the form of a decal, label, placard, cord tag, or other marking such as an embossing, stamping, etching, or other process that provides safety information.

ANSI Z535.6

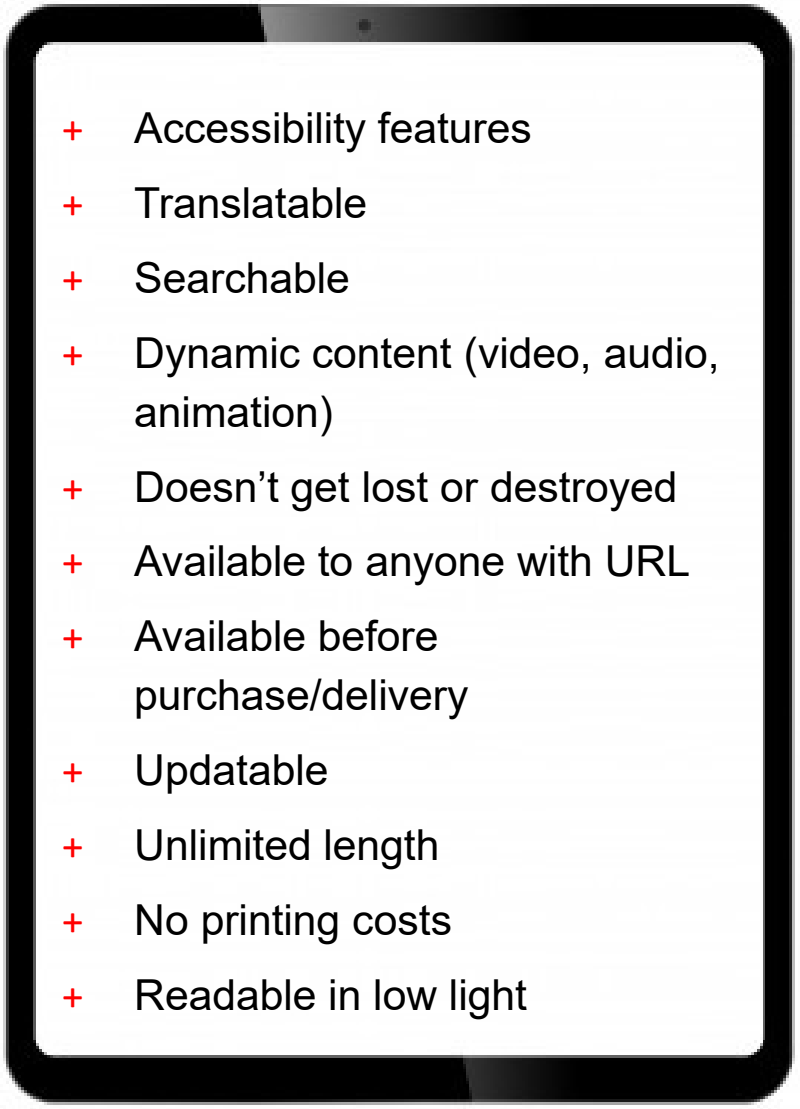
4.2 collateral materials: …Collateral materials do not include items such as product signs, labels, labeling, … audio and video materials, or dynamic or electronic media (e.g., electronic documents with animation, sound, or other features that are not printable).

Will ANSI Z535.7 Tell Me What to Say?

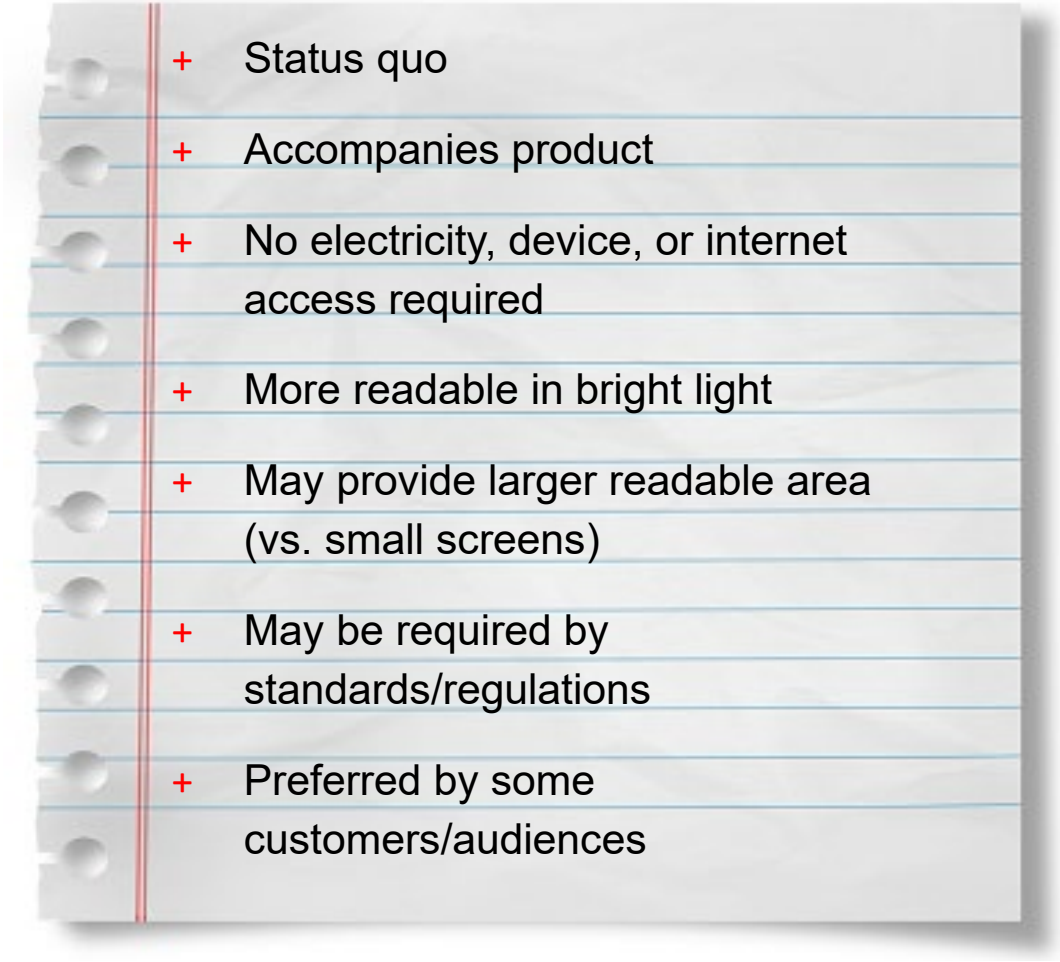
- No.

- Questions to consider when presenting safety information electronically:
  - **Who** needs this piece of product information?
  - **What** do we know about the abilities and expertise of the person who needs the information?
  - **When** do they need access to it?

Consider: Advantages/Disadvantages of Various Media



- \+ Accessibility features
- \+ Translatable
- \+ Searchable
- \+ Dynamic content (video, audio, animation)
- \+ Doesn't get lost or destroyed
- \+ Available to anyone with URL
- \+ Available before purchase/delivery
- \+ Updatable
- \+ Unlimited length
- \+ No printing costs
- \+ Readable in low light



- \+ Status quo
- \+ Accompanies product
- \+ No electricity, device, or internet access required
- \+ More readable in bright light
- \+ May provide larger readable area (vs. small screens)
- \+ May be required by standards/regulations
- \+ Preferred by some customers/audiences

Consider: ADA Applies (Heads Up!)

Title 28 Chapter 1

Part 36 Nondiscrimination on the Basis of Disability by Public Accommodations and in Commercial Facilities

Subpart B – General Requirements

§ 36.201 General.

(a) ***Prohibition of discrimination.*** No individual shall be discriminated against on the basis of disability in the full and equal enjoyment of the goods, services, facilities, privileges, advantages, or accommodations of any place of public accommodation by any private entity who owns, leases (or leases to), or operates a place of public accommodation.

28 CFR § 36 Subpart B

WCAG 2.1 At-a-Glance

Perceivable

- Provide **text alternatives** for non-text content.
- Provide **captions and other alternatives** for multimedia.
- Create content that can be **presented in different ways**, including by assistive technologies, without losing meaning.
- Make it easier for users to **see and hear content**.

Operable

- Make all functionality available from a **keyboard**.
- Give users **enough time** to read and use content.
- Do not use content that causes **seizures** or physical reactions.
- Help users **navigate and find content**.
- Make it easier to use **inputs other than keyboard**.

Understandable

- Make text **readable and understandable**.
- Make content appear and operate in **predictable** ways.
- Help users **avoid and correct mistakes**.

Robust

- Maximize **compatibility** with current and future user tools.

www.w3.org/WAI/standards-guidelines/wcag/glance/

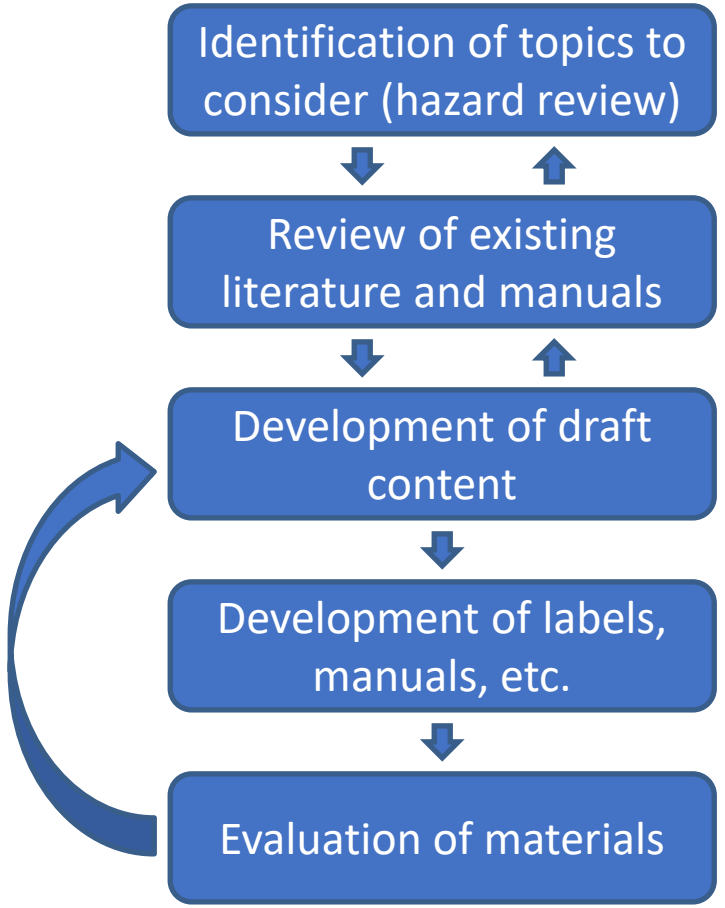
Digital Safety Information Takeaways

- Digital technology can improve access to and quality of safety information
- People expect to find product manuals and information online
- Consider your audience
- ANSI Z535.7 Product Safety Information in Electronic Media coming
- Consider the ADA / Web Content Accessibility Guidelines
- Plan ahead and make sure materials stay available

Evaluating Warnings/Instructions

Evaluation as Part of a Development Process

- Adds to a manufacturer's explanation of how they developed warnings/instructions.



Why Evaluate Warnings/Instructions with People?

- Can help make messages easier to read, perhaps with fewer words.
- It can help detect potential *critical confusions*.
- Others may know ***more or less*** than you do.
- Others may have a different perspective than you do.

Questions Evaluation Can Help Answer

- Is the message technically accurate?
- Is the message understandable?
- Is the message something a user can actually do?
- Is the message necessary?
- Is the message believable?
- Does the message conform to applicable standards/requirements?
- Is the message visible?
- Are the messages being applied consistently across the system of information?

Examples of when Evaluation is Less Helpful

- Messages that have been used **without problems** for long periods of time.
- Messages that are **specifically required** by standards or regulation.
- Messages that are **simple**, easy to read, and easy to follow.
- Messages that are consistent with **widely understood** product safety requirements.

General Takeaways about Evaluation

- In general, warnings/instruction manuals are not required to be evaluated.
  - Some exceptions, e.g., for symbols under certain conditions.
- Good evaluations don't guarantee good products
- More is better – up to a point
- Can take many forms:
  - User evaluation
  - Expert evaluation
  - Standard evaluation
- Watch out for relative comparisons

Upcoming Webinar

Recall Effectiveness from a U.S. and European Perspective

December 6, 2023 at 1:00 - 2:00 pm Eastern Time

- For questions after the webinar, email SPSP at info@productsafetyprofessionals.org or contact speakers:
  - jfrantz@appliedsafety.com
  - jisaacson@appliedsafety.com
  - kenrossesq@gmail.com
- These slides, a link to a video of this webinar and more material can be accessed at https://www.productsafetyprofessionals.org/webinar-archive.

Questions?

Thank you for attending

SPSP 2023 Webinar Series

November 8, 2023

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