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An Image for All: The Rhetoric for Writing Alt-Text

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Abstract

Alternative text is a necessary part of the document design process that often becomes relegated to the work of web developers as part of the coding and tagging of digital documents for accessibility. However, alt-text is a meaning making tool that should be a normalized part of TPC document design practices. This paper uses preliminary interview data with screen reader users to understand the complex rhetorical experience of alt-text use in an effort to offer more effective alt-text investigation and practices in order to develop more inclusive environments that welcome all users.

Keywords: accessibility, alt-text, assistive technologies, digital document design

Introduction

During the March 2022 Disability Center at CSUN conference, Jared Smith of WebAim, a leader in web accessibility, noted that many of the web accessibility guidelines currently used as best practices are not founded on extensive user-research data but more likely the product of anecdotal evidence and opinion [1]. Smith reveals this gap to introduce work WebAim is currently doing to rectify this lack and to call for additional research in the field of accessibility. This paper seeks to take up Smith's call and add to the existing conversation regarding accessibility best practices. Specifically, I strive to address the practice of alternative text as a rhetorical practice for professional and technical communicators.

With a continued increase in all forms of digital communication, we have become an ocular-centric society on a global level for many reasons, including that images often transcend the limitation of language structures to represent complex information. However, the use of images does not develop more effective access to crucial information for all users. Screen reader users continue to rely on clear, concise alt-text for this access. The World Health Organization uses graphs and maps to inform users about the spread of Covid and the impact of countermeasures such as masks and vaccinations. Domino's Pizza, Inc. introduces its corporate identity to a global market with a mouthwatering image of hot pizza dripping with cheese. Social media is one of the most prolific generators of images, with an estimated 3.5 billion users worldwide uploading millions of images daily [2] in an attempt to convey information about their lived experiences.

Web developers, professional communicators, and other document designers are increasingly asked to compile with legal guidelines to make each of these images accessible by including alt-text in their final production. To achieve compliance, however, some rely on computer-generated alt-text or simple descriptions as if alt-text is a neutral practice that lacks the rhetorical power of its visual counterpart. For example, identity is performed through visual representation of the body, and resources are spent to ensure diversity is visually indicated through diverse images of race and gender, yet the alt-text for a group of racial diversity often erases this visual indication of diversity by not noting or misreporting the identity markers. In another example, professionals may wear specific clothing to indicate their professionalism and tilt their head with a slight smile to show they are kind and approachable in headshots for a professional website. All of which is lost when the alt-text for that headshot image reads only "headshot of [name]."

These examples of alt-text fulfill legal compliance but do not convey meaning equally to the visual image. This paper argues that this prolific use of images alongside a growing awareness of the necessity of digital accessibility demands alt-text be taught and practiced as a meaning-making, rhetorical tool.

Background

Digital accessibility and the practice of technical and professional communication (TPC) are intrinsically linked as communication tools become more and more predominantly occurring through digital means. The move from print to digital distribution of communication opened the opportunity to create more comprehensive, flexible multiple access to information. This growth also necessitated discussion regarding the complexity of accessibility practice, including what it looked like and who was responsible for implementation. The long-standing answer to accessibility is the accommodation model, which demands that if an original version of a digital artifact is not accessible to an individual user, the document should be modified as an accommodation for the individual. As many have noted, this model of access is time consuming, oppressive, and nearly impossible to maintain [4] [5] [6]. It demands additional labor from the user and excludes many from full participation in their social, political, and economic communities [7]. In addition, the accommodation model of access generates barriers rather than wider access [8].

Legal and economic entities attempt to answer the accommodation barriers by turning to guidelines and checklists to demand accessibility be a consideration of all digital artifact design. This move fostered the growth of the 508 standards and the Web Content Accessibility Guidelines (WCAG), which the Department of Justice has connected to the Americans with Disabilities Act through legal precedents [9]. Compliance with these legal mandates and responsive industry guidelines direct digital accessibility practices. Organizations such as the World Wide Web Consortium, the International Association of Accessibility Professionals, and WebAim, have worked diligently to develop accessibility implementation instructions in an attempt to answer the demand for compliance. However, these instructions regarding the need for digital accessibility fell almost entirely to web developers. Resources such as WebAim and WCAG's strategies are complicated with tagging and coding instructions that are useful to web developers but make it challenging to prioritize the textual development strategies necessary to convey meaning for TPC professionals. Both these resources mention the need to consider purpose and context when alt-text, but these instructions are written for web developers and lack discussions of more complicated visual information such as identity markers. In the midst of these instructions and alt-text discussions sits the human user. Roughly 7.3 million people in the United States rely on screen reader assistive technology to access visual information.

Despite the attempts to normalize the effective use of alt-text through legal mandates, the problem of access remains. Alt-text needs further user-centered investigation. Rather than alt-text connected to coding and tagging practices of web developers, it should be considered a rhetorical practice of TPC practitioners who should be taught to meet the varied needs of all users.

Methods

To work towards building a more equitable experience for all users, I sought to capture the experience of alt-text through the voice of screen reader users. I wanted to begin to unpack and explore the way alt-text did and did not work effectively to convey visual information to all users. I wanted to investigate the use of strategies such as the value of punctuation, identity markers, and the use of color in the development of an effective alt-text experience.

My investigation included the consideration the prioritization of details to balance the potential of exhausting the user with useless details and offering an authentic, meaningful experience through the use of meaningful details. My research is preliminary and meant to provide direction for initial changes to alt-text development but, more importantly, guide the development of further investigations.

Participants were chosen through my work with community accessibility advocacy organizations. I had worked with screen reader users over the last two years developing accessibility trainings for state employees and other document designers in various workplaces. The participants for this study were recruited from these partnerships.

I specifically used a qualitative study research instrument to capture the individual experience and individual preferences of the participants. A quantitative study would not have invited the rich narrative necessary to understand the participants' experiences. Semi-structured interviews took place over a video conferencing platform but were not recorded to secure and protect the participant's anonymity. The interview consisted of nine initial questions that asked about the frequency of screen reader use and preferences concerning empty alt-text, color descriptions, lengthy descriptions, identity markers, and punctuation use. Participants were encouraged to offer any further information they thought relevant to the overall purpose of the interview. In total, five interviews were conducted with varying results.

Results

The five participants indicated a high use of screen reader users in their daily personal and professional activities and that they encountered images in nearly every document they read. All participants indicated they had rarely or never been asked about their experience with alt text from any document design or web design professionals. One participant further explained how they felt alt-text was built on many assumptions about what she, as a screen reader user, would want to read: "why don't they even ask a blind person or have a blind person involved?"

Images that did not include alt-text were dismissed by some participants as a normalized, frustrating experience they encountered too often. Although, one participant described objects tagged as images without alt-text were like "showing candy to a baby and them taking it away. Why would you even tag an image and not describe it?" Three participants appreciated having images such as logos that repeat throughout a document not described in alt-text but marked as decorative because they did not necessarily connect to the meaning in the document.

All five of the participants indicated different preferences for the use of color descriptions and identity markers. One participant mentioned that they rarely found a time when they needed to know specific details unless such details were imperative to understanding the document text. Another participant indicated that knowing these same details offered richness to the text and made the text more interactive and inclusive. Another participant articulated the benefit of meaningful description: "I like imagery, love all the meat and potatoes in the description. The more I get about the details, the more I learn about the world through sensory information." Another participant observed that artificial intelligence (AI) generated alt-text becoming more common in social media platforms such as Facebook as "vanilla" and vague. They found this AI alt-text meaningless and disruptive because it did not add to the experience captured in the text of the social media post. When asked about lengthy alt-text meant to capture the meaning of complex visual data such as graphs, flowcharts, and design diagrams, participants indicated the frequency of duplicated information between the alt-text and the document text and noted the value of maintaining description of complex images within the document text to maintain continuity and proximity as meaning-making tools.

All five participants indicated personalizing their screen reading software's setting to skip various punctuation markers such as quotation marks and periods. Two participants indicated setting their software to read no punctuation. Two participants noted a value of punctuation marks. For example, one participant described the need for a break afforded by the period at the end of the sentence that forced the screen reader to pause long enough for him to "catch up and absorb the information." The vastly different responses to all questions suggest a complex approach to alt-text development is needed rather than a one-size-fits-all guideline.

Implications for Practices

With these initial experiences in hand, it seems reasonable to investigate how we, as TPC scholars, researchers, and practitioners, do and do not discuss alt-text writing in our document design practices. To begin these conversations, I offer the following considerations to assist TPC practitioners and scholars in constructing meaningful alt-text to provide all users equitable access to visual information.

Alt-Text is a Rhetorical Genre

Alt-text is a meaning-making tool that is part of document design authorial choices, not part of the web designers or webmasters to write the text. Because decisions surrounding alternative text are contextuality relevant, alternative text is more effectively written by the TPC practitioner writing the document text. The practitioner understands the purpose of the image transposed into alt-text. They are uniquely positioned to determine which details from the image should be included in the image's accompanying alt-text to create a mirrored meaning to the image, including sensitive information regarding the visual performance of identity markers of gender, race, age, and ability.

Because considerations contextuality matters to the meaning, TPC practitioners must be taught alt-text as a genre. The development of alt-text takes practice and a shift in thinking of alt-text beyond descriptive text. If an image is worth a thousand words, the development of alt-text requires which of those thousand words create the most effective meaning. To begin this practice, I suggest merging industry-developed best practices.

Consider the purpose of the image and mirror the alt-text to create the same meaning.

Include only the essential details of the image to create the image

Images that are merely aesthetic and offer no meaning become chatter and distracting for screen reader users. Mark these images as "decorative."

Be diligent in recognizing what objects software such as Adobe and Microsoft code as images including "smart-art," framing lines, and background shapes and determine appropriate alt-text development.

Consider the length of alt-text and when alt-text description would better serve the understanding of all users and should be included in the document text.

Develop consistency in terms between the document text and the alt-text

Avoid duplicating information between the document text and the alt-text.

Avoid relying solely on visual tools such as capitalization and punctuation marks to indicate meaning in alt-text.

Additional Investigations Are Needed

Screen reader users should be included in usability testing of digital documents as part of a hyper collaborative design process to develop and test the effectiveness of alt-text and continue developing more user-centered alt-text practices. My preliminary investigation revealed unique preferences from screen reader users, which strongly suggests the need for greater attention to our practices, including the need for additional research. Recategorizing alt-text from a digital checklist for web developers into an essential skill for TPC practitioners is a good starting place as it draws on the TPC specific expertise of continued user research and user-centered design processes.

Conclusion

Alternative text is an essential part of digital document design practices. It is not merely a coding tag for web developers to attach to images within digital documents. The preliminary research discussed above indicates the varied needs of screen reader users and the complexity of alt-text experiences, a valued experience that has yet to be fully identified. Although additional investigation is warranted, it seems evident that alt-text offers the opportunity to create more inclusive access to information. When alt-text is treated as a rhetorical tool with a deep connection to contextuality, it has the ability to meet the experiential needs of screen reader users and create documents that welcome all users to social, political, and economic systems.

Because the purpose of alt-text is to mirror the meaning of an image for a screen reader user, it requires the same careful consideration and application of textual strategies similar to any document design process. The unique user-centered design expertise of TPC scholars and practitioners offers a nurturing environment for the continued growth of effective alt-text practices as part of their normalized document design practices.

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Sherena Huntsman is an Assistant Professor of technical communication at Boise State University. Her teaching philosophy and research trajectory reflect her firm value of individual voice and the conviction that all bodies have the right to access information and instruction. Her ongoing research focuses on the investigation of marginalizing power structures in digital information/instructional spaces. This research interconnect to inform her current investigation into normalizing accessibility strategies in digital document design practices in an continual effort to transform social, political, and economic spaces.