Equivalent Text Descriptions – Why and Where

WHY "TEXT EQUIVALENTS" OR "EqTDs"?

We know that some people and some technologies (e.g. screen readers used by blind individuals)[1] have difficulty with graphics. It can be argued that even more people are print-impaired. In addition to those who cannot see the printed word, many people have difficulty with interpreting written language.

The concept of non-text elements has evolved with the increasing sophistication of electronic documents. Today, there are wide ranges of information exchange methods that are not explicitly coded in words. The oldest, and probably most common form of non-text element is the embedded picture. Embedded graphics, however, have expanded from simple line drawings and photographs to include dynamic forms such as animations and video. Sounds, from spoken language to music and sound effects can be included in electronic documents. Information is often provided through position as well as content.

If concepts are linked by visual proximity or position, that information may not be available when a page is translated into another form. One example of this is the table. Most modern assistive technology can interpret tables in electronic documents, so a text equivalent is not commonly needed, though a summary of the table intent is recommended. In math and science, superscripts and subscripts provide important information that is often ignored by assistive technology. In a language course, the information of a "diagrammed sentence" is much greater than that of the sentence in normal form.

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[1] An excellent video about screen readers by an individual who uses them is found at http://www.doit.wisc.edu/accessibility/video (TRACE Center, University of Wisconsin-Madison.

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Because the technology of information presentation constantly evolves, it is not possible to create a complete list of possible non-text elements. One test that an author can apply is whether they could convey the meaning of a document to a listener over the telephone. If the author must digress, add words, or change inflection to convey the meaning of the document, some non-text element has been used.

A BRIEF HISTORY

The concept of text equivalents, and the legal mandate for them, derives from the evolution of the World Wide Web. In the early days of the web, some user agents (also known as "Browsers") were unable to display graphics, animations, and other types of content. The most basic web browsers displayed only formatted text, and the need for text descriptions stemmed from the limitations of the technology.

As advanced browser technology became more available, it became evident that some individuals were not able to benefit from the richness of the new web experience. Web users with sensory limitations were not able to benefit from the advanced capabilities of graphical desktop browsers, because, while their browsers might be capable of displaying graphical content, or playing sounds, they were not able to perceive the multisensory content. Later, as more individuals were exposed to electronic content, instructors learned that another group could benefit from alternative content: those with perceptual deficits or some types of learning disabilities. While these individuals may be able to see and hear perfectly (meaning that their eyes and ears are not impaired), they may not be able to understand all that they see and hear.

HOW DO EqTDs IMPROVE ACCESSIBILITY?

First, text equivalents are not supplied in place of non-text content, but in addition to it. Thus, those who can benefit from graphical content are free to use that format for acquiring information. Those who cannot benefit from graphics, whether because of technological, sensory, or cognitive limitations, are provided with a language version of the same information.

Second, language is unique in human perception in that it has a complete representation in more than one sensory channel. Typically developing children learn

the rudiments of spoken language (both receiving and producing it) by the time they are two years old. A few years later, most children have learned to interpret visual symbols as the same language they hear. In addition to its spoken and conventionally written forms, language can be conveyed through gestures as sign language or in a tactile form as embossed print or Braille, among other forms. It is this versatility that makes text representation accessible to a wide range of potential readers.

WHERE SHOULD EqTDs APPLY?

Print documents are intrinsically inaccessible to a person who is blind, and may be inaccessible to a person with low vision or a learning disability. However, modern optical technology can convert a printed document to an electronic form with near 100% accuracy. Thus, printed language can be converted, with the appropriate technology, to auditory (via screen readers) and tactile language (Braille) as well. Printed graphics are just as difficult to interpret for the individual with cognitive limitations as are web-based graphics. Hence, for full accessibility, printed material with non-text elements should also have EqTDs.

Source	BRIEF Description	ESSENTIAL and DETAILED Descriptions
Textbook	Caption	Appendix
Article	Caption	Before References/Appendix
Brochure	Caption	Brochure text

Figure 1. EqTDs: Where do they go?[2]

Any document format that contains more than simple, unformatted text presents accessibility challenges. When we talk about electronic documents, we tend to think of

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[2] A screen reader can access a table as long as it is done as a "table" and not with tabs.

distribution via the World Wide Web, and HTML documents, since that is one of the major distribution channels for information. However, images in word processing documents, spreadsheets, or slide presentations need to be made accessible. Electronic documents are also distributed on CD and DVD, on flash memory devices, and via FTP sites (the internet is, after all, more than just the World Wide Web). When such documents include non-text elements, they must also include text equivalents.

As noted earlier, the concepts of text equivalents developed from and are required for documents on the World Wide Web. When concerned only with the technical abilities of various browsers, application to web documents might seem to be adequate. However, the efforts to make the World Wide Web accessible to all have demonstrated the utility of text equivalents to documents distributed in other ways as well, for those individuals with sensory or cognitive limitations.

The ACCESS-ed Project adopts the "EqTD" nomenclature to specify text descriptions that delineate, as appropriate:

FOR ACCESSIBILITY

1. **Brief Description** – Short statement or title that includes type and purpose of non-text information. (Typically 10 words or less).
2. **Essential Description** – Focused description that conveys the meaning and core content of non-text information in the context of its use. What does the creator want the audience to understand? [This is the legal mandate for web documents.] (Approximately 1 – 2 paragraphs).

FOR USABILITY

3. **Detailed Description** – Finer description, distinctly different from the essential description in that it includes content that is not integral to understanding the intent of the non-text element. It may include layout, colors, logos, designs, etc. (May be one or several paragraphs).