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EqTD AUDIT Manual

(Equivalent Text Descriptions Accessibility and Universal
Design Information Tool)

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04/16/2009

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Introduction

The primary purpose of electronic documents, whether informative or entertaining, is to communicate information to the user (reader) of that document. Some of the information to be communicated is commonly in the form of written language. In other cases, the information may be presented as images, sounds, or movies. Such “non-text elements” allow a great deal of information to be presented quickly and compactly, provided that the reader has access to it. However, if the user’s access system (computer/web browser) is not able to display the non-text information (because of slow connections, delivery format, etc.) or the user has sensory limitations (blindness, deafness) that make such information inaccessible, such compact delivery becomes ineffective. To provide optimal communication, alternative means of delivery of non-text information should be provided.

Equivalent text descriptions (EqTDs) are the primary method for increasing the accessibility of non-text information. A critical component in supplying equal access to information for all individuals, EqTDs contains a highly adaptable form of information accessibility. Electronic text can be displayed in a wide range of sizes, colors, and fonts, or can be converted easily to spoken language. This versatility makes equivalent text descriptions an important tool for universal access. The EqTD-AUDIT evaluates the accessibility and usability aspects of ET descriptions. It also evaluates the quality of ET descriptions.

Equivalent text descriptions are commonly thought of as being a component of electronic documents, since a print document would, in general, have any graphics included. Experience with EqTDs has show, however, that they are useful to individuals with cognitive as well as sensory deficits. In many cases, a person with a cognitive deficit may have difficulty interpreting a graph, but can understand a verbal description of the information, or the combination of visual and verbal descriptions. Since equivalent text descriptions apply to all non-text elements, including narrations, videos, and animations, and since print versions of electronic documents cannot contain dynamic content, EqTDs should be thought of more broadly, and can be applied to print and audio recordings as well as electronic documents.

Background

As a larger share of government information became available via the World Wide Web, the issue of equal access grew in importance. The early Internet was capable of transmitting only text documents directly, with non-text documents being accessed via electronic systems such as Gopher, Archie and Veronica. (Early web designers were noted for their odd naming conventions. Once you have Archie, which searched internet archives, could Veronica be far behind?) The birth of the HTML, however, allowed “rich media,” including images, videos, and sounds, to be included in basic web documents, to be readily accessible via electronic distribution. Unfortunately, electronic images, movies, and sounds were not available to all web users. Whether because of sensory deficits or limited web technology, some users were restricted to just the text portion of web pages. To provide access to the information distributed via the web, federal law (Section 508 of the Rehabilitation Act) states, “A text equivalent for every non-text

element shall be provided (e.g., via ‘alt’, ‘longdesc’, or in element content)”. Several helpful Web sites currently provide tools, tips and hints on how to create EqTDs and place them in documents.

Though initially conceived as a means of providing access to information on the World Wide Web, and as a compensation for sensory deficits, Equivalent Text Descriptions have shown themselves to be useful in wider applications. In addition to the Internet, students commonly obtain information from journals (both physical and electronic), text books, and slide presentations (e.g. PowerPoint). While EqTDs were conceived as aids for those with sensory deficits, they have proven useful for many students with cognitive deficits as well.

The legal mandates and inclusion guidelines focus on web applications, and are limited in their consideration of all types of information media (Internet, text books, PowerPoint, etc). Existing guidelines fail to provide a wide range of examples, and lack specific detail of what should and should not be included. This is a problem for potential authors of EqTD including individuals who use non-text information in papers, books, PowerPoint presentations, posters, lectures, and/or Web pages. The Rehabilitation Research Design and Disability (R₂D₂) Center has developed an Equivalent Text Description Accessibility and Universal Design Information Tool (EqTD-AUDIT) to assess EqTDs, thereby helping authors rate and improve the quality of their EqTDs.

This audit is part of a series of audits that have been developed through the ACCESS-ed Project, a national Demonstration Project to Ensure Students with Disabilities Receive a Quality Higher Education Program, funded in part by the U.S. Department of Education’s Office of Post-secondary Education. The project is designed to develop and test a process that delivers infrastructure to campuses nationwide, through which campus wide universal design instructional environment is sustainable. One of the major activities of the project is dissemination of methods and strategies to promote universal design in higher education.

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The ACCESS-ed project is hosted by the Rehabilitation Research Design and Disability (R₂D₂) Center at the University of Wisconsin—Milwaukee and is supported in part by the U.S. Department of Education’s Office of Post-secondary Education, PR/Award #P333A050090. The opinions contained in this publication are those of the grantee and do not necessarily reflect those of the U.S. Department of Education.

EqTD-AUDIT Instructions

The EqTD-AUDIT should be applied on a “per document” rather than “per element” basis. Just as a page may have multiple fonts or paragraphs, a single document may include a number of non-text elements. Recognizing this is important in scoring the EqTD-AUDIT. In addition to assessing multiple examples of EqTDs in a single document, it requires the investigation of multiple features of EqTDs, including the format, purpose, placement within the document and key wording for accessibility. Print copies of the AUDIT should be available so that it can be used in various locations. Data from the printed copy are then entered into the EqTD-AUDIT worksheet to obtain a summary of the results. Alternatively, the auditor can enter scores and data directly into the spreadsheet. Total scores can be reviewed at the end of both the usability and accessibility sections allowing the user to identify where accessibility improvements can be made. The EqTD-AUDIT also contains a summary, displaying comparative graphs that reflect overall accessibility.

The EqTDs can be graded in two ways. First, the authors can self-assess their final EqTDs after completion. Second, the end users can evaluate an EqTD that is already placed in a document to provide feedback to the organization/author. EqTD-AUDIT will help authors improve their EqTDs by identifying problems and assessing outcomes.

1. Print a copy of the Microsoft Excel worksheet: EqTD-AUDIT, which contains EqTD-AUDIT part 1 and part 2.
2. Clearly label the title of the EqTD (along with your name and date) at the top of the worksheet.
3. Thoroughly read through the EqTD.
4. Score the EqTD-AUDIT items using the trichotomous scale.
5. Write comments about the EqTD, or specific issues related to the EqTD-AUDIT, in the comments section.
6. Enter responses into the Microsoft Excel Worksheet. Excel will automatically create the graphs.
7. Examine and consider the implications of the graphs as they present the scores.

EqTD-AUDIT Manual

Purpose

This manual is designed to make the Accessible and Universal Design Information Tool (AUDIT) as simple and straight forward to use as possible. Step by step instructions, including examples will be given to help the user better understand the purpose and the use of the AUDIT.

The EqTD-AUDIT contains two parts: a) Accessibility and b) Usability. The Accessibility portion of the AUDIT is based on federal guidelines such as the Section 508 and ADA standards, as well as the W3C Web Content Guidelines standards. Because the federal standards are intended to be minimum standards, the EqTD AUDIT includes additional items to support enhanced accessibility. Failure to comply with the

Accessibility items means that some groups with disabilities will not be able to have equal access to the document being evaluated. The items in the Usability portion of the AUDIT will improve access to the document for all users. The features detailed in the Usability AUDIT affect users with disabilities, but also improve access for non-disabled users who are using browsers other than the standard desktop.

All AUDIT items are scored on a trichotomous scale: “Yes” (the item under review is present and effective), “Partial” (the feature is present in some but not all cases, or in a way that is not fully effective) and “No” (The item under review does not meet the criteria specified or item is not present).

EqTD-AUDIT Components

Scoring

Place an “X” in the appropriate column for each question. The trichotomous scoring scale (e.g. Yes, Somewhat, No) attempts to provide a score to each item present in the AUDIT. A “Yes” score indicates the item is present. This should not be selected if there is any doubt if the item is present. It should not be selected if there is reasonable doubt that the feature implementation will be effective. A “Somewhat” score indicates that the author has made an effort to comply with the item. If a document includes equivalent text for only some non-text elements, or the text description does not provide equivalent information, you should score the feature “Somewhat.” A “No” score indicates that the specified feature is not present, or is not easily identified. Since a feature that cannot be used is equivalent to a feature that is absent, you should score “No” to any item where you can readily ascertain that feature is present.

Explanation of Questions

Part 1: Accessibility

Accessibility Section 1, item 1: An Equivalent Text Description (EqTD) is included for each non-text element in a document, e.g. images, sounds, non-English letters or symbols.

- ✓ If any information is being conveyed in a non-text element, the same information must be available to the individual who has access only to text. This includes drawings, photographs, and embedded movies. One way to decide if an EqTD is necessary is to image the document printed, then read to a listener over the telephone. If the telephone recipient would not be able to receive all of the information of the document in this way, an EqTD is probably necessary.
- ✓ Because web-browsers attempt to “repair” the failures of authors, non-text elements that do not convey important information (eye candy) are often

announced. These can be distracters to a person with cognitive limitations. To avoid such distractions, such non-text elements should be provided with an “empty” EqTD. (e.g. alt = “”)

Accessibility Section 2, item 1: The EqTD provides the same information about the document item as is provided by the non-text element, e.g., For a graph it describes the relationship and does not simply say "This graph shows the relationship between a and b".

- ✓ Writing an effective EqTD can be difficult, and in some cases, can only be done by the author of the document. In most cases, the important question is, “If I didn’t have access to using graphs, what would I say to convey this information?” In the case of an animation to display a process or a photograph of a scene, the question is, “What do I want the reader to take from this scene or this animation?”

Accessibility Section 3, item 2: If more than one EqTD is visible at once, each is logically linked to the non-text element it replaces, e.g., when an EqTD is located on a separate page, the description starts with the same text that was used to link to it.).

- ✓ With CSS, it is possible to insert EqTDs anywhere in a page, and have them appear in association with the appropriate non-text element. If the page is not rendered using the author’s CSS (such as when read by a screen reader, or via a user’s custom style sheet), such linkages will be lost. It is important that the document make logical as well as visual links between non-text elements and their EqTDs.

Accessibility Section 3, item 3: For long EqTDs (an Essential or Detailed Description typically > 70 characters), logical organizers (lists, headings, etc.) are supplied to assist the reader.

- ✓ In any single document, long blocks of text are better understood if broken up into logical blocks, whether paragraphs or sections. Text equivalents are no different. Though an EqTD applies to a single non-text element, a full equivalent may apply to several aspects. These are better understood if organizers are used.

Accessibility Section 3, item 4: In electronic documents, EqTDs may be provided, at the preference of the reader, either in place of or in addition to the non-text element.

- ✓ Originally, EqTDs were conceived as replacements for the non-text elements a reader could not perceive. Individuals with specific learning disabilities can also benefit from EqTDs, as these provide multisensory delivery of important information. For some students, graphics will simply interfere with learning, and

should be replaced with the equivalent text. For other students, the combination of text and image is a valuable learning aid, and should be available.

Accessibility Section 4, item 2: Where a long EqTD (an Essential or Detailed Description) is required to convey the information of a non-text element, the text equivalent is located at a separate location (page, document, etc.) from the main document.

- ✓ Short alternative descriptions (less than 70 characters) can be rendered within a document without excessive disruption of the flow. Longer EqTDs, however, might make following the main argument impossible if placed in the flow. Such EqTDs should be located on a separate page, so that the main flow is not disrupted, and the reader has the option of obtaining the additional information immediately or at a later time.

Accessibility Section 4, item 3: When the EqTD is not adjacent to (or in place of) the non-text element, a link to the EqTD is located logically adjacent to the non-text element.

- ✓ The contents of an electronic document can be “positioned” in two ways. When the page is placed on the screen in the same order as the underlying document code, it is said to be logically displayed. When moving through a document, text “appearing” below an illustration would be, sequentially, after that illustration in the source document. However, using markup languages, it is possible to display a document in a different order on the screen than it occurs in the electronic source. For example, navigation, which a designer might want to appear first for sighted users who can visually “jump” over it, might be coded after the page content to accommodate readers using text-to-speech, who want direct access to the content.
- ✓ While it would be possible to place all links to EqTDs at the end of a document logically, and visually position them at the point of the element to which they refer, this would make it very difficult to associate the links with the elements when using assistive technology, and should be avoided.

Accessibility Section 5, item 2: The EqTD includes a link back to the item it replaces and its location.

- ✓ In web applications, a followed link can generally be followed in reverse using the “Back” button. In other types of documents where EqTDs would be of benefit, this may not be possible. An explicit link in all EqTDs that allows the reader to return to the original location is necessary to assure that navigation of long EqTDs is possible.

Part 2: Usability

Usability Section 1, item 1: Decorative elements have Equivalent Text Descriptions (EqTD's) that would allow an individual who cannot perceive the elements to describe the element to someone else.

Usability Section 1, item 2: Electronic documents include a text-based description of the overall page layout, including margins, decorative elements and type descriptions available early in the document.

- ✓ Decorative elements are added to documents to increase visual interest, but do not contribute to understanding the content of the document. An array of leaves printed before the page number on each page would be a decorative element. In an electronic document, snowflakes falling from the upper edge would be a decorative element. A border around particular content can highlight that content, so would not be considered a decorative element.
- ✓ While decorative elements do not provide assistance in interpreting a document, they can assist in locating it among others. If a blind person is giving directions to a sighted assistant to locate a document, knowing visual description of the document could be helpful.
- ✓ Although the font, line spacing, and type size are not useful information to a person using a screen reader, they are part of what makes a document visually distinct. If one document is printed in **18 point Arial**, and another is in 10 point Brush Script, the two documents can be discriminated without reading them. Being able to describe the print of a document can allow a blind person to guide a sighted reader to the document more quickly.

Usability Section 2, item 1: The Detailed Description of each non-text element includes a context-free description providing available detail not entered in the information relevant to the containing document, e.g., a Detailed Description of

the image of a tree in a document about the organization of branches might include a description of the setting of the tree.

- ✓ A non-text element such as a picture might be used in a number of ways. A photograph of a university's administration building, for example, might be used to orient students to the campus, to illustrate a style of architecture, or to show types of trees growing in a specific climate zone. Sighted readers of a document might find an image that could be used, with permission, in another application. Those who cannot see the provided image should be provided with enough information to similarly reuse images in other applications.

Usability Section 3, item 1: Brief Description EqTDs (< 70 characters) may be displayed for each non-text element individually rather than for all elements at once.

- ✓ Individuals with certain types of learning disabilities can process information only if it is presented in small units. Presenting all of the text equivalents on a page at once may make accurate interpretation difficult. The ability to selectively show EqTDs make a document easier to interpret by minimizing visual complexity.

Usability Section 3, item 2: Essential & Detailed text equivalents (>70 characters) include the non-text element to which they refer, e.g. to allow bimodal learning.

- ✓ Equivalent Text Descriptions were originally intended to assist those who could not perceive a non-text element to obtain the information contained therein. However, they are also useful for students with learning disabilities who may have difficulty interpreting a graphic or sound, but are able to do so with text cuing.
- ✓ Since Essential and Detailed descriptions, because of their length, are placed outside the document to which they refer, a reader with a learning disability must shift between the source document and the EqTD to benefit from the description. The act of jumping between the locations may interfere with learning. Including a copy of the non-text element (graphic) on the page with the EqTD allows using the text description to facilitate interpretation of the non-text element.

Usability Section 5, item 1: Links to Detailed Descriptions are identifiably different than links to Brief & Essential document content text equivalents.

- ✓ One of the keys to navigation is to be forewarned of the destination of a link. If a user is expecting information that is essential to understanding a document, and instead gets a detailed description of a non-text element, the attempt to interpret the provided information in the context of the document may interfere with understanding both the document and the EqTD. An unambiguous indication of the type of information being provided can prevent such confusion.