

Table 6–1 Accessibility Terms

Term	Meaning
Accessible	Content that can be used by people with disabilities.
Americans with Disabilities Act (ADA)	A civil rights law for people with disabilities.
Alternate text	Descriptive text for an image that extracts the image’s essential meaning and provides this meaning to people with disabilities.
Alternate text file	A text (.HTM or .HTML) file that contains descriptive text for an image. A link to this file appears immediately after (below) an image.
Alt text	Brief, descriptive text for an image that appears in a rectangular box. This box is displayed when the cursor moves over the image, and its contents is read by a screen reader.
Assistive technology	Software or hardware specifically designed to assist people with disabilities. Some examples of assistive technology are screen readers, speech synthesizers, and alternative keyboards.
Disability	A condition that causes a physical or mental difference from those who do not have that condition.
Oracle Global HTML Accessibility Guidelines (OGHAG)	Guidelines that must be followed for HTML coding to be considered valid. Based on rules from Section 508 of the Rehabilitation Act, the World Wide Web Consortium, and the National Federation for the Blind.
Section 508	Part of the Rehabilitation Act. Enacted to eliminate barriers (that people with disabilities may face) to electronic and information technology.
Screen reader	A software program that reads the contents of a screen aloud.
World Wide Web Consortium (W3C)	A group that develops common protocols for the Web.
Web Content Accessibility Guidelines (WCAG)	Information about how to make Web content accessible. Written by the World Wide Web Consortium.

6.4.1 Nontext Elements

Rules

1194.22(a) A text description for every non-text element shall be provided.

WCAG Guideline 1. Provide equivalent alternatives to auditory and visual content. Provide content that, when presented to the user, conveys essentially the same function or purpose as auditory or visual content.

Recommendations

This guideline emphasizes the importance of providing alternate text of nontext elements. Because assistive technology cannot describe a nontext element, such as an image, you must provide an alternative that conveys the same information as the nontext element. The following are some nontext elements that require alternate text:

- Images used for navigation (for example, arrows, a home icon)
- Images used to convey information (for example, diagrams, graphs, screenshots)
- Symbols (also called icons, for example, eyeglasses to mean *look*, a stop sign to mean stop)

- Image map regions
- Multimedia presentations
- Plug-ins and scripts

6.4.1.1 Images (Figures or Illustrations)

Images pose a problem to the disabled user, especially those with low or no vision. Therefore, use images carefully. Do not use ASCII characters to create images or illustrations.

If the purpose of an image is to show a specific region or field, then that region or field should be explained in detail. If the image is a graph or diagram, only the information that is pertinent to the discussion must be described. If the purpose is to indicate an action, then the action that the image indicates must be included.

Some images do not need to be described because they do not add meaning to the documentation. Examples of images that do not need to be described are bullets in a list, transparent blocks used for formatting, and decorative images such as logos. Although these images do not need descriptions, they are required to have an empty alternate text attribute (`alt=" "`) in the HTML file.

The following recommendations for describing images are taken from the National Braille Association, Inc., Excerpts from the *NBA Tape Recording Manual, Third Edition*:

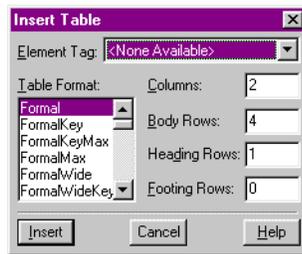
- Ask yourself, "Why is the image there? What does it illustrate or add to the text?"
- Make comparisons to items with which a blind person will be familiar, such as a hand, a ball, or a triangle.
- Describe the image as a whole first. For example, do not discuss a field until you have said that the image is a window.
- Pick out a few reference points and locate them within the image. Describe the details in a logical sequence, positioning them in relation to the reference points.
- The following are some terms that may help you describe objects in an image:

acute (angles)	horizontal	perpendicular
bottom	left	points of the compass
clockwise	lower	radially
concentric	mirror-image	right
counterclockwise	oblique	top
cross-section through	o'clock position	upper
diagonal	parallel	vertical

If you describe images within the text of the document, try to do so before the appearance of the image. Use formal images (formal figures) whenever possible, as these have titles and can be cross-referenced, as shown in [Example 6-1](#).

Example 6-1 Explanation of an Image Within a Document

[Figure 6-1](#) shows the Insert Table window, with the Formal table format selected. Enter the number of columns in the Columns field, the number of body rows in the Body Rows field, and the number of heading rows in the Heading Rows field. Enter 0 in the Footing Rows field for any table format that does not include the word Key.

Figure 6–1 Insert Table Window

6.4.1.2 Graphs

If your document contains graphs, name the type of graph (line, bar, pie, and so on), and state the title, the source of the graph information, and captions.

When describing a line graph, begin the description by explaining what quantity is measured along the horizontal (x) axis, the unit of measurement, and its limits. Do the same for the vertical (y) axis. Decide whether the purpose of the graph is to give detailed information, to describe a trend, or to show a comparison. Start at the left side of the graph and give the coordinates (x and y values) of significant points. Always give the starting point of the curve. [Figure 6–2](#) shows a line graph and [Example 6–2](#) shows its associated alternate text. For more information about alternate text, see [Section 6.4.3](#). For examples of a bar graph and a pie chart, see [Section 6.4.4](#).

Figure 6–2 Sample Line Graph: Exports to Canada**Example 6–2 Alternate Text for Figure 6–2**

The image linechart1.gif is the line graph titled Exports to Canada. The x-axis is the months of the year, from January to December 2000. The y-axis is the number of exports, in increments of 1,000, from 11,000 to 18,000. In January, the number of exports is slightly less than 14,000. In February, the number of exports is approximately 15,000. (You would continue the description, ending with December, depending on what is important in the graph.)

6.4.1.3 Image Maps

Rules

1194.22 (e) Redundant text links shall be provided for each active region of a server-side image map.

1194.22 (f) Client-side image maps shall be provided instead of server-side image maps except where the regions cannot be defined with an available geometric shape.

Recommendations

An image map is an image in an HTML document with hot (active) spots, which, when clicked, act as anchors or links to other information (either directly or indirectly). For example, an image of a map of a park might show the various picnic areas. Clicking a picnic area would take the user to more information about that area. There are two types of image maps, client-side and server-side.

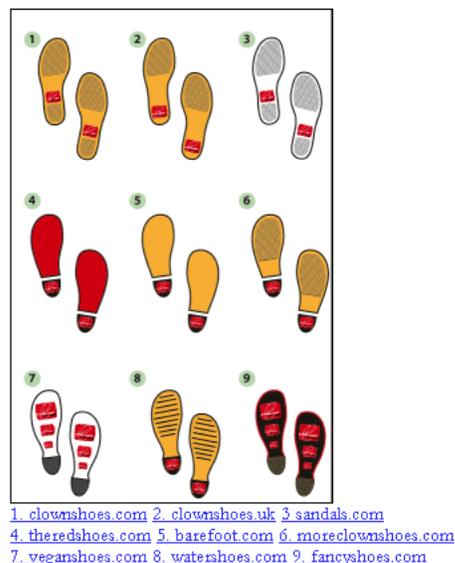
When a user activates a region of a client-side image map with the cursor, the pixel coordinates are interpreted by the browser. The browser selects a link that was specified for the activated region and follows it. When a user activates a region of a server-side image map with the cursor, the pixel coordinates of the click of the mouse are sent to the server-side agent specified in the code. The server-side agent interprets the coordinates and performs some action.

Client-side image maps are the preferred type of image maps. They enable the image map creator to specify each active region, which can then be assigned its own link, and each region can have its own alternate text. If you use client-side image maps, remember to include alternate text that includes information about where each link takes the user.

If image maps are included, use client-side image maps, except where the regions cannot be defined with an available geometric shape. Supplement all image maps with alternate text. For more information about alternate text, see [Section 6.4.3](#).

If you use server-side image maps, you must include redundant text links for each active region, as shown in [Figure 6–3](#). Server-side image maps must also have alternate text associated with them.

Figure 6–3 *Image Map with Redundant Text Links*



Server-side image maps specify only the coordinates within the image when the mouse was clicked. Thus, a screen reader user cannot identify where the link will go. The redundant text link is necessary to provide access for anyone who is not able to see or accurately click the map.

6.4.1.4 Multimedia Presentations

Rules

1194.22(b) Equivalent alternatives for any multimedia presentation shall be synchronized with the presentation.

1194.22 (k) A text-only page, with equivalent information or functionality, shall be provided to make a Web site comply with the provisions of this part, when compliance cannot be accomplished in any other way. The content of the text-only page shall be updated whenever the primary page changes.

Recommendations

For multimedia presentations (Web-based or not) that contain audio or video, you must provide an equivalent alternative that is synchronized with the presentation, such as a written transcript or captions that can be read by a screen reader. If audio and video are used in synchronization with each other, then captions should be provided as an alternative for the audio portion of the presentation, and a written transcript should be provided as an alternative for the visual portion of the presentation.

The content of the alternative you provide must match the content of the presentation. If the content is updated, then the alternative must be updated at the same time.

6.4.1.5 Plug-ins and Scripts

Rules

1194.22(a) A text equivalent for every non-text element shall be provided.

1194.22(l) When pages utilize scripting languages to display content, or to create interface elements, the information provided by the script shall be identified with functional text that can be read by assistive technology.

1194.22(m) When a web page requires that an applet, plug-in or other application be present on the client system to interpret page content, the page must provide a link to a plug-in or applet that complies with 1194.21(a) through (l).

Recommendations

Most Web browsers can read and display HTML code; however, some companies have proprietary file formats, such as PDF, referenced in the HTML code. Those file formats cannot be displayed without a specific plug-in installed on the user's system. If a document or Web page uses plug-ins, then include a link to the required application so it can be downloaded by the user. In addition, to ensure a screen reader can detect a plug-in in the HTML code, use the HTML `<OBJECT>` tag and describe the plug-in using the `alt` attribute. All plug-ins must be accessible or another method to access equivalent content must be provided to the user.

Similar to plug-ins, scripts and applets should be identified with either the HTML `<OBJECT>` tag or the HTML `<APPLET>` tag and must be described using the `alt` attribute. A link for downloading the required script or applet must be provided, and as with plug-ins, scripts and applets must be accessible or another method to access equivalent content must be provided to the user.

A screen reader must be able to read a script, and the content must be understood by the user. Often, text in scripts is meaningless to the user because no context is provided. For example, a script might cause the product's name to scroll across a page, forward and backward. The screen reader would read the product name forward and

backward; however, the user would have no idea that this was done purely for effect, unless the user is told.

It is particularly difficult for a screen reader user to understand information presented when images are included in a script. For example, a script might cause an image to change when the user moves the mouse over it. Some screen readers would tell the user only about the second image. Again, without any context, the user cannot understand the meaning or intent of the information being presented.

If a script (or any element) has its own interface, then ensure it can be operated without any special devices. The user should be able to operate the script using the keyboard, a mouse, a speech synthesizer, and so on. If a script or an applet creates motion, a way to freeze the motion must also be provided.

Often event handlers are used to perform actions such as checking a form for blank fields before it is submitted to the server for processing. Because the level of support for event handlers varies among screen readers, if an event handler is used, ensure the event handler is created according to guidelines defined by the Access Board.

6.4.2 Alternate Text Files

Alternate text files are files that can be read by a browser or a screen reader. These files must be formatted using HTML, and they must meet the Oracle Global HTML Accessibility Guidelines (OGHAG).

The following must be included in every alternate text file:

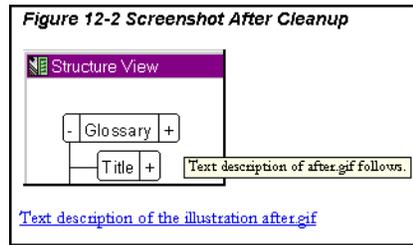
- Place the name of the image file on the first line to confirm to the user that the appropriate description for the image is displayed.
- Describe the meaning of the image. This description is referred to as alternate text. For more information about alternate text, see [Section 6.4.3](#).

It is acceptable to include an empty alternate text attribute (`alt=" "`) in the HTML file for images that do not add any meaning to the documentation. For example, a transparent block that is used as a spacer for formatting purposes does not require a description. An empty alternate text attribute for an image is acceptable; no alternate text attribute is not acceptable.

6.4.3 Alternate Text for Images

Alternate text is a textual description that acts as a substitute for a nontext element. All nontext elements must be supplemented with alternate text in the form of alt text (a brief description, less than 60 characters long, displayed by a browser when a user moves a cursor over an image) or a link to a long description contained in a separate HTML file (the alternate text file). A long description is necessary only if the image cannot be described in less than 60 characters.

[Figure 6-4](#) shows the alt text that is displayed for a particular image. The alt text informs the user that the description of the image follows the image. [Figure 6-4](#) also shows the link to the alternate text file.

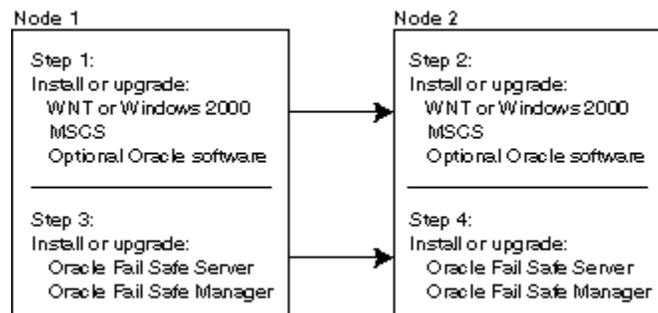
Figure 6–4 Alt Text Being Displayed

When writing alternate text, consider the following:

- If you use symbols to represent concepts:
 - Explain what these symbols mean.
 - Remember to include alternate text for each occurrence of the symbol.
 - Do not change the meaning of the symbol.

For example, if a picture of eyeglasses means *see another book* do not change that meaning to be *see the pharmaceutical reference*.
- When describing user-interface controls, such as those in a window, do so in tab order, as shown in [Example 6–1](#). Tab order is the sequence in which a user navigates through fields when pressing the Tab key.
- Do not include any inconsequential details. Be concise as possible, while still providing alternate text that conveys the same meaning to a disabled user as it would to a user without a disability.

If you are presenting various toolbar buttons, each button could be described in the text with its name: Save button, Print button, and so on. These would not require links to separate alternate text files. However, if you are illustrating a process, such as the order of operations in a procedure or program, you must include a link to alternate text that adequately describes the information conveyed in the image. [Figure 6–5](#) shows an image that depicts a process for which a separate alternate text file is required. [Example 6–3](#) shows the required alternate text.

Figure 6–5 Image Depicting a Process**Example 6–3 Contents of the Alternate Text File for [Figure 6–3](#)**

The image `nu-fsinstall.gif` shows the steps involved in installing Oracle Fail Safe on two nodes:

- Node 1, Step 1: Install or upgrade: Windows NT or Windows 2000, MSCS, Optional Oracle software.
- Node 2, Step 2: Install or upgrade: Windows NT or Windows 2000, MSCS, Optional Oracle software.
- Node 1, Step 3: Install or upgrade Oracle Fail Safe Server and Oracle Fail Safe Manager.
- Node 2, Step 4: Install or upgrade Oracle Fail Safe Server and Oracle Fail Safe Manager.

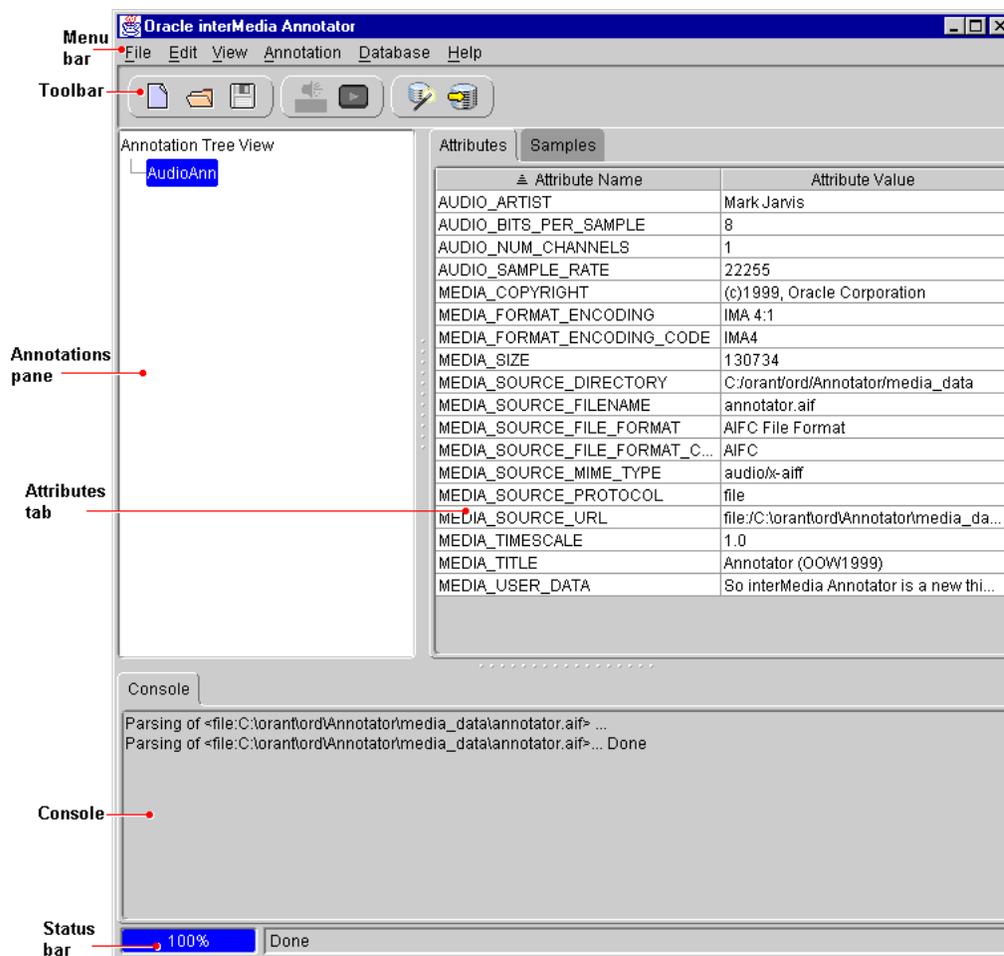
6.4.4 Sample Images and Their Alternate Text Files

This section contains sample images and appropriate alternate text contained in the alternate text files for those images.

Screen Shots

Figure 6–6 shows a screenshot of the Oracle *interMedia* Annotator window. Example 6–4 shows the contents of the associated alternate text file.

Figure 6–6 Sample Figure: Oracle *interMedia* Annotator Window



Example 6–4 Contents of the Alternate Text File for Figure 6–6

The image fullscre.gif shows the Oracle *interMedia* Annotator window.