

STUDY SERIES

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**An Accessibility and Usability Evaluation
of the 2010 Local Update of Census Addresses (LUCA)
Web-Based Training Application**

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Disclaimer: This report is released to inform interested parties of research and to encourage discussion. The views expressed are those of the author and not necessarily those of the U.S. Census Bureau.

**AN ACCESSIBILITY AND USABILITY EVALUATION
OF THE 2010 LOCAL UPDATE OF CENSUS
ADDRESSES (LUCA) WEB-BASED TRAINING
APPLICATION**

Human-Computer Interaction Memorandum Series # 108

Submitted to:

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INTRODUCTION

Since June 2001, Federal regulations have required that U. S. Government Web sites and other software developed by or for the U. S. Government provide comparable access to the information for all users¹. Computer users who have visual and or other disabilities are entitled to have the same access as users who do not currently have any disabilities

Some practitioners consider accessibility to be a subset of usability, while others think of accessibility as related, but separate from usability. Accessibility guidelines have several checkpoints that address more general usability, such as a logical tab order, dividing large information blocks into more manageable groups, and using the clearest and simplest language appropriate. Even if the application complies with the regulation, it still may not be usable, as the Census Bureau's Usability Lab has found in other testing. Both usability and accessibility testing need to be done to identify problems that actual users may have.

BACKGROUND

This accessibility evaluation was performed on all seven sections of the 2010 Local Update of Census Addresses (LUCA) Web-Based training application. The Geography Division (GEO) requested that the Statistical Research Division (SRD) use its expertise to verify and/or identify accessibility problems in the SRD accessibility lab. This application enables field personnel to learn about the LUCA operation to be conducted in 2010.

PURPOSE

The purpose of this evaluation is to report and rate the severity of accessibility problems to the developer of the software so that the problems can be resolved. The priority for accessibility problems is rated high, medium, or low. An item flagged as high means that the user could not perform the task at all. An item flagged as medium means that the user could perform the task, but with difficulty. An item flagged as low priority means that the user is not presented the same information as the able-bodied user, but can still perform the task.

SCOPE AND METHOD

This evaluation is primarily focused on testing accessibility for computer users with visual disabilities. Accessibility testing is performed using the Job Access With Speech (JAWS) 7 screen-reader software². For the purpose of this report, an item is judged to be accessible (compliant with the regulations) if its screen text is read out loud, in a coherent order by JAWS. Graphics are accessible if they have alternate/alternative text (henceforth ALT text) associated with them. Usability problems are detected by listening to the content vocalized by the screen-reader and visual inspection by an analyst with experience in usability. These problems are included in this report as issues to evaluate in formal usability testing if resources are available.

¹ <http://www.section508.gov/index.cfm?FuseAction=Content&ID=3>

² <http://www.freedomscientific.com>

FINDINGS

Findings for the 2010 LUCA Web-based training application are detailed in Figures 1-23. This application has the following accessibility issues:

- Course screens do not have a logical tabbing sequence.
- ALT text for images is redundant, missing, or incorrect.
- Page numbers are vocalized prior to the screen topic name.

During the process of accessibility testing, these usability problems were identified by the analyst:

- Users are not provided information on the number of screens in the training module.
- Images within image links are off center or rotated right.
- Instructions on how to respond or view information are provided after the response options or image links.
- Users are burdened with the need to remember instructions about usage of a keyboard alternative to drag-and-drop knowledge testing exercises.
- Image map links of column headers present too small a target to be clicked on easily.
- Links are displayed in gold instead of underlined blue and when visited do not change color to magenta (purple).

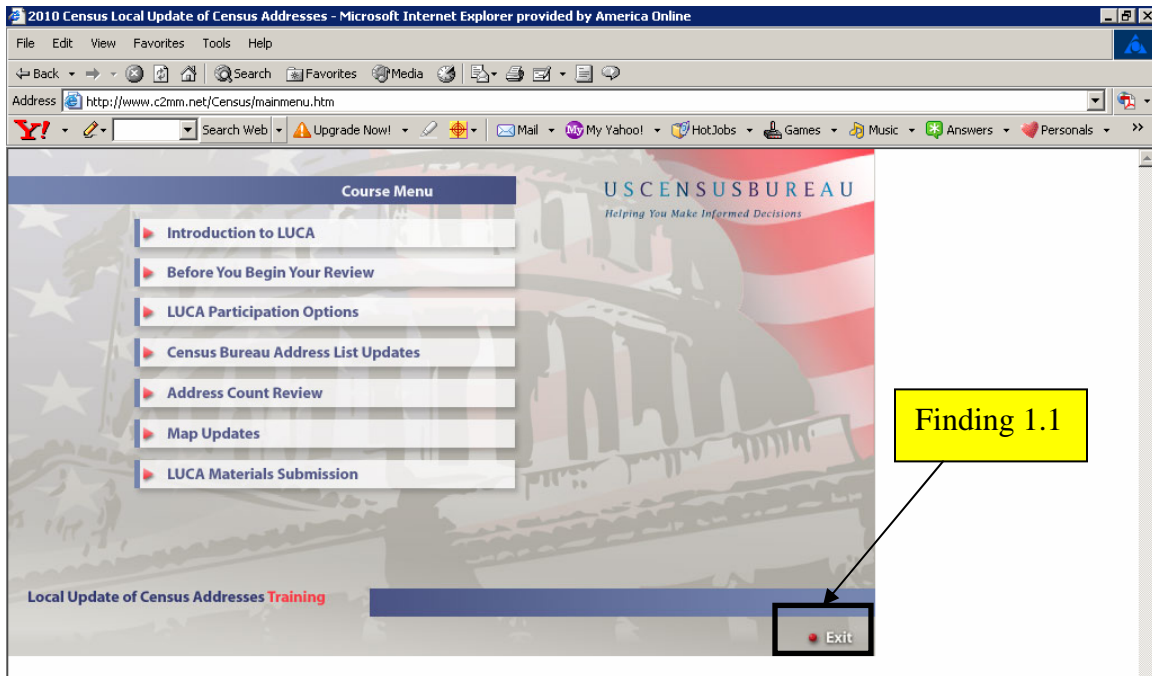


Figure 1. The screen-reader detects the exit button first in tab order, instead of last, as would be expected by the visual order.

Finding 1.1. The exit button precedes the Course Menu options, which does not match the visual order. The instructions vocalized by the screen-reader should not differ from the displayed text as per 1194.22 paragraph N of the Section 508 regulation.

Priority: High

Recommendation: The Exit button should be last in tab order.

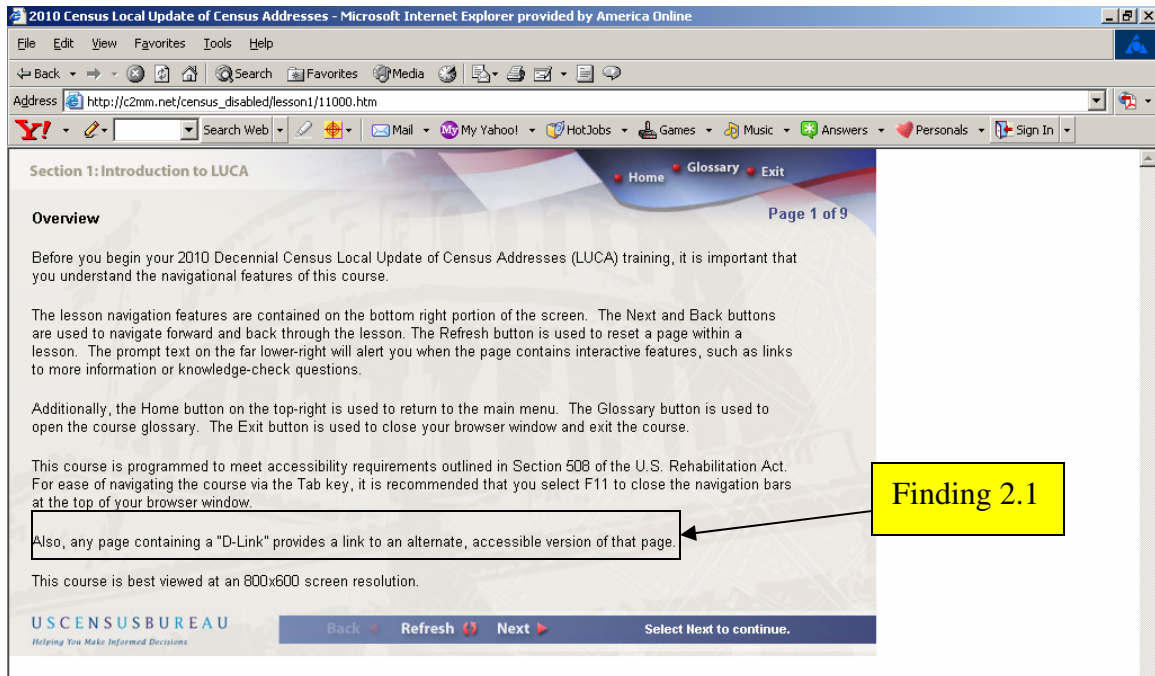


Figure 2. Users may not remember the purpose of the D-Link

Finding 2.1 Knowledge-check question screens requiring usage of drag-and-drop with a mouse have a link labeled as D-Link. The D-Link takes the user to a screen where the response options are accessible by keyboard commands. Users probably would not remember this instruction when encountering screens that require drag-and-drop.

Priority: Medium

Recommendation: Eliminate the sentence with the language about the D-Link. Instead, provide an instruction on each drag-and-drop activity screen to direct the user to an accessible Alternative screen.

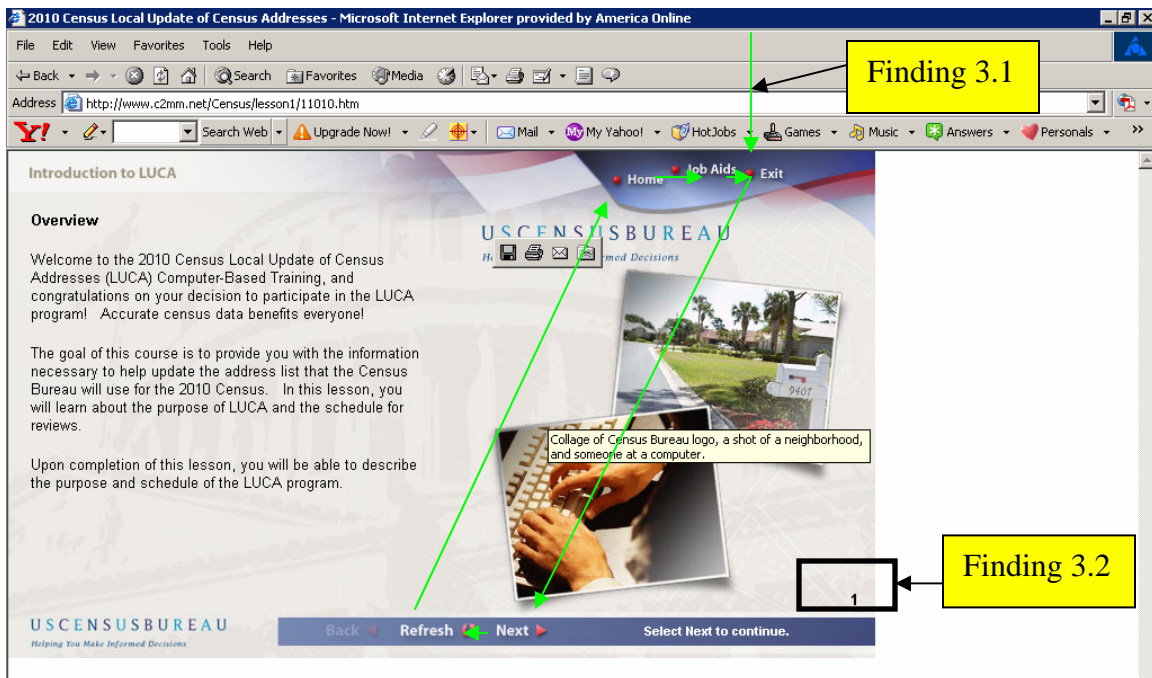


Figure 3. The tab order is not meaningful because the screen-reader announces the page number before the screen topic header.

Finding 3.1. Tab order is not meaningful because users of the screen-reader hear the page number just before the topic header text without any explanation of its meaning. Tab order begins and ends at the Exit button as shown by the arrows in Figure 3. The instructions vocalized by the screen-reader should be in a logical order as per 1194.22 paragraph N of the Section 508 regulation.

Priority: High

Recommendation: Content should be read in the following order: Home button, Job Aids button, Exit button, topic header and text, image ALT text, page number and position (e.g. 1 of N), back button (unavailable for page 1), Refresh button, the statement “Select Next to continue”, and the Next button. (Global)

Finding 3.2. Users are not provided information on the number of screens in the training module. This is not an accessibility violation, but it is a usability issue.

Priority: Medium

Recommendation: It would be beneficial if all users had an idea of how long the training would last so it is recommended to provide the number of screens in this module, e.g. “1 of N”.

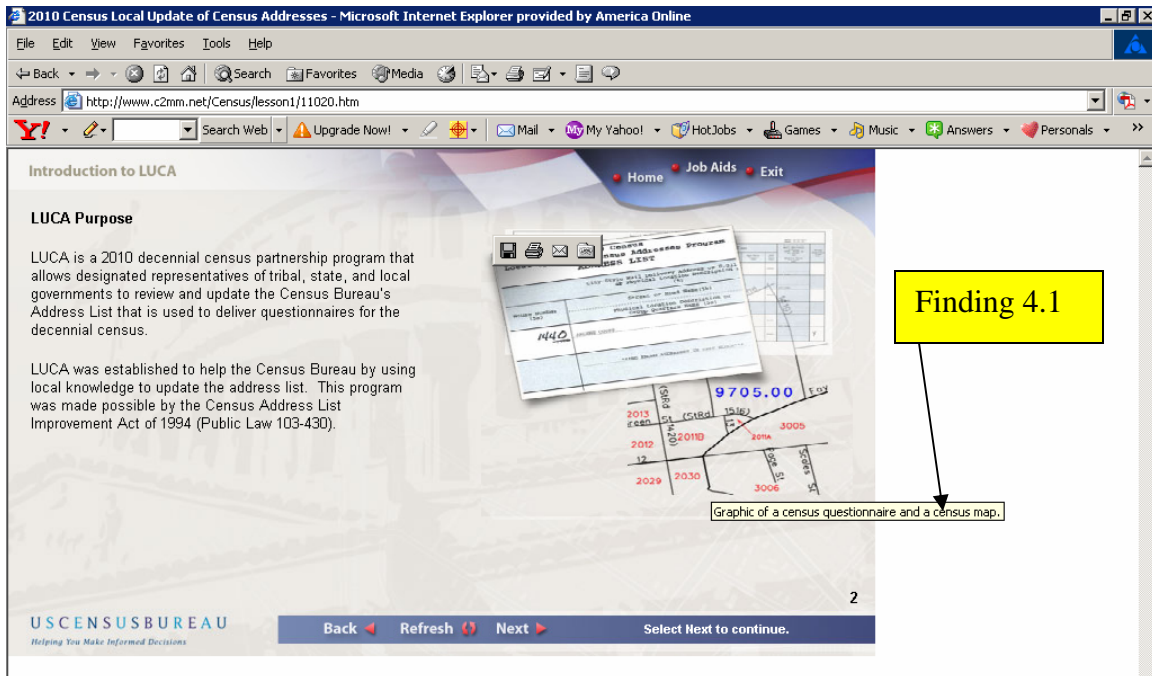


Figure 4. The graphic on page 2, Section 1, has redundant ALT text.

Finding 4.1. Screen reading software announces all images, photos, drawings, pictures, and graphics as “graphic”, so it wastes time for screen-reader users to hear these words in the ALT text. The best practice is to just describe what is on screen.

Priority: Medium

Recommendation: Use “census questionnaire and a census map” for the ALT text.

Note: Findings 3.1 and 3.2 apply to Figure 4.

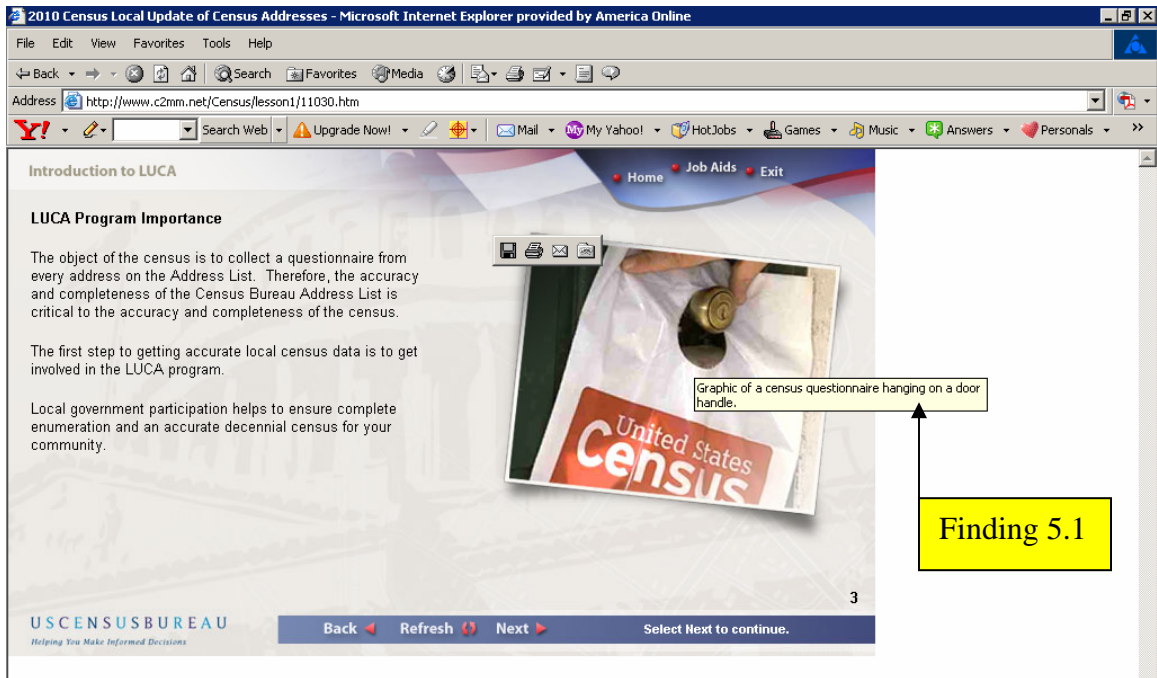


Figure 5. The graphic on page 3, Section 1, has redundant ALT text.

Finding 5.1. Screen reading software announces all images, photos, drawings, pictures, and graphics as “graphic”, so it wastes time for screen-reader users to hear these words in the ALT text. The best practice is to just describe what is on screen.

Priority: Medium

Recommendation: Use “census questionnaire hanging on a door handle” for the ALT text.

Note: Findings 3.1 and 3.2 apply to Figure 5.

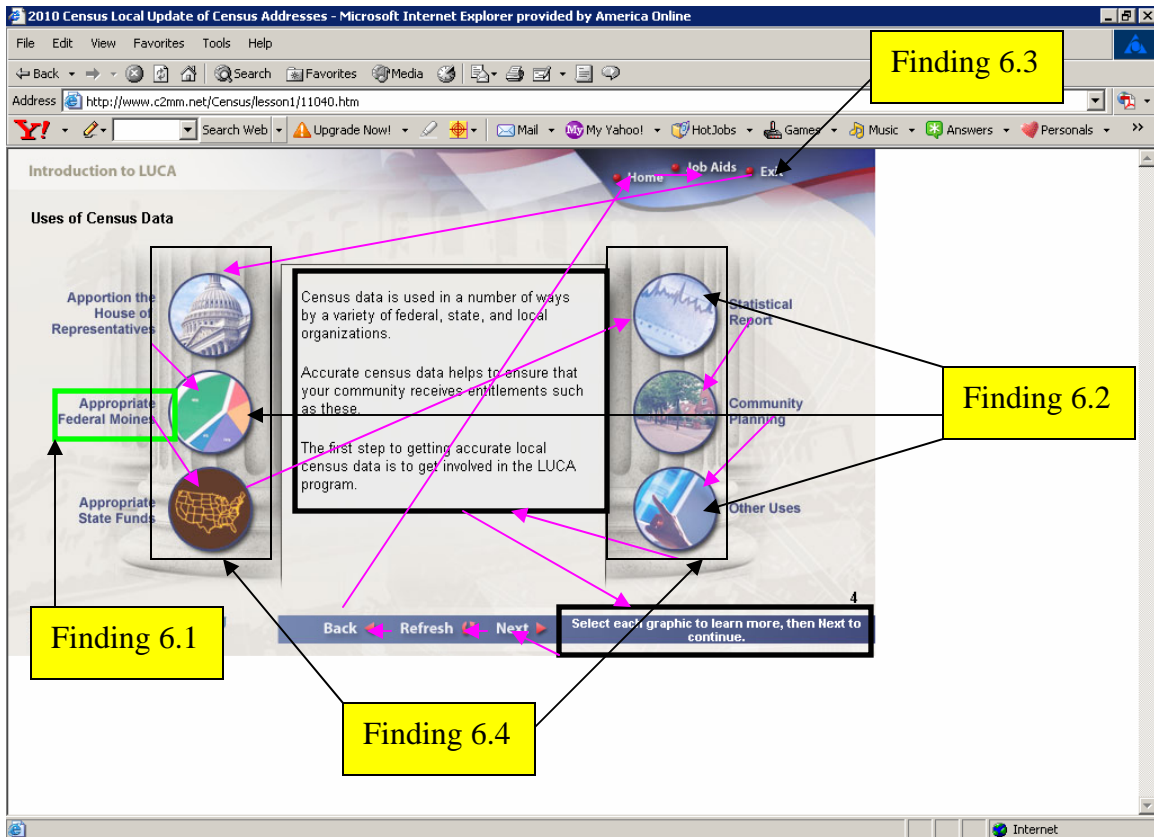


Figure 6. Image links on page 4, Section 1, to information about uses of Census data are not in correct tab order and have unnecessary ALT text.

Finding 6.1. The pie chart image link text has a typo. The word will be mispronounced and cause confusion to the screen-reader user. This behavior violates 1194.22 paragraph N of the Section 508 regulation.

Priority: High

Recommendation: “Moines” should be spelled “Monies”.

Finding 6.2. One image link is off-center. Two are rotated to the right. This is not an accessibility issue, but it is a usability issue. However, Census Bureau software should be professional in appearance.

Priority: High

Recommendation: Center the “Appropriate Federal Monies” image link and rotate the “Statistical Report” image link so the x axis is horizontal and the “Other Uses” image link so the right side of the monitor shown is vertical.

Finding 6.3. Tab order is not meaningful for the tasks a screen-reader user must perform on this screen because the instructions are vocalized after all the image links. Tab order begins and ends at the Exit button as shown by the arrows in Figure 6. The instructions vocalized by the screen-reader should be in a logical order as per 1194.22 paragraph N of the Section 508 regulation.

Priority: High

Recommendation: The tab position for the instruction block “Select each graphic to learn more.” should follow the text block describing uses of Census data so screen-reader users will know how to proceed. Content should be read in the following order: Home button, Job Aids button, Exit button, topic header and text, “Select each graphic to learn more.” text block, Apportion the House of Representatives image link, Appropriate Federal Monies image link, Appropriate State Funds image link, Statistical Report image link, Community Planning image link, Other Uses image link, page number and position (e.g. 1 of N), back button, Refresh button, the statement “Select Next to continue”, and the Next button.

Finding 6.4. A description of the image within the image link is not necessary for the user to be able to perform the task of getting more information about that topic.

Priority: Medium

Recommendation: Only the displayed labels are necessary. Enter the label text for the “ALT = “ statement for all image links on this screen.

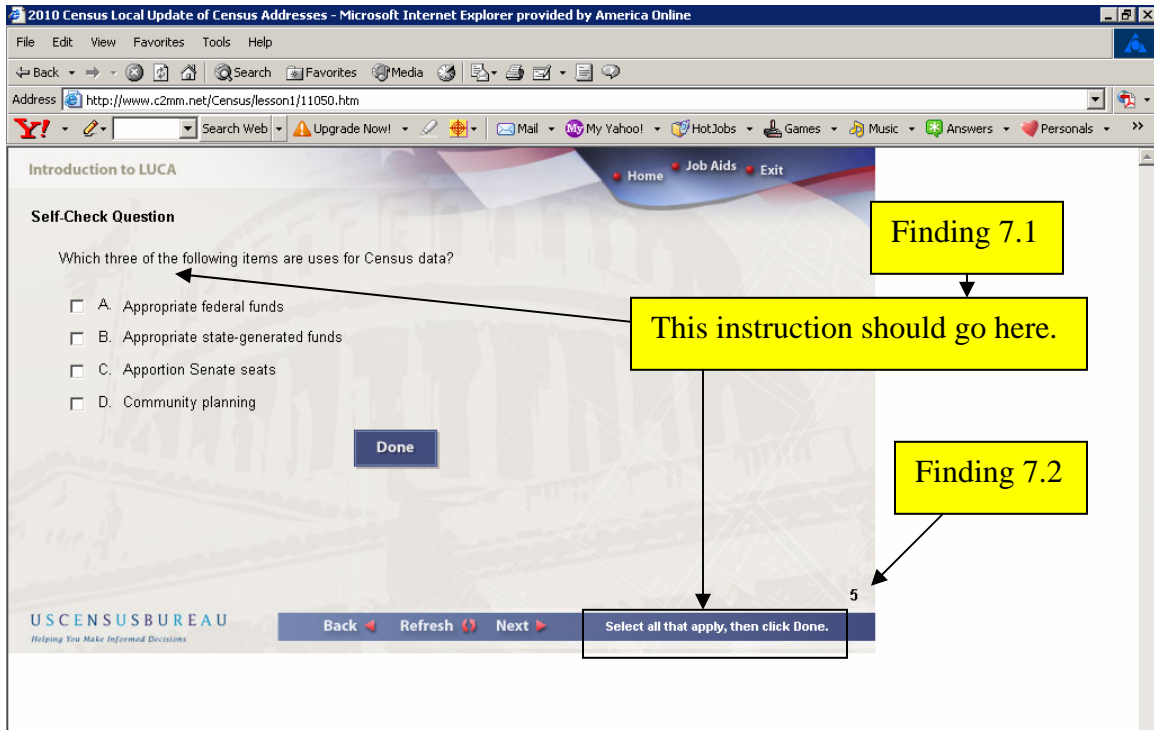


Figure 7. On page 5, Section 1, whether or not the user has vision, any user may miss the instruction to select all that apply for the Self-Check question and the tab order is not meaningful.

Finding 7.1. Users may miss the instruction in the lower right part of the screen to “select all that apply”.

Priority: High

Recommendation: Move the instruction to follow immediately after the question.

Note: Finding 7.1 of Figure 7 also applies to page 25 in Section 2, pages 19 and 27 in Section 3, and page 18 in Section 4.

Finding 7.2. Tab order is not meaningful because screen-reader users hear the page number just before the topic-header text without any explanation of its meaning. The instructions vocalized by the screen-reader should be in a logical order as per 1194.22 paragraph N of the Section 508 regulation.

Priority: High

Recommendation: Content should be read in the following order: Home button, Job Aids button, Exit button, topic header and question text, Done button, page number and position (e.g. 1 of 9), back button, Refresh button, the statement “Select Next to continue”, and the Next button.

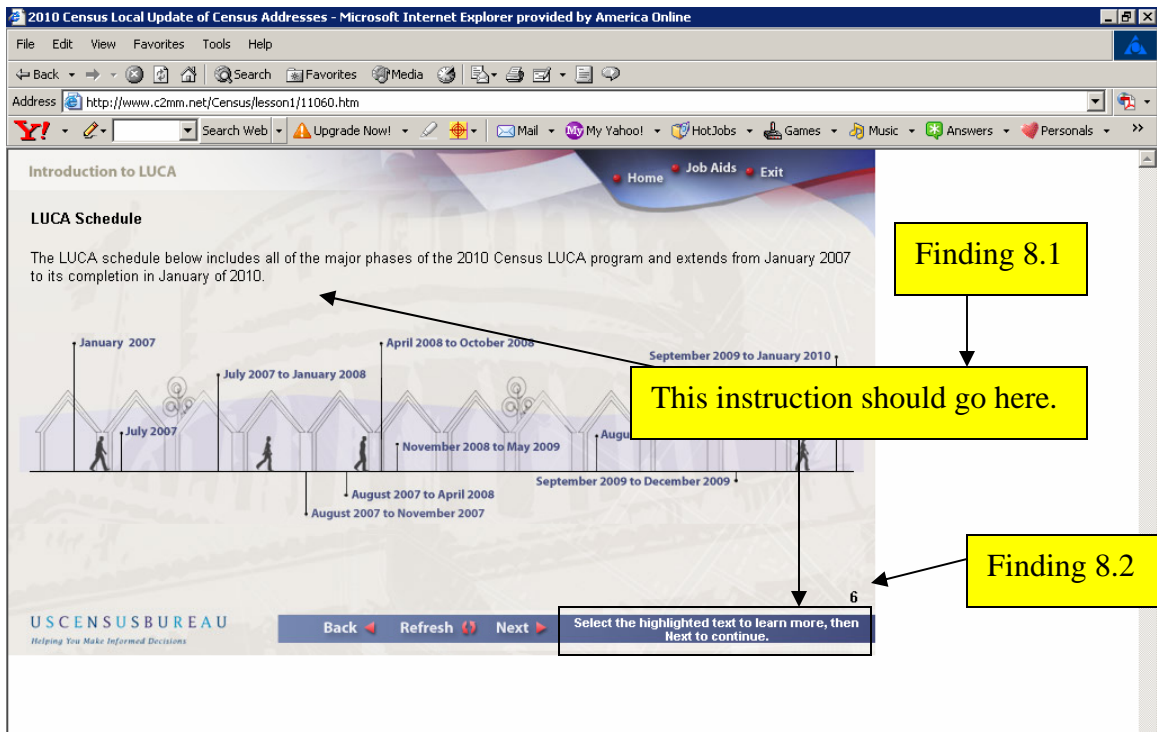


Figure 8. The instruction on page 6, Section 1, to click on the LUCA schedule dates may be missed by users.

Finding 8.1. Users may miss the instruction in the lower right part of the screen to “select the highlighted text to learn more”.

Priority: High

Recommendation: Move the instruction to immediately after the statement about the LUCA schedule.

Finding 8.2. Tab order is not meaningful because screen-reader users hear the page number just before the topic header text without any explanation of its meaning. Also, tab order for the LUCA schedule dates does not occur from left to right as displayed. The instructions vocalized by the screen-reader should be in a logical order as per 1194.22 paragraph N of the Section 508 regulation.

Priority: High

Recommendation: Content should be read in the following tab order: Home button, Job Aids button, Exit button, topic header and LUCA statement, January 2007, July 2007, July 2007 to January 2008, August 2007 to November 2007, August 2007 to April 2008, April 2008 to October 2008, November 2008 to May 2009, August 2009 to October 2009, September 2009 to December 2009, September 2009 to January 2010, page number and position (e.g. 1 of 9), back button, Refresh button, and the Next button.

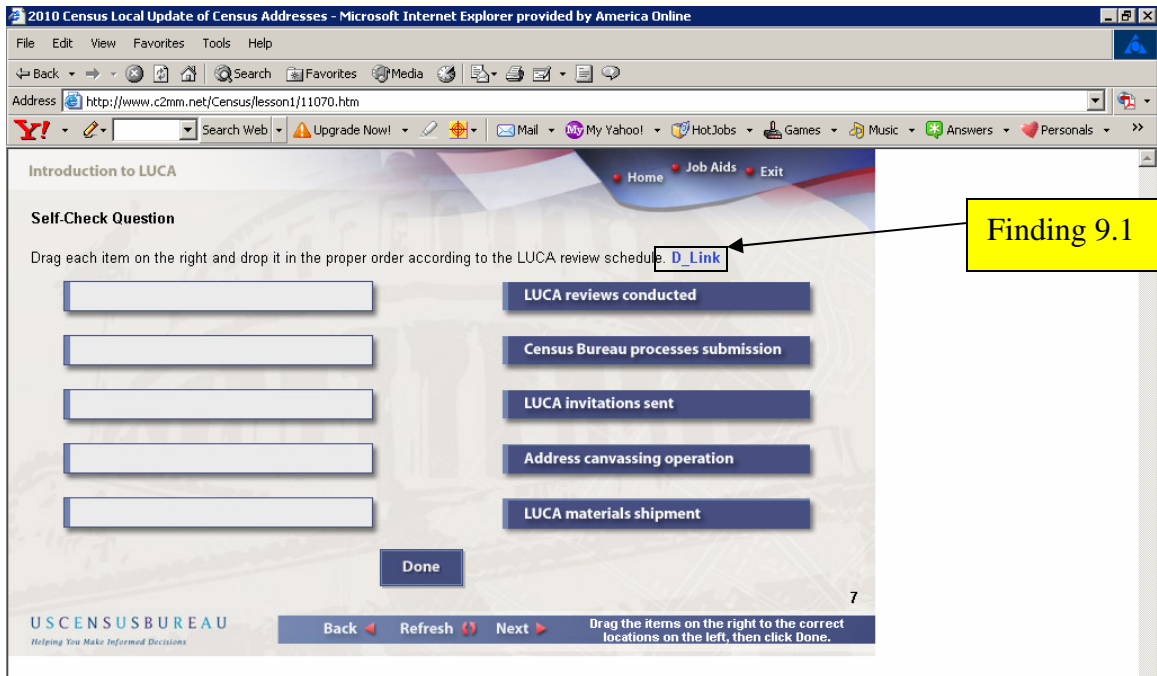


Figure 9. The keyboard alternative to inaccessible drag-and-drop tasks on page 7, Section 1, is not clearly identified.

Finding 9.1. This screen is completely inaccessible to screen-reader users because the keyboard cannot be used to accomplish this task. This design violates 1194.22 paragraph N of the Section 508 regulation

Priority: High

Recommendation: The D-Link offers an accessible alternative to drag and drop tasks, but the user will not know this because no information is given as to its function. Replace the D-Link with a button labeled “Click here for keyboard access to this question.”

Note: Finding 9.1 of Figure 9 also applies to page 3 of Section 2, page 13 of Section 3, page 19 of Section 4, page 12 of Section 6, and page 6 of Section 7.

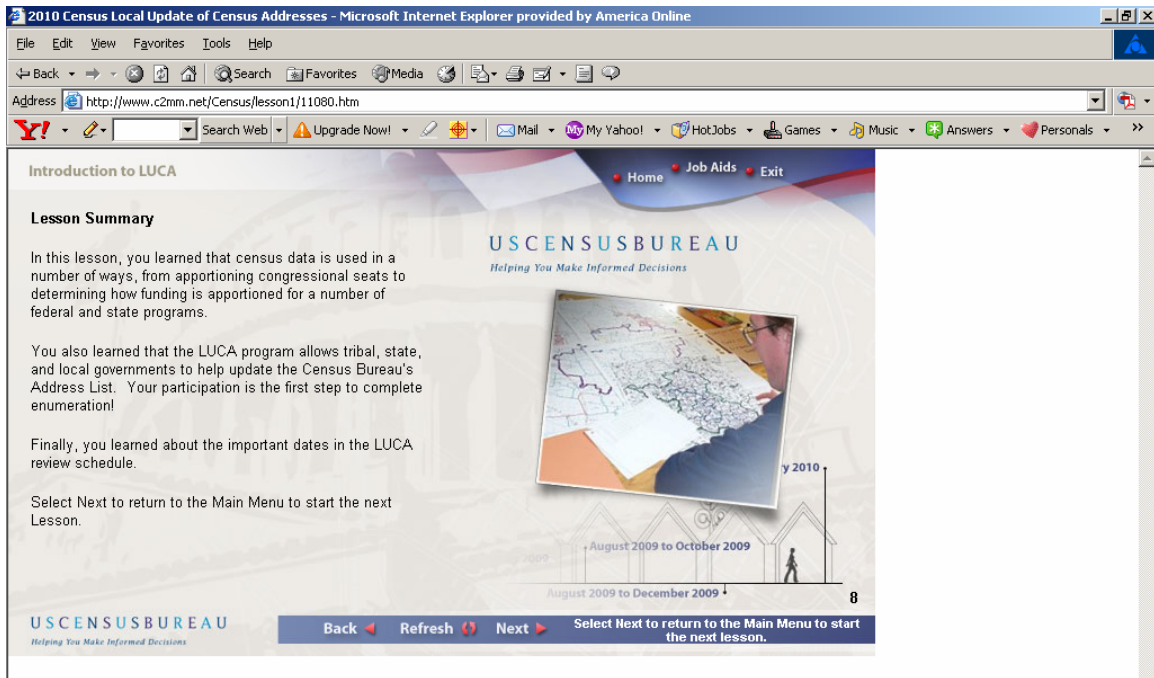


Figure 10. Page 8, Section 1, contains an accessibility and usability issue.

Note: Findings 3.1 and 3.2 apply to Figure 10.

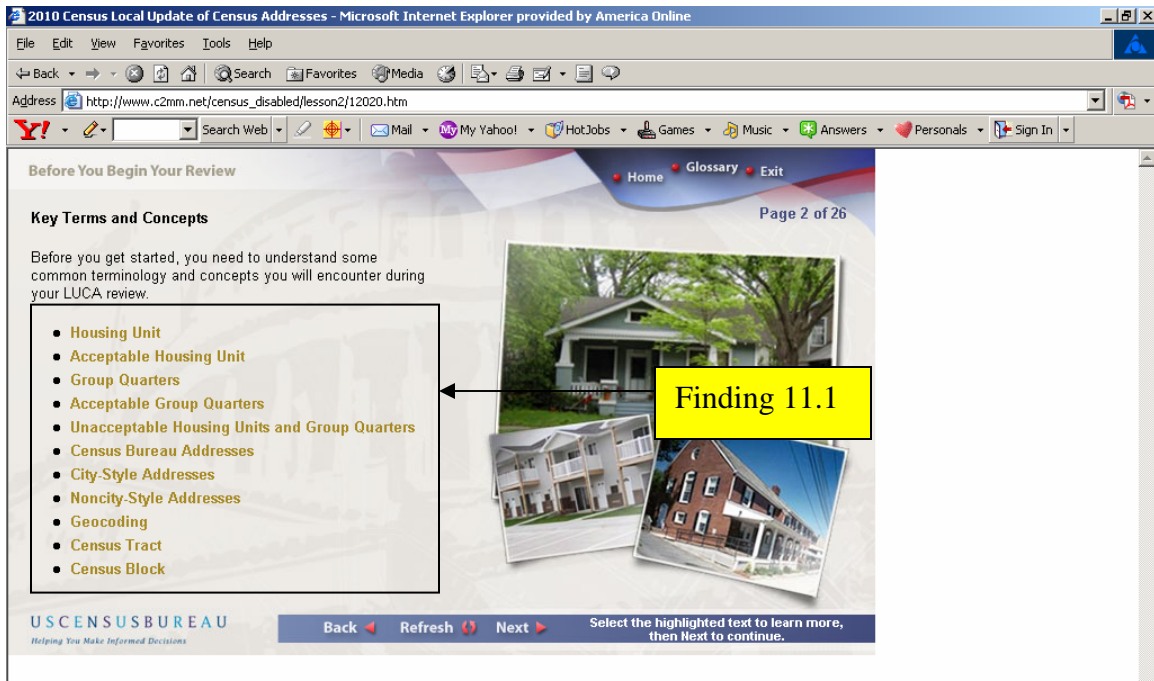


Figure 11. Terms in gold on page 2, Section 2, have poor contrast with the background and would not be recognized as links.

Finding 11.1. Text strings in gold are links and have poor visual contrast with a white background. This is a usability issue.

Priority: High

Recommendation: The links should be in underlined blue so the user will know they are links and change color to magenta (purple) once they are visited. All unvisited links in this application should be in underlined blue.

Note: Finding 11.1 of Figure 11 also applies to pages 5, 11, 13, and 17 of Section 2; pages 2, 3, 7-12, 14, 16-18, 20- 22, 25, and 26 of Section 3; pages 4, 5, 6, 7, 10, and 13 of Section 4; pages 2 and 5 of Section 5; pages 3-5, 13, 15, 16, 18, 19, and 22 of Section 6; and pages 3, 5, and 11 of Section 7.

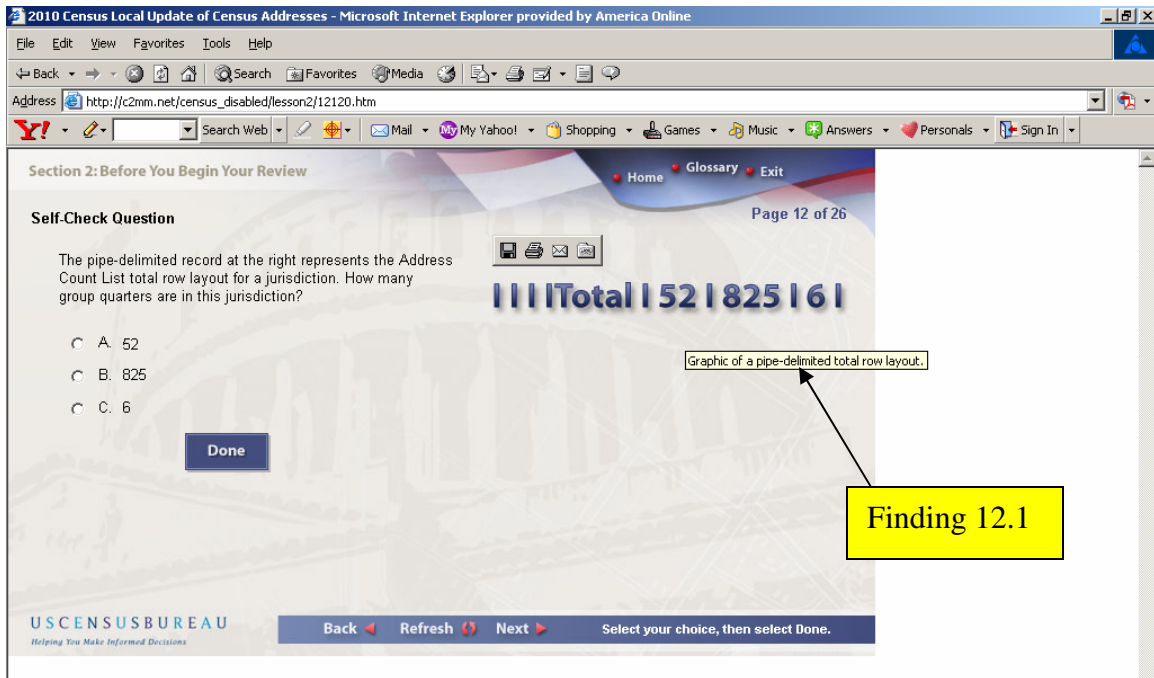


Figure 12. The graphic on page 12, Section 2 has redundant ALT text.

Finding 12.1. Screen reading software announces all images, photos, drawings, pictures, and graphics as “graphic”, so it wastes time for screen-reader users to hear these words in the ALT text. The best practice is to just describe what is on screen.

Priority: Medium

Recommendation: Use “a pipe delimited total row layout” for the ALT text.

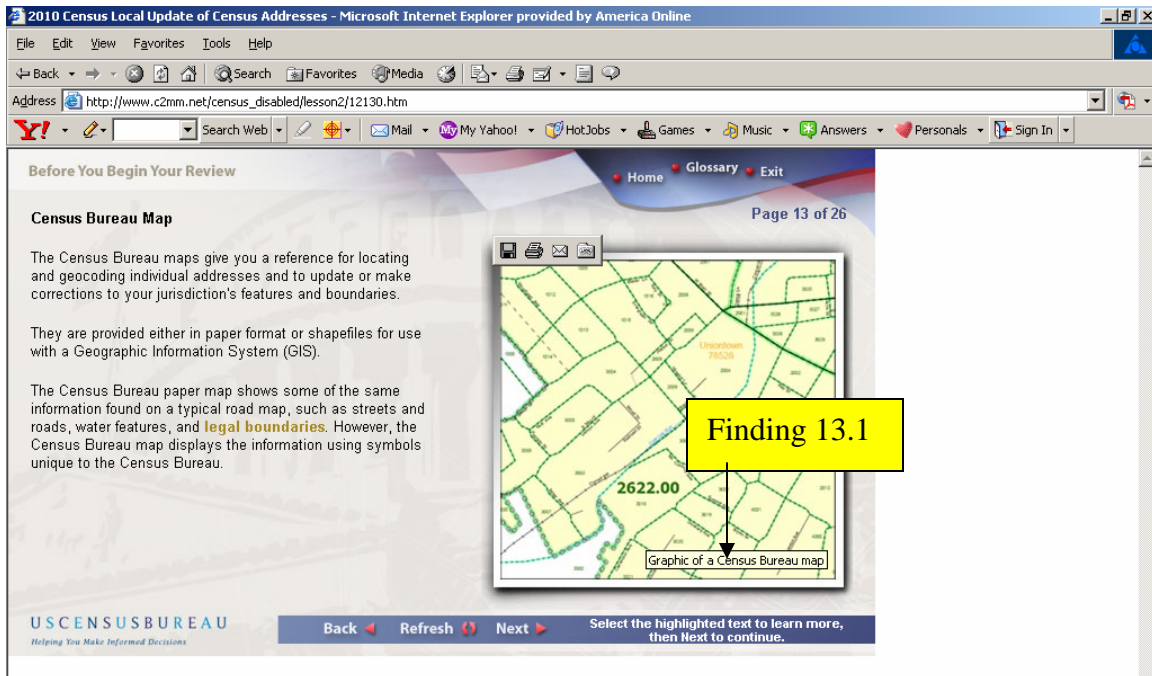


Figure 13. The graphic on page 13, Section 2, has redundant ALT text.

Finding 13.1. Screen reading software announces all images, photos, drawings, pictures, and graphics as “graphic”, so it wastes time for screen-reader users to hear these words in the ALT text. The best practice is to just describe what is on screen.

Priority: Medium

Recommendation: Use “a Census Bureau map” for the ALT text.

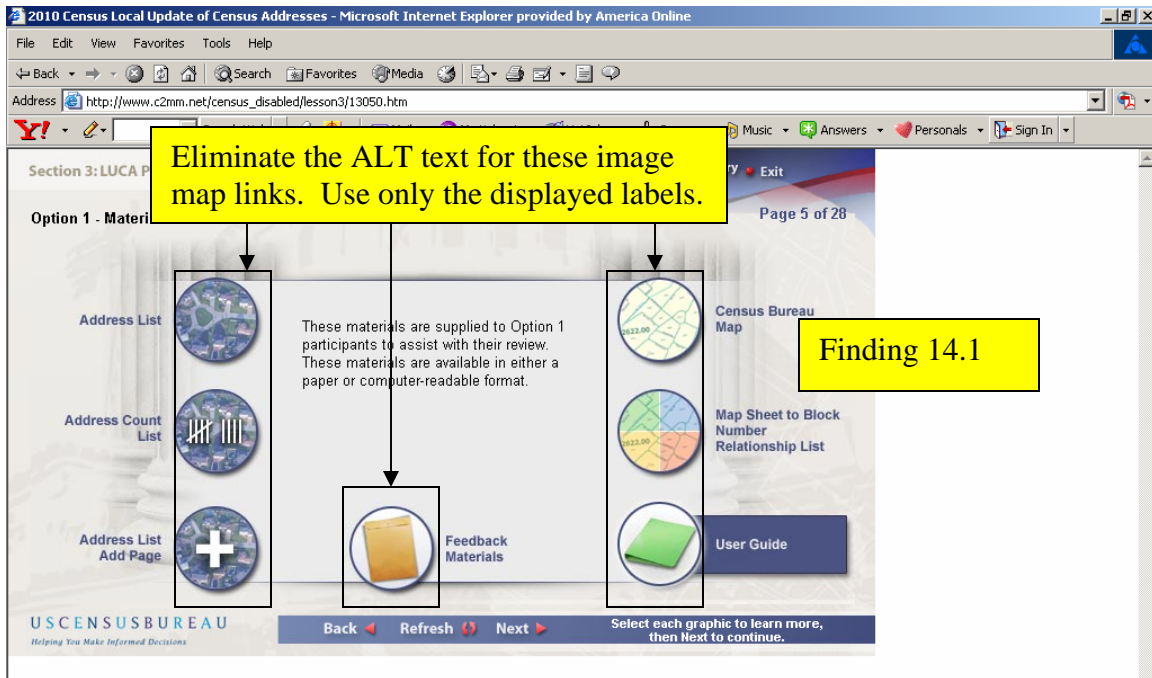


Figure 14. Image links to information on page 5, Section 3, about uses of Census materials have unnecessary ALT text.

Finding 14.1 A description of the image within the image link is not necessary for the user to be able to perform the task of getting more information about that topic.

Priority: Medium

Recommendation: Only the displayed labels are necessary. Enter the label text for the “ALT = “ statement for all image links on this screen.

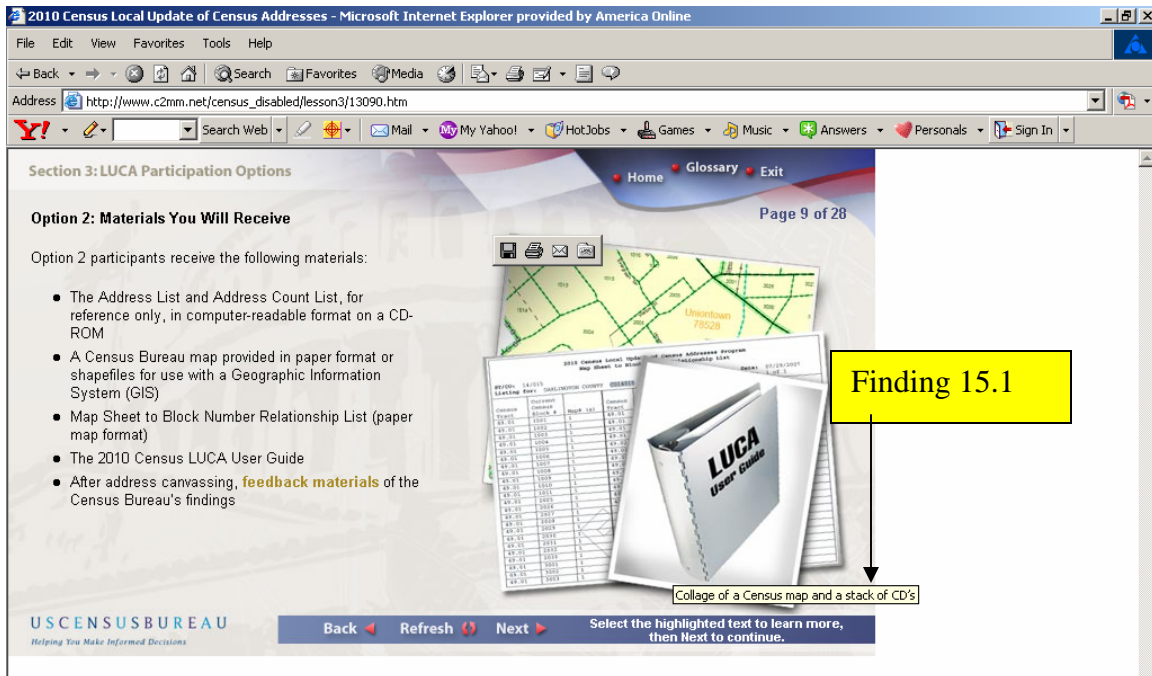


Figure 15. The ALT text on screen 9, Section 3, refers to a stack of CDs which is not in the image.

Finding 15.1 The ALT text does not match what is shown in the image.

Priority: Medium

Recommendation: The wording “Collage of a Census map and the LUCA User Guide” accurately describes the image on this screen.

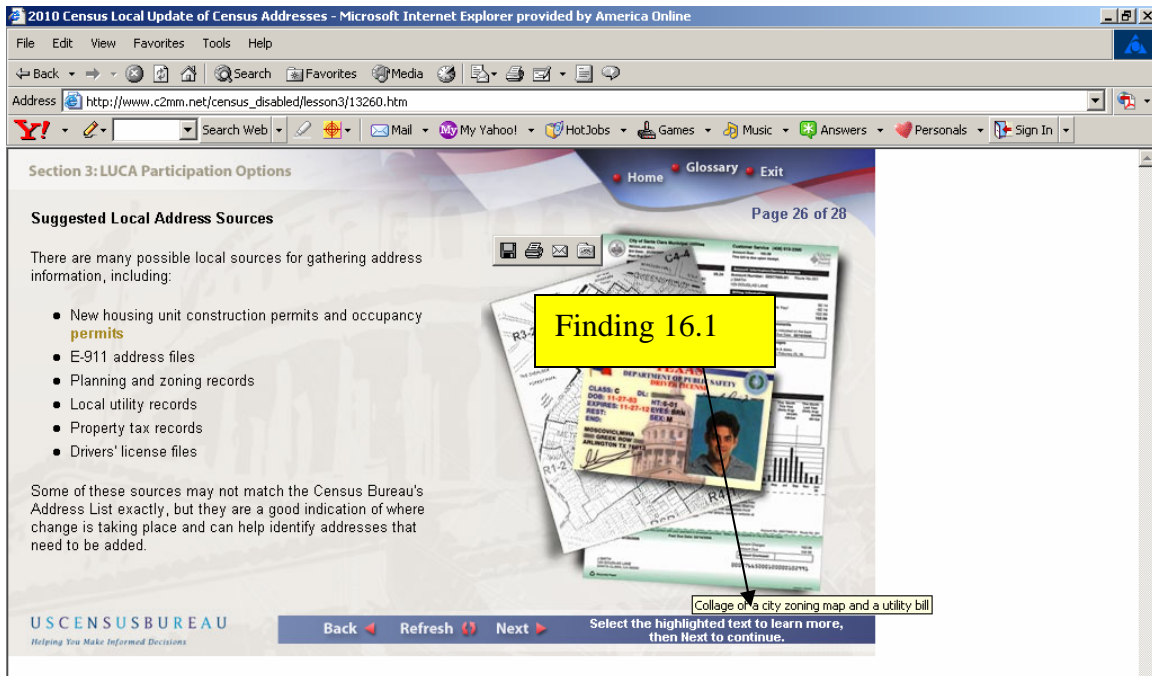


Figure 16. The driver's license on page 26, Section 3, is not mentioned in the ALT text describing the image.

Finding 16.1 The ALT text does not match what is shown in the image.

Priority: Medium

Recommendation: The wording "Collage of a driver's license, city zoning map and a utility bill." accurately describes the image on this screen.

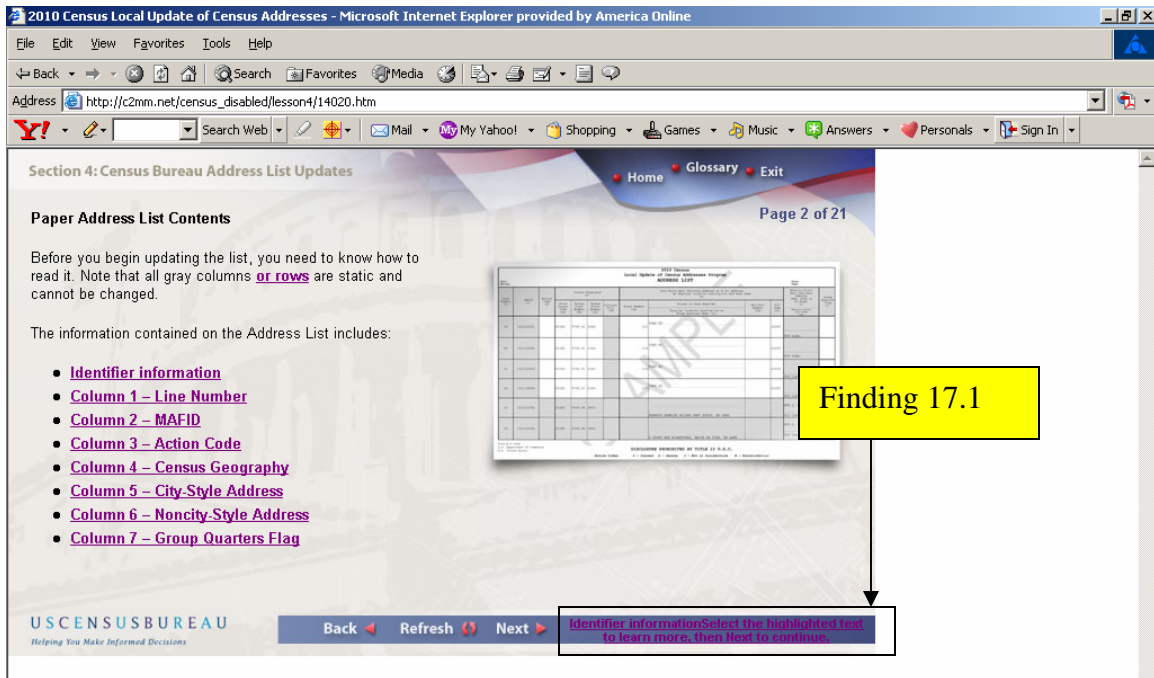


Figure 17. Text on page 2, Section 4, for a link and instructions to display the form are too hard to see.

Finding 17.1. The visual contrast is too low for sighted users to see the link and instructions on the bottom right part of the form. This is a usability issue.

Priority: High

Recommendation: Remove the “Identifier Information” link since it is already listed on the left. Move the instructions to the area immediately below the form graphic.

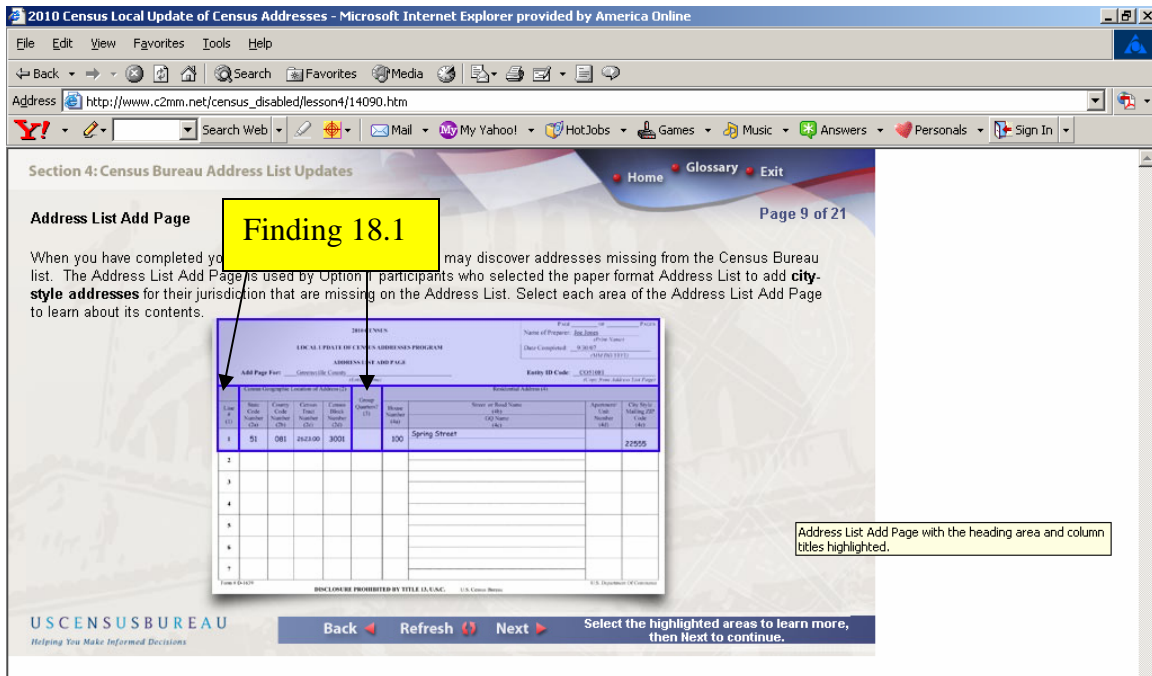


Figure 18. Two of the form field image map links on page 9, Section 4, are too small for users to click on them easily.

Finding 18.1. Image map links for columns 1 and 3 may be difficult for users to click on due to their small size. Also, the image map links do not change color to magenta (purple) as expected once they have been selected. This is a usability issue.

Priority: High

Recommendation: Much of the white space on the Address List Add page form should be eliminated. Text above the form could also be moved left of the image map links. The remaining portion of the image should be expanded to provide larger areas for columns 1 and 3. The image map links should change color to magenta (purple) once they have been visited.

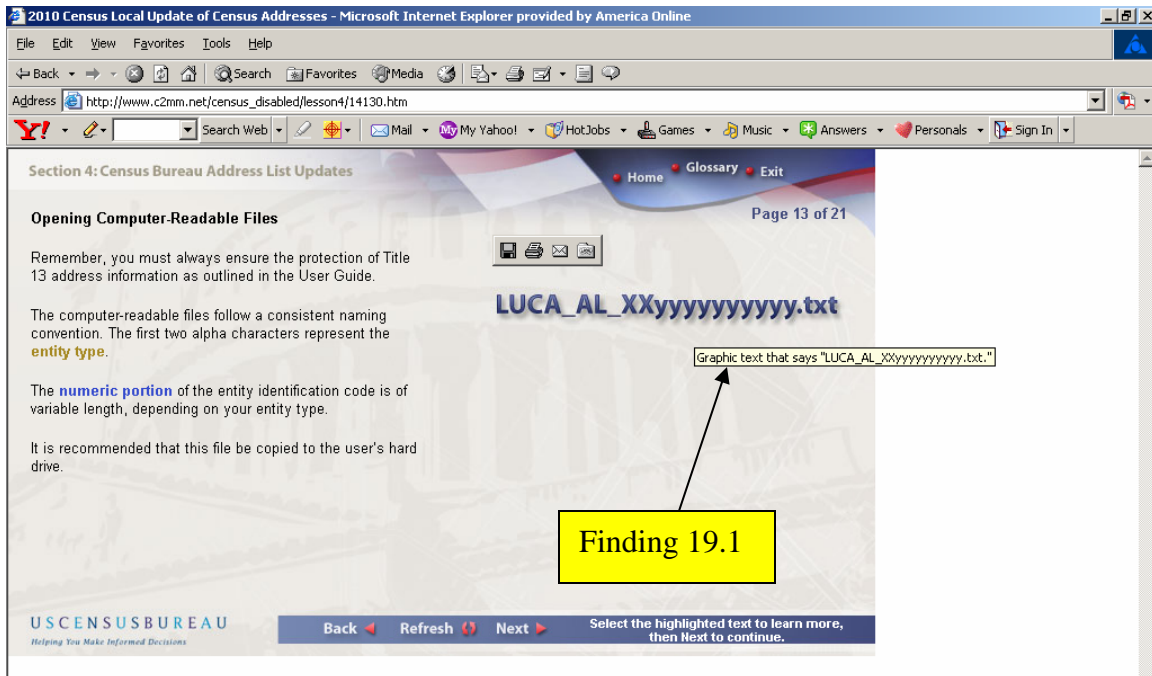


Figure 19. The graphic on page 13, Section 4, has redundant ALT text.

Finding 19.1. Screen reading software announces all images, photos, drawings, pictures, and graphics as “graphic”, so it wastes time for screen-reader users to hear these words in the ALT text. The best practice is to just describe what is on screen.

Priority: Medium

Recommendation: Use “The file name is LUCA_AL_XXyyyyyyyyyy.txt” for the ALT text.

2010 Census Local Update of Census Addresses - Microsoft Internet Explorer provided by America Online

File Edit View Favorites Tools Help

Back Forward Stop Search Favorites Media Print Mail My Yahoo! Shopping Games Music Answers Personals Sign In

Address http://c2mm.net/census_disabled/lesson4/14170.htm

Section 4: Census Bureau Address List Updates

Glossary Exit Page 17 of 21

Self-Check Question

According to your local address list, there is no 1404 Arlene Court. However, there is a 1440 Arlene Court. Which example below represents the necessary update to the paper Address List?

Done

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Back Refresh Next Select your

Finding 20.1

Unique ALT text required for options B, C, and D.

Line from the Address List with a "C" in the Action Code column and "1404" marked out for the house number and "1440" written above it.

| | | | | | | | | | |
|-----------------------|----|----|-----------|---|-------|---------|------|--------------|-----------|
| <input type="radio"/> | A. | 13 | 111112345 | C | 51081 | 2600.00 | 1033 | 1440 1440 | ARLENE CT |
| <input type="radio"/> | B. | 20 | 111112352 | C | 51081 | 2600.00 | 1033 | 1404 1440 | ARLENE CT |
| <input type="radio"/> | C. | 21 | 111112353 | D | 51081 | 2600.00 | 1033 | 1440 1440 | ARLENE CT |
| <input type="radio"/> | D. | 22 | 111112354 | J | 51081 | 2600.00 | 1033 | 1440 1440 | ARLENE CT |

Figure 20. ALT text is only provided for the graphic in response option A on page 17 of Section 4.

Finding 20.1. The ALT text does not properly describe all four response options, which violates 1194.22 A of the Section 508 regulation.

Priority: High

Recommendation: Provide unique ALT text for each response option shown in Figure 20.

2010 Census Local Update of Census Addresses - Microsoft Internet Explorer provided by America Online

File Edit View Favorites Tools Help

Address http://www.c2mm.net/census_disabled/lesson5/15030.htm

Section 5: Address Count Review

Home Glossary Exit

Address Count List

Page 3 of 13

Below is an Address Count List. Select the highlighted areas of the document to learn the contents of each area.

| County Name | County FIPS Code | County Population | County Area (sq. miles) | County Density (per sq. mile) | County Median Household Income | County Median Age | County Median Rent | County Median Home Value | County Median Year Built | County Median Year Renovated | County Median Year of Construction | County Median Year of Renovation |
|-------------|------------------|-------------------|-------------------------|-------------------------------|--------------------------------|-------------------|--------------------|--------------------------|--------------------------|------------------------------|------------------------------------|----------------------------------|
| 49-01-1001 | 16 | 0 | 49-01-1001 | 16 | 0 | 49-01-1001 | 16 | 0 | 49-01-1001 | 16 | 0 | 49-01-1001 |
| 49-01-1002 | 17 | 0 | 49-01-1002 | 17 | 0 | 49-01-1002 | 17 | 0 | 49-01-1002 | 17 | 0 | 49-01-1002 |
| 49-01-1003 | 22 | 0 | 49-01-1003 | 22 | 0 | 49-01-1003 | 22 | 0 | 49-01-1003 | 22 | 0 | 49-01-1003 |
| 49-01-1004 | 0 | 0 | 49-01-1004 | 0 | 0 | 49-01-1004 | 0 | 0 | 49-01-1004 | 0 | 0 | 49-01-1004 |
| 49-01-1005 | 64 | 1 | 49-01-1005 | 64 | 1 | 49-01-1005 | 64 | 1 | 49-01-1005 | 64 | 1 | 49-01-1005 |
| 49-01-1006 | 16 | 0 | 49-01-1006 | 16 | 0 | 49-01-1006 | 16 | 0 | 49-01-1006 | 16 | 0 | 49-01-1006 |
| 49-01-1007 | 18 | 0 | 49-01-1007 | 18 | 0 | 49-01-1007 | 18 | 0 | 49-01-1007 | 18 | 0 | 49-01-1007 |
| 49-01-1008 | 24 | 0 | 49-01-1008 | 24 | 0 | 49-01-1008 | 24 | 0 | 49-01-1008 | 24 | 0 | 49-01-1008 |
| 49-01-1009 | 23 | 1 | 49-01-1009 | 23 | 1 | 49-01-1009 | 23 | 1 | 49-01-1009 | 23 | 1 | 49-01-1009 |
| 49-01-1010 | 18 | 1 | 49-01-1010 | 18 | 1 | 49-01-1010 | 18 | 1 | 49-01-1010 | 18 | 1 | 49-01-1010 |
| 49-01-1011 | 12 | 0 | 49-01-1011 | 12 | 0 | 49-01-1011 | 12 | 0 | 49-01-1011 | 12 | 0 | 49-01-1011 |
| 49-01-1012 | 13 | 0 | 49-01-1012 | 13 | 0 | 49-01-1012 | 13 | 0 | 49-01-1012 | 13 | 0 | 49-01-1012 |
| 49-01-1013 | 10 | 1 | 49-01-1013 | 10 | 1 | 49-01-1013 | 10 | 1 | 49-01-1013 | 10 | 1 | 49-01-1013 |
| 49-01-1014 | 12 | 0 | 49-01-1014 | 12 | 0 | 49-01-1014 | 12 | 0 | 49-01-1014 | 12 | 0 | 49-01-1014 |
| 49-01-1015 | 13 | 0 | 49-01-1015 | 13 | 0 | 49-01-1015 | 13 | 0 | 49-01-1015 | 13 | 0 | 49-01-1015 |
| 49-01-1016 | 11 | 0 | 49-01-1016 | 11 | 0 | 49-01-1016 | 11 | 0 | 49-01-1016 | 11 | 0 | 49-01-1016 |
| 49-01-1017 | 16 | 2 | 49-01-1017 | 16 | 2 | 49-01-1017 | 16 | 2 | 49-01-1017 | 16 | 2 | 49-01-1017 |
| 49-01-1018 | 22 | 0 | 49-01-1018 | 22 | 0 | 49-01-1018 | 22 | 0 | 49-01-1018 | 22 | 0 | 49-01-1018 |
| 49-01-1019 | 64 | 1 | 49-01-1019 | 64 | 1 | 49-01-1019 | 64 | 1 | 49-01-1019 | 64 | 1 | 49-01-1019 |
| 49-01-1020 | 16 | 0 | 49-01-1020 | 16 | 0 | 49-01-1020 | 16 | 0 | 49-01-1020 | 16 | 0 | 49-01-1020 |
| 49-01-1021 | 18 | 0 | 49-01-1021 | 18 | 0 | 49-01-1021 | 18 | 0 | 49-01-1021 | 18 | 0 | 49-01-1021 |
| 49-01-1022 | 24 | 0 | 49-01-1022 | 24 | 0 | 49-01-1022 | 24 | 0 | 49-01-1022 | 24 | 0 | 49-01-1022 |
| 49-01-1023 | 23 | 1 | 49-01-1023 | 23 | 1 | 49-01-1023 | 23 | 1 | 49-01-1023 | 23 | 1 | 49-01-1023 |
| 49-01-1024 | 23 | 1 | 49-01-1024 | 23 | 1 | 49-01-1024 | 23 | 1 | 49-01-1024 | 23 | 1 | 49-01-1024 |
| TOTAL | | | | | | | | | | | | |

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Back Refresh Next Select the highlighted areas on the graphic to learn more, then Next to continue.

Finding 21.1

An Address Count List with the first row completed. The identifier information at the top and the column headings are highlighted.

Figure 21. The column header image map links on page 3, Section 5, may cause users difficulties when clicking on them due to their small size.

Finding 21.1. Image map links for all columns may be difficult for users to click on due to their small size. Also, the image map links do not change color to magenta (purple) as expected. This is a usability issue.

Priority: High

Recommendation: Much of the white space after the totals row on the Address Count List page form should be eliminated. The remaining portion of the image should be expanded to provide larger areas for the columns. The image map links should change color to magenta (purple) once they are visited.

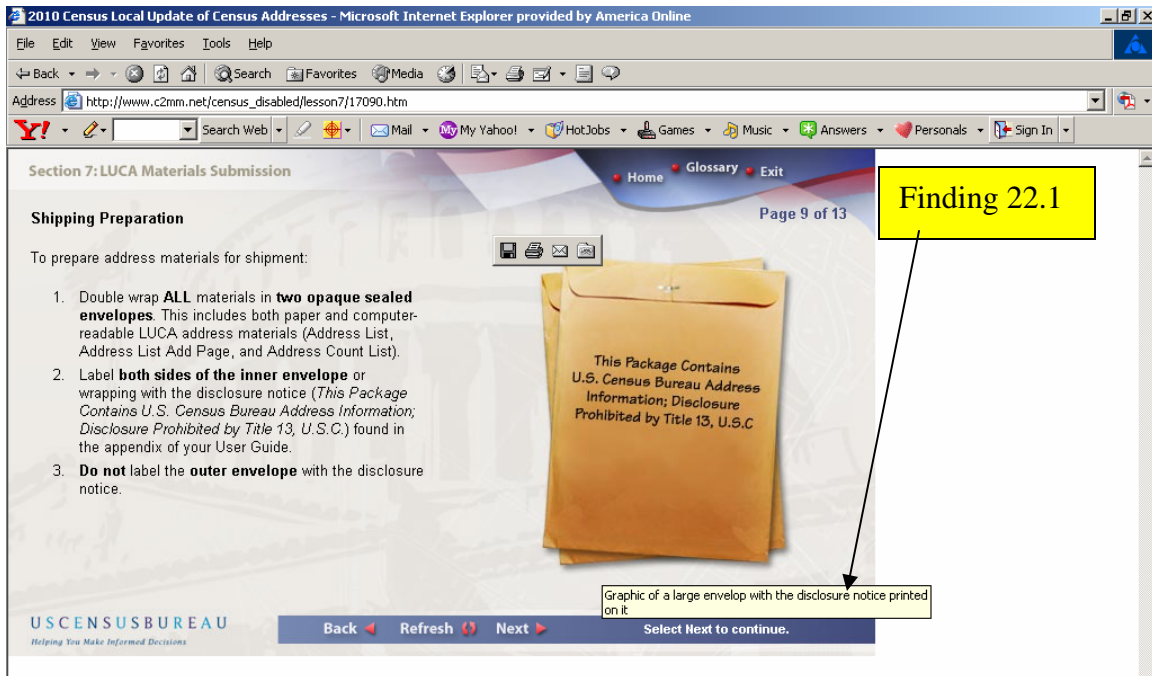


Figure 22. The ALT text for the graphic on page 9, Section 7, is redundant and has a typo.

Finding 22.1. Screen reading software announces all images, photos, drawings, pictures, and graphics as “graphic”, so it wastes time for screen-reader users to hear these words in the ALT text. The best practice is to just describe what is on screen. The word “envelope” is misspelled as “envelop” and will be mispronounced by the screen-reader.

Priority: High

Recommendation: Use “A large envelope with the disclosure notice printed on it.” for the ALT text.

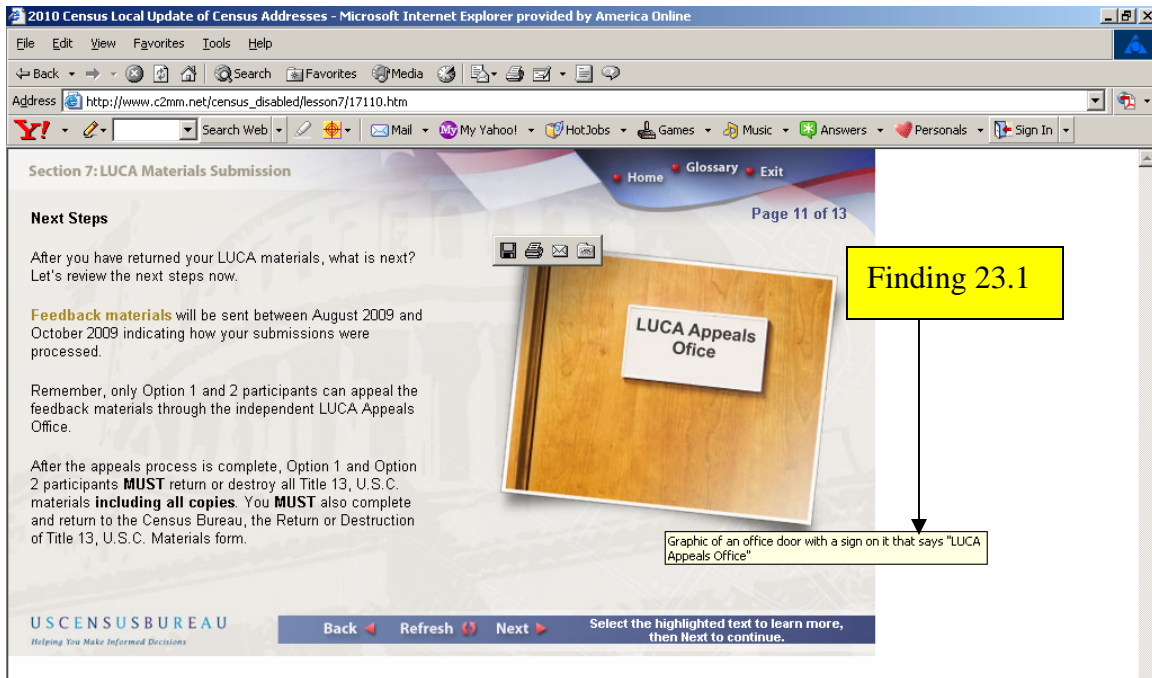


Figure 23. The graphic on page 11, Section 7, has redundant ALT text.

Finding 23.1. Since screen reading software announces all images, photos, drawings, pictures, and graphics as “graphic”, it wastes time for screen-reader users to hear these words in the ALT text. The best practice is to just describe what is on the screen.

Priority: High

Recommendation: Use “An office door with a sign that says LUCA Appeals Office.” for the ALT text.

SUMMARY

Accessibility

The 2010 LUCA WBT has course screens without logical tabbing sequences, ALT text for images is missing; and redundant or incorrect, and page numbers are vocalized prior to the screen topic name. Specific recommendations to remediate these accessibility violations include listing a logical tab order so page numbers and content are vocalized in a meaningful order and providing revised ALT text for images.

Usability

Usability problems were detected during the process of accessibility testing. Users are not provided information on the number of screens in the training module. It is important for the user to be aware of where the training ends so they can manage their time. Images within image links are off center or rotated right. These issues should be addressed so the 2010 LUCA WBT is professional in appearance.

Users may miss instructions on how to respond or view information because they are provided after the response options or image links. Instructions should appear before the remaining screen content, so the user will know how to proceed. Users are not clearly informed of a keyboard alternative to drag-and-drop knowledge testing exercises. A statement is needed directing to direct the user to the alternative page on each page containing a drag-and-drop exercise. Image map links of column headers in a form need to be enlarged so they can be clicked on easily. Links displayed in gold should be displayed in underlined blue and change color to magenta (purple) when visited.

If all the accessibility and usability findings detailed in this report are addressed, users will be able to take the 2010 LUCA training with high satisfaction, efficiency, and accuracy.