

Census Bureau Usability Evaluation Project User-Based Test Planning: Setting Usability Goals

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Abstract

Project Definition:

The Towson University project team assisted in the evaluation and redesign of a legacy (current) Intranet site. The Intranet site serves as a User-Centered Design (UCD) knowledge base for census bureau employees. The current site is accessible at www.census.gov/srd/userworks/index.htm. The project team helped in the development of a new site by developing a set of usability goals based on specific user tasks.

Setting Usability Goals:

Usability goals are a set of quantifiable standards and metrics by which the current site's usability can be evaluated. We assigned relevant site tasks to the target user population, which consists of:

- Administrative applications designers and developers
- Project managers
- Hardware, software, Web site and intranet site designers
- Hardware, software, Web site and intranet site developers
- Hardware, software, Web site and intranet site testers
- Persons responsible for any electronic product design
- IBM American Fact Finder contractors
- Census Bureau Usability Lab personnel

The target users for this Intranet site possess a wide range of usability and User-Centered Design issues. Therefore the site must be designed to accommodate the needs of both experienced designers as well as those who have little or no experience with usability issues. Sample user tasks were created with both of these profiles in mind. Those inexperienced in usability should be able to quickly find introductory information on what usability is and why it is important. Experienced users should also be able to find the in-depth articles and resources they desire.

Introduction

The Towson project team selected the following user tasks.

- Task 1: What does the W3C's Web Accessibility Initiative (WAI) Priority 1 say about the use of frames?
- Task 2: What is the URL of the software developers' tool Browser Sizer.
- Task 3: Find the definition of a Style Guide.
- Task 4: Find the list of the six IBM Web Design Guidelines.

For each user task the Towson project team established the following, in reference to the

various user groups:

- Task importance to the user.
- An acceptable task performance level.
- An acceptable time performance level.
- An acceptable user satisfaction level.

These acceptance levels were established for each user group for each task. The detailed results of this analysis follow:

Task 1: What does the W3C's Web Accessibility Initiative (WAI) Priority 1 say about the use of frames?

Expected Results

The user should be able to easily locate the link to the W3C's WAI site. On that site the W3C defines an accessibility guideline for the use of frames. It states, "Title each frame to facilitate frame identification and navigation". This isn't information that will be specifically contained on the Usability Lab's Knowledge Base site, but having a obvious and intuitive link to it is imperative. Currently the user must click on "Accessibility" in the main navigation, and then locate the link under "Guidelines and Checklists". Users will not find a link to this information if they click on the "Guidelines" in the main navigation. Something many users might likely do when searching for the WAI's accessibility guidelines.

The following chart is a summary of the detailed information below.

User Group	Importance	Task Performance	Time Performance	User Satisfaction
Administrative applications designers and developers	2	75%	< 60 seconds	2
Project Managers	1	50%	< 90 seconds	1
Hardware, software, Web site and intranet site designers	3	100%	< 45 seconds	3
Hardware, software, Web site and intranet site developers	3	100%	< 45 seconds	3
Hardware, software, Web site and intranet site testers	3	100%	< 45 seconds	3
Persons responsible for any electronic product design	2	75%	< 60 seconds	2
IBM fact finder contractors	3	100%	< 45 seconds	3
Census Bureau usability lab personnel	3	100%	< 30 seconds	3

Importance: The following scale for importance will be used for all user groups.

- 1 – not important.
- 2 – somewhat important
- 3 - extremely important

Task Performance: The following scale will be used for all user groups.

- 100% - no more than 1 error*
- 75% - no more than 2 errors
- 50% - no more than 3 errors

**Errors would be wrong links clicked on, getting lost, having to use the back button on the Web browser, etc.*

Time Performance: All users of this group must complete the task under this time.

User Satisfaction: The following scale will be used for all user groups.

1 – not satisfied

2 – somewhat satisfied

3 – extremely satisfied

Questions that can be asked to the user upon completion of the task:

(these apply to all user groups)

- What could be done to help you complete the task quicker?
- Were you satisfied with the task information you found?
- If not what would need to be done to make the information satisfactory to you?

The following is an analysis of how this task applies to the various Knowledge Base user groups.

User Group 1: Administrative applications designers and developers.

Importance: 2 – somewhat important. These applications designers and developers are primarily concerned with the development of PC-based applications, although some may be accessed on the Census Bureau's Intranet. The frames accessibility issue of this task is specific to the Web (Internet and Intranet). Therefore it may be important in some situations, but in most cases frames do not effect the applications being developed by this user group.

Task Performance: All members of this user group should be able to complete the task with at least a 75% performance level. A 75% performance level would mean that the user should have no more than 2 errors.

Time Performance: All members of this user group should be able to complete the task in less than 60 seconds. Since the information isn't present on the Knowledge Base site, and the information is actually contained on another Web site, it may take longer than normal for the user to locate the information. If the information was present on the Knowledge Base site (which it may be on the redesigned version), all users should be able to complete the task in less than 45 seconds.

User Satisfaction:

A) Completing the task: Since this task is somewhat important (2) to this user group, it makes sense that users be at least somewhat satisfied (2) with the amount of effort it took to complete the task.

B) The content/information: Members of this user group should be at least somewhat satisfied (2) with the information found while completing the task. The information isn't maintained by the Knowledge Base Web site, rather by the W3C site. However, it is

important for Knowledge Base to ensure that the information linked to is relevant and up to date.

User Group 2: Project Managers.

Importance: 1 –not important. Project managers, whether managing Web related project or not, will not be involved in the design and development of Web pages using frames. Ideally, they would have an understanding of the use of frames on the Web. However, compared to the other user groups, this task is not important to project managers.

Task Performance: All members of this user group should be able to complete the task with at least a 50% performance level. A 50% performance level would mean that the user should have no more than 3 errors.

Time Performance: All members of this user group should be able to complete the task in less than 90 seconds. The combination of the task not being very important to this user group, and the fact that the information is on another site, constitute the long acceptable time performance. If the information was present on the Knowledge Base site, all users should be able to complete the task in less than 60 seconds.

User Satisfaction:

A) Completing the task: Since this task is not important (1) to this user group, it's not that important that they are satisfied with the task. Therefore it is acceptable if members of this user group are not satisfied (1) with what it took to complete the task.

B) The content/information: Since this task is not important (1) to this user group, it's not that important that they are satisfied with the task. Therefore it is acceptable if members of this user group are not satisfied with the information they find upon completing the task.

User Group 3: Hardware, software, Web site and intranet site designers.

Importance: 3 – extremely important. Web and intranet designers need to understand the issues surrounding the use of frames on the Web. Frames can cause a variety of accessibility and usability problems for users. Although the designers will not be doing the coding that titles each frame, they need to recognize that it needs to be done. Designers and developers sometimes have a crossover of job functions and perform the duties of both positions.

Task Performance: All members of this user group should be able to complete the task with a 100% performance level. A 100% performance level would mean that the user should have no more than 1 error.

Time Performance: Finding the information from this task is extremely important to this

user group, therefore all members of this user group should be able to complete the task in less than 45 seconds. If the information was present on the Knowledge Base site, all users should be able to complete the task in less than 30 seconds.

User Satisfaction:

A) Completing the task: Since this task extremely important (3) to this user group, it's important that they are extremely satisfied (3) with the effort it takes to complete the task.

B) The content/information: Due to the importance of the task, all users of this group should be extremely satisfied (3) with the information they find after completing this task.

User Group 4: Hardware, software, Web site and intranet site developers.

Importance: 3 – extremely important. Web and intranet developers need to understand the issues surrounding the use of frames on the Web. Frames can cause a variety of accessibility and usability problems for users. The developers will be doing the coding that titles each frame.

Task Performance: All members of this user group should be able to complete the task with a 100% performance level. A 100% performance level would mean that the user should have no more than 1 error.

Time Performance: Finding the information from this task is extremely important to this user group, therefore all members of this user group should be able to complete the task in less than 45 seconds. If the information was present on the Knowledge Base site, all users should be able to complete the task in less than 30 seconds.

User Satisfaction:

A) Completing the task: Since this task extremely important (3) to this user group, it's important that they are extremely satisfied (3) with the effort it takes to complete the task.

B) The content/information: Due to the importance of the task, all users of this group should be extremely satisfied (3) with the information they find after completing this task.

User Group 5: Hardware, software, Web site and intranet site testers.

Importance: 3 – extremely important. Web and intranet testers need to understand the issues surrounding the use of frames on the Web, and recognize what steps need to be taken to use them effectively. Testers must be able to find out what the WAI says about the use of frames so that they can test to make sure the sites they are testing are following the guideline.

Task Performance: All members of this user group should be able to complete the task with a 100% performance level. A 100% performance level would mean that the user should have no more than 1 error.

Time Performance: Finding the information from this task is extremely important to this user group, therefore all members of this user group should be able to complete the task in less than 45 seconds. If the information was present on the Knowledge Base site, all users should be able to complete the task in less than 30 seconds.

User Satisfaction:

A) Completing the task: Since this task extremely important (3) to this user group, it's important that they are extremely satisfied (3) with the effort it takes to complete the task.

B) The content/information: Due to the importance of the task, all users of this group should be extremely satisfied (3) with the information they find after completing this task.

User Group 6: Persons responsible for any electronic product design.

Importance: 2 – somewhat important. These people are responsible mainly for the development of CD-Rom based software. However, there is a possibility that they will at some point be developing Web based applications.

Task Performance: All members of this user group should be able to complete the task with at least a 75% performance level. A 75% performance level would mean that the user should have no more than 2 errors.

Time Performance: All members of this user group should be able to complete the task in less than 60 seconds. If the information was present on the Knowledge Base site, all users should be able to complete the task in less than 45 seconds.

User Satisfaction:

A) Completing the task: Since this task is somewhat important (2) to this user group, it makes sense that users be at least somewhat satisfied (2) with the amount of effort it took to complete the task.

B) The content/information: Members of this user group should be at least somewhat satisfied (2) with the information found while completing the task.

User Group 7: IBM fact finder contractors.

Importance: 3 – extremely important. This user group is responsible for the design and development of the American FactFinder Web site

(<http://factfinder.census.gov/servlet/BasicFactsServlet>). Therefore, it is important for them to understand how to make Web sites using frames accessible.

Task Performance: All members of this user group should be able to complete the task with a 100% performance level. A 100% performance level would mean that the user should have no more than 1 error.

Time Performance: Finding the information from this task is extremely important to this user group, therefore all members of this user group should be able to complete the task in less than 45 seconds. If the information was present on the Knowledge Base site, all users should be able to complete the task in less than 30 seconds.

User Satisfaction:

A) Completing the task: Since this task extremely important (3) to this user group, it's important that they are extremely satisfied (3) with the effort it takes to complete the task.

B) The content/information: Due to the importance of the task, all users of this group should be extremely satisfied (3) with the information they find after completing this task.

User Group 8: Census Bureau usability lab personnel.

Importance: 3 – extremely important. The members of this user group are experts in usability and accessibility. They will be overseeing the development of the Knowledge Base, and are considered expert users of this intranet site.

Task Performance: All members of this user group should be able to complete the task with a 100% performance level. A 100% performance level would mean that the user should have no more than 1 error.

Time Performance: Finding the information from this task is extremely important to this user group. Members of this group are considered expert users, and therefore should be able to complete the task in less than 30 seconds. If the information was present on the Knowledge Base site, all users should be able to complete the task in less than 20 seconds.

User Satisfaction:

A) Completing the task: Since this task extremely important (3) to this user group, it's important that they are extremely satisfied (3) with the effort it takes to complete the task.

B) The content/information: Due to the importance of the task, all users of this group should be extremely satisfied (3) with the information they find after completing this task.

Task 2: What is the URL of the software developers' tool Browser Sizer.
(Kimberly Torres)

Expected Results

The user should be able to easily locate the link to the Browser Sizer site (<http://www.applythis.com/browsersizer/default.asp>). On this site software developers can download the software tool Browser Sizer. It is a tool that helps web developers check to see how their web pages look on screen resolutions of 640x480, 800x600, 1024x768 and WebTV.

This isn't information that will be specifically contained on the Usability Lab's Knowledge Base site, but having an obvious and intuitive link to it is imperative. The user must click:

- 1) "Resources" in the main navigation page's content area, and then locate the link under
- 2) "Software/Tools" located in the menu items on the top of this page
- 3) "Browser Sizer" located under the heading Web Validation/Usability

Or the user can click "Resources" from the menu which is along the of the main navigation page and click "Software/Tools" and than "Browser Sizer" as stated above.

The following chart is a summary of the detailed information below.

User Group	Importance	Task Performance	Time Performance	User Satisfaction
Administrative applications designers and developers	2	75%	< 45 seconds	2
Project Managers	1	50%	< 60 seconds	1
Hardware, software, Web site and intranet site designers	3	100%	< 30 seconds	3
Hardware, software, Web site and intranet site developers	3	100%	< 30 seconds	3
Hardware, software, Web site and intranet site testers	3	100%	< 30 seconds	3
Persons responsible for any electronic product design	2	75%	< 45 seconds	2
IBM fact finder contractors	3	100%	< 30 seconds	3
Census Bureau usability lab personnel	3	100%	< 30 seconds	3

Importance: The following scale for importance will be used for all user groups.

- 1 – not important.
- 2 – somewhat important
- 3 - extremely important

Task Performance: The following scale will be used for all user groups.

100% - no more than 1 error*

75% - no more than 2 errors

50% - no more than 3 errors

**Errors would be wrong links clicked on, getting lost, having to use the back button on the Web browser, etc.*

Time Performance: All users of this group must complete the task under this time.

User Satisfaction: The following scale will be used for all user groups.

1 – not satisfied

2 – somewhat satisfied

3 – extremely satisfied

Questions that can be asked to the user upon completion of the task:

(these apply to all user groups)

- What could be done to help you complete the task quicker?
- Were you satisfied with the task information you found?
- If not what would need to be done to make the information satisfactory to you?

The following is an analysis of how this task applies to the various Knowledge Base user groups.

User Group 1: Administrative applications designers and developers.

Importance: 2 – somewhat important. These applications designers and developers are primarily concerned with the development of PC-based applications. Since browsers having various sizes may access these applications on the Census Bureau's Intranet this task is somewhat important to this user group. The accessibility issue of this task is specific to the Web (Internet and Intranet) applications. Therefore it may be important in some situations, but in most cases browser size does not effect the applications being developed by this user group.

Task Performance: All members of this user group should be able to complete the task with at least a 75% performance level. A 75% performance level would mean that the user should have no more than 2 errors.

Time Performance: All members of this user group should be able to complete the task in less than 60 seconds. Since the information isn't present on the Knowledge Base site, and the information is actually contained on another Web site, it may take longer than normal for the user to locate the information. If the information was present on the Knowledge Base site (which it may be on the redesigned version), all users should be able to complete the task in less than 45 seconds.

User Satisfaction:

A) Completing the task: Since this task is somewhat important (2) to this user group, it

makes sense that users be somewhat satisfied (2) with the amount of effort it took to complete the task.

B) The content/information: Members of this user group should be at somewhat satisfied (2) with the information found while completing the task. The information isn't maintained by the Knowledge Base Web site. However, it is important for Knowledge Base to ensure that the information linked to is relevant and up to date.

User Group 2: Project Managers.

Importance: 2 –somewhat important. Project managers, whether managing a Web related project or not, will not be involved in the design and development of Web pages or the testing of utilizing different browser sizes. Ideally, they would have an understanding of the use of using different browser sizes on the Web. However, compared to the other user groups, this task is not as important to project managers.

Task Performance: All members of this user group should be able to complete the task with at least a 50% performance level. A 50% performance level would mean that the user should have no more than 3 errors.

Time Performance: All members of this user group should be able to complete the task in less than 90 seconds. The combination of the task not being very important to this user group, and the fact that the information is on another site, constitute the long acceptable time performance. If the information was present on the Knowledge Base site, all users should be able to complete the task in less than 60 seconds.

User Satisfaction:

A) Completing the task: Since this task is not important (1) to this user group, it's not that important that they are satisfied with the task. Therefore it is acceptable if members of this user group are not satisfied (1) with what it took to complete the task.

B) The content/information: Since this task is not important (1) to this user group, it's not that important that they are satisfied with the task. Therefore it is acceptable if members of this user group are not satisfied with the information they find upon completing the task.

User Group 3: Hardware, software, Web site and intranet site designers.

Importance: 3 – extremely important. Web and intranet designers need to understand the issues surrounding the use of different browser sizes on the Web. If applications are not designed so they can be seen equal in all browser sizes different users will see different information on the screen, which can also cause a variety of accessibility and usability problems for users. Although the designers will not be doing the coding, they need to recognize that it needs to be done. Designers and developers sometimes have a crossover of job functions and perform the duties of both positions.

Task Performance: All members of this user group should be able to complete the task with a 100% performance level. A 100% performance level would mean that the user should have no more than 1 error.

Time Performance: Finding the information from this task is extremely important to this user group, therefore all members of this user group should be able to complete the task in less than 45 seconds. If the information was present on the Knowledge Base site, all users should be able to complete the task in less than 30 seconds.

User Satisfaction:

A) Completing the task: Since this task extremely important (3) to this user group, it's important that they are extremely satisfied (3) with the effort it takes to complete the task.

B) The content/information: Due to the importance of the task, all users of this group should be extremely satisfied (3) with the information they find after completing this task.

User Group 4: Hardware, software, Web site and intranet site developers.

Importance: 3 – extremely important. Web and intranet developers need to understand the issues surrounding the different browser sizes on the Web. If not addressed it can cause a variety of accessibility and usability problems for users. The developers will be doing the coding to size the browsers.

Task Performance: All members of this user group should be able to complete the task with a 100% performance level. A 100% performance level would mean that the user should have no more than 1 error.

Time Performance: Finding the information from this task is extremely important to this user group, therefore all members of this user group should be able to complete the task in less than 45 seconds. If the information was present on the Knowledge Base site, all users should be able to complete the task in less than 30 seconds.

User Satisfaction:

A) Completing the task: Since this task extremely important (3) to this user group, it's important that they are extremely satisfied (3) with the effort it takes to complete the task.

B) The content/information: Due to the importance of the task, all users of this group should be extremely satisfied (3) with the information they find after completing this task.

User Group 5: Hardware, software, Web site and intranet site testers.

Importance: 3 – extremely important. Web and intranet testers need to understand the issues surrounding different browser sizes on the Web, and recognize what steps need to be taken to utilize this effectively. Testers must be able to find out if their applications fit all browser sizes so that they can test to make sure the sites they are testing can be completely viewed in any size browser.

Task Performance: All members of this user group should be able to complete the task with a 100% performance level. A 100% performance level would mean that the user should have no more than 1 error.

Time Performance: Finding the information from this task is extremely important to this user group, therefore all members of this user group should be able to complete the task in less than 45 seconds. If the information was present on the Knowledge Base site, all users should be able to complete the task in less than 30 seconds.

User Satisfaction:

A) Completing the task: Since this task extremely important (3) to this user group, it's important that they are extremely satisfied (3) with the effort it takes to complete the task.

B) The content/information: Due to the importance of the task, all users of this group should be extremely satisfied (3) with the information they find after completing this task.

User Group 6: Persons responsible for any electronic product design.

Importance: 2 – somewhat important. These people are responsible mainly for the development of CD-Rom based software. However, there is a possibility that they will at some point be developing Web based applications.

Task Performance: All members of this user group should be able to complete the task with at least a 75% performance level. A 75% performance level would mean that the user should have no more than 2 errors.

Time Performance: All members of this user group should be able to complete the task in less than 60 seconds. If the information was present on the Knowledge Base site, all users should be able to complete the task in less than 45 seconds.

User Satisfaction:

A) Completing the task: Since this task is somewhat important (2) to this user group, it makes sense that users be at least somewhat satisfied (2) with the amount of effort it took to complete the task.

B) The content/information: Members of this user group should be at least somewhat satisfied (2) with the information found while completing the task.

User Group 7: IBM fact finder contractors.

Importance: 3 – extremely important. This user group is responsible for the design and development of the American FactFinder Web site (<http://factfinder.census.gov/servlet/BasicFactsServlet>). Therefore, it is important for them to understand how to make Web sites using different browsers accessible.

Task Performance: All members of this user group should be able to complete the task with a 100% performance level. A 100% performance level would mean that the user should have no more than 1 error.

Time Performance: Finding the information from this task is extremely important to this user group, therefore all members of this user group should be able to complete the task in less than 45 seconds. If the information was present on the Knowledge Base site, all users should be able to complete the task in less than 30 seconds.

User Satisfaction:

A) Completing the task: Since this task extremely important (3) to this user group, it's important that they are extremely satisfied (3) with the effort it takes to complete the task.

B) The content/information: Due to the importance of the task, all users of this group should be extremely satisfied (3) with the information they find after completing this task.

User Group 8: Census Bureau usability lab personnel.

Importance: 3 – extremely important. The members of this user group are experts in usability and accessibility. They will be overseeing the development of the Knowledge Base, and are considered expert users of this intranet site.

Task Performance: All members of this user group should be able to complete the task with a 100% performance level. A 100% performance level would mean that the user should have no more than 1 error.

Time Performance: Finding the information from this task is extremely important to this user group. Members of this group are considered expert users, and therefore should be able to complete the task in less than 30 seconds. If the information was present on the Knowledge Base site, all users should be able to complete the task in less than 20 seconds.

User Satisfaction:

A) Completing the task: Since this task extremely important (3) to this user group, it's important that they are extremely satisfied (3) with the effort it takes to complete the task.

B) The content/information: Due to the importance of the task, all users of this group should be extremely satisfied (3) with the information they find after completing this task.

Task 3: Find the definition of a Style Guide. (Ezaz Ahmed)

Expected Results

Style Guides or Design Guides are reference materials developed to ensure a consistent look and feel across various related applications. Style guides typically included design principles, recommended colors and fonts, interaction behaviors, common labeling and text messages, etc. Guidelines can be developed at any level of an organization; department, functional area, division, or corporate. As such, applications are often influenced by multiple (but hopefully consistent) style guides.

All projects should have their own project-specific style guide that will assure consistent use of best practices.

Navigational Link

1. The user must click “Usability Methods” from the “Main” page;
2. Click “Style Guide” from the “Usability Methods”.

The following chart is a summary of the detailed information below:

User Group	Importance	Task Performance	Time Performance	User Satisfaction
Administrative applications designers and developers	2	75%	< 45 seconds	2
Project Managers	2	75%	< 60 seconds	2
Hardware, software, Web site and intranet site designers	3	100%	< 45 seconds	3
Hardware, software, Web site and intranet site developers	3	100%	< 45 seconds	3
Hardware, software, Web site and intranet site testers	3	100%	< 45 seconds	3
Persons responsible for any electronic product design	2	75%	< 45 seconds	2
IBM fact finder contractors	3	100%	< 45 seconds	3
Census Bureau usability lab personnel	2	75%	< 45 seconds	2

Importance

The following scale for importance will be used for all user groups.

- 1 – not important.
- 2 – somewhat important
- 3 - extremely important

Task Performance

The following scale will be used for all user groups.

100% - no more than 1 error*

75% - no more than 2 errors*

50% - no more than 3 errors*

**Errors would be wrong links clicked on, getting lost, having to use the back button on the Web browser, etc.*

Time Performance

All users of this group must complete the task under this time.

User Satisfaction

The following scale will be used for all user groups.

1 – not satisfied

2 – somewhat satisfied

3 – extremely satisfied

Questions that can be asked to the user upon completion of the task:

(these apply to all user groups)

- What could be done to help you complete the task quicker?
- Were you satisfied with the task information you found?
- If not what would need to be done to make the information satisfactory to you?

The following is an analysis of how this task applies to the various Knowledge Base user groups.

User Group 1: Administrative applications designers and developers

Importance: 2 - somewhat important. These applications designers and developers are primarily concerned with the development of PC-based applications, although some may be accessed on the Census Bureau's Intranet. The accessibility issue of their task is specific to the Web (Internet and Intranet). Therefore, it may be important in some situations, but in most cases frames do not effect the applications being developed by this user group.

Task Performance: All members of this user group should be able to complete the task with at least a 75% performance level would mean that the user should have no more than 2 errors.

Time Performance: All members of this user group should able to complete the task in less than 45 seconds.

User Satisfaction:

A) Completing the task: Since this task is somewhat important (2) to this user group, it

makes sense that users be at least somewhat satisfied (2) with the amount of effort it took to complete the task.

B) The content/information: Members of this user group should be at least somewhat satisfied (2) with the information found while completing the task. The information is not maintained by the Knowledge Based Web site, rather by the Style Guide or Design Guide. However, it is important for Knowledge Based to ensure that the information linked to it is relevant and up to date.

User Group 2: Project Managers

Importance: 2 – somewhat important. Project managers, whether managing Web related project or not, will not be involved in the design and development of Web pages using frames. Ideally, they should have an understanding of the use of frames on the Web. They should make sure that other groups follow the standard of Style Guide or Design Guide.

Task Performance: All members of this user group should be able to complete the task with at least a 75% performance level. A 75% performance level would mean that the user should have no more than 2 errors.

Time Performance: All members of this user group should be able to complete the task in less than 60 seconds. The combination of the task not being very important to this user group, and the fact that the information is on another site, constitute the long acceptable time performance. If the information was present on the Knowledge Based site, all users should be able to complete the task in less than 45 seconds.

User Satisfaction:

A) Completing the task: Since this task is somewhat important (2) to this user group, it makes sense that users be at least somewhat satisfied (2) with the amount of effort it took to complete the task.

B) The content/information: Members of this user group should be at least somewhat satisfied (2) with the information found while completing the task.

User Group 3: Hardware, software, Web site and intranet site designers

Importance: 3 – extremely important. Web and intranet designers need to understand the issues surrounding the use of designing principles, recommended colors and fonts, interaction behaviors, common labeling and text messages, etc. on the Web. These can cause a variety of accessibility and usability problems for users. So they need to know the Style or Design Guide in reference to design a Web site.

Task Performance: All members of this user group should be able to complete the task with a 100% performance level. A 100% performance level would mean that the user should have no more than 1 error.

Time Performance: Finding the information from this task is extremely important to this user group, therefore all members of this user group should be able to complete the task in less than 45 seconds.

User Satisfaction:

A) Completing the task: Since this task is extremely important (3) to this user group, it is important that they are extremely satisfied (3) with the effort it takes to complete the task.

B) The content/information: Due to the importance of the task, all users of this group should be extremely satisfied (3) with the information they find after completing this task.

User Group 4: Hardware, software, Web site and intranet site developers

Importance: 3 – extremely important. Web and intranet developers need to understand the issues surrounding the use of developing principles, recommended colors and fonts, interaction behaviors, common labeling and text messages, etc. on the Web. These can cause a variety of accessibility and usability problems for users. So they need to know the Style Guide in reference to develop a Web site.

Task Performance: All members of this user group should be able to complete the task with a 100% performance level. A 100% performance level would mean that the user should have no more than 1 error.

Time Performance: Finding the information from this task is extremely important to this user group, therefore all members of this user group should be able to complete the task in less than 45 seconds. .

User Satisfaction:

A) Completing the task: Since this task is extremely important (3) to this user group, it is important that they are extremely satisfied (3) with the effort it takes to complete the task.

B) The content/information: Due to the importance of the task, all users of this group should be extremely satisfied (3) with the information they find after completing this task.

User Group 5: Hardware, software, Web site and intranet site testers

Importance: 3 – extremely important. Web and intranet testers need to understand the issues surrounding the use of testing principles, recommended colors and fonts, interaction behaviors, common labeling and text messages, etc. on the Web. These can

cause a variety of accessibility and usability problems for users. So they need to know the Style Guide or Design Guide in reference to test a Web site.

Task Performance: All members of this user group should be able to complete the task with a 100% performance level. A 100% performance level would mean that the user should have no more than 1 error.

Time Performance: Finding the information from this task is extremely important to this user group, therefore all members of this user group should be able to complete the task in less than 45 seconds.

User Satisfaction:

A) Completing the task: Since this task is extremely important (3) to this user group, it is important that they are extremely satisfied (3) with the effort it takes to complete the task.

B) The content/information: Due to the importance of the task, all users of this group should be extremely satisfied (3) with the information they find after completing this task.

User Group 6: Persons responsible for any electronic product design

Importance: 2 – somewhat important. These people will be responsible for the designing of any electronic product. They may not be extremely involved in designing and developing the site like the designers, developers or testers, but there is a possibility that they will be responsible in designing of the Web based applications.

Task Performance: All members of this user group should be able to complete the task with at least a 75% performance level. A 75% performance level would mean that the user should have no more than 2 errors.

Time Performance: All members of this user group should be able to complete the task in less than 45 seconds.

User Satisfaction:

A) Completing the task: Since this task is somewhat important (2) to this user group, it makes sense that users be at least somewhat satisfied (2) with the amount of effort it took to complete the task.

B) The content/information: Members of this user group should be at least somewhat satisfied (2) with the information found while completing the task.

User Group 7: IBM fact finder contractors

Importance: 3 – extremely important. This user group is responsible for the design and development of the American FactFinder Web site (<http://factfinder.census.gov/servlet/BasicFactsServlet>). Therefore, it is important for them to understand how to make Web sites using recommended colors and fonts, interaction behaviors, common labeling and text messages, etc.

Task Performance: All members of this user group should be able to complete the task with a 100% performance level. A 100% performance level would mean that the user should have no more than 1 error.

Time Performance: Finding the information from this task is extremely important to this user group, therefore all members of this user group should be able to complete the task in less than 45 seconds.

User Satisfaction:

A) Completing the task: Since this task is extremely important (3) to this user group, it is important that they are extremely satisfied (3) with the effort it takes to complete the task.

B) The content/information: Due to the importance of the task, all users of this group should be extremely satisfied (3) with the information they find after completing this task.

User Group 8: Census Bureau usability lab personnel

Importance: 2 – somewhat important. Since the members of this user group will not be responsible for actual designing and developing the Web sites, they do not need to know the style or design guidelines like the designers or developers. But they may oversee the development of the Knowledge Based somewhat, and are considered somewhat expert users of this site.

Task Performance: All members of this user group should be able to complete the task with a 75% performance level. A 75% performance level would mean that the user should have no more than 2 errors.

Time Performance: Finding the information from this task is extremely important to this user group. Members of this group are considered somewhat expert users, and therefore should be able to complete the task in less than 45 seconds.

User Satisfaction:

A) Completing the task: Since this task is somewhat important (2) to this user group, it is important that they are somewhat satisfied (2) with the effort it takes to complete the task.

B) The content/information: Due to the importance of the task, all users of this group should be somewhat satisfied (2) with the information they find after completing this task.

Task 4: Find the list of the six IBM Web Design Guidelines. (Kisha Greenidge)

Expected Results

Possible route from the Home Page:

- Resources
 - Web/Interface Design Guidelines
 - IBM Web Design Guidelines

The six guidelines that are available are:

- Introduction
- Planning
- Design
- Production
- Maintenance
- e-Commerce Topics

The following chart is a summary of the detailed information below.

User Group	Importance	Task Performance	Time Performance	User Satisfaction
Administrative applications designers and developers	3	100 %	< 45 seconds	3
Project Managers	2	75 %	< 60 seconds	2
Hardware, software, Web site and intranet site designers	3	100 %	< 45 seconds	3
Hardware, software, Web site and intranet site developers	3	100 %	< 45 seconds	3
Hardware, software, Web site and intranet site testers	2	75 %	< 60 seconds	2
Persons responsible for any electronic product design	2	75 %	< 60 seconds	2
IBM fact finder contractors	3	100 %	< 45 seconds	3
Census Bureau usability lab personnel	3	100 %	< 45 seconds	3

Importance: The following scale for importance will be used for all user groups.

- 1 – not important.
- 2 – somewhat important
- 3 - extremely important

Task Performance: The following scale will be used for all user groups.

- 100% - no more than 1 error*
- 75% - no more than 2 errors

50% - no more than 3 errors

**Errors would be wrong links clicked on, getting lost, having to use the back button on the Web browser, etc.*

Time Performance: All users of this group must complete the task under this time.

User Satisfaction: The following scale will be used for all user groups.

1 – not satisfied

2 – somewhat satisfied

3 – extremely satisfied

Questions that can be asked to the user upon completion of the task:

(these apply to all user groups)

- What could be done to help you complete the task quicker?
- Were you satisfied with the task information you found?
- If not what would need to be done to make the information satisfactory to you?

The following is an analysis of how this task applies to the various Knowledge Base user groups.

User Group 1: Administrative applications designers and developers.

Importance: 3 – Extremely important. The applications designers and developers are primarily concerned with the development of PC-based applications. Therefore finding the IBM Web Design Guidelines would be very important to them during the design phase of their projects.

Task Performance: All members of this user group should be able to complete the task with a 100 % performance level. A 100 % performance level would mean that the user should have no more than 1 error.

Time Performance: All members of this user group should be able to complete the task in less than 45 seconds. From the Home Page, the IBM guidelines are found under the resources link and it should take about 2 clicks from the home page to find the information.

User Satisfaction:

A) Completing the task: This task is rates extremely important (3) to this user group, and it requires 2 clicks from the home page, therefore the users should be satisfied with completing this task.

B) The content/information: Members of this user group should be satisfied with the information found while completing the task. The information isn't maintained by the Knowledge Base Web site, the IBM site maintains it. However, it is important for Knowledge Base to ensure that the information linked to is relevant and up to date.

User Group 2: Project Managers.

Importance: 2 – Somewhat important. Project managers, especially those managing Web related or systems design projects, should be familiar with the Web Design/Interface Guidelines. This will help them to evaluate a site right away when working with websites or interfaces.

Task Performance: All members of this user group should be able to complete the task with at least a 75 % performance level. A 75 % performance level would mean that the user should have no more than 2 errors.

Time Performance: All members of this user group should be able to complete the task in less than 60 seconds. Since the information is useful to this user group, this is a reasonably accepted timeframe for the users to access the information.

User Satisfaction:

A) Completing the task: Since this task is somewhat important (2) to this user group, it is acceptable if members of this user group are somewhat satisfied with the effort that it took to complete the task.

B) The content/information: It is acceptable if members of this user group are somewhat satisfied with the information they find upon completing the task.

User Group 3: Hardware, software, Web site and intranet site designers.

Importance: 3 – Extremely important. Web and intranet designers need to very familiar with the design guidelines that are available. One of their main focuses should be to design user-centered interfaces or web sites and these guidelines can be very useful in helping this user group to achieve that task.

Task Performance: All members of this user group should be able to complete the task with a 100% performance level. A 100% performance level would mean that the user should have no more than 1 error.

Time Performance: Finding the information from this task is extremely important to this user group, therefore all members of this user group should be able to complete the task in less than 45 seconds.

User Satisfaction:

A) Completing the task: Since this task extremely important (3) to this user group, it's important that they are extremely satisfied (3) with the effort it takes to complete the task.

B) The content/information: Due to the importance of the task, all users of this group should be extremely satisfied (3) with the information they find after completing this

task.

User Group 4: Hardware, software, Web site and intranet site developers.

Importance: 3 – extremely important. Web and intranet designers need to very familiar with the design guidelines that are available.

Task Performance: All members of this user group should be able to complete the task with a 100% performance level. A 100% performance level would mean that the user should have no more than 1 error.

Time Performance: Finding the information from this task is extremely important to this user group, therefore all members of this user group should be able to complete the task in less than 45 seconds. If the information was present on the Knowledge Base site, all users should be able to complete the task in less than 30 seconds.

User Satisfaction:

A) Completing the task: Since this task extremely important (3) to this user group, it's important that they are extremely satisfied (3) with the effort it takes to complete the task.

B) The content/information: Due to the importance of the task, all users of this group should be extremely satisfied (3) with the information they find after completing this task

User Group 5: Hardware, software, Web site and intranet site testers.

Importance: 2 – Somewhat important. Web and intranet designers need to very familiar with the design guidelines that are available, and recognize what steps need to be taken to use them effectively. Testers must be able to find the available guidelines at their fingertips if they need to, so that when they perform tests, they can make sure the sites are following the guidelines.

Task Performance: All members of this user group should be able to complete the task with a 75 % performance level. A 75 % performance level would mean that the user should have no more than 2 errors.

Time Performance: Finding the information from this task is extremely important to this user group, therefore all members of this user group should be able to complete the task in less than 60 seconds.

User Satisfaction:

A) Completing the task: Since this task is somewhat important (2) to this user group, it is acceptable if members of this user group are somewhat satisfied with the effort that it took to complete the task.

B) The content/information: It is acceptable if members of this user group are somewhat satisfied with the information they find upon completing the task.

User Group 6: Persons responsible for any electronic product design.

Importance: 2 – Somewhat important. These people are responsible mainly for the development of CD-Rom based software. However, there is a possibility that they will at some point be developing Web based applications, and therefore the Web/ Interface design would be important to have access to.

Task Performance: All members of this user group should be able to complete the task with at least a 75% performance level. A 75% performance level would mean that the user should have no more than 2 errors.

Time Performance: All members of this user group should be able to complete the task in less than 60 seconds.

User Satisfaction:

A) Completing the task: Since this task is somewhat important (2) to this user group, it makes sense that users be at least somewhat satisfied (2) with the amount of effort it took to complete the task.

B) The content/information: Members of this user group should be at least somewhat satisfied (2) with the information found while completing the task.

User Group 7: IBM fact finder contractors.

Importance: 3 – extremely important. This user group is responsible for the design and development of the American FactFinder Web site (<http://factfinder.census.gov/servlet/BasicFactsServlet>). Therefore, it is important for them to have access to the IBM Web Design Guidelines.

Task Performance: All members of this user group should be able to complete the task with a 100% performance level. A 100% performance level would mean that the user should have no more than 1 error.

Time Performance: Finding the information from this task is extremely important to this user group, therefore all members of this user group should be able to complete the task in less than 45 seconds.

User Satisfaction:

A) Completing the task: Since this task extremely important (3) to this user group, it's important that they are extremely satisfied (3) with the effort it takes to complete the task.

B) The content/information: Due to the importance of the task, all users of this group should be extremely satisfied (3) with the information they find after completing this task.

User Group 8: Census Bureau usability lab personnel.

Importance: 3 – Extremely important. The members of this user group are experts in usability and accessibility. They will be overseeing the development of the Knowledge Base, and are considered expert users of this intranet site.

Task Performance: All members of this user group should be able to complete the task with a 100% performance level. A 100% performance level would mean that the user should have no more than 1 error.

Time Performance: Finding the information from this task is extremely important to this user group. Members of this group are considered expert users, and therefore should be able to complete the task in less than 45 seconds.

User Satisfaction:

A) Completing the task: Since this task is extremely important (3) to this user group, it's important that they are extremely satisfied (3) with the effort it takes to complete the task.

B) The content/information: Due to the importance of the task, all users of this group should be extremely satisfied (3) with the information they find after completing this task.

Summary

The Towson University project team has put together this set of usability goals to assist the Census Bureau in the development of their new and improved intranet Knowledge Base site. By testing members of the representative user groups with the tasks above, the designers and developers will be able to identify strengths and weaknesses of the sites architecture and usability. Both usability experts and novices will use the intranet site, and therefore the chosen tasks represent likely site goals of a wide variety of user groups. Each of these tasks should be tested against each of the established usability acceptance criteria.