

Usability Inspection:
Linksys.com
(<http://www.linksys.com>)

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Executive Summary

A usability inspection was conducted on linksys.com in order to discover its strengths and weaknesses. Throughout the course of the inspection problems were identified and recorded. After the inspection was complete the data retrieved from the test was then analyzed and categorized into high, medium, or low priority.

The following list details some of the high priority problems that should be fixed as soon as possible:

- **The local navigation is difficult to read.** The text that appears in the local navigation is too small for users to read and understand. Currently, the text in that area is an image. The solution to this problem would be to replace the image with html text or a higher resolution image.
- **Users become lost when navigating linksys.com.** In many instances users are forced to use the back button in order to return to a sub-local navigation page. The site's global and local navigation needs to be redesigned to show users where they are in the site.
- **'Educate Me' button in the global navigation does not effectively describe the information found in that section of the website.** The 'Educate me' section of the site informs users on how to network. However, users do not realize this when reading the label. Possible changes are 'How to Use,' 'How to Network,' or 'Networking Advice.'
- **Link names and page titles often do not match.** Currently, very few link names match their corresponding page titles. This can cause much confusion to users because when they are taken to a page with a different page title than the link they clicked.
- **Create consistent alignment.** Items on the Products page should have consistent alignment. Everything should either align to the left or center of the page. Using consistent alignment makes the page design look more professional.
- **Provide a 'Help' or 'FAQ' label.** Provide users with a help or FAQ button in the global navigation so that they can find the information they need.

These are most of the highest priority problems, however there are further problems within the site that are discussed later in the report. These changes should be implemented in order to increase and maintain clients.

Terminology & Conventions Used

There are many names that are used to describe just one tool on the web. In this analysis one term is consistently used for each different tool in order to promote consistency. The following terms are used:

Global navigation: These are the links found at the top of the every page that take users to the major page categories.

Local navigation: Local navigation links are found one step below the global navigation links. In order to view local navigation links, one of the global navigation links must be selected. Local navigation serves to provide organization to the specific sections of a web site.

Sub-local navigation: Because Linksys is so large, this type of navigation is sometimes present. The sub-local navigation is available when users click on a local navigation link and are then brought to a page with more options.

Page title: This describes the main heading of a page. It is often larger than the text around it and also should be the same name as the link clicked that brought users to that page.

Html link: These are links that do not have any special graphic design and are simple blue text links.

Single (‘ ’) quotes are used to surround link labels

Priority Levels

The problems found on Linksys are placed into three levels of priority:

High priority: Items in this category cause much confusion to almost all the users and these issues should be resolved as quickly as possible.

Medium priority: While this issues found in this area are not as much of a problem as high priority items, they still should be fixed in a timely fashion. Often these issues effect over half the users of Linksys's website, but the problems do not greatly hinder the average user's ability to navigate Linksys's site.

Low Priority: These problems do not affect many users, and are often easy to fix. However, if possible, the high and medium priority problems should be resolved before fixing the low priority issues.

Usability Guidelines

Efficient Navigation

Navigation refers to the range of ways users may move around a web site and the tools designers offer to help them. Good navigation needs to complement the information architecture and be very clear. It must be obvious where the users can go in the website, which means that links must be clearly distinguishable from content. The navigation scheme should be set up in such a way that users do not become lost or need to go back in a site.

Practices to Continue

- **Encourage easy navigation in ‘Products’ section.** The local navigation in the ‘Products’ section is helpful because users are able to move rapidly to the products they want.

Suggested Changes

High Priority:

- **Improve the readability of the local navigation links.** The text that appears in the local navigation is too small for users to read and understand. Currently, the text in that area is an image. The image needs to be replaced with html text, this would take up less space and be more readable. Another way to improve the issue, while still keeping the links an image, would be to create a graphic with larger text and more space between the letters. Applying either of these techniques would give users better readability and the local navigation would not look fuzzy.
- **Provide users with information on where they are in the site.** Currently, it is very difficult for users to tell where they are in the site. In many instances users are forced to use the back button in order to return to a sub-local navigation page. The site’s global and local navigation needs to be reorganized to show where users are in the site.
- **Add a link to ‘Home.’** In order to aid in efficient navigation a link that says ‘Home’ should be provided in the global navigation. Although the Linksys logo links to the homepage, not all users know to click on it.

- **Medium Priority:**
- **Add ‘previous’ and ‘next’ buttons to product pages.** Each product has detailed information that can be accessed by clicking on that product’s page. This makes navigation harder. Users might forget how to come back to the main page, or they may want to move on to the next product. Two features that users would find useful are ‘previous’ and ‘next’ buttons. These should be added to all ‘Product’ pages to make it easier for users to browse the many products that Linksys provides.
- **Implement a Cascading Style Sheet (CSS) in the global navigation.** Use CSS to provide users with rollover buttons. This will allow users to tell exactly which link they are about to click on, and which link they just clicked on.

Low Priority:

- **Make current link unclickable.** The link to the page that users currently are on is still clickable. This link should be somehow set apart from the other links by being unclickable and a different color.

Organizational Clarity

The simplest way to associate a number of elements is to group them together. What grouping does is make related items appear to go together. That way a user can understand a title and immediately associate that title with all the objects around it. By grouping similar items together and by giving that group a clear label users are able to better navigate a site. The quality of an organizational system is dependent on how well content is divided, as well as how easy it is for the user to see and understand the system being used.

Suggested Changes

Medium Priority:

- **Maintain a consistent local navigation.** The sub-local navigation changes when certain links are clicked on in the 'Technical Support' section. All the categories should be listed in the local navigation when users first go to the technical support page and should not change.

Low Priority:

- **Place the 'Rebate Status' link that is on the 'Support' page into the 'Support' local navigation.** The 'Rebate Status' link can be found on the 'Support' homepage, but not in the 'Support' local navigation. This may cause confusion to users because users are forced to go back to the 'Support' homepage if they want to get to the 'Rebate Status' section.

Clear Labeling

Clear labeling is necessary for a website to attract and re-attract users. When users visit a site they want to be able to read a label and then deduce what is in that section of the site based on the name of the label. Inaccurately worded labels cause users confusion and also waste their time. If users cannot find the information they need, due to poor labeling, they will usually leave a site and not return. Problems that pertain to other guidelines as well as labeling may be noted under that guideline and will not be found in this section

Suggested Changes

High Priority:

- **Rename ‘Educate me’ to represent a more significant label for users to understand.** Linksys needs to provide a label that users will identify with themselves, thus allowing them to find the information they are looking for. The ‘Educate me’ section of the site is basically informing users on how to network however, users do not realize this when reading the label. Possible changes are “How to Use”, “How to Network”, or “Networking Advice”.

Low Priority:

- **Rename ‘click here’ links on ‘Linksys Contacts’ page.** On the ‘Linksys Contacts’ page, found in the ‘Company’ Section, there are thirteen ‘click here’ links. This can be confusing for both regular users and users who are required to access the page using a text reader.
- **Rename ‘click here’ links on ‘Reviews & Awards’ page.** On the ‘Reviews & Awards’ page there are many links that are labeled ‘click here to read more.’ These links should be reworded to be more descriptive of the links content.
- **Re-label the ‘Step by Step’ button on the ‘How to Network’ page.** Although there is text above the ‘Step by Step’ link that says where the link will take users, the text is part of an image. Therefore, screen readers will not be able to read the text, making the ‘Step by Step’ link confusing.

Consistent Design

Consistency within web pages gives users the tools needed to transfer existing knowledge to new pages on a website, which allows them to grasp information more quickly. This happens because they do not have to spend time trying to remember the differences in every single page of the website. When a website provides a sense of similarity and consistency users are able to understand the interface more, which helps to prevent users from getting lost within a site.

Suggested Changes

High Priority:

- **Ensure that link names and page titles match.** Currently, very few link names match their corresponding page titles. This can cause much confusion to users because when they are taken to a page with a different page title than the link they clicked on users may wonder if they were taken to the right page. For example, when users click on the “Configurator” link in the systems page they are taken to a page that says “Network Builder.”
- **Implement cross-country consistent design.** Many of the international Linksys company pages do not have all the global navigation options. This could be a problem for many users because they may not be able to access an important page, such as the ‘Support’ page, in their language.

Medium Priority:

- **Explain to users when a new window will open.** At the bottom of the page there are three links, the link in the middle, “Privacy Statement”, takes users to an outside page. A new window appears when the link is clicked. The solution to this problem is to put a note under or above that says to users that by clicking on the link a new window will open.

Low Priority

- **Design links that look similar to each other.** The ‘GPL Code Center’ link, on ‘Support’ homepage does not look like the other links around it. Instead it has a picture of a penguin. The ‘GPL Code Center’ should be redesigned to look like the other links, otherwise users no see. Users also may glance over the link because it looks like an advertisement.

- **Add html links onto the 'International' page.** Most of Linksys's web pages have an html links at the bottom of the page, but the 'International' homepage does not. These links should be added to preserve consistent design.

Matching User Expectations

Users expect web pages to conform to certain standards. For example, users expect blue or underlined text to be linked. Also, many users expect a site's logo to be linked. It is a website's job to try to maintain the standards that users expect.

Suggested Changes

Medium Priority:

- **Change color of the links.** The links on the right side of the "Products" page and under the product images need to have blue font with an underline. This will conform to web standards and will give more assurance to the users when they are navigating the website.
- **Redesign 'Solutions' text on homepage.** On the homepage, under the large image there are two images that look nearly identical to one another. One icon says 'Solutions', while the other is labeled 'News'. These images are placed in very close proximity to each other and users are led to believe that they are related. However 'Solutions' is not a link, while the 'News' image is a link. This design confuses users, making them mouse over the 'Solutions' text thinking it is a link. The 'Solutions' text should be redesigned to look more like a heading.
- **Give users the option of non-Flash international page.** Currently the 'International' page, which can be found through the global navigation, is a Flash graphic. There is no option for users who do not have flash. This is a problem because many people in other countries, especially third world countries, may not have Flash or the computer power to run Flash. Linksys should provide an html option for non-Flash users.
- **Make all international links that lead to a non-English speaking country written in that country's main language.** Some of the international links lead to Linksys's English page, even though the country's primary spoken language is not English. Either the extra links should be removed or that portion of the site should be converted into that country's language.
- **Repair links in 'Press Release' section.** There are quite a few links in the 'Press Release' section that are supposed to go to Linksys's homepage, but many of these links go to a different page or are broken. Most of the press release entries in the 2003 section contain text that looks as if it should be linked but is not.

Low Priority:

- **Fix broken links on ‘Limited Warranty’ page.** On the Limited Warranty page there are many ‘Back to top’ links. However, none of these links work. These links need to either be fixed or removed.
- **Change the font color of the ‘Benefits’ anchor link.** The ‘Benefits’ anchor link (not the first ‘Benefits’ link, but the anchor found further down the page) on the ‘Job Opportunity’ page is blue with an underline, but it is not linked. The other blue anchor texts are linked. Users may mouse over ‘Benefits’ and discover it is not linked, then pass over the links further down the page.
- **Tell Users when a link leads to a PDF file.** There are a few links on Linksys that lead to PDF files. There should be a small note to the users that tell them what links are PDF files.

Effective Visual Design

Visual design describes the “mood” set by a website. The “mood” of a website is created by the colors, font, and logo used in that website. Visual design is also related to the information architecture of a site. Users should be able to understand the organization of a site when effective visual design is used.

Web pages have an implied course starting from the top-left corner to the bottom-right. An element placed at the beginning ‘top left’ visually dominates the whole page, because it comes first. An element that sits above or to the left of another element will appear superior. This fact makes it easy to convey to users the relationships between elements.

Suggested Changes

High Priority:

- **Create consistent alignment.** Items on the Products page should have consistent alignment. Everything should either align to the left or center of the page. If left alignment is chosen then content should align with the logo on the top left side of the page. Page titles and products should be aligned with the first letter of the logo if left alignment is implemented. Using consistent alignment makes the page design look more professional.

Medium Priority:

- **Reduce the amount of space between the page title and the first paragraph.** The ‘Product’ pages have excess space between the page title and the first paragraph. This space would be more effective if the beginning of the first paragraph was moved up, thus reducing the amount of scrolling.
- **Redesign the entire ‘Educate Me’ page.** The ‘Educate Me’ page, found by clicking on the ‘Wireless Network’ link on the ‘Educate Me’ homepage, is an image with rollover elements. This is a poor design because often users do not know what to roll their mouse over. Also, there is a rollover button on a cat in the image, but not the couch or chair. Linksys should change this design in favor of a more professional page.

Supporting Readability & Scannability

When browsing the web, users want to be able to find information quickly and efficiently. Thus, web sites should try to promote readability and scannability. They can do this by using headings and then streamlining the content. The headings quickly tell users what the content is about. The content is streamlined by creating small paragraphs and bulleted lists.

Practices to Continue

- **Keep homepage uncluttered.** Linksys does a good job at giving only the most relevant information on their homepage. The most important information is highlighted and there are no long paragraphs.

Suggested Changes

High Priority:

- **Blocks of content are too dense for users to scan.** The content in the “Wireless” section is too wordy, the paragraphs are too long. Users do not feel comfortable checking or reading this page of the website. Because reading on a computer screen is not as comfortable as reading print work, Linksys should break its larger paragraphs into smaller chunks and create bulleted lists.

Low Priority:

- **Streamline the ‘Company’ homepage.** The ‘Company’ page has a very large block of text that tells about the Linksys. This information should be streamlined in order for users to access the information quicker.

Facilitating User Tasks

Most users come to the website in order to complete a certain task. The website should try to make this task as easy as possible for the users to comprehend and use. The goal of the website should be to reduce the time and energy it takes to complete a given task.

Suggested Changes

Medium Priority:

- **The “Link Chat” button does not work in many browsers.** Because Link Chat, which provides live help, only works on IE 5+ and Netscape 4+ for Windows and Netscape 4+ for Macs, many users are left “out of the loop.” Linksys should consider adding functionality to Mozilla, Opera, and Mac IE users.
- **Allow ‘Product Registration’ form to accept dates lower than 2000.** The product registration form, found in the ‘Support’ section, does not accept product purchase dates from 1988 – 1999 (1988 is when Linksys was founded.) This needs to be fixed so that customers can register their products.

Low Priority:

- **Separate ‘Submit’ and ‘Reset’ buttons.** In the ‘Job Opportunities’ form the ‘Submit’ and ‘Reset’ buttons are right next to each other. Users may become frustrated if they accidentally push the ‘Reset’ button instead of the ‘Submit’ button. The simple solution to this problem is to put some space between the two buttons.

Providing Help

Nearly every website needs a help section. This section should be one of the easiest things to find in the site and should be carefully worded to provide users with the information they need. Care should be taken to distinguish technical help from content-based questions. Often sites will change “help” to “FAQ’s” because users have a less negative reaction.

Suggested Changes

High Priority:

- **Provide a ‘Help’ or ‘FAQ’ button.** Provide users with a help or FAQ button in the global navigation. No matter how easy the website is to navigate, users always need the help. Since Linksys personnel will not be with the users while they are navigating the site, the best solution is to provide one of these buttons so the user will find the help for their problems. Although there is technical support in the ‘Support’ section, there is no area for content-based questions. This section needs to be created because of the website’s size.
- **Section specific help needs to be properly labeled.** Help designed for a specific section of the site needs to be labeled so that users know it is a help section, and also, which section the help covers. There are multiple “Help” sections within the site, but they are not specified as being specific to that section. Instead users are left to guess what the help pertains to.

Additional Usability Issues by Page & Section

Usability issues that are specific to a page or section are listed here. There may be some similarities between the various page issues. Also, some issues may be noted here that do not belong to a specific usability guideline.

Products

(<http://www.linksys.com/products/>)

High Priority:

- **Place the product guide away from the ‘Wireless’ products.** On the ‘Product’ homepage there are three rows and each row contains its own type of products. The first row contains ‘Wireless’ products as well as the product guide, which is for all the products. Users may believe the product guide is only for wireless products. However, the product guide is meant to give information about all the products.

There are three solutions to this problem. First a two-column layout could be created with all the products on the left hand side of the page, and the product guide on the right. Second, all products could align to the left of the page, but still be in the rows that they currently are organized in. The product guide could be placed in the first row. The third option is to leave the products centered on the page, like they are now, but move the product guide to the top of the page.

Medium Priority:

- **Remove unnecessary rollovers** The product links are all rollover buttons. The top of each link has a white space that, when rolled over, turns a different color. These rollovers are not necessary and only add download time to the page.

Low Priority:

- **Properly align product rollovers.** The product links are squares with rounded edges. Within these squares are two sections. The upper section changes color when moused over, while the lower section contains an image of the products. These two sections are supposed to be aligned so they look like one continuous image. However, the two sections are slightly de-aligned. The top section is a little farther to the right of the page than the image below it. This is not a very noticeable problem, but it should be fixed

All level 2 'Product' pages.

<http://www.linksys.com/products/group.asp?grid=33&scid=35>)

<http://www.linksys.com/products/group.asp?grid=34&scid=29>)

<http://www.linksys.com/products/group.asp?grid=35&scid=39>)

<http://www.linksys.com/products/group.asp?grid=36&scid=44>)

High Priority:

- **Improve the readability of the local navigation links.** The text that appears in the local navigation is too small for users to read and understand. Currently, the text in that area is an image. The image needs to be replaced with html text, this would take up less space and be more readable. Another way to improve the issue, while still keeping the links an image, would be to create a graphic with larger text and more space between the letters. Applying either of these techniques would give users better readability and the local navigation would not look fuzzy.
- **Add a link to 'Home.'** In order to aid in efficient navigation a link that says "Home" should be provided in the global navigation. Although the Linksys logo links to the homepage, not all users know to click on it.
- **Create consistent alignment.** Items should have consistent alignment. Everything should either align to the left or center of the page. If left alignment is chosen then content should align with the logo on the top left side of the page. Page titles and products should be aligned with the first letter of the logo if left alignment is implemented. Using consistent alignment makes the page design look more professional.
- **Reduce the amount of white space in this page.** Under the images on this page are large amounts of white space. White space can be helpful when users are scanning a page, but too much white space can add unnecessary scrolling.

Medium Priority:

- **Add 'previous' and 'next' buttons to product pages.** Each product has detailed information that can be accessed by clicking on that product's page. This makes navigation harder. Users might forget how to come back to the main page, or they may want to move on to the next product. Two features that users would find useful are 'previous' and 'next' buttons. These should be added to all 'Product' pages to make it easier for users to browse the many products that Linksys provides.

- **Blocks of content are too dense for users to scan.** The content in the “Wireless”

section is too wordy, the paragraphs are too long. Users do not feel comfortable checking or reading this page of the website. Because reading on a computer screen is not as comfortable as reading print work, Linksys should break its larger paragraphs into smaller chunks and create bulleted lists.

Educate Me

[\(http://www.linksys.com/edu/\)](http://www.linksys.com/edu/)

Medium Priority:

- Remove large images. There is a very large image covering most of this page. This adds to the page download time. This image does not serve to convey any important information and should be removed.

Wireframe

Linksys
Index page

(http://www.linksys.com/default.asp)

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