

# Heuristic Evaluation of <http://slashdot.org> by James Glettler

## Introduction

Slashdot is both an excellent community and news blog site. It is focused on providing a community place for technology enthusiasts. The site was started by a few people who wanted to build a place to share news about technology and offer forums for people to interact. The domain name was originally meant as a joke to make saying it difficult. Just try to read the URL <http://slashdot.org> out loud. However, since its creation, Slashdot has grown large enough to receive over 50 million page hits per month. It is now owned by the Open Source Developers Network, or OSDN, the same group that owns thinkgeek.com.

## Forward

The slashdot.org website serves thousands of users needs for information and community. However, there are some issues with the site that could be improved. It was my assignment to evaluate Slashdot to find its good and bad points. I was also requested to make recommendations for any possible improvements. This report is a summary of my findings and conclusions. It also gives some general recommendations for improvement.

## Objective

### *Background*

Slashdot was created by Rob Malda and Jeff Bates in September 1997. As it grew in size and readership, it was purchased by the Open Source Developers Network (OSDN) which runs a number of community-centered websites relating to information technology. Of all traffic to OSDN, one third of it is goes to Slashdot. OSDN is a subsidiary of the VA Software Corporation, a maker of development tools and metrics systems.

All of this community focus centers on supporting mainly those interested and involved in the information technology field. However, because of Slashdot's community nature it boundaries are soft. Although the title of the site is "News for Nerds, Stuff that Matters", there is some breadth to the site. As the creator of the site explains, the site is different things for different people, so sometimes, stories, news or forums will be run that are slightly off topic, as long as it is interesting. In other words, the users of the site direct where it goes.

### *Method*

In order to evaluate this website, I used a standard heuristic evaluation method. Unlike usability testing, a heuristic evaluation involves using a set of rules to individually find problems in a number of different categories. As long as the rules are comprehensive enough, this method is usually the best way to find major problems with a website, especially related to its overall architecture.

The heuristic guidelines I used are a variation of those provided by Kara Heinrichs. Kara is a lecturer in technical communication at the University of Michigan and a specialist in web-design and software

engineering. Other heuristics were taken from those of Jakob Nielsen, another respected member of the web-design and evaluation community.

### *Heuristics*

- Goals driven site design
- User centered design
- Facilitate user tasks
- Facilitate information finding
- Be clear with affordances
- Optimize reading
- Ensure Operation and Accessibility
- Provide Help

### **Discussion**

#### *Goals Driven Site Design*

Slashdot provides for a community of developers, technologies and enthusiasts. Slashdot serves the community by providing IT news web logging (blog) and community moderated forums attached to each blog entry. Blog entries are submitted by the community and selected for posting by the administrators of the site. The original creators are still the decision makers for the site, despite its purchase by OSDN. The site is designed to have direct access to the main blog entries on the opening page. It also provides for a number of alternate ways to locate categorized entries, related entries, and search functions. Further individual customizations are available for users who register with the site.

The other main service Slashdot provides is user moderated forums. These forums are attached to each blog entry and use a multi-threaded message style. This means that a person can reply to the forum or reply to a specific message, creating a sub-forum attached to a message within a larger forum. This process can continue creating a hierarchical tree of messages that users can view and interact with in multiple ways.

Anyone can post to the forums, even anonymously, and no messages are ever deleted or censored. However, by using a community moderation model based on registered users, Slashdot ensures that the high quality of the forums and limits the effects of abusive users. Registered users that actively use the site are at random given five moderation points. Moderation enabled users can use one point to raise or lower the score of a forum message by one point on a scale of -1 to 5. They maintain moderation status until all five points are used up or three days have elapsed. With the millions of users on the site, this ensures that no one person can artificially abuse the moderation system or control the flow of the forums. Furthermore, a moderation system is used at random on the moderators, called meta-moderation as a quality assurance check. All users of the site can then choose to view only forum messages with certain scores, eliminating much of the worthless material posted.

One issue with the site design is that it is complex. There is a lot of functionality put into a relatively small space making the interface rather busy. For regular repeat users this is of little consequence because these users are willing to learn, but new users could be a little daunted by all the options.

The last goal that drives Slashdot is maintaining existence. This means that Slashdot must have some way of financially supporting itself. It has done this through the use of small banner advertisements and

subscriptions for ad-free service. Because of the market penetration of Slashdot and the other OSDN member sites, Slashdot is able to effectively focus on its content, while use automated services to sign up for and pay for ads. As long as Slashdot maintains its high popularity, ad based revenue will be sufficient. OSDN states that the average executive purchasing power of its site users is \$2.4M per person.

The new blog functions of Slashdot are effective at reaching the intended audience. The moderated forums work well as designed and meet the goal of providing useful forums for the community. The community is built on repeat regular users and serves them well in both aspects of the site goals. However, there are some issues to be dealt with to make Slashdot easier to experience for new users.

### *User Centered Design*

From the first view of the Slashdot website, it is apparent that the site serves a niche due to its extensive use of jargon and acronyms. Although this can have a negative effect on clarity for new users, it helps to focus the site on the community. The jargon and terminology used is common to the IT professionals and technology enthusiasts. Acronym use, if not in common use, is not terribly difficult and easily picked up by repeat users.

At the same time, the complex options available coupled with the language issues can restrict the functionality of the site to the front page for new users. It is similar to a person trying to buy a paper from a newspaper vending machine, but not knowing how it works or how to read the instructions.

### *Facilitate user tasks*

The news blog has three main modes of use, both supported by Slashdot. One is to view the most recent entries as posted on the main page. This seems to be the main mode and is directly supported by both Slashdot homepage and various navigation links throughout the site. Blog entries can also be viewed by category, where related issues are grouped together. This is supported from the main page through direct links to the categories, and also with the use of context specific icons. Repeat users can easily identify these icons to get to the content they want. The last mode of use is searching the archive of blog entries, back to the creation of Slashdot. Like most advanced search engines, the Slashdot search function offers a number of categories and options for searching. The blog functions fulfill the users tasks relating to finding news items of interest through the use of textual blog entries and external links.

As explained in the site goals area above, the forums provide a place for community building, as well as a place to gain more information or share opinions and views. The moderation system and filtering functions allow users to view only forum messages that have significant or interesting content, increasing the chance that a user will be satisfied with their forum experience.

All of these features depend on the users knowing of their existence and understanding their use. This is where Slashdot begins to run into some issues, especially for new users. The only real access to help is through the Frequently Asked Questions (FAQ) link in the top left of the page. However, most users, even new users looking for help, may skip over the FAQ, or find it too complex. Slashdot does not provide much in the way of in-line help or hints for the additional features.

New users on Slashdot may then be required to spend some time learning the interface. This does not facilitate any user tasks. On the other hand, repeat users who have been using Slashdot on a regular basis have determined what method they use to get to the information they want. Therefore, most repeat users have locked themselves into a pattern, so they have made the site perform the tasks they wish.

### *Facilitate finding information*

Often, the success of a website is directly related to functionality of its navigation scheme. Slashdot has implemented a very consistent and comprehensive navigation system. However, it is the comprehensiveness that causes some problems especially for new users.

At the top of the page is a navigation bar that links to the OSDN and other related topics. It also includes a search box in the upper right. Having the search function at the top is very helpful. This top navigation bar is set on a lighter background and so is easily ignored when looking for content on the main page. Registered users who do not need this bar can turn it off.

The left side of the window contains two navigation areas. These navigation areas are persistent in all sections of the Slashdot. Keeping this navigation available at all times helps users to have multiple avenues of information finding without having to back out of their current task.

The first navigation area directly underneath the Slashdot logo contains a list of text links. Some of them are understandable immediately, like "faq," "preferences," "submit story," "advertising," "about," and "bugs". However, some of the links are more cryptic like "code," "topics," and "hof". Regular users of Slashdot who have taken the time to click through these links will be able to recall what they mean, but new users may be confused. If someone is looking for programming news stories they may click on code because it is at the top of the list, but it will take them to the code that runs Slashdot, not to programming news. If users do not understand the news categorization layout that Slashdot uses, they may not understand that the "topics" link will take them to a list of the categories and the associated navigation icon used throughout the site.

To cause further confusion, this navigation section does not appear to be organized in any specific fashion by topic or relationship. Quite oddly, it is organized by order of length of the text so as to increase in length and then decrease in length. It is good that the FAQ is first, but it should be associated with the About section, not separated by a visual blockade. Although this navigation section is persistent across the webpage, it is very difficult to decipher.

The next navigation system immediately below offers links to individual topic sections or categories of news entries. Each link is followed by date of the most recent blog entry in that category and a number saying "(XX recent)" if there are recently posted items. Clicking one of these links brings up a new page similar to the main page but filtered to only include stories of that specific category.

This section is also persistent across the webpage and allows users access to their specific interests. Like the first main navigation block, the titles of these sections can be confusing for new users. This is unfortunate because the sections usually contain some blog entries that are left off of the main page.

To the right of the main Slashdot logo are five icons or pictures. These icons change from time to time and are at first somewhat confusing. However, the icons represent the categories of the most recent five stories, starting with the left as being most recent. These icons are beside every blog entry, so after some time, users will come to recall the meaning of each icon. Alternately, users can click the "topics" link in the first navigation section to find a listing of each icon and its category. On the main page, clicking on one of these icons, either in the top left navigation section or beside a blog entry will send the user to an archive page with entries filtered for that specific category. This is a good alternate path for finding

information that is related to topics of interest for the users. For the most part, these icons are successful, however it would help if new users could find their meanings more easily.

On the right side of the Slashdot page are a series of boxes called "Slashboxes." These Slashboxes serve a variety of navigation and information tasks and so vary throughout the site and change over time. However, the Slashboxes always show up in the same place on all blog entry pages including the main page and the section pages. Slashboxes provide links to most recent entries to a specific topic, related information, the previous days headlines, user polls, links to book reviews, quick external links, and a headlines of a number of other Slashdot related websites. One Slashbox is also used to provide a user login for registered users. Registered users get the added benefit of being able to customize their Slashboxes, to only see certain ones, to have custom content, or even to turn them off altogether. Overall, Slashboxes provide a good way to offer a common and recognizable navigation alternative without distracting users.

At the bottom of the page is one the last navigation section. This area includes a search box, and many general links to about information, OSDN again, advertisements, and privacy policy. This area is persistent across all pages and easy to find if needed but out of the way for most users. Unlike the other navigation areas, this is completely understandable even for new users.

### *Be Clear with Affordances*

Slashdot does well with actions. Clicking on a link always brings up a new page in the same window. Although some of the navigation system is confusing, the results of actions can always be seen easily when the subsequent page loads. For the most part, the changes are textual, but for certain sections, the color scheme is changed. This way, when users are in specific sections, they have a visual cue that they are not seeing all the main content.

Because of the navigation issues for new users, beyond understanding basic clicking action, new users won't have any prior knowledge of how to navigate Slashdot unless they have been to a similar site. Users new to Slashdot but not its style will most likely be in main audience of IT professionals looking for specific information so they would be willing and able to understand some of the tricks of Slashdot navigation.

Once past the confusion new users are presented with in the navigation system, the overall textual content and separate sections of Slashdot makes the pages rather busy. The blocking and different text sizes help to read past some of the sections, especially for repeat users. Slashdot makes use of different font sizes and colors between their navigation and main blog entries. However, new users could feel very overwhelmed by the sheer number of links immediately presented to them on the front page.

Of all the areas where Slashdot's clarity is obscured is the use of links within the blog entries. Each blog entry has a title, an author, a date, some explanative text, and a link to "Read More." There are usually a number of links related to the content of the text that are contained inline with the text. For instance, an entry about a specific article on a news webpage may have links to that article, the news webpage's homepage, and possibly to a related article.

Because the links are inline with the text, the destination of each link is often obscured. This requires the user to guess which link is the main one of interest, click them all, or make use of the browser's status bar and choose which link is relevant. In the last option, the user has to put the mouse over each link and read the destination URL and choose which one is the article and not the main page or some other material.

At the very bottom of each blog entry is a link to "Read More." This link takes the user to a page that contains only that specific blog entry in full text (in case it was not displayed in full on the main page) and the related forum below. A new user could easily mistake this link as the link to the main article.

Overall, the Slashdot website is quite consistent with layout, content, and style. This makes the site very easy to understand for repeat users, and new users willing to spend some time to learn the interface. The operation of Slashdot has not changed much in the past few years, thereby really engraining their loyal users in constant patterns of use. This doesn't seem to be a bad thing, just difficult to change without annoying some regular users.

### *Optimize Reading*

The Slashdot main page, although busy, is optimized for quick absorption of news entries by its readers. Once a user has blocked out the navigational sections and focuses on the central news section, they are able to quickly scan down a page looking at the headlines and first few sentences. Furthermore, the text of each blog entry is relatively short, so even reading it in full doesn't take much time or strain. Users wishing for more information can click on the links provided to be taken to external sites with the relevant material.

Users interested in certain material may choose to view and even participate in the online forums. To optimize use of the forums, multiple methods of viewing the forum are in place. Users can choose to view the forum in a flat format, a nested format, or a threaded format. Flat format just lists each posted message by date and time of submission. Nested uses nested tables where replies to individual posts are shifted over so the forum tree format can be seen all at once and the organization between messages are visible. The last format, threaded, allows users to view one thread at a time. This preserves the hierarchy of the messages but users only see one level of it at a time. Viewing in threaded format cuts down on the amount of content on the screen, but increases the number of clicks needed to follow a thread. Users can order any of the views by date of posting (forward or reverse) or by moderation score.

The other method of optimizing forums by filtering the forum by moderation score. This gives users the power to filter out messages that are of little use or off topic as moderated by other users interested in the same thread. Since messages are never deleted, users can also choose to see all the messages, even those with scores of -1. By allowing users this power, they are better able to utilize the forums to read information they want rather than trying to filter junk messages by hand.

### *Ensure Operation and Accessibility*

Besides operating on an information level, a website must operate on a technical level. Websites that are often down or offline reflect negatively on their credibility and can drive users away. Slashdot itself operates quite reliably on a number of web servers in more than one place in the country. The programs used to support the website are open source and available freely to everyone. They run a Debian distribution of Linux along with a variant of their own called Slashcode. This is linked to in the first navigation section under "code." It lets other people run their own website using Slashcode, or make improvements or recommendations that increase the functionality and reliability of Slashdot. Because of the massive IT user base of Slashdot and the open source code, they help to ensure continued reliability.

The website uses standard HTML 4.01 transitional, with tables for layouts. There are a number of non-standard tags used to make up for differences between browsers, but between Internet Explorer and

Mozilla, I didn't detect any operating errors. The site uses only standard image formats and HTML, so there are no need for browser plug-ins or any other alternate software. Because the site is mostly text, it loads quickly and without problems.

The accessibility issue with Slashdot relates to something called the Slashdot Effect. Slashdot provides as part of its blog, links to external websites. When the millions of users of Slashdot all click these links, it creates a significant load on the external web servers. This causes a lot of smaller or unprepared websites the either be taken offline, or to just fail to respond due to the shear volume of web requests. In this case, although there is no problem with Slashdot, their blog functions can cause other websites to become unavailable and therefore make the utility of Slashdot decrease somewhat.

### *Provide Help*

Slashdot has a lot of functionality but it is limited to repeat users due to complexity. Slashdot does offer a frequently asked questions (FAQ) list as the first link in the main navigation section. However, this list is long and not actually helpful for learning to use the site. Navigational and topical jargon use is not explained anywhere on the site in the FAQ section. Slashdot relies on users understanding functionality and language issues mostly by context. For new users, this creates a significant learning curve detrimental to expanding the community.

### **Recommendations**

Overall, Slashdot is an excellent website with great features, good content and an established user base. However, there are some issues discovered in heuristic evaluation that could be improved, mostly dealing with making the site easier for new users. Implementation of the recommendations would rectify the problems identified in evaluation.

### *Facilitate finding information*

The top left navigation block needs to be reorganized in order to better explain the meaning of each link and give the options a definite meaning that users can recognize instead of have to think. This will involve making the link titles more explicit and less confusing.

Some method of hints must be added to Slashdot in order to explain the meaning of individual sections/categories. For instance, the icons used to represent each section should have a caption or tool-tip (through implementation of the "title" attribute).

### *Be Clear with Affordances*

Use more visual blocking or remove some material from the main page in order to decrease the clutter of the main pages. Use of forums is not quite as affected by this problem. Decreasing clutter will increase readability.

Clearly explain the destination of in-line links, possibly by providing links separately below each blog entry, or augmenting the in-line tags with better contextual information or tool-tip explanations.

Replace the "Read More" link below each blog entry with some more descriptive text such as "Read Full Entry" or "Read Forum" or "Expand This Topic". "Read More" is just too obscure, especially for new users.

### *Provide Help*

This is where the most work on Slashdot is needed. Provide some form of in-line or in-context help functions or hints as to what options are available to users.

Create a definite help section that is available from persistent navigation on every page. Such a section would be unlike the frequently asked questions section and titled something like "Using Slashdot" or "How to Use This Site." Such a section would greatly increase the usability of Slashdot for new users as long as it was easily locatable from all pages.