Implementation of Content Management System and

Website Redesign for JonFinn.com

by

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ABSTRACT

The Jon Finn Group, a four-piece instrumental rock band based in Boston, MA, was in need of a website redesign, http://JonFinn.com. They required a website to showcase and sell their music and merchandise, promote upcoming performances, interact directly with their fans, integrate with social networking websites, and administer paid membership subscriptions via a content management system. Making this possible required an overhaul of the website, which was based almost entirely on static HTML files with limited capabilities for dynamic content updates. The band also requested a complete visual design overhaul compatible with traditional desktop computer web browsers, cell phone-based web browsers, and modern touch-based web browsing interfaces.

WordPress, a free open-source content management system, was chosen to implement technologies to meet the Jon Finn Group's needs. Using WordPress required the development of a custom visual theme supported by various free and commercial plugins. WordPress and the supporting plugins required customization to extend functionality for becoming a revenue-generating platform through which paid membership subscriptions could be supported and administered. A survey instrument questioning end users on usability was used to measure the success of the website redesign and WordPress implementation.

To evaluate the success of the redesign, analysis was performed on empirical data collected from web analytics and responses from the usability survey instrument as well as subjective data including stakeholder feedback and comments provided by the usability survey instrument respondents. Following the completion of the site

redesign, it became clear that the site better engaged users than the previous site iteration and met end-users' usability expectations. Web analytics data indicated that users began spending more time on JonFinn.com and viewing more content than they had on the former website design. Usability survey data indicated that 95% of all tested functionality was found to be either "not difficult at all" or only "slightly difficult." Some comments and response data clearly indicated areas for improvement in the design and usability of the site.

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CHAPTER 1

Introduction

Jon Finn has been a guitar professor at the Berklee College of Music in
Boston, MA since 1998 ("Faculty Biography"). He performed regularly with the
Boston Pops, was a widely published author for Mel Bay Publications, and was
endorsed by many renowned musical gear manufacturers ("Jon Finn – Mel Bay
Profile", "Laney Amplification", "Artists"). His band, the Jon Finn Group [JFG],
consisted of three other members, all of whom were also teachers at Berklee (Finn,
JonFinn.com). The JFG self-published and released a new album entitled *Bull in a China
Shop* [BIACS] in 2010. Jon planned to sell and market this album primarily through
the JFG website, JonFinn.com, with a further desire to monetize new premium site
content. To do so, he required the capability to manage and manipulate site content,
media, users, and user permissions. Unfortunately, JonFinn.com was not
technologically suited to meet any of his new requirements when it was last
redesigned in 2006. The site offered no end-user interaction, had not changed
visually since its implementation, did not integrate with his Google-hosted
performance calendar, and had an online store that was not incorporated into the
look-and-feel of the rest of the site. It became clear that JonFinn.com would require
a complete overhaul to support promoting BIACS and the other new features.

Statement of the Problem

The 2006 JonFinn.com was not capable of meeting design and functionality
requirements Jon sought. Managing and manipulating site content, media, users, and
user permissions would require sophisticated software to run the site. A completely

new redesign of JonFinn.com was required and yielded the following research objectives:

1. Complete a visual and architectural overhaul of JonFinn.com to incorporate historical and upcoming content and technological needs, including integration with the online store and social networking services

2. Identify and implement a modern content management system [CMS] that allowed administration of content and media (images, audio, video, documents, etc.)

3. Create a development site on which new ideas and functionality could be tested before applying them to a customer-facing production site

4. Identify and implement a mechanism allowing for end-user interaction that integrates with the CMS

5. Identify and implement a mechanism allowing for user and user subscription administration that integrates with the CMS

The 2006 site was developed using XHTML, CSS2, PHP4, and MySQL without the aid of any third-party software for site administration. All of the site's functionality and content resided in raw source code files. This meant that even minor content or presentation updates required editing the source code files with a text editor or integrated development environment. The site had some custom back-end content publishing tools that allowed for dynamic updates to the performance schedule and the news pages, but neither of the tools were built with sufficient error tolerance and had no authentication mechanisms to prevent unauthorized updating

of the site. Furthermore, the Internet had evolved significantly with advances in social media and networking tools, video and audio delivery technologies, and e-commerce capabilities that Jon desired to incorporate into his 2010 website. The proliferations in technological capabilities on the Internet created new business needs and functional requirements for the 2010 site redesign and the 2006 site was not forward-thinking enough to easily incorporate them.

While site code is generally transparent to the end-user, it is essential to a web browser and the functionality it can provide to an end-user. Without a content management system on a website, site code can also be essential to a content author on a website as it can require a content author to manipulate source code to change a site. The technicality of the markup and lack of a content management system on the 2006 JonFinn.com site prevented Jon from being able to make updates without significant risk. Although the site abstracted the content and presentation elements using HyperText Markup Language [HTML] and Cascading Style Sheets [CSS], as was becoming a common practice at the time, the site was using the Extensible HyperText Markup Language [XHTML] 1.1 World Wide Web Consortium [W3C] recommendation for its markup language, which did not integrate easily with third-party services (Henick, Keith). XHTML 1.1 "is a family of […] document types and modules that reproduce, subset, and extend HTML4" that was fairly esoteric and complicated ("XHTML 1.0…"). While a promising markup technology at the time of its publication in 2000, it proved to be overly ambitious and the excitement amongst web developers that was once behind XHTML in 2006 migrated in 2010 behind the W3C's burgeoning HTML5 standard ("Reinventing HTML", "Tim Berners-Lee…"). HTML5 was an in-progress draft of a recommendation in 2010 and was not fully

implemented by all the popular modern web browsers that year ("Implementations in Web Browsers").

For the visual presentation of content within the 2006 site design, the W3C Cascading Style Sheets Level 2 [CSS2] recommendation was utilized. CSS2 was still a viable recommendation widely in use in 2010, but there were many new features built into CSS level 3 [CSS3], a specification in development parallel to HTML5, that were to be incorporated into the 2010 redesign to simplify presentational elements of the site. The 2006 site used complex markup with CSS2 to make certain features possible, such as rounded corners on the content blocks. Such complex markup made minor site modifications even more complicated. CSS3 simplified many visual design elements without the need for cross-browser support code. For example, creating rounded corners around a block of content using CSS2 required sophisticated code techniques and graphic files for each rounded corner, but CSS3 required no special graphics and only one line of code. Implementing the 2010 features in the 2006 site design would be further complicated by limitations of the CSS2/XHTML pairing.

Using HTML5 with CSS2 and 3 for a new site design provided a modern framework for implementing a cutting-edge content management system. Various new and updated CMSs had been released between 2006 and 2010. WordPress, which was the world's most widely used CMS in 2010, was at version 1.5 throughout 2006 and was not a viable option as a CMS for any content types excepting blog content ("About"). As such, it was not suitable for use in 2006 for a non-blog, content-rich website like JonFinn.com. The CMS landscape had changed severely through 2010 and CMSs became much more feature-rich, especially in its support of

various content types besides blog posts. WordPress 3.0, released in 2010, had support for many content types, automatic menu generation, single-click software installations and updates, content versioning, drag-and-drop administration, content taxonomies, more than 10,000 plugins, and flexible customization options ("Features"). The 2010 JonFinn.com redesign would incorporate WordPress as a modern CMS offering simple-to-use content administration for the JFG, but could not be done using the 2006 site markup or source code structure.

The ability to update content using a CMS became a critical feature for the JFG in 2010. *BIACS* was the first JFG release since 1998 and was considered for a potential Grammy nomination. If the nomination were to become official, it would have been important to quickly and easily update JonFinn.com with the latest information and use social networking sites to bring people to the site for more. Jon had been working hard to use promotional tools through Facebook, MySpace, Twitter, and YouTube in parallel to the 2006 JonFinn.com, but felt unsuccessful in leveraging his fans' interest through his website due to static, unchanging pages with no administration capabilities. WordPress provided a "what you see is what you get" [WYSIWYG] text editor that allowed for content and layout manipulation as well as social networking integration with minimal need for technical implementation expertise.

Apart from the capability to edit the written content of the website, there was a clear need for the ability to upload, manage, and embed media content throughout the site. As musicians, the JFG desired the capability to post recordings of musical performances in audio and video formats. All JFG members were professors at Berklee College of Music and expressed interest in posting online lesson content,

including PDFs and scanned images of sheet music, directly to the website; this content could potentially be monetized. Also, Jon was regularly using the JonFinn.com web server to assist in the management of his various musical engagements. He was the guitarist for the Boston Pops and performed in various off-Broadway show orchestras outside of his regular full-time responsibilities with Berklee. He often posted new content ideas in various directories in the JonFinn.com web server's file hierarchy, which included instrumental backing tracks with which he rehearsed or performed live without a full band; performance schedule details; sheet music; and recordings of other musicians' works on which he was paid to record. These files were unorganized and contained no metadata, which made searching and accessing a slow process. The new site provided a mechanism for Jon to create drafts of new content that he stored and managed in WordPress.

Interaction with the JFG fan base was another critical need for the 2010 redesign that would not have been easily implemented in the 2006 code structure. JonFinn.com had featured interactive bulletin board systems in previous design iterations, but the bulletin boards were repeatedly overcome by irrelevant or inappropriate messages generated—known colloquially as "spam"—by computer programs that scanned the web for posting opportunities. Keeping the message boards free of spam was occupying too much of Jon's limited free time and was replacing interaction time with his fan base, ultimately resulting in the deactivation of the bulletin boards. Unfortunately, the message boards were the only dynamic area of the website in which community could be developed amongst the fan base and where the JFG could interact directly with its fans. The 2010 site would need to incorporate user interaction and discussions via blog post and page comments while

also incorporating the prevention of spam. To do so on the 2006 site would have required significant engineering and development time.

Since the site's 2006 redesign, usage patterns of the Internet had also shifted amongst the general populous in significant ways. Usage of web-based services began exceeding general-purpose web browsing via a web browser on personal computers. The number of portable devices with web-browsing capabilities had flourished in 2010 with high-speed connectivity to cell phones, portable music players, and other portal computing devices like the Apple iPad (Anderson). Many of these devices use touch-based interfaces and the increasing number of these devices shows no signs of slowing (Elmer-DeWitt). As such, the new site needed to incorporate functional design elements that would improve usability for users of these small-screened, portable devices. Although this could have been done with a separate style sheet dedicated to mobile browsers via the 2006 site design, mobile web browsers may have encountered problems with XHTML as they did not support the entire XHTML feature set ("XHTML Basic 1.1").

Dependence upon web-based services using the Internet for data delivery was steadily increasing through 2010 and websites began interacting with one another via back-channel interfaces (Anderson). Most popular CMSs feature technologies such as XML-based remote procedure calls [XML-RPC], pings, pingbacks, trackbacks, and other technologies. When an author of one website references content on another website and the two websites are using content publishing software capable of communicating via XML-RPC, the two websites talk to each other so site administrators are made aware of the reference ("Introduction to Blogging"). Another set of useful services provided through JavaScript-based

remote procedure calls is website analytics. Analytics keep track of how and when a website is being used by an end-user, the end-user's geographic location, and more ("About Us"). The 2010 redesign needed to utilize these technologies and all data will be made available to Jon, but most features were not possible to implement in the 2006 site.

Most importantly, Jon wanted the site to provide residual supplementary income through sales of JFG merchandise and services. Jon developed many of his own approaches to music performance and theory, some of which are detailed in his books, and he desired to offer his insights and content ideas to his site's visitors through paid monthly subscriptions. Jon hoped that well-planned, well-executed, and regularly-updated paid content would retain visitors and that new subscribers would beget more new subscribers. The proliferation of business opportunities on the Internet and the potential for revenue generation through the website was more than appealing. The 2006 website contained an online store through which Jon sold various merchandise and the 2010 redesign would not impede on this capability. The implementation of a paid subscription service mandated a user administration portal with membership categorization along with a mechanism to allow customers to easily pay a recurring monthly fee for subscriptions. A user management database that kept track of paid subscriptions would require a suite of software and integration with the 2006 site that would likely have been quite complicated in its implementation without a content management system.

Lastly, the expectations for the new website were high and the ideas required valuable time and energy into the process of implementation. The aforementioned research objectives were implemented in three phases to break the work up with

achievable milestones. The new website provided a development environment that was privately accessible to Jon and his band so new features could be designed, tested, and implemented before being published to the publicly-accessible production website. Doing so allowed the new production site to progress quickly and easily so the JFG could promote *BIACS* without the website work interrupting their efforts.

The Need for Study

In 2010 the Berklee College of Music was the world's largest independent music school with 4,100+ students from across the globe. Its list of successful graduates includes Grammy-, Oscar-, and Emmy-award-winning musicians with multi-platinum record sales. It is a haven for rock musicians looking to formalize their performance, composition, and/or pedagogy capabilities as well as music business acumen. The guitar department has received particular prestige due to its reputable and successful list of professors and alumnus. Established in 1945, it was the first school in the United States to teach jazz music. In the 1960s, it recognized the guitar as a principal instrument ("A Brief History"). In 1988, Jon Finn was hired as a professor and has since taught rock guitar performance ("Faculty Biography"). He was well respected and rated highly with his students ("Jon Finn – Berklee College of Music").

Jon's work at Berklee allowed him to develop relationships with students and professional musicians alike. These relationships brought students to the school and Jon's teaching style was well regarded. The relationships also brought potential customers to his website JonFinn.com, a marketing opportunity with potential to bring in revenue for Jon and his band. Conversely, many people who heard the

JFG's music found that each of the band members taught at Berklee, causing some budding musicians to desire enrollment at the school. It was through the JonFinn.com website that this symbiotic relationship was further leveraged and value was provided to all involved parties. Despite no official affiliation with JonFinn.com, Berklee and the members of the JFG found this relationship to be mutually beneficial and any promotional efforts offered by either party was helpful.

Successful web-based businesses were an inspiration to add further revenue-generating potential to JonFinn.com. Online subscription services like Netflix, Xbox Live, and World of Warcraft became very popular by 2010 and were profitable with sustained revenues year over year. The popularity of online portals, like the iTunes Music store, proved that large numbers of users were willing to pay for digital content. The iTunes Music store was the largest music distributor in the United States, including brick and mortar shops, selling more than 10 billion songs since it opened in April 2003 ("iTunes Store Top Music Retailer…", "iTunes Store Tops 10 Billion Songs Sold"). While it was unlikely that an independent progressive instrumental band could accrue revenue near the scale of the aforementioned services, it was clear there was plenty of business opportunity for artists willing and able to produce unique content with high value. It is important to note, however, that independent progressive instrumental music bands had a much higher probability at accruing revenue thanks to services now available on the Internet.

The ubiquity of the Internet leveled the marketing playing field for musicians worldwide (Kennard). No longer were artists and their merchandise relegated to racks of alphabetized compact discs or unorganized discount bins in brick and mortar shops, but artists had an equal opportunity for success via search engines. A

search for "Jon Finn" was as effective for finding JonFinn.com as a search for "Britney Spears" is for BritneySpears.com (though certainly not effective to find other people sharing those names). Likewise in a search on the iTunes Music Store. Whereas in a brick and mortar retailer, there are physical advertisements varying in shape and size that attract attention due to their physical proximity with a physical customer. By leveraging the power of search engines and keywords, coupled with unique content offerings through a user-friendly experience on JonFinn.com, Jon hoped to create new revenue-generating opportunities for the JFG. Such opportunities were not limited to sales of physical items, but could have been expanded to services over the Internet, such as guitar lessons via videoconference, or increased potential in booking live performances anywhere around the world.

The key success indicator for the 2010 redesign of JonFinn.com was data from a usability survey instrument distributed to the key JonFinn.com stakeholders and to the JFG mailing list. Other indicators were gleaned from website analytics data, demonstrating a sustained increase in site traffic with complementary increases in metrics like: unique visitors; pages per visit; average time spent on the site per visitor; and visitor loyalty.

The need for the site redesign was simple: The JFG had the capability and opportunity to leverage the proven success of revenue generating content and merchandise. They wanted to target a wider audience through technology to generate revenue. There was a small fixed monthly hosting cost, but the great equalizer of search engine results and marketing through simple, free, and effective technologies and techniques culminated in the opportunity for increased residual income. The idea to design a website managed by a CMS and to make it available to unregistered

and paying/non-paying registered users was not new, but was novel in the context of

musicians using their websites to offer more content directly to their fans without a

middle-man.

CHAPTER 2

Review of Literature

Nearly all literature supporting this paper and the 2010 JonFinn.com redesign effort was gathered via the Internet. Printed materials were used to defend subject areas that are not so oft-changing as open source software. Primary research areas include: a review of the 2006 website; membership websites; social networking; WordPress; WordPress' software architecture; WordPress implementation and features; website usability; HTML5 and CSS3; web hosting, shopping carts, and payment gateways; development and production sites; and usability survey instruments.

2006 Site Review

In 2006, JonFinn.com was redesigned to expand the content available to the site and to give the site a new visual interface. The design replaced an older design that did not make use of W3C standards-based technologies such as HTML and CSS. The front page of the 2006 site stated: "Welcome to jonfinn.com, your home for information about Jon Finn and his band, the Jon Finn Group." The site did what it said it would: provided information about the Jon Finn Group. The site did not provide any language marketing products to the end-user. For example, the site copy further stated: "Jon has written three books, one of which contains an instructional DVD. He has also released two albums and performed on many others…." Only the words "written three books" was hyperlinked in that sentence and it did not link to the product page on JonFinn.com. Only one of the seven links in the front-page content linked to an internal page on the site, which likely led to users leaving the site shortly after accessing it (see fig. 1).

The site had two content areas on the front page containing data that Jon could administer via a back-end web page: "Recent News" and "Upcoming Gigs." These two content blocks existed in the theme's sidebar away from the primary content area and occupied a small area of the viewport (see fig. 1). These were the only area of the JonFinn.com front page that had changed since 2006. This did not give end-users cause to return to the site on a regular basis.

Figure 1. The 2006 edition of JonFinn.com.

The navigation menu text was ordered: Home; Contact; Links; Forum; Guitar; Purchase; Gigs; Music; and News. The JFG albums were featured on the Music page and the books were not featured anywhere on the site. The Purchase link

directed users to the online store, but the link is not made prominent or in any way brought to the attention of the end-user amidst the other navigation links (see fig. 1). This is made evident by the site's usage statistics.

The free Google Analytics tool was used to collect end-user usage patterns and statistics. In the three months preceding the implementation of the redesigned JonFinn.com, the site measured the following between the dates June 29, 2010 and September 29, 2010 (3 months leading to the completion of phase 1):

- 2,532 visits (27 visits per day)

- 6, 735 page views

- 2.33 pages viewed per visit

- 1 minute, 54 seconds average time spent per visit

- 74% new visits

- 51% visits originating from search engine results, 25% from direct traffic, and 24% from referring sites

Membership Websites

Membership websites were not new to the Internet in 2010. A popular technology news website, http://slashdot.org, has had site membership since it launched in 1997 (Malda). Paid membership sites offering premium content to paid subscribers, however, were still in their nascency as many content producers were determining successful revenue models attempting to satisfy users who demand free content while pleasing shareholders (Perez-Peña).

Peter Gabriel, a multi-platinum selling musician since the 1960s known for his adoption of up-and-coming technologies, offered a site membership option called the "Full Moon Club" through which he published exclusive content when a

full moon could be seen in the sky—approximately once per month (McCormick). Membership was free and members were granted access to community message boards and members-only video, audio, and text content. Many of the posts to the Full Moon Club revolved around Gabriel's latest projects and tour efforts ("Peter Gabriel…"). Advance ticket sales offers and other exclusive items for purchase are available to members, often as a premium price due to limited availability. Most importantly, this gave Gabriel a quick, easy, and direct way to reach the people most likely to purchase these premium items and it gives the most enthusiastic and/or wealthy fans to take part in owning the work of their favorite musicians. There also exists a Full Moon Club iPhone application available in the iTunes Music Store that allows Full Moon Club members to listen to Gabriel's latest music releases for free (Full Moon Club).

Another musician offering access to exclusive content via site membership is Trent Reznor, founder of the multi-platinum selling band Nine Inch Nails. Reznor is another adopter of new technology and has gained notoriety in the music industry for shedding his relationship with a major music label only to release all his music independently via the Internet or through merchandise booths at live performances (Van Buskirk). Features of his site's membership include the capability to join in community discussions where fans can interact directly with band members; download "stems" of many songs so fans can remix and re-engineer them; gain access to 50,000+ images and videos; and download the latest Nine Inch Nails album for free ("Nin.com").

Other lesser-known musicians were offering even more personal experiences by making themselves available for in-home performances, although not necessarily

through site memberships. Mike Keneally, most notably recognized for his involvement with Frank Zappa's band in the 1980s, has used his website since 1994 to communicate with his fans (Meredith). He was offering "MyKeneally" living room concerts in which fans paid to have him and some number of band members perform to anyone willing to front the costs (Keneally). There were no restrictions on who could attend the shows or distribute audio and video recordings of the performances. It was through the Internet that these living room performances were marketed and scheduled for Keneally. His fans recorded these MyKeneally experiences and posted them to YouTube and other video and audio sharing sites, likely leading viewers to Keneally's website giving them the opportunity to generate a sale.

Social Networking

While social networking websites like Facebook and MySpace had flourished through 2010 and had allowed for personal interaction with bands (independent artists and those assigned to major labels), there was not as much creative freedom or expression through design available on those websites. MySpace had expanded its profile page customization offerings by 2010, but Facebook's usage had overtaken MySpace and advertisers had discovered that Facebook had become a means for communication rather than consumption of media, leading to reduced sales expectations (Leggatt). By utilizing both Facebook and MySpace to market JFG music and lead fans to JonFinn.com, it is hoped that users will appreciate more targeted content and design.

By offering a more personalized experience on JonFinn.com than a user would find on a social networking site, Jon hoped to engage fans in such a way that

they would have found value in the unique content offered through a site membership with hopes that this would have turned into new revenue streams for the JFG. However, the success of the revenue stream was highly dependent upon the usability of administering, authoring, and viewing of content on JonFinn.com and any marketing the JFG pursued. Since the site's redesign in 2006, free and paid services and software available on the Internet had blossomed, making way for exciting new potential for the JFG. The 2010 redesign of JonFinn.com utilized WordPress, one of the more successful open source software packages on the Internet, as a content and user management system by capitalizing on its success and the endless number of free functionality offers through the platform.

WordPress

WordPress was a free, open-source, PHP-based CMS with years of development history. It was also so popular that it had generated its own set of semantics and vernacular ("WordPress Semantics"). As with many open source projects, it also had a community of users that contributed code to extend the functionality of the product. These contributors also wrote all of the product documentation ("About"). There are thousands of code contributors who have offered more than 11,000 free, open-source functional extensions ("WordPress Plugins"). These and other features had made WordPress the world's largest content-publishing CMS in the world ("About"). WordPress featured an administrative interface that was intuitive for non-technical authors who wished not to think about technical details, but also technical enough for those who wished to customize site presentation and functionality. Though the product started as a set of code meant to "enhance the typography of everyday writing," it turned into a sophisticated, easy-to-

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use, fully-featured CMS with a focus on content rather than simply typography ("About"). JonFinn.com utilized WordPress version 3, which was released in 2010.

The official and most exhaustive source of documentation for WordPress was called the WordPress Codex and was available at http://codex.wordpress.org. It was written and maintained by the development community and documentation was written to support every minor and major upgrade to the WordPress software ("Codex: About"). Documentation was a key feature for WordPress as it was an open source software package with no commercial means for support. The Codex was a critical resource to all WordPress developers and users.

WordPress had been available since 2003 as an open source content editing platform and had expanded its feature set significantly since ("About"). The software roadmap is publicly viewable and well managed, demonstrating no slowing of growth or development ("Roadmap"). For Jon Finn, this was an important consideration as it freed his dependence upon a paid developer to fix issues or add features to his content management system. Thus, Jon and his band could focus on content development and administration. When new versions of WordPress became available, WordPress could upgrade itself through a one-click installation requiring no technical knowledge or intervention (e.g. file permissions, editing of configuration files, etc.) ("Features").

WordPress Software Architecture

As WordPress was based on a popular dynamic scripting language known as Hypertext Preprocessor [PHP], programming assistance via message boards and documentation were widely available ("PHP: Hypertext Preprocessor"). The official PHP website was http://php.net, which hosted various releases of the scripting

language and all official documentation. A PHP engine running on a web server executed PHP code at run time, i.e. whenever an end-user's web browser requested a file with the .php extension. WordPress used a variety of techniques to display content via its root-level index.php file, so all WordPress functionality ran through the PHP engine. PHP was quite useful in that it could be inserted anywhere within a .php file, or even within CSS files and HTML depending on the web server's configuration.

There were four basic content types in a default installation of WordPress 3: posts, pages, links, and comments ("WordPress Semantics"). A post was the most elementary, foundational piece of content that could be categorized and tagged. Posts were assigned to one or more categories, or topics, for taxonomic purposes. Tags were keywords related to a post's content and were provided to a content author or editor for more granular specificity. For example, there may have been various posts assigned to the "News" category on JonFinn.com, but there may have been some posts in that category tagged specifically with a keyword like "Berklee." When an end user clicked on a link to the "News" category, any posts within that category are displayed. When an end user clicked on the "Berklee" tag, any posts tagged with "Berklee," irrespective of categorical assignment, were displayed. For JonFinn.com, categories anticipated early in the design included: "News," "Free Guitar Lessons," "Paid Guitar Lessons," "Rants," and "Inventions."

From an end-user's perspective, a post could have been thought of as an entry on a blog and gave the user an opportunity to leave a comment responding to the author or to other users who had left comments ("WordPress Semantics"). A site administrator could turn off commenting on a per-post basis or throughout the site,

but a post in WordPress was traditionally where end users interacted via comments. WordPress also featured the capability for users to comment on pages (as opposed to posts only), although this was not a typical setup as comments were turned off by default for pages in WordPress 3 ("Glossary").

A page was a content type for "static" content that was meant to exist independently without an expectation for follow-up posts or changes. It did not require categorization or tagging and was generally not enabled for commenting ("WordPress Semantics"). While pages were editable, pages were thought to be "static" because page contents were generally not changing on a regular basis, as would a set of blog posts displayed on a separate page. By default, WordPress did not allow for tagging or categorization of pages, although there were plugins that offered such functionality. For JonFinn.com, pages were created to provide background information on the JFG, site membership options, book and CD product types with individual product pages, and a performance schedule. Pages could be nested under other pages in a logical way. On JonFinn.com for instance, there was a Books page with child pages for each of the books offered on the site store.

A link was a hyperlink to any page on the Internet. Links were assembled into collections called "linkrolls" ("Administration Portals"). By default, WordPress provides links to a selection of links to the http://wordpress.org site: Documentation, Plugins, Suggest Ideas, Support Forum, Themes, WordPress Blog, and WordPress Planet. Linkrolls were critical to the search engine optimization of the site as links to other sites can help establish credibility of the linking site in search engine ranking databases (Gyöngyi, et. al.).

A comment was a content type typically added to the site via the comment form at the bottom of single posts or pages. A series of comments was called a discussion. It allowed any end user to share thoughts with the content author and other commenters ("WordPress Semantics"). Comments were a content type that required careful administration as they could be easily misused. As WordPress was so popular, its security vulnerabilities were widely known and exploited once discovered ("Hardening WordPress"). Quite often, there were spammers that took advantage of these security vulnerabilities to post innocuous comments to a site with hyperlinks to spam websites. As such, the Akismet comment filtering plugin came installed by default with WordPress in a deactivated state ("Stop Comment Spam…").

Comments also came in the format of a pingback, more commonly known as a "ping." A ping can be thought of as a "remote comment" that takes place when one website publishes a blog entry referring to a blog entry on another website ("Introduction to Blogging"). Pings were common between various blog software packages and content management systems and there was a pingback specification so software developers can implement the unofficial "standard" (Hicks). A pingback merely mentioned that Some Author wrote about Another Author's post at some URL. Trackbacks were similar to pings with the exception that trackbacks allowed content authors to see what other authors were writing on their websites when referencing the original author. Trackbacks offered context of the referring author's comments ("WordPress Semantics").

WordPress Implementation and Features

To write, edit, and manage content, an author used the WordPress Admin interface, known by application developers as "wp-admin" and called the

"WordPress administration portal" throughout this paper (see fig. 2) ("WordPress Semantics"). Within the WordPress administration portal, a site administrator could administer many facets of the site: Posts, Media, Links, Pages, Comments, Appearance, Plugins, Users, Tools, and Settings. The Posts, Media, Links, Pages, and Comments sections were separated from the other administrative sections because they were content-related whereas the non-content sections were for site administration. The Posts section allowed for writing, editing, categorizing, tagging, and deleting posts. The Media section allowed for navigating, organizing, adding to and deleting from the media library, which was a collection of all graphics, audio, and video hosted locally within the blog made available for embedding into posts and pages. The Links section allowed for creating, editing, categorizing, organizing, and deleting links that were available for embedding into a linkroll. The Pages section allowed for writing, editing, organizing, and deleting pages. The Comments section allowed for editing, approving, disapproving, and deleting comments left by end users on the site, including pings and trackbacks from other websites. Each of the aforementioned administrative subpanels was available in a sidebar available on the left-hand side of the administration portal (see fig. 2). All content details and revisions were stored in a MySQL database ("WordPress Semantics").
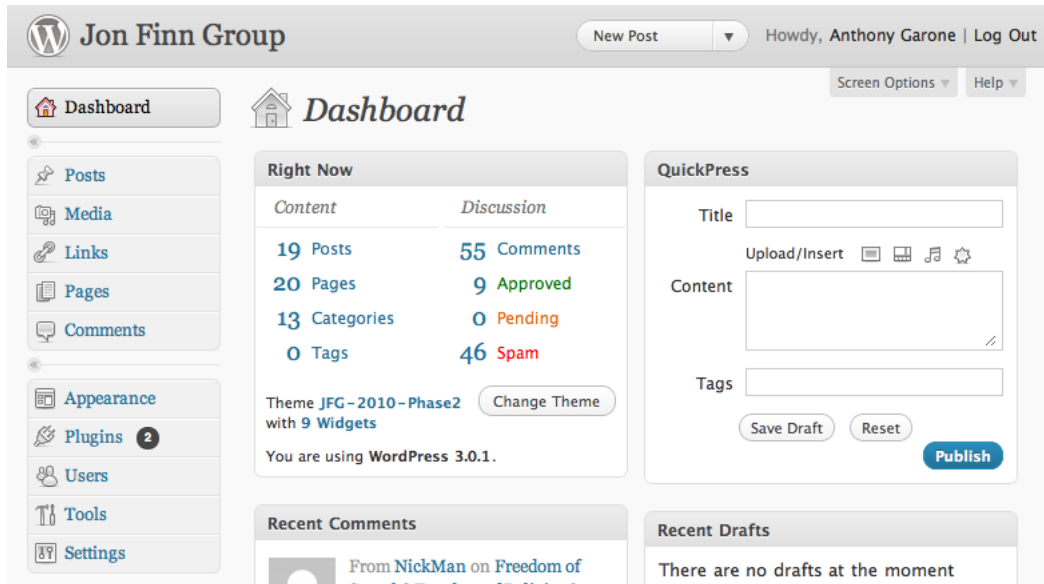
Figure 2. The WordPress administration portal.

In terms of site administration, the Appearance, Plugins, Users, Tools, and

Settings sections offered a significant amount of control and administrative

capability. The Appearance section allowed for the installation, enabling, disabling,

editing, and deletion of site themes, widgets, and menus. A theme was a package of

style sheets and PHP scripts that told WordPress how and what to display when a

user visited. WordPress allowed for one theme to be active at a time and came with a

default theme titled "Twenty Ten." Themes were installed in /wp-content/themes

and required a style sheet file and several PHP scripts to tell WordPress how to

display category pages, single posts, pages, and more. Themes also included a PHP

file containing scripts relevant to the theme to allow for certain functionality that

would not be required by other themes. Themes were quite flexible and WordPress

parsed these files to determine what features it could offer a content author, such as

two-column layouts, one-column layouts, customized post header images, number of

sidebars, and more ("WordPress Semantics"). The JFG 2010 theme was based on the

default WordPress Twenty Ten theme as it came pre-loaded with a full set of built-in functions and capabilities.

Widgets and menus were also customizable under the Appearance section of the WordPress administration portal. Widgets were pieces of code that provide specific functions that are smaller in scope than plugins. Widgets were used in sidebars, which were peripheral sections of content on a page that contained links and content related to a website or metadata on the current page or post being viewed. Widgets were installed as plugins in the /wp-content/plugins folder. Default widgets that came with a WordPress installation were:

- Archives ("displays archive links for each month that has posts"),
- Calendar ("displays a calendar of the current [month; dates] appear as links if there are posts for that day"),
- Categories ("displays a list of post categories as well as links to those posts"),
- Links ("displays a list of links separated by category"),
- Meta ("displays links to meta functions such as Site Admin, [etc.]"),
- Pages ("displays a link to each page"),
- Recent Comments ("displays a list of the blog's most recent approved comments"),
- Recent Posts ("displays a list of the blog's most recent posts"),
- RSS ("displays an RSS feed"),
- Search ("displays a search box to enter text to search a blog"),
- Tag Cloud ("displays a list of a blog's top 45 used tags in a cloud"), and
- Text ("used to enter HTML, javascript, or plain text").

Widgets were added, edited, and removed from a theme's sidebar using a dynamic drag-and-drop interface. Once a widget arrangement was edited in the administrative portal, it was immediately updated live on the website ("Design Widgets Subpanel").

Menus were administered in WordPress via a dynamic drag-and-drop interface. A menu was an organized collection of links arranged for the purposes of site navigation. Menus could contain links that are parents for child links ("WordPress Semantics"). For JonFinn.com, there was a parent link for the Books page with child links to each of Jon's book product pages. When a user's cursor rolled over the Books link in the menu in the JFG 2010 theme, a contextual menu displayed the children links to each of the books' product pages. Three link types could be added to a menu: pages, blog categories, and custom links. WordPress also allowed an administrator to save multiple menus so one menu could be live on the website while another could be saved for posterity or for future site revisions. The JFG 2010 redesign used a menu specific to each phased implementation of the theme.

Themes were edited within the WP administration portal if file permissions on the web server allowed. Style sheets and PHP files were edited directly within a large text field and the files were updated the instant a user clicks "Save." This feature allowed for quick fixes of theme functionality. Once code changes were committed, the functionality was immediately effective on the website. It was not used to make substantial code changes via this interface as changes could have been easily lost in an accidental closing of a web browser window, or if the web browser software crashed.

The next administrative subpanel was for Plugins. Plugins were tools that extended the functionality of WordPress ("WordPress Plugins"). One relevant plugin was available in a default installation of WP: Akismet. It was capable of checking incoming comments for spam content. In the Plugins subpanel, an administrator searched for plugins, installed them with a single click, and activated with a single follow-up click. Plugins were also edited via this subpanel in the same manner as theme files in the Appearance subpanel.

The Settings subpanel allowed for the setting of preferences for the whole website. There were preference sets called "General," "Writing," "Reading," "Discussion," "Media," "Privacy," and "Permalinks." As plugins were installed, their administrative preferences were maintained via the Settings subpanel. Important settings available in this subpanel included: the title and URL of the website; administrative contact information; time zone; date formats; post capabilities (such as publishing a post sent to WP via e-mail); site encoding (character encoding types, such as UTF-8, which are critical for content internationalization); user registration capabilities; comment notification and approval settings; media library settings; site visibility to search engines; and permalink configurations (how links are generated within a website). These settings were critical in locking down capabilities of end users should they happen to discover and access the development site.

WordPress' Media Library was also administered via an administration subpanel. The Media Library was a file transfer mechanism that accepted uploads from a user's local machine and stored media files in WordPress' file structure and database. Files were sorted in a file directory structure according to the file's upload date and all metadata associated with the file was stored in the MySQL database. The

location of the file and its metadata were abstracted from the administration portal's end user via the Media Library interface ("Media Library Subpanel"). The Media Library supported these file types:

- Images: JPEG, PNG, and GIF;

- Documents: PDF, Microsoft Word Document, Microsoft PowerPoint Presentation, and OpenDocument Text Document;

- Audio: MP3, MP4, OGG, and WAV; and

- Video: MP4, QuickTime, Windows Media Video, AVI, OGG, 3GPP, and 3GPP2 ("Accepted Filetypes").

Website Usability

Jennifer Tidwell stated in her book *Designing Interfaces* that users of tools, software, or otherwise are looking to find facts, learn, perform a transaction, control or monitor something, create something, converse with others, and be entertained (3). JonFinn.com met those goals by:

- Making available information about the JFG;

- Helping users to learn more about music theory and the guitar;

- Allowing users to purchase JFG merchandise;

- Allowing users to monitor content updates through RSS feeds;

- Allowing users to comment on content posts; and

- Allowing users to be entertained by featuring quality content.

By offering worthwhile free and paid content, the site enabled users to accomplish their goals and to return for further gratification. Ways of reinforcing these goals through design were made possible through both the WordPress software and through the custom theme created as a façade for content presentation.

Tidwell listed multiple interface element requirements that provide a satisfying user experience that were intentionally implemented on JonFinn.com:

- Safe exploration;

- Instant gratification;

- "Satisficing" ("a combination of 'satisfying' and 'sufficing'");

- Deferred choices;

- "Habituation," where user similar interface elements act in a reliable way; and

- Prospective memory (Tidwell 11-18).

To address safe exploration ("Let me explore without getting lost or getting into trouble"), the site navigation menu was always available at the top of the screen with further navigational elements in the content sidebar, which is available everywhere throughout the site excepting the splash page (Tidwell 11). There were no content elements inaccessible from these primary and/or secondary site navigation elements.

The 2010 redesign further addressed safe exploration by intentionally linking as often as possible to other pages on JonFinn.com. The 2006 design often led end-users to external websites (i.e., pages not hosted at JonFinn.com) within its content. The 2010 site provided most of its external links in content sidebars and used contextual language and link titles wherever possible when linking to external sites. For example, when referring users to the JFG artist page on the iTunes Music Store, the linked text said, "check it out on iTunes."

To address instant gratification ("I want to accomplish something now, not later"), all content was quickly and easily accessible via site navigation, category links,

tag links, sidebar links, RSS feeds, and a site search field available in the sidebar

(Tidwell 11). WordPress indexed all page and post content so a user could quickly

search for a term that yielded relevant results. It is important to note that Jakob

Nielsen and Hoa Loranger stated: "Splash screens must die. They give users the first

impression that a site cares more about its image than about solving their problems"

(Nielsen 111). The splash page on JonFinn.com served multiple purposes: featuring

the JFG's latest release and putting it at the forefront of the site; providing the user

with a list of the latest content updates (although Nielsen may disagree with the

placement of said updates being "below the fold" on some monitors); providing the

user with links to information about the band, how to contact them, and information

on becoming a site member; and notifying the end user that there is premium

content available to all registered members of the site (Nielsen 45).

The site was "satisficing" ("This is good enough. I don't want to spend more

time learning to do it better") in that the site navigation clearly and simply led users

to expected content (Tidwell 11). In the content authoring and management

processes, the fewest number of content categories possible were chosen to offer the

fewest number of potential content locations for users seeking specific content.

The site addressed deferred choices ("I don't want to answer that now; just

let me finish!") by allowing quick and easy access to all non-members-only content

and features (Tidwell 13). For example, anonymous users were allowed to comment

on any post or purchase any item available on the site without authenticating. The

site did not allow site membership to infringe upon a user's capability to access

content on JonFinn.com. And if the user chose to register for the site and

authenticate, there was no re-authentication or validation of credentials. Members,

when logged in, had instant access to all content (assuming valid authentication upon login).

The site addressed "habituation" ("That gesture works everywhere else; why doesn't it work here, too?") by utilizing standard WordPress functionality throughout (Tidwell 14). As WordPress was the world's most popular personal content publishing software, there was a high probability that a user visiting JonFinn.com will have already visited another WordPress site ("About"). Therefore, it was also probable to assume that a user had an understanding of categories, tagging, pages, and how to utilize each of those features to peruse content.

The site addressed the prospective memory requirement in a few different ways. All website addresses were intentionally uniformly generated to be human-readable. For example, any posts in the "News" category were found under http://JonFinn.com/news and the post's title was stripped of unique characters to be web browser friendly. Therefore a post titled "Site Updates" appeared at http://JonFinn.com/news/site-updates. (The name of the post title as formatted for a URL was called a "slug") ("WordPress Semantics"). The site's design also made no attempts to prevent a user from utilizing tools like web browser bookmarks, URL shortening services, links from other sites, content caching services, services that save content for offline viewing (e.g. Instapaper), copying and pasting, or right-clicking. Unless a user unsubscribed from a paid or unpaid membership and lost access to the members-only content, every intention was made to allow users to access the same content at the same URL. Furthermore, WordPress stored slugs to content in such a way that if a slug changed, the former slug address redirected to the new slug address.

The U.S. Department of Health & Human Services states that "usability refers to how well users can learn and use a product to achieve their goals and how satisfied they are with that process" ("Usability Basics"). Based on the requirements of the website redesign and Tidwell's usability requirements, the user's goals were determined to be:

- Ease of use in navigating the website to find specific content;

- Ease of use in creating a user account (paid or unpaid);

- Ease of use in purchasing merchandise;

- Ease of use in interacting with content authors and the commenting community.

- Provide information about the JFG by keeping them in the JonFinn.com content domain.

These usability goals were addressed to end users in the usability survey instrument following the completion of the redesign project.

HTML5 and CSS3

The separation of code, content, and the visual presentation of content was not a new innovation in web development methodology in 2010. The first W3C Cascading Style Sheet recommendation was published on December 17, 1996 (Hakon and Bos). Markup languages were used as a framework upon which content rested and style sheets contained the directives for presentation of that content. The markup language used for the 2010 redesign of JonFinn.com was HTML5, as opposed to the 2006 site that used XHTML 1.1. Considering that JonFinn.com had not been redesigned in four years and it could have been another four before its next redesign, it became critical that the current design was forward-thinking in that it

made use of the most modern technologies available. HTML5 was chosen to meet this need.

The primary advantage of designing the site using HTML5 included the capability to display embedded media content, such as audio and video, in a website without the use of proprietary technologies like Adobe's Flash Player. At the time of the redesign work, Flash Player was the leading video playback plugin and only one of the web-capable mobile device operating systems was capable of running Adobe's Flash Player ("Flash Player 10.1 for Andoid 2.2 Release Notes"). Working around Flash was completed by using HTML5's built-in `<audio>` and `<video>` markup tags that used the end user's web browser's built-in media playing functionality to play audio and video.

In order to use CSS3 features, browser-specific directives were required as the CSS3 recommendation was not yet finalized. In order to implement the CSS3 border-radius directive, -webkit-border-radius and –moz-border-radius were used for WebKit-based browsers (Apple Safari, Google Chrome, and others) and Firefox respectively. As CSS3 was a recommendation under development in 2010, not all web browsers supported the newest CSS3 directives and often did not present content in the same way as interpretations of the incomplete standard recommendation varied amongst browser programmers (Irish, Manian). The 2010 JonFinn.com redesign continued to use CSS2, but also included widely supported elements of CSS3 where applicable.

Web Hosting, Shopping Carts, and Payment Gateways

JonFinn.com was hosted on a shared virtual host by hostcentric.com. HostCentric provided basic one-click installation services of several applications,

including WordPress. HostCentric.com also provided a basic shopping cart system by partnering with ShopSite.com ("ShopSite Shopping Carts"). ShopSite was available in multi-tiered packages: Starter, Manager, and Pro ("ShopSite 10 Feature Checklist"). JonFinn.com utilized the Starter package as it was included in Jon's monthly hosting costs ("ShopSite Shopping Carts"). The HostCentric implementation of the ShopSite software offered a basic feature set that allowed Jon to sell merchandise on his site. ShopSite did not support recurring billing, so it was not a sufficient tool for the JonFinn.com paid membership package ("Recurring Billing"). It did, however, allow Jon to use his Authorize.net account to accept credit card payments on JonFinn.com.

Authorize.net was a payment gateway service that had been in business since 1996 ("About Us"). It was a fully-integrated solution and ShopSite was a "premier Authorize.Net-Certified shopping cart" ("ShopSite Shopping Cart and Authorize.Net"). Authorize.net offered Automated Recurring Billing [ARB] as a service that was utilized to implement paid recurring subscriptions ("Automated Recurring Billing…"). ARB was an Application Programming Interface [API] that allowed a merchant to use subscription- or installment-based purchases. The ARB feature would be used when JonFinn.com began accepting paid monthly subscription fees from its users.

Development and Production Sites

Web development offered many conveniences over traditional software development methods, especially rapid prototyping since changes to source code do not require compilation. So as to facilitate the rapid prototyping process without interrupting services or functionality to customers, two instances of WordPress were

implemented: a development instance at a non-published URL

(http://dev.jonfinn.com) and a production instance at http://jonfinn.com. This

decision was patterned after best practices in the software development industry and

it was completed with no additional cost (Botsum and Beaton). Once a feature had

been fully developed, tested, and understood, it could be promoted to the

production website. Doing this also gave Jon the opportunity to use a real instance

of WordPress without risk as he had no prior experience with WordPress or any

web-based content management system.

Usability Survey Instrument

To evaluate the success of the 2010 JonFinn.com implementation, a usability

survey instrument was created and sent to end-users. Brinck, Gergle, and Wood

suggested that a usability inspection should use a specific set of ten guidelines:

1. Content and scope (does "the site have the functionality necessary to

   serve the [user's needs?]");

2. Speed (does the site load download slowly?);

3. Navigation ("how clear is the organization of the website?");

4. Appropriateness to task ("what are the user's tasks, and does the site

   reflect the structure of the tasks?");

5. Visual design ("does [the] design have simplicity, consistency, and

   focus?");

6. Compatibility ("does the site work with the wide range of users and

   computers?");

7. Simplicity ("is everything presented in the simplest, most straightforward

   way?");

8. Consistency and contrast ("does the site have internal consistency within the page and between pages?");

9. Error handling ("does the system prevent the user from entering inappropriate values?"); and

10. Respect for the user (does the site anger, frustrate, respect, mislead, or trap users?) (411-415).

In writing the usability evaluation questions, they suggested the questions use simple, non-proprietary language (417). They also suggest not neglecting users' first impressions and that most major problems will be detected "after three to four people have reviewed the site" (418).

CHAPTER 3

Methodology

The 2010 redesign of JonFinn.com was too large in scope to accomplish in a single implementation. Prior site redesigns had been purely aesthetic and offered no functional changes in administration for Jon. This redesign, however, required Jon to gain an understanding of content management systems and their capabilities before he would feel comfortable in the completion of the project. It was thus decided that the requirements of the project would be met in three major implementation phases: site redesign and CMS implementation; basic membership integration; paid membership integration.

Phase 1: Site Redesign and CMS Implementation

Before starting on the 2010 redesign effort, Jon had experimentally installed two content management systems to JonFinn.com: Joomla and WordPress 2. These packages needed to be uninstalled and their databases reclaimed as part of pre-work. Phase 1 of the website redesign project implementation included:

- Design a new visual interface for the site;

- Install the WordPress 3 for the development instance;

- Develop a WordPress 3 theme using new visual interface;

- Set up accounts and content categories;

- Migrate content from the 2006 site;

- Integrate the shopping cart functionality into the new visual interface;

- Install a production customer-facing instance of WordPress at http://JonFinn.com; and

- Migrate content and features from the development instance to the production instance.

The initial proposed go-live date for this feature was tentatively set at September 13.

Phase 2: Basic Site Membership

Phase 2 of the website redesign project implementation included many smaller features along with the major goal of free site membership registration. Phase 2 requirements included:

- Incorporate the JFG's Google Calendar performance calendar;
- Add new content areas: Inventions blog post category, sidebar content, and free members-only content;
- Configure WordPress to set permissions on members-only content; and
- Enable site member registration for access to free members-only content.

The initial proposed go-live date for this feature was October 4.

Phase 3: Paid Site Membership

Phase 3 of the website redesign project implementation included:

- Configure WordPress to allow for multiple permissions levels for members (paid and unpaid);
- Add the capability to accept recurring subscription payments for paid site membership;
- Implement security requirements to accept credit card payments on JonFinn.com.

The initial proposed go-live date for this implementation was October 28.

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Usability Survey Instrument

To evaluate the success of the website redesign, a survey instrument was created and distributed using SurveyMonkey.com. The goal of the instrument was to evaluate the end user's experience satisfaction in using the redesigned JonFinn.com following the completion of phase 3. Based on the ten web guidelines suggested by Brinck, Gergle, and Wood and the research objectives, each survey participant was given a five-point scale per question:

- 1 indicating "Not difficult at all";
- 2 indicating "Slightly difficult";
- 3 indicating "Moderatlely difficult";
- 4 indicating "Very difficult"; and
- 5 indicating "Too difficult to complete."

The following questions were asked on the survey instrument:

1. Rate the difficulty in finding a login form for JonFinn.com members.

2. Rate the difficulty in finding the registration form to create an account on JonFinn.com.

3. Rate the difficulty in adding a JonFinn.com store item to your shopping cart and checking out.

4. Rate the difficulty in viewing the JonFinn.com shopping cart.

5. Rate the difficulty in adding a comment to the bottom of the "Advanced Modern Rock Guitar" book product page.

6. Rate the difficulty in finding a free guitar lesson.

7. Rate the difficulty in finding and playing a video of the Jon Finn Group.

8. Rate the difficulty in determining the next Jon Finn Group live performance.

9. Rate the difficulty in searching JonFinn.com for the term "pentatonic."

10. Rate the difficulty in finding a product page for one of the Jon Finn Group's albums.

The survey instrument was to be distributed by Jon Finn via his Facebook contacts and via a musician website called Harmony Central, as well as to contacts known to Jon and the researcher following the completion of phase 3. Jon was also asked for his opinion on the usability of the WordPress administration portal as he was its primary user and stakeholder.

CHAPTER 4

Results of the Study

The 2010 redesign effort for JonFinn.com met the five research objectives outlined in Chapter 1:

1. Complete a visual and architectural overhaul of JonFinn.com to incorporate historical and upcoming content and technological needs, including integration with the online store and social networking services

2. Identify and implement a modern CMS that allowed administration of content and media (images, audio, video, documents, etc.)

3. Create a development site on which new ideas and functionality could be tested before applying them to a customer-facing production site

4. Identify and implement a mechanism allowing for end-user interaction that integrates with the CMS

5. Identify and implement a mechanism allowing for user and user subscription administration that integrates with the CMS

Objectives 1 through 4 were met with the completion of phase 1: site redesign and WordPress installation. Objective 5 was met with the completion of phase 3: paid membership.

Phase 1: Site Redesign and WordPress Installation

The conditions of the site, software installations, and file directory structures were assessed before beginning work (primum non nocere). Jon had previously

experimented with various content management systems available through the HostCentric one-click installation interface. He ended up using all 5 of the allotted MySQL databases available on his hosting plan. Only one database was required to support the 2006 website that customers were using at the time. The four other databases were deleted along with any software remnants of the one-click installations. All data on the web server was backed up for potential rollback scenarios.

WordPress 3 was installed and configured on May 20, 2010 for the development instance hosted at http://dev.jonfinn.com. Between then and late July 2010, design prototypes were submitted to Jon with efforts to reflect different aspects of his personality and his music: light-hearted, humorous, and musical. Many JFG songs often juxtaposed odd time signatures, unique melodies, and technicality with musical parody. His efforts to make his music entertaining for the casual or technical listener are evidenced even in some song titles: "If Stevie Ray Vaughan Went to Berklee and Studied Jazz," "The Industrial Strength Hoedown Extravaganza," "Spanish Ice," and "Left, Right, Upper and Lower" (a song written in the style of "Cheek to Cheek"). As such, a unique and lively approach to graphic design was taken.

In mid-July, Jon approved design prototypes based on an old radio schematic (see fig. 3). The design reminded him of a personal collection of fake musical inventions ("The Talent Booster," "The Digital Predictor," "The Blame Shifter," etc.) that could be used as unique, humorous content to bring users to the site were he to publish them in a blog format. The designs were soon exported into components that were used for the 2010 WordPress theme development.
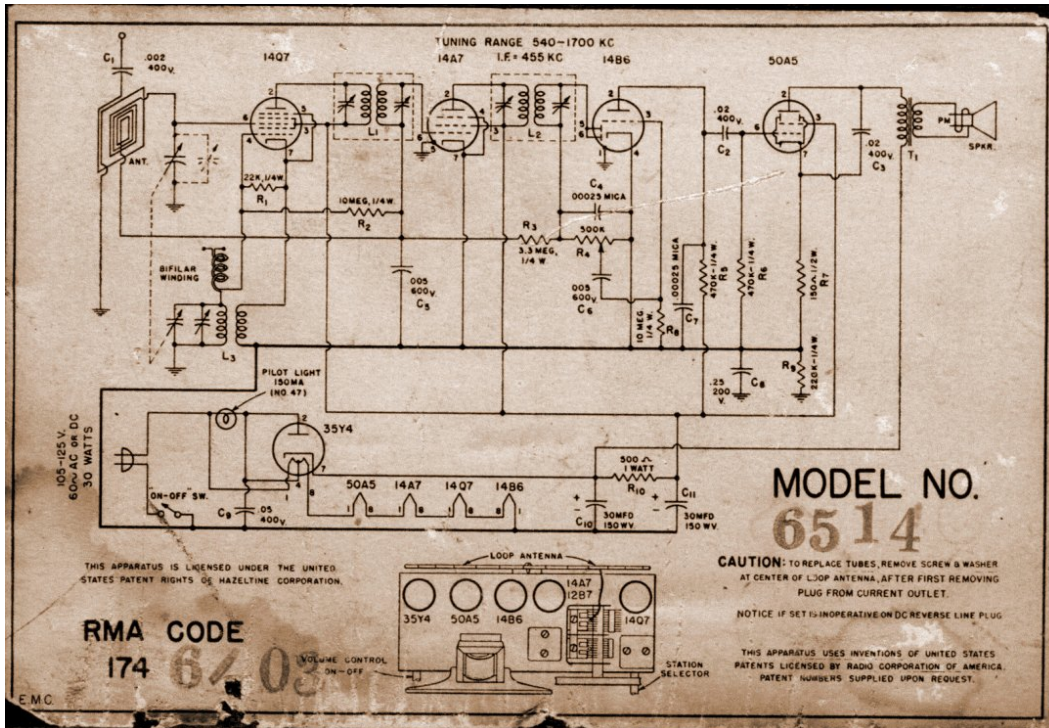
Figure 3. Radio schematic design inspiration.

By July 25, the WordPress 3 development instance was online and functional. Jon immediately began creating blog and page content in the WordPress administration portal. Doing so allowed him to familiarize himself with the new administration interface and to understand basic its functionality. Between July 24 and July 25, he had written more than 40 posts and added more than 100 items to the site's media library. As the theme development efforts were underway, he continued creating content and acclimating to the WordPress user interface and semantics.

The 2010 JonFinn.com theme was developed using the new WordPress theme, called Twenty Ten, as its code base. The theme made available many convenient features, such as "What You See Is What You Really Get" content editing, CSS-driven dropdown/rollover menus, multi-page posts, and various layout

capabilities (Thomas). Manipulating the Twenty Ten theme's primary style sheet required minimal effort in turning a mockup created in Photoshop into a functional website (see fig. 4). The theme was completed on July 31.

Figure 4. The 2010 redesign mockup for JonFinn.com.

Some design features of the Photoshop mockups posed unanticipated difficulties. In particular, the rounded brown border within the primary content section was inconsistent in its height and width when incorporated into the Twenty Ten theme's style sheet. The outer glow around the main content container block was replicated using CSS3, but proved to affect performance dramatically as dynamically generated gradients and shadows were processor-intensive, even on a multi-processor desktop computer (see fig. 5). When tested on Google Android and Apple iOS devices, such as the Motorola Droid and Apple iPad, the CSS3 drop shadow caused content scrolling to stutter, so the feature was dropped. Another

difference between the mockup and the real site was font usage. Only browsers with the "Hiragino Maru Gothic Pro" font installed would have seen the site as designed in the mockup. Only one other site design compromise was made in the transition from mockup to real-world implementation: site navigation.
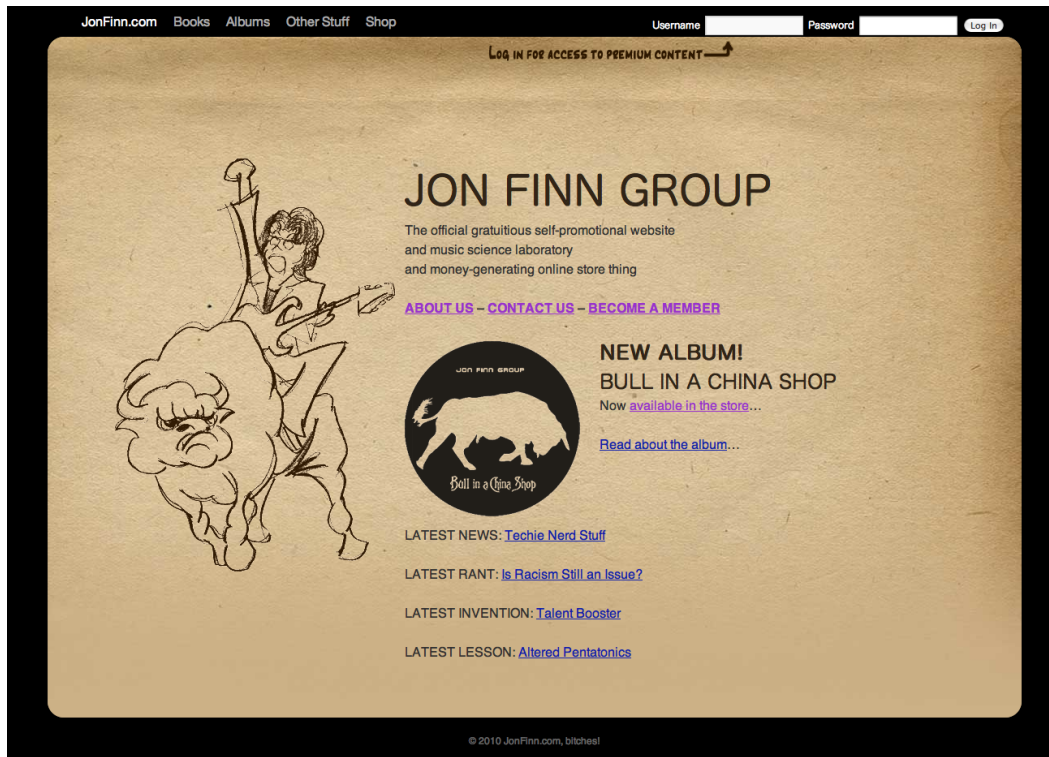
Figure 5. The finished 2010 redesign for JonFinn.com.

The development of the theme focused on simplicity and usability. The splash page welcomed users to JonFinn.com with the newest content of interest to JFG fans. It blended art from the BIACS album and informative, entertaining content. The navigation menu contained a limited number of high-level options to meet the primary business need of the site: to market and sell Jon's books, albums, tickets for live performances, and merchandise. The menu contained dropdown items for users with a mouse and led users to the primary content areas when using a

touch-based interface as touch-based interfaces do not allow for rollover/hover effects (since there is no mouse or cursor). The menu was accessible at the top of every screen outside of the main content frame so it was always available, but never interfering with the presentation of content (see fig. 6). For pages accessible from the splash page, links new content would have highest priority maximizing most of the screen real estate. Links to other content in the sidebar would occupy less than 25% of the viewport and be conveniently located, but not distracting. A simple scan of a paper texture in the background framed by a black border in an appealing provided a pleasing aesthetic meant to promote content and not distract. Putting the design in the background and the content in the forefront of the users' minds was the top priority.
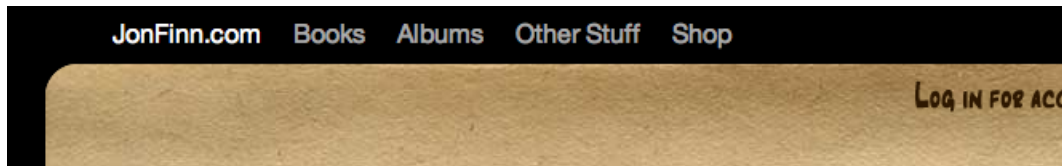
Figure 6. Navigational elements for the 2010 JonFinn.com.

The dynamic menu-generating feature of WordPress 3 was implemented for the global site navigational elements at the top of the screen. The Twenty Ten theme was built to fully support this administration capability and the rollover-style contextual menu at the top of every screen was implemented to allow for quick navigation to all major content areas of the website. Furthermore, the administration portal's menu management system featured a drag-and-drop interface that simplified the management of this menu, allowing a site administrator to save menu sets to be implemented in various locations within a site's theme. The navigation menu was placed at the top of every page between the top of the browser's viewport and the

top of the content container block. It was made possible using absolute positioning CSS directives, which allow a developer to specify the location of a content element to the specificity of a pixel. The Twenty Ten theme came with CSS to support the WordPress menu generation feature and was enhanced to conform the colors and style to the JFG 2010 theme, which included rounding the bottom corners of the rollover menus using the CSS3 border-radius attribute and changing the background and foreground colors of the menu (see fig. 7).
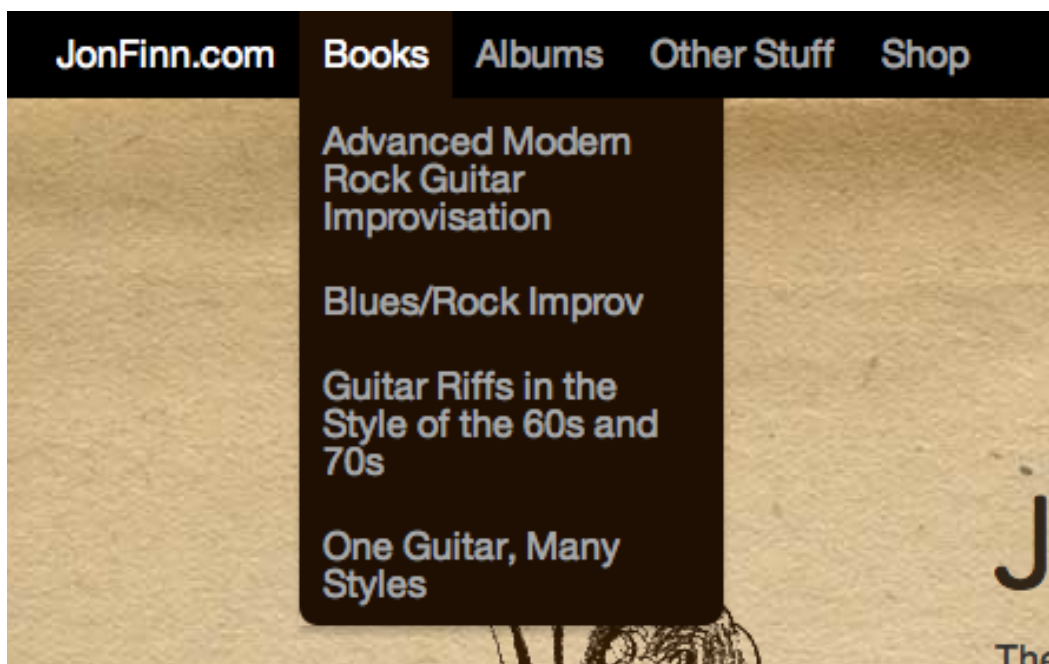
Figure 7. Navigational hover effects for the 2010 JonFinn.com.

With the theme of the website generally in place, content was migrated from the 2006 JonFinn.com website to the new development instance. The lack of content editing capabilities of the 2006 JonFinn.com design meant that most content had not been updated since 2006. This requires some content to be updated as necessary during the migration process. New content was also written as necessary. Digital

images of products, including album and book cover art, were not available and were scanned.

The development website work was completed on September 23 and the implementation of the production website began immediately. As software was installed at the root level of JonFinn.com, visitors encountered an "Under Construction" index.html page at the http://jonfinn.com/index.html. All old content from the 2006 website and other miscellaneous files were moved into a new folder called 2006.jonfinn.com at the root level so as to be available for a new subdomain: http://2006.jonfinn.com. The 2006-version of JonFinn.com was made available at this URL for archival and rollback purposes. WordPress 3.0.1 was installed at the web server's root directory via the HostCentric 1-click installation. The JFG-2010 theme was then installed and WordPress was configured for production usage. Content migration from the development instance was completed once WordPress 3 and the JFG-2010 theme were installed. As there is no official utility to migrate content from one instance to another, the content migration was a manual process of copying, pasting, and validation. Any referenced media files also required manual importing into the production instance.

The production migration was completed in six hours on the evening of September 23, 2010.

Phase 2: Basic Site Membership

The phase 2 requirements for the website were smaller in scope than those for phase 1 and included a much shorter iteration delivery: less than two weeks. The phase 2 requirements included:

- Enable user account registration;

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- Allow for administration of content restriction for members-only content;

- Integrate the JFG Google-hosted performance calendar into a performance calendar page; and

- Set up new blog-like site content categories.

The WordPress plugins repository at http://wordpress.org/extend/plugins/ and hosted a variety of content/user administration plugins that allowed members-only access to site content. Many of the plugins were limited in their feature sets in that they often involved restricted access of an entire website rather than any subset of site content. The plugin entitled "Private! WordPress Access Control Manager" (v1.6.5) was available to perform the required functions (X-Blogs). When installed and activated, WordPress issued a plugin incompatibility due to JonFinn.com running PHP4 as the plugin required PHP5. HostCentric allowed for the PHP version change through its hosting administration control panel, which was used to perform the upgrade

The Private! plugin had a very rich feature set with many customization capabilities. It featured a setup assistant that configured the plugin for a set of specific scenarios:

- "I want to run [a] private blog for my family, my friends or my business;"

- "I want to run a public blog with paid content in certain categories;" and

- "I want to run a members only page."

The purpose of implementing this plugin for phase 2 was specifically to allow for free members-only plugin as a marketing mechanism to eventually entice users to sign up for free accounts. The Private! plugin offered only partial functionality to this

requirement in that an administrator could not delegate access of certain categories to any specific user group. The plugin also entirely hid members-only content from unregistered users, which meant that unregistered users could not be made aware of any of the members-only content, nullifying the potential marketing opportunity. It was decided that the plugin did not meet the phase 2 requirements. It was deactivated and uninstalled with the aid of a built-in uninstallation process.

Another foray into content permission management was attempted with the "Members" plugin written by Justin Tadlock at http://justintadlock.com. The Members plugin allowed for the creation of new user groups, known as roles in WordPress, and permitting access of specific posts to specific roles. For example, a new post in a "Paid Lessons" category could have read access restricted to the "Administrator" and "Paid Subscriber" roles. At the time, the plugin release was at version 0.1.1 and did not include access permissions on an entire category, so all new posts in members-only categories required permission configurations. When an unregistered user accessed members-only content, such as the "Free Lessons" category, post titles were displayed with the post content replaced by "Sorry, but you do not have permission to view this content." With this plugin, members-only content titles could be displayed in the sidebar so unregistered members were aware of the latest content updates, but were granted no access to the content without registration. Despite the need to set permissions on every post as opposed to being able to set permissions on an entire category, this plugin met the requirements for phase 2, but needed to be replaced in phase 3 as it required much further customization to meet the functionality requirements for multi-level memberships. To validate the plugin functionality, a user "test" was created and assigned the role of

"Subscriber," which is the default role for all new WordPress users. A second user named "test_paid" was assigned the role of "Paid Subscriber," which would become the role for paying subscribers in phase 3. A new "Paid Lessons" category was created with a test post. The test post was assigned read permissions to the "Administrator" and "Paid Subscriber" groups. As expected, the "test" user could not read the content, but the "test_paid" and "Administrator" users could. The test was successful.

To best integrate site membership into the visual layout of the website without interrupting the look-and-feel, the login and password input text fields were inserted to the right of the primary site navigation menu at the top of the viewport. This worked well but raised a new set of problems.

When a user was logged in, the user should not have continued seeing the login form at the top of the screen. Instead, the site needed to let the user know that she/he is logged in. To do so required some custom PHP utilizing some of the WordPress global user parameters and session variables. Using global WordPress user variables, a new block of HTML and PHP was written.

When using WordPress' built-in wp_login_form() method, the text input fields were too large and extended beyond the width of the main content area. To work around this issue, the WordPress built-in wp_login_form() function was copied into the JFG-2010 theme's functions.php file into a new function called login_form() that included the smaller text input field settings. Doing so reduced the size and allowed the login form to fit in the navigation bar at the top of each screen (see fig. 8).

Figure 8. Login form design integration for the 2010 JonFinn.com.

With the login integration issues resolved, new content was written to promote the site membership capabilities. Additional code was written into the JFG-2010 theme to urge anonymous users to register for the site when the site detected the user is not logged in. The registration link was available in large text below the site's header banner (see fig. 9).
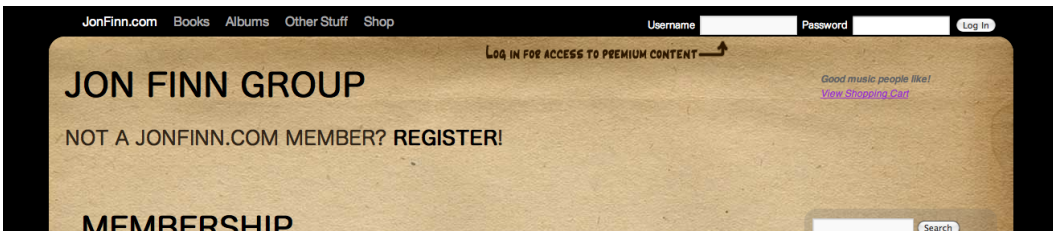
Figure 9. Registration link in the header banner for the 2010 JonFinn.com.

To further compel users to register members, new members-only content titles were added to the sidebar using free a plugin called "List Category," which listed posts by category (Sherif). If an unregistered user attempted to access the content by clicking the post title's link in the sidebar, the user encountered a message stating that the content was inaccessible to users not logged in. Displaying this message required some customization of the Members plugin.

To integrate the JFG performance calendar hosted by Google, Google Calendar's XML feed was used as input to a free plugin titled "Google Calendar Events" (Hanney). The plugin also included a widget that could be added to the

sidebar to display upcoming events, which was immediately added to the JFG-2010 theme. The performance calendar was also integrated into its own content page.

Phase 2's requirement for additional blog categories created a need to display the blog content on a dedicated page. Doing so would prevent the need for users to view multiple category pages to see the latest content updates. WordPress did not offer a method to displaying posts from user-specified categories on a single page, so a plugin was required to provide the functionality. "Map Categories to Pages" made available a post category assignment form to the page editing function in the WordPress administration portal. Assigning categories to a page using this plugin displayed links to posts from the assigned categories on a page. The "Free Lessons," "Inventions," and "Rants" categories were mapped to a blog rollup page, but the plugin, only displayed a list of post titles with no metadata. The plugin code was modified to include category assignments and dates to the plugin's output. The modifications allowed the plugin to display post titles, the category to which the content was assigned, and the publication date.

To improve usability of the content, various links were created between several pages. For example, the online store page did not contain links to the product pages, so those were added. Links were also added from the sidebar widgets to pages with more information (e.g. linking to the performance calendar page from the sidebar list of upcoming performances). Booking information for the JFG was added to the sidebar under the upcoming performances widget output and live performance videos were embedded throughout the site.

The phase 2 production implementation occurred on September 30 and included:

- Content updates and new blog categories;

- Blog content aggregation to a rollup page;

- The capability to assign read permissions to content;

- User registration with the login form in the navigation bar;

- Google Calendar integration; and

- Plugin code modifications to deliver the aforementioned requirements.

The phase 2 theme updates from the development site were packaged into a new release for roll back purposes.

Phase 3: Paid Membership

The primary requirement for phase 3 involved the implementation of paid membership via recurring subscription fees. It also included minor design improvements and features, like HTML5-compatible YouTube video embedding, adding a linkroll, and social networking integration.

Jon had an account with a credit card payment processor called Authorize.net. Their developer website provided a document describing their automated recurring billing [ARB] application programming interface [API]. The API is flexible in its implementation requirements in that one could have used a variety of scripting and programming languages, including PHP, the scripting language used by WordPress (Authorize.net). A very limited number of plugins were available to support ARB via WordPress in a free plugin. WP-Invoice had the highest rating and download numbers, so it was activated on the JonFinn.com development instance.

WP-Invoice allowed for the creation and management of invoices within the WordPress administration portal. It also allowed for different payment options,

including PayPal and Authorize.net integration, further including Authorize.net's ARB (Potanin). WP-Invoice had a variety of setting requirements before it could function in WordPress including: business name and address details; a dedicated WordPress page for displaying invoices; and Authorize.net and PayPal account information. The purpose of WP-Invoice was to allow a site administrator to generate an invoice, e-mail an invoice link to the recipient, and allow the recipient to provide PayPal or credit card information in a form within WordPress. The form was displayed within the site's theme so as to conform with the look-and-feel of the rest of the website. Credit card and other personal information collected over a website requires data encryption, however, so an SSL certificate was purchased and implemented on October 18. This was accomplished through the HostCentric control panel.

WP-Invoice functioned without issue on the dev site. However, it only offered a specific set of functionality that did not fully meet the requirements for a paid membership website. Invoices could not be generated on-demand by a customer. Instead, a site administrator needed to log into the WordPress administration portal and generate the invoice and details. There was no opportunity for a customer to fill in a form to purchase a site membership. Furthermore, even if the plugin provided such functionality, significant manual administration would be required to manage the users who have paid and their levels of access to content within the site. While WP-Invoice performed the invoice management function without issue, it did not meet the full requirements of implementing paid subscriptions on JonFinn.com. It did serve as a useful proof of concept in that

Authorize.net functionality could be provided via JonFinn.com using WordPress and plugins.

Aside from WP-Invoice, there were no other free plugins that implemented ARB in a context useful for the paid membership requirement of phase 3. This meant that commercial plugin options needed consideration. Your Members was a commercial WordPress plugin available for $50 that provided all the functionality necessary to run a paid membership WordPress site. It accepted a variety of payment gateways, including Authorize.net, and automated all user administration aspects of content access. While it did not provide full ARB functionality, the feature was slated for an upcoming release ("Feature Overview"). The plugin did provide such useful features as: unlimited subscription types; partial content protection; secure RSS feeds; and membership options like coupon codes, discounts, and trial periods.

Once installed and configured, the plugin customized the WordPress member registration form allowing a new user to sign up for a subscription upon registration. For registered unpaid users, it offered a membership upgrade option allowing the user to add a subscription option to their account. For registered paid users, it offered membership upgrade and downgrade options. All of these features were available with minimal customization.

The Your Members implementation was completed with the deactivation of the "Content Permissions" component within the Members plugin, which was installed to support the content permissions needs of phase 2. Your Members handled all content permissions by placing an access control panel on editing screens for all pages and posts within WordPress. The only Members plugin components necessary to support the site were "New Roles" and "Edit Roles."

Adding paid membership options to the site required content to inform users of the new feature. New content was written to promote the paid membership capabilities of the site and a new Members menu option was added to the primary site navigation. The Menus rollover menu contained links to the free and paid content available to members and a link to the user's account settings.

In addition to the paid subscription feature, other phase 3 work included HTML5 embedding of YouTube videos and addition of the linkroll. To implement the HTML5 embedding of YouTube videos, a YouTube beta feature known as "iframe embedding" was utilized. YouTube iframe embedding allowed for automatic loading of HTML5 or Flash versions of the embedded videos (Google, Inc.). If the web browser was capable of supporting Flash, the Flash video would display on the page. Millions of mobile devices were incapable of running Adobe Flash at the time of this writing (e.g. any of the Apple iOS devices, such as the iPhone, iPad, and iPod Touch and most Google Android devices). Implementing the iframe embed code merely required a replacement of any YouTube code on JonFinn.com in any content areas (posts, pages, etc.).

The linkroll feature was also important in terms of search engine optimization [SEO]. While a Google search for Jon Finn yielded JonFinn.com as its top result, a search for 'Bull in a China Shop' did not yield any relevant results on the first page of Google search results. As Nielsen and Loranger points out, 90% of users do not look beyond the first page of search engine results (Nielsen 39). Therefore, by adding the linkroll to JonFinn.com, the site linked to other credible music-based sites thereby bolstering a search engine's confidence that JonFinn.com is a legitimate and credible website to which end users should be sent for relevant

search terms. This increases a feature known in the Google search algorithm known as TrustRank. Other search engines' algorithms have emulated this feature, so it is likely that intentionally improving credibility to exploit TrustRank will yield better search result presence on other search engines (Gyöngyi, et. al.). The linkroll included links to Jon's hardware endorsement companies, the Boston Pops, Berklee College of Music, and other related, established websites thought to improve the credibility of JonFinn.com.

To integrate the site with social networking services, the Sociable WP3 plugin was deployed. The plugin appended a series of small icons to each individual post or page within the site that allowed users to bookmark or post the content's URL to their favorite social networking services, such as Facebook or Twitter ("The New Home of Sociable"). The icons were non-intrusive and small (16 pixels by 16 pixels) so as not to distract the end-user from enjoying the site.

Phase 3 was implemented on the production website on October 26, 2010, but did not include all of the features described above. Despite being technologically ready to support paid subscriptions following the implementation, Jon was not ready to make paid subscriptions available to the public. He wanted to develop additional premium content for paid members and granting access to a limited number of users as the number of premium content items was deemed insufficient for paying customers. The process of content development and preparation for paid membership was expected to take approximately six months and go live in the summer of 2011. Thus, the WordPress production instance included only the implementation of the Your Members plugin, updating of YouTube videos to use

HTML5, the deactivation of content permissions through the Members plugin, and the addition of the linkroll in the sidebar.

Usability Survey Instrument

On October 27, 2010, a hyperlink to the usability survey instrument was distributed via a Harmony Central forums post and contacts known Jon and to the researcher (Finn, "Favor to ask"). A total of 27 respondents completed the survey by November 2. SurveyMonkey allowed for the option to have end-users leave comments if they chose. This feature was offered in the survey instrument as Brinck, Gergle, and Wood recommended soliciting feedback from users to understand their perspectives and approaches on completing tasks within a usability survey instrument. Many of the comments left by the users are included in the each of the survey instrument results below. All responses were collected using the following rating scale:

- 1 indicating "Not difficult at all";

- 2 indicating "Slightly difficult";

- 3 indicating "Moderately difficult";

- 4 indicating "Very difficult"; and

- 5 indicating "Too difficult to complete."

Brinck, Gergle, and Wood mentioned that a usability test is "usually a series of tasks users are asked to perform" (436). Often, 80 percent of usability problems can be detected with as few as three or four users, so having had 27 respondents complete the usability survey instrument was determined to be a sufficient indicator as to the overall usability of the 2010 JonFinn.com when measuring against the key functionality requirements for the site.

Question 1 asked users to rate the difficulty in finding the login form. Results were as follows (see fig. 10):

- 26 (96.3%) responded "Not difficult at all"; and

- 1 (3.7%) responded "Slightly difficult."

Comments from the respondents included:

- "It needs two clicks. Why not a 'register' or 'log on' link directly on the home page? And why two links ('register' and 'sign up')?";

- "first thing I noticed" (sic);

- "By login form what do you mean? I don't see a specific page or form… Just two little boxes in the top right" (sic); and

- "Log in is in a pretty standard location."
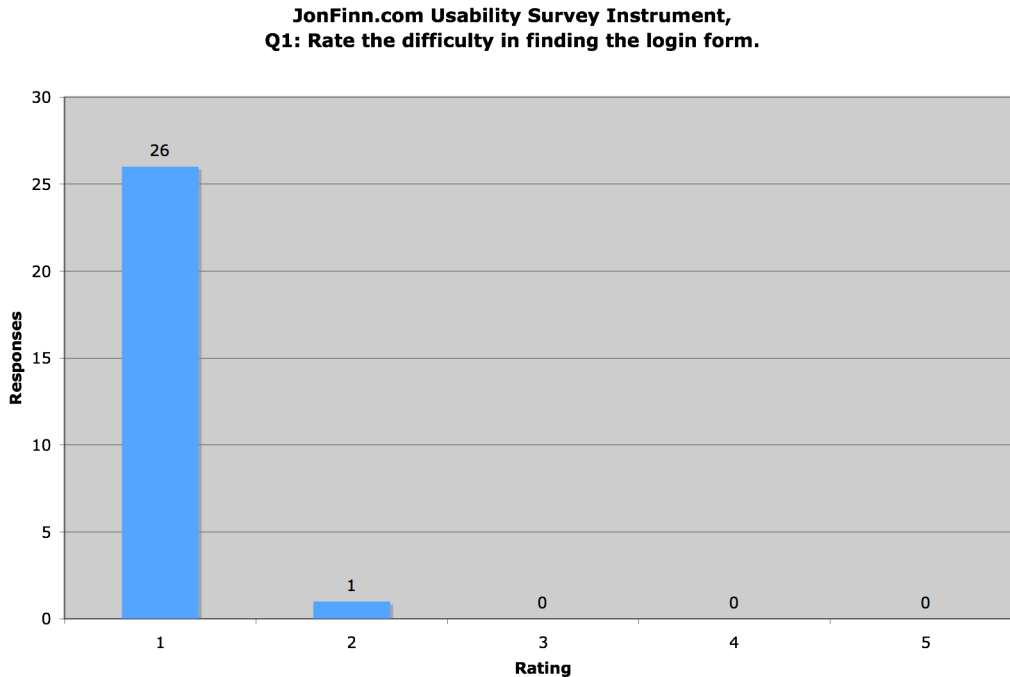
Figure 10. Usability survey instrument results for Q1.

Question 2 asked users to rate the difficulty in finding the registration form to create an account. Results were as follows (see fig. 11):

- 18 (66.7%) responded "Not difficult at all";

- 6 (22.2%) responded "Slightly difficult"; and

- 3 (11.1%) responded "Moderately difficult."

Comments from the survey respondents included:

- "Might want to put 'Become a Member' Closer to the login. I think people are used to that" (sic);

- " Not difficult, could just be made more direct/economical"; and

- "I would locate the registration information closer to the log in information. The white on black text boxes draw the eye easier than another blue link on a page."

**JonFinn.com Usability Survey Instrument,
Q2: Rate the difficulty in finding the registration form to create an**

Figure 11. Usability survey instrument results for Q2.

Question 3 asked users to rate the difficulty in adding an item to the

shopping cart and locate the check-out button. Results were as follows (see fig. 12):

- 21 (77.8%) responded "Not difficult at all";

- 5 (18.5%) responded "Slightly difficult"; and

- 1 (3.7%) responded "Moderately difficult."

Comments from the survey respondents included:

- "The word 'REGISTER' on the SHOP page should be a link" (sic); and

- "No more of a pain than other websites."

JonFinn.com Usability Survey Instrument,
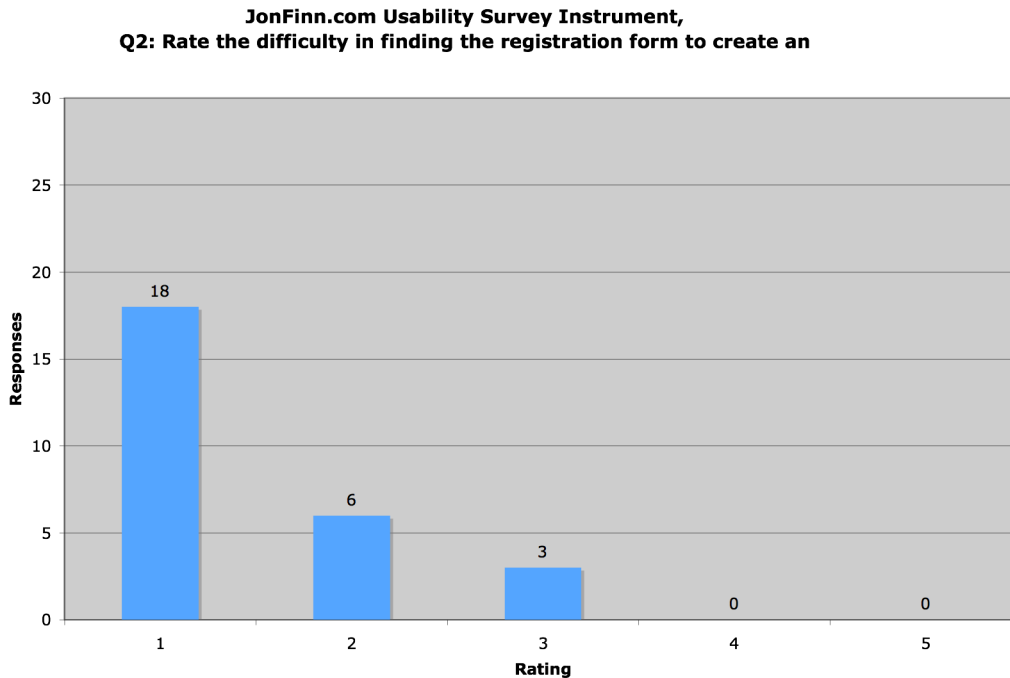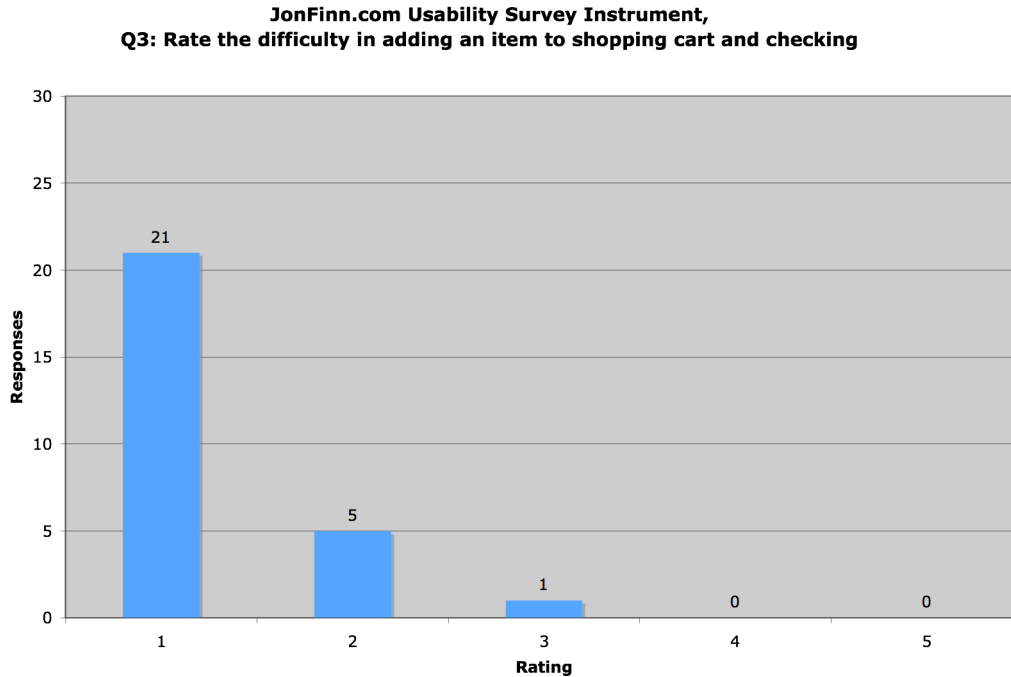**Q3: Rate the difficulty in adding an item to shopping cart and checking**

Figure 12. Usability survey instrument results for Q3.

Question 4 asked users to rate the difficulty in viewing the contents of their

shopping carts. Results were as follows (see fig. 13):

- 22 (81.5%) responded "Not difficult at all"; and

- 5 (18.5%) responded "Slightly difficult."

Comments from the survey respondents included:

- "I found this easier than most sites on the web!";

- "Multiple buttons for this is a good touch";

- "Slight delay in getting back to the shop"; and

- "I like the fact that it takes you to the cart after each addition; however, once you move on to the other items and dig deeper into product description, the link can be lost. The font is smaller and purple blends into the brown a bit" (sic).

**JonFinn.com Usability Survey Instrument,
Q4: Rate the difficulty in viewing the JonFinn.com shopping cart.**
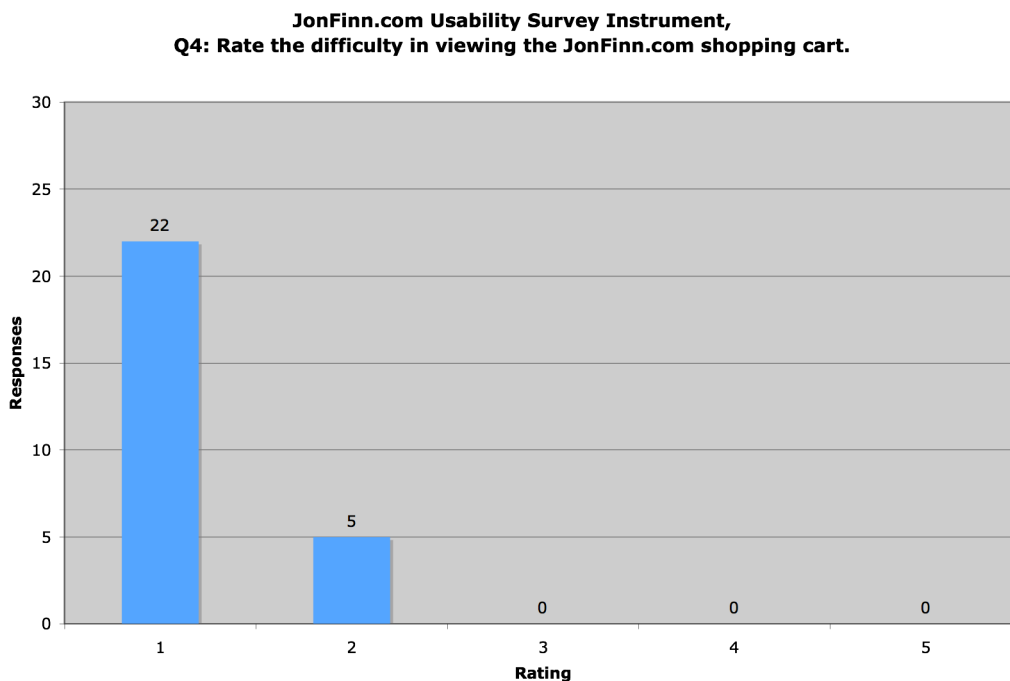
Figure 13. Usability survey instrument results for Q4.

Question 5 asked users to rate the difficulty in adding a comment to the "Advanced Modern Rock Guitar" product page. Results were as follows (see fig. 14):

- 20 (74.1%) responded "Not difficult at all";

- 5 (18.5%) responded "Slightly difficult"; and

- 2 (7.4%) responded "Moderately difficult."

Comments from the survey respondents included:

- "Not difficult (It needs some prettying up though)" (sic).

JonFinn.com Usability Survey Instrument,
Q5: Rate the difficulty in adding a comment to a product

Figure 14. Usability survey instrument results for Q5.

Question 6 asked users to rate the difficulty in finding a free guitar lesson.

Results were as follows (see fig. 15):

- 18 (72%) responded "Not difficult at all";

- 4 (16%) responded "Slightly difficult"; and

- 3 (12%) responded "Moderately difficult."

Comments from the survey respondents included:

- "Found it immediately";

- "There could be a 'Free lessons' link, maybe art the top of the home page, instead of hidden in the 'Other Stuff' menu. There is 'latest lesson' down the bottom, but it's not clear this is free" (sic); and

- "Located under 'Other stuff' is not intuitive."
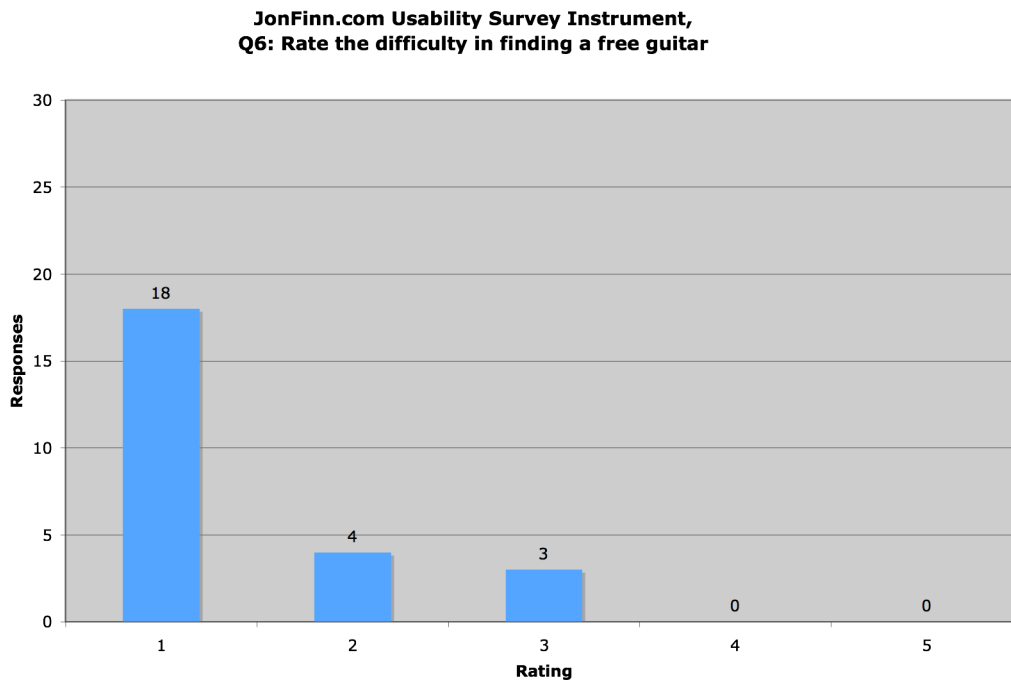
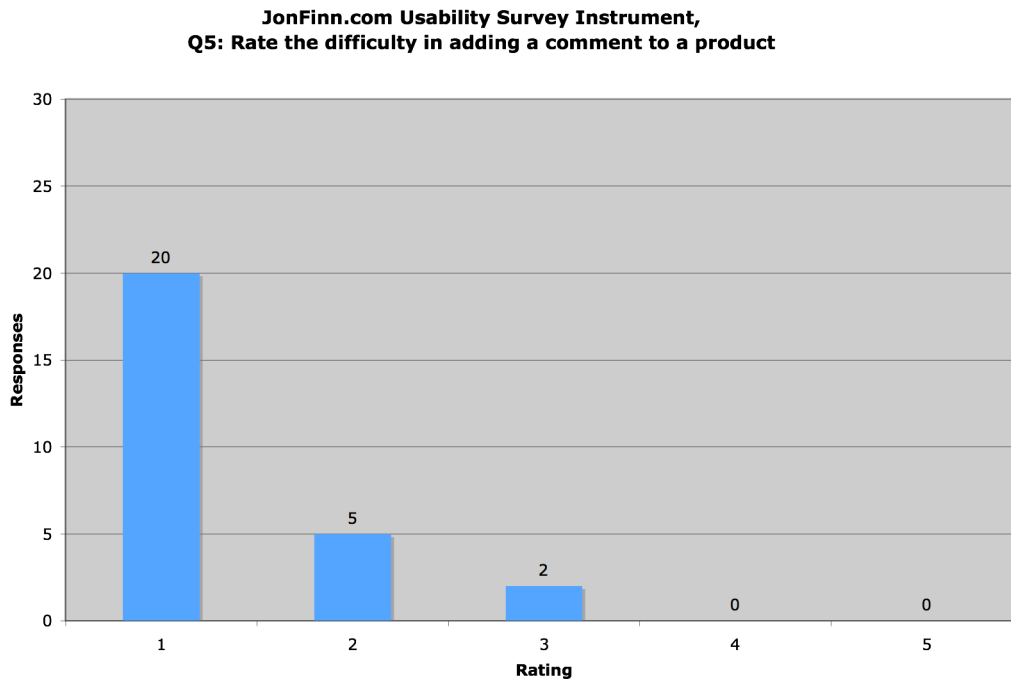
Figure 15. Usability survey instrument results for Q6.

Question 7 asked users to rate the difficulty in finding and playing a video of the Jon Finn Group. Results were as follows (see fig. 16):

- 18 (72%) responded "Not difficult at all"; and

- 7 (28%) responded "Slightly difficult."

Comments from the survey respondents included:

- "Again, why not a main link across the top, rather than part of a dropdown menu? Unless you consider all those things under 'Other Stuff' to be of secondary importance" (sic);

- "Saw the link in previous search…."

JonFinn.com Usability Survey Instrument,
Q7: Rate the difficulty in finding and playing a video of the Jon Finn Group.
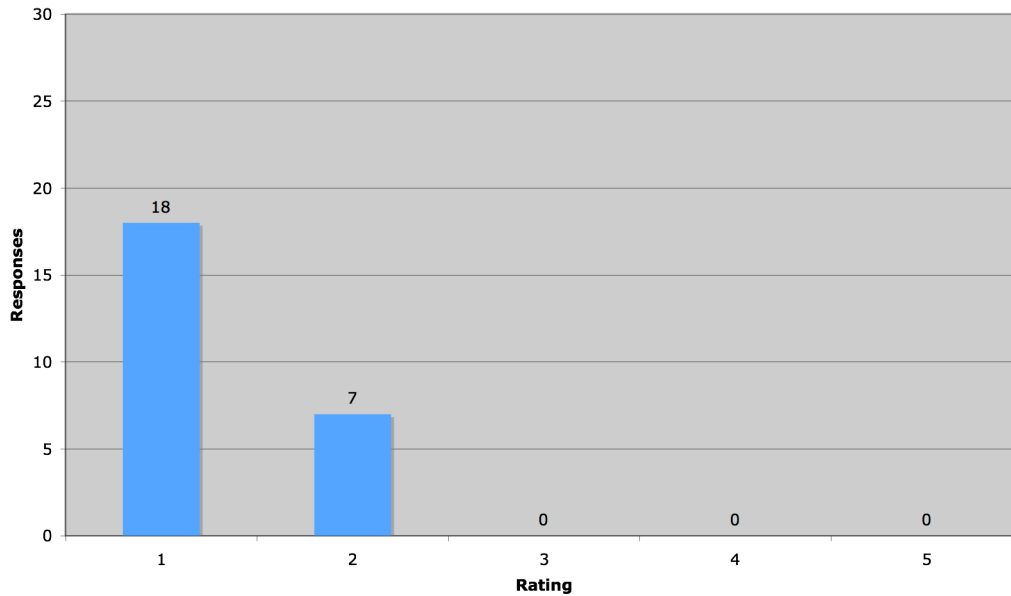
Figure 16. Usability survey instrument results for Q7.

Question 8 asked users to rate the difficulty in determining the date of the next JFG live performance. Results were as follows (see fig. 17):

- 19 (76%) responded "Not difficult at all";

- 5 (20%) responded "Slightly difficult"; and

- 1 (4%) responded "Very difficult."

Comments from the survey respondents included:

- "I like 'gigs', most people will probably be OK with 'gigs', but civilians might find 'tour dates' or 'upcoming performances' more non-musician friendly."
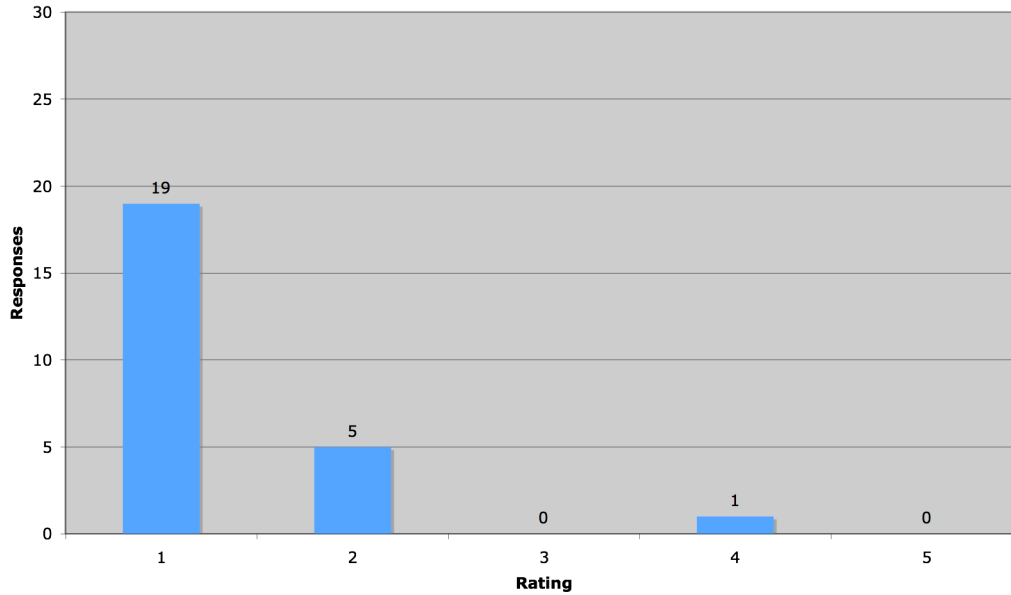
Figure 17. Usability survey instrument results for Q8.

Question 9 asked users to rate the difficulty in searching for the term "pentatonic" using the site's search option. Results were as follows (see fig. 18):

- 17 (68%) responded "Not difficult at all";

- 6 (24%) responded "Slightly difficult";

- 1 (4%) responded "Moderately difficult"; and

- 1 (4%) responded "Too difficult to complete."

Comments from the survey respondents included:

- "I think that the search component should have been more obvious"; and

- "No search box on home page!"

JonFinn.com Usability Survey Instrument,
**Q9: Rate the difficulty in searching for the term "pentatonic."**
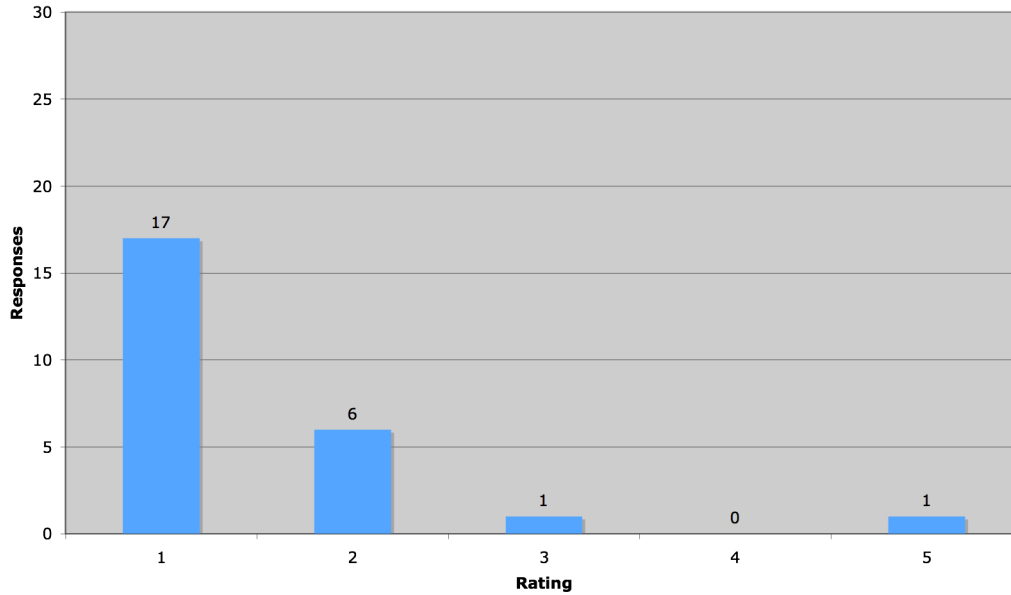
Figure 18. Usability survey instrument results for Q9.

Question 10 asked users to rate the difficulty in finding a product page for any one of the JFG's albums. Results were as follows (see fig. 19):

- 18 (90%) responded "Not difficult at all"; and

- 2 (10%) responded "Slightly difficult."

No comments were left by the survey respondents.
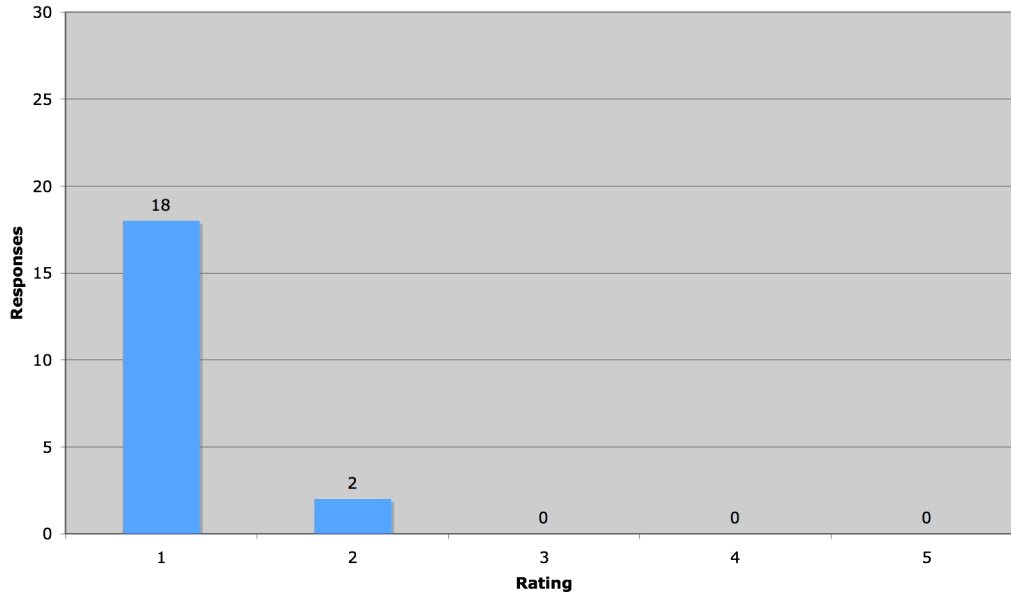
Figure 19. Usability survey instrument results for Q10.

Altogether, the results showed (see fig. 20):

- 197 (77.4%) responses indicated "Not difficult at all";

- 46 (17.9%) responses indicated "Slightly difficult";

- 10 (3.8%) responses indicated "Moderately difficult";

- 1 (0.4%) response indicated "Very difficult"; and

- 1 (0.4%) response indicated "Too difficult to complete."

These results reflected user satisfaction, which was further evidenced by one particular comment: "I found the site very easy to navigate – nice job!"
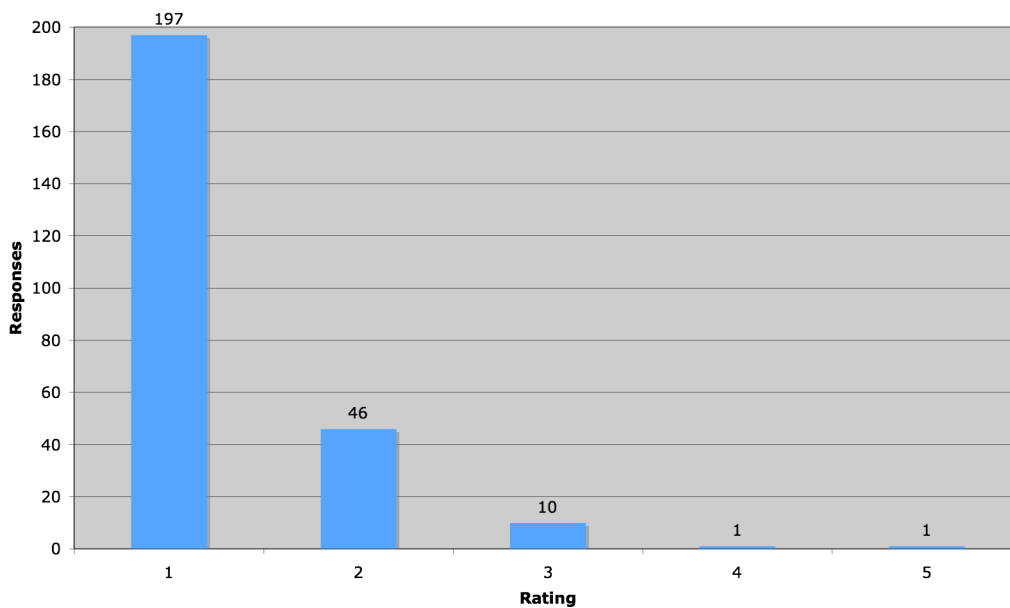
Figure 20. All usability survey instrument results tallied.

CHAPTER 5

Conclusions And Recommendations

Various conclusions can be drawn following the completion of the 2010

JonFinn.com redesign. These conclusions stem from analysis of multiple data

sources: website analytics; usability survey instrument responses; and stakeholder

feedback.

Website Analytics

Between September 29, 2010 (the completion of phase 1) and October 24,

2010 (the completion of phase 3), the redesigned JonFinn.com saw the following

usage metrics:

- 647 visits (25 visits per day)

- 2,019 page views

- 3.12 pages viewed per visit

- 2 minutes, 33 seconds average time spent per visit

- 68% new visits

- 40% visits originating from search engine results, 24% from direct traffic,
  and 35% from referring sites

These results indicated that the site was seeing an increase in return visitors

given the decrease in percentage of new visits. Despite the fact that the site was

seeing fewer users per day, the increase in pages viewed per visit and the average

time spent on the site imply that the site content was engaging users and they were

spending more time on the site reading more content. The most popular content on

the 2006 site was the "Guitar" section of the website, which primarily contained free

guitar lessons, but the most popular content on the 2010 site was the online store for

the specified dates. It should be noted that the "Guitar" section of the 2006 website was removed from the 2010 site and replaced with the members-only guitar lesson content, not all of which was made live on the 2010 site by October 24.

Usability Survey Instrument Responses

As mentioned by Brinck, Gergle, and Wood, most major problems will be discovered within the first five survey responses (418). Overall, there were 27 respondents providing 255 responses to the 10 questions.

- 197 (77.4%) responses were in the "Not difficult at all" category;
- 46 (17.9%) responses were in the "Slightly difficult" category;
- 10 (3.8%) responses were in the "Moderately difficult" category;
- 1 (0.4%) response was in the "Very difficult" category; and
- 1 (0.4%) response was in the "Too difficult to complete" category.

Considering that 95.4% of all responses were in the "Not difficult at all" and "Slightly difficult" categories, the design and implementation of the 2010 JonFinn.com was well received among respondents. Users had the most difficulty with finding the registration form to create a user account; adding an item to the shopping cart and checking out; finding a free guitar lesson; determining the next upcoming JFG performance, and searching the site. Amongst those categories, however, a significant majority of the responses were in the "Not difficult at all" category. Comments left by the respondents indicated that the registration and login capabilities should be made more obvious and those functionalities should be clearly delineated to avoid confusion and additional clicking.

Stakeholder Feedback

Being the primary stakeholder, Jon Finn provided feedback on the usability of the new site. He mentioned that he has been learning about HTML and file transfer processes since 1996 through his personal and professional usage of JonFinn.com and that these experiences have been time-consuming. The 2006 website offered some customized forms that allowed him to update the performance calendar and site news sections, but any other updates were relegated to modification of PHP and HTML files. Any attempts made at implementing message boards were rendered unusable due to the amount of spam posted.

The 2010 redesign has revealed long-term benefits, including the capabilities to update the site from his cell phone, maintain the site's navigation with relative ease, and that the development instance of the site has allowed him to learn about WordPress and its features without worrying about breaking the production instance. He has been able to learn how to manage his site and to implement his long-term goals for the site.

Based on his feedback, it can be concluded that he is excited about the 2010 redesign, but understands that he will face a significant amount of work to meet his goals. The site's infrastructure is in place and he likens the delivery of the 2010 site to a new house. He has been given the keys to the house, but it is up to him "to choose the colors, decorating and landscape" (Finn, "Re: Feedback").

Conclusions

Several conclusions can be drawn from the results presented in chapter 4 and the aforementioned analytics, usability survey results, and stakeholder feedback data.

1. *The 2010 JonFinn.com redesign engaged end-users and retained their attention.* Based on the website analytics data, it can be inferred that users are finding the content and design of the 2010 JonFinn.com more engaging than the 2006 site, given the increase in the amount of time spent on the site and the increase in the number of pages viewed.

2. *The 2010 JonFinn.com redesign met end-users' usability expectations.* The usability survey results indicated that the redesign of JonFinn.com met the usability needs of the end-user suggested by Jennifer Tidwell with more than 95% of users reporting that the tested site functionalities could be executed with little-to-no difficulty.

3. *The 2010 JonFinn.com redesign met the stakeholder's functionality and usability expectations.* Based on the positive stakeholder feedback, it can be concluded that the set of technologies chosen in the site's implementation met the functional requirements set at the beginning of this project. Jon is now able to administer the content and users of his website without the assistance of a developer resource.

4. *A customer-facing, revenue-generating website can be developed and customized using free open-source software.* Despite the fact that there are: monthly web hosting charges for JonFinn.com that include the cost of shopping cart software, payment gateway and processing costs (such as Authorize.net), and software costs for fully-featured membership website administration plugins, there were a variety of options available to build a paid membership website at no cost beyond hosting charges. The Your Members plugin offers sophisticated functionality beyond that of many

free options, but some of the free options were quite viable if a site administrator wanted to put in extra time for subscription management by using a plugin like WP-Invoice with a widely-adopted and free service like PayPal.

5. *WordPress 3 was a viable content management system for sites needing to support various content types (beyond simple blogging).* The 2010 JonFinn.com redesign used WordPress to support simple content types like pages, blog posts, and comments without any customization. Its extensibility through plugins and new features built in to version 3 make it a very flexible and simple option for site administrators and content editors of varying technological experience and understanding.

6. *HTML5 and CSS3 were viable technologies despite the incomplete state of the W3C recommendation.* The HTML5 specification coupled with CSS3 was supported in the major web browsers available at the time without impeding on the usability of the site. YouTube, one of the most popular services on the Internet, believed in it enough to offer HTML5 <video> tag capabilities in its iframe embedding code (although it should be noted that the offering was still in its beta stage). No end-users mentioned functionality issues related to HTML5 or CSS3 in their responses to the usability survey instrument, even in question 7 of the survey that specifically asked users to play a YouTube iframe embedded video.

7. *Building development and production instances of the 2010 JonFinn.com was useful in testing new features before implementing in a customer-facing production environment.* Many plugins were downloaded, installed, activated, tested, and

deactivated in the process of developing and implementing the site

redesign. Having a development environment in which they could be

tested was beneficial in that new content and functionality could be

written and edited without the risk of a customer encountering a problem

in the site's availability. Furthermore, Jon could develop an understanding

of WordPress without worrying about breaking his website or its

appearance, a capability that was not at all possible with the 2006

JonFinn.com.

Recommendations

Usability was one of many critical aspects in the design, development, and

implementation of a customer-facing, revenue-generating website. Some

recommendations were gleaned directly from the hard data resulting from the web

analytics and usability survey instrument responses. Some recommendations were

gleaned from subjective observation throughout the completion of this project.

1. *When developing a membership website, ensure there is enough content available to go live before enabling paid membership capabilities.* At the onset of the 2010

   JonFinn.com redesign, it was thought that phase 3 would not only

   provide the functionality of paid memberships, but also that paid

   memberships would be a go-live feature when implemented in the

   production environment. Jon decided not to move forward on offering

   paid subscriptions to users as there was not enough content available.

   The excitement of implementing a revenue opportunity should be met

   with the preparation of content for which a customer would be willing to

   pay.

2. *Paid software can offer functionality that is beyond what may be available for free.*

   The completion of phase 3 was completely dependent upon the

   functionality provided by the Your Members plugin. Were it not for the

   $50 plugin cost, there would likely have been no simple or realistic way to

   integrate the various free plugins available for WordPress. Furthermore,

   the customer base using Your Members already has experience with

   various payment gateways and other functionalities that likely would not

   have been thought of had a custom solution been developed for

   JonFinn.com.

3. *When offering a login form on a website, ensure a registration link is available nearby.*

   The 2010 JonFinn.com redesign received the most criticism via user

   comments regarding the registration and login processes. When asked to

   locate the registration form to become a site member, survey respondents

   left eight comments regarding confusion caused by the lack of a

   registration link near the login form. This is clearly an expectation that

   users have and should have been incorporated in the phase 2 and 3

   theme templates.

4. *Site search should be available everywhere on a site, not just subpages.* Another

   problem users encountered in the usability survey instrument was the

   location of the search box. It was the only functionality of the site in

   which a user could not complete the task (see fig. 18). One user

   commented "No search box on home page!" while another wrote "I

   think that the search component should have been more obvious."

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APPENDIX A

USABILITY SURVEY INSTRUMENT

JonFinn.com Usability Survey Instrument Edit

| Design Survey | Collect Responses | Analyze Results |

Edit Survey

- **Edit Survey**
- **Survey Options**
- **Print Survey**
- **Restore Questions**

Preview Survey

To change the **look** of your survey, select a theme below.

[Blue Ice ▾]   [Create Custom Theme]

[+ Add Page]

PAGE 1   [Edit Page] [Add Page Logic] [Move] [Copy] [Delete]   Show this page only

1. JonFinn.com Usability Survey Instrument

Introduction
Thank you so much for taking the time to complete this usability survey.

This usability survey instrument was created to evaluate the 2010 redesign of JonFinn.com. The results of this survey instrument will be analyzed and written about in a master's thesis project managed by the site developer, Anthony Garone (anthony@jonfinn.com). The results of the survey will also be used in improving the design of JonFinn.com.

No personal information will be collected in this survey.

Instructions
To complete the usability survey instrument, you will be required to have JonFinn.com open in a web browser of your choice in a separate window or tab in your browser. Each of the questions will require you to provide your subjective opinion regarding the difficulty in completing ten very basic tasks.

It is expected that this survey will take approximately 15 minutes to complete.

Each of the questions offers a difficulty rating scale. While the rating options are subjective in nature, you can follow these general guidelines

- Not difficult at all: The task took no more than 15 seconds to complete
- Slightly difficult: The task took no more than 30 seconds to complete
- Moderately difficult: The task took no more than 45 seconds to complete
- Very difficult: The task took no more than 60 seconds to complete
- Too difficult to complete: The task could not be completed

There are optional comment fields attached to each question in case there is specific feedback you would like to provide to the site developer. Feel free to say whatever you like regarding any of the tasks. There is also an option at the end of the survey in which you can provide any other feedback regarding the site, its design and usability.

[+ Add Question]

+ Add Page

PAGE 2   Edit Page   Add Page Logic   Move   Copy   Delete

2. JonFinn.com Membership

+ Add Question

Q1   Edit Question   Add Question Logic   Move   Copy   Delete

✱ 1. Rate the difficulty in finding a login form for JonFinn.com members. (Note: Do NOT create an account, just find the login form.)

○ Not difficult at all

○ Slightly difficult

○ Moderately difficult

○ Very difficult

○ Too difficult to complete

Comments

[ ]

+ Add Question   Split Page Here

Q2   Edit Question   Add Question Logic   Move   Copy   Delete

✱ 2. Rate the difficulty in finding the registration form to create an account on JonFinn.com. (Note: Do NOT create an account, just find the registration form.)

○ Not difficult at all

○ Slightly difficult

○ Moderately difficult

○ Very difficult

○ Too difficult to complete

Comments

[ ]

+ Add Question

+ Add Page

PAGE 3   Edit Page   Add Page Logic   Move   Copy   Delete

3. JonFinn.com Online Store

+ Add Question

Q3   Edit Question   Add Question Logic   Move   Copy   Delete

✱ 1. Rate the difficulty in adding a JonFinn.com store item to your shopping cart and checking out. (NOTE: Do NOT complete the checkout process. Just find the checkout link/button.)

○ Not difficult at all

○ Slightly difficult

○ Moderately difficult

○ Very difficult

○ Too difficult to complete

Comments

[ ]

| + Add Question | Split Page Here |

Q4 | Edit Question | Add Question Logic | Move | Copy | Delete |

✱2. **Rate the difficulty in viewing the JonFinn.com shopping cart.**

- ○ Not difficult at all
- ○ Slightly difficult
- ○ Moderately difficult
- ○ Very difficult
- ○ Too difficult to complete

Comments

[   ]

| + Add Question |

| + Add Page |

PAGE 4 | Edit Page | Add Page Logic | Move | Copy | Delete |

4. JonFinn.com User Interaction

| + Add Question |

Q5 | Edit Question | Add Question Logic | Move | Copy | Delete |

✱1. **Rate the difficulty in adding a comment to the bottom of the "Advanced Modern Rock Guitar" book product page.**

- ○ Not difficult at all
- ○ Slightly difficult
- ○ Moderately difficult
- ○ Very difficult
- ○ Too difficult to complete

Comments

[   ]

| + Add Question |

| + Add Page |

PAGE 5 | Edit Page | Add Page Logic | Move | Copy | Delete |

5. JonFinn.com Content

| + Add Question |

Q6 | Edit Question | Add Question Logic | Move | Copy | Delete |

✱1. **Rate the difficulty in finding a free guitar lesson.**

- ○ Not difficult at all
- ○ Slightly difficult
- ○ Moderately difficult
- ○ Very difficult
- ○ Too difficult to complete

Comments

[   ]

+ Add Question | Split Page Here

Q7 | Edit Question | Add Question Logic | Move | Copy | Delete
✱2. Rate the difficulty in finding and playing a video of the Jon Finn Group.

○ Not difficult at all

○ Slightly difficult

○ Moderately difficult

○ Very difficult

○ Too difficult to complete

Comments

[ ]

+ Add Question | Split Page Here

Q8 | Edit Question | Add Question Logic | Move | Copy | Delete
✱3. Rate the difficulty in determining the next Jon Finn Group live performance.

○ Not difficult at all

○ Slightly difficult

○ Moderately difficult

○ Very difficult

○ Too difficult to complete

Comments

[ ]

+ Add Question | Split Page Here

Q9 | Edit Question | Add Question Logic | Move | Copy | Delete
✱4. Rate the difficulty in searching JonFinn.com for the term "pentatonic."

○ Not difficult at all

○ Slightly difficult

○ Moderately difficult

○ Very difficult

○ Too difficult to complete

Comments

[ ]

+ Add Question

+ Add Page

PAGE 6   Edit Page   Add Page Logic   Move   Copy   Delete   Show this page only

6. Thank You

Thank you once again for taking the time to complete this usability survey instrument. Your time is appreciated. If you would like to provide additional feedback regarding JonFinn.com or this survey instrument, please feel free to send an e-mail to anthony@jonfinn.com.

+ Add Question

+ Add Page

PAGE 7   Edit Page   Move   Copy   Delete   Show this page only

7. JonFinn.com Product Pages

+ Add Question

Q10   Edit Question   Add Question Logic   Move   Copy   Delete

✱ 1. Rate the difficulty in finding a product page for one of the Jon Finn Group's albums.

○ Not difficult at all

○ Slightly difficult

○ Moderately difficult

○ Very difficult

○ Too difficult to complete

Comments

[   ]

+ Add Question

+ Add Page

90

APPENDIX B

USABILITY SURVEY INSTRUMENT RESULTS

You have a **BASIC account** | To remove the limits of a BASIC account and get unlimited questions, **upgrade now!**

JonFinn.com Usability Survey Instrument Edit

Design Survey | Collect Responses | **Analyze Results**

View Summary
Browse Responses
Filter Responses
Crosstab Responses
Download Responses
Share Responses

Default Report ⇕   + Add Report

Response Summary

Total Started Survey: 27
Total Completed Survey: 20 (74.1%)

Show this Page Only

PAGE: JONFINN.COM MEMBERSHIP

1. Rate the difficulty in finding a login form for JonFinn.com members. (Note: Do NOT create an account, just find the login form.)   Create Chart   ↓ Download

	Response Percent	Response Count
Not difficult at all	96.3%	26
Slightly difficult	3.7%	1
Moderately difficult	0.0%	0
Very difficult	0.0%	0
Too difficult to complete	0.0%	0

Hide replies Comments   4

1.	It needs two clicks. Why not a "register" or "log on" link directly on the home page? And why two links ("register" and "sign up")?	Sat, Oct 30, 2010 8:35 AM	Find...
2.	first thing I noticed	Fri, Oct 29, 2010 10:39 PM	Find...
3.	By login form what do you mean? I don't see a specific page or form... Just two little boxes in the top right	Fri, Oct 29, 2010 3:36 PM	Find...
4.	Log in is in a pretty standard location.	Fri, Oct 29, 2010 3:23 PM	Find...

answered question	27
skipped question	0

2. Rate the difficulty in finding the registration form to create an account on JonFinn.com. (Note: Do NOT create an account, just find the registration form.)   Create Chart   ↓ Download

	Response Percent	Response Count
Not difficult at all	66.7%	18
Slightly difficult	22.2%	6
Moderately difficult	11.1%	3
Very difficult	0.0%	0
Too difficult to complete	0.0%	0

Hide replies Comments   6

1.	I'm used to seeing the registration link near the log-in form.	Tue, Nov 2, 2010 8:14 PM	Find...
2.	I found the site very easy to navigate - nice job!	Mon, Nov 1, 2010 8:52 AM	Find...
3.	Might want to put "Become a Member" Closer to the login. I think people are used to that.	Mon, Nov 1, 2010 7:43 AM	Find...
4.	See above. Not difficult, could just be made more direct/economical.	Sat, Oct 30, 2010 8:35 AM	Find...
5.	I recommend putting a second hyper link next to the log-in boxes. If you can't that's fine .	Fri, Oct 29, 2010 3:36 PM	Find...
6.	I would locate the registration information closer to the log in information. The white on black text boxes draw the eye easier than another blue link on a page.	Fri, Oct 29, 2010 3:23 PM	Find...

| answered question | 27 |
| skipped question | 0 |

Show this Page Only

PAGE: JONFINN.COM ONLINE STORE

1. Rate the difficulty in adding a JonFinn.com store item to your shopping cart and checking out. (NOTE: Do NOT complete the checkout process. Just find the checkout link/button.) Create Chart Download

	Response Percent	Response Count
Not difficult at all	77.8%	21
Slightly difficult	18.5%	5
Moderately difficult	3.7%	1
Very difficult	0.0%	0
Too difficult to complete	0.0%	0

Hide replies Comments 3

1.	The word "REGISTER" on the SHOP page should be a link.	Sat, Oct 30, 2010 8:38 AM	Find...
2.	No more of a pain than other websites	Fri, Oct 29, 2010 3:38 PM	Find...
3.	did not actually check out as I was rating usability, not actually shopping	Fri, Oct 29, 2010 2:17 PM	Find...

| answered question | 27 |
| skipped question | 0 |

2. Rate the difficulty in viewing the JonFinn.com shopping cart. Create Chart Download

	Response Percent	Response Count
Not difficult at all	81.5%	22
Slightly difficult	18.5%	5
Moderately difficult	0.0%	0
Very difficult	0.0%	0
Too difficult to complete	0.0%	0

Hide replies Comments 5

1.	This is easy because you're taken right to it. This is a compromise. It makes it slightly more difficult to figure out how to buy more things.	Tue, Nov 2, 2010 8:34 PM	Find...
2.	I found this easier than most sites on the web!	Mon, Nov 1, 2010 8:53 AM	Find...
3.	Multiple buttons for this is a good touch.	Mon, Nov 1, 2010 7:45 AM	Find...
4.	Slight delay in getting back to the shop	Sat, Oct 30, 2010 8:38 AM	Find...
5.	I like the fact that it takes you to the cart after each addition; however, once you move on to other items and dig deeper into product description, the link can be lost. The font is smaller and purple blends into the brown a bit.	Fri, Oct 29, 2010 3:23 PM	Find...

| answered question | 27 |
| skipped question | 0 |

PAGE: JONFINN.COM USER INTERACTION

1. Rate the difficulty in adding a comment to the bottom of the "Advanced Modern Rock Guitar" book product page. Create Chart ↓ Download

		Response Percent	Response Count
Not difficult at all		74.1%	20
Slightly difficult		18.5%	5
Moderately difficult		7.4%	2
Very difficult		0.0%	0
Too difficult to complete		0.0%	0

Hide replies Comments 2

1.	Not difficult (It needs some prettying up though)	Fri, Oct 29, 2010 3:40 PM	Find...
2.	Made more difficult by the typo in the survey question.	Fri, Oct 29, 2010 3:23 PM	Find...

answered question	27
skipped question	0

PAGE: JONFINN.COM CONTENT

1. Rate the difficulty in finding a free guitar lesson. Create Chart ↓ Download

		Response Percent	Response Count
Not difficult at all		72.0%	18
Slightly difficult		16.0%	4
Moderately difficult		12.0%	3
Very difficult		0.0%	0
Too difficult to complete		0.0%	0

Hide replies Comments 3

1.	Found it immediately	Mon, Nov 1, 2010 8:56 AM	Find...
2.	There could be a "Free lessons" link, maybe art the top of the home page, instead of hidden in the "Other Stuff" menu. There is "latest lesson" down the bottom, but it's not clear this is free.	Sat, Oct 30, 2010 8:45 AM	Find...
3.	Located under "Other Stuff" is not intuitive.	Fri, Oct 29, 2010 3:24 PM	Find...

answered question	25
skipped question	2

2. Rate the difficulty in finding and playing a video of the Jon Finn Group. Create Chart ↓ Download

		Response Percent	Response Count
Not difficult at all		72.0%	18
Slightly difficult		28.0%	7
Moderately difficult		0.0%	0
Very difficult		0.0%	0
Too difficult to complete		0.0%	0

Hide replies Comments 2

1.	Again, why not a main link across the top, rather than part of a dropdown menu? Unless of course you consider all those things under "Other Stuff" to be of secondary importance?	Sat, Oct 30, 2010 8:45 AM	Find...
2.	Saw the link in previous search...	Fri, Oct 29, 2010 10:12 PM	Find...

answered question	25
skipped question	2

3. Rate the difficulty in determining the next Jon Finn Group live performance.

🌀 Create Chart   ⬇ Download

		Response Percent	Response Count
Not difficult at all		76.0%	19
Slightly difficult		20.0%	5
Moderately difficult		0.0%	0
Very difficult		4.0%	1
Too difficult to complete		0.0%	0

💬 Hide replies Comments   2

1.	I like "gigs", most people will probably be OK with "gigs", but civilians might find "tour dates" or "upcoming performances" more non-musician friendly.	Mon, Nov 1, 2010 7:50 AM	Find...
2.	ditto.	Sat, Oct 30, 2010 8:45 AM	Find...

answered question	25
skipped question	2

4. Rate the difficulty in searching JonFinn.com for the term "pentatonic."

🌀 Create Chart   ⬇ Download

		Response Percent	Response Count
Not difficult at all		68.0%	17
Slightly difficult		24.0%	6
Moderately difficult		4.0%	1
Very difficult		0.0%	0
Too difficult to complete		4.0%	1

💬 Hide replies Comments   3

1.	I think that the search component should have been more obvious	Mon, Nov 1, 2010 8:56 AM	Find...
2.	No search box on home page!	Sat, Oct 30, 2010 8:45 AM	Find...
3.	Is anybody reading this other than you?	Fri, Oct 29, 2010 3:45 PM	Find...

answered question	25
skipped question	2

Show this Page Only

PAGE: JONFINN.COM PRODUCT PAGES

1. Rate the difficulty in finding a product page for one of the Jon Finn Group's albums.

🌀 Create Chart   ⬇ Download

		Response Percent	Response Count
Not difficult at all		90.0%	18
Slightly difficult		10.0%	2
Moderately difficult		0.0%	0
Very difficult		0.0%	0
Too difficult to complete		0.0%	0

Comments   0

answered question	20
skipped question	7

APPENDIX C

HARMONY CENTRAL SURVEY INSTRUMENT REQUEST

Harmony Central Forums

User Name [User Name] ☐ Remember Me?
Password [   ] [Log in]

| Register | FAQ | Members List | Calendar |

The Lesson Loft Lessons from what to look for in a guitar to theory, practical use of knowledge, to recording. The total guitar experience. Strictly on topic only.

📝 **Post Reply**

| | Thread Tools ▼ | Rate Thread ▼ | Display Modes ▼ |

🔲 10-30-2010, 08:26 AM | #1

jonfinn
Member

Join Date: Nov 2007
Location: Boston
Posts: 768

Favor to ask

I have a favor to ask: Anthony Garone (jonfinn.com webmaster) is doing his Master's thesis on website programming. In defense of his thesis, he's using jonfinn.com as an example. In the process, he needs to collect data. None of the data is personal information. just honest pinions. If you have time, please take this survey:

Your Opinions on his website programming

Thanks!

We're doing a total re-vamp of the site. Down the road, it will be divided in to the "open" site, "free membership" and the "subscription" site.

While I openly admit we're doing it to increase income, the hope is to create a really useful and entertaining resource/community for guitarists. But with a different twist.

I've always believed that success happens when you create something that people want.
_____
"Once the milk is in the bucket, you cannot squirt it back in to the cow."
http://www.jonfinn.com
http://www.myspace.com/jonfinngroup
http://www.youtube.com/jonfinngroup
Books:
Advanced Modern Rock Guitar Improvisation
Blues/Rock Improv
Foundations of Rock: Guitar Riffs in the Style of the '60s & '70s
One Guitar, Many Styles
CDs:
Bull in a China Shop (NEW!)
Wicked
Don't Look So Serious

📝 Quote

📝 **Post Reply**

« Previous Thread | Next Thread »

Forum Jump
[The Lesson Loft   ▲▼] [Go]

All times are GMT -7. The time now is 10:02 PM.

APPENDIX D

FEEDBACK E-MAIL FROM JON FINN

Subject: Re: Feedback
From: "Jon Finn" <jfinn@berklee.edu>
Date: Wed, November 3, 2010 10:51 am
To: anthony@jonfinn.com
Priority: Normal
Options: View Full Header | View Printable Version | Download this as a file | View Message details

Hi Anthony,

Sorry for getting to you at the last second! Is this OK? Need more info?

Useablity:

Anthony has been my Webmaster since 1996.   The biggest challenge for him has been
teaching me how to upload my own information. At first, that meant I had to learn
basic html and simple ftp transfer processes.
Even though he has been great and I learned a lot, it was time-consuming. For many
years, updating the site meant sitting at the computer for hours at a time. As a
working musician, those contiguous hours are few and far-between. As a result the
site was often left unattended.   Bad for business.

In 2006, Anthony created simple-to-use "admin" forms that made it much easier to
upload certain information. We succeeded for a while. But the php-style editing,
any media uploads were still left to the old html/ftp approach.   News was updated
occasionally, but it became much easier to upload media content to other sites.
Further, our old "message boards" became so over-run with spam that they became
unusable. We finally gave up.

Anthony and I met in the Fall of 2009 to discuss how we'd approach the new site.
He introduced me to the "WordPress" content management system. Admittedly, there
has been a "learning curve" for me, but the long-term benefits are obvious. I can

On Nov 3, 2010, at 12:36 AM, anthony@jonfinn.com
 wrote:

> Hi Jon,
>
> I really hate to be a pest, but I absolutely need to get your feedback on
> the website on Wednesday. My paper is due Thursday and I need to be able
> to hand in a final document during business hours.
>
> Sorry for bugging you about it.
>
> Thanks,
> Anthony
>

Delete & Prev | Delete & Next

Move to: INBOX   Move

Take Address

99