

# GATEKEEPERS OF LEGAL INFORMATION: EVALUATING AND INTEGRATING FREE INTERNET LEGAL RESOURCES INTO THE CLASSROOM<sup>1</sup>

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## I. Introduction

The development of computer technology and the Internet seriously affected a “conceptual universe of thinkable thoughts,” which had been established by the American Digest System and American law libraries since late 19th century and had ruled American legal thinking for more than a century.<sup>2</sup> The Internet and the availability of legal sources on the internet also undermined the “cognitive authority” formed by the National Reporter System and eliminated the need to have a physical location to keep an authoritative print record.<sup>3</sup> About forty years passed since computer assisted legal research (“CALR”) was first introduced in 1973. The internet definitely booted CALR with its convenience and efficiency. The construction of legal databases on the Internet led us to consider when we had better use online databases than print sources and which provides more cost-effective research results.<sup>4</sup>

Indulged ourselves in online databases and deluded by their benefits and efficiency, however, it is also true that we have failed to distinguish high-cost databases such as Westlaw and Lexis with free or low-cost databases. We have been ignoring the disadvantages coming from using high-cost online databases. Today, many legal professionals and researchers are under financial pressure because of the increased cost of subscription databases. Many of the high-cost subscription databases are conglomerate and overlapping each other. On the other hand, free or low-cost databases<sup>5</sup> are well-developed, covering many types of legal sources. It may be taken it for granted that law libraries are considering the availability of legal sources on the internet and start canceling high-cost subscription databases. Many legal professionals and researchers, thus, started considering and relying on free or low-cost internet resources for their research and classes.

The number of these free or less expensive internet resources, however, is increasing every year, and their coverage for legal sources is also expanded.<sup>6</sup> Furthermore, just as the creation of a list of hypertext links to internet resources is no longer an easy task because of the gigantic number of resources available, so simply providing a created list to the law students will likewise irresponsibly confuse and intimidate them. This dilemmatic situation between the necessity for

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free or low-cost internet resources and overwhelming amount of information on the internet, impelled legal professionals and researchers to answer to the following questions: (1) When should free or less expensive internet resources be used instead of the high-cost subscription databases; (2) is it appropriate to teach and encourage law students skills to search free or less expensive internet resources; and (3) what evaluation standards for choosing free or less expensive internet resources will justify the introduction and integration of those resources into the classroom.

While this article will first attempt to answer questions one and two, the article will mainly concentrate on answering to the last question regarding how to evaluate free or less expensive internet resources. The author believes that evaluation standards based on authority, accuracy, currency, coverage, and usability are necessary for legal instructors in order to safely introduce free or low-cost internet resources into their classrooms. First, this article will attempt to define internet legal research and to show the difficulty of distinguishing internet legal research from other online searches. Next, the pros and cons of using free or less expensive internet resources for legal research will be discussed. Lastly, this article will attempt to introduce and establish evaluation standards which we can apply to various internet resources.

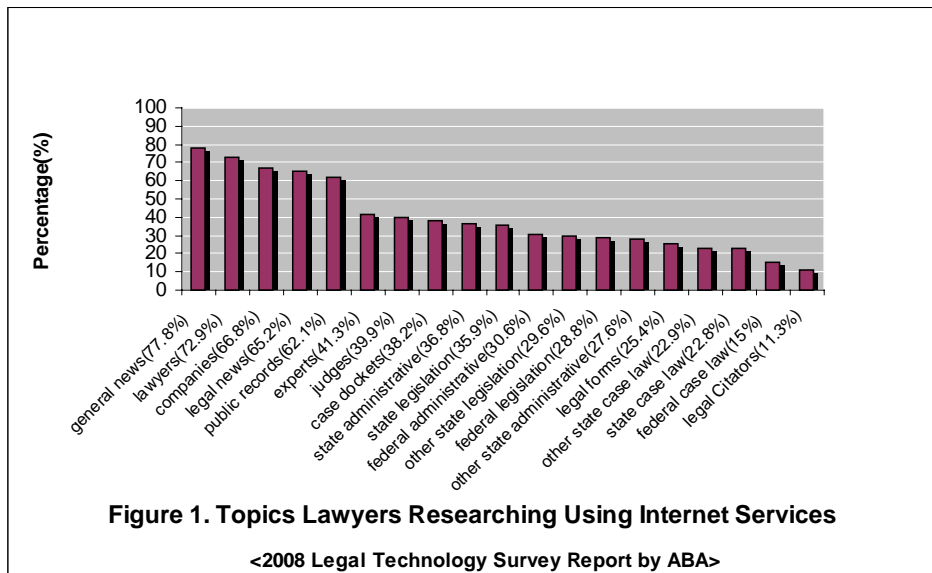
## **II. Distinguishing Internet Legal Research from Other Non-Legal Online Searches**

The adoption of free internet resources as a research tool has been publicly or tacitly recognized and legitimized in the legal field<sup>7</sup>; in fact, lawyers who fail to look at internet resources for their research can be subject to legal and ethical liabilities for their lack of competency.<sup>8</sup> According to 2008 Legal Technology Survey Report by the American Bar Association, 82.6 percent of 755 lawyers surveyed regularly and occasionally use free internet services for legal research.<sup>9</sup> 52 percent of the lawyers regularly use free internet services, which is the same percentage as print sources.<sup>10</sup>

More specifically, as of 2008, more than 20 percent of lawyers are looking at free internet resources when they are researching case dockets (38.2%), federal legislation/statutes (28.8%), federal administrative/regulatory/executive (30.6%), general news (77.8%), legal news (65.2%), companies (66.8%), legal forms (25.4%), public records (62.1%), experts (41.3%), judges (39.9%), lawyers (72.9%), state case law (22.8%), state legislation (35.9%), state administrative/regulatory/executive (36.8%), other state case law (22.9%), other state legislation (29.6%), and other state administrative law materials (27.6%).<sup>11</sup>

As shown in figure 1, the top five topics, which lawyers researched using free internet services, are general news, lawyers, companies, legal news, and public records.<sup>12</sup> While more than fifty percent of lawyers are using subscription databases such as Westlaw and Lexis for researching federal case law, case law from the attorney's home state, other state case law, legal citators, and other state

legislation/statutes, a number of lawyers are still researching federal case law (15%), case law from the attorney’s home state (22.8%), other state case law (22.9%), legal citators (11.3%), and other state legislation (35.9%), using free online services.<sup>13</sup>



Legal researchers’ reliance on internet legal research,<sup>14</sup> using free or less expensive internet resources, can also be inferred from the expansion of definition and coverage of internet legal research. Internet legal research can be dichotomously divided into two main parts: searches for legal sources and searches for general references. Searches for legal sources include locating legislative, judicial, and administrative primary sources and locating secondary sources such as journal articles, legal encyclopedias, treatises, etc. Searches for non-legal general references include locating encyclopedias, almanacs, yearbooks, handbooks, dictionaries, directories, biographical sources, geographical sources, government and statistical resources, health resources, business resources, etc. Searching for legal sources used to be something that distinguished legal research from other online searches.

However, the bright line distinguishing online legal research from other non-legal online searches has become blurred. Online legal searches became more complex as the frequency of non-legal general references searches increased because of the growth of empirical legal research and interdisciplinary legal research. While in traditional legal research, legal researchers mainly look at the primary and secondary legal sources, contemporary legal researchers are less likely to rely on the traditional secondary legal sources<sup>15</sup> and rather, depend upon the non-traditional sources such as blogs and Wikipedia.<sup>16</sup> Additionally, while traditional legal scholars have been skeptical about the adoption of the

methods of other social sciences,<sup>17</sup> new trends of empirical and interdisciplinary legal researches make legal researchers look at the general reference resources like data sets and statistical analysis. According to the ranking from Washington & Lee Law School, *Journal of Empirical Legal Studies* ranked top five in making the greatest impact on other legal scholars and being cited most often since 2006.<sup>18</sup> And an article in the *Journal of Empirical Legal Studies* suggests that “with the explosion in information technology, data sources on the legal system are improving in quality and accessibility. Compared with just a few years ago, researchers today can easily access original data sets.”<sup>19</sup>

Internet legal research is unique in that it requires legal researchers to learn and acquire particular techniques to search and retrieve the materials relating to legal issues.<sup>20</sup> The basic steps for internet legal research, as distinguished from other general internet searches, are as follows:

- (1) Identifying and analyzing the facts and legal issues involved in the project;
- (2) Determining what kind of information you need to locate such as whether it is old or recent, legal or non-legal, etc., and determining what kind of substantive area of law is involved. Determining the type of source and law may affect the reliability of internet resources. For example, if a user is looking for historic information, the internet may not be a good place to start;
- (3) Setting up legal research starting points. One can either search the primary sources directly, or refer to legal research guides or legal encyclopedias on a substantive area of law and draw a big landscape picture first. Legal research guides and legal encyclopedias work more like metadata searches;
- (4) Predicting which organization’s website will most likely contain the information. For example, you select from among government agencies, specialty libraries, nonprofit and research institutes, trade associations, law libraries, professional organizations, and a lot of other information rich agencies;
- (5) Using your judgment, experience, and skill to evaluate the resource in terms of coverage, currency, accuracy, authority, presentation and usability, and cost; and
- (6) Identifying controlled terms or similar terms and using the proper syntax with the website’s unique Boolean operators, truncation, etc. for which instructions will usually be in the “help” section of the website. Like the high-cost database searches, “[k]nowledge of the terminology of the subject area of law is fundamental to successful computer assisted legal research.”<sup>21</sup>

### **III. Pros and Cons of Free Internet Legal Research**

Admittedly, it is true that most free internet resources lack in-depth analytical annotations, which oftentimes leads legal researchers to avoid them. In many instances, the unavailability of advanced search engines, and simultaneous multiple database searches can be considered as one of cons of free internet research. On the other hand, most subscription database search engines like Westlaw and Lexis provide more sophisticated searching syntax and field search options than web search engines. The information contained in such databases is organized more carefully, and a number of legal information professionals have designed and populated the databases. For example, Westlaw has about 7,500 staff members doing extensive legal research and making editorial enhancements to the sources in Eagan, Minnesota. Furthermore, the updating functions of Shepard's and KeyCite provided by Westlaw and Lexis can be considered as one of the most important benefits of the high-cost databases. Ignoring the updating functions may subject a lawyer to court sanctions.<sup>22</sup>

It is also true that "the scope of resources available via the internet cannot yet replace that of a well-stocked law library,"<sup>23</sup> particularly in terms of coverage and organization of legal information by professional law librarians. Of course, available materials in a law library cannot be disassociated from the catalogue, which allows users to search the materials, and law librarians who help patrons effectively find materials they need. Even if internet users can bookmark as many useful websites as they can whether by social bookmarking tools or bookmarking applications like Zotero in Firefox adds-on, a sea of information on the internet is useful to legal researchers only "if you know where to look"<sup>24</sup> among a garden variety of internet websites.

Legal researchers, however, cannot ignore the fact that performing research on the web using free or less expensive internet resources is more cost-effective than Westlaw, Lexis, and other online subscription databases and much cheaper than buying print sources. Other benefits of internet legal research come from the availability of a wide variety of general reference sources. For non-legal general reference sources, generally, internet resources provide broader and more comprehensive and more current information than subscription legal databases.

In addition to the cost-effective advantage of free or low-cost internet resources, most weaknesses of high-cost online databases such as Westlaw and Lexis can be cured and are being fixed by free internet resources because of the higher flexibility and greater number than high-cost databases. Obviously, Westlaw and Lexis do not contain everything. A number of free internet resources can holistically supplement and fix the deficiency in coverage that the high-cost databases have. Another weakness of the high-cost databases comes from the complexity which originated from containing too much information in a website and confusing users by making them faced with a sea of databases to choose from. Of course, too much information in a database makes it hard for developers to change its design flexibly and to make it simpler to search.

Free or low-cost legal research resources are increasing, covering more primary legal sources. Marian Parker, Associate Dean for Library and information Services, Wake Forest University School of Law, said

“Every state in the United States is looking at doing its right part in making the primary sources of law available in an authenticated and preserved manner, in a digital format for everybody. ... The rapidity with which the change is happening is faster than I think any of us predicted.”<sup>25</sup>

Google, the most popular search engine by visits,<sup>26</sup> also launched a “Legal opinions and journals” database in its Google Scholar search in November, 2009.<sup>27</sup> It allows us to search for cases from the United States federal and state courts.<sup>28</sup> This increasingly free availability on the internet even affected and has already changed print buying patterns.<sup>29</sup>

Furthermore, even if there are concerns about the reliability of freely available online materials, the reliability of internet resources is increasing as the number of free databases created by non-commercial organizations increases. Many trustworthy organizations such as government agencies, courts, specialty libraries, and non-profit organizations have been creating their own digital databases and providing high quality sources to users for free. For example, the Law Library of Congress is trying to launch Law.Gov, in an effort to create a repository of all primary legal materials in the United States and to make them authentically available for the public to download.<sup>30</sup> Roberta I. Shaffer, Law Librarian of Congress, said in a letter to colleagues and friends:

The Law Library is pursuing the registration of the “LAW.GOV” domain where researchers throughout the world will be able to find authoritative local, state, national, foreign and international legal and legislative information. The Law Library envisions hosting the site and collaborating with federal agencies, state, local, and foreign national governments, and international organizations to maintain a “one-stop” URL.<sup>31</sup>

The reliability of freely available internet sources will increase more by the authentication procedures as indicated in the report by AALL Leadership on Authentic Legal Information in the Digital Age.<sup>32</sup>

#### **IV. Evaluation Standards**

Evaluation standards for free or low-cost internet resources are necessary in order to determine the reliability of the resources. Free or less expensive internet resources will be safely introduced into our law school classrooms when the authentic evaluation standards for the resources are established, and legal instructors appropriately evaluate free or low-cost internet resources before introducing them to law students. I would like to introduce authority, accuracy, currency, coverage, and usability as evaluation standards.

### **A. Authority and Accuracy**

The reliability of free or low-cost internet resources will increase even more when we evaluate internet resources by authority and accuracy, and weed out inauthentic websites. *The Bluebook* also provides that we can cite to a digital copy of a source if the copy is “authenticated, official, or an exact copy of the printed source.”<sup>33</sup>

Authentication is narrowly construed in the context of admissibility of evidence into the court.<sup>34</sup> In addition to the narrowness of the definition, however, the evidence rule does not specifically mention and provide an illustration for the authentication of legal information on websites. I think authentication of legal information on websites was properly included in the broader definition provided by Government Print Office in its effort to authenticate digitally published documents on its website. According to Government Printing Office, authentication indicates “validation of a user, a computer, or some digital object to ensure that it is what it claims to be.”<sup>35</sup> Authentic content is defined as content that is “complete and unaltered when compared to the version approved or published by the Content Originator.”<sup>36</sup> The authentic content is distinguished from official content that is “approved by, contributed by, or harvested from an official source in accordance with accepted program specifications.”<sup>37</sup>

We can determine the authority of a website and its content by various authentication methods.<sup>38</sup> According to Kelly Kunsch, authentication methods include “private communication models” and authentication through domain names of internet websites, and he recommends the latter, emphasizing more on the authenticity of a website.<sup>39</sup> *The Bluebook* encourages the former method, especially an encryption-based authentication method by digital signatures or public key infrastructure.<sup>40</sup> A principle adopted by Law.gov also seems to adopt the former method and focused more on the legal information itself than the website which contained it, saying, “The primary legal materials, and the methods used to access them, should be authenticated so people can trust in the integrity of these materials.”<sup>41</sup>

Regardless of various authentication methods, the underlying goal of the authentication procedures is to ensure that the internet website is authentic, and legal information created and published by an original author(s) has not been altered and has been safely stored and displayed in that website. Arguably, authentic websites do not necessarily contain accurate, unaltered information. The U.S. Court of Appeals for the First Circuit in *Getty Petroleum* distinguishes accuracy from authenticity, discussing judicial notice of law retrieved from a web page.<sup>42</sup> The court, indicating a hearsay problem of the legal information from a website, emphasizes the importance of accuracy of law as set forth by the enacting authority.<sup>43</sup>

However, the authentic website is rebuttably presumed to contain accurate legal information.<sup>44</sup> The *Getty Petroleum* court also admits that in reality “authenticity and accuracy are never doubted when . . . widely-available, well-respected services are cited.”<sup>45</sup> This must be commensurate with the intimation provided in an illustration for the authentication of public records or reports in Federal Rules of Evidence. The illustration in Rule 901(b)(7) intimates that purported public record and report is authentic if the document comes from the public office keeping it.<sup>46</sup> This must reflect the reality that we cannot check the validity of every single online document, comparing it with an original source. In other words, an individual researcher does not have enough resources to check the accuracy of all the legal information contained in a website. Likewise, original authors and publishers like enacting authorities do not have enough resources to trace all the flow of legal information they created over the internet and warrant that the legal information they created are transferred to and displayed on other websites without alteration.

Considering a tremendous number of websites, all containing the same legal information, only domain owners like online publishers are better positioned to be able to check and are responsible for the accuracy of legal information published on their websites than individual researchers and original authority. It is true that it must be very difficult for domain owners to verify legal information, especially when they get copies from other unofficial websites and are not the first receiver of the information from the enacting authority. However, the first domain owners of legal information websites, who receive copies from the original authority and print publishers, must play a gateway role in preserving the integrity and accuracy of legal information before it is distributed to users and the other websites.

It seems that high-cost subscription databases such as Westlaw and Lexis must have successfully played this gateway role as an original publisher of primary sources in print. For example, the Westlaw database reliably represents cases which have been reported in print by West’s National Reporter System. *The Bluebook* also recommends citing preferably to high-cost subscription databases such as Westlaw, Lexis, and Bloomberg Law because of their reliability and authoritativeness.<sup>47</sup> This gateway role of high-cost databases could be possible because they have enough resources in terms of human resources and money. This, however, almost leads to “market failure” because of the databases’ oligopolistic control over legal information—primary sources can be considered as public goods—and their hesitance to supply it to the public. Many researchers and practitioners, who lack financial assets, have not been able to easily access to the information contained in the databases.

Many governments and courts, therefore, have been not only making efforts to intervene in and cure this market failure situation, but they have also tried to play a gatekeeper role. Federal and state governments including legislature and their official publishers created their own official websites and



digitalized and published on the websites laws, regulations, and rules they made and published in print.<sup>48</sup> Courts have been publishing opinions and rules free of charge on their websites. Furthermore, governments and courts have exercised various efforts to keep the integrity of the legal information published on their websites. Especially, courts have played an important role in keeping their opinions and rules from being altered by publishing them in Portable Data Format (“PDF”)—PDF files have low potentiality for tampering because users cannot edit the content. For example, the Supreme Court of the United States publishes on its website opinions and rules and allows users to download them in PDF; it further tacitly admits the accuracy of the information without disclaiming warranty or limiting its liability.<sup>49</sup> U.S. Government Printing Office has also made great efforts to provide authentic government information on its website since 2005 authentication initiative meeting.<sup>50</sup> Government Printing Office adopted and implemented the Federal Public Key Infrastructure by National Institute of standards and Technology. In addition to the provision of PDF files on its new Federal Digital System, it also provides GPO’s Seal of Authenticity and digital signature by a blue ribbon icon on online PDF documents in order to ensure that a document is authentic, certified, and unchanged.

What, then, about other free or low-cost legal websites which are hosted either by private organizations whether non-profit or profit? Their websites may contain comprehensive legal materials including constitutions, statutes, regulations, and cases. However, they are neither an enacting authority nor a publisher. While they do not play the first gatekeeper role to keep the integrity of legal documents, as a domain owner, they must take the role as the second, third, or further gate keeper, to make users trust their websites and resources. In other words, they must make it sure that they get the complete, unaltered information from original publishers in order to keep their websites reliable. Domain owners can keep documents from being altered by maintaining documents in PDF. The authenticity of documents will further increase if domain owners keep digital signatures original publishers provided. Their good practice of keeping integrity of original documents will definitely raise their status to widely-available, well-respected services of which legal information can be safely relied by researchers and practitioners.

### **B. Currency and Coverage**

The more current legal information on a website definitely means users’ increased reliance on the website. Currency of information, therefore, is often included as a standard to evaluate the authority of a website.<sup>51</sup> The currency of information, however, should be distinguished from the authentication and accuracy of information. Currency of information is more likely to be an independent standard to determine whether a website contains updated, separate primary legal sources which may preempt and modify the legal effects of previously published legal information on the website. While the authenticity

and accuracy of a legal source on a website is determined mainly by evaluating the source itself and by comparing it with the original source, currency of information is mainly determined by looking at the website and its updating schedule by its owner. Currency of information is more related to updating legal information.

While many publishers let the legal information published in their print resources available on their websites free of charge, they oftentimes set up moving walls, making current issues not available for a few years in order to protect the economic sustainability of print materials.<sup>52</sup> This sometimes makes us assume that the online resources are not frequently updated in terms of legal information.

Moving walls, however, usually apply to legal journals and articles. Many government and court websites play a good role to update the primary legal sources such as cases, statutes, regulations, administrative decisions, legal forms, etc. For example, administrative forms must be a good example which shows that official internet websites provide the most current and reliable forms such as immigration forms by U.S. Citizenship and Immigration Services, foreign labor certification forms by Employment and Training Administration, tax forms by Internal Revenue Service, SEC forms included in EDGAR, etc. Regulations are also updated fast on official websites. Electronic Code of Federal Regulations (“e-CFR”) on the GPO Access website is a good example which updates federal regulations on a daily basis and provides the most current information on federal regulations. This is actually faster than the Code of Federal Regulations database in Westlaw<sup>53</sup> as well as Code of Federal Regulations in print. Federal Register on the GPO website also contains “Today’s Issue of the Federal Register,”<sup>54</sup> which allows users to look at the most current version—the same day as its print publication. Its publication on the GPO website is actually faster than the date when libraries subscribing to the print version of Federal Register receive it.<sup>55</sup>

Furthermore, court opinions are also updated fast on courts’ websites. Court usually publishes their slip opinions on their websites, and this is more current than the actual print case reporters. Retrieving court opinions from the websites of various federal courts will be faster and more effective when a new pilot program by the federal judiciary and Government Printing Office is fully implemented.<sup>56</sup> The pilot project plans to combine a dozen federal courts including two U.S. Courts of Appeals, seven U.S. district courts, and three U.S. bankruptcy courts and will allow free public access to court opinions. The judiciary’s Public Access to Court Electronic Records service (PACER) has also provided free access to federal court opinions free of charge since 2005.<sup>57</sup>

Non-official sites such as Google Scholar’s “Legal opinions and journals” and Legal Information Institute at Cornell Law School (“LII”) also update its content very quickly. Google engineer Anurag Acharya discloses that its case law database is licensed from a major legal information vendor although he could not name it.<sup>58</sup> When Google Scholar cannot provide the most recent cases, it provides

links to the documents in other websites like LII. LII receives its opinions distributed by the Project Hermes opinion service of the U.S. Supreme Court,<sup>59</sup> which publishes its opinion on the same day as its decision.<sup>60</sup>

Just as it is important to contain the most current information on the websites, it is also important to indicate how current the information contained in a website is in order to help users to decide the reliability of legal information provided. Users need to decide whether they have to use separate updating tools like Shepard's Citation Service or KeyCite. The e-CFR home page clearly indicates how current is the information contained in the database like saying, "e-CFR Data is current as of May 12, 2011."<sup>61</sup> This indication of currency is also closely associated with indication of coverage of a website.

When legal instructors introduce free or low-cost internet resources into their classrooms, they should indicate the coverage of the resources in terms of both time and kinds of sources available. This is because instructors want law students to be efficient without wasting time searching for information not covered by the website. They cannot simply expect student to choose an appropriate database without properly introducing it with coverage information, which is usually hidden somewhere in a website or can be found by calling the domain owner. For example, instructors cannot simply teach that students get government legal documents from GPO's Federal Digital System free of charge. They should know in the beginning what collection and resources are included in the database and what is the coverage for each collection; at least, they may want to start from the "Browse by Collection" page,<sup>62</sup> where they can figure out the kinds of collections available and the coverage of time for each collection.

As far as legal instructors teach law students and legal researchers where to begin and what is the coverage of a website, I think, comprehensiveness of a website cannot be something to consider when they teach it. Comprehensiveness of a website is more likely a subjective, relative standard because even a high-cost subscription database like Westlaw or Lexis cannot include every single legal source. And free or low-cost internet resources holistically make up a good mega database especially when law librarians create a good bibliography or research guide on a topic or a jurisdiction and connect or link the resources together.

### **C. Usability**

Among the standards, the usability web-design principle provides a good tool to evaluate the online legal resources. Should we introduce the unusable resource to our students? Users will rely more on an internet website when the website provides more usable design and process. In the introduction of his book, Jakob Nielsen said, "Usability rules the Web. Simply stated, if the customer can't find a product, then he or she will not buy it."<sup>63</sup> As such, if a legal resource is poorly designed and as a result, is not usable, legal researchers will not buy it because they cannot find what they want, or it is a pain to search in the website.

If two websites provides the same kinds of contents in terms of authority, accuracy, coverage, currency, usable websites will be desirable.<sup>64</sup> In this part, I will make efforts to find the meaning of the usability and its elements and to apply it to some of important legal websites.

According to the Research-Based Web Design & Usability Guidelines developed by the U.S. Department of Health and Human Services (HHS),<sup>65</sup> "users define 'usability' as their perception of how consistent, efficient, productive, organized, easy to use, intuitive, and straightforward it is to accomplish tasks within a system." Consistency, scannability, simplicity and visibility, and accessibility are at the core of the usability principle.<sup>66</sup>

Consistency is one of the most powerful usability principles: when things always behave the same, users do not have to worry about what will happen.<sup>67</sup> "Users can have expectations based on their prior experience. . . . users acted on their own expectations even when there were indications on the screen to counter those expectations."<sup>68</sup> There are many studies which found that tasks performed on more consistent interfaces resulted in (1) a reduction in task completion times; (2) reduction in errors; (3) an increase in user satisfaction; and (4) a reduction in learning time.<sup>69</sup>

For example, the U.S. Copyright Office website<sup>70</sup> meets users' expectations, using familiar conventions and thus creating a consistency as search box is provided on top of the screen without distraction. The links in the navigation bar are prominently and consistently displayed in red colors throughout the pages of the website, and the titles of each topic are consistently displayed in bold, dark green colors with no distractions. Finally, the website shows all major options on the homepage and clearly communicates the website's value and purpose. As such, users will easily become familiar with this site, and users, when revisiting this site, will not be confused.

The GPO Access website<sup>71</sup> is an example of a site that lacks consistency. This website does not follow the familiar conventions. There is no typical navigation bars either on the left or top, and the lists are not listed by importance. The search box is strangely located at the bottom using the name "Catalog." Now, the U.S. Government Printing Office, however, is moving their old website into a new platform called the GPO's "Federal Digital System" (hereinafter "FDsys"), which is scheduled to be completed in 2010.<sup>72</sup> The FDsys website is more consistent than the previous one in terms of the location of navigation bars, menus, color scheme, and indications to help users figure out their current location. In other words, the navigation bar on top and the menu in the left are consistent throughout the pages of the website. The blue color navigation system, a 994 pixel wide GPO banner with a dark blue color theme, and a white color text division with #333333 color<sup>73</sup> text are also consistent throughout the site. Additionally, the indication of the user's current location such as "FDsys > Collection Results" is consistently displayed under the GPO banner and before the texts.

Scannability is also important in designing a website.<sup>74</sup> It is well known that most users spend a considerable amount of time scanning rather than reading information on websites.<sup>75</sup> "Skimming instead of reading is a fact of the Web, and it's been confirmed by countless usability studies."<sup>76</sup> Because of the impatience that the internet experience brings about, users do not read texts fully and read only keywords, sentences, and paragraphs which attract their attention.<sup>77</sup> "A wall of text is deadly" for the users who increasingly need an interactive experience, and non-scannable text is "intimidating," "boring," and "painful to read."<sup>78</sup> Well-designed headings help to facilitate both scanning and reading written material.<sup>79</sup> Well-structured documents with levels of headlines, bulleted lists, and highlighting and emphasis on the important words will also increase scannability.<sup>80</sup> Furthermore, we cannot ignore that first time users, or users who have not used a website for a while, will be frustrated with searching a website when the website designer does not understand users' scanning patterns which can be traced by eye tracking instruments like Tobii eye trackers. According to Nielsen, users' reading, scanning patterns look like a letter F.<sup>81</sup>

Users first read in a horizontal movement, usually across the upper part of the content area. Next, users move down the page a bit and then read across in a second horizontal movement that typically covers a shorter area than the previous movement. Finally, users scan the content's left side in a vertical movement. Sometimes this is a fairly slow and systematic scan that appears as a solid stripe on an eye tracking heatmap. Other times users move faster, creating a spottier heatmap.<sup>82</sup>

The TRAC website<sup>83</sup> is a good example of a web site with a non-scannable text that makes users spend a considerable amount of time figuring out its content. Besides the lack of consistency in terms of color scheme, navigation bar, headings, and contents throughout the site, its sub-websites for DHS, FBI, DEA, IRS, ATF, Reports, and Immigration do not provide meaningful and concise headings for the material hidden somewhere behind each homepage, making users difficult to scan the contents in the website. Bulleted lists and bigger fonts for each paragraph could be adopted to enhance users' usability experience.

Website developers and designers are also making mistakes by creating web pages which are not simple and not visible.<sup>84</sup> Visible and simple searches can be achieved by providing a search box because users often move fast and furiously looking for a search box, which is "the little box where [they] can type."<sup>85</sup> Furthermore, simple and visible searches make users revisit the website; in other words, if users do not find the result with their first query, they are progressively less and less likely to succeed with additional searches.<sup>86</sup> And the first results page, which contains the most important hits on the top of the page, is very important<sup>87</sup> because users almost never look beyond the second page of search results.<sup>88</sup> Research indicates that users tend to stop scanning a list as soon as they see something relevant.<sup>89</sup> Furthermore, in a simple and visible search,

letting users know the scope of their search is important because “users often think they are in a different site area than the one they are actually searching.”<sup>90</sup>

The TRAC website described above makes users’ usability experience worse by not providing this simple and visible search. While the website allows users to browse various pages, it fails to provide users with a search box. Even in a situation where users are trying to find a pertinent document by browsing pages, it is very difficult for them to find and click a hypertext link because there is no indication as to which words or sentences on each sub-homepage are links. Users will end up finding the links after they hover their cursor over words or sentences and waste some time. Moreover, if the user manages to find a document by clicking more than three times and wants to see more documents from other pages, the website does not make it easy for users to tell where they are unless they go back to the main web page by clicking the browser’s back button several times and start to browse again.

Another mistake the Trac Immigration website made is not changing the color of the link users have visited.<sup>91</sup> Changing the color of a link that has been clicked and providing feedback in order to let users know their past and present locations makes it easier to decide where to go next<sup>92</sup> and improves the user’s speed of finding information.<sup>93</sup> Providing path and hierarchy information plays the same role. Again, for example, the new FDsys website provides this path and hierarchy information such as “FDsys > Collection Results” and indicates the user’s current location.

Overall, one good example of a website, which provides a good usability, is LexisOne.<sup>94</sup> In LexisOne, you can search for federal and state court cases. While users ought to register by creating an account, the service in LexisOne is free. Searching for cases in this website is simple and visible. After the simple introduction of the database coverage, the website provides a search box on top, which users will see for the first time.<sup>95</sup> On the top of the case text, a source for the case and search terms used for getting this case appear. Links for “Back to Search Results,” “New Search,” and “Next” are located on top left corner of the text. These features make it easier for users to browse the search results and restart a search. The website is also very consistent in aspects such as consistency in the menu on the left and minimized usage of the colors black, grey, and white and use of red underlined hyperlinks. Furthermore, users can simply choose their scope of search on the first page by selecting one from the scroll down menu. In this website, users do not need to go back and forth from page to page when they are searching.

In spite of its beta status, the Public Library of Law<sup>96</sup> website developed by Fastcase did a better job than LexisOne in terms of usability and additionally features broader coverage for links to other sources such as statutes, regulations, court rules, constitutions, and legal forms. The Public Library of Law website provides a simple and visible search; it eliminates distractions and locates a search box in the top middle of the homepage, where users’ scanning starts.

Users can easily navigate among sources by simply clicking the type of sources. In a case law database, users will put search terms in the search box and hit the search button next to the box. Users can limit the scope of their search by date and jurisdiction by clicking the "Advanced Options" button under the search box.

On the "search results" pages, the results are listed by relevance, and the percentage of relevance is also provided next to the title of each case, conspicuously underlined with blue-colored letters, which also increases the scannability of the website. Furthermore, the grey-colored text, containing the search terms in a black color and located below the case title, makes it easier to see whether the case is relevant. Full space allocation of the list of search results and the actual text of the case in a white color 72 em<sup>97</sup> wide content container with the #404246 dark grey color background helps users to reduce their researching time by making them concentrate on case results and case text. While LexisOne requires users to pay money to follow hyperlinks provided in the case text, which actually makes users go back and search again, the Public Library of Law website allows users to freely follow the hyperlinks to the authorities provided in a case and see them without searching again. Furthermore, the users' current location is easy to tell by looking at the hierarchical information under the search box. Except for the fact that the website does not allow users to figure out the hyperlinks they have clicked, overall searching in this website is very simple and visible.

The website is also highly consistent throughout the pages. For example, the search boxes for different sources and hierarchical information to help users their current location is placed on the top of a page regardless of which pages users look at.

The recently launched "Legal opinions and journals" database in Google Scholar beta version<sup>98</sup> is also remarkably usable in terms of its simplicity and visibility of design and search. Users will easily find the search box without any distractions underneath the Google scholar logo. The simplicity comes from the fact that users do not need to worry about the type of sources and jurisdictions. First time users, or any users who have not used this website for a long time, will not experience any difficulty on the first homepage of this website. The search box appears on the top of any web page in this website.

After putting search terms and clicking the search button, users will see the easily-scannable display of search results, which is similar to the design of the familiar Google search results. Although the case names are not bulleted, case names are bigger than other texts and are colored and underlined in blue to increase the scannability. Under the case name, case citations are provided in a green color with a smaller font size than the case name and without the underline. Three-lines of black color text containing the search terms follow the citation, and "Cited by . . .," "Related articles," and "All . . . versions" in a grey color follows the text. Users can easily refine their search results by simply

choosing a date and the type of sources such as articles, federal cases, and state cases from the drop down menus provided on the top of search results page. Users can also simply click the "How cited" link next to the name of the cases to get updated information about a case from the same search results page. Furthermore, the search results page make it easier for users to scan the cases by providing them in a 50 em wide white color container, which helps users fix their eyes to the left side and keep scanning downward.

When users select one of the cases, they will find easily scannable text of a case contained in a 530 pixel wide white color table. Here, users' searching speed will be accelerated because the search terms are bold and highlighted with yellow and light blue colors, and the authorities cited inside the case are underlined and colored in blue. Furthermore, the page numbers are noticeably located next to the text of the case. The footnotes are hyperlinked and provided at the end of the text.

The high usability of the Google Scholar website is also satisfied by its consistency in color scheme, size of fonts, and location of navigation bars and search box. Users will always find the blue-color underlined hyperlinks each webpage, and the black font color and font size for the text are consistent throughout the website. The navigation bar for other Google searches, images, videos, maps, news, e-mail, etc., a search box, and hyperlinks to "Advanced Scholar Search" and "Scholar Preferences" are located on the top of each web page all the time.

Now, it is difficult to argue that the high cost online databases are more desirable for legal research than the free or less expensive databases. This is because it is hard to say that users, paying more for high cost databases, are better able to improve their research effectiveness and to increase their satisfaction.<sup>99</sup> There have been usability concerns about online high cost databases. The analysis of the most heavily used databases<sup>100</sup> will be helpful to understand the usability principle and to apply it to other free or less expensive internet resources. As an example, I would like to briefly analyze Westlaw and Lexis based on the usability principle that I discussed previously.<sup>101</sup> I found some mistakes by Westlaw using the Usability Guidelines developed by the U.S. Department of Health and Human Services (HHS) and the top ten mistakes in web design introduced by Jakob Nielsen.<sup>102</sup>

Westlaw<sup>103</sup> could do a better job in creating simple and visible search functions. First, users searching based on complex legal issues ought to select any database(s), or search for any relevant database(s) first, before formulating their search syntax. However, Westlaw located such functions at the bottom of the screen. Following the F-shaped scanning pattern,<sup>104</sup> first time users like the first year law students, or users who have not used Westlaw for a while, will definitely have a difficult time finding them. Confused by these functions and wasting time in selecting an appropriate database, users will end up failing to choose a proper and less expensive database unless they have already



memorized the databases. The menu provided underneath the search box is actually leading you to select the broad, expensive databases unless users know how to customize the menu. Also, if you use the "search-for-database" function at the lower left of the screen, it actually changes the screen, and you are forced to select one of the databases and wait until a new search screen with a search box shows up.

Westlaw has placed its "Find by citation" and "Search" functions in the most important, first horizontal line, where users start reading and scanning. However, the "Find by citation" function is actually available on other internet websites. And by making users see the search box first, Westlaw compels us to think about the search terms and connectors first before choosing the scope of search, which is required to search. According to Julie M. Jones in the *Law Library Journal*, we are following the stronger scent of a graphical box.<sup>105</sup> In other words, the database does not allow users enough time to think about the scope of search and the type of the database they are searching by putting the search box first. Setting up an improper or too broad scope of search eventually makes users have wrong results or too many hits and waste their research time. First time users, like the first year law students, are not so highly sophisticated that they can select an appropriate, narrow database or create a good search syntax from the beginning. When the search results give users many hits and searching is not simple and visible, usability concerns become greater. As Nielson suggests, users almost never look beyond the second page of search results.<sup>106</sup> Not only will the users' scanning and reading ability will decrease when they scroll down, but also students will easily give up reading further.

By default, Westlaw enumerates search results reverse-chronologically and alphabetically instead of by relevancy.<sup>107</sup> This means that students ought to look at the last page anyway in order not to miss any relevant case even if there are lots of search results. However, students may not want to read to the end when they have so many hits, and they may miss the important and relevant cases in the latter part of the results.

Another usability problem of Westlaw is that when users click the "authority" link on the text, it opens up a new Browser Window. It may be acceptable if users simply want to check the citation and briefly refer to how the source is cited. However, if users wish to read further by maximizing it, or follow other authorities on the opened authority, they will lose the original search results and lose where they are. Opening new browser windows can be a big mistake.<sup>108</sup> According to Nielson, "opening up new browser windows is like a vacuum cleaner sales person who starts a visit by emptying an ash tray on the customer's carpet" and "it actually disables the *Back* button which is the normal way users return to previous sites."<sup>109</sup> Users may manage to go back to the original results if they simply click the browser back button several times after reading further sources. However, if they follow another link or email or print the source they opened additionally, it may be very hard to go back to the

original list of results. They must click the back buttons several more times, or use research trails.

If these difficulties of using high cost online databases continue, users' efforts to find alternate sources and their tendency to access these resources will increase. Users will be likely to move to the free or low cost internet resources to get the necessary materials when they have citations or party names.

## **V. Conclusion**

I have discussed usability, authority, accuracy, currency, and coverage as evaluation standards for the purpose of determining the reliability of free or low-cost internet resources. Legal research instructors can also introduce internet resources, analyzing them based on the evaluation standards. Or they can separately teach the standards and make students to consider before using an internet website. Likewise, these standards should not play as each separate, independent standard. They will be holistically applied to a wide variety of internet resources.

Additionally, these standards are not discussed to sort out bad websites from good, reliable websites. Usable, authentic websites which contain more accurate and current legal information will be more reliable than the ones lack of some aspects. However, sometimes these standards are conflicting with each other. A very usable website which provides a bad search function because it contains unsearchable PDF files can be very authentic website which contains unaltered, complete legal information.<sup>110</sup>

In a forthcoming article, the efforts to add more evaluation standards and increase law students' information literacy for free or low-cost internet resources will be further analyzed. Editorial enhancements like case annotations, perspective of domain owners, etc. will be explored.

## **Endnotes**

1. © Jootaek Lee, 2009. This is a development from the presentation at the 2009 CALI Conference for Law School Computing. This article was presented at the Conference on Legal Information: Scholarship and Teaching, held at the Earle Mack School of Law at Drexel University on July 21-23, 2011, as part of its Boulder Summer Conference Series. I extend my gratitude to the participants who provided constructive comments and to the Legal Research Center of the Drexel Law School which held this Conference. I also thank Catherine Biondo, an assistant law librarian at the Northeastern School of Law Library for editing this article.
2. © Jootaek Lee, 2009. This is a development from the presentation at the 2009 CALI Conference for Law School Computing. This article was presented at the Conference on Legal Information: Scholarship and Teaching, held at the Earle Mack School of Law at Drexel University on

July 21-23, 2011, as part of its Boulder Summer Conference Series. I extend my gratitude to the participants who provided constructive comments and to the Legal Research Center of the Drexel Law School which held this Conference. I also thank Catherine Biondo, an assistant law librarian at the Northeastern School of Law Library for editing this article. Jootaek Lee, Senior Law Librarian (Research Librarian for Foreign, Comparative, and International Law), Northeastern University School of Law, Boston, Massachusetts. Robert C. Berring, *Legal Research and the World of Thinkable Thoughts*, 2 J. APP. PRAC. & PROCESS 305, 311 (2000).

3. Robert C. Berring, *Legal Information and the Search for Cognitive Authority*, 88 Cal. L. Rev. 1673, 1701 (2000).
4. ANNE L. McDONALD, LYNDIA THOMPSON & MARY E. ZIEBARTH, COMMUNICATING WITH LEGAL DATA BASES: TERMS AND ABBREVIATIONS FOR THE LEGAL RESEARCHER 1 (1987).
5. See, e.g., JUSTIA, <http://www.justia.com> (last visited May 18, 2011); FINDLAW FOR LEGAL PROFESSIONALS, <http://lp.findlaw.com> (last visited May 18, 2011); GPO ACCESS, <http://www.gpoaccess.gov> (last visited May 18, 2011), FDSYS: GPO'S FEDERAL DIGITAL SYSTEM, <http://www.gpo.gov/fdsys> (last visited May 18, 2011); LEXISONE, <http://law.lexisnexis.com/webcenters/lexisone> (last visited May 18, 2011); GOOGLE SCHOLAR: LEGAL OPINIONS AND JOURNALS, <http://scholar.google.com> (last visited May 18, 2011); LEGAL INFORMATION INSTITUTE AT CORNELL LAW SCHOOL, <http://www.law.cornell.edu> (last visited May 18, 2011); THE PUBLIC LIBRARY OF LAW, <http://www.plol.org/Pages/Search.aspx> (last visited May 18, 2011). Examples for less expensive databases are Fastcase, Loislaw, Casemaker Online Law Library, etc.
6. For example, according to the Fulltext Sources Online, the number of "Open Access Journals" increased from 1,435 in 2005 to 3,834 in January, 2010, and the number of URLs with free archives increased up to 14,435 in January, 2010 from 638 in January 1998. FULLTEXT SOURCES ONLINE xx (Mary B. Glose et al. eds., Information Today, Inc. 2010). Furthermore, the Fulltext Sources Online as of January, 2010 indicates there are 663 law journals and 350 law reviews for full text. *Id.* at xix.
7. This can also be inferred from the fact that research guides on free internet legal resources are introduced and available through most law library websites. See e.g. *Free Law Online / Internet Legal Resources*, MARIAN GOULD GALLAGHER LAW LIBRARY, UNI. OF WASH. SCHOOL OF LAW, <http://lib.law.washington.edu/research/research.html> (last visited May 18, 2011); *Free & Low Cost Legal Research*, GEORGETOWN LAW LIBRARY, <http://www.ll.georgetown.edu/guides/freelowcost.cfm> (last

visited May 18, 2011); *Legal Research on the Web*, DUKE LAW LIBRARY & TECHNOLOGY, <http://www.law.duke.edu/lib/researchguides/intresearch> (last visited May 18, 2011).

8. See generally Ellie Margolis, *Surfin' Safari—Why Competent Lawyers Should Research on the Web*, 10 Yale J. L. & Tech. 82 (2007). The author says, “[I]t can safely be said that research via the internet is a standard technique used by a majority of lawyers in a majority of jurisdictions through the country.” *Id.* at 107.
9. LEGAL TECH. RES. CTR., AM. BAR ASS’N, 2008 LEGAL TECHNOLOGY SURVEY REPORT V-1, V-21 (2008).
10. *Id.* at V-23.
11. *Id.* at V-23-34.
12. See *Id.*
13. *Id.* at V-23-41.
14. ‘Internet legal research’ and ‘online legal research’ is used interchangeably, meaning legal research using free or less expensive internet resources instead of high-cost subscription databases.
15. Margolis, *Supra* note 7, at 116 (citing John J. Hasko, *Persuasion in the Court: Nonlegal Materials in U.S. Supreme Court Opinion*, 94 Law Libr. J. 427, 441-53 (2002)).
16. *Id.*
17. Elizabeth Chambliss, *When Do Facts Persuade? Some Thoughts on the Market for “Empirical Legal Studies,”* 71 LAW AND CONTEMPORARY PROBLEMS 17, 20-21(2008).
18. *Law Journals: Submissions and Ranking*, WASHINGTON AND LEE UNIVERSITY SCHOOL OF LAW, <http://lawlib.wlu.edu/LJ/index.aspx> (last visited May 18, 2011). Social Sciences and the Law: 1 out of 24 (combined impact and citations); Refereed Law Journals: 1 out of 504 (currency factor\*); Refereed Law Journals: 2 out of 504 (combined impact and citations); All Law Journals: 11 out of 1522 (currency factor\*) as of 2008. *Id.*
19. Chambliss, *supra* note 16, at 31 (quoting *Journal of Empirical Legal Studies*, <http://www.wiley.com/bw/journal.asp?ref=1740-1453>).
20. Stephen C. Weiss, *Searching for Law on the Internet*, 33 TRIAL 78, 78 (1997).
21. THEODOR HERMAN, HOW TO RESEARCH LESS AND FIND MORE: THE ESSENTIAL GUIDE TO COMPUTER ASSISTED LEGAL RESEARCH 73 (1996).

22. Margolis, *Supra* note 7, at 98 (citing as examples *Salahuddin v. Coughlin*, 999 F. Supp. 526, 529 (S.D.N.Y. 1998); *Gosnell v. Rentokil*, 175 F.R.D. 508, 510 n.1 (N.D. Ill. 1997); *Brown v. Lincoln Towing Serv.*, No. 88C0831, 1988 WL 93950 (N.D. Ill. 1988); *Pravic v. U.S. Indus.-Clearing*, 109 F.R.D. 620, 623 (E.D. Mich. 1986); *Blake v. Nat'l Cas. Co.*, 607 F. Supp. 189, 191 (C.D.Ca. 1984)).
23. DIANA BOTLUK, *THE LEGAL LIST: RESEARCH ON THE INTERNET* 6 (2008).
24. *Id.*
25. Richard A. Danner, S. Blair Kauffman & John G. Palfrey, *The Twenty-First Century Law Library: Marian Parker's Comment*, 101 LAW LIBRARY JOURNAL 143, 155 (2009).
26. According to Experian, one of leading information services company, as of February, 2011 is Google. Google accounts for 67.95 percent of all U.S. searches for the month of January, 2011. See *Experian Hitwise Reports Bing Searches Increase 21 Percent in January 2011*, EXPERIAN HITWISE, <http://www.hitwise.com/us/press-center/press-releases/bing-searches-increase-twenty-one-percent> (last visited May 6, 2011).
27. See Anurag Acharya, *Finding the Laws that Govern Us*, OFFICIAL GOOGLE BLOG (Nov. 17, 2009), <http://googleblog.blogspot.com/2009/11/finding-laws-that-govern-us.html>.
28. "Currently, Google Scholar allows you to search and read opinions for US state appellate and supreme court cases since 1950, US federal district, appellate, tax and bankruptcy courts since 1923 and US Supreme Court cases since 1791 (please check back periodically for updates to coverage information). In addition, it includes citations for cases cited by indexed opinions or journal articles which allows you to find influential cases (usually older or international) which are not yet online or publicly available. *Legal opinions in Google Scholar are provided for informational purposes only and should not be relied on as a substitute for legal advice from a licensed lawyer. Google does not warrant that the information is complete or accurate.*" *Help: Which court opinions do you include?*, GOOGLE SCHOLAR, <http://scholar.google.com/intl/en/scholar/help.html> (last visited May 18, 2011).
29. Amanda M. Runyon, *The Effect of Economics and Electronic Resources*, 101 LAW LIBRARY JOURNAL 177, 198-99 (2009).
30. Law.Gov, *A Nations of Laws: Report*, <http://resource.org/law.gov/index.html> (last visited May 18, 2011).

31. Roberta I. Shaffer, *Holiday Letter from the Law Library of Congress*, Jan.5, 2010, [www.loc.gov/law/news/holiday\\_letter.pdf](http://www.loc.gov/law/news/holiday_letter.pdf).
32. See Am. Assoc. of Law Libraries, *State-by-State Report on Authentication of Online Legal Resources Full Report*, (Mar. 2007), [http://www.aallnet.org/aallwash/authen\\_rprt/AuthenFinalReport.pdf](http://www.aallnet.org/aallwash/authen_rprt/AuthenFinalReport.pdf).
33. THE BLUEBOOK: A UNIFORM SYSTEM OF CITATION R. 18.2, at 165 (Columbia Law Review Ass'n et al. eds., 19th ed. 2010).
34. Fed. R. Evid. 901(a).
35. *Final Authentication White Paper*, GOV'T PRINTING OFFICE, 3 (Oct. 13, 2005), <http://www.gpo.gov/pdfs/authentication/authenticationwhitepaperfinal.pdf>.
36. *Id.*
37. *Id.*
38. Kelly Kunsch, *Diogenes Wanders the Superhighway: A Proposal for Authentication of Publicly Disseminated Documents on the Internet*, 20 SEATTLE U. L. REV. 749, 760-70 (1997).
39. *Id.* at 760-70. Authentication through domain names of internet websites or making official domain registry for legal information websites may not be possible because of the lack of funds available. Since this article was published in 1997, the authentication method he suggested has not been realized. However, his idea is similar and commensurate with the idea of creating a national inventory of authentic legal information supported by the American Association of Law Libraries. Since 2007 when the Executive Board of American Association of Law Libraries adopted a policy to warrant the access to the publicly available government information, law librarians have been making efforts for the authentication and preservation of official legal sources, creating a nation inventory of official legal sources published on each state's official websites. *AALL State Working Groups to Ensure Access to Electronic Legal Information*, AM. ASS'N OF LAW LIBRARIES, <http://www.aallnet.org/Documents/Government-Relations/Advocacy-Toolkit/stateworkinggroups.pdf> (last visited May 16, 2011).
40. THE BLUEBOOK: A UNIFORM SYSTEM OF CITATION R. 18.2.1, at 165-67 (Columbia Law Review Ass'n et al. eds., 19th ed. 2010).
41. *Law.gov Principles and Declarations*, LAW.GOV: AMERICA'S OPERATING SYSTEM, OPEN SOURCE <http://public.resource.org/law.gov> (last visited May 12th, 2011). This trend is commensurate with the recent adoption

- and approval by the Uniform Law Commission (ULC) of The Uniform Electronic Legal Material Act at its 120th Annual Meeting in Vail, Colorado, and tells a state “official publisher” to authenticate state legal materials. *Uniform Electronic Legal Material Act Approved*, UNIFORM LAW COMMISSION, July 12, 2011, <http://www.nccusl.org/NewsDetail.aspx?title=Uniform%20Electronic%20Legal%20Material%20Act%20Approved>.
42. *Getty Petroleum Mktg., Inc. v. Capital Terminal Co.*, 391 F.3d 312, 324 n.17 (1st Cir. 2004).
  43. *Id.*
  44. Kelly Kunsch, *Supra* note 37, at 779. The burden of disproving authenticity of the information contained shifts from publishers and vendors to the domain owner of the website. *Id.*
  45. *Getty Petroleum*, 391 F.3d at 325.
  46. Fed. R. Evid. 901(b)(7).
  47. THE BLUEBOOK: A UNIFORM SYSTEM OF CITATION R. 18.3, at 171 (Columbia Law Review Ass’n et al. eds., 19th ed. 2010).
  48. *See e.g., Federal Digital System: America’s Government Authentic System*, U.S. GOV’T PRINTING OFFICE <http://www.gpo.gov/fdsys/search/home.action> (last visited May 12, 2011); ONLINE SUNSHINE, <http://www.leg.state.fl.us> (last visited May 12, 2011).
  49. *See e.g. 2010 Term Opinions of the Court*, U.S., <http://www.supremecourt.gov/opinions/slipopinions.aspx> (last visited May 12, 2011). The website only says, “In case of discrepancies between the print and electronic versions of a slip opinion, the print version controls. In case of discrepancies between the slip opinion and any later official version of the opinion, the later version controls.” *Id.*
  50. *See Authentication Information*, U.S. GOV’T PRINTING OFFICE, <http://www.gpo.gov/authentication/index.htm> (last visited May 12, 2011).
  51. Kelly Kunsch, *Supra* note 37, at 756; Wendy Scott, *Evaluating & Authenticating Legal Web Resources: A Practical Guide for Attorneys*, 52 SYRACUSE L. REV. 1185, 1196-97 (2002).
  52. *See e.g. The Moving Wall*, JSTOR, <http://about.jstor.org/content-collections/moving-wall> (last visited May 16, 2011).
  53. When I compared, e-CFR was published five days faster than CFR in Westlaw.

54. See *Federal Register: Today's Issue of the Federal Register*, U.S. Government Printing Office,  
<http://www.gpo.gov/fdsys/browse/collection.action?collectionCode=FR> (last visited May 16, 2011).
55. The libraries usually get the print version about ten days later after its publication.
56. Press Release, The Administrative Office of U.S. Courts, New Pilot Project Will Enhance Public Access to Federal Court Opinions (May 04, 2011), [http://www.uscourts.gov/News/NewsView/11-05-04/New\\_Pilot\\_Project\\_Will\\_Enhance\\_Public\\_Access\\_to\\_Federal\\_Court\\_Opinions.aspx](http://www.uscourts.gov/News/NewsView/11-05-04/New_Pilot_Project_Will_Enhance_Public_Access_to_Federal_Court_Opinions.aspx).
57. Users can get free opinions by creating a free Pacer Account and going through "Civil and Criminal Records" under the "Reports" menu on the individual Case management/Electronic Case Files (CM/ECF) site of each federal court. On the PACER website, users should go through "Court Links" to reach individual CM/ECF site on the left-side menu instead of PACER Case locator link. *Individual Court Pacer Sites*, PACER, <http://www.pacer.gov/cgi-bin/links.pl> (last visited May 16, 2011).
58. *Google SLOJ Details Emerge on Law Librarian Blog Talk Radio*, LAW LIBRARIAN BLOG (Dec. 8, 2009), [http://lawprofessors.typepad.com/law\\_librarian\\_blog/2009/12/google-sloj-details-emerge-on-law-librarian-blog-talk-radio.html](http://lawprofessors.typepad.com/law_librarian_blog/2009/12/google-sloj-details-emerge-on-law-librarian-blog-talk-radio.html).
59. *LII Collection: US Supreme Court Decisions: Extent and currency*, LEGAL INFORMATION INSTITUTE <http://www.law.cornell.edu/supct/supremes.htm> (last visited May 16, 2011).
60. Lexis, Westlaw, VersusLaw, etc. also subscribe to the Court's Project Hermes opinion service. See *Where to Obtain Supreme Court Opinions*, Supreme Court of the United States, <http://www.supremecourt.gov/opinions/obtainopinions.aspx> (last visited May 17, 2011).
61. See *Electronic Code of Federal Regulations*, GPO ACCESS, <http://www.gpoaccess.gov/ecfr> (last visited May 16, 2011).
62. *Browse Government Publications*, FDSYS: GPO'S FEDERAL DIGITAL SYSTEM <http://www.gpo.gov/fdsys/browse/collectiontab.action?null&bread=true> (last visited May 17, 2011).
63. JAKOB NIELSEN, *DESIGNING WEB USABILITY* 9 (2000).
64. Christof van Nimwegen and Here van Oostendorp suggest that the websites, that have interfaces internalizing knowledge, are not so much effective in constructing learning schema and enhancing users' performance as the websites that have interfaces externalizing



knowledge. Christof van Nimwegen and Herre van Oostendorp, *The Questionable Impact of an Assisting Interface on Performance in Transfer Situations*, 39 INT'L J. OF INDUS. ERGONOMICS 501, 507 (2009). However, standards that distinguish between internalized websites and externalized websites are different from the usability standards.

65. U.S. DEP'T OF HEALTH AND HUMAN SERVS., RESEARCH-BASED WEB DESIGN & USABILITY GUIDELINES DEVELOPED 3 (2006).
66. *See generally* NIELSEN, *Supra* Note 62.
67. They know what will happen based on earlier experience. Jakob Nielsen, *Top Ten Mistakes in Web Design*, June 5, 2009, <http://www.useit.com/alertbox/9605.html>.
68. U.S. DEP'T OF HEALTH AND HUMAN SERVS., *Supra* Note 64, at 3.
69. *Id.* at 103.
70. *See* U.S. COPYRIGHT OFFICE, <http://www.copyright.gov> (last visited May 18, 2011).
71. *See* GPO ACCESS, <http://www.gpoaccess.gov> (last visited May 18, 2011).
72. *See* FDSYS: GPO'S FEDERAL DIGITAL SYSTEM, <http://www.gpo.gov/fdsys/search/home.action> (last visited May 18, 2011).
73. Web color #333333 is close to the dark grey color.
74. Jakob Nielsen, *Top Ten Mistakes in Web Design* (2007), <http://www.useit.com/alertbox/9605.html>. (last visited May 18, 2011).
75. U.S. DEP'T OF HEALTH AND HUMAN SERVS., *Supra* Note 64, at 76, 171.
76. NIELSEN, *Supra* Note 62, at 104.
77. *Id.*
78. Nielsen, *Supra* Note 73. *See also* NIELSEN, *Supra* Note 62, at 104.
79. U.S. DEP'T OF HEALTH AND HUMAN SERVS., *Supra* Note 64, at 76, 171.
80. NIELSEN, *Supra* Note 62, at 105-06.
81. Nielsen, *F-Shaped Pattern for Reading Web Content*, June 5, 2009, [http://www.useit.com/alertbox/reading\\_pattern.html](http://www.useit.com/alertbox/reading_pattern.html)
82. *Id.*
83. *See* TRAC Reports, Inc., <http://trac.syr.edu> (last visited May 18, 2011).
84. Nielsen, *Supra* Note 73.
85. Jakob Nielsen, *Search: Visible and Simple*, June 5, 2009, <http://www.useit.com/alertbox/20010513.html>.

86. *Id.*
87. *Id.*
88. *Id.*
89. U.S. DEP'T OF HEALTH AND HUMAN SERVS., *Supra* Note 64, at 113.
90. Nielsen, *Supra* Note 84.
91. *See* Nielsen, *Supra* Note 73.
92. U.S. DEP'T OF HEALTH AND HUMAN SERVS., *Supra* Note 64, at 62.
93. *Id.* at 92.
94. *See* NEXISONE: SEARCH FREE CASE LAW, <http://www.lexisone.com/lx1/caselaw/freecaselaw> (last visited May 18, 2011).
95. *See* Nielsen, *Supra* Note 84.
96. *See* PLOL: THE PUBLIC LIBRARY OF LAW, <http://www.plol.org/Pages/Search.aspx> (last visited May 18, 2011).
97. 1 em is equal to the current font size; 2 em means 2 times the size of the current font.
98. *See* GOOGLE SCHOLAR, <http://scholar.google.com> (last visited May 11, 2011).
99. *See* U.S. DEP'T OF HEALTH AND HUMAN SERVS., *Supra* Note 64, at 103.
100. *See generally* LEGAL TECH. RES. CTR., *Supra* Note 8.
101. While I was writing this article in late January 2010, there was an announcement by Westlaw about "sweeping changes"; specifically, Westlaw announced that their new product, Westlaw Next, would be launched on February 1, 2010. Ashlee Vance, *Leal Sites Plan Revamps as Rivals Undercut Price*, N.Y. TIMES, January 25, 2010, at B5. However, this analysis based on usability will still benefit the legal researchers in analyzing other online legal resources and databases and in introducing them to law students. According to Jakob Nielson, "web usability changes less rapidly than web technology, so the methods and concepts. . . will be useful . . . for many years . . ." Nielson, *Supra* Note 62, at 12.
102. Nielsen, *Supra* Note 72. Ten mistakes are bad search, PDF files for online reading, not changing the color of visited links, non-scannable text, fixed font size, page titles with low search engine visibility, anything that looks like an advertisement, violating design conventions, opening new browser windows, and not answering users' questions. *Id.*

103. For analytical purposes, I used the 'Law School' tab which most law students starting to learn Westlaw use for their legal research class. This tab is set up as a default by Westlaw.
104. *See Nielsen, Supra* Note 80.
105. Julie M. Jones, *Not Just Key Numbers and Keywords Anymore: How user Interface Design Affects Legal Research*, 101 LAW LIBRARY JOURNAL 7, 18 (2009).
106. *See Nielsen, Supra* Note 73.
107. This function can be changed by the "Preferences" function, which appears in small white color letters on the top right corner of the pages; however, changing setting for search results using this "Preferences" function is not easy for the first time users or law students.
108. Nielsen, *Supra* Note 73.
109. *Id.*
110. For this reason, many websites are providing PDF and other types of files at the same time.