

THE AGRICULTURAL LAWYERS' GUIDE TO THE INTERNET

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“All I know about the Internet, I learned from my children.”

Lawyer over 50

“The first thing we will do is . . . [connect] all the lawyers.”

Modified Shakespeare

I. INTRODUCTION

The Internet is a moving target. Like the introduction of other major technologies (automotive, television, nuclear), we do not know where the technology will take us or where the technology will go. But few of us can choose to stay off the Internet. The train has left the station, is gaining speed, and will pass the laggard lawyer. More importantly, the technology *can* level the playing field for the small or rural law firm that must compete in an increasingly competitive market. But like any tool, the Internet must be adopted carefully and thoughtfully. It is a tool, not a panacea.

The advantages of the Internet could not be more useful for another client group than they are for farmers and agricultural lawyers. Both professions rely on vast amounts of information that must be both current and accurate. The difficulty in the past was not the lack of information but its location. The rural environment was limited to its local reports and publications. If information was desired from outside the locality, it would either have to be mailed, wired, or a journey might be necessary. All these cost money and have time limitations. Time constraints include not only time of day—has the source closed for the day?—and time of year—is it a holiday or holy day?—they also include the time the information was shared and received—it might be out of date.

Another benefit of the Internet for the rural farmer and lawyer is that not only do they have access to the world, but also the world has instant access to the farmer and lawyer. The Internet, with its feature of e-mail (electronic mail), allows the immediate transfer of information to the firm and from the firm to clients. As

Adkins¹ points out, Microsoft Word and Corel WordPerfect are incorporating Internet technologies into their word processing applications, making the line between Internet technologies and the desktop disappear. If fifty million people around the world can access ten million Internet servers, can society avoid a major impact from this new research, marketing, and communication tool?²

II. COMPUTER USE PROFILES OF FARMERS AND LAWYERS

A. *Computer Profile of Farmers—What Our Clients Look Like*

The United States Department of Agriculture (USDA) has recently reported that thirteen percent of U.S. farmers have Internet access. However access ranges from four percent in Louisiana and Mississippi to thirty-one percent in New Jersey. Twenty percent of all farmers use a computer in their farm business.³ For individual state information and additional data, see Appendix A and B.

B. *Computer Profiles of Law Firms*

The American Bar Association's Legal Technology Resource Center reported the results of its 1997 Small and Large Firm Technology Surveys.⁴ Similar surveys have been conducted since 1985.⁵ The survey collected information on the adoption, development, and use of automation by law firms with twenty or fewer lawyers,⁶ and 500 of the largest private law firms.⁷ Individuals in both small and large firms were also surveyed.

Seventy-eight percent of the 379 small firms responding reported using Netscape Navigator,⁸ twenty-nine percent use Microsoft Explorer,⁹ four percent use

1. Andrew Z. Adkins, III, *Internet for Florida Lawyers Part I*, THE INTERNET LAWYER (visited Mar. 31, 1998) <<http://www.internetlawyer.com/tutorial/tutl.htm>>.

2. *See id.*

3. U.S. DEPARTMENT OF AGRICULTURE, NATIONAL AGRICULTURAL STATISTICS (NASS) (July 30, 1997) <http://mann77.mannlib.cornell.edu/reports/nassr/other/computer/farm_computer_usage_07.30.97>.

4. LEGAL TECHNOLOGY RESOURCE CENTER, AMERICAN BAR ASSOCIATION, LARGE LAW FIRM TECHNOLOGY SURVEY 1997 EXECUTIVE SUMMARY (1997) [hereinafter LARGE FIRM SURVEY]; LEGAL TECHNOLOGY RESOURCE CENTER, AMERICAN BAR ASSOCIATION, SMALL LAW FIRM TECHNOLOGY SURVEY 1997 EXECUTIVE SUMMARY (1997) [hereinafter SMALL FIRM SURVEY].

5. SMALL FIRM SURVEY, *supra* note 4, at 3; LARGE FIRM SURVEY, *supra* note 4 at 3.

6. *See* SMALL FIRM SURVEY, *supra* note 4, at 3.

7. *See* LARGE FIRM SURVEY, *supra* note 4, at 3.

8. *See* SMALL FIRM SURVEY, *supra* note 4, at 7.

Mosaic,¹⁰ and ten percent reported using some other type of browser for the World Wide Web.¹¹ Of the 114 large firms responding, eighty-eight percent used Netscape Navigator,¹² forty-four percent use Microsoft Explorer,¹³ and fifteen percent used Mosaic.¹⁴

Ninety-four percent of small firms used some type of word processing software, with sixty-three percent using WordPerfect¹⁵ and forty-six percent using Microsoft Word.¹⁶ Large firms reported use of WordPerfect in seventy-eight percent of the cases¹⁷ and use of Microsoft Word in sixty percent of the firms.¹⁸

Law firms are shifting to the Internet with increased activities in legal research, marketing, and communicating internally and externally.¹⁹ Ninety-eight percent of large firms responding to the ABA survey²⁰ were on the Internet and the remainder plan to join in 1997. Sixty-three percent of small firm lawyers surveyed used the Internet and fifty-nine percent of those without access plan to obtain Internet access in 1997.²¹ Of the small law firms responding, sixty-seven percent used the Internet for legal research, fifty-four percent for communications, forty-one percent with clients, twenty-three percent for access to court records, fourteen percent for marketing their practice and seven percent to locate expert witnesses.²² Likewise, large firms mirror small firms, only with percentages in their usage of the computer higher: ninety-seven percent do legal research on the Internet, eighty-eight percent communicate with colleagues, ninety-one percent communicate with clients, seventy-eight percent access court records, sixty-one percent market the legal practice, and thirty-three percent locate expert witnesses.²³ Fifty-one percent of large firms reported having a homepage and sixty percent of firms without one plan to create a homepage in 1997.²⁴

9. See SMALL FIRM SURVEY, *supra* note 4, at 7.

10. *See id.*

11. *See id.*

12. See LARGE FIRM SURVEY, *supra* note 4, at 7.

13. *See id.*

14. *See id.*

15. See SMALL FIRM SURVEY, *supra* note 4, at 5-6.

16. *See id.* at 5.

17. See LARGE FIRM SURVEY, *supra* note 4, at 4.

18. *See id.*

19. *See id.* at 6.

20. *See id.*

21. See SMALL FIRM SURVEY, *supra* note 4, at 6.

22. *See id.*

23. See LARGE FIRM SURVEY, *supra* note 4, at 6.

24. *See id.* at 6.

Ninety-eight percent of large firms reported using CD-ROM for legal research.²⁵ Seventy-two percent of small firm lawyers reported using CD-ROMs, and fifty-seven percent of those not using CD-ROM plan to acquire the technology in 1997.²⁶ Lawyers have more than eleven hundred law-related CD-ROM titles to choose from.²⁷

The ABA reports that there is no clear leader among electronic mail programs for either large or small law firms.²⁸ Because of the relative lack of privacy, most lawyers limit what they transmit via the Internet.²⁹ Encryption technology is being reviewed by lawyers to secure e-mail and preserve confidentiality.³⁰ The ABA report concluded that both small and large firms are embracing cutting-edge technology.

Lawyers are demanding powerful computers and Windows-based software programs to improve the efficiency of their practices. While use of the Internet for a variety of activities has become commonplace, current usage reflects a cautious optimism about this new tool. Lawyers have chosen to supplement their practices with activities on the Internet, while they wisely continue to use all other resources available to them.³¹

The *Internet Lawyer* and Microsoft Corporation conducted a survey of Internet and online user trends in the legal profession in the fall of 1996.³² The study reported that seventy-one percent of lawyers now use the Internet for e-mail, research, and marketing.³³ Thirty-two percent use local Internet Service Providers (ISPs), eighteen percent America Online, and six percent Counsel Connect, a proprietary online communication service.³⁴ The Microsoft study indicated that seventy-two percent of respondent lawyers use the Internet for legal research, forty-eight percent to retrieve federal cases, statutes, and regulations, and thirty-four percent for state legal

25. *See id.*

26. *See* SMALL FIRM SURVEY, *supra* note 4, at 6.

27. *See id.*

28. *See* LARGE FIRM SURVEY, *supra* note 4, at 7; SMALL FIRM SURVEY, *supra* note 4, at 7.

29. *See* LARGE FIRM SURVEY, *supra* note 4, at 7; SMALL FIRM SURVEY, *supra* note 4, at 7.

30. *See* LARGE FIRM SURVEY, *supra* note 4, at 7; SMALL FIRM SURVEY, *supra* note 4, at 7.

31. SMALL FIRM SURVEY, *supra* note 4, at 7.

32. The Survey Questionnaire can be found at <<http://www.internetlawyer.com/surform.htm>> and the report on The Internet Lawyer web site, <<http://www.internetlawyer.com/>>.

33. *Study Proves Lawyers Leaping Onto the Net*, INTERNET LAWYER (Jan. 27, 1997) <<http://www.internetlawyer.com/ltechpr.htm>>.

34. *See id.*

materials.³⁵ Many lawyers use the Internet for non-legal materials such as finding missing persons, investigating trademark infringement, and conducting medical research and company research.³⁶

C. Computer Profile of the American Agricultural Law Association

The American Agricultural Law Association³⁷ was surveyed,³⁸ and eighty-eight members responded to questions concerning their access to the Internet and other electronic legal information. Sixty-seven percent of the replies were from practitioners and the remainder were from professors and attorneys working with associations, corporations, and government or other professions.³⁹ Seventy-three percent of the lawyers reported that they have access to the Internet.⁴⁰ Of the respondents with access to the Internet, fifty-two percent used it to search federal agency regulations,⁴¹ forty-seven percent federal statutes,⁴² forty-eight percent federal cases,⁴³ forty-four percent state agency regulations,⁴⁴ forty-one percent state statutes,⁴⁵ fifty-nine percent state cases,⁴⁶ and fifty-eight percent for other information.⁴⁷

Twenty-eight percent of respondents reported that they or their firm had a web page,⁴⁸ seventy-seven percent had computers on their desk,⁴⁹ forty-two percent used e-mail for internal communications,⁵⁰ and fifty-three percent for external communications.⁵¹ But only eighteen percent subscribed to or participated on a listserve.⁵² AALA members reported that they use the Internet to search for financial

35. *See id.*

36. *See id.*

37. <<http://www.aglaw-assn.org>>.

38. *See* James R. Baarda & L. Leon Geyer, American Agricultural Law Association Survey, Sept. 1997 (on file with *Drake Journal of Agricultural Law*).

39. *See id.*

40. *See id.*

41. *See id.*

42. *See id.*

43. *See id.*

44. *See id.*

45. *See id.*

46. *See id.*

47. *See id.*

48. *See id.*

49. *See id.*

50. *See id.*

51. *See id.*

52. *See id.*

information, commodity prices, futures, scientific information, industry and company information, law and technical journals online, regional newspapers, news, sports, tax forms and publications, vendors for law office products, expert witnesses, government and industrial research materials, federal regulatory agency information and regulations, education information and facts about rural areas, state attorney general opinions, treatises, jury instructions, *Thomas*, and clearing houses.⁵³ When asked if AALA members participated on listserves, fewer lawyers responded. The listserves that were mentioned include the following: bankruptcy law, state bar, wetlands, environment, NET-lawyers, muscotenet, University of Arkansas Agricultural Law Programs, state bar listserves for committee, Martindale-Hubbell online, AgLaw-L, legal ethics, Law Prof., judicial news, and law and technology news.⁵⁴

Participants were asked if they subscribed to fee-paid electronic services of a CD-ROM, online Lexis, or Westlaw for state and federal research.⁵⁵ To search state code, thirty-four percent used CD-ROM,⁵⁶ seventeen percent used Lexis-Nexis,⁵⁷ and twenty-two percent used Westlaw.⁵⁸ CD-ROM provided search capability for state cases for thirty-three percent⁵⁹ of respondents, Lexis-Nexis served eighteen percent,⁶⁰ and Westlaw was used by twenty-three percent.⁶¹ Thirteen percent of those researching the Federal Code chose CD-ROM,⁶² eleven percent chose Lexis-Nexis,⁶³ and twenty-three percent chose Westlaw.⁶⁴ To search all federal cases, five percent used CD-ROM,⁶⁵ sixteen percent used Lexis-Nexis,⁶⁶ and eighteen percent used Westlaw.⁶⁷ State and regional cases were researched on CD-ROM by six percent of the researchers,⁶⁸ fourteen percent used Lexis-Nexis,⁶⁹ and nineteen percent used

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53. *See id.*
 54. *See id.*
 55. *See id.*
 56. *See id.*
 57. *See id.*
 58. *See id.*
 59. *See id.*
 60. *See id.*
 61. *See id.*
 62. *See id.*
 63. *See id.*
 64. *See id.*
 65. *See id.*
 66. *See id.*
 67. *See id.*
 68. *See id.*
 69. *See id.*

Westlaw.⁷⁰ For federal cases, three percent of respondents used CD-ROM,⁷¹ sixteen percent used Lexis-Nexis,⁷² and twenty percent used Westlaw.⁷³

Of the forty-four lawyers who identified themselves as being in a rural practice, forty-one percent used CD-ROM,⁷⁴ fourteen percent had access to Westlaw,⁷⁵ and eleven percent have access to Lexis.⁷⁶ Of the other forty lawyers responding, thirty-nine percent use CD-ROM,⁷⁷ thirty-three percent have access to Westlaw⁷⁸ and twenty-five percent have access to Lexis.⁷⁹ Of the forty-four lawyers who identified themselves as being in a rural practice, fourteen percent had a web page,⁸⁰ seventy-three percent had a computer on their desk,⁸¹ and thirty-nine percent used the Internet.⁸² Of the other forty non-rural lawyers responding, forty-eight percent had a web page,⁸³ ninety percent had computers on their desk,⁸⁴ and seventy-five percent used the Internet.⁸⁵ Of the eighty-eight respondents, nineteen were practicing in urban areas.⁸⁶ Of the nineteen lawyers practicing in urban areas, thirty-three percent had CD-ROM access to the law,⁸⁷ twenty-six percent had access to Westlaw,⁸⁸ and twenty-one percent had access to Lexis.⁸⁹ Of the nineteen lawyers practicing in urban areas, thirty-two percent had a web page,⁹⁰ ninety-five percent had a computer on their desk,⁹¹ and forty-seven percent were connected to the Internet.⁹²

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70. *See id.*
71. *See id.*
72. *See id.*
73. *See id.*
74. *See id.*
75. *See id.*
76. *See id.*
77. *See id.*
78. *See id.*
79. *See id.*
80. *See id.*
81. *See id.*
82. *See id.*
83. *See id.*
84. *See id.*
85. *See id.*
86. *See id.*
87. *See id.*
88. *See id.*
89. *See id.*
90. *See id.*
91. *See id.*
92. *See id.*

III. INTERNET ACCESS AND USE

Before using the Internet, one must first connect to it over the telephone system. At a minimum, the following are necessary:⁹³ a computer, modem and regular phone line; the services of an Internet Access Provider or online service; the Internet Access Provider or online service's access telephone number; Internet communications software (Trumpet, SLIP, or PPP); and Internet application software (Eudora, Mosaic, or Netscape).

Though the initial startup costs can be expensive, reaping the rewards of this investment down the road makes the expenditure worthwhile. Electronic access to e-mail, legal research and the Web are just a part of our move to the twenty-first century and the virtual global village.

A. E-Mail (*Electronic Mail*)

E-mail provides a user with the ability to directly contact anyone on the Internet. E-mail can be sent to one person, or "broadcast" to many.⁹⁴ As today's Internet networks grow, e-mail is becoming a dominant form of communication for Internet users across the world. It is inexpensive and much quicker than most conventional forms of communication. Along with the written text of e-mail, the user can attach computer files that may include important documents, visuals, or programs. Mailing lists (sometimes called "listserves") are a way to send e-mail *automatically* to a large number of people on a regular basis.⁹⁵ Like "snail mail," a mailing list also can bring in junk mail.⁹⁶

Subscribing to a mailing list can be done by e-mailing a subscription request.⁹⁷ Once on the mailing list, any messages sent to the mailing list are automatically e-mailed to subscribers.⁹⁸ The advantage of mailing lists is the access to current information. The disadvantages arise when one has subscribed to too many listserves, resulting in an overwhelming amount of e-mail. The clutter of mail received may include more junk mail than useful items. It is also possible for an e-mail address to be released to other parties (companies) who will put the address on

93. HENRY JAMES, *THE FARMER'S GUIDE TO THE INTERNET* 19 (1996).

94. *See id.*

95. *See id.*

96. *See id.*

97. *See id.*

98. *See id.*

their own listserve. Another pitfall is what can be found out about anyone on the Internet.⁹⁹

B. Websites—Clients, Recruits, and Prestige

Web sites may be like telephones. Early adopters win and increase business. One firm reported \$800,000 of billing attributable to their web site.¹⁰⁰ For the rest, websites are necessary to stay even or run in place.

The *Washington Post* reported in September that nationally, 2600 firms¹⁰¹ have web sites, up from 1600 in January. Content varies from electronic versions of brochures and discussions topics to partner profiles.¹⁰² For a large firm, an initial investment of \$10,000 to \$15,000 is reported to cover initial design and development.¹⁰³ Others argue \$250,000 a year will be needed—the bulk is “lost billing” time.¹⁰⁴ Counters allow you to determine numbers of web site visitors.

Thomason of the Seamless Website¹⁰⁵ recommends considering two basic issues when hiring a web designer. The first issue is “am I hiring a good Web designer?”¹⁰⁶ “How many sites have they developed, What do those sites look like?, and are their

99. In the privacy of my home and early in the morning on October 4, 1997 at 9:22 a.m., I typed Leon Geyer into Alta Vista search engine <<http://www.altavista.digital.com/c...=q&what=web&kl=XX&q=Leon+and+geyer>> for a search of the Web for documents in any language. Within seconds, 18,320 documents matching my query were available for review. While the search included other Geyers such as Georgie Ann Geyer, the nationally syndicated columnist <http://www.leadingauthorities.com/la/GeorgieAnn_Geyer.html>, many German companies such as Geyer-Werke GMBH <<http://www.mediacube.de/~geyer/geyer-muenchen.html>>, the appointment of Geyer as Commissioner of Securities in Ohio <<http://198.234.130.80/HTMLpages/PressRelease/Geyer>>, and many homepages, I was chagrined to see a “Mail Thread Index” report of my correspondence as a member of the AgLaw Listserve maintained by Washburn University <<http://ftplaw.wuacc.edu/listproc/aglaw-l/msg00005.html>>. References to departmental program and extension publications should be expected. <<http://web.cals.vt.edu/CALS/scholarships/deptScholarships.html>>, <<http://www.ext.vt.edu/docdb/aaec/aaec-177>>. They are created in the public domain and for the public domain. But, my listserve conversations? (I am not a surfing junkie and did not surf the association’s membership).

100. See HENRY JAMES, *THE FARMER’S GUIDE TO THE INTERNET* 19 (1996).

101. Beth Berselli, *Firms Find Web Sites Attract Clients, Recruits, Prestige*, WASH. POST, Sept. 22, 1997, at F7.

102. See *id.*

103. See *id.*

104. See *id.*

105. Kevin Lee Thomason, *A Couple of Words on Hiring a Web Designer*, III INTERNET LAWYER 9, Sept. 1997, at 10.

106. *Id.*

clients happy?" are the basic hiring questions.¹⁰⁷ Fishman adds, "Don't fall for the flashy stuff. I mean animations, shockwave, sound, video clips, etc. It's nice for an entertainment site maybe, but not for a law firm. Also, not everything can be viewed by every browser."¹⁰⁸ Thomason's second issue is "am I hiring them under a good contract?"¹⁰⁹ He suggests that the contract at least spell out the following: the scope of the work that the design firm will do; the duties of the law firm in the site creation process; who owns the intellectual property rights in the various parts of the site; total fees for the site design, and the time-schedule for payment of the fees; what happens if the parties run into a disagreement; and a time-schedule for completion of the site.¹¹⁰

Ambrogi suggests that surfers use the Internet like a phone book.¹¹¹ The web site is a public service and should provide information to a prospective client.¹¹² A competitive web world requires a site that emphasizes the unique aspects of each practice.¹¹³ A web site indicates currency with technology and readiness to work with computer literate clients. Being on the Web means answering e-mail like phone calls. It sets the tone for the practice.¹¹⁴ Other lawyers' sites can be studied for ideas of what to do as well as what not to do. Visitors should be cautioned about confidentiality and each site should be user friendly—leave the bells and whistles for others.¹¹⁵ Do not expect immediate results from the Web. The Web, like the telephone and fax machine, may become a necessary tool of the trade, but only to stay in place.

As John Polson has observed:

The World Wide Web has become such a huge tool for business and this is the same reason that many see the World Wide Web as a *Mission Critical Business Tool*. On the World Wide Web, the consumer selects the message they want to see, and they do this *on their own time*.¹¹⁶

107. *Id.*

108. *Id.* at 11.

109. *Id.*

110. *See id.*

111. *See* Robert J. Ambrogi, *20 Tips for a Successful Legal Web Site*, 7 LAW OFFICE COMPUTING, June-July 1997, at 50, 50-57.

112. *See id.* at 51.

113. *See id.* at 52.

114. *See id.* at 55.

115. *See* <http://www.legalethics.com> for a review of ethics and the Internet.

116. Personal e-mail from John Polson, Sales and Marketing Manager, P.T.I., Inc., Blacksburg, Va. His complete letter follows at Appendix C.

There are several legal Web developers¹¹⁷ and a variety of homepages for lawyers.¹¹⁸

C. Internet Guides

A proliferation of books and articles on the use of the Internet can be found classified by profession or topic. Various books and articles provide information on “how to” and provide lists of sources by subject area.¹¹⁹

The outline of, and many lists from, Legal List are available online.¹²⁰ The Legal List describes seventy-three Canadian and U.S. legal publishers and book sellers online,¹²¹ fifty online law-related journals,¹²² eighteen pages of online state law resources,¹²³ thirty-six pages of law schools and academic law libraries,¹²⁴ and thirty-five pages of e-mail and listserves related to law.¹²⁵ *Environmental Guide to the Internet* lists 884 environmental sites¹²⁶. Publications such as *The Internet Lawyer* can be found online.¹²⁷ *Virtual-Attorney.Com*¹²⁸ is an online magazine focusing on legal technology—software and hardware reviews, chat rooms, and

117. <http://www.internetlawyer.com/>; [webdir.htm, http://www.netlawtools.com/services.html](http://www.netlawtools.com/services.html); and <http://www.ptiweb.com>.

118. For a variety of homepages for lawyers, check out <http://www.fhe.com>; <http://www.firian.com/>; <http://www.evw.com>; <http://www.munech.com>; <http://www.brobeck.com>; <http://www.swlaw.com/>; <http://www.bender.com/authbio/harl.htm>; <http://www.econ.iastate.edu/faculty/harl/>; <http://www.agriculture.com/user.pages/aglaw.html>; <http://law.uark.edu:30/arklaw/aglaw/>; <http://www.agecon.uga.edu/~tcentner/tjc.htm>; and <http://www.agriculture.com/user.pages/sas.html>.

119. See, e.g., ALLISON G. BURGESS, *THE LAWYER’S GUIDE TO THE INTERNET* (1995); Josh Blackman, *How to Use the Internet for Legal Research* (visited Oct. 10, 1997) <<http://www.netlawtools.com/revblack.html>>; Dana Rachlin, “*Search Engine Primer*”, *THE INTERNET LAWYER*, Aug. 1995; DIANA BOTLUK, *THE LEGAL LIST: RESEARCH ON THE INTERNET*, 162-64 (1996); CAROL BRIGGS-ERICKSON & TONI MURPHY, *ENVIRONMENTAL GUIDE TO THE INTERNET* (3d. ed. 1997); HENRY JAMES, *THE FARMER’S GUIDE TO THE INTERNET* (1996).

120. <<http://www.lcp.com/The-Legal-list/index1.html>>.

121. See BOTLUK, *supra* note 119 at 198-211.

122. See *id.* at 189-98.

123. See *id.* at 128-45; <<http://www.lcp.com/The-Legal-List/index5.html>>.

124. See *id.* at 81-117.

125. See *id.* at 26-61, <<http://www.lcp.com/The-Legal-List/ch2d.html>>.

126. BRIGGS-ERICKSON & MURPHY, *supra* note 119.

127. <<http://www.internetlawyer.com/>>.

128. <<http://www.virtual.attorney.com/>>.

bulletin boards. Professional lawyer associations such as state bars and the American Bar Association are online.¹²⁹

D. CLE Online

Continuing legal education (CLE) can be acquired over the Internet.¹³⁰ Audio programs are available via the computer and can be accessed conveniently from the Practising Law Institute.¹³¹ Other distance learning options are sure to follow. Is a virtual AALA meeting in our future?

IV. WORLD WIDE WEB—INFORMATION AND RESEARCH

Once someone has accessed the available information on the Internet, searching skills then must be mastered. Because of the vast quantity of information on the network, skilled searches provide the user with quick and valuable information.

The most crude method involves “surfing” the Internet.¹³² The process begins by using a given homepage of interest and following links within that page to narrow your search of the topic. Surfing the Internet is an excellent method for first time users who need to become familiar with different formats and presentations of information. Usually other subjects of interest are found as the surfer moves haphazardly through the Internet. When surfing the Internet, the starting point usually begins with a given homepage of a specific topic. These pages are commercial, public, government, or professional organization web sites. Their Internet addresses are laid out readily in everyday interactions. They can be found on television, periodicals, pamphlets, and other such documents. Once a particular page is used, the sky is the limit to information on the subject.

Search engines provide another means of searching the web. These are programs that will perform word searches in predefined subject areas or across the entire Internet.¹³³ The following table is a list of common search engines along with their Internet address:

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129. <<http://www.abanet.org>>.
130. <<http://www.pli.edu/index-hi.html>>.
131. <http://www.clegroup.com/cle_net/index.htm>.
132. John Dascanio, Accessing Information from the Internet, Virginia-Maryland Regional College of Veterinary Medicine Annual Proceedings at Virginia Polytechnic Institute and State University (1997) (on file with the *Drake Journal of Agricultural Law*).
133. *See id.*

SEARCH ENGINE	URL ADDRESS*
Alta Vista	http://altavista.digital.com/
DejaNews	http://www.dejanews.com/
The Electric Library	http://www.elibrary.com/id/2525/
Excite	http://www.excite.com/
Infoseek Guide	http://infoseek.com/
Lycos	http://www.lycos.com/
Magellan	http://www.mckinley.com/
MetaCrawler	http://metacrawler.cs.washington.edu:8080/
MedExploreer	http://www.medexplorer.com/medexplr.htm
Net Locator	http://www.nln.com/
Open Text Index	http://www.index.opentext.Net/
Shareware.com	http://www.shareware.com/?Netscape.swbtn
Who Where?	http://www.whowhere.com/
Yahoo!	http://www.yahoo.com/

*URL - Uniform Resource Locator or Domain name, analogous to an address on the Internet.¹³⁴

Search engines can be approached in several ways. The simplest way is to use the keyword search. The search engine pulls up web sites containing your specified word(s). Some search engines allow you to refine your keyword search by including or excluding specific topics. Along with the keyword search, browsers may have a list of directories and corresponding sub-directories. This allows the user to begin with a general topic search followed by sub-directories to refine the topic of choice. While within a sub-directory, a keyword search limited to the contents of that sub-directory may be used.

As a means of keeping a direction while browsing, the “forward” and “back” buttons (located on your browser toolbar) provide control on your surfing movement. Bookmarks are helpful also. There always will be more favorite sites than you can keep track of.¹³⁵ Bookmarks (as they’re known in *Netscape*) make it easy to manage those sites and save typing in the Web address every time. In *Netscape*, go to the Bookmarks menu and select Add Bookmark.¹³⁶ *Explorer’s* site index is called Favorites and works the same way.¹³⁷

134. *See id.*

135. *See* Joan Novelli, *Speed Surfing for Educators*, ELECTRONIC LEARNING, Mar.-Apr. 1997, at 52.

136. *See id.*

137. *See id.*

A. General and Main Search Engines—Free

According to a survey of the legal profession, Internet search engines in order of preference were as follows: Yahoo!, AltaVista, WebCrawler, Infoseek, Excite, Lycos, and Open Text.¹³⁸ If you are beginning to conduct research sessions with little or no information, the main search engines provide direction.

Yahoo!¹³⁹ functions like a “yellow pages” of the Internet or index to the Internet. You may input key terms and search for categories and sites or search by known sites such as Government:Law. Site links are placed on Yahoo! at the discretion of its administrator.¹⁴⁰ Yahoo! provides intelligent default, an exact phrase match, matches on all words (AND), matches on any word (OR), and a person’s name search option.¹⁴¹ Yahoo! claims three thousand legal jobs online.

AltaVista¹⁴² allows you to search web pages by simple terms or utilize Boolean search terms like AND, NOT, and NEAR. It is fast and huge. AltaVista provides help pages for assistance with search construction. Phrase searching, required and prohibited terms, and truncation allow it to “rank” highest scoring documents first.

Infoseek¹⁴³ allows for choices of searching techniques. These include the World Wide Web, e-mail addresses, usenet newsgroups, company directory, and Infoseek Selected Sites. Simple and complex searches can be conducted. Terms can be excluded, included, or bracketed to appear within 100 words of another with highest-scoring results appearing at the top.

Excite¹⁴⁴ searches web pages and usenet articles. Excite uses simple Boolean operators like AND and OR. Spaces between words are treated as “AND / OR.” It searches for words with similar meaning that are not in the specified search string.

WebCrawler¹⁴⁵ provides online travel reservation services and the latest news stories on its homepage.¹⁴⁶ WebCrawler supports “natural language searching” and Boolean search operators.¹⁴⁷ Standard Boolean search terms like AND, OR, NOT,

138. <<http://www.internetlawyer.com/start.htm>>.

139. <<http://search.yahoo.com/search/options>>.

140. See Michael A. Geist, *Main Search Engines* (visited Mar. 27, 1998) <<http://www.columbia.edu/~mag76/legal3a.html>>.

141. See *id.*

142. <<http://www.altavista.digital.com>>.

143. <<http://guide.infoseek.com>>.

144. <<http://www.excite.com>>.

145. <<http://www.webcrawler.com>>.

146. See *id.*

147. See *id.*

NEAR / #, ADJ (next to each other and in order), “...” (provides for page searching), and (...) (simplifies the creation of complex queries and can be used with other search operators) are used by WebCrawler.¹⁴⁸ WebCrawler allows search results to be viewed at 10, 24, or 100 at a time.¹⁴⁹ Selected topics such as Arts and Books, Auto, and Business and Finance can be searched.¹⁵⁰ Like other search engines, help, e-mail searches, yellow pages, weather, maps, and more can be clicked on at the homepage and searched.¹⁵¹

Lycos,¹⁵² like other servers, provides a drop-down menu to cover the top five percent of the sites for selected topic directory. Lycos provides access to individuals, companies online, and roadmaps and search techniques.¹⁵³ Lycos provides web site addresses and a web guide.¹⁵⁴ A modified Boolean search is available on Lycos. A (+) requires the term in the search, a (-) excludes the word and (“ ”) searches for a phrase.

B. Internet Access to the Law—Free

1. Access to Federal Courts

The U.S. Federal Courts homepage¹⁵⁵ is a clearinghouse for federal information. The web site describes the federal court system, provides press releases, vacancy lists of Article III judges, and selected articles from the federal courts’ newsletter, *The Third Bench*.¹⁵⁶ It also features the Directory of Electronic Public Access Services to Automated Information in the U.S. Federal Courts.¹⁵⁷

Emory Law School’s U.S. Federal Courts Finder,¹⁵⁸ Georgetown University Law Center,¹⁵⁹ and Villanova Center for Information Law and Policy¹⁶⁰ offer web

148. *See id.*

149. *See id.*

150. *See id.*

151. *See id.*

152. <<http://www.lycos.com>>.

153. *See id.*

154. *See id.*

155. <<http://www.uscourts.gov>>.

156. *See id.*

157. <<http://www.uscourts.gov/pubaccess.html>>.

158. <<http://www.law.emory.edu/FEDCTS>>.

159. <<http://www.ll.georgetown.edu/Fed-Ct>>.

160. <<http://www.law.vill.edu/Fed-Ct/fedcourt.html>>.

sites for Federal Circuits and the U.S. Supreme Court.¹⁶¹ Individual web sites may be found as follows:

- United States Supreme Court (since 1990)¹⁶²
- United States Court of Appeals for the Federal Circuit (since 8/95)¹⁶³
- United States Court of Appeals for the D.C. Circuit (since 3/95)¹⁶⁴
- United States Court of Appeals for the First Circuit (since 11/95)¹⁶⁵
Maine, Massachusetts, New Hampshire, Rhode Island, Puerto Rico
- United States Court of Appeals for the Second Circuit (since 2/95)¹⁶⁶
Connecticut, New York, Vermont
- United States Court of Appeals for the Third Circuit (since 5/94)¹⁶⁷
Delaware, New Jersey, Pennsylvania, Virgin Islands
- United States Court of Appeals for the Fourth Circuit (since 1/95)¹⁶⁸
Maryland, North Carolina, South Carolina, Virginia, West Virginia
- United States Court of Appeals for the Fifth Circuit (since 1992)¹⁶⁹
Louisiana, Mississippi, Texas
- United States Court of Appeals for the Sixth Circuit (since 1/95)¹⁷⁰
Kentucky, Michigan, Ohio, Tennessee
- United States Court of Appeals for the Seventh Circuit (since 1/95)¹⁷¹
Illinois, Indiana, Wisconsin
- United States Court of Appeals for the Eighth Circuit (since 11/95)¹⁷²
Arkansas, Iowa, Minnesota, Missouri, Nebraska, North Dakota,
South Dakota
- United States Court of Appeals for the Ninth Circuit (since 6/95)¹⁷³
Alaska, Arizona, California, Guam, Hawaii, Idaho, Montana,
Nevada, Northern Mariana Islands, Oregon, Washington

161. See DIANA BOTLUK, *THE LEGAL LIST: RESEARCH ON THE INTERNET* 162-64 (1996).

162. <<http://www.law.cornell.edu/supct>>; <<ftp://ftp.cwru.edu/hermes>>.

163. <<http://www.law.emory.edu/fedcircuit>>.

164. <<http://www.ll.georgetown.edu/Fed-Ct/cadc.html>>.

165. <<http://www.law.emory.edu/1circuit>>.

166. <<http://www.TouroLaw.edu/2ndCircuit>>; <<http://www.law.pace.edu/lawlib/legal/us-legal/judiciary/second-circuit.html>>.

167. <<http://www.law.vil.edu/Fed-Ct/ca03.html>>.

168. <<http://www.law.emory.edu/4circuit>>.

169. <<http://www.law.utexas.edu/us5th/us5th.html>>.

170. <<http://www.law.emory.edu/6circuit>>.

171. <<http://www.kentlaw.edu/7circuit/>>.

172. <<http://www.wulaw.wustl.edu/8th.cir>>.

173. <<http://www.law.vill.edu/Fed-Ct/ca09.html>>.

United State Court of Appeals for the Tenth Circuit (since 8/95)¹⁷⁴
 Colorado, Kansas, New Mexico, Oklahoma, Utah, Wyoming
 United States Court of Appeals for the Eleventh Circuit (since 11/94)¹⁷⁵
 Alabama, Florida, Georgia

2. *Selected Federal Executive Sites/Gateways*

GovBot Database of Government Web Sites¹⁷⁶ searches 180,000 U.S. Government web pages. U.S. Government Printing Office¹⁷⁷ provides access to the Federal Register. The U.S. House of Representatives Internet Law Library,¹⁷⁸ FedWorld Information Network,¹⁷⁹ or the Federal Web Locator,¹⁸⁰ provide access to selected government agency regulations. The United States Code can be found through the U.S. House of Representatives Law Library.¹⁸¹ The U.S. Constitution is available through Thomas,¹⁸² Cornell University's Legal Information Institute,¹⁸³ and the U.S. House of Representatives Internet Law Library.¹⁸⁴

An individual can take a complete course or tour of World Wide Web (WWW) legal connections and learn more about the U.S. legal system, case briefing, audio Supreme Court cases, memo writing, citations including online citations, conducting legal research, computerized legal research, and exam writing.¹⁸⁵ Specialized sources for agricultural lawyers include the National Bankruptcy Review Commission,¹⁸⁶ the American Bankruptcy Institute,¹⁸⁷ and the National Center for

174. <<http://www.law.emory.edu/10circuit>>.

175. <<http://www.law.emory.edu/11circuit>>.

176. <<http://pardoo.cs.umass.edu/GovBot>>.

177. <<http://www.access.gpo.gov>> and choose "GPO Access: On-line, On-Demand & Locator Services", then "Connection to the Online Databases."

178. <<http://law.house.gov/>>.

179. <<http://www.fedworld.gov>>.

180. <<http://www.law.vill.edu/fed-agency/fedwebloc.html>>.

181. <<http://law.house.gov/usc.htm>>.

182. <<http://thomas.loc.gov>>.

183. <<http://www.law.cornell.edu/constitution/constitution.overview.html>>.

184. <<http://law.house.gov/317.htm>>.

185. See WWW Connections (visited Apr. 4, 1998).

<<http://www.columbia.edu/~mag76/www.html>>.

186. <www.nbr.gov>.

187. <<http://www.abiworld.org>>.

Agricultural Law Research.¹⁸⁸ The American Agricultural Law Association homepage provides similar links.¹⁸⁹

Other specialized sources to save time include Finding People with more than ninety million Americans and ten million U.S. businesses.¹⁹⁰ *DejaNews* finds experts, locates and checks the background of a witness or expert, and scans newsgroup discussion forums, names of people, and keywords to find relevant disclosure.¹⁹¹ Direct access to the homepages of more than twelve hundred public companies and access to annual reports, product information, and company press releases can be found at Networth.¹⁹² EDGAR¹⁹³ provides public Securities Exchange Commission filings.

C. Legal Search Engines—On the Internet

Statutes, case law, proposed legislation, and state legislative material can be found by both fee-for-service, such as Lexis and Westlaw, and free services. Free sources are listed below and fee-for-service follow. Several of the free services are designed to “educate” the public, provide free government documents, and provide open access to government information. They can be a starting tool for legal research. Some examples of legal search engines are: *Findlaw*,¹⁹⁴ which provides a yellow-page type listing of legal sites on the Internet; and LawCrawler,¹⁹⁵ which is a search engine that enables you to search for legal information by keyword, provides a comprehensive list of all law reviews available on the Internet, and offers a feature that automatically sends e-mail abstracts of new law review articles by topic.¹⁹⁶ Choices are outlined like branches on a tree and by selecting branches, the search is narrowed.¹⁹⁷

Legal Information Institute (LII) at Cornell University¹⁹⁸ offers topical indices to information on the Internet, connection to other legal sites, legal information by

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188. <<http://law.uark.edu/arklaw/aglaw/>>.
189. <<http://www.aglaw-assn.org>>.
190. <<http://www.switchboard.com/>>.
191. <<http://dejanews.com/forms/dnq.html>>.
192. <<http://networth.galt.com/www/home/equity/irr/>>.
193. <<http://www.sec.gov/edgarhp.htm>>.
194. *FindLaw: Internet Legal Resources* (visited Mar. 28, 1998) <<http://www.findlaw.com/>>.
195. See Michael A. Geist, *Legal Search Engines* (visited Mar. 28, 1998) <<http://www.columbia.edu/~mag76/legal5a.html>>.
196. See *id.*
197. See *id.*
198. <<http://www.law.cornell.edu>>.

topic, full-text of Supreme Court decisions since May 1990, full-text of the Uniform Commercial Code, a feature that automatically sends e-mail abstracts of Supreme Court and New York Court of Appeal decisions, and legal information by organization.¹⁹⁹ Hieros Gamos contains most sites of Findlaw and LII.²⁰⁰ It adds original documents for more than two hundred practice areas, Doing Business guides, employment services, dispute resolution, vendors, publishers, online CLE presentations (audio), access to Audio Supreme Court Arguments, selected law school seminars, and more.²⁰¹

Thomas—U.S. Library of Congress includes proposed legislation, Congress This Week, the Congressional Record, Congressional committee information, historical documents, U.S. government Internet resources, and an explanation of the legislative process and bills.²⁰² FLITE offers Supreme Court decisions from 1937-1975 and the Department of Commerce database.²⁰³ The Villanova Center for Information Law and Policy²⁰⁴ uses Boolean keyword and Perl regular expression. U.S. Federal Courts Finder—Emory School of Law²⁰⁵ contains databases that vary from circuit to circuit—about 1995.

Washburn University²⁰⁶ concentrates on state law with metalinks that include the following: a state-by-state link to government and legislative information; the Uniform Commercial Code Locator, with links to state statutes that correspond to the UCC; and the Administrative Law and Regulatory Reform Bibliographic Database which contains links to numerous state agencies. Columbia University²⁰⁷ offers “Full Text” search for law and law journals and the capacity to browse law library catalogs. Law Lists University of Chicago²⁰⁸ provides access to electronic

199. See Michael A. Geist, *Legal Search Engines #2* (visited Mar. 28, 1998) <<http://www.columbia.edu/~mag76/legal6a.html>>.

200. See *Hieros Gamos-Organizations* (visited Mar. 28, 1998) <<http://hg.org/hg1.html>>.

201. See Michael A. Geist, *Legal Search Engines #3* (visited Mar. 28, 1998) <<http://www.columbia.edu/~mag76/legal7a.html>> (noting some of the contents of the Hieros Gamos search engine).

202. See *Thomas—U.S. Congress on the Internet* (visited Mar. 28, 1998) <<http://thomas.loc.gov/>>.

203. <<http://www.fedworld.gov/supcourt/fsearch.htm>>.

204. <<http://www.vcilp.org/Fed-Agency/fedwebloc.html#search>>.

205. <<http://www.law.emory.edu>>.

206. <<http://lawlib.wuacc.edu/washlaw/washlaw.intro.html>>.

207. <<http://www.columbia.edu/~mag76/legal14a.html>>.

208. <<http://www.lib.uchicago.edu/~llou/lawlists/info.html>>.

discussion groups—Listserv, Listproc, MajorDomo, Mailbase—person-to-person networking, legal research, information exchange, and law-related UseNet groups.²⁰⁹

The National Conference of Commissioners on Uniform State Laws, Chicago-Kent College of Law²¹⁰ makes available drafts of Uniform and Model Acts. For example, Article 2 and Article 9 are available.²¹¹ Access to the National Governors' Association and state-related material can be found on the association's web site.²¹² The Virtual Library—Law—Indiana University²¹³ links to non-U.S. laws by country, legal information by topic, and legal information by organization type.

Other legal Internet sites include the House of Representatives Internet Law Library,²¹⁴ Municipal Codes Online (Selected),²¹⁵ and the Internet Lawyer.²¹⁶ The Internet Lawyer connects you to selected federal and state legal resources, as well as providing access to ABA and other WWW resources.²¹⁷ LawCrawler²¹⁸ offers the same search program and database as AltaVista by digital. Designed for the average person, it is considered one of the best.²¹⁹ Searches can be on terms and connectors AND (contain two or more terms), OR (either or term), NOT (exclude term), and NEAR (within 10 words) can be used to restrict terms. ALSO (American Law Sources On-line,²²⁰) provides a "comprehensive, uniform and useful compilation of links to all on-line sources of American law that are available without charge."²²¹ ALSO provides links to U.S., Canadian, and Mexican federal law, commentary, and practice, U.S. and Mexican state law, commentary, and practice, and Canadian provincial law, commentary, and practice material. Oyez Oyez Oyez,²²² funded in part by the National Endowment for the Humanities, National Science Foundation,

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209. See *Law Lists Info* (visited Mar. 28, 1998) <<http://www.lib.uchicago.edu/~llou/lawlists/info.html>>.
210. <<http://www.kentlaw.edu/ulc/>>.
211. See *Uniform Law Commission* (visited Mar. 28, 1998) <<http://www.kentlaw.edu/ulc/>>.
212. <<http://www.nga.org>>.
213. <<http://www.law.indiana.edu/law/v-lib/>>.
214. <<http://law.house.gov>>.
215. <<http://www.spl.lib.wa.us/collec/lawcoll/municode.html>>.
216. <<http://www.internetlawyer.com/start.htm>>.
217. See *The Internet Law Library* (visited Mar. 28, 1998) <<http://www.internetlawyer.com/start.htm>>.
218. <<http://www.lawcrawler.com/>>.
219. See Aaron Grossman, "FindLaw," "Law Crawler" Locate Information Fast. 12 VA. LAW. WKLY. 348, Aug. 25, 1997, at B-4.
220. <<http://www.lawsources.com/also/>>.
221. *American Law Sources On-line* (visited Mar. 28, 1998) <<http://www.lawsources.com/also/>>.
222. <<http://oyez.at.nwu.edu/>>.

M.R. Bauer Foundation, Northwestern University, and Mayer, Brown, and Platt,²²³ is designed to provide information about major constitutional cases before the Supreme Court of the United States in written and digital recordings.²²⁴ Digitized recordings of oral arguments and opinion announcements from National Archive sources will be available on Real Audio.²²⁵ Catalaw²²⁶ bills itself as “Internet’s Grand Central Legal Station.”²²⁷ A “catalog” of law on the Internet, it arranges all legal and government indexes into a single *metaindex*. Searches can be conducted by topic, text, region-specific, lawyer directories, professional services, international law and government.

D. Internet Search Techniques for Finding the Law

1. Technique—Online Research Strategies

Living in a society of “laws and government,” the rules we live by are organic and always changing. The lawyer must keep up with these changes and the best way to do so is by using the Internet. Surfing pages put out by the government provide excellent access to government publications and pamphlets. Various departments of the government have homepages that provide a diverse amount of information state-by-state. Within the Internet there are commercial services for lawyers that provide a wide range of useful information on current issues. For example, tobacco-related litigation can be found at <http://www.tobacco-litigation.com/index.html-ssi>. These services carry a fee, but are worth the cost. Historical archives can be found as well.²²⁸

When conducting legal research on the Internet, the source of information is important. Much of the information is from unofficial sources. Although it does not surpass Lexis or Westlaw in researching case law and statutes, the Internet yields more information in selected areas. The international dimension, the access to governmental information, and immediacy of information make the Internet a powerful tool. For example, the World Trade Organization²²⁹ provides information including full text results of dispute settlement hearings.

223. See *Oyez Oyez Oyez* (visited Apr. 7, 1998) <<http://oyez.at.nwu.edu/>>.

224. See *id.*

225. <<http://www.realaudio.com/>>.

226. <<http://www.catalaw.com/>>.

227. *Catalaw* (visited Apr. 4, 1998) <<http://www.catalaw.com/>>.

228. Lizzy Borden crime scene photographs, newspaper stories, and comments are one the Web. See *The Internet Lawyer* (visited Apr. 7, 1998) <<http://www.internetlawyer.com/tutorial/tut2.htm>>.

229. <<http://www.wto.org>>.

Assistance in learning computer-assisted legal research can be found on the Internet. For example, at <http://qsilver.queensu.ca/law/calrintr.htm>, an extensive tutorial on conducting legal research is available. The instruction includes researching U.S. material such as Lexis and Westlaw, Canadian material (brush up on French, too), and other international material including EEC material, WTO, European Union, and English law. It is provided by Queen's Law School.²³⁰

The Internet generally is not a place to look for historical documents unless they are part of a classic collection.²³¹ But, current statutes and cases can readily be found. Although not a replacement for either fee-based law engines such as Westlaw or Lexis or classic treatises, the Internet can provide secondary material, as well as access to government material, international material, out-of-state material and federal case law. The Internet has a long way to go before it becomes an electronic replacement for the traditional fee-for-service research vehicle.²³²

Thomason argues that limited privacy exists when searching the Internet.²³³ Savvy or devious webmasters can determine a lot about a surfer when he or she lands on their page. Web sites can obtain "who your ISP (Internet service provider) is, (2) what country you are from, (3) what software you are using, and (4) what kind of computer you have."²³⁴ With a little programming, sometimes they can determine your e-mail name and address.²³⁵ Carlson and Howard remind us that "the manner in which material is indexed and searchable can vary substantially from site to site. Be sure to learn the identity of the source maintaining the site, the last date it was updated, and any disclaimers provided at the sites you visit."²³⁶

Although there are five search engines on the Internet,²³⁷ most lawyers and other Internet users will learn to work with a few such as those outlined earlier. For more details on search engines and how they work, see *The Search Engine* at <http://www.searchenginewatch.com/>. Useful search engines should be bookmarked on your web browser for easy recall and use.

230. <<http://qsilver.queensu.ca/law/calrintr.htm>>.

231. <<http://www.law.cornell.edu>>.

232. See DIANA BOTLUK, *THE LEGAL LIST: RESEARCH ON THE INTERNET* 64 (1996).

233. Kevin Lee Thomason, *Charlie Don't Surf (The Net in Privacy)*, *INTERNET LAWYER*, July 1996.

234. *Id.* at 4.

235. *See id.*

236. Bruce L. Carlson & Margaret P. Howard, *Internet Resources for Illinois Lawyers*, 85 *ILL. B.J.* 162, 163 (1997).

237. Andrew Z. Adkins III, *Internet for Florida Lawyers Part 3*, *INTERNET LAWYER* (visited Mar. 28, 1998) <<http://www.internetlawyer.com/tutorial/tut3.htm>>.

Adkins, a self-described techno geek,²³⁸ points out that although the different search engines use “different techniques for finding and indexing information,”²³⁹ one engine is not preferable over others. Just like a library has multiple search and reference guides, the Internet has no *one best way*. His best advice is “get out there and do it.”²⁴⁰ One can save time and maybe money on Internet travel by reducing load time. Animation, sound, and colorful graphics make web sites exciting and slow. Check your options menu on the browser and stop the packages that you do not want to access.²⁴¹

The Internet Lawyer²⁴² provides two detailed articles: *State Caselaw on the Net*,²⁴³ and *Federal Caselaw on the Net*.²⁴⁴ The articles point out the problem of consistency on the Web among the courts and that some of the sites seek to provide consumer-oriented materials. Accuracy, citability and cost are other items to consider. Although free on the Internet, there is little assistance for the individual Web surfer from most Web sources. Subject guides that provide collections of links categorized by subject may save time. Examples include the Internet Public Library Reference Center,²⁴⁵ the McKinley Internet Directory,²⁴⁶ and Yahoo Subject Guide to Internet Resources.²⁴⁷ Purdue University Libraries provide a site discussing how to evaluate Internet sources. The site has links to relevant articles and supporting data.²⁴⁸

2. Search Pitfalls

Among the pitfalls of searching the Internet are instances in which web pages are initiated with the best of intentions, but quickly become outdated because they are maintained on a sporadic basis or no longer maintained at all. Another problem is that, as servers and web pages are updated, the address of a particular item may change. If you try to look up a full citation for a particular document and receive notice that the document does not exist on the server, try going to the initial web

238. *See id.*

239. *Id.*

240. *Id.*

241. Joan Novelli, *Speed Surfing for Educators*, ELECTRONIC LEARNING Mar.-Apr. 1997, at 52.

242. <<http://www.internetlawyer.com/>>.

243. <<http://www.internetlawyer.com/statelaw.htm>>.

244. <<http://www.internetlawyer.com/fedlaw.htm>>.

245. <<http://ipl.sils.umich.edu/ref/>>.

246. <<http://www.mckinley.com/mckinley-cgi/browse.pl?MAIN>>.

247. <<http://www.yahoo.com/>>.

248. <<http://thorplus.lib.purdue.edu/libraryinfo/instruction/gsl5/3gsl75/evaluation.html>>.

page (the first part of the address) and follow the menu (or use a web-site-specific search engine) to find the document. A case in point is that the 1996 edition of The Legal List gives the address of the United States Court of Appeals for the Second Circuit as <http://www.law.pace.edu/legal/us-legal/judiciary/second-circuit.html>. However, a current attempt to use this address comes up negative. By going to the initial web page (<http://www.law.pace.edu>), one can follow the menus to find the information under <http://www.law.pace.edu/lawlib/legal/us-legal/judiciary/second-circuit.html>. The phrase /lawlib/ has been added to the Internet address and makes the original address obsolete.

E. *Commercial Internet Search—Pay for View—Wexis*

It may be cheaper today and in the future to obtain information electronically rather than receive it in print. The updated law texts of today may be more expensive than the fees that accompany online services. Online services also provide quick, reliable, and more current information. CD-ROMs may be replaced by pay-for-view Internet commercial services or at least attached to the commercial service to provide the most up-to-the-minute law. With the consolidation in legal publishing, Westlaw and Lexis are the major online law services. Sometimes the combination is known as Wexis.

1. *Westlaw*

Westlaw is an online service of West Publishing Company of the United States that provides access to more than seven hundred databases and services. In addition to containing the full text of the U.S. National Reporter system (covering U.S. federal, state and territorial Case Law), Westlaw includes a wealth of other databases and services covering such areas as statutes, codes, regulations, rules, judicial and administrative decisions, legal articles and periodicals, and other secondary material.²⁴⁹

Westlaw has all of the following legal and non-legal information sources online—and much more:²⁵⁰ federal and state cases as far back as 1789; federal and state statutes, regulations and administrative materials; more than 3000 newspapers, magazines, newsletters, transcripts and newswires; law reviews and journals;

249. See *Guide to Using WESTLAW* (visited Apr. 2, 1998) <<http://www.lib.monash.edu.au/law/online/westlaw.htm>>.

250. See *Introducing WestLaw [Online]* <<http://www.westpub.com/WLAWInfo/wlawdoc/LawStu/intro.htm>>.

directories of legal employers and job-hunting databases; Black's Law Dictionary; company and financial news; medical and drug information; international law and news; proposed legislative bills; as well as hornbooks and treatises.²⁵¹

2. *Lexis-Nexis*

Lexis-Nexis²⁵² is the second major fee-for-service web site. Lexis-Nexis provides legal, news and business information online.²⁵³ The company is a division of Reed Elsevier, Inc. Started in 1973, 300,000 searches are conducted daily on 18,300 sources—13,500 news and business and 4800 legal.²⁵⁴ More than 9.5 million documents are added weekly to the more than one billion online documents.²⁵⁵

Lexis-Nexis offers freestyle, Boolean, and Easy Search. Freestyle is a plain English search on both legal and non-legal materials. Boolean provides a more precise method of searching. Easy Search provides online menus and screen prompts.

The Lexis service contains libraries of English, French and Canadian law, and other legal materials from Australia, New Zealand, Mexico, Ireland and Scotland. In addition, the service has a full complement of research tools, including an online Guide which provides detailed descriptions of all Nexis and selected Lexis libraries.²⁵⁶ EdgarPlus allows access to SEC filings—15,000 company SEC electronic files.²⁵⁷ Online Public Records provides major state real and personal property assets, UCC liens, “secretary of state corporation filings and a FINDER

251. *See id.*

252. <<http://www.lexis.com>>.

253. *See Lexis-Nexis Background* (visited Apr. 2, 1998) <<http://www.lexis-nexis.com/Incc/about/background.html>>.

254. *See id.*

255. *See id.* Lexis contains major archives of federal and state case law, continuously updated statutes of all 50 states, state and federal regulations, and an extensive collection of public records from major U.S. states and counties. The Lexis service has 40 specialized libraries covering all major fields of practice, including tax, securities, banking, environmental, energy and international. Convenient group files combine legal information from all jurisdictions and, where appropriate, add sources of relevant business, financial or general news. A subscriber to the Lexis service also has access to the Nexis service and its related services. *See id.* The Hot Topics library contains summaries of the latest legal and regulatory developments within nearly 40 practice areas. The SECONDARY library contains ALI Restatements of the Law, ALR and Led2d articles, selected state jurisprudence, and is a great place to start researching secondary legal research materials.

256. *See Lexis-Nexis Background* (visited Apr. 2, 1998) <<http://www.lexis-nexis.com/Incc/about/background.html>>.

257. *See id.*

library containing person and business locators, a nationwide franchise index and professional license files; a verdicts and settlements library, and court indices and dockets.”²⁵⁸

Like Westlaw, Lexis-Nexis is aggressively providing new products and combinations of products to meet the needs of current and prospective clients. Lexis-Nexis Advantage for small law firms provides specific state legal information such as case law, statutes, constitutions, court rules and legislative services through a web product, for a fee of just \$65 per attorney per month.²⁵⁹

The use of online law services with all the benefits of the Internet discussed above puts today’s agricultural lawyer a step ahead of the rest. As times and the way we come by information change, so must those who rely on information change in order to survive.

V. HOW FARMERS ARE BENEFITING FROM THE INTERNET

Farmers are using the Internet regularly to obtain production estimates, crop conditions, and monthly estimates of supply and demand to help them put current information in perspective.²⁶⁰ Information found today on the Internet was not readily available to farmers of the past. The availability of information is building a new breed of farmers who are more educated in the market as a whole. This new access to information moves the competitive nature of farming to a new level. Those farmers who remain out of the electronic circuit soon will be left behind and out of the big game. The Internet provides timely crop, weather, and price information.²⁶¹

258. *Id.*

259. <<http://www.lexis.com/webadv.phtml>>.

260. HENRY JAMES, *THE FARMER’S GUIDE TO THE INTERNET* 6 (1996).

261. The following profile of a farmer who uses the Internet is typical of progressive farmers on the Net.

The Internet is one of the easiest ways to get information. I’m on the Internet just about every day getting information on weather and crop conditions. I use it to track farming conditions in the U.S., particularly in Iowa and Illinois. I also check farming conditions in other countries, particularly South America where they grow a lot of soybeans. I want to know, did they have good planting weather? What kind of rain are they getting? Do they have dry weather for harvest? All these things affect commodity prices. So knowing what’s going on around the world helps you get the best price for your crop. Of course, you have to make the final decisions yourself, but without up-to-date, accurate information, you’re just flying blind. . . . It’s no mystery about how to plant and when to harvest. What makes the difference between prospering and failing is not the details of farming, but management skills, knowledge of finance and markets, and, of course, enterprise analysis. It’s easy to teach a child the mechanics of farming, but teaching these other skills is often difficult.

Farmers and the lawyers who farm the farmers can click onto USDA²⁶² for Farm Service Agency Farm Loan Program Forms and Aerial Photography Forms, and other sites for 1996 Production Flexibility Payments by state.²⁶³ Both sites allow individuals to surf to USDA's or FSA's homepage. Farmers may also *venez fair un tour!* to Statistics Canada²⁶⁴ or profit from a visit to the latest U.S. data.²⁶⁵

Several organizations have collected agricultural web sites. See Henry James²⁶⁶ for a listing of more than one thousand Internet resources for farming, agriculture and rural living. *Not Just Cows*²⁶⁷ is maintained by a librarian and contains Internet resources in and links for agriculture.²⁶⁸ Another example is <http://www.okstate.edu/OSU-Ag/agedcm4h/bobslist.htm>, where thirteen pages of agricultural web sites are linked.²⁶⁹ And, you will find Home on the Internet Range at COWBOY.NET²⁷⁰ and many other links to our western traditions. Commercial agricultural publications such as *Successful Farming*²⁷¹ provide interaction for the agricultural community, access to market updates, weather, sources of technology, and web links to commercial agricultural ventures and governmental ventures such as Agriculture Canada online.²⁷² Collections of agricultural World Wide Web sources, including agricultural associations,²⁷³ and access to commercial world agricultural information,²⁷⁴ are available. Specialized agriculturally-related forums include antique tractors.²⁷⁵ Information on farming the Urban Fringe is readily available.²⁷⁶ Edmonds²⁷⁷ provides an important source of information on new and used trucks and automobiles.

Profile: Jim Bell, Jr. <<http://www.midwest.Net/scribers/jbell/index.htm>>.

262. <<http://www.fsa.usda.gov/pas/fsaforms.htm>>.

263. <<http://www.fsa.usda.gov/pas/PFC1212.htm>>.

264. <<http://www.statcan.ca>>.

265. <<http://www.fedstats.gov>>.

266. See Henry James, *THE FARMER'S GUIDE TO THE INTERNET* 138-277 (1996).

267. See Wilfred Drew, *Not Just Cows: Guide to Agriculture and Agricultural Resources on the Internet and the WWW* (visited Apr. 4, 1998) <<http://www.snymor.edu/~drewwe/njc/>>.

268. See *id.*

269. See *id.*

270. <<http://www.cowboy.net/>>.

271. <<http://www.agriculture.com/>>.

272. <<http://www.agcanada.com/>>.

273. <<http://web.css.orst.edu/Contents/WWWs/Alphabetical.htm>>.

274. <<http://www.agriculture.com/worldwide/>>.

275. <<http://ledger.co.forsyth.nc.us/antique-tractor>> and <<http://www.antiquetractors.com>>.

276. <<http://smallfarms.wsu.edu/UrbFarm.htm>>.

277. <<http://www.edmonds.com>>.

VI. OTHER SPECIAL CASES OF INTEREST TO THE AGRICULTURAL AND RURAL LAWYER

A. *Environmental Law*

Many rural lawyers are finding that environmental topics are assuring a large caseload. Many sources of legal as well as technical resources can be secured from the Internet. The third edition of *Environmental Guide to the Internet* lists more than 884 environmental sites.²⁷⁸

Government-related environmental sites include the following: the Environmental Law Institute,²⁷⁹ the Environmental Protection Agency,²⁸⁰ the U.S. Fish and Wildlife Service,²⁸¹ the USDA,²⁸² the USDA Forest Service,²⁸³ the U.S. House of Representatives,²⁸⁴ the U.S. Senate,²⁸⁵ the Government Printing Office,²⁸⁶ and the General Accounting Office.²⁸⁷ Internet Newsbrief from EPA can be added as a weekly update.²⁸⁸ State Environmental Safety Regulations²⁸⁹ are also available. Selected public interest related sites include the following: Section of Natural Resources, Energy and Environmental Law (SONREL) American Bar Association,²⁹⁰ Environmental Law Alliance Worldwide (E-Law),²⁹¹ Environmental Defense Fund,²⁹² United Nations Environment Programme,²⁹³ Greenpeace International,²⁹⁴ Environmental Law Around the World,²⁹⁵ and the Sierra Club.²⁹⁶

278. CAROL BRIGGS-ERICKSON & TONI MURPHY, ENVIRONMENTAL GUIDE TO THE INTERNET (3d ed. 1997).

279. <<http://www.eli.org/>>.

280. <<http://www.epa.gov/>>.

281. <<http://www.fws.gov/>>.

282. <<http://www.usda.gov/>>.

283. <<http://www.fs.fed.us/>>.

284. <<http://www.house.gov/>>.

285. <<http://www.senate.gov/>>.

286. <<http://access.gpo.gov/>>.

287. <<http://www.gao.gov/>>.

288. listserv@unixmail.rtpnc.epa.gov. Type "subscribe INTERNETNB-L firstname lastname" in the body of the message.

289. <<http://www.counterpoint.com/state.html>>.

290. <<http://www.abanet.org/sonreel/general.html>>.

291. <<http://www.igc.apc.org./elaw/>>.

292. <<http://www.edf.org/>>.

293. <<http://www.unep.no/org/>>.

294. <<http://www.greenpeace.org/>>.

295. <<http://www.igc.org/igc/issues/el/>>.

296. <<http://www.sierraclub.org/>>.

B. Health Law and Policy for Aging Rural Populations

Selected Internet Resources in Health Law and Policy are maintained by Saint Louis University School of Law, Center for Health Law Studies.²⁹⁷ Selected health topics with Internet connections to major sources of information include aging and elder law, AIDS, antitrust, bioethics, cancer, children and families, death and dying, disability, drugs and medical devices, euthanasia and assisted suicide, forensic psychiatry, foundations, fraud, genetics, government agencies, hospitals and medical centers, lawyers and consultants, managed care, Medicare, organ transplantation, pain management, patient care and rights, physicians, public health, telemedicine, health search engines, and other guides to health.

C. Access to News on the Internet²⁹⁸

Timely and historical access to news can be found on the Internet. The following sources complement the regional and increasingly local access to news via the Internet: C-SPAN,²⁹⁹ PBS,³⁰⁰ NPR,³⁰¹ CNN,³⁰² ABC News,³⁰³ and the Congressional Quarterly.³⁰⁴ Major newspapers include: Boston Globe,³⁰⁵ Chicago Tribune,³⁰⁶ Los Angeles Times,³⁰⁷ New York Times,³⁰⁸ USA Today,³⁰⁹ Wall Street Journal,³¹⁰ Washington Post,³¹¹ Washington Times,³¹² and The Economist.³¹³ Other

297. <<http://lawlib.slu.edu/centers/hlthlaw/hlthlnk.htm>>.

298. See Aaron Grossman, *Get All the News You Need Via the Internet*, VA. LAW WKLY. Sept, 15, 1997, at B-10.

299. <<http://www.c-span.org/>>.

300. <<http://www.pbs.org/>>.

301. <<http://www.npr.org/>>.

302. <<http://www.cnn.com/>>.

303. <<http://www.abcnews.com/>>.

304. <<http://www.cq.com/>>.

305. <<http://www.boston.com/globe/>>.

306. <<http://www.chicago.tribune.com/>>.

307. <<http://www.latimes.com/>>.

308. <<http://www.nytimes.com/>>.

309. <<http://www.usatoday.com/>>.

310. <<http://www.wsj.com/>>.

311. <<http://www.washingtonpost.com/>>.

312. <<http://www.washtimes.com/>>.

313. <<http://www.economist.com/>>.

media sites of interest include CourtTV,³¹⁴ Federal Register (daily contents),³¹⁵ JP - the legal cartoon,³¹⁶ Lawyers Weekly,³¹⁷ and National Law Journal.³¹⁸

D. Education on the Internet

Most educational institutions can be reached on the Internet at [http://www \[institution's name or initials\].edu/](http://www[institution's name or initials].edu/). This allows access to Extension information and, in some cases, law and other university library catalogues such as the following: Oregon State, orst; Stanford University, Stanford; Virginia Tech, VT; University of Washington, Washington; Kansas State, KSU; and the University of Alaska, Alaska. The University of Minnesota is <http://www1.UMN.edu/tc/>

VIII. CONCLUSION

To paraphrase Mike Ellerbrock, “The information explosion has tempted and enabled [the Internet] to cram and clutter the . . . [legal] household with more furniture and technical gadgets than most . . . [lawyers] can assimilate and use. Intellectual overload threatens comprehension. Too many bells and whistles can short-circuit the [legal] household.”³¹⁹

This Article was designed to provide the reader with an idea of what is available on the Internet for rural and agricultural lawyers. The Internet is unlikely to replace the need to conduct book and Lexis or Westlaw research, but it has become an invaluable research tool. It can help level the playing field as lawyers in Otumwa and Wakarusa can have the same and immediate access to information as lawyers in Minneapolis and Washington D.C. and often at the same cost—free.

The evolution of the way we retrieve information has come a long way. To be familiar and up-to-date with such information sources is to be competitive in a highly networked society. The newest addition to the information highway is the Internet. The Internet is comprised of a vast network of information through computers that is readily accessible to the user. Communication has moved to a click of a button,

314. <<http://www.courttv.com/>>.

315. <<gopher://gopher.counterpoint.com:2002/00/Today/toc>>.

316. <<http://www2.southwind.Net/~jptoon>>.

317. <<http://www.lweekly.com/>>.

318. <<http://www.ljx.com/nlj/>>.

319. Mike Ellerbrock, *Roots of Economics, Ecology & Ecumenism: Foundations of the Land-Grant Household*, Paper Presented at Distinguished Faculty Lecture Series commemorating Virginia Polytechnic Institute State University's 125th Anniversary (Sept. 11, 1997) (on file with *Drake Journal of Agricultural Law*).

providing instant access and distribution of information. As information is accessed and shared easily through our computer screens, it can become an overwhelming quantity of data to comprehend. The Internet must be optimally deciphered to guide a browser to their ideal resource of information.

What makes the Internet such an asset in a fast-paced society is its availability. The Internet is the Seven-Eleven of information. The Internet doesn't close at a certain time. There is no off time for holidays, and it is not limited to any place or region. The Internet exists to be accessed twenty-four hours a day, every day of the year, and all that is needed (basically) is a computer and a telephone line. As society goes electronic, it is reaching the point at which all publications, daily reports, and other such information will be readily accessible. But issues of cost, access, and methods of capturing consumer dollars are not all resolved. There is no longer the need to spend precious time sending out for information like you might for dinner. All the information is at your fingertips. Information should be less wasteful and expensive. Paperwork, mailing, and the process of searching for information costs money. Putting information on the Internet eliminates paper, saves postage, and may provide unlimited accessibility.

To have access to the Internet is to take a step forward and to take advantage of the newest technological resource of information. The benefits of staying informed through readily accessible information saves time and money lost by those left behind. Access may be required to make sure attorneys are competitive in the practice of law. Future computerization of courthouse information and standards of practice surely will require it.

The Internet is not only a research tool, but also a communication tool. E-mail, mailing lists, the World Wide Web, listserves, and chat rooms make it supplemental to Westlaw and Lexis.

Happy surfing—don't drown in the paper generated by the electronic wave. And, as Shakespeare might have said the first thing we will do is *connect* all the lawyers.

APPENDIX A³²⁰

FARM COMPUTER USAGE: ACCESS, OWNERSHIP, AND USE BY STATE AND UNITED STATES, 1997.

State	Farms	FARMS			
		With Computer Access	That Owned or Lease Computers	Using Computers for Farm Business	With Internet Access
		Percentage of Farms			
AL	45,000	25	21	13	9
AZ	7,500	46	42	35	16
AR	42,500	25	22	17	10
CA	84,000	51	47	30	23
CO	24,500	47	43	31	16
DE	2,400	45	44	21	18
FL	40,000	41	35	24	19
GA	43,000	25	23	12	11
ID	22,000	48	36	21	12
IL	76,000	45	36	27	17
IN	62,000	37	29	16	10
IA	98,000	46	37	25	12
KS	65,000	36	31	21	11
KY	88,000	23	18	9	8
LA	26,500	26	21	14	4
MD	13,000	50	43	33	25
MI	52,000	47	38	20	17
MN	87,000	43	32	22	11
MS	43,000	22	15	9	4
MO	102,000	33	27	16	10
MT	23,000	54	41	33	15
NE	55,000	45	38	29	14
NV	2,500	37	33	10	5
NH ³²¹	26,500	35	31	22	11
NJ	9,400	53	40	22	31
NM	13,500	47	39	27	14
NY	36,000	42	33	19	14
NC	57,000	30	24	13	10
ND	30,500	44	34	28	11
OH	73,000	41	30	18	14
OK	73,000	31	26	15	9
OR	37,500	61	52	30	22
PA	50,000	34	25	14	13
SC	21,500	25	20	11	9
SD	32,500	43	30	24	13
TN	80,000	24	17	7	8
TX	205,000	41	32	21	18
UT	13,400	68	52	31	29
VA	47,000	26	20	10	8
WA	36,000	58	55	41	20
WV	20,000	30	22	9	13
WI	79,000	36	29	19	9
WY	9,100	56	45	37	11
US ³²²	2,053,800	38	31	20	13

320. U.S. DEPARTMENT OF AGRICULTURE, NATIONAL AGRICULTURAL STATISTICS (NASS) (July 30, 1997)

<http://mann77.mannlib.cornell.edu/reports/nassr/other/computer/farm_computer_usage_07.30.97>.

321. Includes CT, ME, MA, NH, RI, and VT.

322. Excludes AK and HI.

APPENDIX B³²³
 FARM COMPUTER USAGE: ACCESS, OWNERSHIP, AND USE BY ECONOMIC CLASS, TYPE OF FARM,³²⁴ REGION,
 AND UNITED STATES 1997.

Region	Farms	FARMS			
		With Computer Access	That Owned or Lease Computers	Using Computers for Farm Business	With Internet Access
		Percentage of Farms			
NORTHEAST ³²⁵	121,900	38	30	18	14
\$1,000-9,999	63,300	38	27	11	14
\$10,000-99,999	35,800	31	27	19	11
\$100,000 & over	22,800	48	43	38	21
Crop Farms	54,600	43	36	21	17
Livestock Farms	67,300	34	25	15	12
NORTH CENTRAL ³²⁶	812,000	41	32	22	12
\$1,000-9,999	303,100	36	26	11	12
\$10,000-99,999	316,700	34	26	18	10
\$100,000 & over	192,200	61	53	45	17
Crop Farms	415,700	43	35	24	13
Livestock Farms	396,300	39	29	20	11
SOUTH ³²⁷	846,900	31	24	15	12
\$1,000-9,999	532,000	26	20	9	11
\$10,000-99,999	233,900	32	25	18	12
\$100,000 & over	81,000	56	50	44	21
Crop Farms	315,000	31	25	17	12
Livestock Farms	531,900	31	24	14	12
WEST ³²⁸	273,000	53	47	31	19
\$1,000-9,999	132,000	47	40	18	16
\$10,000-99,999	90,200	53	47	34	18
\$100,000 & over	50,800	70	66	62	30
Crop Farms	130,800	60	55	41	23
Livestock Farms	142,200	47	39	22	16
UNITED STATES ³²⁹	2,053,800	38	31	20	13
\$1,000-9,999	1,030,400	32	25	11	12
\$10,000-99,999	676,600	36	29	20	12
\$100,000 & over	346,800	60	54	47	20
Crop Farms	916,100	41	34	24	14
Livestock Farms	1,137,700	36	28	17	12

APPENDIX C³³⁰

323. U.S. DEPARTMENT OF AGRICULTURE, NATIONAL AGRICULTURAL STATISTICS (NASS) (July 30, 1997)

<http://mann77.mannlib.cornell.edu/reports/nassr/other/computer/farm_computer_usage_07.30.97>.

324. Crop and livestock farms are based on 1992 Census of Agriculture percentages by type.

325. Includes CT, ME, MA, NH, NJ, NY, PA, RI, and VT.

326. Includes IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD, and WI.

327. Includes AL, AR, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, and WV.

328. Includes AZ, CA, CO, ID, MT, NV, NM, OR, UT, WA, and WY.

329. Excludes AK and HI.

The World Wide Web has quickly become what many are calling the “future of business.” We are always hearing in the media about the Internet and how important it is for business success that we be on the Internet. For many companies, the question is “why should we” and “what can it do for my business.” Why is it so important? If I am not on the Internet, am I bound to go out of business?

The answer to the last question is: probably not. Many businesses will be able to go right along doing business like before, doing no advertising and picking up all of their business from word of mouth. But the answer to the first question is a bit more complex. That answer lies within each business’ goals and plans for the future. We live in an overcommunicated society. What that means for business is that the messages that we provide for our potential customers is easily lost among all of the other information that bombards them every day. Newspaper, radio, TV, billboards. All of these are intrusive to the consumer. Company messages come at us when we are trying to watch a program or listen to music or just drive as peacefully as possible to our next destination. So many companies have realized that they need to take advantage of new and different methods of getting their message to the consumer. In many cases that means that they need to have a personalized message for their potential consumers. . . .

Just like the telephone, the World Wide Web has now become a valuable communication tool. Here is a way that we can put our message out to the world where it is available 24 hours a day whenever someone wants it. And the real advantage is, not only is it a medium for communication, but it is also a *marketplace*. It is a marketplace in that the web site can be utilized to facilitate transactions, pay bills, or simply request information. It is a “storefront” or “office” that is open and available to answer questions, long after our doors have closed for the evening and before they open in the morning.

Without a doubt, there is no substitute for personal contact, talking to a living breathing human being, however, if you don’t know that someone is seeking your services, or who that person is, how would you ever contact them at the right time? This is why a Web Site is so important, why not having a web site has been compared to not having a telephone.

330. Personal e-mail from John Polson, Sales and Marketing Manager, P.T.I., Inc., Blacksburg, Va.

What are the costs of having a web site, and what can it do?

Every business is different, has a unique business strategy, and performs unique services or provides unique products for consumers. Each web site is different also, and what each company does with that site is different. The obvious entrance for any company onto the World Wide Web is with a brochure presence. The brochure provides information about the company for the consumer to view. The site should be designed to provide easy access to the services and products of the company, what the company is about, and any other pertinent information that will help the consumer choose your company over another. The beauty of the Web for the consumer is that information is "FREE" (assuming they pay their monthly access fee). If your site presents the image that they feel fits their needs and answers their questions better than the other guy's web site, then your web site has done its job and you have a new customer or have kept an existing customer.

Newspapers and magazines have reported on the cost of Web Sites for many different areas of the country. Many reports have shown that to be on the Internet with a Web presence will cost at least \$10,000 and could easily approach \$1 million dollars. Of course for some companies, that is a couple of days advertising costs.

P.T.I. Inc. (Personal Technology Innovators) a leading web development company in Blacksburg, Virginia specializes in web site development and marketing for small to medium size businesses. The average cost of initial development for a graphically oriented brochure type Web site designed by P.T.I. Inc. has a range of between \$850 to \$1500. This includes the cost for graphics design, custom logos, digitizing photographs, sound, animation, and custom layout and navigation controls for a site which consists of a half dozen to a dozen pages of information.

All sites are interactive, meaning that the user selects the information that they want to see and that information is then displayed for them. The most important feature of a site in many ways is how it is used to get the customer to provide you, the company, with information about them and their consumption or service needs. If the only way the "customer" can contact you through the web site is to write down your phone number and call you back during business hours, chances are you may never hear from that customer. If however the customer sees that your business might just have what he or she is looking for and the site provides them with a method of contacting you, then once again the site has done its job. An interactive form which allows the customer to select services they are interested in and

gives them the opportunity to tell you a little about themselves, even if it is just their Name and Phone number or Address, puts you one step closer to a sale to a new or previous customer. These forms should be included in the cost of web site development by whoever you choose to build and host your web site.

The next question is how much does it cost per month. The answer will vary depending on your Internet Service Provider. Some providers charge fees for the amount of data or how many times your site is accessed each month, very similar to the way long distance companies charge for phone calls by the minute. They may also charge large additional fees for registering and hosting a domain name such as "www.companyname.com." P.T.I.'s fee for hosting is a flat \$50 per month with no restriction on web site size (average site size of 5-20Mb) or amount of data transferred. Domain Name registration is a one time \$150 dollar fee which registers a name for 2 years after which there is an annual renewal fee of \$50. Domain Name hosting requires an IP address which carries a \$25 per month additional fee (\$75 per month total).

A web site is a dynamic entity and should be updated from time to time as well. Custom graphics additions and design charges vary from location to location as well. The average cost for graphics design in a metropolitan area could range from \$75 per hour to well over \$200 per hour. P.T.I. does graphics design, custom photo manipulation and other graphics services as a part of web site development which are generally priced on a per job basis. Simple text documents can be added to a web site and an archive of documents such as newsletters for as little as \$15. Items requiring custom graphics and more complex HTML coding may average between \$55 to \$125. It is recommended that a web site be updated to ensure accurate information on at least a quarterly basis. Changes can be made annually, quarterly, monthly weekly, daily, or (using various programming functions on the server retrieving real time data), by the minute or even more frequently.

The annual cost of a custom designed 10 page web site with graphics, photographs, Logo design, graphically oriented user friendly navigation controls and interactive forms for the first year will include the following: approximately \$1000 initial web site investment; \$50 per month hosting (\$600 annual hosting cost); monthly update such as a newsletter which is designed using a desktop publishing program and converted to HTML, \$40 - \$125 (\$480 - \$1500 annual cost); \$150 Registration fee for the Domain name

for two years. \$50 annually thereafter; and \$25 additional per month Domain Name Web Site hosting (additional \$300 annual cost).

Total first year cost including development, monthly updates and hosting: \$2080 - \$3550.