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Researching Software Copyrightability: A Practical Guide

Irwin Gross

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RESEARCHING SOFTWARE
COPYRIGHTABILITY: A PRACTICAL GUIDE

Irwin Gross†

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† B.S. Computer Science, Stanford 1990; J.D. Harvard 1993. The author wishes to thank Michelle Waches and Virginia Wise for their ideas and support in developing this guide.
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INTRODUCTION

Scope of the Guide

This article is a research guide that describes and analyzes research materials that may be used to determine whether elements of a computer program\(^1\) are protectable ("copyrightable") under United States copyright laws.\(^2\) This guide presents an organized evaluation of

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1. Throughout this guide, the terms "computer program" and "software" denote a set of instructions, stored on magnetic storage media or in a computer's memory, that directs the computer to perform a particular task or set of tasks. There are, however, other types of computer programs that exist as patterns ("masks") on the semiconductor chips that comprise computer "hardware." Although this guide focuses primarily on the copyrightability of software, the guide also covers many of the research materials describing the special statutory protection accorded semiconductor chips.

2. This research guide takes no position concerning the proper scope of copyright law as applied to computer programs. Rather, the guide is intended to serve primarily as a research tool, available to all participants in the ongoing, hotly-contested software copyrightability debate.
RESEARCHING SOFTWARE COPYRIGHTABILITY

traditional legal materials as well as relevant non-legal sources, but all materials considered are evaluated based on their relevance for resolving questions of software copyrightability. The survey of research materials presented is designed to be useful both for the practitioner who must decide whether a particular aspect of a client's, or a client's competitor's, program is copyrightable and for the scholars or policymakers analyzing contemporary copyright doctrine as applied to computer programs. Descriptions and analysis throughout the guide assume familiarity with basic legal sources and at least some experience with online information-retrieval services (e.g., Lexis and Westlaw).

Structure of the Guide

Part I: Overview: This section provides a basic overview of the history and animating tensions of modern copyright law, distinguishing copyrightability from related doctrinal issues. For those unfamiliar with computer programming, Part I also outlines the terminology and structure of computer software. Citations to general materials on copyright law and software design are included for easy reference. Those who possess a basic understanding of software and copyrightability may wish to skip directly to Part II.

Part II: Strategies & The Best Tools: This section highlights a number of the best available research tools and outlines a basic research strategy for those interested in quick, but reliable, answers as well as for those who wish to conduct exhaustive research. Each of the materials described in this part is discussed in more detail in a later section. The purpose of Part II is to provide a quick reference to particularly useful materials and to assist in prioritizing among the many available resources.

Part III: Secondary Legal Sources: This part covers the wide variety of secondary legal materials that describe the current state of the law and offer interpretations of primary sources. Each category of materials is described in a separate subsection; categories include periodicals, looseleafs, treatises, books, legal encyclopedias, and annotations.

Part IV: Primary Legal Sources: The authoritative sources of copyright law are the Constitution, federal statutes, administrative regulations, and federal cases. This section explains the tools necessary to locate relevant primary material. Also included in Part IV is a de-

3. Related legal issues—including determinations of infringement, preemption of state law, and availability of remedies—are of undeniable importance, but they are beyond the scope of this guide.
scription of citators and other techniques for bringing research up-to-date.

**Part V: Online Services:** Most online materials are described and evaluated along with their print counterparts in parts III, IV, VI, and VII. This section adds descriptions of additional materials available only online and an explanation of the structure of the many Lexis and Westlaw files relevant to copyrightability. This section also includes brief descriptions of some non-legal online services, such as America On-Line and CompuServe, which provide valuable computer industry-related information.

**Part VI: Directories/Associations/People:** Because people are often excellent sources of information, this section provides techniques and sources for locating names, addresses and telephone numbers of government agencies, interested groups, and private individuals.

**Part VII: Computer Programming/Computer Industry:** Depending on the nature of the copyrightability issue, a researcher may need to understand the structure of a particular program or type of software. This section describes some introductory sources on computer programming and software design. Part VII also includes references to information about the computer industry and the software market to facilitate the comparison of different programs features.

**Appendix A: Useful Library of Congress Subject Headings.**

### I. OVERVIEW

#### A. Copyright Law

Tracing its origins from eighteenth century England, copyright protection is a form of limited monopoly granted by the government to authors of original intellectual works. The United States Constitution specifically grants Congress the power to "promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." Since 1790, Congress has utilized this power by protecting certain forms of authorship under a copyright statute. The last major revision of the Copyright Act occurred in 1976 (the "1976 Act") and it extended copyright protection to "original works of authorship fixed in any tangible medium of expression, now known or later develop-

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4. Statute of Anne, 8 Anne ch. 19 (1710) (Eng.).
5. U.S. CONST. art. I, § 8, cl. 8.
oped.” In 1980, Congress amended §§ 101 and 117 of the 1976 Act in an attempt to clarify the extent of copyright protection afforded to computer programs. Four years later, in 1984, Congress added the Semiconductor Chip Protection Act (“Semiconductor Act”), which specifically protects the patterns (“mask works”) on the physical “chips” that perform processing in modern computers. The Semiconductor Act gives a more limited form of protection to mask works fixed in computer chip circuitry.

Although copyright protection has been extended to a broad range of “works of authorship,” including some aspects of computer programs, it is a fundamental tenet of copyright law, first expressed in Baker v. Selden, that only an author’s original expression of an idea is protected; an idea itself may not be copyrighted. Thus, if he were alive today, Shakespeare might copyright his particular expression of the idea of a tragic hero’s rise and fall (e.g., the text of Hamlet), but he could not copyright the idea of a tragic hero’s rise and fall itself. This notion is referred to as the idea/expression dichotomy. Furthermore, copyright does not protect purely “utilitarian” works. That is, one may not obtain a copyright in a work, such as a desk, whose only value is that it serves some useful function—this is the essence of the utilitarian/non-utilitarian dichotomy.

The idea/expression and utilitarian/non-utilitarian dichotomies are central elements of copyright doctrine. Both are codified today at 17 U.S.C. § 102(b), which provides that copyright does not protect “an idea, procedure, process, system, method operation, principle, or discovery.” Additional introductory and general discussion of copyright law may be found in:

14. For example, the United States Supreme Court held, in Mazer v. Stein, 347 U.S. 201 (1954), that the creator of a statuette that served as a lamp base was entitled to copyright protection only to the extent that the statuette had artistic or aesthetic value apart from its functionality as part of a lamp.
• Frank H. Foster & Robert L. Shook, Patents, Copyrights & Trademarks 143-153 (1989) [236 pages].

Neither work is detailed, but both provide good basic discussions of copyright law and help to place copyright protection in perspective by explaining the relationship among copyright, patent, and trade secret protection.

B. Computer Programs

A computer program is a series of instructions ("computer code") that tells a computer how to perform a particular task. In many ways, a program is analogous to a cake recipe, which contains the instructions for mixing and baking a cake. Unlike the typical cake recipe, however, a program is written in one of various computer languages. The many types of computer languages range from those actually used and understood by human programmers ("source code") to the strings of 1s and 0s used internally by the machine ("object code"). One aspect of each computer program is its code, but programs also produce distinctive screen displays, like the display of brightly colored imaginary characters on the screen of a Pac-Man video game or the replica of an accountant's ledger generated by a spreadsheet program. These screen displays themselves are protected by copyright ("copyrightable").

Moreover, each program that interacts with human beings ("users") must have what is called a "user interface." Such an interface, often called the "look and feel" of a program, consists—loosely speaking—of (1) the elements of a program's display,15 (2) the program's commands that allow users to communicate desired actions,16 and (3) the relationship between the commands and the display elements.17 Additional introductory information on the composition, content, and function of computer programs may be found in:


15. Such elements might include windows, icons, or a command prompt.
16. These commands may take the form of simple English words (e.g., "save" or "find") typed by the human user. Alternatively, commands may be listed on menus and selected by user actions such as mouse clicks.
17. For example, when the user types "open" or selects "open" from a menu, the program may cause a window to appear on the screen containing previously stored information.
C. The Problem: Copyrightability and Computer Programs

In light of the above descriptions of copyright doctrine and computer programs, the issue addressed by the materials described in this guide is whether a particular aspect of a computer program (its computer code, display screens or user interface) is entitled to copyright protection.

Note that this issue is, in some sense, rather narrow. To say that an element of a program—its code, for instance—is copyrightable says nothing about what the author must prove to show that another has infringed that copyright. Nor does the determination of copyrightability tell the author the duration of the copyright, what remedies are available for infringement, or which court has jurisdiction to hear an infringement claim. Nevertheless, copyrightability is a vital issue which must be determined as a threshold matter in each software copyright case.

In certain cases, the answer is relatively straightforward. For example, a computer program's literal code (source code and object code) traditionally has been considered a "literary work" for purposes of copyright law, and it is now fairly clear that computer code itself is copyrightable. Computer code in the form of a "mask" on a semiconductor chip is also protected under the Semiconductor Act. More problematic, however, are questions about a computer program's characteristic screen displays. Are these displays part of the computer program itself? Should they be protected separately as audiovisual works? Are they even "works of authorship"?

Still more difficult are the so-called "non-literal" elements of computer programs, such as their look and feel or the "structure, sequence, and organization" of their code. The difference between literal and non-literal elements is best illustrated by an analogy to a book. A book contains specific words in a specific order; so too, a


20. See Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc., 797 F.2d 1222, 1224 (3d Cir. 1986) (affirming District Court's conclusion that there was copyright infringement based on the substantial similarities between the structures of two programs), cert. denied, 479 U.S. 1031 (1987).
computer program contains particular instructions in a particular order. These are "literal" elements, and, as to both books and programs, literal elements are copyrightable. A book, however, also contains a plot or story-line. Unlike specific words in a specific order, the definition of the "plot" is not wholly objective, and different observers might describe a book's plot quite differently. So too, a computer program's instructions are written with a certain structure, and the combination of a program's user interface elements (menus, commands, displays, etc.) may create a characteristic look and feel that is susceptible of several descriptions. Thus, like a book's plot, a computer program's look and feel is an intangible, non-literal element of a creative work. The courts have not yet been able to formulate clear definitions to establish which non-literal elements fall under the auspices of the 1976 Act. As a result, different courts have varied widely in determining the scope of copyright protection for computer programs, and the mission of this guide is to provide a roadmap to the materials necessary to answer the confusing and often difficult questions concerning whether particular elements of computer programs are copyrightable.

II. STRATEGIES AND THE BEST TOOLS

This part lists some of the best tools among those described in more detail in parts III-IV. Materials covered in parts V-VII are somewhat less focused on traditional legal sources and therefore are not easily summarized. The aim of this section is to identify several particularly good sources from each section and to suggest a useful order of inquiry. However, there is no "magic formula," and the researcher should feel free to modify the order or to seek out new sources depending on time and cost constraints.

A. Summary of Secondary Legal Sources

1. PERIODICALS

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<td>Best Specialized Periodicals</td>
<td>See listing</td>
<td>part III.A.3.</td>
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<td>Best Articles</td>
<td>See, Table 1: Most Useful Periodical Articles</td>
<td>part III.A.4.</td>
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21. Compare Whelan, 797 F.2d at 1224-25 (broad protection for the "structure, sequence and organization" of computer programs) with Computer Assocs., 982 F.2d 693 (stringent limitations on copyrightability of non-literal elements of computer programs).
2. Looseleaf Services

**Tool:**
Finding Looseleaf Services
Best Single Source

**Source:**
LEGAL LOOSELEAFS IN PRINT
CCH COPYRIGHT LAW REPORTER

**Discussed in:**
part III.B.1.
part III.B.2.

3. Current Awareness Tools

**Tool:**
Updated Daily

- BNAPTD (Lexis)
- BNA-PTD (Westlaw)
- WTH-IP (Westlaw)
- Passive Retrieval (Eclipse, PDQ)

**Updated Weekly:**

- PTCJNL (Lexis)
- BNA-PTCJ (Westlaw)
- CILP (Westlaw)

**Discussed in:**
part III.C.1.
part III.C.2.

4. Treatises

**Tool:**
Academic Treatises
Practitioner-Oriented Treatises

**Source:**
NATURE ON COPYRIGHT
MODERN INTELLECTUAL PROPERTY

**Discussed in:**
part III.D.1.
part III.D.2.

5. Annotations

**Tool:**
ALR

**Discussed in:**
part III.E.

6. Bibliographies, Legal Encyclopedias, & Books

**Tool:**
Bibliography

**Source:**
Annual Selected Bibliography on Computers, Technology, & the Law in Rutgers Computer & Tech. L. J.

**Discussed in:**
part III.F.1.

7. Practitioner's Materials

**Tool:**
PLI Continuing Legal Education Materials

**Discussed in:**
part III.G.

B. Summary of Primary Legal Sources

1. Constitution

**Tool:**
Constitutional Research
(outside the scope of this guide)

**Source:**
HOW TO FIND THE LAW

**Discussed in:**
part IV.A.
III. SECONDARY LEGAL SOURCES

Secondary materials are an excellent place to begin a legal research project on the copyrightability of computer programs. These materials explain the current state of the law with varying degrees of clarity, and they offer a wealth of citations to primary legal sources. Each subsection in this part discusses a particular category of secondary materials, providing citations to and descriptions of valuable sources and offering methods and resources for uncovering additional materials.

A. Periodicals

Legal periodicals are the best starting point for a legal research project because they provide a valuable overview of the law. Periodical articles are “exploding sources,” with footnotes offering a plethora of citations. Articles are also usually shorter, better indexed, and often
more current than books. Moreover, those articles written by presti-
gious authors or appearing in prominent law reviews may themselves be
persuasive authority of considerable weight in the developing field of
software copyrightability. Keep in mind, however, that because com-
puter software itself and the legal terrain of software copyrightability
have changed enormously in recent years (and even months) most pe-
riodical materials published before 1986 will be of little value in deter-
moving the present state of the law.

1. Finding Periodicals

The best source for locating the titles of periodicals is *Ulrich’s
International Periodical Dictionary*. *Ulrich’s* is available both in
print and online through Westlaw, and it is indexed by subject and
alphabetically by periodical name. Although its subject headings are
quite broad (e.g., “computers”), it is the most comprehensive source of
its kind available. For each periodical covered, *Ulrich’s* includes such
information as the title, the publisher, whether and where the periodi-
cal is indexed, the frequency of publication, and subscription cost.
Examples of periodicals found in *Ulrich’s* containing articles on
copyrightability are:

- **Computer Law & Practice**
  Tolley Publishing Co. Ltd.
  Quarterly

- **Computer Law Strategist**
  Leader Publications, Inc.
  Monthly

- **Computer Law Reporter**
  Law Reporters
  Bi-Monthly

- **Computer Lawyer**
  Prentice Hall Law & Business
  Monthly

*Ulrich’s* also lists publications that index articles found in other
periodicals.22

Because of the high level of activity in copyright law and intel-
lectual property law generally, researchers want access to very current
information. One way to obtain such information is to search special-
ized legal newsletters. These newsletters are typically produced
weekly or monthly and contain valuable summaries of recent cases,
legislative actions, and trends in the copyright field. An excellent
source for finding the titles of these periodicals is *Legal Newsletters in
Print*, which lists newsletters both alphabetically by title and by sub-
ject. *Legal Newsletters in Print* also gives a brief description of each
newsletter and lists its publisher, frequency and cost. Examples of
newsletters found under subject headings such as “Copyright” and
“Computers & Automation” are:

22. *See infra* part III.A.2.
2. Finding Periodical Articles

The most effective tool for finding citations to recent (1980 to present) periodical articles is the *Current Law Index* (CLI), published by Information Access Company. CLI indexes hundreds of periodicals, uses standard Library of Congress subject headings, and is updated monthly. CLI also organizes articles about particular statutes and cases. Moreover, the publishers of CLI produce a more comprehensive version of CLI, called the *Legal Resource Index* (LRI), which is available on Westlaw (LRI), Lexis (LAWREV or LEXREF library, LGLIND file), and some computerized library catalog systems. A CD-ROM version of LRI, called *Legaltrac*, is also available. LRI is the easiest way to search for periodical articles because it has greater coverage than CLI, and the researcher using LRI is free to input complex boolean searches spanning across several years worth of articles. In contrast, CLI is published in annual volumes, meaning that a researcher must check each relevant subject heading for each year of interest.

One alternative to CLI is H.W. Wilson's *Index to Legal Periodicals* (ILP). A subset of ILP is accessible online through Westlaw and Lexis, and a more limited version of ILP is also available on CD-ROM. ILP is more difficult to use than CLI, as ILP does not use standard Library of Congress subject headings. Nevertheless, for periodical articles prior to 1980, ILP is the only widely available source of general indexing. Because the researcher interested in copyrightability of computer programs is primarily focusing on recent materials, however, LRI or CLI will usually be the best method for finding articles in general legal periodicals.

To update searches in either CLI/LRI or ILP, the University of Washington Law Library publishes the *Current Index to Legal Periodicals*.

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23. For a list of Library of Congress subject headings relevant to the copyrightability of computer programs, see appendix A, infra.
24. Words and logical connectors.
25. These ILP sources are not, however, available to those utilizing a Lexis or Westlaw academic subscription.
icals (CILP). This index groups articles under broad subject headings and is published weekly. The most recent two months issues of CILP are available as a current awareness database on Westlaw.26

Another particularly valuable tool for finding periodical articles relevant to copyrightability is the specialized index. Specialized indices often provide abstracts of articles, but they cover only articles in specific subject areas or articles appearing in a single publication. These indices typically track specialized materials not covered by ILP or CLI. For example:

- **Computer Literature Index**
  Quarterly bibliography of periodicals and books relating to computers (this work is particularly valuable because it indexes practitioner-oriented materials, including such publications as Computer Law & Practice).

- **BNA's Patent, Trademark & Copyright Journal — Six Month Summary**
  Bi-annual (November and May) index of materials appearing in this single BNA publication (this index serves as a valuable, quick reference on important changes in copyright law in the most recent six months).

Also useful is the **Index to Periodical Articles Related to Law (IPARL)** by Roy M. Mersky & J. Myron Jacobstein, editors. IPARL covers articles relating to computer law found in non-legal publications. Although discussions of copyrightability do not regularly appear in non-legal publications, many computer-related hobbyist and professional magazines contain articles about computers and the law that analyze the policy considerations involved in defining the appropriate scope of copyright protection for software. Thus, IPARL can provide articles that serve as valuable sources for policy arguments.

Less valuable is Eleanor DeLashmitts Annuals and Surveys Appearing in Legal Periodicals, a looseleaf that catalogs annual surveys of the law found in periodicals. DeLashmitt does not include a heading for either computers or copyright or list the valuable annual bibliography of computer law published by the Rutgers Computer & Technology Law Journal.27 Nevertheless, DeLashmitt does list annual surveys of the law in each federal judicial circuit, which may be helpful in determining the mood of a particular court of appeals with respect to intellectual property issues.

Legal newspapers and bar journals also occasionally print materials related to copyrightability. Generally speaking, however, these ar-

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26. For a description of "current awareness databases," see infra part III.C.
27. See infra part III.F.1.
articles are poorly indexed and do not contain a wealth of citations to primary sources. Some exceptions are covered by practitioners' materials.28

With a citation to a particular article in hand, often the best method to find the full text of the article itself is to go to the stacks of a law library in search of the periodical. Online coverage of major legal periodicals is also available on Lexis and Westlaw, but be careful. Westlaw includes selected articles from those periodicals it covers, and the Lexis combined library of law reviews (ALLREV) excludes several of the most important journals covering copyrightability issues. For example, neither HRVTECH (the *Harvard Journal of Law & Technology*) nor LAWTECH (the *Journal of Law & Technology*) is incorporated in the Lexis ALLREV file. Thus, it is necessary to check the scope of any file used on either Lexis or Westlaw.29 However, Westlaw does have one particularly desirable collection of periodical materials conveniently grouped. In its IP-TP (intellectual property—law reviews, texts & bar journals) database, Westlaw has aggregated articles from law reviews, symposia, bar journals, and continuing legal education (CLE) courses. This material can be especially valuable because it contains the insights and strategic suggestions of practitioners as well as more traditional scholarly material.

Before citing a law review article in a brief or other pleading, the researcher should check *Shepard's Law Review Citations*. Only available in print, *Shepard's Law Review Citations* lists all citations to articles printed in major law reviews. Unlike Shepard's volumes for cases, statutes, and regulations, however, *Shepard's Law Review Citations* do not contain treatment codes.30 Although law review articles are not "reversed" or "overruled" as are court decisions, it is wise to find out whether and how previous courts and other commentators have reacted to a law review article *before* relying upon it.31

3. Examples of Legal Periodicals

This section lists several legal periodicals that often contain material relevant to copyrightability. This list is not, and is not intended to be, detailed or comprehensive; instead, it is provided as a starting

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28. See infra part III.G.
29. To determine the scope of a file on Lexis, simply search the GUIDE file in the library containing the file about which you are concerned. To determine the scope of a file on Westlaw type "scope <db>" (where <db> is the name of the relevant database).
30. Treatment codes are Shepard's system of one-letter indicators which explain subsequent judicial and legislative treatment of each cited source. The treatment code "o," for example, means that a cited case has been overruled.
31. Use of Shepard's volumes is covered in more detail in part IV.D., infra.
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point and an indication of the burgeoning literature in this field. Each periodical on this list publishes scholarly articles, including articles directly relevant to the copyrightability of computer programs, and each periodical is indexed in one or more of the materials mentioned in part III.A.1, supra.

- ALBANY LAW JOURNAL OF SCIENCE & TECHNOLOGY (since 1991)
- BULLETIN OF LAW, SCIENCE, & TECHNOLOGY (since 1976)
- COMPUTER LAW JOURNAL (since 1978)
- COMPUTER LAW & PRACTICE (since 1984)
- COMPUTER LAWYER (since 1984)
- HARVARD JOURNAL OF LAW & TECHNOLOGY (since 1988)
- HIGH TECHNOLOGY LAW JOURNAL (since 1986)
- INTELLECTUAL PROPERTY LAW REVIEW (since 1978)
- INTERNATIONAL COMPUTER LAW ADVISER (since 1981)
- JOURNAL OF LAW & TECHNOLOGY (since 1986)
- JURIMETRICS (since 1954)
- PRIVACY JOURNAL (since 1974)
- RUTGERS COMPUTER & TECHNOLOGY LAW JOURNAL (since 1981)
- SANTA CLARA COMPUTER AND HIGH TECHNOLOGY LAW JOURNAL (since 1985)
- SOFTWARE LAW JOURNAL (since 1985)

An additional interesting and atypical periodical is the American Society of Composers, Authors & Publishers (ASCAP) Copyright Law Symposium. For the past 40 years, ASCAP has held a competition in which law students have submitted papers relating to current issues on copyright law. Top entries are published each year in the symposium. These papers often contain innovative proposals as well as excellent citations to legislative history and primary sources. Each volume of the symposium contains a table listing the titles of all papers included in previous symposia volumes, organized by year of publication.

4. Examples of Periodical Articles

As with part A.3, supra, this section is not intended to serve as a comprehensive catalog of available periodical articles on copyrightability. Nevertheless, the list does indicate periodical articles which are of particular use to the researcher. The articles listed in Table 1 were culled from the hundreds of writings about copyright law and computer programs, and articles are included because they provide excellent citations to primary materials, contain clearly written expositions of copyrightability doctrine as it relates to computer programs, or are often cited favorably by courts.
Table 1: Most Useful Periodical Articles


Additional periodical articles, including student notes and comments, which are also helpful in understanding copyrightability are listed in Table 2.

Table 2: Additional Periodical Articles

B. Looseleaf Services

After periodical articles, looseleaf services are the most useful form of secondary source. There are several types of looseleafs relevant to copyrightability research, including looseleaf treatises and more general catch-all looseleaf services. There is only one true
catch-all looseleaf, which includes the full text of both cases and statutes, for copyright law, and it is considered in this section.\(^{32}\)

1. Finding Looseleaf Services

The best source for finding looseleaf services is *Legal Looseleafs in Print*, compiled and edited by Arlene L. Eis. Organized alphabetically and indexed by general subject heading, this resource points the researcher to more than twelve looseleaf services and looseleaf treatises relevant to copyright law. Useful subject headings for searching include: copyright, intellectual property, and computer. *Legal Looseleafs in Print* includes the names, prices, frequency of supplementation, and publisher for each looseleaf. A helpful list of legal publishers, with addresses and telephone numbers, is also included at the front of the soft-cover volume.

It is worth noting that no library—not even a large academic research library—contains all of the available sources of information that a researcher might find relevant or necessary for a particular project.\(^{33}\) Fortunately, a consortia of libraries have joined together and linked their catalogs electronically through systems such as Research Libraries Information Network (RLIN) and Ohio College Library Consortium (OCLC). RLIN is the system of choice. Both systems can search for books and serials (looseleafs are considered serials) but RLIN has a larger network. Searches on RLIN may be conducted by law librarians and others familiar with the command language, and materials located in this manner usually may be obtained through interlibrary loan.

2. *CCH Copyright Law Reporter*—The Best Source

Commerce Clearing Houses *CCH Copyright Law Reporter (Reporter)* is, in this author’s opinion, the best single source for researching the copyrightability of computer programs and copyright law generally. Although materials found in this source must, as with all research, be updated, if you could choose only one source of information, this would be it. The *Reporter* comes in two black and gold reference volumes. These two volumes allow “one-stop shopping” for

\(^{32}\) For information on looseleaf treatises, see part III.D., infra.

\(^{33}\) Harvard Law School’s collection, for example, does not include CCH’s *Guide to Computer Law*, a two volume looseleaf supplemented on a semiannual basis, which contains an excellent description of court’s early attempts to expand the scope of copyright protection to accommodate computer programs.
researching issues associated with the 1976 Act, including copyrightability. The volumes include:

- **Compilations:** Organized behind white tab guides in volume 1 and divided by topic, these brief segments on copyright law subjects contain textual explanations, brief digests of important cases, and citations to the full text of related decisions. Copyrightability has its own topical tab, beginning at § 500, and additional material concerning the scope of copyright protection is found beginning at § 2000.

- **Court Decisions:** The bulk of the second volume contains the full text of court decisions concerning copyright law.

- **Laws, Treaties, Regulations, Forms, Copyright Circulars:** This section is in the 1st volume at ¶ 10,000 and contains the full text of current versions of the 1976 Act, relevant administrative regulations, treaties concerning copyright law, official forms, and circulars issued by the Copyright Office. Although this material is not usually necessary for analysis of copyrightability issues, it is convenient to have access to it in a single set when working on complex copyright cases.

- **New Developments:** Updated monthly, these keep the compilations current with news of proposed and final rulemaking. This section is located in volume 2 at ¶ 20,000.

The **Reporter** has multiple points of access. Primary among these is its main Topical Index, located behind the red tab guide near the beginning of the first volume. The alphabetical index is thoughtfully subdivided and provides paragraph numbers leading to compilations on particular subjects. The **Reporter** utilizes a layered indexing system, so after finding a paragraph reference in the topical index, the researcher should also examine the cumulative index (organized by paragraph number) to determine if any new relevant cases have been added. Alternatively, one can look to the Current Topical Index which, like the main Topical Index, is organized by subject. For those who approach the **Reporter** with a case name in hand, there is a case table behind the blue tab in the first volume that translates case names into paragraph numbers.

The **Reporter** has a set of "spin-off" bound volumes, called the **Copyright Law Decisions.** Like the current cases found in volume 2 of the **Reporter,** the cases in the volumes of **Copyright Law Decisions** are organized by paragraph number and are indexed directly in the case table and indirectly through the topical index. Each volume of the **Copyright Law Decisions** also includes its own table of cases. The content of the spinoff volumes is selective—materials that CCH editors decide is of permanent reference value—but a quick scan of the

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34. The CCH Copyright Reporter also covers the Semiconductor Chip Protection Act, as it is part of Title 17.
cumulative table of cases reveals that most important copyrightability decisions have been included in the set. Also part of the reporter are soft-cover "transfer binders," whose contents are described by their titles.35

Additionally, the Reporter lists important personnel at the Copyright Office36 (at ¶ 300) as well as the members of the Senate Judiciary Committee on Patents, Copyrights & Trademarks and the House Judiciary Subcommittee on Intellectual Property & Judicial Administration (at ¶ 320). The only serious drawback to the Reporter is the fact that it is not updated frequently. The case reports and compilations are updated approximately monthly, and, in order to be up-to-date in the rapidly changing field of copyrightability, one has to rely on current awareness tools.37 Nevertheless, the Reporter is a fantastic tool that brings together a large amount of primary legal material with effective indexing to facilitate accurate, efficient research. Because the Reporter can be a little daunting at first, newcomers to the set should begin with the section at the front of volume 1 entitled How to Use this Reporter. Only seven pages long, this introduction rewards careful study. Finally, when using the Reporter, it is important to remember that the Reporter—like all CCH looseleaf materials—uses citations to paragraph (¶) numbers, not to page numbers in the set.

3. Other Looseleafs

There are a number of other looseleaf services that offer citations to primary materials as part of a textual summary of copyright law, but none other than the CCH Copyright Reporter offers the full text of cases and statutes.38

C. Current Awareness Tools

Because the scope of copyright protection for computer programs is currently in a state of flux, it is important for the legal researcher to have the most up-to-date information possible. For those situations when especially current information is required, there are three main sources, two daily and one weekly, to explore.

35. These transfer binders typically include particularly important legislative history or similar commentary. For example, one such binder entitled Committee Reports accompanying S.22 includes the Senate committee reports on the bill that eventually became the Copyright Act of 1976.
36. The Copyright Office is part of the Library of Congress.
37. Current awareness tools are described in part III.C., infra.
38. This guide classifies the other looseleafs as "looseleaf treatises." Descriptions of the looseleaf treatises are found at part III.D., infra.
1. Sources Updated Daily

The Bureau of National Affairs (BNA) publishes a daily update on the status of intellectual property law called *BNA Patent, Trademark, & Copyright Daily*. This daily source contains summaries of newly decided cases and information about regulatory or legislative proposals and actions relating to intellectual property law, including copyright law. The *Patent, Trademark, & Copyright Daily* is available both on Westlaw (BNA-PTD) and on Lexis (BNA library, BNAPTD file), and it exists as a “current awareness database” on both systems. A current awareness database differs from an ordinary online file or database in that, when the user selects the database, the user is immediately presented with the most recent few days editions of the publication, rather than having first to key in a search request.

Westlaw also compiles its own “daily highlights” of intellectual property law in a database appropriately entitled Westlaw Topical Highlights—Intellectual Property (WTH-IP). This database contains summaries of recently decided cases, often including decisions concerning copyrightability of computer programs. The case summaries in WTH-IP are shorter than those found in BNAs daily service, but WTH-IP is more comprehensive in its coverage of new decisions. Although there is considerable overlap between BNA-PTD and WTH-IP, BNA’s daily service is the superior tool for those primarily interested in legislative or policy changes. However, for those doing more traditional copyrightability research where case law is of primary importance, WTH-IP is more valuable. In order to ensure completeness, of course, it is necessary to check both services.

Another tool for keeping up-to-date is the passive retrieval system. Both Lexis, through the “Eclipse” function, and Westlaw, through the “PDQ” function, allow researchers to set up passive searches in particular online libraries. Once the search is in place, it executes automatically at user-specified intervals, and the user is notified at log-on whenever the search has retrieved new items. Thus, someone interested in software copyrightability might input the following Lexis search (in the COPYRT library, FEDCTS file) as a passive search:

(computer or software) w/50 (copyright!)

Although it is somewhat simplistic and a bit overinclusive, this search, which is updated automatically on a daily or weekly basis, helps keep the researcher abreast of new developments in the field as they emerge. As with all online activities, cost is a factor to consider when setting up passive searches—each time the search is updated,
the user's account is charged. Nonetheless, these searches are a powerful and flexible tool that essentially allows the researcher to construct his or her own current awareness file from the general database of federal cases.

2. Sources Updated Weekly

If the research project demands current information but is not dependant on up-to-the-minute data, as will often be the case if the copyrightability question under consideration is not on the frontier of developing doctrine, another valuable source of information is BNA's Patent, Trademark, & Copyright Journal. Published every week, this journal includes highlights of the previous week's legal developments in intellectual property law. The print version is indexed semi-annually, and the Journal is also available online on both Lexis (BNA library, PTCJNL file) and Westlaw (BNA-PTCJ). As mentioned in part III.A.2, supra, the Current Index to Legal Periodicals (CILP) is another current awareness source that indexes recently published periodical articles. Apart from particular research questions, use of CILP along with the weekly BNA is an effective method of keeping up with events in the field of intellectual property law.

D. Treatises

Treatises are scholarly efforts to impose structure upon and explain a particular field of the law. These efforts vary in quality and comprehensiveness, and this section explores only a sampling of the most useful of the available treatises. Some of the treatises described in this section are of the looseleaf variety. That is, such treatises are found in looseleaf binders and are periodically supplemented with new pages. Whether looseleaf or bound, however, each treatise is aimed at a slightly different audience and will be more or less valuable depending on the technicality of the copyrightability question and the level of copyright law experience possessed by the researcher.

Generally, the treatises are less useful than periodical articles specifically addressed to copyrightability law and the "catch-all" CCH Copyright Law Reporter because the treatises ordinarily are less current. Nevertheless, the major treatises, particularly those by Professors Nimmer and Goldstein, are regularly cited by courts deciding novel copyrightability issues,39 and the single volume works are often the most effective method for gaining a perspective on the relationship

between the question of copyrightability and other legal issues in copyright and intellectual property law.

1. Academic Treatises

- **Melville B. Nimmer & David Nimmer, Nimmer on Copyright** (6 vols. + irreg. updates, published by Matthew Bender) (1993). This is the classic treatise on copyright law, frequently cited by the Supreme Court. Within its ambit is all of modern copyright law, including copyrightability of computer programs. The topical index is located in volume 6, and materials on copyrightability are found in chapters 2 and 13. Chapter 13 contains Professor Nimmer's famous "abstractions test" for determining the copyrightability of non-literal elements of computer programs. Chapter 8A discusses the Semiconductor Act at length. Researchers should feel free to cite sections of this treatise as persuasive (but non-binding) authority. The Nimmer treatise also includes the full text of current copyright statutes and a table of cases listing cases both by plaintiffs' and defendants' names. One word of caution: although the treatise is updated several times yearly, it can be several months behind, and the careful researcher should update all citations to primary materials.

- **Paul Goldstein, Copyright** (3 vols. + annual supplement). Another well-respected academic treatise. Unlike Nimmer, Goldstein is printed in bound volumes, making it slightly more cumbersome to use (the researcher must first consult the primary volume then look to the supplement).

2. Practitioner-Oriented Treatises

- **Michael A. Epstein, Modern Intellectual Property** (2d ed. 1989) (1 looseleaf volume and annual supplement) (published by Prentice Hall Law & Business). This practitioner-oriented treatise canvasses a wide range of software related topics. Copyrightability is covered in chapter 10 (Protecting Computer Software, at 363-430). Written clearly and with ample citations, this is an excellent source for those new to copyright law. Modern Intellectual Property is also available online through Westlaw (MODIP).


42. Note, however that the Westlaw version of Modern Intellectual Property is not always as current as the print version. As of March 1994, for example, the online version was
3. Other Treatises

- **L. J. KUTTEN**, *Computer Software (Protection/Liability/Law/Forms)* (3 looseleaf vols. + irreg. supplements). This work spans broadly across intellectual property law, exploring issues specific to computer software. Chapter 2, located in Volume 1, addresses copyrightability issues briefly. Although this source does not delve deeply into copyrightability questions, it may be very useful if the researcher is also interested in other avenues of protection for a piece of software beyond the bounds of copyright law. Moreover, the section describing the origins and history of the 1976 Act and subsequent amendments as they relate to computer software (located in chapter 2 at § 2.01[7] - § 2.01[11]) serves as a valuable introductory legislative history.

- **RICHARD H. STERN**, *Semiconductor Chip Protection* (1986) (1 looseleaf volume) (published by Prentice Hall Law & Business). This volume is specifically geared to the Semiconductor Chip Protection Act of 1984. Since its publication in 1986, however, little has been added to this publication. Thus, it is imperative that the researcher update all citations found in this treatise and conduct additional research in other sources. Nevertheless, this is the best single volume work on the provisions of the Semiconductor Act. For those with copyrightability questions related to computer programs on microchips, this is a valuable resource.

4. Other Treatises

- **HARRY G. HENN**, *Henn on Copyright Law* (3d ed. 1991) (1 bound volume) (591 pages, including appendices, no supplement). This is a well-organized source, but unless it is supplemented, it will quickly fall out of date. Of particular interest in this volume is the outline of the copyright statute (1976 Act, including subsequent amendments, at 41-48). For the researcher seeking an overview of the legal terrain, this short (eight page) outline is the most concise overview of the current copyright statute that is even remotely complete.

- **WILLIAM F. PATRY**, *Latman's Copyright Law* (6th ed. 1986) (1 bound volume, 648 pages, no supplement) (published by BNA). This single volume treatise on copyright law has a good brief introduction to copyrightability of computer programs (at 59-64).

- **D.C. TOEDT** III ed., *The Law & Business of Computer Software* (1 looseleaf volume + approximately annual update) This work is an odd cross between a periodical and a treatise. It is subdivided into chapters on different subjects relating to legal protection of computer software. Each chapter consists of articles by practitioners, edited current only through October 1991—according to a Westlaw scope—while the printed looseleaf version already contained the annual 1992 update.  

43. The 7th edition of Patry's book was published in 1992 but was not yet available at time of publication of this article.
and updated by the treatise editors. Chapter 2 (Analyzing Software Copyright Infringement Claims) and chapter 7 (The Semiconductor Chip Protection Act) are relevant for copyrightability research.

E. Annotations

Annotations (also called annotated law reports) are essentially completed research memoranda on particular legal subjects. Each annotation breaks a relatively narrow subject into subsections and offers brief summaries of relevant cases. Such works generally are valuable resources for legal research, but in view of the large number of specialized materials available—intellectual property periodicals, CCH Copyright Reporter, and numerous looseleaf treatises—annotations are not the best place to begin research on a copyrightability issue. Nevertheless, if none of the more specialized materials is available, annotations may be quite useful.

Annotations are primarily found in American Law Reports (A.L.R.), published by Lawyer's Cooperative Publishing Company. A.L.R. annotations are part of the Lawyer's Cooperative Total Client Library System. Thus, each A.L.R. annotation contains references to related annotations, code sections in United States Code Service (U.S.C.S.), and sections in the Lawyer's Cooperative legal encyclopedia, American Jurisprudence Second Series (Am. Jur. 2d). Moreover, citations to A.L.R. annotations may be found in Lawyer's Edition Second Series (L. Ed. 2d), U.S.C.S., and on Lexis, through AutoCite. The A.L.R. annotations are organized into sets of volumes: A.L.R. 1st through A.L.R. 3d (early state and federal cases), A.L.R. 4th through A.L.R. 5th (modern state cases) and A.L.R. Federal (modern federal cases). Although older federal materials (before 1969) are found in A.L.R. 2d and A.L.R. 3d, the only set of interest for software copyrightability research is A.L.R. Federal.

Annotations in A.L.R. Federal are indexed by subject (and by U.S.C. and C.F.R. section) in the A.L.R. Index. Materials relevant to software copyrightability are found under "copyright-computer programs." There is, at present, only one annotation directly on point:


When using A.L.R., it is important to examine the pocket parts (both for the volume containing the annotation and for the Index to Annotations) in order to update the annotation’s text.
F. Bibliographies, Legal Encyclopedias, & Books

1. Bibliographies

In the rapidly changing area of software copyrightability, bibliographies found in books and even in periodicals quickly become outdated. Nevertheless, the *Rutgers Computer & Technology Law Journal* publishes a very useful annual bibliography, covering material on all aspects of computers, technology, and the law. Citations to the three most recent editions are:


For historical purposes—or to demonstrate the legal community's contemporaneous understanding of the 1980 Amendments to the 1976 Act—some researchers may be interested in the earlier literature on copyrightability. One bibliography of such sources is:


A more general resource for finding bibliographies focused on particular subjects is the *Legal Bibliography Index*, published by W.S. Chiang and L.E. Dickson. If the specialized bibliographic materials are not available, the *Legal Bibliography Index* may serve as a valuable research tool.

2. Legal Encyclopedias

Legal encyclopedias are multi-volume works, offering a structured look at all (or nearly all) areas of the law. There are two major legal encyclopedias: *Corpus Juris Secundum* (C.J.S.) and *American Jurisprudence 2d* (Am. Jur. 2d). Given their breadth of coverage, these sources do not provide much depth in analyzing detailed copyrightability issues. Although some researchers may wish to consult these sources during the preliminary stages of research, they do not provide much valuable information. The specialized sources considered in previous sections are probably better starting points for re-

44. In order to find bibliographies appearing in books or books which are themselves bibliographies, one would look in the card catalog (or on-line catalog) of a law library, searching with Library of Congress subject headings or keywords. CLI/LRI and ILP, discussed at part III.A.2., *supra*, are the best sources for finding bibliographies appearing in legal periodicals.
search. However, if none of the specialized materials is available, both encyclopedias contain a number of citations, and C.J.S. provides the researcher with quick access to the West Key Number System.45

Neither C.J.S. nor Am. Jur. 2d are available online and their subject indices—set forth in separate printed volumes—were not designed with the interface between copyright law and computers in mind. The subject headings, however, do contain several relevant sections:

- **C.J.S.:**
  - 18 C.J.S., Copyrights § 12 (Computer Programs)
  - 18 C.J.S., Copyrights §§ 92 - 101 (Semiconductor Chip Protection)

- **Am. Jur. 2d:**
  - 18 Am. Jur. 2d, Copyright and Literary Property § 50 (Computer Program)

3. Books

There are many books available on the relationship between computer programs and the law. Unfortunately, the vast majority either do not discuss the issue of copyrightability or are so old (published prior to 1986) that they cannot provide many citations to relevant primary materials. Although books are not among the best sources for research in software copyrightability, those seeking to do exhaustive research and those without access to other materials may wish to examine them.

The best source for finding books on copyrightability (or more realistically, on copyright) is the online catalog or card catalog of a law library. Because no library has all titles, the researcher may need to search RLIN or OCLC for a library which has the needed titles.46 Also valuable for finding relevant (i.e., current) books is *Books in Print* (BIP), which is available online on Dialog through Westlaw. The government also occasionally publishes materials in a book-like form that are useful to the copyright researcher. Such government publications may be found in the *Monthly Catalog*, also available online on Dialog through Westlaw (GPO-CTLG). Examples of books and government publications that are current and potentially valuable include:

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45. The West Key Number System is a classification system developed by West Publishing in which points of law in a case are indexed under a general topic and a specific key number.
46. See supra part III.B.1. for a description of RLIN and OCLC.


G. Practitioners' Materials

There are a great many materials on copyright and computer law aimed at practitioners: from form books, procedural manuals, and regulatory guides to looseleaf treatises, Continuing Legal Education (CLE) manuals, and published proceedings of practitioners associations. No attempt is made here to catalog, categorize, and evaluate all of these materials. Instead, this section simply describes a few of the materials most useful in researching the boundaries of software copyrightability.

• ABA Section of Intellectual Property Law (formerly known as the Section of Patent, Trademark & Copyright Law): This section of the ABA publishes both its committee reports and the proceedings of its annual meeting, including statistical information. The proceedings and committee reports sometimes contain valuable empirical information and summaries of changes in the law during the most recent year. All of these materials are available in print, and selected committee reports and proceedings are available on Lexis in the PTCLAW file (found in the COPYRT library).

• U.S. Copyright Office Speaks: This annual publication (now in its fourth year) provides a combination of articles by practitioners on copyright issues and speeches given by employees of the United States Copyright Office.

• Practising Law Institute (PLI): PLI publishes continuing legal education (CLE) materials in several areas of law, including copyright. The handbook accompanying PLI’s yearly CLE seminar on software protection and the law is a valuable resource; it has changed names several times over the years, and is now called Current Developments in Computer Software Protection (1991). Perhaps the most useful aspect of the handbook for copyrightability research is the 180-page article Copyright Protection for Computer Software: A Summary of Authorities with an Emphasis on Current Judicial Developments by Morton D. Goldberg, a leading software law practitioner. This article is updated yearly and provides a helpful structure in thinking about software copyrightability issues. Current Developments is available in print, and selected articles from Current Developments are also found on Westlaw in the PLI-PAT database. Print
versions of current PLI publications may be obtained directly by contacting the Practising Law Institute at 810 Seventh Avenue, New York, NY 10019.

- **AMERICAN INTELLECTUAL PROPERTY LAW ASSOCIATION, QUARTERLY BULLETIN**: Like the ABA publication mentioned above, this bulletin contains proceedings of the association and articles by members. It is available in print, and selected articles are found on Lexis in the AIPLA file (in the COPYRT library).

IV. **PRIMARY LEGAL SOURCES**

Having first surveyed the secondary materials described in part III and found a collection of promising citations, the researcher should then explore the primary legal sources—the Constitution, statutes, and cases—that define rather than simply explain the law. This part describes the structure and sources of these primary legal documents.

A. **Constitution**

The fundamental source of congressional authority to enact copyright statutes granting computer programs intellectual property protection is found in Article I, Section 8, Clause 8 of the United States Constitution (the "Patent & Copyright Clause"). That clause has been read to permit a grant of a copyright monopoly by Congress only to protect "Writings," but the term "writings" has been construed so broadly as to impose virtually no limitation on Congressional power. Constitutional doctrine will rarely be relevant to research concerning the copyrightability of computer programs.

Theoretically, one could formulate an argument that it is beyond Congress power under the Patent & Copyright Clause to protect non-literal elements of computer programs because those elements cannot fairly be termed "writings." Although this argument has some intuitive appeal, one should consider, before engaging in a great deal of likely fruitless research, that another source of Congressional power, the Commerce Clause, has been read so as to permit Congress to regulate nearly every imaginable economic activity. Thus, even if the Copyright Act were unconstitutional under the Patent & Copyright Clause, it is likely constitutional under the Commerce Clause.

49. See, e.g., Wickard v. Filburn, 317 U.S. 111 (1942) (Congress may regulate a farmer's consumption of food grown on his own farmland because the type of activity in which the farmer engaged, eating food grown on his own land, if engaged in by a large group of individuals, would have an effect on interstate commerce).
A full listing of the materials needed to complete effective constitutional research is beyond the scope of this guide. But for those researchers who feel that issues of constitutional moment are implicated by the circumstances of their case, a good introduction to materials on the Constitution is found at:


B. Legislative materials

1. Statutes/Annotated Codes

The 1976 Act is entirely codified at Title 17 of the United States Code (U.S.C.). The U.S.C., published by the Government Printing Office, is the official code of the United States, but the two major unofficial codes—United States Code Annotated (U.S.C.A.) and United States Code Service (U.S.C.S.)—are substantially more useful. Both U.S.C.A. and U.S.C.S. are updated regularly (with pocket parts and advance legislative services), and both are therefore generally more current than U.S.C., which is printed only once every six years. Both U.S.C.A. and U.S.C.S. are annotated codes. Along with the text of each section, these codes provide brief digests of judicial decisions interpreting the section, citations to pertinent regulations and periodical articles, and "statutory credits" listing the citations to the public law number(s) from which the code section and any subsequent amendments were originally drawn. Thus, in addition to serving as primary sources of law, annotated codes are useful as case-finding tools and as a first step to researching legislative history. In order to find relevant statutory material, both U.S.C.A. and U.S.C.S. provide subject index volumes. Although the researcher can look up either "computers" or "copyright" in these indices, for purposes of copyrightability, the three most important sections of Title 17 are §§ 101, 102, and 117.

Although U.S.C.A. and U.S.C.S. are quite similar, there are important differences between them. U.S.C.A. is published by West, and it provides access to the West key number system as well as references to other West publications, such as C.J.S. and United States Code Congressional & Administrative News (U.S.C.C.A.N.).

50. The most recent version of the U.S.C. was published in 1988.
54. See infra discussion at part IV.B.2.
contrast, U.S.C.S. is a Lawyers Cooperative publication, providing citations to A.L.R. annotations and Am. Jur. 2d. Because the citations offered by the two codes differ slightly, the researcher should look at both to ensure maximum coverage. If there is time to consult only one code, however, choose U.S.C.A. For the relevant statutory sections, U.S.C.A. has a separate section in its case annotations for computers and computer programs, which makes the task of sorting through the many cases decided under §§ 101, 102, and 117 substantially easier. Moreover, U.S.C.A. has more citations to periodical articles.

Both annotated codes are available online. U.S.C.A. may be found on Westlaw in FIP-USCA and U.S.C.S. is on Lexis in the COPYRT library, USCS file. Both Lexis and Westlaw offer the ability to "flip" through the code on screen, looking at preceding and succeeding sections. Nevertheless, because much of the formatting from the printed versions is lost online, it is often easier and less expensive to look at the printed code and its related pocket parts first, and then to update this research using the methods described at part IV.D., infra.

2. Legislative History

"Legislative history" is the term used to describe the Congressional committee reports, committee prints, transcripts of hearings, early drafts of bills, and other documents that may indicate the Congressional intent or purpose behind the enactment of a particular piece of legislation. The use of legislative history by courts in interpreting statutes has come under fire recently from prominent figures such as Justice Scalia, and there is a school of political and legal theory that holds that the notion of "Congressional intent" is incoherent. Nevertheless, courts often refer to legislative history in interpreting the 1976 Act and its amendments in software copyrightability cases. Thus, the researcher must be able to find relevant legislative history sources.

Before beginning the somewhat arduous process of pulling together a legislative history, it is wise to search for pre-existing compiled histories on the relevant statute; that is, one should first check to

55. Although it is found in Westlaw's collection of intellectual property database, a "scope" of FIP-USCA reveals that it includes all fifty titles of the United States Code.


57. See, e.g., PETER ORDHOOK, GAME THEORY AND POLITICAL THEORY: AN INTRODUCTION (1986) 71-82 (discussing particular theorems that yield conclusions that legislative outcomes may be entirely unrelated to the intent of the majority of legislators); see generally, DANIEL A. FARBER & PHILIP P. FRICKEY, LAW AND PUBLIC CHOICE (1991) (159 pages) (explaining and critiquing the "public choice" attacks on the use of legislative history).
see whether someone else has already done the work. One excellent source for finding completed legislative histories is:


Utilizing Johnson’s book effectively requires that the researcher have the public law number of the desired statute. This number may be obtained by looking at the statutory credits listing for the desired section in one of the annotated codes. At least three public law numbers are of interest for purposes of researching software copyrightability:

- Pub. L. 96-517: The 1980 Amendments to the Act, adding a definition of computer program to § 101 and making modifications to § 117 explicitly providing for the protection of software.

Review of Johnson’s book (both in part I, which contains legislative histories by broad subject area and in part II, which contains compilations listed by public law number) reveals a plethora of pre-compiled legislative history materials. The following brief list is meant simply as an illustration:

- Donald S. Chisum, Patents: A Treatise on the Law of Patentability, Validity and Infringement (beginning in 1978—legislative history of the 1980 Amendments, which included the first express statutory indication of the copyrightability of computer programs) (6 vols.).

Another valuable source of compiled legislative histories is the set of legislative history volumes that is part of the Congressional Information Service (CIS). As with Johnson’s book, each CIS legislative history volume lists legislative histories by public law number. CIS has a different bound volume for each year’s enacted legislation.

58. For legislative histories of bills more current than those covered by Johnson’s book, see legislative history volumes of CIS, discussed infra.
For bills passed during or after 1984 (such as the Semiconductor Act), the CIS legislative history volumes provide an easy-to-use listing of relevant reports, hearings, and other documents, complete with CIS accession numbers to facilitate access to the full text of those documents. For bills passed before 1984, legislative histories, sorted by bill number, are found in the back of the CIS Abstracts volume for the appropriate year.

In addition to these compilations, one additional piece of legislative history that has been considered quite important by the courts in determining the appropriate scope of software copyrightability is:


The National Commission on New Technological Uses of Copyrighted Works was created by Congress in 1974 to study new forms of expression (such as computer programs) and to make recommendations for modifying the copyright law accordingly and even those opinions that have downplayed the significance of the report nevertheless have addressed it.

Because committee reports and other legislative history materials have only recently become available online (and then mostly prospectively), the best source for finding the full text of legislative documents other than pre-compiled legislative histories is the annual set published by Congressional Information Service (CIS). In addition to the legislative histories mentioned above, CIS provides a subject index to nearly all Congressional documents. By looking at the well-organized CIS Index volume covering the relevant year, the researcher may obtain a CIS accession number for the desired document. The CIS accession number is the key to the CIS system; it allows a researcher to look up an abstract of the particular committee report, hearing, print, or other document in the CIS Abstracts volume for that year. The researcher may also view the full text of the document on the microfiche set associated with the CIS volumes. Thus, CIS is an excellent tool for obtaining the full text of a particular hearing or report in an attempt to determine the outer perimeter of Congressional authorization of copyright protection for computer programs.

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61. The CIS Index volumes are also available on-line on Westlaw (CIS) through Dialog.
Surprisingly, however, CIS does not contain the full text of the CONTU Report (the Final Report does not appear in any of the indices for the years 1978-82). Nevertheless, this report is in the collection of many law libraries.

Another useful source for finding legislative history materials is West's United States Code Congressional and Administrative News (U.S.C.C.A.N.), which is organized by public law number and typically includes the full text of one or two legislative history documents for each bill.\footnote{See, e.g., 1980 U.S.C.C.A.N. 6460-514 (legislative history of 1980 Amendments, including the full texts of two House committee reports).}

3. Administrative Materials/Regulations

Rules and regulations are the legislative portion of administrative law. In doing copyrightability research, however, regulations are nearly inconsequential. The Copyright Office, an arm of the Library of Congress, is charged with primary responsibility for issuing regulations under the 1976 Act.\footnote{See COPYRIGHT LAW REPORTER, ¶ 8010.}

The best print source for finding regulations relating to copyright law is the CCH Copyright Reporter, but in the interest of completeness, this guide briefly addresses the primary materials.

The Code of Federal Regulations (C.F.R.) is the official regulatory code, and it contains no annotations. In fact, there is no annotated code of regulations. To find regulations, researchers may consult relevant sections of an annotated code or the official index to the C.F.R.\footnote{Rules pertinent to copyright law are found in Titles 19 and 37 of the C.F.R.; in particular, regulations governing copyright registration are found at 37 C.F.R. § 202.3.}

The official index, however, is only a single volume, and with its broad subject headings, it is quite difficult to use. A more desirable alternative is the CIS Index to the Code of Federal Regulations, a multi-volume subject index to the C.F.R., but the CIS index only goes back to 1985. The most efficient approach for finding specific regulations relevant to copyrightability analysis often will be to use the online versions of the C.F.R., available on Lexis (COPYRT library, CFR file) and Westlaw (FIP-CFR).

Before materials appear in the C.F.R., however, they appear in the Federal Register. The Federal Register appears daily, and in addition to final rules, it contains proposed rules, Copyright Office circulars, and executive materials. Although most of this material is irrelevant for copyrightability research, the Federal Register serves to update the C.F.R. In the event that a copyright regulation is relevant
to judicial determination of software copyrightability, it is important to know the method for updating sections of the C.F.R. First, look to either the CIS Federal Register Index or the List of Sections Affected (LSA). The LSA lists sections of the C.F.R. that have been affected by recent agency action and lists citations to the relevant Federal Register pages containing amendments and other changes to existing C.F.R. sections. It is important to match the publication dates of the relevant C.F.R. title with the LSA, so as not to miss any intervening changes. For even more current updating, the last Federal Register issue of each month contains a cumulative list of “C.F.R. Parts Affected” for that month, and the latest daily Federal Register issue contains a list of “C.F.R. Parts Affected” thus far during the current month.

Regulations printed in the Federal Register often contain a valuable section entitled “For Further Information.” This section provides the researcher with information on whom (a specific person) to contact in order to receive more information about the regulation. The Federal Register is available in print and online through Lexis (COPYRT library, FEDREG file) and Westlaw (FIP-FR). Lexis also has a file that combines portions of the C.F.R. and Federal Register relevant to copyright issues (COPYRT library, ALLREG file).

C. Judicial Materials—Cases

A thorough understanding of judicial decisions is integral to successful software copyrightability research. Congress has granted the federal district courts exclusive jurisdiction over civil cases arising under “any Act of Congress relating to . . . copyrights.”65 Thus, case law governing the scope of protection for computer programs under the 1976 Act is found in the opinions of the federal district, circuit, and Supreme courts. This section surveys sources containing the full texts of those judicial decisions.

1. Supreme Court

There has not yet been a Supreme Court opinion directly addressing the limits on software copyrightability under the 1976 Act. Nevertheless, Supreme Court precedents on copyrightability issues involving all types of “writings” are of enormous importance. Much of the current debate over the scope of copyright protection for the user interfaces of computer programs, for example, turns on differing interpretations of an 1879 Supreme Court decision holding that an ac-

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counting system was an "idea" rather than an "expression" and thus was uncopyrightable. Decisions of the Supreme Court concerning copyright issues are available in the three most widely available reporters (U.S., S.Ct., and L.Ed.2d), specialized newsletters (BNA's U.S. Law Week and CCH's U.S. Supreme Court Bulletin), CCH's Copyright Law Reporter, BNA's United States Patent Quarterly, Second Series (U.S.P.Q.2d), in text books, and online through Westlaw (FIP-SCT or USPQ) and Lexis (GENFED library, US file; or COPYRT library, FEDCTS file). BNA mails the full text of Supreme Court patent, trademark, and copyright opinions to U.S. Law Week subscribers on the evening of the day on which the decisions are handed down.

2. Circuit & District Courts

The decisions of the United States Courts of Appeals are published in West's Federal Reporter (F. and F.2d), CCH's Copyright Law Reporter, U.S.P.Q.2d, and online through Lexis (GENFED library, USAPP file or individual circuit files, and COPYRT library, FEDCTS file) and Westlaw (FIP-CTA and individual circuit files). The district courts are the federal trial courts, and they are the courts of original jurisdiction for copyright cases involving software copyrightability issues. District court decisions are published in West's Federal Supplement (F. Supp.), CCH's Copyright Law Reporter, U.S.P.Q.2d, and online through Lexis (GENFED library, DIST file and COPYRT library, FEDCTS file) and Westlaw (FIP-DCT).

Some decisions found online, in CCH's Copyright Law Reporter, and in BNA's U.S.P.Q.2d, are designated "unpublished" by the deciding court. Many circuits prohibit citation of such "unpublished" opinions absent special circumstances and compliance with particular procedures. Accordingly, although unpublished decisions may be useful for background research, they often are inappropriate for citation in briefs and scholarly materials.

67. The Copyright Office also publishes a "reporter" containing cases involving copyright law. The Decisions of the United States Courts Involving Copyright (cited as 49 C.O.Bull.) is an official government publication which includes cases reprinted from the Supreme, circuit, and district courts. As with most government reporters, however, it is badly out of date. The most recent volume, vol. 49, was published in 1992, but it only included cases through 1985! Needless to say, this is not a particularly valuable research tool.
68. Nine circuit courts specifically address whether unpublished opinions may be cited. See, D.C. Cir. R. 11(c), 1st Cir. R. 36.1, 5th Cir. R. 47.5.3, 6th Cir. R. 24(c), 7th Cir. R. 28(e), 8th Cir. R. 28A(k), 10th Cir. R. 36.3, 11th Cir. R. 36-2, and Fed. Cir. R. 47.6(b).
3. Finding Cases—Digests & Online Searches

The best print sources for finding cases directly (i.e. without prior reference to secondary sources) are case digests. These digests organize cases by subject and, within each subject, provide brief statements of relevant judicial opinions with citations to the full text of the cases. The most comprehensive available digest for the federal courts and hence for copyrightability research is West’s *Federal Practice Digest 4th*. This digest covers recent decisions at all levels of the federal courts (Supreme, circuit, and district courts). The West digest utilizes its ubiquitous Key Number system, which ties together cases in state and federal jurisdictions. Material on software copyrightability may be found under:

- Copyrights & Intellectual Property
  - Nature, Subject Matter & Scope
    - *Key No. (5)* Literary Works (useful for finding cases involving computer code and user interface)
    - *Key No. (6)* Pictorial Works (useful for finding cases involving computer screen displays)
    - *Key No. (12.2)* Derivative Works (useful for finding cases involving computer screen displays)

Another useful print source is BNA’s *U.S.P.Q. Looseleaf Case Reporting Service*, which contains weekly looseleaf updates of the *U.S.P.Q. Annual Digest* (bound volumes are printed quarterly, and these quarterly volumes are then aggregated into yearly volumes). Because the *U.S.P.Q. Annual Digest* is not cumulative across years, it is less effective than West’s *Digests* for general research, but new cases are digested more quickly in the U.S.P.Q. system than in the West system. Using the BNA *Looseleaf Service*, then, it is possible to be more up-to-date than with the West *Digests*. Decisions concerning software copyrightability are found in U.S.P.Q. under: Division II—Copyrights (225) (protectability of computer products).

Beyond print digests, online searching allows for rapid, albeit expensive, access to a wealth of decisions. The researcher may conduct full-text searches of essentially all federal decisions from the last

69. There are also specialized digests for decisions of the Supreme Court, but effective software copyrightability research almost always requires the researcher to consider decisions at all levels of the federal system. Thus, the Supreme Court digests are less valuable than the Modern Federal Practice set. Similarly, the researcher need not ordinarily consider decisions rendered in state courts. Although the 1976 Act does raise questions of preemption that require analysis of state law—and hence state court decisions—those questions do not arise in the context of copyrightability determinations. Accordingly, the researcher will generally not have any need to consult West’s broader *Decennial Digests* (and the *General Digest*, which acts as its supplement).
twenty years using words and boolean searches on both Lexis and Westlaw. Westlaw has also recently implemented a "natural language" case searching system called Westlaw Is Natural (WIN). To utilize WIN, follow the on-screen directions and type an inquiry in ordinary English (e.g., "Are a computer program's menu command structures copyrightable?"). The WIN system extracts the search terms (e.g., computer, copyrightable, menu, command, etc.), constructs a search, and reports the twenty cases deemed (based on a statistical model) to be the most relevant. The system works fairly well, bringing up some of the most important cases, but WIN cannot yet substitute for a solid working knowledge of standard boolean searching techniques.

Westlaw also allows the researcher to search for cases using Key Numbers. Such Key Number searches are particularly useful when combined with field searches—using the synopsis and digest fields. For example, the following Westlaw search would retrieve cases involving disputes about the copyrightability of windows and icons used by a computer program:

to(99k5) & sy, di(icons & (window portal))

The author believes that Westlaw, with its capacity for key number searching and WIN, is a slightly better overall tool for finding cases. This conclusion, however, is largely a matter of opinion; because the Lexis command interface allows advanced users to save valuable time by executing an entire string of commands without waiting for the execution of each individual command, Lexis may be superior for certain researchers.

4. Important Copyrightability Cases

As with the list of periodical articles at part II.A.4, this list of important cases is not meant to be exhaustive. The applicability of these cases will vary depending on the facts of particular research projects, but each case contains a valuable explication of one or more important doctrinal points in the emerging law of software copyrightability:

• Ashton-Tate Corp. v. Ross, 728 F. Supp. 597 (N.D. Cal. 1989), aff'd 916 F.2d 516 (9th Cir. 1990).

D. Citators—Updating Primary Materials

A research task is not completed until the results have been checked to verify their continuing validity. The primary means for updating cases and statutes is Shepard’s jurisdictional citators. Although many fields of the law have specialized topical Shepard’s
volumes, copyright law does not. The careful researcher therefore will Shepardize cases on copyrightability using the Shepard’s for the appropriate federal court reporter (U.S., F.2d, or F. Supp.). To verify a citation, begin with the most recent Shepard’s on the shelf (usually a red or gold paperback) and work backwards (red paperback —> gold paperback —> bound volume). Instructions for this task may be found in the “What Your Library Should Contain” section on the cover of the most recent Shepard’s. The Shepard’s volumes list citing documents using only the citations given in those documents. Thus, a citation to a Supreme court case by a later case will appear in the Shepard’s section covering L. Ed. 2d citations only if the later case actually gave the L. Ed. 2d parallel citation. Usually the researcher will get more extensive results by Shepardizing the official citation, but for completeness it is best to Shepardize each of a case’s parallel citations. There are also Shepard’s volumes for federal statutes and regulations that work in essentially the same way.

Perhaps the easiest way to verify the vitality of a decision is online. Both Lexis and Westlaw contain a variety of citator services. Shepardizing online has several advantages over updating using printed sources; online citators have an easier-to-read format, and the treatment codes are spelled out. Unlike the printed volumes, Westlaw’s version of Shepard’s usually provides the first page of the citing case in addition to the page on which the cited case appears. Moreover, both Lexis and Westlaw allow the users to restrict their searches to particular treatment codes or headnote numbers. Using this feature, the researcher may search for citations to or criticisms of the material covered by a single headnote within a case.

To access Shepard’s on Westlaw, type “sh <citation>”; on Lexis, type “shep <citation>”. While viewing the full text of a case on either system, the researcher may simply type the relevant command (“sh” or

70. There is a Shepard’s Topical citator for U.S. Patents & Trademarks Cases, covering citations of U.S.P.Q. and U.S.P.Q.2d, but this Shepard’s is not specifically devoted to copyright law, and it is wiser to use the ordinary Shepard’s volumes for the federal courts.

71. Shepard’s volumes not only provide citing cases, they also provide access to law review articles in major law reviews.

72. Shepard’s also publishes a more up-to-date citator, Shepard’s Express, that covers federal cases and gives a more narrative explanation of the cited cases status and authority. Nevertheless, the most current updating is more easily and effectively done online.

73. Not only are Shepard’s volumes useful for updating cases, the set may also serve as a tool for finding additional relevant judicial decisions. Use of Shepard’s as a case finder, however, is a hit-or-miss proposition that leads to many dead ends. This is because, even with treatment codes, there is no way to determine which cases discuss the cited case in a relevant context without actually retrieving all of the cases. Finding cases this way can be a laborious and time-consuming process. Digests and annotated codes, therefore, are a far more effective method for finding pertinent case law.
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shep”), without the citation, to receive the Shepard’s results. More current citations may be obtained (on Westlaw only) by typing “sp <citation>” (Shepard’s preview). Citations in Shepard’s preview do not contain treatment codes.

The most current online standard citator services are Insta-Cite (Westlaw) and Auto-Cite (Lexis). Both are current to within a few days. By typing “ic <citation>” (on Westlaw) or “ac <citation>” (on Lexis), the researcher may obtain the direct history and negative indirect history of a case. AutoCite has superior retrospective coverage, but both are useful for straightforward, current checks on the authority of a case.

Westlaw’s QuickCite and Lexis’ LexCite run date-restricted searches (in the default libraries including all federal cases) for the citations (and parallel citations) of the cited case. The results of these searches can sometimes be even more current than Insta-Cite and Auto-Cite. Westlaw’s service is the easier of the two to use (simply type “qc <citation>”). LexCite is somewhat more difficult to use, because the researcher must manually transfer to the CITES library before running the cite-check search. The advantage for this additional required effort, however, is that LexCite provides A.L.R. citations to the cited case and covers L. Ed. 2d and United States Law Weekly (U.S.L.W.) cites.

V. ONLINE SERVICES

This part briefly surveys the organization of legal materials in the two major online services and describes two other online services that may contain information relevant to software copyrightability research. The libraries, files, and databases listed in this part are more comprehensively discussed in parts III, IV, and VII.

A. Lexis

Most of the materials on the Lexis system that are tailored to research on copyright issues reside conveniently in the COPYRT library. COPYRT includes files for cases (FEDCTS), statutes (USCS), regulations (CFR), the Federal Register (FEDREG), and selections from the Congressional Record (RECORD). This library also offers several combined files including ALLREG (the Federal Register and Titles 19 and 37 of the C.F.R.) and OMNI (federal cases, final rules & regulations, proposed rules & regulations, and additional materials).

Also found within COPYRT are BNA current awareness files (BNAPTD (updated daily) and PTCINL (updated weekly)). Finally, Lexis provides selected articles and other materials from the commit-
A researcher may obtain more specific information on any of the files within the COPYRT library by selecting the GUIDE file within the library. Once inside GUIDE, one need only type the number of the desired file to receive more information concerning the file's scope and content. If the GUIDE file proves insufficient, one may use the Lexis hardcopy documentation (which unfortunately is fairly sparse) or Mead Data Central's customer service telephone line (1-800-543-6862).

B. Westlaw

Westlaw has a more extensive collection of materials directly relevant to copyright law, but Westlaw does not include all materials found on Lexis. Thus, to be complete, the diligent researcher might need to look on both systems. Materials specifically useful for copyrightability research are found closely grouped together under the "Intellectual Property" heading listed under "Topical Material" on the main menu screen. Within the Intellectual Property grouping, Westlaw has databases such as BNA's U.S.P.Q. reporters (USPQ), all federal cases (FIP-CS), Supreme Court cases (FIP-SCT), circuit court cases (FIP-CTA), district court cases (FIP-DCT), and a special file for the decisions of the Federal Circuit (CTAF). Also in this grouping are databases containing annotated statutes (FIP-USCA), regulations (FIP-CFR), and the Federal Register (FIP-FR).

Articles specifically relating to intellectual property topics are found in IP-TP, and Westlaw has the practitioner's treatise Modern Intellectual Property (2d ed.) (MODIP) and selected Practising Law Institute materials (PLI-PAT) online. Like Lexis, Westlaw has both the daily and weekly BNA current awareness tools (BNA-PTD and BNA-PTCJ, respectively), and Westlaw also has its own current awareness database (WTH-IP).

Westlaw also contains a host of non-legal databases available through Dialog. Using Dialog on Westlaw databases, researchers may access a wealth of non-legal information without needing to learn a new query language. Information on Westlaw and Dialog on Westlaw databases may be obtained simply by typing "scope <database name>". For further information on databases supplied by Dialog, a researcher may consult the Dialog Bluesheet (a short description of the database) or, for recently added databases, the Dialog monthly magazine Chronolog. The printed Westlaw documentation contains
additional explanations of the Westlaw databases, and when other methods fail, a telephone call to West’s customer service (1-800-WESTLAW) often yields the necessary information.

C. Other Online Services

Although Lexis and Westlaw are the primary sources of online information for legal research, there are at least three other online services that are potentially relevant to legal analysis of software copyrightability. All three contain predominantly non-legal information, but each offers the researcher a unique window into the workings of the computer industry through ongoing conversations and debates between casual computer users, “power users” and software developers. The first of these services is America On-Line, an online system aimed primarily at personal computer owners. Notably, America On-Line carries CyberLex and CyberLaw, nationally circulated “electronic” columns written by attorney Jonathan Rosenoer concerning the current state of software law. CyberLex and CyberLaw are coupled with an electronic bulletin board that is a forum for debate on intellectual property law as it relates to computer programs. Because the people who use this system often are quite technologically sophisticated (or employed by companies involved in ongoing software copyright disputes), the information available through America On-Line provides a perspective on the development of copyrightability doctrine that is entirely different from ordinary legal discourse on the subject. Two other online services that also cater to personal computer users are Prodigy and CompuServe. Like America On-Line, these services frequently offer lively discussions concerning the proper role of copyright law and the legal system generally in regulating computer software.

VI. Directories/Associations/People

People are excellent sources of information. Individuals may know specific answers to particular research questions, or more often, they may be able to point the researcher in the right direction. Accordingly, this section lists several tools for finding people who may be able to help with copyrightability research.

74. An electronic bulletin board allows individual computer users to leave electronic mail messages for one another.
A. Directories

An excellent method for finding individuals with relevant knowledge is a specialized directory, and *Directories in Print* is a broad inclusive listing of such directories. Published by Gale Research, Inc., *Directories in Print* provides bibliographic information on directories, including title, frequency of publication, address of publisher, and brief summary of content. *Directories in Print* is indexed by subject, and a quick search under “Copyright” reveals:

- Copyright Directory: Attorneys, Professors, Government Agencies, Searchers, Congressional Committees, Consultants, and Clearinghouses

  This storehouse of biographical data covers a wealth of individuals and organizations interested in various aspects of copyright law and includes the name, address, phone (and sometimes fax) number for each individual or organization.

  It costs $79.95 and is published biennially (odd years) by:
  Copyright Information Services
  Harbor View Publications Group, Inc.
  440 Tucker Avenue
  P.O. Box 1460
  Friday Harbor, WA 98250-1460
  (206) 378-5128

  Another useful directory is Martindale-Hubbell, the well-known directory of lawyers throughout the United States. *Martindale-Hubbell* is available online on Lexis. Westlaw uses a similar legal directory called West's Legal Directory. Searching for those lawyers who list “copyright” or “software law” as a specialty may help to locate knowledgeable attorneys in a particular geographic area.

B. Associations/Organizations

Associations and organizations that focus on copyright law often collect information that is potentially useful to a researcher concerned with software copyrightability. One excellent source for finding such organizations is the *Encyclopedia of Associations*. Available both in print and on Westlaw (EOA), the *Encyclopedia of Associations* is indexed by subject; for each association listed, the *Encyclopedia* provides name, address, a brief description, membership information, and a list of the associations publications. Among the associations that might be valuable to the copyrightability researcher are:
Not to be overlooked as an organizational source is the United States Government. Various government organizations may have relevant information. Among these are the Copyright Office and the Congressional subcommittees that deal with copyright issues:

- Senate Judiciary Subcommittee on Patents, Copyrights, & Trademarks
- House Judiciary Subcommittee on Intellectual Property & Judicial Administration

The researcher may quickly find the names of current members of these Congressional subcommittees in the *CCH Copyright Law Reporter*, the *CCH Congressional Index*, or the CNGVOT file on Lexis (GENFED library). The *CCH Copyright Law Reporter* also contains a list of current personnel of the Copyright Office.

Periodicals, particularly practitioner-oriented periodicals that contain biographies of authors, are another valuable source of information on individuals. Annual editions of *The Copyright Office Speaks*, for example, contain articles about copyrightability and biographies of the authors.

VII. COMPUTER PROGRAMMING/COMPUTER INDUSTRY

A. Computer Programming/Software Design

For those researchers who need more of an introduction to computer programming than is provided by the sources listed in part I.B., *supra*, there are several valuable texts:
INTRODUCTORY—NON-TECHNICAL

- Peter S. Mennel, An Analysis of the Scope of Copyright Protection for Application Programs, 41 Stan. L. Rev. 1045, 1050-57 ("An Overview of the Design of Application Programs" (1989) (This article provides a non-technical overview of the modern software design process and a plethora of citations to more advanced materials on software and interface design).

INTRODUCTORY PROGRAMMING TEXTS


B. Computer Industry

Particularly for practitioners advising clients before litigation begins, it may be important to know and understand the workings of the computer industry. For example, if a client asks a practitioner whether the user interface of a competitor’s program is copyrightable, the practitioner should resist the impulse to jump immediately to legal materials. Instead, a quick survey of the industry might reveal several products with features substantially identical to those of the competitor’s program already in the market. If so, it may be that even the competitor itself recognizes that at least some aspects of its interface are unprotectable. While such information is unlikely to be dispositive, it certainly is valuable.

Several sources can help familiarize the researcher with software already on the market. Widely available personal computer magazines such as PC World, Byte, PC Week, Mac User, Macworld, and Windows are available at newsstands and are well worth their $3-$5 price as a quick education on the state of the personal computer software market. Industry trade publications such as Info World, Dr. Dobbs Computing Journal, and MacWeek provide more detailed, and often more technical, information. Some of these publications are available online through Lexis in the NEWS library, ASAPIN file. In
addition, the Lexis CMPCOM library contains files with a variety of computer industry-related information.

Westlaw also contains many useful sources of industry information. In particular, through Dialog on Westlaw, the researcher may search the COMPUTER database, which contains selected articles from a host of computer-related publications. There is also the Buyer’s Guide to Micro Software database (MICRO-SD), which allows a ready comparison between the features of a client’s program and those of competing programs. Another database of special importance is IDEN, which acts as a “database of databases,” enabling the researcher to seek more specific industry-related data as the research project may require. Finally, the COPYRIGHT database contains data taken from actual registrations with the United States Copyright Office.

**CONCLUSION**

Because of the rapid increase in the amount of information available in the legal world generally and in the field of copyright law in particular, no research guide can be truly comprehensive. Nevertheless, by imposing some structure on the dizzying array of extant materials, the outline and strategy set forth by this guide provides researchers a framework for evaluating and prioritizing the available primary and secondary sources. It is the author’s hope that, after consulting this guide, the researcher feels more confident and more enthusiastic about finding answers to the challenging legal questions presented by software copyrightability.
APPENDIX A: USEFUL LIBRARY OF CONGRESS SUBJECT HEADINGS

Computers—Law And Legislation—United States
Computers—Law And Legislation—United States—Bibliography
Computers—Law And Legislation—United States—Bibliography—Periodicals
Computers—Law And Legislation—United States—Periodicals
Computers—Law And Legislation—United States—Cases
Computer Software Industry—United States.
Copyright And Electronic Data Processing—United States.
Copyright—Computer Programs—United States
Copyright—Computer programs—United States—Congresses
Intellectual Property—United States
Law—Computer Programs