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CHAPTER A

Faculty
Overview of CALR
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FACULTY

PENNY A. HAZELTON. Professor Hazelton has been the Director of the Marian Gould Gallagher Law Library at the University of Washington School of Law since September 1976. Teaching legal research to law students, law librarianship students (lawyers training to be law librarians), library students, attorneys, legal secretaries, and paralegals has occupied a good part of Professor Hazelton’s time in her 15-year career.

Professor Hazelton has her JD from Northwestern School of Law of Lewis & Clark College and earned a Masters in Law Librarianship from the University of Washington in 1976. Professor Hazelton is a member of the Washington State Bar Association, the new Indian Law Section and has served as Chair of the Editorial Advisory Board Committee. In addition, she has been active in the American Association of Law Libraries and served as its President in 1990/91.

PEGGY ROEBUCK JARRETT. Peggy Roebuck Jarrett received a BA in Economics from the University of California, Davis in 1981 and an MSLL from The Catholic University of America in 1984.

Ms. Jarrett spent seven years working in private law firm libraries in Washington, DC and Seattle before joining the reference staff of the Gallagher Law Library in August 1990. During her private sector years, Ms. Jarrett performed legal and nonlegal on-line searches, assisted attorneys and legal assistants with search strategy and technique, reviewed monthly bills, assisted in developing client billing policies for CAIR, dealt with the vendors, and generally acted as on-line expert, on-line searcher, and on-line troubleshooter. Now, as part of the Gallagher staff, she is applying her past experience to teaching LEXIS and WESTLAW to law students, and to performing LEXIS and WESTLAW searches for faculty members.

Ms. Jarrett is a member of the American Association of Law Libraries (AALL). She currently serves on the AALL Government Relations Committee, and edits the Government News column for the AALL Newsletter. She is also a member of the Law Librarians of Puget Sound.

JEFFREY L. JERNEGAN. Mr. Jernegan, a partner of Mikkelborg, Broz, Wells & Fryer in Seattle, is the volunteer system operator of the Washington State Bar Association’s L.A.W. BBS. He began his telecommunications activities in 1983, has operated his own Seattle Bulletin Board since 1987, and was one of the founders of the L.A.W. BBS in 1990. He is a member of the Computerization of Law Division of the WSBA and is also actively involved in projects to obtain additional databases for the public, bench and bar.

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E. SCOTT WETZEL III. Mr. Wetzel was educated at Reed College (BA, 1980) and the Northwestern School of Law at Lewis and Clark College (JD, 1983). He practiced law in Seattle from 1983 to 1988 and founded CD Law, an electronic publishing company, in 1989.

MARY WHISNER. Ms. Whisner is a University of Washington graduate and received her JD from Harvard Law School. She holds an MLIS from Louisiana State University. She joined the University of Washington as a Reference Librarian in 1988. In her current position as Head of Reference, Mary assists law students, faculty and other library users in effective use of legal materials. She has performed countless LEXIS and WESTLAW searches and has taught hundreds of law students on-line search skills.
OVERVIEW OF CAIR

Presentation and Materials by
Penny A. Hazelton

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OVERVIEW OF CALR

Professor Penny A. Hazelton
May 1993

I. High quality legal research is important

A. Professional responsibility

1. ABA Model Rules of Professional Conduct Rule
   and Washington RPC 1.1
   a. Familiar with relevant law
   b. Conduct adequate research

2. Smith v. Lewis, 13 Cal3d 349, 530 P.2d 589
   (1975)
   a. Sufficient research
   b. Standard research techniques
   c. Readily available authority

B. Statement of Fundamental Lawyering Skills and
   Professional Values (SSV)

1. Report of the Task Force on Law Schools and the
   Profession: Narrowing the Gap (ABA Section of
   Legal Education and Admissions to the Bar, July
   1992): Legal Education and Professional
   Development - An Educational Continuum
   a. Third of ten lawyering skills considered
      necessary for the practice of law.
   b. Other skills are problem solving, legal
      analysis and reasoning, factual investigation,
      communication, counseling, negotiation,
      litigation and alternative dispute-resolution
      procedures, organization and management of
      legal work, and recognizing and resolving
      ethical dilemmas.
   c. Skill 3 - legal research
      In order to identify legal issues and to
      research them thoroughly and efficiently, a
      lawyer should have:
      3.1 Knowledge of the nature of legal rules and
          institutions
      3.2 Knowledge of and ability to use the most
          fundamental tools of legal research;

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3.3 Understanding of the process of devising and implementing a coherent and effective research design.

II. What is Computer-Assisted Legal Research (CALR)?

A. Online databases
   1. WESTLAW
   2. LEXIS
   3. L.A.W. BBS (WSBA - electronic bulletin board)

B. CD-ROM (compact disk, ready only memory products)
   1. CD LAW
   2. Washington case law on CD-ROM (West)
   3. Washington law on CD-ROM (Laserlaw)

C. Equipment required
   1. Personal computer with screen and keyboard
   2. Printer
   3. Modem and telephone line
   4. Internet access

D. Communications software
   1. Westmate
   2. LEXIS software
   3. Off-the-shelf software, such as ProComm

E. Full text

III. Why use CALR?

A. Save time; the systems are fast

B. Very current
   1. U.S. Supreme Court Case
      a. CALR 6-24 hours
      b. USLW 1-7 days
      c. Unofficial Advance Sheets 14-28 days
   2. State Supreme Court Cases
      a. CALR 2-30 days
      b. Official and National Reporter Advance Sheets 10-42 days
   3. U.S. Courts of Appeal

4-6
a. CALR 4-30 days  
b. Federal Reporter 2d Advance Sheets 30-90 days  

4. U.S. District Courts  
a. CALR 14-50 days  
b. Federal Supplement Advance Sheets 30-180 days  

C. Comprehensive  

1. Full-text search of all types of legal materials, including titles not owned by firm  
a. State and federal case law  
b. Federal and state statutes  
c. Federal and state administrative decisions  
d. Law reviews  
e. Looseleaf services  
f. Federal regulations  
g. New additions  

2. Includes unreported/unpublished opinions  

3. Full text plus and segment/field searching  

4. Specialized databases  

IV. Describe today’s program  

A. Scope and purpose  

B. Administrative details
CHAPTER B

ESSENTIAL AND EASY SEARCHES

Presentation by
Mary Wisner

Materials by
Penny A. Hazelton
SECTION 9B. ESSENTIAL SEARCHES USING CITATIONS

(1) GENERAL OBSERVATIONS

Two uses of the CALR systems are essential in today’s world of modern legal research. Furthermore, these two kinds of searching on LEXIS and WESTLAW require very little understanding of how the systems operate. The sign-on protocol will need to be learned, and since this varies with the type of terminal and software being used, the appropriate vendor manuals must be consulted. Once getting into the system is mastered, however, performing the mechanical searches is very easy.

The first type of essential search permits the researcher to quickly locate a copy of an entire document when the correct citation is known. Many times during the course of research, a citation is found for a case, statute, regulation, administration decision, law review article, or A.L.R. annotation that looks interesting. With access to WESTLAW and LEXIS, you can locate this document quickly and efficiently for review.

6. Full text searching on WESTLAW permits access to the editorial enhancements associated with the publications of West Publishing Company as well as to the full text of source documents; thus, it is possible to search headings, synonyms, par-
The second type of essential search that is done using a valid citation is case verification. The authority of cases can be checked online by Shepardizing them, by using Shepard's PreView (WESTLAW only), using Insta-Cite (WESTLAW) and Auto-Cite (LEXIS), and by using the CALA system as a citator. Though Shepardizing (including Shepard's PreView) can be done in printed form, the other three case verification techniques have no print equivalent. In addition, Shepard's PreView, Insta-Cite, Auto-Cite, and the system used as a citator are much more current than Shepard's. Thus, these online services are essential tools required in order for case verification to be absolutely current.

(2) SEARCH FOR DOCUMENT WHEN CITATION IS KNOWN

A relatively recent development is both WESTLAW and LEXIS permits the researcher to quickly locate a specific case, statute, or other kind of document in the databases. On WESTLAW the FIND command permits you to retrieve, for example, a specific case or statute for which you have a valid citation. The comparable LEXIS commands are LEXSEE and LEXSTAT. Though other kinds of searches could be done to locate these documents, these simple commands are faster and easier, and thus, more efficient.

FIND, LEXSEE, or LEXSTAT can be used to quickly retrieve an increasing number of types of documents beyond court opinions and statutes.* Both CALR systems provide online a list of the types of documents that can be located with these commands. Regardless of the type of research you are performing (manual or computer), a search that permits a researcher to quickly retrieve a known document will be of enormous assistance. When the needed document (1) may never be published, (2) may be in the library's collection but missing from the shelf, (3) may not be physically located near the researcher, or (4) may not yet be published in any print form.

7. When first announced in the mid-1980s, the commands did not work for every type of document in the databases. Specifically, many administrative decisions, filings, and reports could not be retrieved with these commands. For both LEXIS and WESTLAW, these commands are being expanded to cover more, if not all, of the documents in their databases.
Once a document is found through FIND, LEXSEE, or LEXSTAT, the researcher may read or browse the document online, print it online or offline, or download the document text to a floppy or hard disk. The cost and availability of each of these options will probably dictate which one is selected.8

(3) CASE VERIFICATION

Another type of research that can be performed on a CALR system when a citation is known is case verification. This section will discuss case verification from the most comprehensive source to the most current sources. In practice, the most current sources, Insta-Cite or Auto-Cite, should usually be checked first. Both systems have loaded many units of the printed Shepard’s Citations. Shepardizing of cases can be performed online quickly and efficiently with the case citation. However, the online files are no more current than the printed equivalent. Nevertheless, online Shepardizing has advantages over manual Shepardizing.

Advantages include easier and speedier searches. In addition to cumulating the lists of citing cases online in one place (a substantial plus over use of the printed version), both LEXIS and WESTLAW write out the analysis or treatment (instead of using J, for example, the systems remind you that J means dissenting opinion), and permit you to retrieve the text of a citing case. Depending on the system you are using, the online Shepard’s display may cite you to the first page of the opinion of the citing case as well as to the page on which your case is cited. Another significant feature permits the display of citing cases to be limited. For example, in Shepardizing a case you may discover that there are 60 pages of citing cases. If you are particularly interested printing and downloading. Offline printing is usually available in law schools. But check to see what guidelines your law school uses for offline printing. If you cannot offline print, your only option is to print or download (if you are using a personal computer) online. Printing an entire document may be necessary if, for example, the document itself is not yet in printed form or is published sources are not easily available to you.

8. Although a complete discussion of costs is outside the scope of this chapter, a note about browsing/reading and printing costs is in order. Reading documents online is not very cost effective. That is because WESTLAW and LEXIS charge for every minute you are connected to the database (online time). In addition, if every law student reads documents online, terminals would not be available for other students’ use. Browsing documents may be very cost effective, however, especially if it reduces the number you would otherwise have to read in full in printed form, or online. Printing online is also not cost effective. Offline printing and downloading is done one page at a time. The CALR system charges for your online or connect time which, depending on the length of the document, may be quite time-consuming. Offline printing or downloading to a disk permits the researcher to execute a print command which tells the terminal to print the document all at once either to paper or another computer. Both systems charge separately by the line for offline.

9. At the present time it is not possible to use Shepard’s, Insta-Cite, or Auto-Cite with statutory citations.

10. Check the online and printed directories for specific information as to which citators are available for searching. For example, both systems have added the state, federal, and regional reporter Shepard’s, but most of the online files do not do so far back as the printed product. The scope of Shepard’s coverage online will be displayed each time you shepardize on WESTLAW and LEXIS.
only in seeing how often your case has been distinguished or cited in dissenting opinions, you can ask the computer to look through the 60 pages of citing cases and retrieve only those that meet your requirements. Similarly, you can limit the display to citing cases published in a particular reporter, to citing cases from a specific court, or to citing cases that refer to a particular headnote number. All these features make online Shepardizing very attractive. If given a choice between a search in the printed volumes and online, legal researchers should Shepardize cases online because of the flexibility of the online version. See Illustration 46.

ILLUSTRATION 46
Shepardizing Online
WESTLAW DISPLAY

Shepard's

CITATIONS TO: 107 S.CT. 1082
CITATION: UNITED STATES CITATIONS
COVERAGE: 1947-1988 bound supplement through Dec 1989 supp; for more see SCPE
Retrieval
Headnote
No.

1
SC Case
727 F.2d 900
2
Dissenting Opin 105 S.CT. 1959, 1975

Cir. DC
DNC 18-1671
1
E Explained
660 F.2d 719, 723
10
2
E Explained
683 F.2d 1130
6
3
E Explained
683 F.Supp. 1120
10
4
E Explained
643 F.Supp. 1130, 1131
11
7
740 F.Supp. 9, 14
Note: Check Shepard's Preview, Index-Title, and WESTLAW as a Citator
Copyright (C) 1981 McGraw-Hill, Inc. Copyright (C) 1981 West Publishing Co.

LEXI DISPLAY

CITATIONS TO: 460 U.S. 102
REFERENCE: SHEPARD'S UNITED STATES CITATIONS
COVERAGE: UNITED STATES SUPREME COURT REPORTS
NUMBER ANALYSIS

1
petitai citation
56 L.Ed.2d 254
2
same case
792 U.S. 152
3
dissenting opinion
55 U.S. , , , ,
4
dissenting opinion
57 U.S. , , , ,
Cir. DC
5
explained
643 F.2d 717
7
explained
660 F.Supp. 1130
9
followed
740 F.Supp. 14

PARA NOTES

To see the text of a citing case, press the citing reference NUMBER and then
the TRANSMIT key.
For further explanation, press a key (for HELP) and then the TRANSMIT key.
Press ALT-F for Research Reference help; Press LRC for the Utilitine Menu.

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Because the Shepard's online product is no more current than the printed product, in 1989 WESTLAW announced an enhancement of Shepard's online, Shepard's PreView. A product of a joint venture between West and McGraw-Hill and currently only available on WESTLAW, Shepard's PreView provides the most current online citations to cases that appear in the advance sheets of the National Reporter System. No analysis of the cases is provided, but the researcher will find citing cases that are not yet in the regular Shepard's coverage. Thus, Shepard's PreView is always more current than Shepard's, though there may be some overlap. See Illustration 47.

However, even Shepard's PreView is not as current as another service offered on the CALR systems, Insta-Cite (on WESTLAW) and Auto-Cite (on LEXIS). There is no printed equivalent for these services. They are current within a few days of new opinions added online. EVERY CASE CITED AS AUTHORITY IN A MEMORANDUM OR BRIEF SHOULD BE CHECKED THROUGH ONE OR THE OTHER OF THESE SERVICES.

Both Insta-Cite and Auto-Cite, in response to a specific citation, retrieve the parallel citations to the case, assist in case name and citation verification, and include direct history and significant precedent treatment. Auto-Cite (LEXIS) will also refer the searcher to A.L.R. annotations where the case is cited, and Insta-Cite (WESTLAW) will refer to C.J.S. sections where the case is cited. See Illustration 48.

Potentially even more current citing cases than are provided with Insta-Cite and Auto-Cite searches can be located when the CALR

ILLUSTRATION 47
Shepard's PreView on WESTLAW
(More Current than Shepard's)
ILLUSTRATION 48
The Most Current Citation Verification Services

AUTO-CITE SERVICE ON LEXIS

Auto-Cite Service. Copyright (c) 1991, VERALEX INC.

480 US 202;

PRIOR HISTORY:

CITATION YOU ENTERED WAS A NEGATIVE REFERENCE TO


AUTO-CITE information continues, press the NEXT PAGE key.
To return to LEXIS, press the EXIT key.

For further explanation, press the H key (for HELP) and then the TRANSMIT key. Press ALT-F for Research Software help; Press ESC for the Utility Menu.

Auto-Cite Service. Copyright (c) 1991, VERALEX INC.

480 US 202;

Annotations citing the case(s) indicated above with asterisk(es):
2. Construction and appl. of 26 USC sec. 154 (2) authorizing appeal to Supreme Court from Court of Appeals judgment invalidating state statute, 17 L Ed 2d 894, supra sec. 4.

To search for collateral annotations referring to the annotation(s) above, type the citation end press the TRANSMIT key.

To check another citation, type it and press the TRANSMIT key.
To return to LEXIS, press the EXIT key.
For further explanation, press the H key (for HELP) and then the TRANSMIT key. Press ALT-F for Research Software help; Press ESC for the Utility Menu.

INSTA-CITE SERVICE ON WESTLAW

CITATION: 107 S.Ct. 1083
1 California Band of Mission Indians v. Riverside County, State of Cal., 85 Cal App. 3d, 81 Cal Rptr. 102 (1979), July 25, 1979. (AL 84-0325)

AND Judgment Afpirmed and Remanded By
3 California v. Cabson Band of Mission Indians, 480 U.S. 202, 107 S.Ct. 1083, 94 L Ed.2d 246, 52 USF 1225

Census of Jurisdictions (C.J.L.) References
92 C.J.L. Indians Sec.72 Note II (Pocket Part)

Copyright West Publishing Company 1990

systems are used as citators. Using either system as a citator is not part of a service per se, but is a search technique used to retrieve citing documents. A database (WESTLAW) or library and file (LEXIS) must

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be selected and a query must be formulated. Thus, the exact citation to a case that was used to access Shepard's Shepard's PreView, and Insta-
Cite or Auto-Cite cannot be used to perform this citation search. Typi-
cally, a citation search would look like this (with California and Cabazon being the parties' names in the case for which you hope to find citing authorities):

LEXIS: California pre/8 Cabazon and date aft 6/1/90
WESTLAW: California +12 Cabazon & date/aft 6/1/90

Only the significant part of the parties' names should be used, and the date selected should go back to the latest coverage in Shepard's or Shepard's PreView.11 This example introduces other techniques for
query formulation that are described in more detail in Section 9D, infra.

When the only case verification tool available was Shepard's Citations as a printed product, choice of the tool for our verification of case authority was relatively easy. Now, with four different ways to check the authority of a case, more care must be taken in the selection of the tools to do the job. The researcher must pay more attention to the reason for using these services and understand functionally what a particular service will provide. In order not to duplicate effort, and therefore waste time and money, the most current service that re-
tieves the information needed should be selected. In some cases, more than one service must be used, but in almost every situation, Insta-Cite or Auto-Cite should be used.

If you want only:
  — parallel citations
  — to verify spelling of case
    name and verify that citation
    is correct
  — secondary authority citing
    your case
  — direct history of your case
    (your case's path through the
    court system)
Use:
  — Insta-Cite or Auto-Cite*
  — Insta-Cite or Auto-Cite
  — Shepard's Citators online or
    in print (must Shepardize offi-
    cial state citation in state
    citator)
  — Insta-Cite or Auto-Cite*

11. Using a CALR system as a citation is also an effective way to create citations that
do not exist comprehensively in printed sources and to update the annotations in
an annotated code. For example, by run-
ning this search in the Washington case
database, you can find all cases that cite
section 478-168-070 of the Washington Ad-
munistrative Code.
LEXIS: 478-168-070
WESTLAW: 478-168-070

Updating the annotations in the annotated
code or statistics is likewise easy. For ex-

ample, in the Washington case database, a
search for cases citing Wash.Rev Code
§ 424.010 would look like this:
LEXIS: 424.010 and date a/f 8/1/90
WESTLAW: 424.010 & date/aft 6/1/90

Here our code section number is used as a
search term and the date begins three
months before the ending date of the Inter-
im Annotation Service pamphlet for the
Code.
— negative treatment of your case (i.e., overruled, limited, etc.)
— comprehensive treatment of your case (all cases citing your case)
— cases citing (treatment) your case since last published Shepard’s citator
— cases citing (treatment) your case since Shepard’s PreView display

— Insta-Cite or Auto-Cite*
— Shepard’s online or in print
— Shepard’s PreView
— CALR systems as citator
— Shepard’s PreView
— CALR systems as citator
(WESTLAW or LEXIS)
— WESTLAW systems as citator

* Although Shepard’s citators will provide this information as well. Insta-Cite and Auto-Cite are preferred because they are much more current.
CHAPTER C

COMPUTER SEARCH BASICS

Presentations by
Peggy Roebuck Jarrett and Mary Whisner

Materials by
Penny A. Hazelton

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Chapter 9

COMPUTER-ASSISTED LEGAL RESEARCH

By Penny A. Hazelton *

SECTION 9A. INTRODUCTION: COMPUTER-ASSISTED LEGAL RESEARCH SYSTEMS

Imagine a printed index to legal authorities that would allow users to locate any word used in any authority. An index that would be compiled instantaneously upon receipt of material, so that there would be no delay between the time material is available and the time material is readily accessible. An index infinitely specific and infinitely flexible that included entries for any combination of two or more words. Imagine the value to a legal researcher of being able to create an ad hoc index of all relevant primary material tailored specifically to the research problem at hand.

* Professor of Law and Law Librarian, Marian Gould Gallagher Law Library, University of Washington School of Law, and Adjunct Professor, U.W. Graduate School of Library and Information Science. Parts of Sections 9A, 9C, 10, and 9E are based on material written by Scott F. Boren for Chapter 9 of the 4th edition of this text.
But imagine the nightmare of using such an index: It would require thousands of printed volumes to list the location of every word in relation to every other word occurring in even a relatively small number of reported decisions; new material would have to be added daily; updating material could rarely be cumulative by virtue of sheer bulk and frequency. It would take hours to use such a printed index.

Nevertheless, something approaching such an index is available today. The index is not printed; it is compiled, published, and made accessible electronically, using computers, computer terminals, and telecommunications equipment. It does not index every opinion. It does not index every word in the opinions that it does index. It is not quite infinitely flexible. It is not quite infinitely specific. But compared to printed research materials, it represents a new generation of tools available to the legal researcher. "It" is conventionally referred to as a computer-assisted legal research (CALR) system. In fact, there are two such indexes, or systems, commercially available. One system, called LEXIS, is a service provided by Mead DataCentral. The other system, called WESTLAW, is a service of West Publishing Company. These systems are capable of tremendous flexibility, specificity, and speed.

These two systems have been referred to by James Sprowls, one of the early students of CALR, as "generic retrieval mechanisms." 1 Sprowls uses the term generic not in the sense of being slightly off-quality and low-priced, but in the sense of being readily adaptable to particular research problems on an ad hoc basis. As Sprowls points out, conventionally printed indexes point the researcher toward particular access points and entry terms. In this sense, they are not as adaptable on an ad hoc basis as computerized systems. Although the existing printed search tools of American law are generally excellent—perhaps the envy of all other disciplines of human intellectual endeavor in terms of their scope, coordination, specificity, and ease of use—nevertheless, these printed tools are often not adequately flexible, they sometimes lack specificity, occasionally they incompletely or erroneously analyze issues; they are not instantaneously available. CALR systems overcome many of these shortcomings and therefore have become important additional tools available to the legal researcher.

CALR systems are accessible with a computer terminal, keyboard, modem, communications software, and a telephone line. Since the early 1980s both WESTLAW and LEXIS have been working on compatibility with the world of personal computers, in addition to offering their dedicated terminals for lease and/or sale. Now LEXIS and


2. Dedicated terminals were first developed by LEXIS (Deluxe terminal) and later by WESTLAW (WALT terminal). They were designed with special keyboards to make use of the system so easy and straightforward as possible. Not only were the keyboards designed to activate common search procedures directly at a single touch, but the hardware is very easy to install. A dedicated terminal simply needs an outlet and a telephone line. The
WESTLAW can be accessed with either company's "smart" personal computer workstation or with almost any computer terminal and modem manufactured. Both companies have written communications software that makes the sign-on procedure very easy, though off-the-shelf communications software packages such as ProComm and CrossTalk can also be used.

Most law schools now provide a variety of equipment for CALR use. Dedicated terminals are still common, though the use of personal computers in a special lab setting is growing. A mix of equipment will also be found in the private firm sector, again with growing emphasis on personal computers.

WESTLAW and LEXIS are dynamic and powerful systems, responsive to the legal marketplace. The companies are constantly changing the systems—adding new databases and enhancing old ones, refining software to make the systems more flexible and powerful. Because of the constant changes, this chapter is not a "how-to manual." Instead, it is intended to introduce the reader to current CALR systems in the hope that the reader will develop a sense of the potential of these systems: what they are, how they work, and when they should be used.

This chapter cannot, and does not attempt to, provide complete, detailed instruction on the mechanics of operation of either system. For specific information about the operation of LEXIS, WESTLAW, or any other CALR system, consult the literature published by and available from the vendor. Both online and offline tutorials are also available.

LEXIS and WESTLAW are very helpful publications filled with news and tips about effective use of their products. Law schools normally receive multiple copies of these newsletters for distribution to staff, faculty, and students. WESTLAW also prints and distributes a newsletter specifically for law schools entitled Class Acts.

Early on both systems relied on their online menu and directory screens to provide lists of available files and databases. As the new databases added continued to grow at impossibly high rates, the vendors finally met a user need by publishing lists of their databases. Now both systems publish, at least twice a year, a directory of all online files. The Westlaw Database List and the LEXIS/NEXIS Library Contents and Alphabetic List both describe material loaded online and include the library or database name, the file name or database identifier, the material in the system, and the date of coverage of the material online. In addition, both directories include a complete alphabetical list of all titles contained in the database so a user can, at a glance, find out whether the Washington Attorney General Opinions.
ble for both systems. Since 1985, guides to WESTLAW and LEXIS have also been written and published by others not hired by or associated with these vendors.

Computer-assisted legal research systems operate by allowing a researcher as a computer terminal to perform searches of large databases of primary and secondary material stored in electronic format at a distant location. The cost of CALR use (for all but academic institutional subscribers) relates directly to the time the terminal is connected to the remote computer database (online time). Specific billing practices and costs differ between WESTLAW and LEXIS. On both systems, however, wasted time online translates directly into wasted money. Some institutional CALR subscribers (most notably law schools) pay for CALR use on a flat-rate subscription basis. Subscribers with this pricing policy can afford to be much more adventurous and experimental in their CALR research since there is no danger of prohibitively high costs because of heavy online use. This chapter proceeds on the assumption (erroneous in the case of most law schools) that the student-researcher will pay ordinary commercial rates for his

for example, are on WESTLAW and LEXIS and if so, how far back the file extends. Additionally both vendors are publishing exceptionally good training manuals especially for law students. Learning LEXIS/LEXIS: A Handbook for Modern Legal Research (Law School ed. 1989) and WESTLAW for Law Students (4th ed. 1990) can be used as excellent introductions to CALR systems. WESTLAW for Law Students has good problems throughout to test the student’s understanding and knowledge. A very recent LEXIS publication, R. Carriss, LEXIS: A Legal Research Manual (1989), has included similar exercises and should be used as a companion to Learning LEXIS.

4. In trying to reach today’s generation of law students and others who need to learn CALR, both vendors have developed computer-assisted legal instruction (CALI) tutorials. Learning LEXIS for Law Students: Version 2.0 (1990) and DISCLAWS Version 1, 1980 (version 2, 1989). These tutorials may be performed on any personal computer with the advantage that they can be used at home as well as at the law school. Online access to WESTLAW or LEXIS is not a feature of these CALI diskettes but they do provide a structured program for learning and are sometimes used in a training lab setting. See Delmar, WESTLAW/LEXIS 200 Course: Pilot Program Passed Test Sit Trial, 61 Law Libr.J. 580 (1989).

In addition, a tutorial called PC WEST-TRAIN is available in a floppy disk format for those who own personal computers. The LEXIS tutorial is called TUTOR and is found in the Select Services Library. Once TUTOR has been selected, the user (at no charge) has access to four separate tutorials that provide explanations and use illustrations for LEXIS, NEXIS, LEXIPAT, and INDEXUS to MDC Libraries. A separate service, Computer-assisted Instruction (CAI), gives the user experience with connectors on LEXIS and NEXIS. (NEXIS is a computerized service containing hundreds of newspapers, newsletters, magazines, and wire stories in full text. See Section M, infra, for more detail.)

Neither LEXIS nor WESTLAW in their training sessions give sufficient emphasis to the importance of reading the documentation associated with each system. This may reflect an assumption that attorneys will avoid a research task that requires investment of time and energy to master. The result is that users are eased into the system without being fully aware of its capabilities. In commercial environments where online time results in client charges, this is unacceptable. If a researcher is unwilling to invest the time and effort to gain a complete understanding of CALR system operation, he or she should not attempt to use such systems. The cost associated with ignorance is too high.

5. See e.g., J. McKinney, Legal Database Online: LEXIS and WESTLAW (1989), F. Shapiro, LEXIS: The Complete User’s Guide (1989). Please note, however, that if these works are not revised frequently, many of the details of operation will be inaccurate.
or her research. This approach is used to sensitize students to the environment in which most will ultimately make use of CALR systems.

Both WESTLAW and LEXIS allow users to conduct research in a variety of law related materials by using the storage and retrieval capability of large computers. The researcher, once signed onto the system, selects a database or file and then frames a search query using terms relevant to the issue being researched. The researcher types the search query on the keyboard of a terminal, and the computer directly searches the source documents in the specific database for the terms in the search query. Often CALR research saves time compared to conventional research because the computers operate with great speed.

The basic material (called source documents) that may be searched is both LEXIS and WESTLAW consists of databases of the texts of reported and unreported opinions of state and federal courts, state and federal statutes, most federal and some state administrative and regulatory documents, many looseleaf services, legal periodical articles, some foreign law (primary sources), and many Shepard's Citators. Each system offers sources not available on the other, and the inclusive dates for materials offered in both often differ.

Current database lists should be consulted for availability of specific material. Since both systems are constantly expanding the materials available for searching, the online directory should always be consulted as well since it will be more current than the printed directory. The WESTLAW online directory can be consulted from within a database with the SCOPE command. The LEXIS online directory is consulted from the file menu by entering the page number shown for the file whose directory you want to see.

This chapter will endeavor to help you learn how the documents have been loaded into WESTLAW and LEXIS and how they are accessed. This knowledge will help you understand when to use a CALR system and how to integrate computer and manual tools into your own personal legal research strategy.

Full text searching on WESTLAW permits access to the editorial enhancements associated with the publications of West Publishing Company as well as to the full text of source documents; thus, it is possible to search headnotes, synopses, and similar digest topics, and key numbers. LEXIS does not edit or enhance court opinions except in their creation of document segments. Segments and the WESTLAW equivalent, fields, will be described later in section 9D8.
SECTION 9C. CALR SEARCH BASICS

(1) OVERVIEW

Effective use of WESTLAW and LEXIS requires that legal researchers pay far more attention to the words contained in legal documents than we have with conventional printed research tools. This attention is required because of the flexibility and power of CALR systems themselves. No indexer has indexed. You have access to the words of the judge or legislative body exactly the way they were written. If the judge uses the phrase Ford Pinto in an opinion and never uses the word car or automobile, your search using car or automobile will not retrieve the case about the Ford Pinto.10

In a search for automobile accident cases, where your query uses the word automobile, you will retrieve the contracts case that discusses the high cost of automobiles and the immigration case discussing the registration of the automobile by a naturalized citizen as well as cases about automobile accidents. The mere retrieval of a document containing your search term does not guarantee relevance. Without an understanding of the words that make up the documents we search as well as the software written to retrieve the documents, legal researchers using computer systems are doomed to failure. Proper recognition,

10. Keep in mind, however, that on WESTLAW a researcher searches the reporter and digest headnotes written by a West editor as well as the full text of the judge’s opinion, thus decreasing the chance that car or automobile would not be used in this document. On LEXIS, editorial enhancements are not added to the documents posted online.
at the outset, of the following problem areas can result in post-effective and productive use of CALR tools.

(2) DEFINITION OF A WORD

The computers used in CALR systems are impressive machines, but they are not intelligent. They do not recognize sense or meaning. These machines recognize groups of alphabetical or numerical characters called strings. So long as a character string is preceded and followed by a space, the computer will recognize it as a "word" and dutifully search for it.

For example, these are words to a CALR system:

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>727</td>
<td>philosophy</td>
</tr>
<tr>
<td>Bakke</td>
<td>68-149-220</td>
</tr>
<tr>
<td>act</td>
<td>Dogs</td>
</tr>
<tr>
<td>anti-trust</td>
<td>5/7/80</td>
</tr>
<tr>
<td>judgement</td>
<td>contract</td>
</tr>
<tr>
<td>84-697</td>
<td>receive</td>
</tr>
<tr>
<td></td>
<td>discrimination</td>
</tr>
</tbody>
</table>

The computer does not know if the string of characters (whether letters or numbers or a combination) is a misspelled word (for example, judgment and receive in the above list) or simple nonsense. If there is no string stored in the computer's memory exactly like the string the researcher types into the computer terminal, the computer will inform the researcher that no such word is contained in the database the researcher is searching. Such a message is generated not because the computer recognizes nonsense, but because the computer fails to find a match between material typed by the researcher and material stored in its memory. Because the computer's selection of material is not conceptually based, completely irrelevant material can satisfy what appears to be a perfectly valid search request, while a combination of seemingly whimsical terms might very rapidly locate a specific document that would require a great deal of research to locate using printed search tools or which could not be located at all in printed sources.

(3) NOISE/STOP WORDS AND COMMON WORDS

Some words occur so frequently in our language that there is no utility in having a CALR system search for them. These words are called noise or stop words. The most obvious are the character strings "the" and "an," which occur with great frequency, while rarely conveying a meaning. In searching in CALR systems for the term automobile, all documents including the word will be retrieved. Though you may only have wanted to locate automobile accident cases, you will also retrieve non-automobile accident cases including, for example, a case which contained the following language: "I was watching a movie about automobile safety, when the projector flew off." This same search in conventional printed tools would be less likely to hit irrelevant cases since a human indexer in reading the projector flew case would probably not index it under the subject, "automobile."

13. In searching in CALR systems for the word automobile, all documents including the word will be retrieved. Though you may only have wanted to locate automobile accident cases, you will also retrieve non-automobile accident cases including, for example, a case which contained the following language: "I was watching a movie about automobile safety, when the projector flew off." This same search in conventional printed tools would be less likely to hit irrelevant cases since a human indexer in reading the projector flew case would probably not index it under the subject, "automobile."

14. "I know it when I see it," as the test for obscenity, can be located quickly in the U.S. Supreme Court database. In slump v. Ohio, 378 U.S. 384, 84 S.Ct. 1789, 12 L.Ed.2d 790, 805 (1964) Justice Stewart concurring.
ing substance. In LEXIS and WESTLAW, source documents contain noise words that the computer is instructed to ignore when they are transmitted in search queries.18

Inexperienced searchers may try to use a noise or stop word as an individual search term. The CALR system will inform the researcher that the word cannot be searched. However, the rest of your search can be run. Stop or noise words are quite common when the researcher has included a phrase as part of the search query. "Assumption of risk," "justice of the peace," "I know it when I see it" are examples of possible search queries that contain noise or stop words. Depending on the CALR system you select, you may retrieve some irrelevant hits even with the exact phrase being used as the search query. Generally, it is a good idea to search the quotation or phrase just as it is. However, you should review your results carefully, looking for irrelevant documents.

A second category of words can be searched on CALR systems but should be avoided. Conceptually, these words are similar to noise words in that they occur so frequently that they convey little substantive import. "Tax" or "taxation" might seem to be an obvious term to use in a search related to a tax issue, but these general terms are seldom necessary. The more specific terms "depletion allowance" or "501(c)(3)" are examples of better starting points for CALR tax-related research.18 The names of Reporter series (for example, F.Supp., or P.2d) should never be used except when using a service that requires citations, such as Shepard's, Shepard's PreView, Auto-Cite, or Insta-Cite. Similarly, the full caption of a case should never be used as a search term (the word "v." as in Roe v. Wade, may occur millions of times in many databases, and it adds nothing to the information that the parties in the case were Roe and Wade). The researcher is not interested in the mere fact that search terms happen to occur in source documents; instead, the researcher is interested in unique or distinctive terms that will permit the computer to distinguish relevant documents from all others.

Searches for extremely common words that are not actually noise words usually increase the cost of a research session without improving results. Therefore, reject obvious, but commonplace or general terms, in favor of more distinctive, specific terms.

(4) TRUNCATION

Variant word forms pose some interesting problems for the computer researcher who is searching the full text of documents in a database. How a word might actually appear in the database must be considered.


19. This rule is especially true if you are using one of the CALR systems specialized databases, like the tax libraries. However, tax or finance can be a helpful search term if combined with unusual words or facts or you in a smaller database such as a portion of a state code or a small state administrative (non-tax) file.
For example, if a researcher is looking for cases containing the word incorporate, we have already learned that incorporated, incorporation, incorporates, and incorporating are not the same word to the computer. Each has more than 11 letters and none matches exactly the string of characters in the search term, incorporate. If a document you considered relevant used the variant forms of the word incorporate and never used the word incorporate itself, your search would not retrieve that document.

In order to avoid the need to include all variant forms of every search term in the actual query, both CALR systems use a truncation symbol and a root expander. The two symbols for expanding the number of words searched for are the exclamation point (!) and the asterisk (*). The exclamation mark substitutes for any number of additional numbers or letters that might follow the root word. The asterisk substitutes for only one additional letter or character, although you can use several asterisks in the same word. Neither the exclamation point nor the asterisk can be used at the beginning of a word. Using our "incorporate" example, we can truncate the word to incorporate and the CALR systems will retrieve any document containing any of the following forms of our search term:

incorporate
incorporated
incorporates
incorporation
incorporating

If we ask the CALR system to search for incorporate**, we will retrieve only:

incorporate
incorporates
incorporated

When the computer sees the asterisks ** at the end of this root, the CALR systems will locate any word matching the root and with up to two characters after the last letter. All of the other variant forms contain too many letters—more than 12. So, any word with up to two characters more than the root, incorporate, will not be found by the computer.17

What happens if we truncate before the a in incorporate? Truncating as incorporate- will retrieve all of the forms of incorporate seen above, but will also retrieve:

incorporeal
incorpority

17. When the asterisk is embedded in a word, such as Andrews', it substitutes for only one character. Thus, Andrews will retrieve Anderson and Andrews. But that character must be there. For example, Rodgers will retrieve Rogers but not Ang- eres.
leading to irrelevant documents. Truncating like this, i.e., will lead to
hosts of irrelevant hits such as

incriminate
incubus
incomplete
insane
incoherent
income

This last truncation is clearly a terrible mistake. Thousands of
irrelevant documents will be retrieved. However, failure to properly
truncate almost every word in a search query will regularly retrieve a
smaller number of documents that are probably relevant for the search
being performed. If in doubt, consult a dictionary so you can determine
where to break or truncate the root word. As a general rule, include in
your search as many of the characters that are common to all of the
variations of the root word as you can think of. And, unless you are
limiting retrieval, use the exclamation symbol to find all variations of
your search term. The asterisk works in more limited circumstances.

(5) PLURALS

One kind of word variant must be discussed separately—word
plurals. To make searching easier and to increase relevant retrieval,
both systems have been programmed to recognize a singular word as
the equivalent of its plural. Every word that forms its plural by adding
s or es or by changing y to ies will be found when the search is merely
for the singular.28 Thus, a search for the word city will retrieve
documents including city or cities. Here, WESTLAW and LEXIS part
company, however. If you enter the plural form of the word on
WESTLAW, you retrieve only the plural and not the singular. On
LEXIS the plural form will retrieve both the plural and the singular.

<table>
<thead>
<tr>
<th>Term</th>
<th>WESTLAW Retrieves</th>
<th>LEXIS Retrieves</th>
</tr>
</thead>
<tbody>
<tr>
<td>search</td>
<td>search, searches</td>
<td>search, searches</td>
</tr>
<tr>
<td>searches</td>
<td>searches</td>
<td></td>
</tr>
<tr>
<td>search</td>
<td>searches</td>
<td></td>
</tr>
<tr>
<td>searches</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note also that on WESTLAW you can turn off the automatic pluralizer
by placing the # symbol before the singular, i.e. # damage will
retrieve damage but not damages.

(6) COMPOUNDS

Compound words are also handled somewhat differently on the two
CALR systems, depending on how the vendor chose to handle the
hyphen (—).

On LEXIS, the hyphen is treated as a space. Thus, post-conviction
is the same to the computer as post conviction. Either of these forms

28. WESTLAW also retrieves some ir-
regular plurals. For example, human re-
trieves women, man retrieves men.
will retrieve the other. However, *postconviction* as one word is not the same as *post-conviction* or *post conviction*, both of which the computer sees as two words. On LEXIS in order to retrieve all three forms, your search would have to include both *post conviction* and *post-conviction* (or you may use *post conviction* instead of *post-conviction*).

On WESTLAW, the hyphenated form of the word has been normalized. That is, a search for *post-conviction* will retrieve all three forms, *postconviction*, *post-conviction* and *post conviction*. However, a search using *postconviction* will retrieve only that form while *post conviction* will locate *post conviction* and *post-conviction*.

Term: GOODWILL WESTLAW Retrieves

   good-will  good-will, goodwill, and good
   will         good-will and good will

   good will  good-will and goodwill
   goodwill    good-will and good will

(7) SYNONYMS

Conventional indexes implicitly (and sometimes explicitly) lead us to think of synonyms and related terms when doing research. When the term *lawyer* fails to yield meaningful references, most researchers automatically check under *attorney* even though the index may contain no explicit cross-reference to this term. The English language permits a great deal of semantic and syntactic variety in expressing concepts. If a court is discussing an automobile accident case, just think of the number of different words that could be used by the court:

- auto
- car
- motor vehicle
- pick-up
- truck
- r.v.
- subcompact
- compact
- cherry

Searches in full-text databases are likely to yield more potentially relevant cases if synonyms are used. A good thesaurus can come in handy here; or if you are unfamiliar with the area of law and no synonyms come to mind, a good treatise, encyclopedia, A.L.R. annotation, or periodical article may help you select appropriate related words. Because CALR systems ordinarily search for concepts only by seeking exact correspondence of search terms to terms in source documents, researchers must anticipate alternate means of expression as well as variant word forms such as those discussed above.
Note that both CALR systems have added many equivalences to their databases. For example, N.L.R.B. will retrieve N.L.R.B., N.L.R.B., N.L.R.B., National Labor Relations Board and other variations.

SECTION 9D. QUERY FORMULATION: CONNECTORS AND SEARCH LOGIC

CALR systems would be of extremely limited utility if they permitted searches for only one character string or word at a time. Because legal concepts are often subtle, it is imperative that CALR systems be able to search for several words simultaneously, and it is also crucial that the computer be able to distinguish among various relationships between words. Each system has developed several connectors that permit the researcher both to connect various words together and to specify relationships between words.

The basic connectors used in CALR systems are drawn from mathematical set theory. These connectors are OR, AND, and AND NOT. In set theory and CALR systems, these connectors have precise meanings that sometimes differ from their usage in spoken language. These meanings can be understood if you think of the source documents that satisfy a specific query as a set, that is, a collection of documents that contain the word or words of the query as a common characteristic.

(1) THE OR CONNECTOR

The OR connector is intended to be used where synonyms and alternate expressions are needed. A source document containing any one of the terms may be relevant, regardless of the absence of the other terms. In LEXIS the OR connector is represented by typing OR, in WESTLAW, simply by a space between words. (Note that WESTLAW will accept an OR as well.)

Assume a researcher is interested in the question whether an attorney has ever been held liable for lack of adequate legal research for his/her client. The word attorney has several synonyms, including lawyer. Let’s see how we would translate this into a computer search.

LEXIS: attorney or lawyer
WESTLAW: attorney lawyer

A representation of the operation of the OR connector can best be seen through the use of Venn diagrams. In the diagrams the circles represent all documents containing the word attorney (set A) and the word lawyer (set B). The hatched areas within the circle represent documents retrieved by our search. Diagram 1, Column I represents the situation where no documents in the database have both the word attorney and the word lawyer in them. Together Set A and set B create set C (all documents with either attorney or lawyer) — A + B = C. In Column II some documents with the word attorney in them (Set A) also use the word lawyer (Set B). Again, A + B = C.

C-13
Set $C = Set A + Set B$

The OR connector will always broaden a search and should be used primarily to connect synonyms or related concepts.

(2) THE AND CONNECTOR

The AND connector is more restrictive than OR but is still broader than the proximity connectors that will be discussed infra. The AND connector requires that both words (words on either side of the AND) exist in the same document. In WESTLAW the convention for the AND connector is the ampersand, &, although the system will accept AND; on LEXIS, use AND. Looking again at our research question as to whether an attorney has ever been held liable for failure to perform adequate legal research, we now look for words or phrases that must be in the same document. For relevant documents, malpractice and research should appear in the documents retrieved.

LEXIS: malpractice and research

WESTLAW: malpractice & research

Again, we can use the Venn diagram in Diagram 2 to illustrate how this works.

In Column 1, no documents meet our request because Sets A and B do not overlap. No documents in the file we are searching contain both malpractice and research. However, in Column II, set C contains the documents that include both of our search terms. The AND connector, therefore, retrieves a smaller number of documents than OR but does not specify any other proximity relationship between the two words.

(3) THE AND NOT OR BUT NOT CONNECTOR

The AND NOT connector (LEXIS) and % (BUT NOT) on WESTLAW can be used to exclude documents that contain certain terms. This connector should be used cautiously since excluding a term
may result in the exclusion of a relevant case. For example, if you wish to locate cases containing the word search but not cases dealing with search and seizure, your search query would look like this:

**LEXIS:** search and not seizure

**WESTLAW:** search % seizure

**DIAGRAM 2**

(I) Set A
   malpractice

(II) Set A
     malpractice
     Set B
     research
     Set C

No documents meet our request.

Documents in newly created Set C meet our request.

All documents containing the word to the right of the connector will be excluded from the retrieval. This connector performs the opposite of the AND connector.

The AND NOT and BUT NOT connectors should be used rarely, since with those limitations relevant documents will often be excluded. See Diagram 3.

**DIAGRAM 3**

(I) Set A
   seizure
   Set B
   seizure

(II) Set A
     seizure
     Set B
     seizure

All of Set A retrieved

Only the part of Set A which does not overlap with Set B is retrieved.
(4) MULTIPLE CONNECTORS

Both WESTLAW and LEXIS allow search statements with several terms, provided that these terms are related by connectors. For example, a search for documents discussing an attorney’s failure to do adequate legal research as the basis of a malpractice action, might be represented as follows:

LEXIS: Attorney or lawyer and malpractice and research
WESTLAW: Attorney lawyer & malpractice & research

In Column I of Diagram 4 the set of documents represented by the shaded area is retrieved. In Column II, no documents are retrieved since there is no overlap of research with attorney or lawyer and malpractice.

The documents in the small shaded area are the only ones retrieved.

No documents satisfy our search.

(5) PROXIMITY CONNECTORS

Judicial opinions for a decided case may well contain two or more specified search terms satisfying the AND connector, but occurring so far from each other (for instance, one term in a concurring opinion and another in a dissenting opinion) that they do not have any real relation to each other. The computer would retrieve the case even though it is not relevant to the researcher’s inquiry. To some extent retrieval of these irrelevant documents cannot be avoided in CALR systems, because the computer cannot search for ideas or concepts, but instead must locate strings of characters in specified relations that stand for ideas or concepts. Irrelevant retrievals can, however, be minimized. What is needed is a connector that allows the researcher to specify that the words occur within a certain proximity of each other.

There are two types of proximity connectors—numerical and grammatical. Numerical connectors require that the words on either side of
the connector be within a specified number of words of each other. They are used when the AND connector retrieves too many irrelevant documents. Numerical connectors will narrow a search. On LEXIS, the numerical connector is expressed as W/n, where n equals any number of words from 1 to 255. WESTLAW uses the /n connector where n again equals any number of words between 1 and 255. For example, in trying to locate cases containing the phrase, forcible entry, the following searches would be appropriate:

LEXIS: forc/ w/5 entry
WESTLAW: forc/ /8 entry

(A higher number is used for WESTLAW because the system counts every word, including stop words, whereas LEXIS does not count stop words.)

Both searches will retrieve the phrase "forcible entry," or a case in which "entry was forced," or a case which says "use of force to gain entry." In all cases the word "force" or one of its variations was within 8 words of the word "entry" on LEXIS and within 8 words on WESTLAW. The numerical connector W/n or /n should be used when you are searching a phrase that may be expressed in different ways and when the ideas conveyed by your search terms are closely associated.

Both systems also permit a search for words within a certain number of each other where the word on the left must always precede the word to the right of the connector. WESTLAW expresses this concept with the +n connector; LEXIS with the PRE/n connector. (The + connector can also be used as +s to require that the words appear in the same sentence.) This connector is most often used when you are doing a citation field search described infra in Section 9D(8) or using the system as a citator. For example, to find cases citing Roe v. Wade, 410 U.S. 113 (1973), an effective search is:

LEXIS: Roe pre/5 Wade
WESTLAW: Roe +5 Wade

The other type of proximity connector is the grammatical connector, and it requires that search terms appear in the same grammatical unit—a sentence or paragraph. On WESTLAW the two connectors are /P and /S. /P is the most widely used connector, and it should be used if you do not know which proximity connector to select. The /S requires search terms to appear within the same sentence. For example:

WESTLAW: discriminate /P athlete sport

The search will require the variant forms of discriminate to appear in the same paragraph as forms of athlete or sport.

WESTLAW: proceeds /S "life insurance"

This search will retrieve documents in which the word proceeds is anywhere in the same sentence as the phrase life insurance. Use of quotation marks for a phrase is described infra in Section 9D(7).
LEXIS does not have grammatical connectors. LEXIS does have a W/SEG connector that requires the words on either side to be in the same segment or portion of the document. Depending on the size of the segment, however, this will be somewhat more restrictive than AND but is not as narrow as the WESTLAW grammatical connectors.

(6) SUMMARY OF CONNECTORS

To summarize the connectors:

<table>
<thead>
<tr>
<th>LEXIS</th>
<th>WESTLAW</th>
</tr>
</thead>
<tbody>
<tr>
<td>synonyms, alternative forms</td>
<td>or no symbol (blank space between words) or &amp; and</td>
</tr>
<tr>
<td>words must be in same document</td>
<td>and</td>
</tr>
<tr>
<td>to exclude words from documents</td>
<td>and not but not</td>
</tr>
<tr>
<td>within n words of each other (phrases; closely associated words)</td>
<td>w/n /n</td>
</tr>
<tr>
<td>word on left must precede word on right</td>
<td>pre/n +n</td>
</tr>
<tr>
<td>words are in same paragraph</td>
<td>/p</td>
</tr>
<tr>
<td>words are in same sentence</td>
<td>/s</td>
</tr>
<tr>
<td>words are in same segment</td>
<td>w/seg</td>
</tr>
</tbody>
</table>

To perform research effectively online, the researcher must select the appropriate connector. Failure to do so will result in irrelevant retrievals or worse, not retrieving all relevant documents.

(7) ORDER OF PROCESSING

When a number of connectors occur in a search request, the computer performs its search according to a specified hierarchy among connectors. The order in which WESTLAW and LEXIS compile connectors is arbitrary in the sense that there is no a priori reason why any one order is more appropriate than another. The connectors are resolved in the following order:

<table>
<thead>
<tr>
<th>WESTLAW</th>
<th>LEXIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>space (or)</td>
<td>or w/n, pre/n,</td>
</tr>
<tr>
<td>+n</td>
<td>w/seg</td>
</tr>
<tr>
<td>/n</td>
<td>not w/seg and</td>
</tr>
<tr>
<td>+s</td>
<td>and</td>
</tr>
<tr>
<td>/s</td>
<td>not and not</td>
</tr>
<tr>
<td>/p</td>
<td></td>
</tr>
<tr>
<td>&amp;</td>
<td>%</td>
</tr>
</tbody>
</table>

While the significance of this order of processing (compilation) may not seem apparent, an illustration will help clarify the issue. Assume

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you are looking for court opinions that include the phrase *scotch and soda* or the word *beer*. A possible search might look like this:

**WESTLAW:** scotch /5 soda beer  
**LEXIS:** scotch w/5 soda or beer

Although you know what you want, that is, that you want cases with the phrase *scotch and soda* or cases containing the word *beer*, the computer will resolve the OR connector first and give you something different. Thus, in either WESTLAW or LEXIS, the CALR system will look for words on either side of the connector OR and find all cases with the word *soda* and all cases containing the word *beer*. See Column I in Diagram 8. Then the computer will join that set with all cases containing the word *scotch*. See Column II. If *scotch* is not within five words of *beer* or *soda*, the case will not be retrieved. The result—not all relevant cases will be retrieved. You do not care about the relationship between *soda* and *beer*, but the computer doesn't know that!

---

**Diagram 8**

![Diagram 8](image)

Resolution of the OR locates all documents containing soda or beer. Combines set created in Figure 1 with any document containing scotch within 5 words of soda or beer.

Parentheses can override the normal search order. The preceding problem can be corrected as shown in Diagram 6:

**LEXIS:** (scotch w/5 soda) or beer  
**WESTLAW:** (scotch /5 soda) beer

As a practical matter, parentheses can usually help the researcher formulate his or her query so as to eliminate problems of this sort. Whenever your search request exceeds three or four words and uses a variety of connectors, the parentheses can help with the expression of the query. A poor search costs money. Plan ahead!
Resolution of the
w/5 locates all
documents containing
scotch within 5 words
of soda.

Combines set created in
Figure I with any
document containing
the word bear.

One further caution must be made at this point in using WESTLAW. Because WESTLAW assumes a space is an OR, a search for *habea corpus* will retrieve documents containing either *habea* or *corpus*, a result with many irrelevant hits. To search for phrases properly on WESTLAW you must enclose the phrase in quotation marks. Thus,

WESTLAW: "habea corpus"
LEXIS: habea corpus

Note that LEXIS uses the normal form. Because the quotation marks are easy to forget on WESTLAW, many researchers routinely type in an OR (rather than leave the space) between synonyms. Then the quotation marks are easier to remember to use for phrase searching.

(8) ORGANIZATION OF DOCUMENTS IN THE DATABASES

All documents loaded into WESTLAW and LEXIS are gathered together in various groups. On WESTLAW, all documents will be found in a database or a service. Each document consists of several fields. The LEXIS system organizes their documents into libraries. Each library has one or more files and each document in the file is broken down into segments.

Thus, the two systems are organized like this:

<table>
<thead>
<tr>
<th>WESTLAW</th>
<th>LEXIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database</td>
<td>Library</td>
</tr>
<tr>
<td>Document</td>
<td>File</td>
</tr>
<tr>
<td>Fields</td>
<td>Document</td>
</tr>
<tr>
<td>Segments</td>
<td>Segments</td>
</tr>
</tbody>
</table>

In order to conduct a search online, the researcher must select the database (WESTLAW) or library and file (LEXIS) in which the search
will be run. This is analogous to the selection of a specific printed legal research tool, like A.L.R. annotated reports or the C.J.S. encyclopedia, in traditional legal research. Just as in traditional research, selection of the wrong computer database or file may result in poor or inaccurate results. United States district court opinions will not be found in Federal Reporter 2d nor will they be found in the SCOT database on WESTLAW or the US file in the LEXIS GENFED library. They may be found in the DCT database on WESTLAW and in the DIST file of the GENFED library on LEXIS, information that you must obtain from a current database list for the system you are using.

The fields (WESTLAW) and segments (LEXIS) have been created by simply dividing the source documents into parts that reflect the naturally occurring divisions in the documents themselves. This division of the documents makes CALR systems very powerful and flexible because searches can be conducted in each of the divisions. Thus, it is possible to locate, for example, (1) a case if only the court’s docket number is known, (2) cases from a specific court, (3) a case with particular party names or names, (4) a specific judge’s opinions, (5) cases decided since a specific date, (6) cases for which some relevant words appear only in a West-created digest or synopsis, (7) dissenting opinions written by a specific judge, (8) cases assigned to a specific West digest topic, and the like. Segment and field searching substantially enhances the work that can be done on computers by making searches more efficient and speedy. Segment and field searches are often most effective when combined with other search terms. Following are some examples of field and segment searches:

1. **Docket Number**
   - LEXIS: number(04–1485)
   - WESTLAW: opinion(04–1485)

2. **Limit to Court**
   - LEXIS: court(9th or 11th)
   - WESTLAW: oo5 or 11

3. **Party Name**
   - LEXIS: name(Boeing and Microsoft)
   - WESTLAW: title(Boeing & Microsoft)

4. **Judge**
   - LEXIS: opinionby(Brennan)
   - WESTLAW: judge(Brennan)

5. **Date**
   - LEXIS: date(aft 1980 and date bef 1989)
   - WESTLAW: date(aft 1980 & bef 1989)
   - LEXIS: date is March 1980
   - WESTLAW: date(March 1980)

6. **West digest**
   - WESTLAW: digrs(common_law /8 mar7)
   - LEXIS: discontey(Marshall)

7. **Dissenting opinion**
   - LEXIS: dissentby(Marshall)
ILLUSTRATION 49

LEXIS Segments—Court Opinion

Opinion—C 22

William C. Miller, with whom were Miller & Miller on the brief, and James
Robert Miller on argument for Appellee.

The cause was argued before HAMMOND, C. J., and BARNETT, FINCH AND DYNEL, JJ.

252 N.E.2d 158.

HAMMOND, C.J., delivered the opinion of the Court.

...
ILLUSTRATION 53
WESTLAW Fields-Court Opinion

Title

Date

Synopsis

* * *

Attorney for respondent firstAlberquerque's appearance. To control costs of

* * *

Tentative agreement reached between the two companies; agreed upon after

* * *

Revise and recommend.

* * *

236 N.M. 301

1976 N.M. Digest 498

13 N.M. App. 101

20 N.M. App. 147, 110 P.2d 625

Opinion

* * *

Tentative agreement reached between the two companies; agreed upon after

* * *

Nov. 15

* * *

William G. Miller, Tom Howard Miller, Oliver Rauf

* * *

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ILLUSTRATION 51
LEXIS Segments—Code Document

To be able to provide precisely or succinctly code sections, segment II. The
first line of the document may be optionally ignored or be disregarded in full.

ADVISOR'S CODE OF WASHINGTON 1988
TITLE 18 BUSINESS AND PROFESSIONS
CHAPTER 18.85 REAL ESTATE BROKERS AND SALESPERSONS
RS 18.85.350 (1988)

Section 18.85.350ICORING A commission

It shall be unlawful for any licensed broker to pay any part of the commission
on any compensation to any person who is not a licensed real estate broker in
any state of the United States or its possessions—any province of the
Province of Canada, or to a real estate salesperson not licensed to do business for
such person, for any broker licensed to do any part of his commission or
compensation to any person, another licensed or not, without through his
broker.

ISTORY: 1952 c 235 s 13; 1945 c 118 s 4; 1941 c 252 s 24; Ann. Supp. 1939 p 1
Add 1975 p 37

ILLUSTRATION 52
WESTLAW Fields—Code Document

Citation - Wash 18.85.350

Preline - WEST'S REvised CODE OF WASHINGTON ANNOTATED
COMP. 18.85.350COP K 18.85.350COP K 18.85.350
CH 18.85 BUSINESS AND PROFESSIONS
CHAPTER 18.85 REAL ESTATE BROKERS AND SALESPERSONS

Caption - 18.85.350 ICORING A commission

Test - It shall be unlawful for any licensed broker to pay any part of his commission
on any compensation to any person who is not a licensed real estate broker in
any state of the United States or its possessions—any province of the
Province of Canada, or to a real estate salesperson not licensed to do business for
such person, for any broker licensed to do any part of his commission or
compensation to any person, another licensed or not, except through his
broker.

SECTION 9E. CONDUCTING RESEARCH ON CALR SYSTEMS

(1) GENERAL OBSERVATIONS

Research on CALR systems may seem radically different from
research in conventionally printed materials. Though many features
of the legal research process are the same for CALR or conventional
legal research, results are achieved in quite different ways.

Perhaps the greatest single difference is that to use CALR systems
effectively, you must make many choices consciously and explicitly.
There is no index or thesaurus in most online legal data bases to guide
our choice of the best search terms to use. Often we can successfully

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use a conventional, priced research tool with only a vague notion of what we really want to find. Some luck and serendipity usually accompany traditional legal research. CALR systems require the researcher to create the index or search terms and hope to retrieve relevant and not irrelevant documents.

More can go wrong with CALR searches if deliberate, conscious thinking does not occur. Unfortunately, many legal researchers use conventional printed resources unconsciously. Poor or inefficient research is usually the result. Having a clear framework and process in mind—necessary for CALR research—will also help us improve our use of conventional research tools, and thus, our research product.

(2) GOING ONLINE

Computer-assisted research may fit into any particular research strategy in several different places. Computers could be used to review secondary authority (to locate A.L.R. annotations, for example) during the initial stage of research. Or CALR systems could be used to locate a specific statute or case where the citation is known. Computers can be used to locate cases, statutes, and other documents by subject. Shepard's Citations or Insta-Cite and Auto-Cite can be used to verify the authority of a case. A more thorough discussion of how best to integrate manual and computer research appears in section 9F of this book.

For the discussion in this subsection let us assume that you have determined that computer research is appropriate to help locate the information you need. You have framed the issue(s) of your problem, identified relevant words and phrases, selected the appropriate jurisdiction, and analyzed your own knowledge of the area of law. In addition, you have decided on an appropriate library and file (on LEXIS) or database (on WESTLAW), and you have written out your search query. Your strategy has been planned and now it is time to go online.

Each system has a unique sign-on procedure that takes the researcher through a progression of steps. Current reference manuals for LEXIS and WESTLAW should be consulted for the exact procedure to be followed. Eventually you will see the database menu or directory screen, from which you must select a database (WESTLAW) or a library and file (LEXIS). At a prompt from the system, type in your search query exactly as you wrote it, proofread it, and transmit it to the computer with a transmit or enter key.

The CALR systems' response time is very fast, but it will vary somewhat depending on (1) the load on the remote computer facility (i.e., the number of other users trying to access the system at the same time), (2) the size of the database or file selected (the larger it is, the longer the search usually takes), (3) the complexity of the search query itself, and (4) the speed of the modems (i.e., speed with which searches and results are transmitted over telecommunications lines between you and the remote databases themselves).
The results retrieved can be displayed in full text, in excerpts containing the search terms (called KWIC on LEXIS, term mode on WESTLAW), or in a list of citations of all documents that meet the search request. Ordinarily, results will be displayed in reverse chronological order, with the most current document displayed first. 10

For most kinds of searches, the results of the query should be scanned for relevancy. This is easy to do in KWIC or term mode, where your search terms will be highlighted and displayed in excerpts of the document. A quick look at the first 8-10 documents will usually give you a very good idea about the validity of the search query you used.

Do not become discouraged if one or more retrieved documents do not appear to be relevant. Often irrelevant documents must be retrieved to avoid eliminating other, relevant documents. Ordinarily, documents may be quickly scanned and dismissed if not relevant. The possible validity of your search can also be measured by the number of documents you retrieve. If the retrieval rate is very high, say several hundred documents, you may need to narrow your search by (1) selecting a smaller database or file to search in, (2) using more restrictive connectors (such as, /s instead of /p, (3) using a field search (such as looking only at the language in the synopsis or digest fields or syllabus segment), or (4) using fewer alternative terms (synonyms).

If your retrieval rate is low—only 5 to 10 documents—or if you get no documents, you may have missed relevant documents. You should consider broadening your query by (1) using less restrictive connectors (for example, w/30 instead of pre /s or w/5), (2) searching in a broader, larger database or file, (3) using root expanders (for example, negligent/ instead of negligent), or (4) using more alternative terms.

You may also choose to edit your query if most of the documents retrieved were irrelevant. Retrieval of many irrelevant documents and few, if any, relevant ones is probably a sign that the query was poorly conceived or that a CALR system will not be efficient and effective to use for the particular research problem.

It is entirely appropriate to spend a reasonable time online scanning results, interpreting them, and formulating a modification of the original query. Remember, however, that a charge will be assessed for this time, even though the computer is idle. Because of this charge, researchers should act deliberately and productively. If the results are unexpected or irrelevant and if the researcher fails to see productive alternate search strategies within a short period of time, it is best to sign off and consider the next steps in a more leisurely fashion. Both systems permit saving, for a limited time, the last search, before signing off.

10. Exceptions to this general rule will occur when searches have been conducted in the larger ALLFEDS, ALLTAX, or STATES-OMNI files online. Have the researcher will get, for example, the cases arranged alphabetically by state or court with highest court first and then in reverse chronological order.

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There are no hard and fast rules for evaluating and fine tuning search queries. Each researcher must develop the judgment required to examine the material retrieved by a search request and to assess the results. Often by scanning the material retrieved, a searcher can quickly identify the problem area: the need to add another word or two to the search query to get the right context; the need to use a segment or field to retrieve more relevant material; the need to provide alternative terms and so on. Then the search can be modified or edited as needed. Generally speaking, it is desirable for initial searches to tend towards overbreadth. CALR systems make it relatively easy to narrow subsequent searches, but it is often difficult to broaden a search without starting anew. For this reason, a CALR query should be formed like a funnel: wide at the mouth and tapering inward.

Once you have performed a search that retrieves as many relevant documents as you can locate, you will want to print the results. Both CALR systems permit printing of information displayed either on screen (online printing) or whole documents or parts of documents at one time (offline printing). Online printing tends to be slower since one page must be displayed then printed, then the next page is displayed then printed, then the next page is displayed and printed, and so on. Online printing requires an operator to be present to press the appropriate keys. Offline printing is permitted on both systems, but at an extra charge per line printed. No operator is necessary for an offline print once the proper commands have been given. Online and offline print commands may be sent either to a stand-alone printer or to a floppy disk (commonly called downloading).

Your decision about what to print and how to print it should be informed by an understanding of the pricing structure and your access to printed sources. Unless a document is not yet available in a printed source, reading an entire document online is not usually a good use of a CALR system. However, an offline print of the full text of a necessary document may be more economical than traveling to another library to see a copy.

(3) SUMMARY

Computer-assisted legal research systems permit very powerful and flexible access to a wide variety of legal information. Locating documents with known citation, verifying the authority of case law through Shepard's online, Insta-Cite or Auto-Cite, and other mechanical-type searches on LEXIS and WESTLAW can be done easily and with reliance on the results. More problematic are the other types of word searches that the systems have been designed to accept. WESTLAW and LEXIS are generally very easy to operate—so easy that the researcher often overestimates the value of what has been retrieved. In the euphoria of an obviously effective use of the computer, researchers may conclude that a search query has uncovered all the
authority applicable to an issue. This may not be so for a number of reasons.

First, search results can only be as comprehensive as the query from which they are derived. A query may pinpoint unquestionably relevant material, yet fail to disclose equally relevant material that addresses the issues involved differently. Researchers should not discount the possibility that additional relevant material was eliminated by the search query; this possibility results directly from the computer's inability to search for ideas or concepts as opposed to words. There is also a danger that the CALR system will only reinforce the researcher's limited understanding of an area of law: while a researcher would have formulated a query to account for alternate concepts were he or she aware of them, retrieval of relevant material that fails to discuss other concepts naturally encourages the belief that such concepts do not exist.

Second, search results are limited by the coverage of the database or file searched. Obviously, the computer cannot retrieve material that has not been stored in its memory. While it does not happen often, sometimes recent decisions become available in conventional form prior to appearing on CALR systems. The circumstances under which this may occur differ for LEXIS and WESTLAW, but in both systems it is possible that recent authority exists in print format yet is not available in the CALR database. More commonly, a researcher may discover that older authority is simply not available on the CALR system. Only rarely does either WESTLAW or LEXIS purport to make available all the reported decisions of any given court. In most instances, the CALR system specifies a date and attempts to provide complete coverage thereafter. Prudent researchers will remember to search for earlier authority by conventional means unless retrieved material makes clear that such a step is unnecessary.
CHAPTER H

INTEGRATING MANUAL AND COMPUTER RESEARCH

Professor Penny A. Hazelton


h-1
Integrating Manual and Computer Research

Outline

Professor Hazelton
May 1993

I. Concept of integration applied to legal research
   A. Integration of what?
   B. Why is it important?

II. Nature of the process of legal research
   A. Purposes for which the research is done
   B. Nature of the materials themselves
   C. Jurisprudential principles

III. The process of legal research itself
    A. Few studies
    B. Lawyer’s knowledge of facts and relevant law
    C. Select sources to consult
    D. Identify relevant index terms used in tools available
    E. Group several terms together to reduce volume retrieved
    F. Retrieve and study relevant materials
    G. Analyze materials
    H. Keep repeating the process until
       1. Clearly relevant material located, or
       2. You run out of time, or
       3. Little or no useful information found

I. In sum: Formulate a query and select tools

IV. The goal of legal research
    A. Same factual situation
    B. Similar or analogous factual situation
    C. An authoritative answer provided by rule, statute, case, regulation
    D. Applicable rule or concept which benefits client or clients case
    E. Does manual legal research always locate the relevant case or statute?

V. The nature of legal research tools
    A. Words, phrases, numbers, citations
    B. Manual research tools
       1. Indexes, Tables, Tables of Contents
       2. Hierarchical arrangement
a. Advantages
(1) Can usually eliminate a lot of irrelevant material quickly
(2) Help of intelligent human judgment

b. Disadvantages
(1) Mistake or poor judgment of human interuser, the indexer
(2) Facts poorly indexed
(3) Deep index stacking or indexing under only one term may inhibit access
(4) Poor access with partial or limited information
(5) Printing takes time so published materials are never totally current

C. Computerized tools
1. May or may not contain editorial enhancements
2. Every word of every document is in the database--Full-text

a. Advantages
(1) Can access every word in every document
(2) Flexibility as to word and phrase combinations
(3) Excellent access with partial information
(4) Potentially more current

b. Disadvantages
(1) Noise or stop words
(2) Common words
(3) Synonyms
(4) Ambiguous words
(5) Concepts hard to retrieve
(6) Spelling and abbreviation problems

VI. Choosing computer or manual research tools
A. Variables to consider
1. Speed with which answer is required
2. Physical location of various tools
3. Level of experience in use of tools
4. Knowledge of contents
5. Researcher's general knowledge of the area of law
6. Currentness of answer
7. Comprehensiveness of search

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8. Relative cost

B. Manual research best

1. Too many synonyms
2. Ambiguous words
3. Complex concepts and legal theories
4. Concepts expressed only in common words
5. Procedural questions
6. Analogous fact situations
7. Words have continual spelling/form variations
8. Statutory-type materials must be consulted by subject
9. When you find nothing or too much (information overload)

C. Computer-Assisted Legal Research is best

1. Unique search term or phrase
2. Unique fact situation
3. Emerging areas of law
4. Need totally comprehensive search
5. Your searches involve use of segments or fields
6. Strictly mechanical searches, such as citation tracking
7. Narrowly-phrased question
8. Information not accessible in manual tools
9. Needed information has not yet been published in print form
10. Needed information will never be published in printed form.

VII. Impact of CALR

A. Better quality of legal research -- better representation of client

1. New kinds of questions can be answered
2. Different ways of phrasing questions
3. Can do research more often

B. Save time

C. Save money

1. Time
2. Hard copy tools (subscription and space)

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D. Dangers

1. Over-reliance
2. Over-narrowing of questions
3. Too much information at your fingertips

VIII. Conclusion
# APPENDIX A

## TABLE I

Nine Commonly Used Retrieval Tools and the Retrieval Terms They Make Available to the Researcher

<table>
<thead>
<tr>
<th>Retrieval Tools</th>
<th>Case Reports</th>
<th>Case Opinions</th>
<th>Published Statutes</th>
<th>Amended Statutes</th>
<th>Case Citation Indices</th>
<th>Erudite References</th>
<th>Words and Phrases</th>
<th>Thesaurus: Word Index</th>
<th>&quot;Full Full&quot; Cited [Cit] Retrieval System</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Case Heading</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Provided</td>
</tr>
<tr>
<td>1. Title</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X the full decision</td>
<td>X the full decision</td>
</tr>
<tr>
<td>2. Party</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X text of the suit</td>
<td>X text of the suit</td>
</tr>
<tr>
<td>3. Court</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X the case</td>
<td>X the case</td>
</tr>
<tr>
<td>4. Decision Date</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X heading</td>
<td>X heading</td>
</tr>
<tr>
<td>5. Docket Number</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X is</td>
<td>X is</td>
</tr>
<tr>
<td>6. Judge's Name</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X stored</td>
<td>X stored</td>
</tr>
<tr>
<td>7. Attorney's Name</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X within the suit</td>
<td>X within the suit</td>
</tr>
<tr>
<td>8. Case Citation</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X the computer</td>
<td>X the computer</td>
</tr>
<tr>
<td>9. Lower Court Citation</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X the computer</td>
<td>X the computer</td>
</tr>
</tbody>
</table>

| **II. Case Text** |              |               |                  |                  |                       |                    |                  |                      | Provided                          |
| 1. Words        |              |               |                  |                  |                       |                    |                  | X the full decision        | X the full decision            |
| 2. Phrases      |              |               |                  |                  |                       |                    |                  | X text of the suit         | X text of the suit             |
| 3. References to Earlier Decisions | X            |               |                  |                  |                       |                    |                  | X decision                | X decision                      |
| 4. References to Statutes | X            |               |                  |                  |                       |                    |                  | X stored                 | X stored                       |
| 5. References to Learned Treatises |               |               |                  |                  |                       |                    |                  | X within the computer      | X within the computer          |

| **III. Case Headnotes** |              |               |                  |                  |                       |                    |                  |                      | Provided                          |
| 1. Topics       | X            |               |                  |                  |                       |                    |                  | X the full decision        | X the full decision            |
| 2. Outline Number| X            |               |                  |                  |                       |                    |                  | X text of the suit         | X text of the suit             |
| 3. Words        | X            |               |                  |                  |                       |                    |                  | X the headnotes            | X the headnotes                |
| 4. Phrases      | X            |               |                  |                  |                       |                    |                  | X headnotes                | X headnotes                    |

| **IV. Statute** |              |               |                  |                  |                       |                    |                  |                      | Provided                          |
| 1. Title        | X            |               |                  |                  |                       |                    |                  | X the full decision        | X the full decision            |
| 2. Citation     | X            |               |                  |                  |                       |                    |                  | X text of the suit         | X text of the suit             |
| 3. Words        | X            |               |                  |                  |                       |                    |                  | X the statutes             | X the statutes                 |
| 4. Phrases      | X            |               |                  |                  |                       |                    |                  | X are stored               | X are stored                    |

*Note: It is not deemed desirable to search for all the decisions handed down by a particular judge in browsing through the published case reports.*

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*From: Scovil, James, "Legal Research and the Computer: Where the Two Paths Cross", 15 Clearinghouse Review 150, 153 (1981)*

H-6
Integrating Manual and Computer Legal Research

Penny A. Hazleton*

Integration, applied to legal research, is the buzz-word of the day. In today's computerized world, the use of the word integration in the context of legal research is very encouraging. It means we have passed through the discovery phase of computerized legal research systems and are moving toward the using phase. In the discovery phase we learned that machine-readable databases cannot do everything and that these online systems are not likely to replace totally more traditional printed legal resources. And, at this juncture, we come face to face with another reality. How do we fold the use of computerized legal information systems into the processes we already have developed for solving legal problems? Do traditional printed research tools simply parallel computerized systems or can the legal research tools of yesterday and today be used together to give access to even more and better legal information? After over fifteen years of working with LEXIS and WESTLAW, the last six of which have seen intensive use in academic, court, and private law libraries, law librarians, attorneys, judges, and law clerks have become aware of the need to more fully coordinate their use of computer and manual research tools.

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In his editor's column, Professor Barkan has suggested that integrating legal research can be discussed at five different levels. This essay is concerned only with the first, functionally integrating traditional print-based research tools with new research, primarily computerized, technologies. Barkan, “From the Editor: Integrating Legal Research.” > Integrated Legal Research 1 (No. 1, Sum. 1989). [hereinafter Barkan].
The kind of training law students receive today in legal research can be discovered by reviewing both the periodical literature and the standard textbooks written for legal research courses. Although the legal research programs for first-year law students vary widely from school to school, most contain a CALR component. At some schools, WESTLAW and LEXIS are taught very early in the first-year program and, at others, midway through the year. Some schools do not teach first-year students how to use the CALR systems at all. Training, instead, is only provided to second- and third-year students.

Most programs teach the computer portion in chunks of time, training the students in all facets of WESTLAW and/or LEXIS at one time. Temporary or permanent learning centers usually set up by the vendors, have greatly encouraged this practice. From small and experimental CALR training programs in the early 1980s, today most academic law librarians are heavily involved in organizing and often teaching CALR systems to law students.

CALR training programs in law schools have often been added with little or no additional staff provided. Most programs are barely able to cope with providing the basic training and can do so only for the limited periods of time during the academic year. This kind of program cannot be by its very nature encourage integration. To date, law schools have paid little attention to the integration of manual and computerized legal research tools.

This changing role of computer-assisted legal research can also be seen by looking at the standard legal research textbooks. As early as the mid-1970s, these textbooks contained a few pages about computerized databases. The information about CALR has really expanded in recent years. Now there is often a chapter or computerized tools as


5. A temporary teaching center (TLC) normally means that the CALR vendor is supplying hardware (terminals, keyboards, modem) telephone lines, and passwords to someone for a two to eight-week period. A temporary computer laboratory is necessary for CALR training at the law school. In most cases, the vendor has agreed to install a permanent center (PLC) for such training. If a law school has a computer lab for this purpose, the vendor still supplies needed telephone lines, modem, and passwords for the training sessions. See generally, Edwards, "LEXIS and WESTLAW Training Centers: Law School Opportunities," 80 Law Libr. J. 459 (1988).

6. Comment Professor Bemhauer, supra note 4, p. 5 in his 31 pages in 1983. M. Bemhauer, Legal Research Training (41ST ed. 1973) and M. Bemhauer, Legal Research Training (44TH ed. 1983) (bemhauer Bemhauer) in How to Find the Law 5 pages of coverage was in 1976 to the top 20 pages in 1983, M. Bemhauer, How to Find the Law 459-69 (7TH ed. 1976), and Cohen & Bemhauer, supra note 1, 693-703 and over 9 pages scattered throughout the text.
well as discussions throughout the text which treat the computers as sources of information. Or, as you will see in Cohen, Berring & Olson's 9th edition of How to Find the Law, no separate chapter on computers is included at all, but all references to computer systems are incorporated in their respective bibliographic chapters. Generally, simple computer searches and other "how to and why" information are not included in these treatments. CALR databases are treated as sources of legal materials and information, not as tools in their own right. On the other hand, Professor Carrick's new work, LEXIS: A Legal Research Manual, is revolutionary in its treatment of computerized legal databases. She has truly integrated fundamental legal bibliographic information about printed sources with the use of computers as a research tool. Hers is clearly a how-to manual with many examples and tips for the use of LEXIS.

Another development of note imprinting legal research training has been the so-called process-oriented approach which is epitomized by Christopher and Jill Wren in their text, The Legal Research Manual. First published in 1983, this text has deleted most bibliographic and conceptual information about sets of law books and concentrates on fact and legal issue analysis, finding the law, reading the law, and updating the law. This book, now in its second edition, has been both criticized and praised. Whether brought about by the Wrens' insistence on what they call process, by a resurgence of interest in teaching legal research in a more effective fashion, or by recognition of the complexities CALR systems bring, a review of the literature and actual teaching practices of the past few years indicates that legal research teachers are beginning to recognize the need to put legal research into a better and more coherent conceptual framework. "These are turbulent days for the teaching of legal research." The coming of age of computer-assisted legal retrieval systems and the recognition of the need for a conceptual framework mean that legal research teachers must reevaluate their courses and the matters in which research is taught. Legal research teachers nation-wide are busy working with the administrative and pedagogical issues associated with formulating the conceptual framework that will help students learn to use manual and computerized tools more effectively.

In the real world, law librarians have been practicing the art of integrating resources—manual and computer—for some time. However, aside from the legal research texts, some
Nature of the Process of Legal Research

In his presentation on the "Research Habits of Lawyers" in 1968, Professor Morris Cohen surveyed the literature and concluded that very little information was available on the methodology of research, particularly the actual procedures used by lawyers in their need to solve legal problems. Before discussing what he was able to find, Professor Cohen explored three factors that he believes have influenced and shaped the process of legal research:

1. The purpose for which the lawyer does research;
2. The nature of the materials with which and in which the research is done; and
3. Certain jurisprudential principles which affect the sources of authority and the weight they are to be given.

A lawyer is a counselor and an advocate and, as such, normally performs research either to advise a client about a proposed course of conduct or to persuade a tribunal that an already determined course of action is correct. Though some research projects are more objective than others, most legal research is done with a particular outcome in mind. Why or how does this fact affect the process of legal research? Many times a...
researcher will fail to find important, relevant authority if he or she has approached the problem with a narrow focus, or it may take longer to uncover the other side of the issue.

Secondly, the nature of the legal materials available has indubitably shaped the process of legal research. The multiplicity of resources available—secondary sources, primary materials such as codes, reporters, regulations, constitutional provisions, finding aids such as digests and Shepard's citators—has made the process of doing legal research more complex. In addition, law comes from federal, state, county, city, and international sources. As the numbers of cases and legislative enactments continue to explode, finding relevant material quickly and efficiently has become a more onerous task. The research tools have become more sophisticated and complex—whether we are talking about a specialized looseleaf service or computer-assisted legal retrieval systems. Since the law is constantly changing, legal publications have developed pocket parts, supplements, looseleaf pages and a variety of other devices to stay current. The process of legal research is clearly affected by the need to have access to all of the law and access to the most current laws or cases on a particular point as well.

As pointed out by Professor Cohen, the process of legal research has also been greatly affected by the widening scope of the non-legal sources to which lawyers refer. More and more lawyers need access to statistics, economic data, social science, medical or other scientific or governmental studies. All of these factors influence the kind of law books or computerized information systems that are produced for lawyers' use, and thus impact the process used.18

Finally, our principles of precedent and stare decisis affect the process of legal research. The interplay of these principles means the researcher cannot ignore the laws and cases of the past. A 1917 Washington State Supreme Court case may well continue to express the current legal principle to be applied in 1990. Old law books are not necessarily unused law books. In addition, the weight of authority to be given to any particular case or statute varies depending on the jurisdiction and specific level of court in which the case was heard.19

The Process of Legal Research

Having discussed several characteristics that impact the actual process of performing legal research, we need to look at this process itself. How do lawyers go about doing research? What procedures or models do they employ to help them find answers to legal questions quickly and efficiently?

The two studies referred to by Professor Cohen suggests that many lawyers do little research. Of those who do legal research, the state's digests and primary materials were used most frequently, with encyclopedias, ALR, and hornbooks and other treatises running close behind.20 While these studies are interesting in themselves, they shed very

18. Id. at 181-87.
19. Id. at 37-88.
20. Id. at 190-93. Only one more recent study about the process of legal research could be located. Its emphasis, similar to the studies described by Professor Cohen, is on the law books owned and accessible to the North Dakota attorney. Reusm, "Patterns of Legal Research in North Dakota: A Survey," 61 N.D. L. Rev. 383 (1985).
little light on the actual thought processes used by attorneys when they research a legal problem. The best evidence of the process comes from an interesting source—legal research textbooks written for law students.21

No two of these texts list the exact same steps. The table shows the various methodologies suggested in the major legal research texts. There are as few as four steps or as many as nine. Though these models differ in emphasis, some similarities are readily apparent. Most recommend that facts be gathered and analyzed early on22 and that issues to research be formulated. Some suggest an early review of secondary sources for background of an unknown subject. Selecting tools and searching for answers to the issues formulated then follows. Reading and evaluating the sources found, updating, reevaluating issues and refining the analysis seems to be a part of most of the processes reviewed.

However, the various authorities characterize the procedures or steps involved in legal research, simply put, researchers analyze the facts, formulate a query or series of queries, select the tool(s) to use, consult the resources by using words or index terms, read and synthesize the authorities located, update the product of their searches and communicate the result.23 How thoroughly each of these steps is handled will vary greatly in the researcher's access to the various tools, in the time available, and in the researcher's skill in manipulating the research tools themselves.

With many complex legal problems or problems which present new legal questions, the attorney or researcher is likely to repeat a variety of these steps over and over again. Whether used once or repeated, the researcher continues these steps until clearly relevant material is located, there is no time left to continue researching (or it is no longer cost effective to continue), or little or no useful information is found.

The Goal and Nature of Legal Research

What, then, is the goal of legal research? We must look back to the purposes for which legal research is done in the first place.24 An attorney is trying to gather enough information to advise a client about a particular course of action or to perform research to justify or support a position already taken by a client. Most often, the researcher will be delighted to find primary authority—a case, statute, regulation or constitutional provision which clearly gives an authoritative answer to our query. Unfortunately, clear, authoritative answers are not always found and interpretations of the primary authority or analogous situations must be located in order to determine what rule to apply in a specific situation.

22. See Professor Dick Dannen's call for better fact analysis in legal research courses Dannen, "Approaching Legal Research," 1, Inaugural Legal Research 2-3 (no. 1, Sum. 1988).
24. See supra text accompanying notes 16 and 17.
<table>
<thead>
<tr>
<th>Research Process</th>
<th>Comparison of Major Legal Research Tests</th>
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<tr>
<td>A. Rombauer</td>
<td>B. Carrique</td>
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<td>A. Pesty</td>
<td>D. Wren &amp; Wies</td>
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<tr>
<td>1. Preliminary analysis</td>
<td>1. Initial analysis</td>
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<tr>
<td>2. Search for statutes</td>
<td>2. Identify pertinent facts and issues</td>
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<tr>
<td>3. Search for mandatory precedent</td>
<td>3. Decide what tools to use</td>
</tr>
<tr>
<td>4. Search for persuasive</td>
<td>4. Double-check result</td>
</tr>
<tr>
<td>5. Refinements in your analysis, updating the law</td>
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| E. Kruse          | F. Cohen, Berling & Olson              |
| G. Jacobson & Mersey | H. Prost, Bitne & Brysiewicz         |
| 1. Factual analysis | 1. Analyze facts & frame issues        |
| 2. Research vocabulary | 2. Overview of subject               |
| 3. Background information | 3. Search for legal authority       |
| 4. Formulating & order issues | 4. Read & evaluate primary sources |
| 5. Search for authority | 5. Update the law                    |
| 7. Misc.          | 7. Compile search                     |
| 8. Appendix        | 8. Appraise authorities found         |

C. L. Rupin, Legal Research and Citation 33 (3rd ed. 1998)
The goal of legal research, then, is to find an authoritative answer to a client’s problem by an efficient use of the resources available and in a cost-effective manner.

What characterizes the legal research tools we use? And how do these characteristics affect the research we perform and our intelligent selection of the best research tools?

Most are kept up-to-date and all legal research tools—computerized and manual—contain numbers and letters arranged to form words, phrases, and citations. Though manual and computerized tools have these two characteristics in common, the manner of access we have to them is quite different. In essence, access to printed (manual) sources is through hierarchically arranged indexes and tables of contents while access to computerized research tools, LEXIS and WESTLAW, is through every single word in the case or document (full-text access). Actual access to the full-text documents that have been loaded into computer databases is provided not by the mere fact of being in machine-readable form but by the concordances created and the design of software used to search and retrieve the “words” in these databases. The “index” to LEXIS or WESTLAW is created first by the search software and its broad or limited capabilities and second, to some limited extent, by the user.

The most common kind of indexing in printed legal research tools is subject indexing. Because most researchers need access to legal literature by subject, and because most research problems deal with subjects on which more than one idea, indexes in legal literature tend to be stacked or pre-organized. For example, indexing in the West digest system is deep—often five or six subdivisions from the initial entry.

The advantages of the access to printed legal research tools are familiar to attorneys and librarians alike:

1. Once a relevant general or main index term is selected in a treatise, digest, or statute, much irrelevant material is automatically eliminated.

2. Human judgment—someone familiar with legal concepts and terms—is interpolated between a researcher and the raw material of the case, statute or regulation. Concepts are generally well-indexed.


26. Other kinds of indexing in printed tools also exist. For example, text and treatises often have class access (tables of cases, statutes or regulations) in addition to subject access. Access to legal periodicals is also available through author indexes and citation indexes (by cases and statutes) as well as subject. Statutes are often accessible by indexes of session law citations, popular name, and subject. Interesting, that case law has never been indexed in the traditional print form by author of the opinion. An author index to the case was represented from the very outset of a number of possible access points. Access to case law has been traditionally by subject, by jurisdiction, and by statute-regulator citation tables. See Sprock, supra note 23, at 153.

The disadvantages of printed materials are also very well known:

1. Error by the indexer could result in a lost or misplaced case, statute, or idea. 29
2. Facts are usually poorly indexed.30
3. Deep index stacking or layering can cause retrieval problems. Similarly, simple indexing under only one or two relevant terms may inhibit access.31
4. Access to printed sources is very poor if the researcher has only partial or wrong information32 or knows information which traditionally is not indexed.33
5. Printing and publishing in a cost-effective manner is very time-consuming and normally results in delays.

On the other hand, the advantages of full-text databases and free-text searching turn many of the disadvantages of print sources full circle:

1. Ideally, full-text databases with powerful search software give the researcher access to every work in the database. Thus, facts are easily retrievable.
2. The system is flexible enough to permit a search for any combination of words, phrases, and numbers. The researcher is not limited by a rigid thesaurus or an index's terminology.
3. Access with partial, wrong, or non-traditional information is usually quite good.
4. CALR systems can be potentially more current than print sources.

Though these are powerful advantages, the following disadvantages of CALR systems, based on their full-text arrangement and searchability, are very real34 indeed:

1. Noise or stop words on CALR systems are not usually searchable.35 So you do not really have access to every word.
2. Searches that include very common words (such as court, federal, jury, defendant, supreme) normally retrieve so many documents that the searches are not very helpful.
3. Because CALR systems are literal and search only the words requested by the user.

30. The legal materials published by Lawyer's Cooperative Publishing Company come closer than most in trying to include fact indexing. See, for example, entries in their Index to Annotations under bailouts, tax cream, steel, bandstand, ogs, and wall. See also Shapiro, supra note 29, at 9.
32. For example, if you know the name of one party to a case, but not the jurisdiction or approximate year of the case, printed legal materials may not be of much help.
33. For example, printed legal materials cannot easily permit you to locate n of Judge Fletcher's 9th Circuit opinions on Indian law. See also Shapiro, supra note 29, at 9-10.
researchers, relevant documents can be missed where many synonyms have been used in different documents to express the same fact or idea. 36
4. Ambiguous words cause irrelevant retrievals. 37
5. Complex legal concepts and words in a particular context may be difficult to retrieve. 38
6. Words that have several spellings (e.g., M'Naughten Rule) or abbreviations (N.L.R.B.) and words that are misspelled because of typographical errors in the databases will also cause irrelevant retrievals or miss relevant cases if all variations are not used. 39

Though the nature of the legal research tools we have to use tells us a great deal about when to use printed documents and when to use computerized research, there are several other variables to consider.

Variables That Will Affect the Selection of Research Tools

The factors that will affect the researcher's choice of manual tools or computerized databases are:

- Speed required
- Physical location of research tools
- Level of experience in use of research tools
- Knowledge of context
- Researcher's general knowledge of the area of law
- Relevance of answer required
- Completeness of search
- Relative cost

Each of these variables will be discussed. However, keep in mind that how each factor affects your choice of tools depends on your personal research expertise, as well as the interplay among the factors themselves.

Getting an answer quickly is always important. Though the computer systems will always perform the tasks you request quickly (if no system malfunction occurs), you may not get the result you require quickly. If you push the wrong key, forget a step, trust revise your search because a retrieved 3000 cases or whatever, that last search may be so

36. Consider a search using the word "child" to locate cases regarding adoption. Any particular document in the computer system which uses the words minor, boy, girl, kid, infant, or baby instead will not be retrieved by the "child" search. See also Jentzer, "To Search or Not to Search: The Decision to Go Online or Use Manual Sources," 2 Ingenuity Legal Research 4 (no. 1 1989) (herein Jentzer). Ratliff, supra note 6, at 264-65; Jacobson & Mersky, supra note 21, at 432.
37. A search for the cases which deal with the drug, DES, is also likely to retrieve cases in which the city of Dye Movers is mentioned, Jacobson & Mersky, supra note 21, at 433. But see Biering, "Full-Text," supra note 21, at 47 e.65. The writer contradicts this example and suggests that the term "diaphyseal rare" is a better search. However, many researchers would be banned immediately if they had to spell the drug's full name properly.
38. In discussing whether a statute or ordinance is overbroad when measured against the constitution, the search might be "overbroad" or "overbreadth." However, the Court never uses either of these words, identifying a computer search that will work is almost impossible. See, e.g., Jacobson & Mersky, supra note 21, at 433.
39. Judgment is one of the latter words which should always be searched in CALR system under both of its common spellings: judgements or judgments.
prolonged that faster results could have been obtained using manual tools. On the other hand, if you must research a complex issue in just a few hours, computerized tools may be needed to do the job at all in the given time period.

The physical location of the research tools you need will also affect your choice of tool. If you have a personal computer with modem in your office and all other legal materials (i.e., manual research tools) are in a library two floors away or down the hall, you are likely to use the closest source. The looseleaf set on labor in your office is easy and handy to use—as long as you are in your office.

Inexperience with any particular set of books or CALR system will certainly affect the selection of a tool. BNA's Labor Relations Reporter is a forbidding research tool to the non-labor researcher. The novice will spend a lot more time to understand how it works and may, therefore, choose to try to find the answer using a less complicated resource. On the other hand, the researcher who uses this looseleaf service often is much more likely to use the set efficiently in solving a client's problem. Thus, all other things being equal, repeated use of familiar manual or computerized tools is the norm and will limit the range of choices the researcher will make.

Another important variable is the researcher's knowledge of the contents and coverage of the selected research tool. For example, you cannot locate the pertinent regulation in the Washington Administrative Code when the WAC has not been loaded on WESTLAW or LEXIS. One cannot Shepardize a state statute or search for Oklahoma cases prior to 1945 online. The content of the CALR databases and libraries is not necessarily the same as the content in the printed sources of the same tool. Similarity, familiarity with the contents of printed sources is equally important. For example, U.S. District Court opinions since 1932 cannot be located in the Federal Reporter and CCH's Federal Banking Law Reporter does not include the FDIC Enforcement Decisions.

Each researcher must analyze the depth of his or her own knowledge in the area to be researched. Little knowledge of a complex area such as antitrust will make first use of computerized tools very difficult. The legal jargon in the antitrust field is highly specialized and a novice will have a difficult time framing appropriate search queries. On the other hand, a veteran labor lawyer may well go directly to the specialized labor files online to research her problem.

Is the answer to your legal research problem one likely to be covered only in the most recent case law? Computerized tools may be the only way to find the most recent cases in fast-developing areas of law. Thus, the first cases dealing with the right of a child with the AIDS virus to attend public school may be hard to locate in printed sources. Similarly, to get the text of a U.S. Supreme Court decision on the day it is decided—if you don't live in Washington, D.C.—you must use a CALR system. Conversely, CALR systems are likely to be of scant help if you need to know the statutory provision in effect in 1950 in Indiana regarding the validity of common law marriages. Must your search locate every case or article on a certain point of law? Or do you just want to locate the landmark cases dealing with the right to a trial by jury? Comprehensive searches can sometimes be handled only by using a CALR system.

especially if the query is not complicated and involves the appearance of a specific word or phrase in the database. On the other hand, if the search query is complex, comprehensive answers may not be the result. In my experience, locating the landmark cases via computer can be a frustrating experience. Several books about the U.S. Supreme Court and the U.S. Constitution provide faster and more accurate access to these important cases.

Actual or perceived cost of a research tool or the use of that tool will also affect the ultimate choice between a manual and computerized resource. Most lawyers who do research are unaware of the cost of most law books, but they do think in terms of the time they will take to do the research itself. The annual cost of a looseleaf service is not usually divided among only those clients whose lawyers actually use the set. It is charged to overhead—the library—and rarely billed out directly to the client. Because of the billing practices of CALR systems, the “cost” of doing research on computers is much more visible to the user. Normally, use of CALR systems is billed directly to the client. Though cost is an important variable to consider, ultimately most researchers are simply using their best (but often uninformed) guess about the relative cost of the research tool they select and the relative cost of the time they devote to research. In addition, the high start-up costs of CALR systems as well as the high price tags on sophisticated looseleaf or current awareness services reduce choice when the service (electronic or print form) is not even available to the researcher.

All eight of the variables discussed above will impact the decision-making process in your choice of a research tool or tools. They may well dictate your selection of a particular tool. Ultimately, however, the nature of the legal question, problem, or issue you must research should dictate your selection of a particular manual or computerized resource. Your selection of a research tool must be informed by an understanding of the kinds of questions which lend themselves to manual or to computerized tools. And we can think in terms of guidelines when we understand how printed and computerized tools are constructed and the structure that makes them accessible to us.

There are no firm rules in this developing area. Generalizing is always dangerous, at best. However, guidelines can be helpful in providing some assistance to legal researchers who struggle daily with the need to find information in the most efficient possible way. Each of these guidelines can be disproved; but my experience and the experiences of others suggest these rules-of-thumb are valid more often than not. As we gain more experience with computerized systems and these systems change and grow, the list of guidelines must also grow and develop. Only when we have sufficient experience with all kinds of legal research tools can we integrate the use of these various systems to be productive researchers.


...too many synonyms are required to retrieve all relevant documents.
...words are ambiguous.
...complex concepts and legal theories need to be explored.
...searches can only be expressed in common words or with stop words.
...the question is a procedural one.
...mandatory authority on point cannot be located and analogous situations must be considered.
...words have several spelling or form variations.
...statutory-type materials must be consulted by subject.
...you find nothing or too much (information overload).

Many words can be used to refer to the same thing. Professors Jacobstein and Mensky list the possibilities when a court discusses a ten-year-old boy:

<table>
<thead>
<tr>
<th>boy</th>
<th>child</th>
<th>youth</th>
<th>infant</th>
</tr>
</thead>
<tbody>
<tr>
<td>minor</td>
<td>juvenile</td>
<td>ten-year-old</td>
<td>young man</td>
</tr>
</tbody>
</table>

The court could also refer to him by using words showing his relationship to something else, including his connection to the case itself:

<table>
<thead>
<tr>
<th>son</th>
<th>brother</th>
<th>ward</th>
<th>student</th>
</tr>
</thead>
<tbody>
<tr>
<td>pupil</td>
<td>victim</td>
<td>witness</td>
<td>plaintiff</td>
</tr>
<tr>
<td>defendant</td>
<td>appellant</td>
<td>petitioner</td>
<td>patient</td>
</tr>
</tbody>
</table>

and many others too numerous to list.42

Computer searches which do not contain all possible synonyms are most likely to achieve incomplete results. A surprising number of death penalty cases are missed by a computer search for "death penalty" or "capital punishment." Many judges never use either of these phrases but instead say that the defendant was sentenced to die. If your search can only be formulated with the use of a word with many synonyms, selection of a manual tool for the problem may make your results more relevant and helpful. Or you must be careful to include all possible synonyms.

The opposite problem results from the use of ambiguous words—words that could have any one of several meanings depending upon context. The word release can be a noun which refers to the discharge of an obligation or responsibility, but it is also a verb which means to relinquish or to give up. A full-text search in a CALR system for the word "release" will find cases in which a prisoner was released from the city jail, as well as cases in which the plaintiff had signed the release form provided by the insurance carrier. AIDS is a verb as well as a noun, and a simple search for the word "aids" in a computer database to locate recent cases involving the AIDS virus will retrieve many irrelevant documents.43 A knowledgeable searcher must anticipate the problem created

42. Jacobstein & Mensky, supra note 21, at 432.
43. Additional irrelevant documents are likely to be picked up when searching "aids" on LEXIS since the LEXIS software automatically retrieves the plural and singular forms of a word when the plural, word is searched. So documents discussing the fireman who came to the aid of the little old lady will also be retrieved on LEXIS. On WESTLAW, on the other hand, the search for the word "aids" will only retrieve that word and not the singular form, "aid."
by ambiguous words and modify the search to look for a word or phrase likely to put the search term in the proper context for more relevant hits. Often this context is hard to provide, and the researcher will find manual research tools more reliable.

Doing computer searches for complex legal concepts and theories can be very difficult. To use the computer, the researcher must be able to express these concepts in words and phrases. And judges often do not use exactly the same words to express the same idea. A judge can talk about a statute being overbroad without ever using the word overbroad or overreach. In addition, these expressions of concepts often use only common words and lead to very poor computer retrieval results. Here, the judgment of an indexer may be of great help to you and the manual tools may well provide a more relevant response.

Searches that can only be expressed in common words can be very tricky on the computer. Consider this question:

If person waive his or her right to a trial by jury in one trial, can a jury trial still be demanded in a subsequent new trial of the same matter?

Thousands of irrelevant cases are bound to be retrieved on the computer with any combination of these words in your search. They are simply too commonly found in legal databases. In a related situation, stop or noise words are those that occur so frequently in the databases that the CALR systems have been programmed not to search for them. For example, a computer search for "as a clause in a contract" will be difficult since both words are invisible to the computer. Unless a very unique word or phrase can be combined with these common words, CALR systems are not a good source for this kind of research.

Procedural questions usually make poor computer searches unless they can be linked with an unusual search term or a specific court or a procedural rule. Almost all procedural questions rely on common words to express their meaning. The printed texts and treatises for rules and procedural questions are varied and many. The indexing is often quite good and, in my experience, they are usually more efficient tools.

When the legal researcher must try to identify an analogy to support her argument, computer searching is very difficult, if not impossible. Unless analogous situations can be identified with appropriate words and phrases, a computer search cannot be construed.

Searches that must rely on words with many spelling or form variations can be poor computer searches. The right-wrong test of criminal responsibility is expressed by the

44. Jacobstein & Marks, supra note 21, at 433 for DES example.
46. Jacobstein & Marks, supra note 21, at 433.
47. Jensen, supra note 36, at 5 (guideline 1); see also Rombaut, supra note 6, at 264.
48. Jacobstein & Marks, supra note 21, at 433.
49. Rombaut, supra note 6, at 263.
50. Jensen, supra note 36, at 5.
M'Naghten Rule. This rule has been spelled several different ways, among them, M'Naghten, McNaghten, M'Naghten, and M'Naughten. Or try to find cases which refer to the National Labor Relations Board as part of your search. The NLRB, the Board, the N.L.R.B., the N L R B, and the N. L. R. B. are just a few of the possibilities. Some abbreviations have been normalized by the database creators in order to minimize this problem, but the possibility of variant forms remains something a skilled researcher must consider. And if the word or phrase you must search has many variations, you may be better off not using a CALR system.

Statutory-type resources include the United States Code, state statutes, Code of Federal Regulations and other similarly arranged sets of books. These sets of law books are typically arranged by subject in a complex, hierarchical fashion rather than like their chronologically arranged case reporter brethren. Thus, the guidelines that apply in deciding between manual and computerized sources will be somewhat different. The legal researcher must take this difference in arrangement into account in the use of statutory-type printed and computerized products. Though the full text of many printed statutory materials has been added to the CALR systems, and this full text is searchable word-by-word, the arrangement of the words in the printed product has been carried forward by the computer. Most sections of statutes interrelate with other sections, but reviewing a section isolated from the rest may not disclose that relationship. The individual sections, read alone, are often deprived of their necessary context. One enhancement that both WESTLAW and LEXIS had to develop for these databases was one that would permit easy browsing of adjacent statutory sections, so context could be seen by the researcher. But even this enhancement has not solved the problems associated with actually searching for words in statutory sources online. In the first place, the documents contain a much smaller number of words to search. This means the broader connectors—and, with [larger than normal number]—usually produce more effective searches. Secondly, the texts of statutes use words with greater precision and with less redundancy than the prose of court opinions. Therefore, the use of synonyms, or the use of different words to express the same concept, may be very important. Instead of broadening one's retrieval

52. For example, see Wash. Rev. Code 43.12F.065 (1987) which describes the duties of the director.
43.21F.065. Duties of director
In addition to the duties and functions assigned by RCW 43.21F.045 and 43.21F.060, the director shall:
(1) Manage, plan, direct, and administer the activities and staff of the office;
(2) Adopt, manage, and coordinate personnel of the office and prescribe their duties subject to chapter 41.06
RCW, and
(3) Establish advisory committees as may be necessary to carry out the purposes of this chapter. Members
shall be compensated for travel expenses incurred in the performance of their duties in accordance with
RCW 43.03.020 and 43.03.060.

53. The director of the office is the director of the state energy office.

54. Carrick', supra note 1, at 64.

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(which is likely in many-word documents such as cases) to an unmanageable number, use of synonyms is more likely to help locate the actual relevant statute by giving more possible words in the database for the computer to retrieve. Sometimes this technique will also retrieve too many irrelevant statutes. A search for the penalties for drunk driving using "drunk drive" as your search will not locate that statute if throughout the code this concept is referred to as "driving under the influence of intoxicating liquor or a controlled substance."55

What this means is that until all of the printed tools' enhancements—indexes, annotations, history notes and the like—are put online, subject searching of statutory files online may be of very limited value. The more words added to the statutory databases for searching, the greater the possibility of retrieving the seeded statute.56 Furthermore, the words used in the statute may have been enhanced by an index or the editor of the case annotations. For example, "common law marriage" may appear in an index or case annotation even though it does not appear in the relevant statute.

And lastly, manual researching is always a good alternative if you suffer from information overload. If your computer-search results are never small enough to review, or your review of results leads you to broader searches which result in more relevant hits and lots if irrelevant ones, try manual sources. Pursuing a poor strategy online is a waste of time and money. Instead of helping us narrow our focus, computers can broaden what we retrieve to the point that we can't cope with the amount of material we have identified. Do not be reluctant to sign off and try something different. It is amazing—sometimes those frustrating online searches are easy manual research problems.

Computerized Research Tools Are Better When . . .

... a unique search term, or phrase, or quotation can be used.
... the fact situation is unique.
... the area of law is new and emerging.
... totally comprehensive searches are required.
... your searches involve the use of a segment or field.
... a strictly mechanical search can be done, such as Sheparding, searching for a West key number, and citation tracking.
... the question can be narrowly drawn.
... the information you have is not accessible in manual tools, such as opinions indexed by writing judge or searchable by docket number or with only partial information.
... the needed information has not yet been published in print form.
... the needed information will never be published in printed form.

A unique search term or phrase offers the best possible kind of search for a CALR system. Has the phrase "Christian nation" ever been used in a U.S. Supreme Court opinion? Has the word "rely" ever appeared in a Supreme Court case? The phrase "Christian nation" has appeared in twelve WESTLAW and thirteen LEXIS U.S.

55. Id.
56. Of course, increasing the size of the files and databases online also runs the risk of increasing the irrelevant retrieval rate.
Supreme Court documents. The word "reify" does not appear in any U.S. Supreme Court cases but variant forms such as "refited" and "reificacion" do appear.

Finding exact quotations is one of the most powerful capabilities of computerized research systems. Whether one is searching in a case law or statutory-type database, the incredible power of the CALR systems is fully realized. For example, retrieving the case in which Justice Potier Stewart said, "I know it when I see it" is very easy online. Even though subject access to statutory databases online is problematic, searching for quotations or specific language in a statute is a snap. How else could one discover how many places in the USC Congress required something to be filed "on or prior to December 30"?

However, be somewhat careful in your reliance on unique words. A unique word in one database may not be unique in another. The word of coram nobis is a relatively unique phrase in the U.S. Supreme Court database but is very common in the Mississippi cases database.

Because the court opinions have been loaded in full text, CALR can be very useful when a unique fact situation needs to be located. Finding personal injury cases in which a mouse had been found in a Coca-Cola bottle is relatively straightforward. As long as the search terms can be combined in a way to create a unique combination, the computer tools can perform this kind of search—results that usually cannot be located with manual tools (unless someone wrote an article or section in a treatise citing all of the mouse-in-the-Coke-bottle cases).

If an area of law is new and emerging, chances are good the CALR tools should be used for two different reasons. First, the database should be more current than printed tools. Secondly, if they are, new words and terms of art are more likely to be found more quickly than in manual resources. For example, a legal researcher is more likely to locate cases about drug testing in the workplace, comparable worth, or AIDS with a computer database until such cases become so common that they have found niches and descriptive terms in the index and topic classification in printed sources.

A striking example of the lag time between a new development and its appearance in printed sources is provided by the 1952 Patent Act. It created a new section 103, which

57. Interestingly, in at least two of the cases retrieved, the phrase appears in the counsel segment, not the court's opinion itself. For opinions on whether any of these cases stand for the proposition that the United States is a Christian nation, see any of the many articles that discuss this issue, e.g., "The 'Christian Nation' Controversy," American Lawyer, June 1989, at 70; Washington Post, Aug. 13, 1989, at A5, first section.

58. In the other five cases, Justice Stewart's language was quoted from Jacobellis v. Ohio, 378 U.S. 184, 197 (1964). The fact that this case is retrieved at all is particularly interesting when you realize that "if" and "when" are not searchable on LEXIS because they are noise words, and that "when" is a stop word on WESTLAW.

59. See also Shapira, supra note 29, at 9.

60. Word of error coram nobis is recognized by statute in Mississippi and provides a vehicle for the rehearing of criminal cases where constitutional errors have occurred. Miss. Code Ann. 99:95-145 (1977).

61. Two cases were found quickly with the WESTLAW search method (escape or corona-cola) Ritter v. Coca-Cola, 34 Wis. 2d 157, 128 N.W. 2d 439 (1964) and Shoshone Coca-Cola Bottling Co. v. Dolenski, 82 Nev. 439, 420 P.2d 855 (1966). Undoubtedly others would have been located if all results had been reviewed.
stated that to be patented, the subject matter of the thing to be patented had to be non-obvious. Non-obvious, in the patent law context, took on a special, technical meaning. Even though the definition of non-obvious was often discussed by courts, the term non-obvious did not appear in the indexes or tables of contents of any printed patent books until 1966. Similarly, environmental law cases are not found collected in a separate West Digest topic called environment. The phrase environmental law was not in general use until the late 1960s when the National Environmental Policy Act was passed by Congress. West added protection of the environment to a preexisting topic (Health) sometime during the publication of the General Digest which eventually became the Eighth Decennial Digest (1966–1976). These two examples illustrate why computer legal research tools are usually better sources for new areas of law and emerging trends.

Totally comprehensive searches are not always required in legal research. But when they are, a computer research system may be the only way to ensure complete coverage. This general rule of thumb must be modified by several ifs—if the search is precise enough to retrieve every single relevant document, if the library or file which is being searched is complete; if there is no manual tool that collects all of the relevant documents. Doing a totally comprehensive subject search for particular kinds of cases using subject search terms is more difficult even on CALR systems, but a comprehensive CALA search for every case from the Washington State Court of Appeals assigned to Animal's key number 1 can be done with reliance on the results.

Both WESTLAW and LEXIS have broken each document into its segment into smaller parts. On WESTLAW, these are called fields; on LEXIS, segments. In addition, both systems permit separate searching of these smaller parts. For example, if a researcher wanted to locate the U.S. Supreme Court opinion in the Bakke case, a search in the name (LEXIS) segment or id (WESTLAW) field for Bakke would limit retrieval to only those cases in which the word Bakke appears in this small portion of the opinion. Since the word Bakke is in the full text of many U.S. Supreme Court opinions, the segment/field search permits a faster retrieval of the desired case. Most often, if the information you have can be located in a segment or field online, your search will be efficient and worth doing on a computer.

Strictly mechanical-type searches are the most reliable searches which can be done on CALR systems. One can Shepardize a case from a printed Shepard's citator. But the process has been made so easy on WESTLAW and LEXIS that Shepardizing manually is not very time (i.e., cost) effective. In the first place, citations found in the various pamphlets and newspaper supplements are integrated in the online systems with the citations found in the bound volume(s). Thus, you need look at only one list of citations for each citation you Shepardize. No longer do you need to locate the first Shepard's volume your case is listed in just to find the parallel cite! Shepardizing online also has some features not available in the printed product—for example, the ability to display a list of citing references limited to headnote number of treatment (i.e. dissenting; I for followed; O for overruled, etc.); the ability to see immediately the full text of any citing case; the actual description of the treatment, not just the appearance of a symbol representing the type of treatment.
Other examples of easy mechanical-type searches are Insta-cite and Auto-cite: searching for cases assigned to a specific West key number and topic citation tracking where the searcher requires the CALR system to locate all documents containing a specific citation the FIND, LEXSEE and LEXSTAT commands by which specific documents can be retrieved with the citation and appropriate command. All these types of searches are easy to conduct—and often give better or faster results than using manual tools. Here, the only thing that may inhibit use of CALR systems for these types of searches are the variables discussed earlier. For example, if the Shepard's citator you need is near your office, while the CALR system is on another floor, you probably will not Shepardize online. Undoubtedly WESTLAW and LEXIS will continue to improve the number and quality of this kind of feature.

Questions narrowly drawn tend to be best suited for computer searches. Conversely, a general question about a foreign corporation doing business in a particular state may be all but impossible using current CALR systems. The more focused your question for a computer search, the more likely you are to get relevant, precise results. Unless you have unique words to use, general questions are not good for computer searches.

Computer searches are necessary if the type of information the researcher has cannot be accessed with manual tools. James Sprowl illustrates this nicely with a table in his 1981 article. For example, searches for cases written by a specific judge on a particular topic, for a case when only the court and docket number are known, for cases in which a particular attorney argued, or for all the cases decided on a particular day by a specific court are all possible using legal computer databases.

Researchers often remember only pieces of information, but not the right pieces of information, to locate a case in manual tools. Locating a case when you know only the court and the subject matter of the case, for example, can be impossible with manual tools but may be easily accomplished with CALR systems. One of the real strengths of WESTLAW and LEXIS is the ability of the systems to retrieve documents with information that is often not searchable at all in printed sources.

Using WESTLAW and LEXIS is also a logical choice if the needed information is not yet available in printed form. With CALR systems, you can usually read a copy of a court's opinion days or weeks before it can be located in a printed source. U.S. Supreme Court cases are now loaded on both WESTLAW and LEXIS the same day they are handed down. The attorney in Washington state could read a copy of the Webster63

62. The General Digest and its Decennials and the Federal Digest have become extremely cumbersome manual tools. Once a specific key number and topic is located, search to find other cases assigned to the same key number are best handled online unless the state case law database does not extend back far enough in coverage.

63. A searcher can create a Shepard's equivalent for any item cited in documents online. For example, a search in the Washington State cases file for 478-66-0770 would turn up all cases citing this section of the Washington Administrative Code.

64. Sprowl, supra note 21, at 153.

opinion the same day as the Washington D.C. attorney who waited at the Court’s Public Information Office for a printed copy.66

Though the deadlinre for U.S. Supreme Court cases is the same day they are decided, other courts’ opinions receive a lower priority on the computer systems as well as in the printed publications. Nevertheless, the computer databases are almost always more current than print sources for court opinions. But many of the databases on WESTLAW and LEXIS are created from a print product. Note also that sometimes the agreement between the CALR vendor and the print publisher requires that the online system file be less or no more current than the print product. Some files or libraries are embargoed for a specific time period by this requirement. Thus, check the currency of the database or library you wish to use to see if it really is more current than the printed product.67 A non-very-well-advertised example of this is Shepard’s Citations. Shepard’s online was never and is not now more current than the current supplemental material published for the books.68

More and more, the computer retrieval systems must be used to locate needed information that will never be published in any printed form. Insta-cite and Auto-cite are case verification tools not available in printed form. They are very current, and therefore include information which would be nearly impossible to find otherwise. As mentioned above, Shepard’s Preview is another example of a service which has no print equivalent.

In addition, a good many legal documents can be found only online. Best known for their availability on LEXIS and WESTLAW are the so-called unpublished decisions of the federal district courts and the federal courts of appeal. If the cases are in specialized areas of law, these are sometimes printed in looseleaf services, but an estimated 28,000 “unpublished” opinions per year are loaded in CALR systems and not found in Federal Supplement, Federal Reporter 2d, Federal Rules Decisions, West’s Bankruptcy Reporter, or West’s Military Justice Reporter. Similarly, the unpublished Comptroller General Decisions can be found on LEXIS and WESTLAW, but not in any folio-text published form. They are digested in a government publication. Many of the state corporate filings on LEXIS have no published equivalent. Routinely it areas dealing with administrative law practice, the administrative actioins—private letter rulings, news digests, circulars,

66. Printed slip opinions are usually in short supply and copies are often exhausted before the day of decision. Additional copies are available from the court one to two days later and will be mailed to reporters, until the supply is exhausted. Normally, however, the opinion will be available through BNA’s United States Law Week or the CCP Supreme Court Bulletin by then. The U.S. Supreme Court is exploring ways to directly supplement its opinions electronically. To date, no such plan has been implemented.

67. Cases and to be loaded online before they are printed. Looseleaf services, law reviews, and administrative decisions will probably be no more current than the printed products and are often less current. Matthew Bennet, in the early 1980s, contracted to have many of their cases loaded on LEXIS. However, when new supplemental material was published, it was not loaded into the database, with the result that those treated online were not as current as the published work. Eventually, the Matthew Bender slips were removed from LEXIS (perhaps because they were not used). The rule of thumb is to check both the beginning date of coverage and the date of the most recent information loaded in that file of database.

68. Shepard’s Preview, announced by WESTLAW in the spring of 1989, fills the time gap between paper publications and Insta-cite, but is not available in a printed product at this time and does not have all of the standard Shepard’s features (no references to headlines, treatment, etc.).
orders, releases—are only selectively published in any print form. The CALR files are often more complete. When access to such documents is required, the CALR systems will normally be the research tool of choice.

Conclusion

Anyone who has the time and energy can learn how to use legal research tools. We are blessed in the legal profession with a wide variety of interrelated primary and secondary sources in print, microform, and electronic formats. If one wanted to be a tax attorney today and had no tax research tools, what would one buy or arrange to have access to: the CCH Standard Federal Tax Reporter, Prentice Hall's Federal Taxer, West's new six-disk tax CD-ROM library, WESTLAW or LEXIS? The list is obviously longer than this. Selection of the research tools needed for the practice of law today is no easy task. Just as these decisions cannot be appropriately made in a vacuum, neither can the selection of a specific tool for research be made without an understanding of the strengths and weaknesses of the resources available for consideration.

The educational process at which the legal researcher must work is neverending. As older, traditional resources are enhanced or stop publishing altogether, as new traditional works are published, and as technology develops new and amazing formats for adoption to legal materials, the lawyer, law librarian, law student, and law professor must continually update and revise her bag of tricks. I may know how to coax almost anything out of the U.S. Supreme Court databases, but I am like a child with the tax looseleaf services or the online tax databases. Fortunately for me, several very good research guides have been written for novices in the field of tax law. If I choose, I can benefit from the experience of other experts.96

But even though we cannot know all of the details needed to perform every kind of legal research, we can educate ourselves conceptually about the literature of the law—its primary and secondary materials.97 In doing so, we must approach research learning as described in a recent article about legal research and law students:

They need to know the principles of structure and design of the legal research system. They need to know enough about the scheme of research to evaluate the quality of the tools and the quality of the information they find in them. As lawyers, they must be self-sufficient enough in research that they can at least evaluate their own work and the work of others (emphasis added).97

Specifically, legal researchers must know enough about how print sources have been created and how, when, and why they are used. This step is essential to the true integration of computerized and manual print tools. Even though tremendous freedom and power belong to the user when working with online and CD-ROM tools, the conceptual framework for most files and databases online relates to the print product on which they

96. You can find findfindguides or user's guides exist to help the uninitiated locate and use specialized legal materials, e.g., L. Cohen, Specialized Local Research (1995) contains eleven chapters on different areas of law, including immigration, military law, and banking law. Jacobson & Mensky, supra note 21, at 442-535 (federal tax research); Cohen & Berring, supra note 1, at 638-91 (international law).
97. Berring & Vanden Heuvel, supra note 1, at 443.
are based. It is relatively straightforward to teach someone the mechanics of WESTLAW and LEXIS searching, but the full power of CALR systems will not be unleashed unless the user is intimately familiar with the printed counterparts of the online (or CD-ROM) files.

This, then, explains the need for the kind of ideas presented in this essay. The actual structure of print and computerized tools must be examined to see how they can best be used to solve legal problems. Once the conceptual framework is in place, many more skilled researchers will add to our ever-growing body of knowledge about the strengths and weaknesses of computerized and printed legal research sources. Only then will the effective integration of legal research tools (that is, selecting and using the best possible legal resource in a cost-effective manner) really happen.

72 An interesting and thorough discussion of computer-assisted legal research, written by a practicing attorney, also includes several case studies that compare research in CALR systems to manual research. See, e.g., How to Practice Law with Computers 241-308 (1993);
CHAPTER I

MANAGEMENT ISSUES:
COST, BILLING, TRAINING

Presentations and Materials by
Penny A. Hazelton
Peggy Roebuck Jarrett
Mary Whisner
CHAPTER I
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EQUIPMENT AND START-UP COSTS

Whatever electronic database you choose, you will need some basic equipment: a terminal with a screen and a keyboard, a printer, a modem, and a telephone line; the modem and phone line are not necessary for a CD-ROM product unless it has online access to more current information. If you select a CD-ROM product, you will need one or more CD-ROM players. Consult your vendor for ideas about equipment.

Both LEXIS and WESTLAW offer "dedicated" equipment, either for sale or lease. Dedicated terminals are generally more "user friendly" than other equipment, because signing on is easy and they have special keys that tell you just what to do (e.g., to move to the next page of a document on one system, you just touch the key labeled "Next Page"). However, dedicated terminals are usually more expensive and less flexible than other types of equipment. As you might expect, you cannot use a special LEXIS terminal for WESTLAW and vice versa, nor can you use either terminal to access other CALL systems. The new LEXIS 2000 workstations and the WALT PCs can be used for word processing; both may be used with WINDOWS software.

LEXIS, WESTLAW, CD Law and L.A.W. BBS are compatible with almost all personal computers and word processing systems. You can use one PC for word processing, CALL systems, electronic bulletin boards, spreadsheets, and billing programs. You may download cases or other documents from legal research systems and then use them in a brief using your word processing software. In exchange for this great gain in flexibility, you give up a little user-friendliness -- instead of a dedicated key labeled "Next Page", you would have a template over your PC's function keys that tells you that F1 or F3 is for "Next Page."

Training is offered to new subscribers by most electronic legal information vendors. WESTLAW and LEXIS even have ongoing training sessions to introduce you to new features and databases.
COSTS OF SEARCHING

This chapter discusses the pricing systems of the two leading national computer-assisted legal research systems, LEXIS and WESTLAW. Prices and policies are, of course, subject to change. For detailed information about the systems, talk to the company's sales representatives, read the documentation provided, and attend training sessions.

LEXIS

LEXIS pricing is complex, at least partly in response to consumer requests for more flexibility. This chapter summarizes the current policies. As with any product, you should be aware that the policies may change or that new options may be added. Note that articles about LEXIS pricing that are more than a year old are likely to be out of date, because LEXIS made some significant changes in late 1991.

For many years, LEXIS had only "transactional" pricing. That is, users were charged for the time they spent on-line plus a transaction charge for each level-one search. This system was more economical for some types of searching than for others. In 1990, LEXIS gave subscribers an alternative: an "hourly" system that charged by time on-line, without regard to how many searches were performed. Subscribers had to choose one system or the other, based on their typical searching practices.

In late 1991, LEXIS expanded subscribers' choices. There are now three different ways of pricing: the original transaction-based system (time plus number of searches), the time-only system, and a new "zero-connect" price structure that charges only for the search with no charge for the time on-line. A firm that subscribes to LEXIS now may choose to use only one system, or to have I.D.s for two or three of the systems, allowing users to choose the I.D. (and the pricing system) that is most appropriate for a particular project. LEXIS plans to make choosing one system or the other for each research project easier. In summer 1991, it will introduce a sign-on procedure that will give users a menu of pricing systems. Thus a firm or attorney will have only one I.D., but when signing on will choose which pricing system to use for that research session.

No matter which system or systems a firm chooses, there is a basic subscription fee of $125 per month. Group membership plans (see below) reduce the monthly subscription. LEXIS offers discounts (up to 22%) for heavy use.
The three systems are summarized below. For more information, consult a LEXIS account representative.

**Transactional System**

Under the standard transactional system, a user is charged for connect time, network time (telecommunications), and searches. (There are also separate charges for special services, such as LEXSEE and Shepard's. See below.) The time-based charges are: $30/hour for connect time; $13/hour for network time (MWADNET or other long distance data network). (Subscribers who use WATS instead of MWADNET are charged $21/hour.) These on-line charges add up to $43/hour, or about $.72/minute. The search charge varies, from $6 to $38/search. In general, a search in a very large file will be much more expensive than a search in a small file. Examples are:

- GENFED library; COURTS file (all the federal cases on LEXIS) $41/search
- SENFED library; US file (U.S. Supreme Court cases) $19/search
- STATIS library; WASH file (Washington Supreme Court and Court of Appeals cases) $20/search
- FEDCOM library; COMDLY file (Communications Daily) $6/search
- NEXIS library; OMNI file (all stories in all NEXIS publications) $38/search
- NEXIS library; SEATTM file (Seattle Times, 1/30- ) $6/search

There is no additional charge for modifying a search. Thus, if you start with a broad search that retrieves, say, 96 cases, you can modify it to include only cases from the last two years and you will not be charged for another search.

**Zero-Connect System**

The zero-connect system is aimed at users who want to run one search and stay on-line for a comparatively long time, browsing through the results and reading documents. As the name suggests, there are no on-line charges -- i.e., the connect time and network time are free. The charge per
search is the same as in the transaction system, but a $7 surcharge is added for each search. (If your arithmetic is quick, you've already figured out that this system becomes cost-effective compared with the transactional system after about 10 minutes on-line: saving 72 cents a minute for 10 minutes pays for the $7 surcharge.)

**Hourly System**

Under the hourly system, a user is charged for connect time, network time, and time in a database. No matter which library and file a user is in, he or she is charged $32/hour for connect time and $13/hour for network time — or $.75/minute. (Again, the charge for WATS rather than another network is $21/hour). Database charges vary -- generally, a search in a very large file will be more expensive than a search in a smaller file. Examples are:

- **GENFED library; COURTS file (all the federal cases on LEXIS)** $315/hour ($5.25/minute)
- **GENFED library; US file (U.S. Supreme Court cases)** $185/hour ($3.08/minute)
- **STATES library; WASH file (Washington Supreme Court and Court of Appeals cases)** $185/hour ($3.08/minute)
- **FEDCOSM library; COMDLY file (Communications Daily)** $97/hour ($1.62/minute)
- **NEXIS library; OMNI file (all stories in all NEXIS publications)** $328/hour ($5.47/minute)
- **NEXIS library; SEATTTM file (Seattle Times, 1/90- )** $97/hour ($1.62/minute)

(remember that the connect and network charges, $.75/minute, must be added to the above charges.)

**Sample searches**

Below are examples of how hypothetical searches would be charged on LEXIS, with each of the three pricing systems.

**Example:** STATES library - WASH file

- seatbelt or seat-belt w/15 negligence
- 10 cases

Once you retrieve the results (say, 10 cases), you might choose to print out the citations, turn off the computer and go read the cases in the books. Let's say this takes 4

1-6
minutes. Instead, you might choose to browse through the cases on-line, printing out passages that strike you as significant. Let’s say this takes 15 minutes. Here are the charges for each of the three pricing systems:

**Option A (print cites only)**

**Transactional System**
- On-line charges (4 min. x $ .72/min.) $ 2.88
- Search in WASH file $ 20.80
- TOTAL $ 22.88

**Zero-Connect System**
- Search in WASH file $ 20.00
- Search surcharge $ 7.00
- TOTAL $ 27.00

**Hourly System**
- On-line charges (4 min. x $ .75/min.) $ 3.00
- Database charges (4 min. x $3.08/min.) $12.32
- TOTAL $15.32

**Option B (browse through cases, print passages)**

**Transactional System**
- On-line charges (15 min. x $ .72/min.) $10.80
- Search in WASH file $ 20.00
- TOTAL $30.80

**Zero-Connect System**
- Search in WASH file $ 20.00
- Search surcharge $ 7.00
- TOTAL $27.00

**Hourly System**
- On-line charges (15 min. x $ .75/min.) $11.25
- Database charges (15 min. x $3.08/min.) $46.20
- TOTAL $57.45

Lexis’s zero-connect system and, to a lesser extent, the transactional system encourage longer searches and browsing on-line, since the search charge is the main portion of the cost. On the other hand, these systems disfavor quick searches where you sign on, get a citation, and sign off -- e.g., a search to find the citation of a case when you know the parties’ names.

**EXAMPLE:** STATES library, WASH file
- Name (Allingham and Seattle) - 1 case

Running the search and printing the citation takes about 30 seconds. Here’s how the search would be charged in each of
the three systems:

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
<th>Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transactional System</strong></td>
<td>on-line charges (.5 min x $ .75/min.)</td>
<td>$ .36</td>
</tr>
<tr>
<td></td>
<td>search in WASH file</td>
<td>$20.00</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>$20.36</td>
</tr>
<tr>
<td><strong>Zero-Connect System</strong></td>
<td>search in WASH file</td>
<td>$20.00</td>
</tr>
<tr>
<td></td>
<td>search surcharge</td>
<td>$ 7.00</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>$27.00</td>
</tr>
<tr>
<td><strong>Hourly System</strong></td>
<td>on-line charges (.5 min x $ .75/min.)</td>
<td>$ .38</td>
</tr>
<tr>
<td></td>
<td>database charges (.5 min. x $3.08/min.)</td>
<td>$ 1.54</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>$ 1.92</td>
</tr>
</tbody>
</table>

The same three pricing systems apply to searches in NEXIS and most other nonlegal databases. As a practical matter, you might find that you do more browsing and printing on-line with NEXIS than with LEXIS, because you don’t have easy access to backfiles of newspapers and magazines the way you have sets of case reporters in your library.

EXAMPLE: NEXIS library, SEATTM file
(death pre/2 dignity) or initiative 119 - 136 stories

modify:
and living will - 26 stories

Let’s say you spend 20 minutes reading newspaper stories on-line, printing out some screens as you browse. The charges would be:

<table>
<thead>
<tr>
<th>System</th>
<th>Description</th>
<th>Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transactional System</strong></td>
<td>on-line charges (20 min. x $ .72/min.)</td>
<td>$14.40</td>
</tr>
<tr>
<td></td>
<td>search in SEATTM file</td>
<td>$ 6.00</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>$20.40</td>
</tr>
<tr>
<td><strong>Zero-Connect System</strong></td>
<td>search in SEATTM file</td>
<td>$ 6.00</td>
</tr>
<tr>
<td></td>
<td>search surcharge</td>
<td>$ 7.00</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>$13.00</td>
</tr>
<tr>
<td><strong>Hourly System</strong></td>
<td>on-line charges (20 min. x $ .75/min.)</td>
<td>$15.00</td>
</tr>
<tr>
<td></td>
<td>database charges (20 min. x $1.62/min.)</td>
<td>$34.40</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>$49.40</td>
</tr>
</tbody>
</table>
Special Services

LEXSEE, LEXSTAT, Shepard's and Auto-Cite are priced differently from searches in files. The charges are:

Transactional System
LEXSEE, LEXSTAT: $4 per document retrieved. Shepard's, Auto-Cite: $2.75 per citation checked. If you "jump" from a Shepard's display to one of the citing cases, you are charged $4, as if you had used LEXSEE to retrieve that case. You are also charged on-line charges -- i.e., $.72/minute -- for the time you spend looking at the cases or citator displays.

Zero-Connect System
Charges for the special services are the same as in the transactional system, BUT you are not charged for time on-line. Therefore, if you are just going to be cite-checking or retrieving documents whose citations you know, this system is more cost-effective than the transactional system.

Hourly System
In the hourly system, LEXIS charges $1.85 an hour (or $3.08/minute) for LEXSEE, LEXSTAT, Auto-Cite, and Shepard's. If you add the on-line charge of $.75/minute, the cost of these services is $3.63/minute.

(LEXIS used to add "access charges" for displaying ALR annotations in some KWIIC format and FULL format, but these charges have been removed.)

Printing
LEXIS provides two options for printing and downloading documents:

1) You may print or download individual screens, one at a time, for the cost of the connect time.

2) You may print or download after you sign off -- either entire documents or search results. The charge is $.02 per line for LEXIS files and $.25 per line for NEXIS files. (A few selected services are $.07 per line.) The printing and downloading charges are the same in all three pricing systems. Note that downloading only captures the text of the retrieved documents, not the search logic. Printing or downloading off-line saves you staff time, but you should be aware that short documents are less expensive printed or downloaded screen by screen.

1-9-
## Summary table

The following table summarizes the three LEXIS pricing systems. The bottom row in the table suggests when each system is most cost-effective.

<table>
<thead>
<tr>
<th></th>
<th>Transactional System</th>
<th>Zero-Connect System</th>
<th>Hourly System</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Connect Charge</strong></td>
<td>$3.00/hour</td>
<td>N/A</td>
<td>$3.22/hour</td>
</tr>
<tr>
<td></td>
<td>$.50/minute</td>
<td></td>
<td>6.53/minute</td>
</tr>
<tr>
<td><strong>Telecommunications Charge</strong></td>
<td>$13.00/hour</td>
<td>N/A</td>
<td>$13.00/hour</td>
</tr>
<tr>
<td></td>
<td>$.22/minute</td>
<td></td>
<td>12.22/minute</td>
</tr>
<tr>
<td>(Out-of-town call)</td>
<td>$22/hour for</td>
<td></td>
<td>[BASE]</td>
</tr>
<tr>
<td></td>
<td>Meter</td>
<td></td>
<td>$22/hour for</td>
</tr>
<tr>
<td></td>
<td>$22/hr flat</td>
<td></td>
<td>[METER]</td>
</tr>
<tr>
<td><strong>Search charge</strong></td>
<td>$16-$90 per search</td>
<td>$16-$90 per search</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>for most files</td>
<td>for most files</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PLUS $7/search</td>
<td>PLUS $7/search</td>
<td></td>
</tr>
<tr>
<td></td>
<td>surcharge</td>
<td>surcharge</td>
<td></td>
</tr>
<tr>
<td><strong>Hourly charge</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>Depends on which file is</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>searched. Most files are</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$90, $185, $225,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>or $315 per hour</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-- i.e., $1.50,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$3.08, $3.75, or</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>$5.25.</td>
</tr>
<tr>
<td><strong>Citator services</strong></td>
<td>$2.75 per citation</td>
<td>$185/hour</td>
<td>$3.08/hour</td>
</tr>
<tr>
<td></td>
<td>(Auto-Cite,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shepard’s)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>LEXBEE, LEXSTAT</strong></td>
<td>$4.00 per citation</td>
<td>$185/hour</td>
<td>$3.08/hour</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Off-Line Print</strong></td>
<td>$.02/page for almost</td>
<td>$.025/page for all</td>
<td>$.075/page for a few</td>
</tr>
<tr>
<td><strong>Charge</strong></td>
<td>all LEXIS files</td>
<td>LEXIS files</td>
<td>special services</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Best for what</strong></td>
<td>Run one search,</td>
<td>Run one search,</td>
<td>Run many</td>
</tr>
<tr>
<td><strong>type of</strong></td>
<td>scan the results</td>
<td>read search</td>
<td>searches; run a</td>
</tr>
<tr>
<td><strong>searching?</strong></td>
<td>in KMIC format</td>
<td>results online</td>
<td>quick search, produce</td>
</tr>
<tr>
<td></td>
<td>(10 minutes or</td>
<td>(more than 10</td>
<td>list of citations, and</td>
</tr>
<tr>
<td></td>
<td>less)</td>
<td>minutes), run a</td>
<td>sign off; Auto-Cite</td>
</tr>
<tr>
<td></td>
<td></td>
<td>broad search and</td>
<td>or Shepardize (if you can</td>
</tr>
<tr>
<td></td>
<td></td>
<td>modify or focus</td>
<td>check tech citation in</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(no additional</td>
<td>50 seconds or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>search charge);</td>
<td>less).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>retrieve</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>documents using</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LEXBEE or</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LEXSTAT.</td>
<td></td>
</tr>
</tbody>
</table>
GROUP MEMBERSHIP

LEXIS offers group membership plans through SKCSA and the ABA. (See "Access Information for CALA systems.") Currently, subscribers through the SKCSA plan pay $25/month (instead of the regular $125/month subscription). They are charged under the transactional system. A $3.00 surcharge is added to each search in a file; a $1.00 surcharge is added to the cost of Auto-Cite and Shepard's citation checks. Group membership is advantageous for firms that perform fewer than about 31 searches a month.

NEW "MVP" PLAN

The "Most Valuable Products" Plan is aimed at firms whose practice is largely limited to their own state's law. It was introduced in just ten states in late 1991, but it is now available in all fifty states. For a flat monthly rate, subscribers can search their own state's files without any time or search charges. For an additional monthly charge, they can also search cases from their federal circuit. A Washington firm with up to three attorneys, for example, can conduct unlimited searching in the WASH LIBRARY on LEXIS for $135 per month. The firm can gain unlimited searching in the file of 9th Circuit cases (Court of Appeals and District Courts) for $36/attorney/month. A firm can choose pay for off-line printing at $.04/line or can get unlimited printing for $15/attorney/month. The following table summarizes the charges:

1-11
<table>
<thead>
<tr>
<th>Service</th>
<th>1-3 Attorneys</th>
<th>Each Additional Attorney</th>
</tr>
</thead>
<tbody>
<tr>
<td>WASH library, unlimited searching</td>
<td>$135/month</td>
<td>$45/month</td>
</tr>
<tr>
<td>GENFED library; 9TH fil., unlimited searching</td>
<td>$30/month</td>
<td>$10/month</td>
</tr>
<tr>
<td>Printing (standard pricing)</td>
<td>$.02/line</td>
<td></td>
</tr>
<tr>
<td>Printing, unlimited</td>
<td>$45/month</td>
<td>$15/month</td>
</tr>
<tr>
<td>Citator Services (Auto-Cite, Shepard's)</td>
<td>$3.75/citation</td>
<td></td>
</tr>
<tr>
<td>LEXSEE, LEXSTAT</td>
<td>$5/citation</td>
<td></td>
</tr>
</tbody>
</table>
WESTLAW, with one exception, bills according to the length of time you spend on-line. Depending on which use contract you select you will pay a set price per minute. The exception to time billing is a few of the Dialog databases which have time billing plus transaction charges. Also, in several very large "allfile" databases -- AllFed, AllStates, AllTax, TP-All (all texts and periodicals), Stat-All (all statutes), and FRRM-ALL (all federal bankruptcy materials) -- WESTLAW bills you at the current rate per minute but the actual time you were using the database is multiplied by 1.90. Charges are thus, in effect, 1.90 times the regular rates when using these "allfile" databases.

WESTLAW has private, government, educational institution, and public terminal agreements. Law firms and corporations are the same for purposes of the private (commercial) plans. WESTLAW often runs specials or deals offering reduced rates for on-line time and equipment. The following information is for standard plans. The local representative should be contacted to verify the information and to discover the possibilities of special offers.

1. **Plan 1** (the 3 hour minimum use contract) costs $295.00 per hour for database charges plus $48.00 an hour for communications -- or $3.25 per minute plus $0.80 per minute, for a total of $4.05 per minute. (Database time is time spent in a database -- this does not include the database directory or the scope screens. Communication time is measured from the moment you sign on to the moment you sign off.) When using the "allfile" databases the database charge cost goes up 90%, since you are billed for 1.90 times the actual time you use. E2 Access searching is $85.00 per hour or $1.42 per minute. You are also charged a $125.00 per month subscription fee. WESTLAW offers a quantity discount with this plan for use over 3 hours per month.

2. **Plan 1C** (the 20 minute minimum use contract) costs $240.00 an hour, or $4 per minute, plus a communication charge, which depends on the speed of your modem. For a 1200 baud modem, the communication charge is $20.60 an hour, or $0.51 per minute. Database plus communication is $270.60 per hour, or $4.51 per minute. For a modem that is 2400 baud or above, the communication charge is $52.20 an hour or $0.87 per minute, for a total database plus communication of $292.20 per hour or $4.87 per minute. When you use the "allfile" databases you are billed for 1.65 times the time you actually use. EE Access searching is $1.25 per minute. There is no monthly subscription fee for this plan.

3. **Plan 10** is the same cost as Plan 1C without the 20 minute minimum use agreement. Instead, you pay $30.00 per month subscription fee.

Both plans 1 and 1C allow you to carry over extra use month to month up to a year.
Summary Table

The following table summarizes the three WESTLAW pricing plans:

<table>
<thead>
<tr>
<th></th>
<th>Plan 1</th>
<th>Plan 1C</th>
<th>Plan 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subscription Fee</td>
<td>$ 125.00/mo.</td>
<td>none</td>
<td>$ 30.00/mo.</td>
</tr>
<tr>
<td>Minimum Use</td>
<td>3 hours</td>
<td>20 minutes</td>
<td>none</td>
</tr>
<tr>
<td>Database Charge</td>
<td>$ 195.00/hr.</td>
<td>$ 240.00/hr.</td>
<td>or $ 4.05/min.</td>
</tr>
<tr>
<td></td>
<td>3.25/min.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication Charge</td>
<td>$ 48.00/hr.</td>
<td>1200 baud = $ 30.60/hr. or $ 0.51/min.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.80/min.</td>
<td>2400 baud = $ 52.20/hr. or $ 0.87/min.</td>
<td></td>
</tr>
<tr>
<td>Total Database Plus</td>
<td>$ 243.00/hr.</td>
<td>1200 baud = $270.60/hr. or $ 4.51/min.</td>
<td></td>
</tr>
<tr>
<td>Communication Charge</td>
<td>4.05/min.</td>
<td>2400 baud = $292.20/hr. or $ 4.87/min.</td>
<td></td>
</tr>
<tr>
<td>Allfiles*</td>
<td>Database Time Multiplied by 1.9</td>
<td>Database Time Multiplied by 1.65</td>
<td></td>
</tr>
<tr>
<td>EZ Access</td>
<td>$ 85.00/hr.</td>
<td>$ 75.00/hr.</td>
<td>or $ 1.25/min.</td>
</tr>
<tr>
<td></td>
<td>1.42/min.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quantity Discount</td>
<td>Yes, for use over 3 hours</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Off-line Printing or Downloading</td>
<td>$ 0.02/line</td>
<td>$ 0.02/line</td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td>$ 70.00/per trainer</td>
<td>No charge at training center; $70.00 per trainer at subscriber's office</td>
<td>$280 minimum $2100 maximum</td>
</tr>
</tbody>
</table>

*Allfiles are very large files, including AllPeds, AllStates, AllTax, TF-All, stat-All, FBKR-All.

(Note: Some of the Dialog databases have time billing plus transaction charges. Please check your documentation, call 1-800-WESTLAW, or call your vendor representative for specific Dialog price information.)

For purposes of comparison, consider the following WESTLAW search, similar to the hypothetical LEXIS search, above.

I-14
EXAMPLE: WA-CS database
seat-belt /a negligent - 8 cases

Option A (print cites only)
(Plan 1) 4 min. x $4.05 per minute $16.20
(Plan 1C) 4 min. x $4.51 per minute $18.04

Option B (browse and print full text of cases on point)
(Plan 1) 15 min. x $4.05 per minute $60.75
(Plan 1C) 15 min. x $4.51 per minute $67.65

WESTLAW’s pricing scheme encourages quick searches where you sign on, run the search, print the citations, and sign off. A search for a case when you know the parties’ names can be quite economical:

EXAMPLE: WA-CS database
title(allingham & seattle) - 2 cases

(One of the cases is a brief order modifying the main case.) Running the search and printing the citation takes about 30 seconds, so the cost would be:

(Plan 1) .5 min. x $4.05 per minute $2.03
(Plan 1C) .5 min. x $4.51 per minute $2.26

West key numbers can be quickly searched on WESTLAW. If, for example, you want to find out what the elements of fraud are in Florida, it is easier to search WESTLAW than go through the General Digest:

EXAMPLE: FL-CS
184K3 - 26 cases
Look at the first two or three cases, and then print out the citations:

(Plan 1) 5 min. x $4.05 per minute $20.25
(Plan 1C) 5 min. x $4.51 per minute $22.55

WESTLAW also has an automatic display command for cases and statutes. This command, called FIND, can be executed at any time you are on-line; the only cost is the per minute charge based on your individual contract.

The citation services on WESTLAW, Shepard’s, Shepard’s Preview, and Insta-cite, are available at the per minute charge you contract for.

1-15
Printing on WESTLAW is also available in two different options.

1) Print individual screens on your printer or download individual screens to a disk, for the per minute charge.

2) Print or download to disk entire documents or search results after you sign-off $ .02 per line. As with LEXIS you are only capturing the text, not the searching capability.

Pro Bono

West Services offers access to WESTLAW in its local office at no cost, for pro bono projects. Contact WESTLAW at 628-6435 for further information.

Training

WESTLAW training costs vary with each price plan. For Plan 1, training is $70.00 per trainee, with a minimum of $280.00. The maximum charge per subscriber is $2,100.00. For Plans 1C and 10, training at the training center is available at no charge. Training at the subscriber's office is $70.00 per trainee with a $280.00 session minimum. Under all plans, each trainee receives one free hour of WESTLAW following the initial training session.
LEXIS AND WESTLAW COST-CONTROL TIPS

(Note: Some of the tips involve commands specific to each system. Check the vendor documentation for more information.)

1. Prepare Before Going On-Line
2. Use the 800 Numbers
3. Know Your Prices
4. Use Print Sources in Conjunction with CALR
5. Retrieve Documents in One Step
6. Scan Documents Quickly
7. Use Jump and Link
8. Proofread Your Query
9. Use Smaller or Subject Specific Files/Databases
10. Use the Fastest Modem You Can Afford
11. Use Fields and Segments
12. Use Key Numbers
13. Stack Commands
14. Modify on LEXIS
15. Keep Track of Your Searches
16. Save Your Last Search
17. Automatically Run Searches
18. Update Your Research
19. Reduce Printing
20. Change Client Information On-Line
21. If You Are In Trouble, Sign Off
22. Use Less Expensive Electronic Sources When Available
23. Use Documentation, Help Screens, and Other Search Aids
24. Use Vendor Representatives
25. Keep Up With New Developments
26. Ask a Librarian

1. Prepare Before Going On-Line

Plan your research strategy before going on-line! Pick your WESTLAW database or LEXIS library and file, think about alternative words and phrases, choose connectors, and be prepared with data restrictions or other limiters, before going on-line.

2. Use the 800 Numbers

LEXIS (800/542-6862) and WESTLAW (800/937-8529) Customer Service staffs offer more than technical help with equipment - - they can help you formulate search strategies, including choosing databases, search terms, and connectors. WESTLAW offers a direct line (800/688-6363) to its staff of Reference Attorneys. When you are not sure about a search, use the 800 numbers before you go on-line. Customer Service staffs will actually run test searches to ensure you get the desired results.
3. **Know Your Prices**

Which WESTLAW pricing plan do you have? Which LEXIS pricing plan do you have? Do you have more than one option for pricing? With some pricing plans, on-line time is very expensive, and a good strategy is to print a list of citations and go to the library to read the material in hard copy. With other pricing plans, on-line time is relatively inexpensive and money is saved by browsing on-line rather than making a trip to the library. [See "Costs of Searching"]

4. **Use Print Sources in Conjunction with CALR**

Use print secondary sources to find background information, leading cases, and terms of art. Read a nutshell, hornbook, law review article, or ALR annotation, before going on-line. Go on-line to do a quick and dirty search in a law review index, print the citations, and look up the articles in the library. [See "Integrating Manual and Computer Research"]

5. **Retrieve Documents in One Step**

If you have a citation to a document, use the LEXIS lexsee or lexstat commands, or the WESTLAW find command. With these commands you avoid choosing a database and running a search.

6. **Scan Documents Quickly**

The LEXIS focus command and the WESTLAW locate command allow you to scan retrieved documents for specific words or phrases. This is especially useful if your search included a fairly common word, but you really just need to see portions of text containing a more specific word or phrase.

7. **Use Jump and Link**

Use Westlaw's Jump and Lexis' Link feature to move quickly from one document to another. Both Jump and Link allow you to quickly and easily access the full-text of cited documents, cases, code sections, and other types of documents are marked with a symbol that you use to retrieve them, without having to type the citation or worry about the proper format. You save time by saving key strokes.

8. **Proofread Your Query**

If you proofread your query, you can avoid re-typing your search and avoid wasting valuable computer processing time. It is particularly important if your LEXIS pricing plan is transactional -- you are charged for each search or request you type. Proofreading your search before you hit the enter key can save billing headaches.
9. Use Smaller or Subject Specific Files/Databases

If your pricing plan is directly linked to the amount of time you spend on-line and you need to browse some results to make sure your search is effective, use a small database, browse the results, refine the search, and then quickly run it in the largest database you need. Quickly print the cite list, and sign off.

Rather than use a large jurisdictional database such as WESTLAW allstates or LEXIS states:omni, search a more specific jurisdiction. Use smaller, subject specific databases or files (but be careful: some subject databases and files, such as those covering tax materials, can be quite expensive).

Remember that the larger the database or file, and the more common the search terms, the longer it takes the computer to process your request. Smaller files and more specific requests mean less processing time.

10. Use the Fastest Modem You Can Afford

Connect time can be significantly lowered by using a fast modem. Even if your pricing plan adds a surcharge for a fast modem, your bills will be lower in the long run.

11. Use Fields and Segments

Make your searches more efficient by limiting search terms to appropriate fields or segments. Use date restrictions. The more specific you are, the less computer processing time needed. Also, consider printing field or segment restricted text only to reduce the number of lines printed.

12. Use Key Numbers

On WESTLAW, use key numbers or key numbers combined with keywords to pinpoint cases. Use the expanded Key Number Digest and the key command to identify key numbers, which you can use to narrow or expand your search.

13. Stack Commands

LEXIS dot commands can be stacked, separated by semi-colons. Stacking commands allows you to bypass menu screens. For example to find citations to law review articles by Abner Mikva, starting with the client identification screen, type your identification;lawrev;iglind;au(mikva). To run the search in the full-text law review file type .cf;allrev; . The semicolon functions as the transmit or enter key. The dot commands, such as change file (.cf); change library (.cl); next page (.np); and new search (.ns) are listed on the back of your LEXIS password card.

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On WESTLAW, separate search commands with a space and print commands with a semi-colon. To run the same Mikva search, type db lri au(mikva). To run the same query in the full-text law review database type sdb tp-all. If you want to edit the query first, type gdb tp-all. To print a document on the attached printer, and then sign off, type pr; d; atp; off; y.

14. Modify on LEXIS

Modifying on LEXIS allows you to create new levels of research without incurring new search charges. If your pricing plan is transactional, use modify (m) to narrow an overly broad search, or broaden an overly restrictive search.

15. Keep Track of Your Searches

Get into the habit of printing out your request screen. These screens are a useful record of your strategy, especially if you need to modify your search or take a different approach later on. LEXIS has a command, .keep, that allows you to maintain a complete list of all searches done during a session. After running a search, type .keep before moving on to a new library, file, or search. To view kept searches, type .log. (Please note: if your pricing plan is transactional you will be charged as if you are doing a new search if you re-run a kept search. The .keep command is cost-efficient for time-based pricing plans).

16. Save Your Last Search

Get into the habit of saving your last search, so you do not have to retype it if you need to go back to it later in the day, or if you have printing problems. WESTLAW automatically saves your last search for several weeks; log on, choose a database, type q, and your last search will appear on the screen. On WESTLAW, you can also use your options command to request that your searches always be saved and thereby skip the step when you sign off; options also allows you to automatically set the printer destination, so you do not have to choose each time.

17. Automatically Run Searches

If you need to regularly run the same search over a long period of time, use LEXIS Eclipse or WESTLAW FDQ. Both these services automatically run queries on a daily, weekly, or monthly basis and print out the results. Eclipse and FDQ allow you to avoid the cost of logging on and re-entering your search.

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18. Update Your Research

Use Auto-Cite or Insta-Cite to verify cases. Use Shepard's on-line to avoid checking hardbound volumes, supplements and advance sheets separately. If appropriate, limit your results to display only references that overrule, reverse, limit, criticize, or modify your case. Limit your results to cases within a particular jurisdiction. Use the WESTLAW's WestCheck or LEXIS' CheckCite programs to cite-check entire documents quickly and easily.

19. Reduce Printing

Printing charges can add up quickly, so avoid unnecessary and overlong print requests. Instead of printing all documents in full, try the following: print lists of citations; print field or segment restricted text; print term or keyword restricted text; print selected screens; print the first page of documents; and depending on your pricing plan, take notes!

20. Change Client Information On-line

You do not need to sign off and sign on again to change client information. If you do a search for one client, and you need to do a search for another, just type the word client. Both LEXIS and WESTLAW allow you to type in new client identification, which will be reflected on your bill.

21. If You Are In Trouble, Sign Off

If your searches are not working, sign off. Call the 800 number, consult a colleague, rethink search strategy and possible sources.

22. Use Less Expensive Electronic Sources When Available

For Washington State research, consider using L.A.W. BBS or CD Law. Use LEXIS or WESTLAW to update material. Use LEXIS or WESTLAW to search material not available on L.A.W. BBS or CD Law.

23. Use Documentation, Help Screens, and Other Search Aids

WESTLAW has printed guides to general and subject searching, and a list of databases. On-line, WESTLAW offers the Iden database, which contains documents describing all available databases and services, including the Dialog databases. For each database, you can search the originating source of the information, the names of any equivalent print sources, and the coverage and currentness of the material. If you know the name of a print source, you can use Iden to quickly find out what database to search. Once you identify the database you need to use, check the scope screens for field names and search tips.

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Like WESTLAW, LEXIS has printed guides and database lists. The most comprehensive guide is the new LEXIS/NEXIS Product Guide, a multi-volume set which includes an index to publications and sources, detailed descriptions of libraries and files, tips for searching, explanations of how documents are arranged and displayed, transactional pricing information, and descriptions of common sources. One of the most useful features is sample documents from each file with the segment names clearly marked. Many LEXIS libraries also have on-line, searchable guides.

24. Use Vendor Representatives

Use the local vendor representatives. They can help you with specific problems and keep you informed of new features.

25. Keep Up With New Developments

Take advantage of the training options available to you. Locally, both LEXIS and WESTLAW send out monthly calendars of classes. The classes include introductory training, refreshers, advanced techniques, and topical searching. It is extremely important to keep on-line skills up to date. LEXIS and WESTLAW also offer the occasional "special" -- during a limited time period they will waive database charges for a particular (usually new) database. These "specials" are announced on the welcome screen when you log on.

Keeping up with CALR is also possible through reading. LEXIS and WESTLAW have subscriber newsletters, and bar journals and legal newspapers often publish CALR related articles. The field of CALR is constantly changing and growing, so the effective and efficient searcher needs to be informed about new pricing structures, database content, and software enhancements.

26. Ask a Librarian

Talk to your librarian, if you have one. Most librarians are expert on-line searchers and knowledgeable about prices and billing policies. Find out what your librarian can do for you.
BILLING AND BILLING PRACTICES

Billing from WESTLAW and LEXIS is very specific and transaction oriented. Each time a search is performed on a CALR system, the computer requests client identification. Once entered, the CALR system will then report, on a monthly or weekly (your option, but weekly costs more) bill, all on-line time associated with that client. You will have a local account representative assigned to your firm by the CALR vendor, and he/she will be happy to help in the "translation" of your monthly statements. The monthly bill will include:

- Basic subscription fee, if applicable
- Cost of leasing dedicated equipment, if applicable
- Cost of the following by client and as a total:
  - Actual connect time (on-line time)
  - Telecommunications connect time
  - Number of searches conducted
  - Total lines printed or downloaded off-line

WESTLAW and LEXIS also have electronic billing systems (Quickview on WESTLAW and Payback on LEXIS). These electronic bills can be downloaded locally and can be manipulated in a variety of ways to make the process of client billing more regularized. The individual account representatives can explain their system to you. For an excellent article on this subject, see Chick, Cindy, "LEXIS and WESTLAW On-line Billing Systems: Payback and Quickview", 8 Legal Information Alert 1-3 (Nov. 2, Feb. 1989).

The detail of the billing you will receive permits a wide variety of options to consider for recouping your costs. Possible options are:

1. Do not separately bill your client for CALR work. Include all CALR costs in your hourly fee as part of overhead (much as your library book subscriptions are treated).

2. Bill your client separately for CALR costs
   (a) Bill only the real (on-line and search) costs of searches performed for that client
   (b) Bill all costs, including fixed costs
   (c) Bill all clients at a fixed rate
   (d) Bill subjectively by estimating how long the research would have taken manually and bill accordingly
Clearly, most CALR work is billed directly to the client by one of the methods described above in (2). That is, CALR is not considered overhead. However, in some courts and jurisdictions, when a contingent fee contract is involved, CALR may not be separately charged to the client as an expense unless the contract so provides. Ill. Ethics Op. 85-9 (1/17/86); followed by Louisiana State Bar Association v. Edwin, 540 So.2d 294 (La. 1989); Pa Ethics Op. 87-23 (10/20/87).

In situations where no contingent fee contract is involved, some courts have handled CALR expenditures as costs (Wehr v. The Burroughs Corporation, 619 F.2d 276 (3rd Cir. 1980)), while others have determined that CALR cannot be separately taxed as costs (Letwich v. Harris-Stowe State College, 702 F.2d 686 (8th Cir. 1983)). No rule for the state of Washington has been located. The difference in approach often has to do with the type of case filed and the interpretation which has been given attorney's fees and costs under the statute or rule in that particular situation.

When billing clients directly and separately for CALR work, billing the real costs of searches and no further elaboration (2a), billing all costs, including the fixed costs (2b), can be handled by taking the total amount billed and dividing it by the total minutes of system use. Then the client is charged the average cost per minute by the number of minutes used for that client. For example:

- Your October bill is $550
- Total use amounted to 3 hours 22 minutes
- $550 divided by 202 minutes is $2.72 per minute
- Client ABC had 10 minutes of CALR in October
- $27.20 should be billed to Client ABC

Billing a client at a fixed rate can save administrative time in analyzing the bill on a regular basis. But keep in mind, this rate must be reasonable and should represent, as closely as possible, actual cost (i.e., not overhead). See Ill. Ethics Op. 85-9 (1/17/86), Attachment A. Fixed rate billing can be calculated a variety of ways:

- Bill out each search at a fixed rate: for "N" searches at $20/each
- Set fixed prices for Auto-Cite, Insta-Cite, Shepard's, FIND, LEXSEE: for example: "N" cites at $2.25 each
- Use the same formula as option (2.a), but add a sign-on charge for each time the system is used for the client.
- Bill each session at a fixed percentage, which would include connect time, telecommunications costs, searches, cite-checking and automatic displays.

How much you charge your client for CALR depends on your firm billing policies. Questions to ask yourself include: Do you want to make profit on CALR or do you want to recover the costs? Is charging back for CALR consistent with your overall billing philosophy? Do you want your current clients to cover the costs of searching for client development, pro bono, or continuing legal education? Do you have internal budgets for client development, pro bono, and continuing legal education that could include a CALR portion? Do you have a policy of writing off inefficient research and, if so, would that policy apply to CALR?

The mark-up for CALR varies greatly from firm to firm, according to geographic region, size, and type of practice. The _American Lawyer_, in 1988, listed four firms and their mark-ups. The range? 104-150%. ("On-Line Time: Who Pays (and How Much)", _American Lawyer_, supplement p.12 (December 1988)).

Once you decide on a billing structure, it should be carefully explained to all those involved. Attorneys, legal assistants, and any other searchers should fully understand the implication so they can maximize their search efficiency. Clients should be informed, and billing attorneys should be prepared to justify charges.

The firm billing policy should be reviewed periodically to ensure that it is meeting its goals. You may also want to review the policy to reflect changing trends in client billing for CALR. The legal newspapers, bar journals, and legal management periodicals publish articles and surveys on billing practices.

When the actual bills begin to arrive, review them very carefully. Searchers should be using the appropriate client identification when logging in, but some firms require a log sheet to be filled out in addition. A log sheet enables the searcher to explain the client identification if need be. The bills should also be reviewed to insure no one is abusing the system, or obviously searching inefficiently. Setting up controls can prevent billing headaches in the long run.
How much you charge your client for CALR depends on your firm billing policies. Questions to ask yourself include: Do you want to make a profit on CALR or do you want to recover the costs? Do you want to recover both fixed and variable costs? Is charging back for CALR consistent with your overall billing philosophy? Do you want your current clients to cover the costs of searching for client development, pro bono, or continuing legal education? Do you have internal budgets for client development, pro bono, and continuing legal education that could include a CALR portion? Do you have a policy of writing off inefficient research, and if so, would that policy apply to CALR?

The mark up for CALR is controversial, and varies greatly from firm to firm, according to geographic region, size, and type of practice. Surveys of billing practices for CALR are rare: the American Lawyer, in 1988, listed four firms and their mark-ups, ranging from 10% to 150%. "On-Line Time: Who Pays (and How Much?)", American Lawyer, December, 1988, at S12). Other articles tend to be vague or general. For example, a 1989 article states "Some [firms] charge anywhere from 1.5 to four times the actual cost of the research." (Griffith, Cary, "Billing for LEXIS Research Made Easier With Payback," Information Today, May, 1989 at 13).

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Since the time between the actual research and receipt of the bill can be 30-45 days, both LEXIS and WESTLAW offer subscribers the option of viewing research time and costs on a more current basis. PAYBACK is WESTLAW's service; it is available on-line within a week of the research session. QuickView is the comparable LEXIS service. The benefit of PAYBACK and QuickView is their currentness; the drawback is that monthly volume usage discounts cannot be figured in until the regular monthly bill arrives.

BILLING FOR CD-ROM

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CD-ROM products are still relatively new to the law office. They are similar to on-line services in that they allow you to search the full-text of cases, statutes, and regulations, using keywords and boolean operators. They are dissimilar, however, in a fundamental way: the cost of using a CD-ROM product has nothing to do with the time spent using it. Generally, on-line costs depend on the amount of research done: the time spent on-line or the number and type of searches. CD-ROM costs are fixed, and the research time and amount are totally up to the discretion of the purchaser. CD-ROM products are like looseleaf services: you pay for a subscription and then you can let it gather dust, or use it all day long.

The ability to use a CD-ROM product without the fear of running up a large bill can be very appealing. On the other hand, the lack of an easy way to bill the client and cover the cost is a barrier for some practitioners unwilling to invest in the technology. If you do decide to purchase a CD-ROM product, possible options are:

1. Do not separately bill your client for work done on a CD-ROM. Include the cost of the subscription in your fee as part of overhead, just like the cost of a looseleaf subscription.

2. Bill your client separately for CD-ROM usage:
   a. Estimate the amount of time you will use the service
   b. Divide estimated use by the CD-ROM subscription cost and arrive at an hourly rate that will at least recoup the cost of the subscription
   c. Keep track of time spent using the CD-ROM through some sort of log sheet kept next to the workstation.

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Opinion No. 85-9
(1/17/86)

Topic: Computerized Legal Research

Digest: An attorney may charge clients for computerized legal research expenses under a formula reflecting the attorney's actual cost.

Ref.: Rules 1-102, 2-106
Kentucky Bar Association v. Graves 356 S.W.2d 890 (Ky., 1977)

QUESTION

We have been asked our view as to the appropriate manner in which an attorney may charge clients for computerized legal research performed in connection with such services as Lexis* or Westlaw.

OPINION

So far as can be determined, the manner in which charges may be made to a client for computerized legal research (CLR) has not been addressed by any professional ethics opinion or disciplinary rule in Illinois or elsewhere. General guidance is available from Rule 2-106(a), which prohibits charging or collecting illegal or excessive fees, and Rule 2-106(b), which enumerates several factors for determining the reasonableness of a fee in relation to the services performed.

Companies which provide CLR services to law firms typically lease computer terminals and submit monthly invoices for rental fees, search, access and time charges, supplies, etc. The pricing policies of CLR services generally include a variety of one-time charges, monthly charges and search charges which vary from month to month. The law firm typically incorporates these charges into the legal services bill which is ultimately submitted to the client by allocating these costs in proportion to CLR services devoted to each client's account.

A typical method employed by firms has been to treat CLR costs as an itemized expense to the client. It has been accepted that, while an attorney should not invoice for the necessary expenses of a properly equipped office, a client may be expected to bear reasonable additional expenditures as required by diligent representation. Reo v. Nofari, 269 N.Y.S.2d 543 (N.Y.App. 1966); cf. Kentucky Bar Association v. Graves, 356 S.W.2d 890 (Ky., 1977). The former category should include, for example, local telephone calls and secretarial assistance while the latter might include long distance telephone, photocopying, travel and court costs. CLR would appear to fall in the latter category as an expense.

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which can be itemized and billed separate and apart from ordinary overhead. It should be noted, however, that if CLR is to be billed as an "expense" in a situation involving a contingent fee contract, the client must be fully informed in advance whether CLR expenses are to be deducted before or after the contingent fee is calculated. Rule 1-106(c)(1).

In order to rationalize bookkeeping, firms often bill CLR expenses to clients according to a mathematical formula. An approximation is considered necessary because the monthly CLR invoice received by the law firm does not allocate associated expenses such as unit rentals, space and supplies on a per client basis. In addition, the monthly bill does not reflect support staff time and the cost to the firm for financing those clients who are not billed by the firm until a later date. Common formulas include variations on multiplying the monthly time/search attributable to each client by a numerical factor or charging each client a flat rate for minutes on line.

The Committee is of the opinion that an attorney may use a formula for estimating and charging a client for CLR as an expense if the formula reasonably reflects the firm's actual cost. Actual cost to the firm constitutes those expenses directly attributable to providing CLR to its clients as opposed to those expenses which are a necessary part or adjunct of a properly equipped lawyer's office.

An alternative approach to charging for CLR is to simply incorporate it as absorbed overhead within the standard fee structure. A firm might choose to treat CLR expenses as ordinary overhead and factor this expense into its standard fees across the board. This practice would not violate Illinois disciplinary rules as long as the ultimate fee is reasonable under Rule 2-106(a) and consistent with the factors enumerated in Rule 2-106(b).

* * *

Approved January 17, 1986
Opinion 87-23 (10/20/87) Fees; Contingent Fees; Research. A lawyer who has been retained by a client on a contingent fee basis may bill the client for computer-aided legal research, provided that the fee agreement explicitly spells out that such costs will be billed, the agreement includes a detailed and complete explanation of the nature of computer-aided research, and the client consents. For those clients who have already signed a contingent fee agreement, a written disclosure and verbal explanation of the research charges must be provided to such clients. The committee notes that any existing client who refuses to consent to the charges should not be prejudiced by such a refusal. In such cases, computer-aided research should be used just as if the client had agreed to be billed for the cost. Rules 1.5, 1.8, DRs 2-106, 5-103(B).