# SOFTWARE REVIEW

## COMPUTERIZED CITATION
## CHECKING REVISITED

CITERITE II, Version 2.41.
Published by Jurisoft Inc.,
763 Massachusetts Avenue
Cambridge, MA 02139
(617) 864-6151 or (800) 262-5656
$169.95;

*and*

COMPUCITE, Version 2.02, disk date 10/12/88.
Published by CompuLaw Ltd.
3520 Wesley Street
P.O. Box 232
Culver City, CA 90232
(213) 558-3360 or (800) 452-9529
$129.00.

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Checking citations so that they conform to the BLUEBOOK[1] has always been a dull and painful task. Cite checkers are only human, and even the best of them occasionally notice -- or worse, fail to notice -- a mistake only after a brief or memorandum is filed or after an article is in print.

Two programs to automate the cite checking process first hit the market two years ago: CITERITE and THE CITE CHECKER. At the time,

1. THE HARVARD LAW REVIEW ASS'N, A UNIFORM SYSTEM OF CITATION (14th ed. 1986).

they were so flawed that lawyers using them were likely to produce more, not fewer, errors, since many would probably over-rely on the programs' limited abilities.[2]

Recently, the same two programs have been updated to enhance their cite-checking abilities. CITERITE II is a substantial improvement over the original CITERITE, and will bring considerable relief to law review candidates, law firm associates, and anyone responsible for making sure that all the case citations in a document are in perfect form. Unfortunately, COMPUCITE, the new version of THE CITE CHECKER now lags even farther behind CITERITE II, and is generally unacceptable.

## I.     FEATURES

### A.     Basic Functions

CITERITE and COMPUCITE help you check your citations in the same basic manner. You start by writing a legal document using a word processing program[3] and saving it as a file. Next, you invoke CITERITE or COMPUCITE and choose the name of this file (or a different one you want to check) as explained later in this Review. Both programs examine the file and automatically locate the citations in it. (The prior version of CITERITE required that each citation be marked with a special character.) The programs check each citation against their databases of citation style rules and their internal lists of case reporters and law journals. The programs then write new files listing all citations, the errors discovered in them, and the specific cite-checking rule(s) violated by each error. You return to your word processing program to examine these error files and edit your document file to reflect the correct rules revealed by the programs.

There are some functional differences between the programs. COMPUCITE checks only case citations, while CITERITE can check the form of statutes, law review articles, and certain other legal materials. COMPUCITE, unlike CITERITE, ignores all text formatting information, so it doesn't notice if a case citation isn't properly underlined or contains extra spaces. CITERITE can also check for either the BLUEBOOK standards or the "California" citation style used by California state courts; we tested only the BLUEBOOK format.

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2. *See* Welch, *Software Review*, 1 HIGH TECH. L.J. 527 (1986).

3. CITERITE supports eight word processing formats; COMPUCITE supports four formats, but allows the user to define additional formats. Both programs support MICROSOFT WORD, WORDSTAR, and WORDPERFECT.

COMPUCITE also writes a second file called a "table of cases." CompuLaw suggests that you can use this file to check substantive errors in your citations. Ideally, the file contains only one listing of each case you have cited. Therefore, if the file contains two or more nearly identical references to the same case [e.g., *"Rogers v. Wells,* . . . (S.D.N.Y. 1980)" and *"Rogers v. Wells,* . . . (N.D.N.Y. 1980)"], you can compare them to determine which one(s) contain the errors (i.e., which District Court reference is incorrect). This is a clever suggestion, but COMPUCITE's inability to recognize text formatting information reduces its usefulness: identical citations differing only by internal spacing may be included as separate entries in the table of cases, and citations containing hyphens will not appear in correct form. Moreover, the file is not useful as a complete "table of authorities" because it does not include the page numbers on which the cases appear.

## B.  Copy Protection

CITERITE uses a disk-based form of copy protection, but that protection is disabled when the purchaser calls Jurisoft's toll-free number to register the program and obtain a special code.

COMPUCITE is sold with certain unidentified functions disabled. CompuLaw promises that when it receives a registration card (on which you must sign assent to the "license agreement"), it will mail a set of codes which activate all of the program's features. The codes were included in our reviewer's package, and took only a minute to carefully type in.

We're not pleased with any form of copy protection that burdens legitimate users, but these methods are clearly preferable to constant disk-based copy protection that interferes with hard disk use and backup programs.

## C.  Documentation and Support

The CITERITE manual is well-written, with all the information we needed to install and operate the program, but it lacks an index and could be organized a little better. COMPUCITE's 110-page manual is adequate, and includes an index, but devotes 90 of its 120 pages to detailed discussion of citation error messages. The COMPUCITE package also includes a copy of the BLUEBOOK. Both programs provide toll-free (800) telephone numbers for technical support, although California (for COMPUCITE) and Massachusetts (for CITERITE) customers must use non-800 toll numbers to obtain help. Jurisoft also offers an "Extended Support and Upgrade Program" for CITERITE. For a $40 annual fee ($20 if you enroll within 45 days of purchasing the program), Jurisoft will send you

its quarterly newsletter and inform you of upgraded versions of the program, which you may purchase for an additional $5.

## II.   INSTALLATION AND USE

### A.   Installing the Programs

CITERITE took only a few minutes to install on our hard disk; one need only remove the copy protection (as explained above) and copy the program files onto the hard disk.  However, if you do not have a hard disk, you may face a severe problem.  CITERITE's program files will not fit on a single 5.25" low density (360K) disk.  Therefore, you cannot use CITERITE with a dual floppy system unless one of the drives reads high density (1.2MB) or 3.5" (720K or 1.4MB) disks.  Because COMPUCITE's program files fit on a single low density disk, it does not have this limitation.

Installing COMPUCITE on our hard disk was more troublesome. To operate, the program requires that your computer's CONFIG.SYS file contain the line "FILES = 40."  While this is a reasonable request, if you use COMPUCITE's "install" program to load COMPUCITE onto your hard disk, the program alters your CONFIG.SYS file without asking -- a severe breach of computer etiquette.  Moreover, the install program repeatedly freezes the computer and demands that the system be reset if it doesn't find the IBM ANSI.SYS graphics driver file in the root (topmost) directory of the hard disk.  Since many people use alternative graphics drivers or store graphics driver files in subdirectories, COMPUCITE's refusal to run unless these conditions are fulfilled is completely unacceptable.

### B.   Configuring the Programs

We found it easy to configure CITERITE for our word processor by selecting it from a menu.  At the same time, we also could have instructed CITERITE to use the "California" citation style, told the program how on-screen text should appear when it checks a document in its memory-resident mode, and set other display and citation search options.  If more than one person will use a single copy of CITERITE, or if you must prepare materials using more than one citation style, you can create up to four "option sheets" that store the proper options for each type of material.

Like its counterpart, COMPUCITE has a simple and intuitive menu interface used to configure the program for your word processor and select other program options; for example, the subdirectory in which the

documents to be cite-checked are stored, and "security codes" you may require users to enter in order to change specified cite-checking options.

The CITERITE interface provided two configuration advantages that its competitor lacked. First, it allowed us to look at the list of document files before selecting the file to be citechecked.[4] This is useful if you forget the exact name of the document in question. Second, it allowed us to specify different directories for the document file and the output (error message) file written by the program. It is sometimes more convenient to store output files in a different directory to keep them separate from the document files, especially as the filenames differ only by their extensions in COMPUCITE. Moreover, if you store your document files on a floppy disk, you may need to store the output files on your hard disk because there may not be enough room for them on the floppy.

## C. Running the programs

Once we'd loaded CITERITE as a stand-alone program, we typed in the name of our document and the name of a file to store error messages in, and typed "G" for "go." Later, we used the program directly from MS-DOS (avoiding the menu interface) by typing the document and error file names as parameters. You may also include as a parameter the code for a particular "option sheet" to be used in cite-checking the file. We found these to be valuable time savers in using the program.

CITERITE also has a memory-resident mode, so that disk files or citations currently on the screen can be checked without exiting the word processing program. Unfortunately, the memory-resident mode uses 200K bytes of memory, more than most users can spare. A "review-only mode" uses only 30K; it allows you to review CITERITE error messages but not check errors, a useful feature if your word processor has no "split screen" mode for examining both the original file and the error list file at the same time.

Unlike CITERITE, COMPUCITE has no direct MS-DOS command mode: every time you run COMPUCITE, even when checking the same file after making only a few changes, you must plod through the same series of menus. While this interface is simple and easy to understand, it is also cumbersome and slow. In particular, we did not see why it was necessary to have to go through an additional menu to start cite-checking after we had specified the document to be checked from the main interface. We would gladly give up a measure of simplicity for something that worked a little faster.

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4. In other words, it executed the DOS "dir" command for the subdirectory in which the documents to be cite-checked were stored.

We also didn't like the "beep" COMPUCITE generated every time we moved the menu bar; others in your office won't like it either. You can disable the "beep," but only by the cumbersome procedure of creating a special SOUND.OFF file on your hard disk.

## D.    Using the programs to correct cite-checking errors

To see how one would use these programs to detect and correct cite-checking errors, we used WORDPERFECT's split screen mode to examine both the document and the error messages generated by the programs, switching between the two document windows as we located and repaired our mistakes.

In general, this process took longer than we'd wished, even using WORDPERFECT's search and replace function. We'd prefer cite-checking programs that allowed us to make changes as errors are detected. Better yet, we wish the cite-checking programs were integrated into WORDPERFECT so that we could check and correct citations the same way we check for spelling errors.

We also found that CITERITE's error messages were easier to read and understand. COMPUCITE messages were typically printed in all-capital letters, which tended to blur in emphasis and made us feel we were using a primitive computer program; CITERITE used upper-and-lower case letters. COMPUCITE messages were also separated by a line of 70 dashes, which may exceed the margins you have specified in your word processing setup; CITERITE had the foresight to reset our WORD-PERFECT margins at the top of its output files to accommodate its text.

## III.   PERFORMANCE

To test the capabilities, accuracy, and speed of the two programs, we used them to cite-check several sample memoranda of various sizes.

CITERITE and COMPUCITE both handled several common citecheck-ing problems. When we omitted a required official reporter citation, both programs demanded it; COMPUCITE also reminded us that once we added the official reporter, we could delete the parenthetical identifying the court. In addition, both programs also can be set to complain about unmatched parallel pinpoint citations [e.g., *Jones v. Smith*, 123 Cal. 3d 456, 78 Cal. Rptr. 910, 1002 (1988)]. Both programs allow this "pinpoint" checking to be disabled.

In some types of documents -- most notably law review articles -- the majority of citations are contained in footnotes. To citecheck these documents, a program must be able to locate and check citations within both the text and footnote sections of the document. Fortunately, we found that both programs noticed and checked citations within

WORDPERFECT footnotes, which are "hidden" and not displayed on the same screen as (WORDPERFECT text. In most cases, the programs also checked citations that were "split" between the text and footnote (i.e., where the case name appeared in the text and the rest of the citation was a footnote).[5]

COMPUCITE noted some obvious problems that CITERITE missed. For example, when we included a blank in the date of a case (e.g., "197_"), it reminded us to fill in the blank. CITERITE made no mention of the problem. COMPUCITE also noted that we failed to provide explanatory parentheticals in our "see also" citations, though it improperly insisted that they're required (the BLUEBOOK [page 9] merely "encourages" such parentheticals). CITERITE didn't check such introductory wording at all. Finally, COMPUCITE checked citations that were inside explanatory parentheticals [e.g., *"Smith v. Jones, . . . (quoting Roe v. Wade . . ."*]. CITERITE failed to check such citations.

In general, though, COMPUCITE did not match its competitor's level of performance and had difficulties with situations that CITERITE handled without problem. The most obvious difference was speed. COMPUCITE is very slow, even without counting the extra time it demands to navigate its awkward menus. It took COMPUCITE 12 minutes to check one eight-page memo containing several dozen citations; CITERITE checked the same memo in less than three minutes. Checking an even longer memo (35,000 bytes) produced an even greater difference in speed: COMPUCITE took over 15 minutes, while CITERITE handled it in 2.5 minutes. COMPUCITE may have taken some additional time to write the separate "table of cases" file, but we doubt that obtaining this file justifies the much slower processing speed.

Second, COMPUCITE was less reliable in checking case citations. It consistently complained about our citations to Federal District Court opinions, rejecting both correct and incorrect parentheticals identifying the district. In contrast, CITERITE correctly detected and checked all state and federal case citations we tested. COMPUCITE also complained whenever California citations didn't include citations to P.2d, even though most California cases don't appear there. CITERITE recognized that California Supreme Court cases, but not appellate cases, appear in P.2d.

Third, COMPUCITE's performance suffered from its inability to recognize text formatting information. It did not tell us when case names were not underlined. It became confused any time a case reporter name was misspelled or a space was omitted (such as "Cal.App."

5. COMPUCITE says on page 6 of its manual that it does not handle these "split" citations. We suspect that it does not do so for all word processors, but that it is able to do so for WORDPERFECT.

instead of "Cal. App."). Worse, it automatically deleted all hyphens from citations, thus botching many case names and any citation to a range of pages (e.g., "63-69"). For example, when we cited to *Restaurant Associates Industries Inc. v. Anheuser-Busch Inc.*, COMPUCITE correctly noted that the second and third words should have been abbreviated; it then rudely lopped off the first word from the case name and also deleted the hyphen. CITERITE processed the citation properly.

Finally, CITERITE cite-checked a broader variety of citations. COMPUCITE checked only cases, while CITERITE attempted to check statutes, treatises, and other legal materials. CITERITE also handled "short form" (e.g., "*Smith v. Jones*, 175 U.S. at 196") and "*id.*" citations. Still, CITERITE didn't locate all citations; it balked at a number of obscure citation forms, including examples from the inside front cover of the BLUEBOOK. The program also insisted that we change our book review citations, including a correct citation entered directly from page 92 of the BLUEBOOK. We suspect there are many such minor errors in CITERITE's dictionary and tables, each of which will require a call to Jurisoft for a bug fix.[6]

## IV. EVALUATION

Brief writing and citation checking still requires much solid human effort. No computer program can yet detect that you've cited to the wrong page or year, that your citation needs an explanatory parenthetical, or that the material cited doesn't actually support the point you're making. Moreover, much work remains to be done to reach the standards for an "ideal" cite-checking program.[7] For example, CITERITE II and COMPUCITE still do not correct errors as they detect them, or provide a convenient way for you to correct each citation error as it is found.

Nevertheless, computerized cite-checking has noticeably advanced in the last two years. Many problems -- finding citations without having to "mark" them in your document file, checking citations located in footnotes, and checking "short form" citations -- have been solved by one or both of the programs. In general, CITERITE does an excellent job, and COMPUCITE does a marginal job, of checking the form of legal case citations. Either program could save you dozens of hours checking to see that your legal citations comply with the BLUEBOOK. More important,

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6. The user can make limited changes to the CITERITE dictionary, but this task is probably best left to Jurisoft except for special materials that aren't in the BLUEBOOK (such as HIGH TECH. L.J.). Even then, you can't specify the dates and format of new materials: you must copy the format of an existing journal, thus losing some of the checking ability of the program.

7. *See* Welch, *supra* note 2, at 533-35.

these programs might save you from irritating the judge or law clerk who must locate the materials cited in your brief.

At $170, we think CITERITE II provides an excellent value to any practitioner whose written work is expected to conform to the BLUEBOOK rules, and who owns a hard disk or high density floppy disk computer system capable of running the program. CITERITE is easy to use, speedy, and excels at locating and correctly checking the form of citations. COMPUCITE is more cumbersome to use and doesn't match CITERITE's speed, scope and accuracy. We don't think it's worth its $129 price tag.