Computers as a Research Tool
By Richard J. Joseph

Introduction

Computerized databases are rapidly replacing books as the principal source of tax-related information. These databases encompass not only the IRC, Treasury Regulations, court cases, state laws, and other primary authorities, but also citators and secondary sources such as tax service reporters, treatises, journals, and newsletters. The principal advantages of using a computerized tax service are ease and speed of access. They eliminate the need for searching through several volumes of text. They also eliminate the need for consulting numerous cumulative supplements. Their principal disadvantage consists primarily of the paucity of indexing that they provide. In general, they lack the finding lists and cross-reference tables that are important means of accessing the print reporters. As a practical matter, the researcher should first learn how to research the books before graduating to a computer. Otherwise, his or her research proficiency will be confined to a screen unrelated to anything in tangible, organized form.

Computerized tax research requires familiarity with basic computer commands, icons, and templates. As most students know, a command is an electronic instruction transmitted to a computer through the use of a mouse or keyboard. An icon is a sensitized symbol or graphic on a computer screen which, when activated, executes an electronic command. A template is a chart or box which overlays or overrides screen graphics and text. These icons, commands, and templates are specific to the software of each tax service provider. Most of this software operates on Microsoft® Windows®; some, on Apple® Macintosh®.

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2 On some computerized tax services, icons appear, and are referred to, as "command buttons."

3 On some computerized tax services, templates appear, and are referred to as “dialog boxes.”
Thus, familiarity with either of these operating systems is essential for computerized tax research.

To conduct a search in any service, the researcher must always do two things. First, **activate a database**. A **database** is a file that stores information. This information can be either textual or numerical in form. As a general rule, the broader the database, the more thorough the search. Second, **implement a search strategy**. This strategy can be formulated in terms of keywords or citations. In general, the narrower the search strategy, the less productive the search. As a practical matter, the search should be as thorough as possible, yet not so all-encompassing as to overwhelm the researcher with a mass of impertinent information. The need for thoroughness should always be balanced with the need for efficiency.

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**EXAMPLE 1:** Let's say that you want to research the issue of whether meal vouchers are the same as cash allowances for purposes of IRC Section 119. Further, you want to explore all primary authorities that deal with the issue. Obviously, you would want to consult a broad set of databases. At a minimum, these databases should encompass the IRC, Treasury Regulations, IRS pronouncements, and federal court cases. (A database consisting of the IRC alone would hardly serve the purpose of thoroughness.) Likewise, you would want to implement an effective search strategy. This strategy might include the keywords,

\[
\text{meals and cash allowance}^4
\]

A search strategy consisting of **meals, cash or allowance** alone would hardly serve the purpose of manageability. Implementing such a strategy would likely result in hundreds of documents, most of which would not be on point. Thus, a balance is struck by broadening the database to include all primary authorities, and by narrowing the search strategy to reflect the principal search terms.

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^4 In some search modes, **cash allowance** must be placed in quotation marks. Otherwise, the search will retrieve a set of documents containing either **cash or allowance**.
There are three types of computerized tax services: first, electronic or "on-line" services, which convey information via the telephone lines. Chief among these services are Mead Data Central's LexisNexis® and the West Group’s WESTLAW®. Second, CD-ROM\(^5\) services, which store information on compact disk. Among these services are CCH’s ACCESS®, RIA's OnPoint®, and Tax Analysts' OneDisc®. (Both ACCESS and OnPoint are also available "on-line"). Third, Internet services, which convey information via the Internet. The principal Internet tax services are RIA’s CHECKPOINT® and the CCH Internet Tax Research NetWork.\(^{TM}\) In addition, noncommercial institutions, such as the government and universities, provide access to their tax-related databases via the World Wide Web.

Because the Internet has become the principal medium for conveying tax-related information to professionals, the passages that follow focus on the two principal Internet tax services: RIA’s CHECKPOINT (accessible at http://checkpoint.riag.com) and the CCH Internet Tax Research NetWork (accessible at http://tax.cchgroup.com/network) Let us examine the features of these services.

**Databases**

Both CHECKPOINT and the CCH Internet Tax Research NetWork (CCH NetWork) utilize state-of-the-art technology to convey timely information via the Internet. This information is stored in databases (called “libraries”), principal among which are the following:

<table>
<thead>
<tr>
<th>CHECKPOINT</th>
<th>CCH NETWORK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newsstand</td>
<td>My CCH</td>
</tr>
<tr>
<td>Federal</td>
<td>Federal</td>
</tr>
<tr>
<td>State and Local</td>
<td>State</td>
</tr>
</tbody>
</table>

\(^5\) Compact Disk Read-Only Memory.
Newsstand on CHECKPOINT and My CCH on the CCH NetWork provide information on recent tax developments. The Federal library on both services contains the text of the IRC, Treasury Regulations, IRS pronouncements, federal court opinions, and other primary sources. The Federal library on CHECKPOINT contains, in addition, the RIA citator, Federal Tax Coordinator 2d, and United States Tax Reporter annotations and explanations, while the Federal library on the CCH NetWork contains the CCH citator, Standard Federal Tax Reporter, and Federal Tax Service. Tax reporters for all fifty states and multistate tax guides are found in the State and Local library on CHECKPOINT and the State library on the CCH NetWork. Tax treaties, international tax treatises, and international tax newsletters are found in the International library of both services.

CHECKPOINT’s Estate Planning offers the text of estate tax treaties, newsletters, journals, and Warren, Gorham & Lamont treatises. CCH’s Financial and Estate library supplies the Federal Estate and Gift Tax Reporter, as well as the text of estate and gift tax statutes, cases, and rulings. Pension and Benefits on CHECKPOINT and Pension and Payroll on the CCH NetWork contain the text of ERISA, related regulations, and committee reports. Payroll on CHECKPOINT provides the text of state and federal employment regulations, as well as state employment statutes. Finally, Special Entities on the CCH NetWork provides the text of statutes, regulations, and commentaries pertaining to S corporations, partnerships, and limited liability companies.

Activating a Database

How does one begin to search in either service? The first step is to activate a database. The procedure for doing so differs in each service.
CHECKPOINT

Go to the main search page (under the “Research” tab) and click on the hyperlinked heading “Search.” This heading appears immediately below the tabs at the top of the page. Following this action, a listing of CHECKPOINT databases by practice area will appear on the screen. To the left of each heading will be a blank box. If you click on a box, a checkmark will appear, signifying activation. If you again click on the box, the checkmark will disappear, signifying deactivation. To change the applicable practice area, drop down the menu at the left of the screen and highlight the heading of a different practice area to be searched. As the screen refreshes, a new listing of CHECKPOINT databases relevant to the selected practice area will be displayed.

Alternatively, on the main search page, click on the hyperlinked heading “Table of Contents.” Next appearing on the screen will be a table of database contents. Within this table, to the left of each database heading, will be a blank box. If you click on a box, a checkmark will appear, signifying activation of the entire database. To activate a specific subdatabase, click on the hyperlinked heading of a database listed in the table of contents. As the screen refreshes, a listing of subdatabases within that database will appear. If you click on a box next to a subdatabase heading, a checkmark will appear, signifying activation of that specific subdatabase.

EXAMPLE 2a: Suppose you wanted to activate the database Federal Tax Coordinator 2d. Go to the main search page and click on the hyperlinked heading “Search.” Following this action, a listing of CHECKPOINT databases will appear on the screen. One such database will be Federal Tax Coordinator 2d. To the left of the database heading will be a blank box. Click on the box and the database will be activated.

Alternatively, on the main search page, click on the hyperlinked heading “Table of Contents.”
Next appearing on the screen will be a table of library contents. Within this table will be the hyperlinked heading “Federal Library.” If you click on this heading, a listing of databases within the Federal Library will be displaced. One such database will be Federal Editorial Materials. If you click on its hyperlinked heading, a listing of subdatabases within this database will be displayed. One such subdatabase will be Federal Tax Coordinator 2d. If you click on the box next to its heading, the subdatabase Federal Tax Coordinator 2d will be activated.

The CCH NetWork

To activate a CCH database, go to the main menu and click on the heading of a library to be searched. These headings appear as file folder tabs at the top of the screen. Following this move, a listing of databases within the main library will be displayed. To the left of each heading will be a blank box. Click on a box, and a checkmark will appear, signifying activation. Again click on the box, and the checkmark will disappear, signifying deactivation.

EXAMPLE 2b: To activate the database for Standard Federal Income Tax Reporter, first click on the heading for the Federal library. Following this action, a listing all databases within Federal library will be displayed. One such database is Standard Federal Income Tax Reporter. To the left of this heading will be a blank box. Click on the box, and a checkmark will appear, signifying activation.

Having activated one or more databases/subdatabases, you are ready to begin your search. CCH and RIA databases/subdatabases can be searched in four basic ways:
1. By keyword
2. By citation
3. By contents
4. By topic.

**Searching by Keyword**

*CHECKPOINT*

Searching CHECKPOINT by keyword is relatively simple. At the top of the main search page will be a blank field. To the right of this field will be a *Search* command button. Above this button will be the hyperlinked heading “Thesaurus/Query Tool.” In the blank field, type the keywords to be searched. If you want to conduct a Boolean search\(^6\), join these terms by "connectors". A **connector** is a conjunctive or disjunctive term that expresses a syntactical or spatial relationship among keywords. You can view a listing of CHECKPOINT connectors by clicking on “Thesaurus/Query Tool,” then by scrolling down the menu titled “Connectors.” Finally, execute the search by clicking on the *Search* command button. Next appearing on the screen will be a summary of search results and a listing of relevant documents. To view any one document, simply click on its hyperlinked heading.

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**EXAMPLE 3a:** Suppose you wanted to search by keyword whether meal vouchers are the same as cash allowances for purposes of IRC Section 119. Having activated the database *Federal Tax Coordinator 2d*, you would type the terms *meals and cash allowance*\(^7\) in a blank field for keywords. Then, you would click on the *Search* command button. Next appearing on the screen would be a summary of search results, expandable to a listing of

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\(^6\) A *Boolean* search, which requires “connectors,” retrieves documents based on a precise set of syntactical and spatial relationships. By contrast, a *folio* search, which requires no “connectors,” retrieves documents based on an approximate range of syntactical and spatial relationships.

\(^7\) In this RIA search mode, *cash allowance* need not be placed in quotation marks.
documents that contain the pertinent search terms. One such document, "H-1790 Cash allowances for meals and lodging" might be relevant to your research. To retrieve its text, simply click on the hyperlinked heading.

The CCH NetWork

Searching the CCH NetWork by keyword also is simple. At the top of the page that lists library headings will be a blank field. To the right of this field will be a command button labeled Search. Below this field will be a command button labeled Search Tools. Search serves to execute one’s search. Search Tools enables the researcher to vary the parameters of the search (e.g., by document date, document type, search logic, etc.).

In the blank field, after setting the desired parameters, type the keywords to be searched. Join these terms by connectors if you want to conduct a Boolean search. (For a listing of CCH NetWork connectors, refer to “Boolean Search Method” in the CCH NetWork Help Index.) Then, click on the Search command button. Next appearing on the screen will be a listing of documents that contain the relevant search terms. To retrieve any one document, click on its hyperlinked heading.

EXAMPLE 3b: To search by keyword whether meal allowances are the same as cash vouchers for purposes of IRC Section 119, in the Standard Federal Income Tax Reporter database, you would proceed as follows: First, in the blank field at the top of the screen, you would type the terms meals and “cash allowance.”

In this CCH search mode, cash allowance should be placed in quotation marks.
would be the hyperlinked headings of documents that contain the relevant search terms. One such document, “CCH-EXP, 99FED ¶7222.24, Meals and Lodging Furnished by Employer: Cash allowances” might be relevant to your research. To retrieve its text, simply click on the hyperlinked heading.

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**Searching by Citation**

**CHECKPOINT**

To search CHECKPOINT by citation, go to the main research page and click on the hyperlinked heading “Search.” Appearing at the left of the screen will be the heading “Find by Citation,” followed by a listing of primary and secondary sources. Click on the hyperlinked heading of a source to be searched. Next appearing on the screen will be a citation search template. Within this template will be a series of blank fields next to a series of *Search* command buttons. In a blank field, type the citation of a document to be searched, then click on the corresponding command button. Following this action, the text of the cited document will be displayed.

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**EXAMPLE 4a:** Suppose you wanted to retrieve Paragraph H-1790 of *Federal Tax Coordinator 2d*. From the main research page, you would click on the hyperlinked heading “Search.” Appearing at the left of the screen would be the heading “Find by Citation,” followed by a listing of primary and secondary sources. Click on the hyperlinked heading “Federal Tax Coordinator 2d.” (This heading is found under the listing “More…” beneath the phrase “Find by Citation.”) Next appearing on the screen would be a *Federal Tax Coordinator 2d* citation search template. In the blank field for “FTC Paragraph Number(s),” you would type the symbols "H-1790," then you would click on the corresponding *Search* command button. Following execution, the text of the document "H-1790 Cash
allowances for meals and lodging” would be displayed.

The CCH NetWork

To search the CCH NetWork by citation, click on the Find by Citation command button, located at the top of the main page. Next appearing on the screen will be a citation search template. Within this template will be one or more (1) document headings, (2) blank fields, and (3) Search command buttons. (On some templates will be a single blank field for entering a complete citation.) Now, select the type of document to be retrieved. Then, in the blank field next to the document heading, type the numerical citation. Finally, execute the search by clicking on the corresponding Search command button. Next appearing on the screen will be either the hyperlinked headings of documents on point or the text of a specific document text.

EXAMPLE 4b: To retrieve ¶7222.24 of the Standard Federal Tax Reporter, you would click on the Find by Citation command button. A ”citation search” template would appear on the screen. In the blank field next to the heading “CCH ¶", you would type “7222.24”. Then, you would click on the Search command button. Following execution, the text of the document “CCH-EXP, 99FED ¶7222.24, Meals and Lodging Furnished by Employer: Cash allowances” would be displayed.

Searching by Contents

The organizational structure of CCH and RIA databases resembles an outline. At the top of the outline, the most comprehensive of databases correspond to the most general of topics. At the bottom of the outline, the least comprehensive correspond to the most specific of subtopics. As the outline expands, the databases narrow, and the subtopics become more specific. The final
level of specificity is represented by the text of specific documents. Searching by contents tracks this outline to the final level of specificity. On both services, it is accomplished in a series of steps.

CHECKPOINT

Start your search by going to the main research page and by clicking on the hyperlinked heading “Table of Contents.” As the screen refreshes, a table of contents page will be displayed. At the left of this page will be three headings: “Display Level 1,” “Display Level 2,” “Display Level 3.” In the center of the page will be a hyperlinked listing of CHECKPOINT libraries. To the left of each listing will be a "plus" sign. When activated, this sign will turn into a "minus".

To view the contents of all libraries, click on the "Display Level 2" heading. A listing of databases within the libraries will appear, as the topical outline expands. To view the contents of these databases, click on the "Display Level 3" heading. A detailed listing of subdatabases will appear, as the topical outline further expands. To view the contents of a single library, click on the "plus" sign next to its corresponding heading. The "plus" will turn into a "minus," as a listing of databases within that library is displayed. Continue this process until you obtain a listing of documents. Then, select the document most on point. To retrieve its text, simply click on its hyperlinked heading. To reverse the process (that is, to return to the first-level of library headings), either click on the "Display Level 1" heading, or successively click the "minus" signs next to the activated database headings.

EXAMPLE 5a: To search the Federal Tax Coordinator 2d subdatabase for documents relating to "meal vouchers" and "cash allowances", you would go to the main research page, click on the “Table of Contents” heading, then follow this hyperlinked path:

* Federal Library
* Federal Editorial Materials
As you did so, you would browse through the contents of each database for topics/documents on point.

The CCH NetWork

From the main page, click on the hyperlinked heading of a library to be searched. Following this action, a listing of databases within this library will be displayed. Next, click on the hyperlinked heading of a database to be searched. A listing of subdatabases within this database will unfold. Continue this process until you reach a listing of documents within a particular subdatabase. Peruse through the listing until you find a document on point. To retrieve its text, simply click on the hyperlinked heading.

EXAMPLE 5b: To search the Standard Federal Income Tax Reporter database for documents relating to "meal vouchers" and "cash allowances", you would go to the main page, then follow this hyperlinked path:

* Federal Library
  * Standard Federal Income Tax Reporter
    * Exclusions and Exemptions
      * Meals and lodging -- Sec. 119
      * CCH-EXP, Meals and Lodging Furnished by Employer

As you did so, you would browse through the contents of each database/subdatabase for topics/documents on point.
Searching by Topic

Both CHECKPOINT and the CCH NetWork provide topical indexes for the IRC and their principal secondary sources. By consulting these indexes, the researcher can topically search underlying text databases.

CHECKPOINT

The CHECKPOINT topical indexes are found in the Federal Indexes subdatabase, within the Federal Editorial Materials database, under the Federal library. They can be accessed in one of two ways: first, by going to the main “Table of Contents” page, then by successively clicking on the hyperlinked headings for the foregoing library, database, and subdatabase; or second, by going to the main “Search” page, then clicking on the hyperlinked heading “Indexes” located at the bottom left corner of the screen. Following these actions, a listing of IRC, Treasury Regulation, and secondary source indexes will be displayed. Within each index will be an alphabetized listing of letters, topics, and subtopics. Next to each subtopic will be a hyperlinked reference(s) to a pertinent document(s). If you click on a reference, you will obtain the document text.

EXAMPLE 6a: To search CHECKPOINT by topic for documents relating to "meal vouchers" and "cash allowances", you would first click on the Table of Contents command button. Then, you would follow this hyperlinked path:

* Federal Library
* Federal Editorial Materials
* Federal Indexes

Under Federal Indexes, you would select Federal Tax Coordinator 2d Topic Index. Then you would proceed along this path:

* M
  * Meals and lodging

Within the latter subdatabase would be a listing of subtopics, among which "Cash allowances". Next to this subtopical heading would be a series of hyperlinked references, including one to H-
If you clicked on this reference, you would obtain the text of a document on point.

The CCH NetWork

In the CCH NetWork, topical indexes are found within the various main libraries. For example, the topical index for the IRC and for all federal tax reporters are found in the Federal library; those for all state tax reporters are found in the State library. Searching by topic in this service is similar to searching by topic in CHECKPOINT. Simply click on a hyperlinked index heading, then a hyperlinked alphabetical letter, then a hyperlinked document reference. Following the latter action, the text of a particular document can be retrieved.

EXAMPLE 6b: To search the CCH NetWork by topic for documents relating to "meal vouchers" and "cash allowances", you would first access the Federal library, then follow this path:

* Topical Index – Standard Federal Income Tax Reporter
* M
* TOP-INDX, 2004FED, MEALS AND LODGING

Within the latter subdatabase would be a listing of subtopics, among which "cash allowances". Next to this subtopic would be a hyperlinked reference to ¶7222.24. If you clicked on the paragraph reference, you would retrieve the text of a document on point.

Moving Within and Between Documents

Let's assume that you have retrieved the text of a document on point. How do you view this text, and how do you move between documents within your set of search results? At the right-hand side of the screen in both CHECKPOINT and the CCH NetWork is a scrollbar. If you pull down the scrollbar, you will be able to view document text. Within this text are likely to be hyperlinked citations to other authorities. To retrieve an authority, simply click on its hyperlinked citation. Above the text of most primary, and some secondary, sources will be
either command buttons or hyperlinked headings. These features will take you to other authorities pertinent to the document under view. Finally, both CHECKPOINT and the CCH NetWork contain devices for moving between documents within the set of search results, and for moving between documents beyond the set of search results (as if you were paging through a book). In CHECKPOINT, these devices appear at the bottom of the screen as sets of arrows. In the CCH NetWork, they appear at the top of the screen under the heading “Nearby Documents.”

Other Features

RIA and CCH are constantly adding new features to their services. These features are designed to enhance the timeliness, efficiency, and thoroughness of tax research. For example, both services allow the researcher to,

* Trace the history of a particular search
* Set search parameters
* Store documents in client folders
* Export text to word processing programs
* Update research with timed, automatic runs
* Receive email on updated search results.

Noncommercial Internet Services

Many noncommercial institutions, such as the government and universities, allow access to their tax-related databases via the Internet. Although the cost of this access is considerably less than that of subscribing to a commercial tax service, searching the noncommercial databases poses three disadvantages to the researcher. First, the scope of tax-related information on the noncommercial sites is narrower than that on the commercial sites. Such information does not encompass all primary tax authorities. Second, the historical breadth of tax-related
information on the noncommercial sites is limited. To be sure, most noncommercial databases store only a few years' data. Third, the documents provided on the noncommercial sites are less "searchable". Some of these documents cannot be accessed even by keyword. For these reasons, care should be exercised in searching the noncommercial sites. Together, they should not be regarded as a substitute for a commercial tax service.

Most of the noncommercial sites are equipped with their own "search engines". A search engine is a software device for retrieving documents by keyword, citation, subject, author, or other attribute. The features of the various search engines differ with the various sites. Some sites serve as "gateways" to other Web sites. A gateway is a central location for hyperlinking to other sites maintained by other service providers. It is analogous to an index, electronically connected to reference material. Still other sites supply data for download. Such data require special software to decode.

In "tax-surfing" the Internet, the researcher might first visit the IRS site located at http://www.irs.gov. Though oriented to the layman, this site contains a wealth of information useful to the tax professional. Such information includes guidelines for electronic filing, IRS forms and instructions, the full text of Treasury Regulations, and recent issues of the Internal Revenue Bulletin. Other useful sites include those maintained by the Library of Congress at http://thomas.loc.gov and the Government Printing Office at http://www.gpoaccess.gov. From these sites, the researcher can retrieve the text of recent court opinions, tax legislation, committee reports, state and federal tax laws, and much more. Surprisingly, most recently published primary authorities, with the notable exception of some treaties and court opinions, are available on the noncommercial sites. A selected listing of these sites organized by authority is presented in TABLE 1.
STOP & THINK
Access the IRS site at http://www.irs.gov and search whether meal vouchers are equivalent to cash allowances within the meaning of IRC Section 119. At the left side of the main page will be a template for searching the IRS site. In the blank field of this template, enter the keywords,

*meals and cash allowance*

then answer the following:

**Questions:** How many documents do you retrieve? Are any on point? Under the Treasury Regulations, may they be cited as "substantial authority" for the tax treatment of an item? *(To answer this question, consult an Internet site that provides the text of 26 C.F.R. Sec. 1.6662-4.)*

**Answers:** Your search should have retrieved over 500 documents, among which *IRS Publication 15-B, Employer’s Tax Guide to Fringe Benefits*, which is most on point. One could argue that this document may be cited as "substantial authority" for the tax treatment of an item; that is, insofar it constitutes an "IRS information release" within the meaning of Reg. Sec. 1.6662-4(d)(3).

An excellent gateway for starting tax-related research is *Tax Accounting Sites Directory* at [http://www.taxsites.com](http://www.taxsites.com), maintained by Dennis Schmidt, Professor of Accounting at the University of Northern Iowa. This site provides hundreds of hyperlinks to federal, state, and international tax law and tax form databases. Instrumental in financial accounting searches is the Electronic Data Gathering, Analysis, and Retrieval (EDGAR) site at [http://www.sec.gov/edgar.shtml](http://www.sec.gov/edgar.shtml). EDGAR is a document filing and retrieval service sponsored by the U.S. Securities and Exchange Commission (SEC). It provides access to the full text of documents filed with the SEC by publicly traded companies. These documents include annual financial statements on Form 10-K, quarterly financial statements on Form 10-Q, proxy statements, and prospectuses.
The EDGAR database extends from January 1994 to the present. It is accessible by company name, central index key, document file number, and keyword.\footnote{For a more detailed discussion of computerized tax research in general, see William A. Rabbe, Gerald E. Whittenburg, John C. Bost, and Debra L. Sanders, \textit{West's Federal Tax Research}, 6th Edition (Cincinnati, OH: South-Western College Publishing, 2003), Chapters 6 and 7.}