

Current Comments®

You Don't Need an Online Computer to Run SDI Profiles Offline! So Why Haven't You Asked for ASCA— The ISI Selective Citation Alert

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A few years ago, I described my difficulties in responding to laypeople who ask me, "What do you do for a living?"¹ But when professionals ask the same question, I tell them: "My firm provides a computerized clipping service. We can tell you not only what has been published on almost any subject you can name, but also if anyone has quoted or cited any of your publications." This answer is usually greeted with a look of semi-disbelief. At that point, I take out the latest copy of my own personal ASCA® report. ASCA (*Automatic Subject Citation Alert*) is ISI®'s selective dissemination of information (SDI) service. ASCA reports alert scientists and scholars to new publications dealing with their specific interests. We have been operating this service for over 15 years.

I am still unable to understand why there is such widespread naiveté about this service. Figure 1 shows an advertisement for ASCA which appeared in *Science* back in the mid-1960s. It invited readers to imagine a "custom designed" information service. That's what a customized "clipping service" is. The term is used in the US to describe a service provided to public relations managers. But most clipping services confine their coverage to newspapers and magazines. They use trained readers to look for articles that concern or mention their clients. Press agents for celebrities take advantage of clipping services to tell them what the press is saying about their cli-

ents. ISI's clipping service tells you what the science press is saying about you, or about things of interest to you.

The ad in *Science* produced a phenomenal response. We received thousands of inquiries and dozens of orders with checks. To each of these respondents, we sent an ASCA "profile" form, very much like the one shown in Figure 2. This form was our way of asking what subjects should be covered. Several months passed, and a number of people who had already paid for ASCA subscriptions still had not returned their forms. We called each of them, and found that most of them assumed that the computer could figure out for itself what they were interested in!

At that point, I decided to try a procedure for "automatic profiling." For each delinquent profile, I looked up the last paper the subscriber had published. I used the list of cited references in that paper as the basis for an initial profile. I eliminated some references that obviously would not be useful, such as commonly cited statistical methods. I also added the subscriber's name as a source and cited author. To round out the profile, I selected a few keywords from the title of the paper, or those that had occurred repeatedly in the cited references.

The results of this experiment were spectacular. We found that nearly all of the profile "terms" were right on target. We sent to each subscriber the first weekly report (a recent sample is shown

Figure 1: Early advertisement for ASCA®.



Close your eyes. Imagine you're creating a weekly current scientific awareness service to alert you to only those particular articles you are interested in. You think to yourself this is a good idea, but not possible.

Now open your eyes. There is such a service available, starting January 1965. It's called ASCA. It's custom designed for each individual scientist everywhere in the world and in every discipline. And it costs less than \$2.00 per week for your own individual computer printout. Interested? Want details? Write for information. You'll be glad you did.

Please send information on ASCA.

01/02

Name _____

Title _____

Organization _____

Address _____

City _____

State _____

INSTITUTE FOR SCIENTIFIC INFORMATION

525 Chestnut Street Philadelphia Pa 19106

Figure 2: Sample ASCA® profile form.

Specifically, I am interested in the following subject:

Some of the authors who have published the most important articles on this subject are:

Some of the best known articles on this subject are:

(Author)	(Journal)	(Vol.)	(Page)	(Year)

Some significant words, phrases and word stems used in titles of articles describing this subject are:

Name/Title

Organization/Dept.

Address

City

State/Province

Country

ZIP/Postal Code

Telephone

in Figure 3), with a reminder to use the back of each report to modify the profile at any time. In other words, you just use the carbon copy of the weekly report to add or delete terms. For all intents and purposes, this procedure for compiling a personalized profile still works in most cases.

It is now over 15 years since that experiment with automatic profiling. But I find a surprising number of scientists still

don't know about ASCA, despite considerable advertising in *Current Contents*® (CC®) and elsewhere. Many of those who have heard of ASCA view it with skepticism. This skepticism takes a variety of forms.

For example, some people have doubts about the completeness of ASCA's coverage. Perhaps the cost of ASCA seems too low to be comprehensive. But there are also those who

remember when, back in the mid-1960s, *ASCA*'s coverage was limited to the approximately 700 journals then indexed in *Science Citation Index*[®] (*SCI*[®]). People who had experience with *SCI* in its early days know that it excluded some of the better journals in descriptive biology, earth science, and other fields. It didn't cover the social sciences and many other subjects now well represented in our various *CC* editions. But today, *ASCA* covers the more than 5,400 journals indexed in *SCI* and *Social Sciences Citation Index*[®] (*SSCI*[®]).

Recently, a retired Harvard professor expressed to me his misgivings concerning *ASCA*'s coverage. I responded by sending him an *ASCA* report which contained just one profile term—his name as a cited author. After looking over the results—the list of articles which cited him—he sent me a letter which began, "My face is red," and in which he declared himself free of any doubts he had about the scope and comprehensiveness of *ASCA*'s coverage. That is not to say that we cover everything. But we do cover everything that is important.

Some people are perhaps skeptical about *ASCA*'s search methods. It must seem incredible that the minimal amount of effort required to supply a few keywords, authors, or papers can result in reports of all new articles on a topic. But this effort is all that is needed because of the versatility of *ASCA*'s search methods.

What people don't realize is that with *ASCA*, we not only do title word searches, we do them in very sophisticated combinations. Not only can we perform various kinds of "Boolean" searches, we can provide right and left truncation, or what we call "floating" stems. In other words, you can do a string search as might be required in searching through chemical or biological terms.

With cited-author or cited-paper terms, the computer performs a straight-

forward citation search, just as if you were searching *SCI* in the library. The difference is that *ASCA* does it automatically each week. *ASCA* is the only SDI service available with the added capacity to search by cited author, paper, book, etc. This capability alerts you to relevant documents that other types of indexing terms would not have identified because title words, for example, would not by themselves have indicated the item's relevance. I should mention that to date, cited-author terms identify only those papers in which the author in question appears first in the by-line. But this will soon change, and cited-author terms will identify papers regardless of the author's position in the by-line, provided the paper has appeared in any of our citation indexes as a source item from 1955 to the present.

In addition to title words, authors, or papers, *ASCA* profiles can also include key institutions, or even countries of publication. I did in fact once describe how administrators can use *ASCA* to monitor the scientific output of their respective countries.² A combination of any or all of the different types of *ASCA* search terms will produce weekly reports that contain the information you want to see, and only that information.

Perhaps the most frequent objection to *ASCA* that I hear comes from those who regularly browse *CC*. They somehow feel that *ASCA* would be redundant. They ask, "If *CC*, why *ASCA*?" *ASCA* delivers a convenient, self-contained weekly report with complete identification of your selected source items. I do not recommend *ASCA* as a substitute for *CC*. However, reading journal titles in *CC* will not tell you which articles have cited your work, or the work of a colleague. Nor can you, without considerable effort, find out through *CC* the latest papers that have been published by a particular group at a particular institution. It is true that you can use *CC*'s *Weekly Subject Index*

Figure 3: The first page of a sample ASCA® report. The column at left identifies the profile term that produced each entry. The profile used contained J. Schlessinger as a source-author term, and this report shows he has published a paper during the week covered. J. Schlessinger was also used as a cited-author term, and the paper by Waterfield cited Schlessinger. To illustrate an organizational search, the profile contained the French INSERM (Institut National de la Sante et de la Recherche Medicale) as a search term. The report thus includes a paper by P.J. Voisin and colleagues of INSERM. (If desired, this report could have been limited to only papers from INSERM which match any or all of the other profile terms.) The papers by R. Ladenheim and colleagues and S.B. Elias and colleagues were identified by using the phrase "insulin receptor" and "autoantib" as a floating stem. The column at left identifies phrases only to the first nine letters, with two spaces between each word. "Insulin receptor" thus appears on the report as "insulin."



9403 ACCT NO

REPORT FOR 04 MAR 83 PAGE 1

418,792 INDEXING TERMS FROM CURRENT SCIENTIFIC LITERATURE WERE PROCESSED FOR ASCA THIS WEEK

 LATERAL AND ROTATIONAL DIFFUSION OF EGF RECEPTOR COMPLEX - RELATIONSHIP TO RECEPTOR-MEDIATED ENDOCYTOSIS
 (AUTH HIT) SCHLESSI, J
 BIOPOLYMERS 22(1): 347-353, 1983 23 REFS
 THESE ITEMS IN YOUR PROFILE WERE CITED:
 KAHN CH J CELL BIOLOGY 70 261 76
 SCHLESSINGER J P NATL ACAD SCI USA 755353 78
 -----> CHECK TO ORDER TEAR SHEETS -----> () #QB345
 J SCHLESSINGER, WEIZMANN INST SCI, DEPT CHEM IMMUNOL, IL-76100 REHOVOT, ISRAEL

 REDUCTION OF BETA-THROMBOGLOBULIN LEVELS IN DIABETICS CONTROLLED BY ARTIFICIAL PANCREAS
 VOISIN PJ ROUSSELL D STREIFF F DEBRY G
 STOLTZ JF DROUIN P
 METABOLISM 32(2): 138-141, 1983 31 REFS
 THESE ITEMS IN YOUR PROFILE WERE CITED:
 INSEKMU59 -----> CHECK TO ORDER TEAR SHEETS -----> () #0B425
 PJ VOISIN, UNIV NANCY 1, DEPT NUTR & MALAD METAB, F-54000 NANCY, FRANCE

 A MONOCLONAL-ANTIBODY TO THE HUMAN EPIDERMAL GROWTH-FACTOR RECEPTOR
 WATERFIELD MD MAYES ELV STROQBAN P BENNET PLP
 YOUNG S GOODFELL PN BANTING GS
 OZANNE B
 J CELL BIO 20(2): 149-161, 1982 75 REFS
 SCHLESSINGER J THESE ITEMS IN YOUR PROFILE WERE CITED:
 P NATL ACAD SCI USA 752659 78
 -----> CHECK TO ORDER TEAR SHEETS -----> () #QB584
 MD WATERFIELD, IMPERIAL CANC RES FUND, DEPT PROT CHEM, LINCOLNS INN FIELDS, LONDON WC2A 3PX, ENGLAND

 INSULIN (SP) ACTION OF INSULIN ON OVARIAN STEROIDOGENIC ACTIVITY - PRELIMINARY CHARACTERIZATION OF THE INSULIN-RECEPTOR (MEETING ABSTR.)
 LADENHEIM R TESONE M CHARREAU E
 MEDICINA 42(6): 718, 1982 NO REFS
 -----> CHECK TO ORDER TEAR SHEETS -----> () #QA690
 R LADENHEIM, INST BIOL & MED EXPTL, RA-1428 BUENOS AIRES, OF, ARGENTINA

 AUTOANTIB AUTOANTIBODIES TO ACETYLCHOLINE-RECEPTORS IN MYASTHENIA-GRAVIS (LETTER)
 ELIAS SB APPEL SM
 N ENG J MED 308(7): 402, 1983 6 REFS
 -----> CHECK TO ORDER TEAR SHEETS -----> () #QB718
 SB ELIAS, HENRY FORD HOSP, DETROIT, MI 48202

FOR OATS® SERVICE, MARK ITEMS WHERE INDICATED ABOVE () AND SEE ORDERING INSTRUCTIONS ON BACK OF FORM.

to follow the literature on particular topics. But there are certain topics where this can be a real chore. The search may require a combination of terms or synonyms. After all, the purpose of computers is to save us time in doing repetitive operations.

There is an even better reason for using *ASCA*, even if you read every word of the edition of *CC* you use. *ASCA* combines the contents of six *CC* editions, each of which covers a broad area of scholarship. So if there is an occasional reference in another *CC* edition that you might miss, *ASCA* can relieve your multidisciplinary anxiety. This is especially true of overlapping fields, as between the social and medical sciences, or physics and engineering.

Suppose there are one or several small specialty journals you would like to follow, which are covered in a *CC* edition that you don't read. These can be part of your *ASCA* profile in two ways. You could get a complete listing of the contents of each issue, or you could be informed of any article that cites anything published in that journal. This knowledge is frequently useful to journal editors.

Information scientists differentiate between SDI and retrospective searching, although both involve the same procedure to retrieve information. The difference is in the time period covered. Many new subscribers to *ASCA* would like to have their profiles searched from past years up to the start of their subscriptions. But using *ASCA* for such retrospective searches would be grossly inefficient. *ASCA* uses a "batch processing" method, in which all profiles are entered simultaneously into the computer, with the output sorted after the computer has completed its run. This keeps costs down. *Ad hoc* retrospective searches are best performed by using the online or print versions of our files. For the sciences, there's *SCISEARCH*[®], which has been available for many years from *DIALOG*, as well as the print *SCI*.

For the social sciences, there's *Social SCISEARCH*[®], available from both *DIALOG* and *BRS*, as well as the print *SSCI*.

ASCA is, and always was, an offline SDI service—that is, one does not communicate directly with a computer to have a search performed in real time. I find it amusing the way some of the so-called online SDI systems are described.³ This applies to *MEDLINE*, *DIALOG*, *BRS*, and others. To obtain an SDI report, one goes online to ask for an offline printout. This "online-offline" option is nothing more than a variation of the batch system we've been using for years. One can, of course, obtain fully online SDI when dialing up the computer each week. But this is both time-consuming and expensive, because one pays for connect time while the computer prints out the SDI report. Moreover, the information received is not as current as one may think, since data base vendors don't always update their files weekly, the way we update *ASCA*. With both the online-offline option and *ASCA*, you do have to wait for your report to arrive in the mail.

Printing and mailing costs influence the cost of an *ASCA* profile. Thus, if your profile covers a prolific area of research and produces many pages of reports, its cost will be greater. For example, if you wished to keep abreast of developments in catastrophe theory, you wouldn't expect many hits. However, research involving the drug cimetidine now results in about 1,000 papers per year. That's about 20 hits per week—perfectly manageable. But if you are interested in some aspect of DNA research, you would be inundated by using unrestricted terms such as "DNA" or "RNA." You can use such high-frequency terms in combination with others to narrow the output and the cost, as, for example, "recombinant DNA."

When you talk about the cost of an information service, you are dealing with a very subjective concept. If I tell you

ASCA is cheap, then I must be comparing it to something else. A personal subscription to *CC* costs \$230 per year in the US. Sharing the subscription with colleagues cuts the cost considerably. The minimum for an *ASCA* subscription is \$150 per year. However, since the price of a profile depends primarily on the number, type, and frequency of occurrence of terms, a subscription shared with a colleague in your lab could cover both your needs, while the total cost may be just \$200 per year.

Another way of keeping the cost of our SDI service down is to spread it out among an entire invisible college. Some years ago, the Classification Society designed an *ASCA* profile to serve its entire membership of several hundred people. Due to the length of the profile, it would have cost an individual member subscriber as much as \$1,000 per year. But spreading the cost out among its members reduced it considerably. This type of group need inspired us to prepare other such "canned" profiles to serve broader topics. We call this service *ASCATOPICS*[®]. We now have more than 300 to choose from in the sciences and the social sciences. For \$150 per year, you can receive comprehensive weekly reports on the latest literature about a great variety of topics, from cyclic AMP to surface physics, from noise control to rural economics.

There are several ways in which we ensure that the search terms used for *ASCATOPICS* profiles are kept up to date. We encourage users to suggest terms that reflect the latest developments in their fields. Also, we use our own files of research front data to detect paradigm changes in a field and to identify emerging specialties. I needn't describe our clustering process here, as I have done so many times.⁴ But this process ensures that most of the core papers in each field are included in the profile. By the way, I should mention that if you have any ideas about designing an *ASCATOPICS* profile to serve research-

ers in your own specialty, you should feel free to contact us about it.

Naturally, the weekly printouts are delivered by mail. But we can also provide *ASCA* and *ASCATOPICS* reports on magnetic tape. Most subscribers to this service are companies or institutions that require many different profiles. Organizations that receive *ASCA* and *ASCATOPICS* tapes can print their own reports in any quantity desired. In fact, governments or large organizations can purchase our entire *SCI/SSCI* data base on tape. From these tapes, users can establish their own SDI systems. We can also supply the required *ASCA* software. In 1980, the Library of the Hungarian Academy of Sciences purchased *SCI* tapes and *ASCA* software to provide its patrons with SDI reports.⁵ Other subscribers to *ISI* tapes include pharmaceutical companies or other organizations who may prefer to keep their profiles and reports confidential. Running their own *ASCA* searches allows them to duplicate reports, edit and reformat their reports to meet their needs, and maintain the privacy of their interest profiles. I might point out, however, that all *ASCA* profiles are held in strictest confidence.

Last week, I described our *Sci-Mate*[™] system.⁶ With a *Sci-Mate*-controlled microcomputer as your intelligent terminal, you can store your profile indefinitely. Then you can dial up *ISI* each week for your *ASCA* report. We can transmit your *ASCA*-selected information for direct output on your printer, or in electronic form directly to your floppy-disk memory. This feature will make it simple for you to examine each hit before it is placed in your permanent personal microcomputer files. *Sci-Mate* will also enable you to generate reprint requests automatically.

There has been a general resistance to SDI services within the scientific and academic communities which I find hard to understand. For example, when I visit universities and other places, I hear

deans and department heads complain that it is impossible to know exactly what the faculty and staff are publishing. And yet for over 15 years, at an incredibly low fee, that capability has been within their reach. Why have so few libraries used ASCA or another SDI system to help their administrators with this problem? And what about publishers of journals and books? Isn't it of marketing or editorial interest to know when and by whom your books and journals are cited?

Satellite technology has made it possible for information to be disseminated worldwide on the same day as it is entered into a computer system. Whereas ASCA is now a weekly service that is among the most timely yet available, it will one day become a daily service for those who require it. This could include pharmaceutical companies which need to know about published reports on their drugs as soon as they appear. I've mentioned how you can obtain ASCA by online access. But in the near future, we will be able to deliver ASCA reports directly to your own personal micro-computer. A communications satellite will transmit a signal to turn on your terminal; then, by a coded message, it will transmit your daily or weekly report.

The early pioneers of SDI such as Hans P. Luhn⁷ may have imagined such technological developments as SDI by satellite. But I wonder if they ever dreamed that the capability would be with us so soon. Now that it is almost here, there are a lot of people who need to catch up with what they should have known a long time ago. If you're uncomfortable with the idea of SDI, then let your secretary or lab assistant check into it for you. Your life may never be the same. As the ad said more than 15 years ago: "Close your eyes. Imagine you're creating a weekly current scientific awareness service to alert you to only those particular articles you are interested in.... Now open your eyes." Ask for ASCA.

For more information about ASCA or ASCATOPICS, contact the Marketing Services Department, ISI, 3501 Market Street, University City Science Center, Philadelphia, Pennsylvania 19104, USA.

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