# Alerting with Internal Abstract Bulletins*

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## I. INTRODUCTION

With all the published current awareness services available, why do some companies persist in preparing their own abstract bulletins for internal distribution? Such abstract bulletins are expensive services, although the cost is frequently hidden by the company's accounting system. They take up the time of professional and clerical personnel which might otherwise be devoted to other services. They usually cannot cover nearly as many primary sources as a well-established published service such as *Chemical Abstracts* or *Rubber RAPRA Abstracts*. Why then should you prepare your own abstract bulletin at all?

Perhaps you shouldn't. If your company's business is such that (a) one or two good existing abstracting services cover all of your fields of interest, and (b) at least half the items appearing in each of these are pertinent to your business, or (c) all your interests fall within one or more well-defined sections of *Chemical Abstracts* or of some other existing abstracting service, then you should probably rely on these services for abstracts. Perhaps you might use some other method, such as title announcements, to alert potential readers to specific items faster than the published abstracting services. But you would probably think twice before embarking on the expense of preparing an abstract bulletin.

There are other situations in which you might well hesitate to start an abstracting service: (1) if your main responsibility is to a group of scientists (in contrast to technologists), each working in a limited field and showing little interest in other areas (such scientists frequently obtain the latest information of interest to them through direct contact with their colleagues and by reading a limited number of journals, usually faster than through any abstracting service); (2) if your *only* objective is "alerting", as opposed to "informing", *and* there is no need for storage of current information for subsequent retrieval; and (3) if qualified abstracting staff is not available.

If, on the other hand, you do have or can obtain adequate staff and none of the published abstracting services or a convenient combination thereof seems to meet your needs completely, then you should certainly consider establishing your own abstracting service if you wish to fulfill the following objectives: (1) alert a number of people as to the existence and pertinence of recorded information of which they might otherwise not be aware; (2) protect them from an excessive amount of nonpertinent documents; and (3) help them to tell the difference, *i.e.*, to decide what to read and what not to read. These objectives can be met *only* by "tailor-made" abstracting and digesting services, *i.e.*, by internal abstract bulletins or by selective dissemination of abstracts or literature summaries to individuals on the basis of the specific interest of each person.

Other alerting services do not fulfill these needs. Published abstracting services are not sufficiently selective and frequently too slow. Reproduced contents pages, whether purchased or prepared internally, also include too much which is not pertinent and, on the other hand, cannot cover such sources as patents or trade literature. Published title-lists such as *Chemical Titles* and *Current Chemical Papers* also suffer from not being selective enough. Internally prepared selective title-lists serve well for alerting purposes but, in my opinion, do not give enough information about each item to enable the reader to make a decision "not to read" with confidence.

A case can be made for using titles alone, without abstracts, as an effective alerting method (*1*). In studying the use made of our own abstract bulletins at Cabot Corporation, we have found that readers actually do use mainly the title in their initial decision to use or reject an item. Usually, they read an abstract only after the title has aroused their interest; then the abstract enables them to make a further decision to read or disregard the original. Thus, the abstract does not necessarily give the reader a larger number of relevant items than he might obtain from a list of titles alone; it does, however, enable him to *reject* items which, from the title alone, appeared to be of potential interest. Thus the abstract bulletin enables the reader to be more selective in his reading.

In another context, *i.e.*, machine indexing, Montgomery and Swanson (*2*) concluded that a bibliographic citation system should present "something more than titles" to the reader.

In summary, the main advantages of an internal abstract bulletin are:

(1) It can be tailored to the company's interests in coverage, selectivity, style, and slant.

(2) It can combine selectivity with wide coverage of sources by including selected items from other abstracting services as well as special types of publications such as patents and manufacturers' brochures.

(3) It can cover unique and possibly confidential sources such as internal reports and private communications.

(4) More information can be imparted than in any listing of mere titles, including reproduced contents pages and keyword-in-context indexes.

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(5) It provides a single source of information instead of, perhaps, several overlapping published services.

(6) It can be faster than published services, at least for some item.

(7) It makes possible the simultaneous creation of a permanent retrievable record.

Against these advantages one must balance the following disadvantages:

(1) High cost—compared to published abstracting services, to some of which you must subscribe in any case; also compared to the preparation of title-lists, but not necessarily compared to selective dissemination of individual items to specific users.

(2) Less selectivity than selective dissemination of information.

(3) Possible bias if prepared by a small staff.

(4) Not as fast as title lists.

As a rule of thumb, internally produced selective title-lists hold the edge where speed of alerting and low cost are most important; selective dissemination to individuals, where the interest of individuals differ widely and selectivity is vital; and internal abstract bulletins where: (a) the same items must be brought to the attention of a large number of people in different departments and positions, *e.g.*, research, development, marketing, sales, and patent departments; (b) selection from "borderline" material is to be left to the reader, rather than made by the Information Department; (c) the readership prefers abstracts to titles; and (d) a permanent retrievable record is desirable.

In our own company we have found it worthwhile to supplement our regular, rather slow (monthly and quarterly) abstract bulletins with weekly title-lists and even more frequent "express" abstract bulletins and announcement services in special fields for limited audiences, as well as distribution of selected contents pages and routing of periodicals. By a combination of all of these services we aim to make the technical staff and management aware of pertinent items in the current literature and in our own technical reports which might not otherwise come to their attention and, at the same time, protect them from an excessive flood of nonpertinent material.

## II. PREPARATION OF AN ABSTRACT BULLETIN

The actual process of producing an abstract bulletin consists of the following steps: (1) reading of original documents, (2) selection of items to be abstracted, (3) abstracting, (4) editing, (5) arrangement of abstracts in the proper order for inclusion in the abstract bulletin, (6) typing, (7) proofreading, (8) reproduction, (9) collating and binding, and (10) distribution. Steps 1 through 5 are concerned with the intellectual part of the process. The remaining steps are concerned with the physical production and distribution of the bulletin.

Steps 4 through 6 may take place in different order, depending on the mechanics of producing the bulletin. In our own company the original abstract is typed on a card, either directly by the abstractor or by a clerk from manuscript or recorded dictation. Editorial changes are usually made by hand but may require retyping of some items. The rough-draft cards are then arranged for the bulletin and the final copy is typed for offset reproduction.

Our "express" abstract bulletins for limited, internal distribution are reproduced directly from the "rough" cards on a Xerox Copier. Only up to fifteen copies are made. The result is inelegant, but fast.

For some abstract bulletins the abstracts are typed in final edited form on cards or strips which are then arranged in the proper order and photographed, sometimes size-reduced, to prepare the plate for reproduction. This has the advantage that the typing job can be done piecemeal, as soon as each abstract has been prepared and edited. The time-lag between compilation and issue of the bulletin is thus reduced.

Readability is a prime requirement for abstract bulletins. There are three aspects to this: readable style, convenient arrangement, and pleasing format and typography. These subjects have been adequately covered in the literature (*3–5*) and will not be discussed here. The following points may be worth emphasizing: (1) put the most important aspect first in each item (what this is depends on your readers), (2) give enough bibliographic information so that the reader can identify the original source, (3) slant abstracts to readers' interests, (4) arrange the bulletin in recognizable fashion so that the reader can skip sections which do not interest him, and (5) choose layout and typography which are pleasing to the eye and readable.

## III. COSTS

With different methods of calculating and assigning costs in different organizations, it is difficult to make valid comparisons. Costs reported range from $2.50 to $7.00 per abstract for selecting, abstracting, editing, and indexing; and a total of $4.00 to $8.00 per abstract when the cost of printing and distribution is included.

However, previous reports on costs of abstracts (*6, 7*) have failed to distinguish between the fixed cost of selecting, abstracting, editing, and typing the abstracts and the variable cost of printing and distribution. The first cost depends only on the number and quality of abstracts; its value "per abstract" should be comparable for different bulletins, regardless of frequency and circulation. The second varies with the number of copies distributed. Table I reports figures obtained from the literature and by private communication, in somewhat comparable terms. Where variable costs were available, they have been converted to the basis of 1000 copies.

This table indicates the major items which must be taken into account in calculating the total cost. By far the largest item will be salaries for abstracting and indexing. Clerical labor comes next. If you are using published abstracts and distributing a large number of copies, royalty payments may also constitute a major item. *Chemical Abstracts* charges a fixed cost of $750 per year for the right to reproduce their current abstracts plus a variable cost of $3 per 1000 abstract-impressions.

The cost estimate for the hypothetical bulletin and for case A both include indexing costs (84¢ per item). Strictly speaking, this cost need not be included if your abstract bulletin is designed to be only an alerting and informing

Table I. Cost per Item Abstracted

| | Hypothetical abstract bulletin[a] | | Actual cases[b] A* | B* | C |
|---|---|---|---|---|---|
| Fixed costs | | | | | |
| Subscription | $0.19 | | | | |
| Abstracting | 2.88 | | | | |
| Editing–supervising | 1.00 | $4.72 | $2.50 | | $6.80 |
| Indexing | 0.84 | | | | |
| Typing | 0.84 | | 0.50 | | |
| Other clerical | 0.42 | | | | |
| Royalties and misc. | | | 1.00 | | |
| | $6.17 | | $4.00 | $3.25 | |
| Variable costs (per 1000 copies printed) | | | | | |
| Printing and materials | $1.32 | | $2.08 | | |
| Royalties and misc. | | | 0.42 | | |
| Mailing | 0.20 | | 0.83 | | |
| | $1.52 | | $3.33 | $0.75 | |
| Total direct cost | 7.67 | | 7.33 | 4.00 | |
| Overhead allocation and contingencies | 3.00 | | 4.00 | 0.40 | |
| | $10.67 | | $11.33 | $4.40 | |

[a] Based on hypothetical "typical" bulletin of 10,000 abstracts per year, 500 copies distributed per week (*8*). [b] A: based on actual bulletin of 1000 abstracts per year, 1200 copies distributed quarterly. C: estimated on basis of man-hour estimates given by R. S. Rose, *Res. Management*, **1**, 55 (1958). * The asterisk denotes private communications.

service and is never to form the basis of an information retrieval system.

The proportion of fixed to total cost depends on the number of copies printed. In the hypothetical case of a "typical" bulletin with a distribution of 500 copies, the fixed cost constitutes 90% of the total. For a much smaller bulletin (case A) with a distribution of 1200 copies, printing and distributing costs are relatively higher and amount to 50% of the total cost. When both sets of data are converted to the basis of 1000 copies, the difference is reduced, but is still considerable: percentage of fixed costs is 80% in the first case and 55% in the second. I attribute this difference to the following factors: (1) lower quality (less depth) of abstracts in case A, (2) fewer abstracts per page in case A, and (3) higher mailing costs in case A because of distribution abroad.

Fixed cost can be reduced by using more efficient abstractors and streamlining the abstracting process. Variable costs can be reduced by reducing the size of the bulletin (*e.g.*, by size-reduction), improved layout, printing on both sides of the paper and possibly by less costly reproduction methods, as well as more efficient methods of handling, *e.g.*, in the collating step.

## IV. STAFF

A little might be said here about the qualifications required in the staff who contribute to the preparation of the abstract bulletin.

The abstractor must have sufficient understanding of the subject matter to enable him to distinguish what is new and important to the company. If he also *selects* the items to be abstracted, he must be familiar with as many aspects of the company's business and special interests of the readers as possible. In some companies, the research staff cooperates in the preparation of the abstract bulletin. This does not always work well, because each research man tends to see the literature from a highly specialized point of view and may be unfamiliar with the needs and interests of others in the company. He may ignore items or aspects which are important to others; write his abstracts so as to hide information which might be of interest in a different context; or even forget to pass along those journals which are of particular interest to himself. A less biased attitude and more over-all knowledge of company interests are usually required.

Needless to say, the abstractor should also be able to write well and concisely. He should be alert to ambiguities in the original text. Some foreign language talents are usually a must in an abstracting group.

The editor requires similar qualifications. In addition, he should have some knowledge of the problems involved in the scheduling and physical production of the bulletin. Much has been written on the requirements for technical editors, and those for an abstract bulletin editor are not appreciably different.

The typists and clerical staff play an important part in the production of an abstract bulletin. Accuracy and reliability are vital. It is also important that the clerical staff consider themselves to be part of the team and show initiative and intelligence. Some instructions are meant *not* to be obeyed on occasions!

What about the number of staff required? In an inquiry into the economic advantages of an information service in small and medium-sized firms (*9*), the Organisation for Economic Cooperation and Development (formerly O.E.E.C.) estimated that one abstractor produces 5 to 15.5 abstracts per day, depending on whether the abstracts are all in the abstractor's own language or not. If selection and typing time are included, the number is 4–10 abstracts per day. These figures are adjusted for nonproductive

time. This agrees reasonably well with Weil's estimate (8) of 12 abstracts per day, including selection, or 8 per day when adjusted for nonproductive time.

Time spent per abstract varies greatly both with the type of original material and with the quality and depth of abstracting; estimates range from 15 to 72 minutes. For articles in English, a rough average is 30 minutes per article. About the only conclusion I can draw is that a single abstractor will not be able to produce more than 3,000 abstracts per year. If a considerable proportion of the material is in foreign languages, it will be less. O.E.C.D estimates 934 foreign language items per year.

## V. TRENDS

During the past ten years or so, there seems to have been a trend away from internal abstract bulletins in favor of selective dissemination of information, title announcements, and, to a limited extent, cooperative abstracting services. A spot-check of about 30 companies who were issuing abstract bulletins five years ago has confirmed this impression. About 25% have discontinued their abstract bulletins, although some of them still abstract for retrieval purposes.

It may be significant, however, that several companies who discontinued their own abstract bulletin find that some substitute measures are necessary. Some of those cooperating, for instance, in the American Petroleum Institute services are preparing supplementary abstract bulletins of their own. Others, who switched to title-listings, find that they are using expanded titles or brief annotations. In fact, the distinction between a title-list and a true abstract bulletin is not as definite as one might think.

This limited survey also led me to the general impression that many who are now issuing abstract bulletins are dissatisfied with the quality of the product in relation to its cost. Some of this dissatisfaction appears to be rather vague and not based on any clear knowledge of the actual costs involved. In some cases, the dissatisfaction appears to be caused by previous efforts to reduce costs without maintaining quality, resulting in abstract bulletins which are difficult to read and unattractive.

Most of the remedies appear to be along the lines of reducing costs by: (a) switching to title-lists such as keyword-in-context listings, (b) relying on published alerting services, and (c) limiting coverage in terms of subjects or types of sources.

Improving the quality of the abstract bulletin is another way of increasing the quality-to-cost ratio, provided that costs are not increased in proportion. This can be done in three ways: (1) being more selective (which should reduce cost as well), (2) making the abstracts more informative and shorter (which may mean using better qualified and more highly paid abstractors), and (3) improving readability, in terms of arrangement of each abstract (*e.g.*, use of topic-lines instead of title), format, typography, and reproduction method.

In conclusion, I believe that an internal abstract bulletin can play a vital role in the information network within a company and particularly in the research process. However, it will do so only if those responsible for producing it are fully aware of the interests and information needs of the users as well as the methods and tools available, and use a bit of imagination. Managers of information services must make the choice between different alerting services on the basis of estimated value in relation to cost. But the value estimates must include some intangibles. And it is sometimes well to remember that it is the job of the Information Department to provide information which the company does not yet know it needs. The abstract bulletin can be an excellent means of doing this.

## LITERATURE CITED

(1) Resnick, A., *Science*, **134**, 1004 (1961).
(2) Montgomery, C., Swanson, D. R., *Am. Doc.*, **13**, 359 (1962).
(3) Weil, B. H., *J. Chem. Doc.*, **1** (2), 52 (1961).
(4) Weil, B. H., Schoengold, M. D., Mento, M. A., "Publishing Modern Abstract Bulletins," paper to the American Chemical Society, Jan. 1958; published as part of Chapter 6 in "Technical Editing," B. H. Weil, Ed., Reinhold Publishing Corp., New York, N. Y., 1958.
(5) Weil, B. H., "Technical-Abstracting Fundamentals. II, Writing Principles and Practices," paper to the American Documentation Institute, Dec. 15, 1962.
(6) Crum, W. T., "The Cost of Abstracting," unpublished paper.
(7) Mohlmann, J. W., *J. Chem. Doc.*, **1** (2), 64 (1961).
(8) Weil, B. H., Notes for Columbia University lecture (1960) and Rutgers University course on abstracting, indexing, and other information services, 1962.
(9) Organisation for Economic Cooperation and Development, "Does Your Firm Need Its Own Information Service?" O.E.C.D., Paris, 1961, p. 46.

## ADDITIONAL LITERATURE OF INTEREST

Borko, H., Chatman, S., "Criteria for Acceptable Abstracts: A Survey of Abstractor's Instructions," *Am. Doc.*, **14**, 149 (1963).

Strauss, L., Strieby, I., Brown, A. L., "Scientific and Technical Libraries," Interscience Publishers, New York, N. Y., 1964, Chapter 10, "Dissemination of Currently Published Information," pp. 218–237.