

CHAPTER 6

Abstracting the Essence

The most-read part of a paper may be its abstract. Effective abstracts are concise, summarize conclusions and recommendations, and are amenable to computer storage and retrieval. In terms of number of readers, an abstract is easily the most essential part of a technical paper.

To help explain what an abstract is, we have included two views of abstracts. View one, by Kenneth K. Landes, was published in the *Bulletin* of the American Association of Petroleum Geologists in 1966 (Vol. 50, No. 9, p. 1992). View two is an excerpt from "Standards for writing abstracts" by B.H. Weil.

View One

A Scrutiny of the Abstract, II

ABSTRACT

A partial biography of the writer is given. The inadequate abstract is discussed. What should be covered by an abstract is considered. The importance of the abstract is described. Dictionary definitions of "abstract" are quoted. At the conclusion a revised abstract is presented.

For many years I have been annoyed by the inadequate abstract. This became acute while I was serving a term as editor of the *Bulletin* of the American Association of Petroleum Geologists. In addition to returning manuscripts to authors for rewriting of abstracts, I also took 30 minutes in which to lower my ire by writing "A Scrutiny of the Abstract." This little squib has had a fantastic distribution. If only one of my scientific outpourings would do as well! Now the editorial board of the Association has requested a revision. This is it.

The inadequate abstract is illustrated at the top of the page. The passive voice is positively screaming at the reader! It is an outline, with each item in the outline expanded into a sentence. The reader is told what the paper is about, but not what it contributes. Such abstracts are merely overgrown titles. They are produced by writers who are either (1) beginners, (2) lazy, or (3) have not written the paper yet.

To many writers the preparation of an abstract is an unwanted chore required at the last minute by an editor or insisted upon even before the paper has been written by a deadline-bedeveled program chairman. However, in terms of market reached, the abstract is the *most important part of the paper*. For every individual who reads or listens to your entire paper, from 10 to 500 will read the abstract.

If you are presenting a paper before a learned society, the abstract alone may appear in a preconvention issue of the society journal as well as in the convention program; it may also be run by trade journals. The abstract which accompanies a published paper will most certainly reappear in abstract journals in various languages, and perhaps in company internal circulars as well. It is much better to please than to antagonize this great audience. Papers written for oral presentation should be *completed prior to the deadline for the abstract*, so that the abstract can be prepared from the written paper and not from raw ideas gestating in the writer's mind.

My dictionary describes an abstract as "a summary of a statement, document, speech, etc...." and that which *concentrates in itself the essential information* of a paper or article.... May all writers learn the art (it is not easy) of preparing an abstract containing the *essential information* in their compositions. With this goal in mind, I append an abstract that should be an improvement over the one appearing at the beginning of this discussion.

ABSTRACT

The abstract is of utmost importance, for it is read by 10 to 500 times more people than hear or read the entire article. It should not be a mere recital of the subjects covered. Expressions such as "is discussed and "is described" should *never* be included! The abstract should be a condensation and concentration of the *essential information* in the paper.

View Two

An abstract, as defined here, is an abbreviated, accurate representation of a document. The following recommendations are made for the guidance of authors and editors, so that abstracts in primary documents may be both helpful to their readers and reproducible with little or no change in secondary publications and services.

Make the abstract as informative as the document will permit, so that readers may decide whether they need to read the entire document. State the purpose, methods, results, and conclusions presented in the document, either in that order or with initial emphasis on findings.

For various reasons, it is desirable that the author write an abstract that the secondary services can reproduce with little or no change. These reasons include the economic pressures on the secondary services caused by continuing increases in the volume of scholarly publication; the need for greater promptness on the part of the secondary services in publishing information about the primary literature; and the growing value of good authors' abstracts in computerized full-text searching for alerting and information retrieval.

In the proposed standard the term *abstract* signifies an abbreviated accurate representation of a document without added interpretation or criticism and without distinction as to who wrote the abstract. Thus, an abstract differs from a brief *review* of a document in that, while a review often takes on much of the character of an informative or informative-indicative abstract, its writer is expected to include suitable criticism and interpretation. While the word *synopsis* was formerly used to denote a resume prepared by the author, as distinct from an abstract (condensation) prepared by some other person, this distinction no longer has real meaning.

Types of abstracts

An abstract should be *informative*; that is, it should present quantitative and qualitative information. Space limitations may influence the amount of information you can present but not the quality. Informative abstracts are especially desirable for texts describing experimental work and documents devoted to a single theme. Discursive or lengthy texts, however, such as broad overviews, review papers, and entire monographs, may permit an abstract that is only an *indicative* or descriptive guide to the type and contents of a document. A combined *informative-indicative* abstract must often be prepared when limitations on the length of the abstract or the type and style of the document make it necessary to confine informative statements to the primary elements of the document and to relegate other aspects to indicative statements.

Abstracts should not be confused with the related, but distinct, terms *annotation*, *extract*, and *summary*. An *annotation* is a note added to a title or other bibliographic information of a document to comment or explain, such as the notes on the references shown in the chapter entitled Reference Shelf in this book. An *extract* signifies one or more portions of a document selected to represent the whole. A *summary* is a restatement within a document (usually at the end) of its salient findings and conclusions and is intended to complete the orientation of a reader who has studied the preceding text. Because other vital portions of the document (for example, the purpose and methods) are not usually condensed into a summary, the term should not be used synonymously with *abstract*.

Format

For long documents, such as reports and theses, an abstract generally should not exceed 500 words and preferably should appear on a single page. Most papers and portions of monographs require fewer than 250 words. Fewer than 100 words should suffice for notes and short communications. Editorials and Letters to the Editor often will permit only a single-sentence abstract.

Begin an abstract with a topic sentence that is a central statement of a document's major thesis, but avoid repeating the words of a document's title if the title is nearby.

In abstracts specifically written or modified for secondary use, state the type of the document early in the abstract if the document type is not evident from the title or publisher or if it will not be clear from the remainder of the abstract. Explain either the author's treatment of the subject or the nature of the document,

for example, theoretical treatment, case history, state-of-the-art report, historical review, report of original research, or literature survey.

Write a short abstract as a single, unified paragraph; use more than one paragraph for long abstracts, for example, those in reports and theses. Write complete sentences, using transitional words and phrases for coherence.

Avoid terms, acronyms, abbreviations, and symbols that may be unfamiliar to your readers unless you define them the first time they occur in the abstract. Include short tables, equations, structural formulas, and diagrams only when necessary for brevity and clarity. Try not to cite references.

A well-prepared abstract enables readers to identify the basic context of a document quickly and accurately, to determine its relevance to their interests, and thus to decide whether they need to read the entire document. Readers for whom the document is of fringe interest often obtain enough information from the abstract to make their reading of the whole document unnecessary. Therefore, every primary document should include a good abstract. Secondary publications and services that provide bibliographic citations of pertinent documents should also include abstracts if at all possible.