Editorial Policy

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Background

In the late 1960s, ACM perceived a need among its members for a journal to help people discover new specialties, and to help practitioners stay abreast. It perceived, among its members, a strong base of expertise for achieving these purposes. It founded the *COMPUTING SURVEYS*.

The *SURVEYS* began publication in March 1969 with Bill Dorn as Editor-in-Chief and Myrtle Kellington as Executive Editor. Lee Revens became Executive Editor in 1970, and Art Blum in 1976. A number of well-written tutorials and surveys in the early issues convinced the skeptics that this journal could be successful. Each printing run of the *SURVEYS* is presently about 34,000 copies—only the *Communications of the ACM* prints more copies per issue (about 44,000). The *SURVEYS* is the option of first choice for about three quarters of our members.

In its earliest days the *SURVEYS* was managed single-handedly by the Editor-in-Chief with the quiet assistance of referees. In early 1973 ACM discontinued the experiment of paying honoraria to *SURVEYS* authors, without noticeable effect on the influx or quality of papers. On taking over from Bill Dorn in 1973, Elliott Organick established an informal editorial panel—senior people who advised both on the suitability of particular papers and on areas of special interest or importance. He promoted this panel to an Editorial Board in December 1975. He instituted the practice of publishing special issues. (I had the privilege of editing the first, on programming, in December 1974.) Through the end of 1977, there have been special issues on computer system architecture (December 1975), data base management (March 1976), software reliability (September/December 1976), and Parallel Processors (March 1977). Special issues on Computer Performance Evaluation and on Graphics Standards are expected in 1978. I hope for one or two each year.

From the *COMPUTING SURVEYS* tables of contents, 1969–1977, I constructed Table I, (See Vol. 9, No. 4 (Dec. 1977) 319ff) which summarizes the distribution of papers and pages among subjects. The first three categories of the table account for about 45 percent of the papers and 35 percent of the pages. The SIGs and SICs with direct interests in these three categories comprise about 40 percent of all SIG/SIC memberships—the *SURVEYS* has, to a first approximation, matched its attentions to our members' interests. During the period 1969–1977, the average paper was about 25 printed pages, or nearly 50 manuscript pages—no wonder the referees, authors, and editors complain of exhaustion!

I was proud to take over from Elliott Organick, at the start of 1977, a journal of such prestige and promise.

What Are Surveys And Tutorials?*

The main differences between a survey paper and a tutorial paper are emphasis and audience. A survey paper assumes its audience has a general knowledge of the field; it emphasizes an overall view of the literature. A tutorial assumes its audience is inexperienced; it emphasizes the basic concepts of the field. In practice, most of the papers published in the *SURVEYS* combine the two approaches: they survey a range of material *and* explain the underlying concepts.

The primary purpose of a "pure" survey is a guided tour through the literature in an area. By assuming its audience is familiar with the field's basic concepts, it can concentrate on classifying the literature; on developing a perspective of the field; and on evaluating trends. It is up to date and comprehensive. It may be as long as an extended discussion of the literature with many citations, or it may be as short as an annotated bibliography with a preface.

The primary purpose of a "pure" tutorial

* I am grateful to D. L. Parnas and E. I. Organick for many of the ideas in this section.

TABLE I SUMMARY OF COMPUTING SURVEYS VOLS 1-9 (1969-1977)

<i>Subject</i>	<i>Papers</i>		<i>Pages</i>	
	No	%	No	%
Programming, Methods, Validation, and Testing	21	21.4	416	16.9
Data Management, Information Systems, Business Applications	13	13.3	314	12.8
Computer Architecture	11	11.2	260	10.6
Modeling, Measurement, Simulation, and Evaluation	10	10.2	158	6.4
Graphics, Picture Processing	6	6.1	218	8.9
Computer System Design	6	6.1	203	8.2
Programming Languages	5	5.1	275	11.2
Theory of Computation	5	5.1	100	4.1
Man-Machine Interface, Software Packages, Text Editors	4	4.1	98	4.0
Compiling and Loading	4	4.1	85	3.4
Fault-Tolerant Software	3	3.1	90	3.6
History	3	3.1	55	2.2
Data Communication, Networks	2	2.0	69	2.8
Privacy, Legal Issues	2	2.0	48	2.0
Industrial Process Control	1	1.0	32	1.3
Humanities Applications	1	1.0	22	0.9
Artificial Intelligence	1	1.0	20	0.8
	98		2463	

is explaining a topic to a nonexpert who is familiar only with the basic concepts. Through its title, abstract, and introduction, a tutorial sets out clearly both what it assumes of a reader's background and what it intends to tell him. A tutorial may be simple, written for people with almost no background; or it may be advanced, assuming that its readers are already versed in the subject. A tutorial's point of view is too new to have appeared in a text; yet it is similar to a text, on a small scale. A tutorial need not contain new results or define new research problems; rather, it binds together old results in a new way. A tutorial need not be easy—to wit, an advanced tutorial, a tutorial on a difficult subject, or a tutorial explaining a new way of thinking.

What Does Computing Surveys Publish?

We have no preconceptions about which subjects to emphasize in the SURVEYS. We will publish any survey or tutorial paper of worth, on any subject of interest to ACM. Our concerns are quality, accuracy, and clarity.

We insist that papers of whatever ilk published in the COMPUTING SURVEYS

meet minimum standards. A standard of first importance is *technical accuracy*: readers should not have to contend with errors or omissions. Of equal importance is *clear writing*: crisp, concise, coherent prose is every bit as important as technical accuracy.

Many prospective authors shy away from the SURVEYS because they believe surveys and tutorials *must* be lengthy. That the average paper's length during the first nine years was around 50 manuscript pages feeds this misconception. We want to encourage more authors to step forward with short papers having modest objectives. For lengthy manuscripts, referees are reluctant reviewers reticent to render reports rapidly; shorter papers are easier to review, revise, and read. Don't misunderstand our intent: authors of long papers are as welcome as ever. But authors of short papers are welcome too.

To emphasize our interest in shorter papers, we established a *Short Notes* Department. To qualify, a paper must meet all our other standards and must not exceed 4000 words (16 manuscript pages) complete. We will strive for rapid reviewing and timely publication of such material.

However hard we try for accuracy and

clarity, we sometimes err. To allow readers to take us to task, to note errors, and to comment on papers we have published, we established the *Surveyors' Forum*. The Editor-in-Chief, who is the sole judge of which letters to publish, will normally invite the authors, and anyone else involved, to comment.

Are You A Prospective Author?

If you are planning on submitting a paper to the *COMPUTING SURVEYS*, you will value the following information. You should submit four (4) copies of your manuscript following the typing guidelines given below. Your cover letter should identify your manuscript as a (regular) Paper, a Short Note, or a Forum Letter. Your cover letter should also declare your intention to transfer your copyrights to ACM should the paper be accepted (see below).

You should submit Forum Letters directly to the Editor-in-Chief. You may submit Papers or Short Notes to the Editor-in-Chief or any Associate Editor. Papers and Notes will be reviewed by at least two referees. The referees, and any associate editor involved, will make recommendations to the Editor-in-Chief, who will make the final decision.

As you prepare your paper, keep in mind that we want positive answers to all the following questions that we pose to the referees:

- 1) *Is the paper technically accurate?* If the paper is a survey, is it adequately comprehensive? Are there errors, deficiencies, or misleading statements? Does it give proper credits?
- 2) *Is the paper clearly written?* Is it crisp? Coherent? Concise? Well organized? Does it avoid undue formalism, needless notation, cabalistic symbols? Is it harder than the subject requires?
- 3) *Does the paper emphasize intuition rather than detail?* Does it interpret results rather than merely stating or deriving them? Does it show how to use results? Explain their limitations? Can difficult, but necessary, material be put in appendices?
- 4) *Does the paper define its audience and meet its objectives?* Does it set

forth clearly the assumptions on the reader's background? Are these assumptions reasonable? Does it tell the reader what to expect? What not to expect? Does it tell what material is included? Excluded? If the paper is long, does the introduction advise various classes of readers which sections to read or omit?

- 5) *Is the paper interesting?* The subject timely? Thought-provoking? Is the subject of wide interest or applicability? If the paper is a tutorial, does it use examples well? Does it stimulate the imagination?
- 6) *If revisions in the paper are advisable, is it likely that the author will implement them satisfactorily?*

The most common criticisms from referees are: the audience is not clearly defined, the objectives and scope are not obvious, the writing is loose and verbose, and there is more detail than intuition.

Typing Guidelines

Your entire manuscript, including the bibliography, should be in double-spaced type on separated 8½ × 11 sheets. (Users of text editors—take note!) The front page should include

Title

Authors and Affiliations

Abstract

Key Words and Phrases

Categories for *Computing Reviews* (CR).

There should be a Table of Contents whose main sections include:

INTRODUCTION

...

SUMMARY

ACKNOWLEDGMENTS

REFERENCES

In the text, main-section headings should be all capital letters.

COMPUTING SURVEYS uses alphanumeric bibliographic keys, such as DENN78a, DENN78b, and COX70. The capital letters are the prefix, four letters or less, of the first author's last name. The two digits specify the publication year. A trailing a, b, c, . . . distinguishes multiple papers by the same author published during that year. If different authors would have the

same key, the fourth key letter is replaced by another distinguishing letter such as the author's first initial. Keys cited in the text are enclosed in square brackets [DENN78a] except when used as nouns—as in “see DENN78a.” (Copy editors will restyle the keys as [DENN78a] and [COX70].) The reference list should be double-spaced in the usual lexicographic ordering by authors, identified by keys in the left margin.

The papers of this issue illustrate these conventions.

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