

ACM Publications Implementation Plan: July 1982 - June 1985

May, 1982

Prepared for ACM Council by the Publications Board
and the Publications Planning Committee:

R.L.Ashenhurst
M.D.Cooper
A.Goldberg
J.Gosden
M.S.Lynn (Chairman)
C.Montgomery
J.R.Rice
E.A.Swan
S.Zilles (Guest)

PREFACE

In 1978, the Publications Planning Committee developed a Policy Framework for ACM Publications that was adopted by Council, and which governs policy for all ACM publications (1). This Policy called for a three-year planning cycle for ACM publications. The first such plan was also adopted by Council in 1978 (2). This document presents the second implementation plan covering the period July 1982 to June 1985.

This three-year Plan concentrates on the future of CACM taken in the context of other ACM publications. In addition it discusses plans for Computing Reviews, the Anthologies Series, and other activities.

A financial analysis is presented which projects the costs of the proposed plan and also indicates how ACM might be able to fund the plan.

-
- 1 A condensed version of the Policy Framework appeared in June, 1978 CACM and is attached as Appendix B. An article on the 1977 Publications Survey, which preceded development of the Policy Framework, is attached as Appendix D.
 - 2 "ACM Three-Year Publications Implementation Plan, FY80 - FY82". Prepared for Council by the ACM Publications Planning Committee, November, 1978. A summary is attached as Appendix C.

CONTENTS

1.0 Previous Implementation Plan Accomplishments 1

2.0 CACM Editorial Plan: Overview 3

3.0 Constraints 4

4.0 Directions for CACM 7

4.1 Content: 7

 4.1.1 Technology Transfer: 7

 4.1.2 Research Material: 10

 4.1.3 General Material: 11

4.2 Design: 12

5.0 Editorial Plan for Other Publications 13

6.0 Staffing, Schedule, and Resources 16

6.1 Staffing Implications 16

6.2 Schedule 17

6.3 Page Plan for CACM 17

6.4 Financial Plan 22

 6.4.1 Assumptions: 22

 6.4.2 Total Expansion Costs: 23

A.0 Cost Assumptions. 26

B.0 1978 Long-Term Policy Framework 28

C.0 1978 Three-Year Plan Summary 29

D.0 1977 Publications Survey 30

LIST OF ILLUSTRATIONS

Figure 1.	. . . . .	18
Figure 2.	. . . . .	19
Figure 3.	. . . . .	20
Figure 4.	. . . . .	21
Figure 5.	. . . . .	24
Figure 6.	. . . . .	27

1.0 PREVIOUS IMPLEMENTATION PLAN ACCOMPLISHMENTS

The first implementation plan called for a number of actions. Chief among these were:

1. Unbundling of publications such that a member receives CACM with his dues, but optionally pays for additional publications.
2. Creation of a new Transactions on Programming Languages and Systems (TOPLAS).
3. Initiation of a new section in CACM called "Computing Practices".

These objectives have all been accomplished.

The implementation plan also called for the development of additional transactions. Transactions on Graphics (TOG) has been born. The Transactions on Computer Systems (TOCS) and the Transactions on Office Information Systems (TOOIS) are in the gestation period and will be born within nine months.

Some secondary aspects of the plan have not been implemented, mainly due to the intensity of effort and level of funding required to accomplish the above higher priority tasks. Computing Notices (similar in concept to the Notices of the American Mathematical Society), for example, is not even under active consideration at this time - there has been no volunteer initiative in this area.

The earlier plan clearly anticipated that CACM would change in character (perhaps for the worse) as a result of that plan before it would become the right flagship publication for ACM. This is because CACM is in transition from a research paper dominated publication to a more balanced publication. The present status of CACM should come as no surprise to those Council members who approved the earlier plan.

In particular, the earlier plan left open future directions for CACM. It proposed several alternatives; this plan is a variant of one such alternative. The earlier plan stated that the alternative to be chosen would depend upon the result of

the steps that were in fact taken under the plan. We now know the results of these steps, and are therefore in a position to recommend precisely the next steps for CACM.

We emphasize that one of the main purposes of the earlier plan was to create options for CACM that were simply not open to ACM before: this has been accomplished.

2.0 CACM EDITORIAL PLAN: OVERVIEW

CACM has clearly changed as a result of diverting research papers into transaction and of initiating the "Computing Practices" section. In the light of these changes, and in the firm belief that CACM should continue to be the flagship publication for ACM, this Plan in summary believes that CACM should now be re-structured in the following directions:

- o Substantial expansion of 'technology transfer' material, with particular emphasis on editor-driven material, expansion of "Computing Practices", and the gradual introduction of ABACUS-like articles;
- o Re-definition of research material to concentrate on areas not covered by Transactions, but augmented by occasional special issues and selected reprints in areas covered by Transactions;
- o Gradual expansion of general material, particularly in the area of public-policy material;
- o Substantial re-design of the publication layout and graphics.

These will be discussed in more detail in future sections. However, it is first useful to review the constraints which bound the possible changes that can be made.

3.0 CONSTRAINTS

There are many constraints affecting choices for directions for ACM publications. These are complex, were discussed at length in the Policy Framework, and will not be repeated here. There are, however, three topics that are worth briefly re-stating:

Audience Diversity: The membership of ACM is extraordinarily disaggregated in interests, reading tastes, and perceptions. A publication that appeals to one group is likely to offend another. Conversely, a publication that attempts to appeal to all interests is likely to be judged by a given group according to the material that is of least interest to that group - as a result, judged adversely.

Furthermore, many members do not read CACM - some because they believe it contains nothing of interest to them, and some, we would suggest, because they do not particularly wish to read anything. Many individuals in the former group are often pleasantly surprised when persuaded to read certain articles; many are judging CACM by what it was six months, one year, or five years ago (one still encounters members who are not aware that Computing Practices even exists), and yet CACM has been constantly changing. As far as the latter group is concerned, it is not clear that any flagship publication will appeal to them - perhaps they join ACM for other reasons. Nevertheless, all these 'non-readers' will criticize CACM, even when they are not familiar with its contents. This will probably always be so.

This diversity of membership makes it almost impossible to design a flagship publication that will appeal to all members.

Solution Diversity: Everybody knows how to solve the problems of CACM. Every member knows precisely what it should contain. Most views expressed, however, reflect personal desires and/or perceptions of a limited number of members. We have heard just about as many different solutions pro-

posed as there are members in ACM. Our diversity of view reflects the rich diversity of ACM, which is one of its joys and strengths. We must achieve a consensus, yet create a purposeful CACM which does not give the appearance of a "committee compromise". This implies evolution, rather than revolution.

Dues Perception: Another problem is that most members equate their ACM dues with CACM itself, and ignore other services rendered - perhaps because these other services benefit them only indirectly. The member may not be aware or be interested in the fact that the quality of the profession as a whole may be enhanced. In fact, of the \$45 dues, only about \$18 goes for CACM (1); the rest goes to non-publications activities. These other activities do not have to withstand the repeated and continuous careful scrutiny and judgement of members as CACM does each month. Some have argued that for this reason, CACM should largely be unbundled from the dues, and only a newsletter go to all members. The Publications Board and previous Councils have consistently opposed this view, since we have believed that as a matter of policy every member should receive some technical material.

In any event, the fact that most of their dues does not go to CACM needs to be brought home to every member. The dues renewal form should clearly indicate the separate cost of CACM even though it remains bundled. Those members who object to paying the rest of the dues because they may not benefit directly from the other activities should be strongly reminded that ACM is a 501 c(3) organization intended to benefit the profession as a whole and the public-at-large, not just its members. Perhaps Council should consider as a matter of policy whether ACM wishes to attract or retain members who do not generally support this view.

(1) Actually, the net amount is about \$14 in view of the surplus that the Publications Board returns to ACM.

The above observations are simply intended as cautionary notes in the interpretation of what follows. The problem is as complex as it ever was, and does not admit of simplistic solutions. As a consequence of the steps taken over the past three years, ACM now has options open to it that were not readily available before. It should be re-emphasized, however, that whichever direction is taken, it will cost money if CACM is to stand a chance of appealing to the diverse ACM membership.

4.0 DIRECTIONS FOR CACM

This section describes the details of a plan for re-structuring CACM. The discussion is in two parts: Contents and Design.

4.1 CONTENT:

The main changes to the content of CACM are a substantial expansion of 'technology transfer' material, accompanied by an expansion of editor-driven material; a re-definition and limitation of the research contributions section; and a gradual expansion of public-policy material as a subset of general-interest material. It is convenient, again, to describe this in three parts:

4.1.1 Technology Transfer:

This is the area where we foresee the greatest potential for growth and change in CACM. It is also the area where the greatest additional resources will have to be invested if it is to succeed.

It should be emphasized that many steps have already been taken in this area in recent years. The 'Reports and Articles' section was an important step forward. 'Computing Practices' was a significant change and - although the quality of the articles has undoubtedly been uneven - has been well-received by those members to whom it was addressed. However, to do more will require full-time staff who are both good writers and well-versed in the field; such staff still have not been proven to be readily available. However, we must try.

In increasing order of difficulty, we propose change and expansion as follows:

1. Abstracts (of papers from other ACM publications). As of January, 1982, we have started reprinting in CACM the published abstracts of all Journal and Transactions' articles. This is for the purpose of providing useful snapshots on what is going on in fields not covered by CACM in reasonably clear

language (not always - but this will put increasing responsibility to Editors-in-Chief to ensure that abstracts are clearly and concisely written).

2. Computing Practices. Obstacles to increasing the flow of papers have primarily been procedural. Steps are being taken to rectify this, which efforts should start to pay dividends over coming months.
3. Reports. Committee-generated "position-papers" will continue to fulfil some of the technology transfer objectives. Recent examples are the Standards Committee report on ADA standardization and the report of the Public Cryptography Study Group. The Self-Assessment Procedures are a continuing series in this category.
4. Articles. These will be substantially expanded over what we publish at present and will be the area of greatest change. New mechanisms will be introduced to generate this material. Such articles can be categorized as follows:
 - o Contributed Articles. These tend to be opinion pieces assessing major trends in a field or proposing new directions. Recent examples are articles on the future of programming by Wasserman and Gutz, and on the scaling down of ADA by Ledgard and Singer. The annual Turing Lectures are also in this category. Staff editorial support (such as is in place for Computing Practices) is required to enhance materially the processing of such articles; and to solicit and support guest editors for the production of special issues on topic areas.
 - o Publication Overviews (written by Editors-in-Chief or their designees). These would serve to give perspective on material published in Transactions and their associated fields. The Editorial Committee is seriously examining the feasibility of having one or two such articles per year in CACM.
 - o Research Expositions. These would specifically be rewrites (as contrasted with reprints) of research papers from other ACM

publications, recast to convey the essential ideas to a wider audience. Although volunteers may occasionally be found who are willing and able to carry out such a task, this will mainly depend upon headquarters senior editorial staff for implementation.

- o Case Studies. It is planned to generate a series of case studies using interview techniques, with both volunteer and professional input on the writing and editing. Example topic areas include a banking system; a CAD/CAM operation; and specific large systems such as those of SSA (Social Security) and FAA (air-traffic control).
- o Technology Overviews. These would be expositions and comparisons of new or emerging technologies, products and/or systems compiled by appropriate persons. Free-lance assistance may be used in this area.

It can be seen that expanding the flow of such articles will depend upon paid staff. We will return to this point later.

5. ABACUS-Type Articles. These would be articles of broad-interest derived from a variety of sources (including those categories mentioned above), but given the "ABACUS treatment" editorially. However, unlike the original ABACUS concept, they would be oriented more towards the profession than to the technical lay public. Since these would cover a wide variety of topics and be quite distinctive in appearance, they are considered as a separate category here. Initially we might publish 3-4 such articles per year (starting in late FY84), expanding as funding and interest allows.

The above model does not involve folding CSUR into CACM, even though CSUR is our most popular optional publication and consists of material that can be considered of the technology transfer genre. CSUR has a valid life and identity of its own which would be lost within CACM; the number of papers published by CSUR would translate into about one CACM paper per month. Besides which, such a step could well represent financial suicide.

4.1.2 Research Material:

Most of the research material that used to appear in CACM now appears in Transactions, a trend that will continue with TOG and TOCS, but not substantially be affected by TOOIS. However, research contributions are now appearing in CACM in fields that are emerging as areas of computer science research e.g., Human Aspects of Computing. The Publications Board believes that research contributions should continue in CACM, but play a less dominant role. We believe research material should be limited to the following areas:

- o Research contributions in areas not covered by Transactions. The nurturing of new areas is, we feel, important. As each such area matures, it can in turn be spun off into a new Transaction consistent with the unbundling principle.
- o Special issues (about 1-2 per year) in areas not covered by Transactions. This again gives focus to new and emerging fields in a manner which has 'technology transfer' overtones.
- o Special issues (about 1-2 per year) in areas covered by Transactions. This is to ensure that such areas are periodically brought before the membership as a whole in order to encourage cross-fertilization of research ideas. As an aid in technology transfer, however, such special issues should be accompanied by interpretive articles by the Editor-in-Chief (or designee) of the corresponding Transactions (see discussion under technology transfer, above).
- o Technical Notes both in areas covered and areas not covered by Transactions. However, the emphasis for technical notes in areas covered by transactions would be on readability.
- o Selected research contributions (about 4-6 per year) reprinted from other ACM publications, which are deemed to be of such widespread significance that they should be brought as is to the attention of the entire membership. Such articles may be hard to select - the Editorial Committee is studying the feasibility of this.

The original Plan called for the publication in CACM of original research contributions in areas covered by Transactions. However, only selected papers would be published which were considered to be of widespread importance to computer science as a whole. The difficulty of selecting such material at time of submission from the wealth of material submitted to Transactions has prevented implementation of this approach; we now favor other 'technology transfer' mechanisms. We shall continue to consider the earlier approach, but are not optimistic that it will be feasible.

- o Technical correspondence mainly related to research papers published.

4.1.3 General Material:

Besides Technology Transfer and Research material, CACM will continue to include news material of more general interest. There will be a gradual expansion of 'public policy' news material (see below).

This category of General Material will include:

- o Current Contents. Among the sections of CACM that will continue are:
 1. ACM Forum. This has become one of the most important vehicles for communication on issues of general significance to the field.
 2. Professional Activities.
 3. Calendar.
 4. President's Letter.
 5. ACM News.
 6. Miscellaneous material, such as indexes.
- o Public Policy Material. The current CACM department 'Industry and World News' attempts to highlight political, social, and economic developments which relate to the computing field. Due to space and staffing limitations, however, this department has not received the attention that it deserves. There needs to be greater, in-depth coverage of both the Washington milieu and the national and international scenes, insofar as they raise issues of computing research, education and practice; and of the effect of computing upon society and

vice-versa. The middle part of Science serves as a useful model for what we have in mind.

Industry and World News, possibly renamed, will gradually be expanded in such directions.

The above outlines the proposed directions for the contents of CACM. In the next section, we discuss design issues.

4.2 DESIGN:

One of the problems discussed earlier was that readers do not read material in CACM that may be of interest to them. Simply adding or changing the content will not of itself change this fact. Good design is essential if readership is to be encouraged. The present design of CACM was appropriate for a publication dominated by research papers. However, as the type and scope of papers changes over the years, the design needs to be over-hauled.

A radical change in both cover and interior design is particularly important to distinguish clearly between the different kinds of material while still retaining an overall integrated appearance. In recent years, the interior design of CACM has taken on a pot-pourri appearance. This is because new material has gradually been introduced within the design constraints intended for the "old" research dominated CACM.

The introduction of ABACUS-type articles will also introduce special challenges and requirements.

One of the objectives of the revised design will be to convince readers that CACM contains significant amounts of material that is of interest to them individually, and to subdue the impact of material that may only be of interest to other readers. This is difficult, but possible.

A truly professional job needs to be done. Such a re-design cannot succeed if it is done in an ad hoc manner on the fly. It will cost some money (as is discussed in the Budget section of this plan), both the initial specifications and the continuing costs. It must, however, be done.

5.0 EDITORIAL PLAN FOR OTHER PUBLICATIONS

The previous section outlined the plan for CACM over the next three years. This section places CACM in the context of plans for other publications.

1. Additional Transactions:

During the past three years, two Transactions have been launched (TOPLAS, TOG) and two are in process of being launched (TOCS, TOOIS).

It is not likely that any new Transactions will be started in the foreseeable future that will affect CACM. Perhaps several years from now a Transactions on Social Implications of Computing is conceivable, since this area is building up steadily in CACM. It is certainly possible that Transactions may be started in areas not covered by CACM, as was the case with TOOIS. At this time, there are no new Transactions on the drawing-board beyond TOCS and TOOIS, so that it would be at least two years before another could possibly appear.

2. Computing Reviews:

Computing Reviews is in the process of a number of major changes. The CR Categories have been revised and the new scheme implemented beginning with the January, 1982 issue. In addition, extensive automation of both the management and the production of CR is taking place with every expectation that this will result in improved timeliness and editorial coverage of the publication. Editor-in-Chief Jean Sammet, assisted by HQ staff, is taking strong steps towards placing CR on a firm footing, steps which are supported by the Publications Board.

Over the next eighteen months and beyond, there will be steady improvement. With this improvement, however, will come increased coverage and demands for a corresponding increase in the number of pages. However, CR is the only ACM publication that loses money, and in fact runs a substantial defi-

cit. It is not likely that CR can bootstrap its own expansion.

This requirement for increased coverage and increased pages cannot be over-emphasized. CR has not grown in fifteen years. The computing field has obviously grown enormously, including its corpus of published literature. The financial implications of an editorially successful CR are very serious. This remains a problem that is likely to compete with CACM for additional funds.

It is likely that a substantial increase in both member and non-member subscription prices will have to be considered, but not until the publication is back on schedule and planned improvements are noticeable.

The future of GUIDE will also have to be carefully considered, since it, too, has serious financial problems. Again, however, we cannot consider this until CR and GUIDE are both back on a reasonable schedule.

3. Anthologies:

The Publications Board has launched the ACM Anthology Series. This is expected to be an important contribution to the ACM publications milieu and an important source of new net revenue; but the latter will probably build slowly.

4. Publications Backlogs:

Existing publications will need to expand to maintain their pre-eminence. Backlogs continue to build-up for JACM and several of the Transactions. Steady expansion in pages can be anticipated, and can be funded by corresponding increases in subscription prices and/or circulation.

5. Other activities:

The Policy Framework, among other things, called for future publications to meet the needs of readers through Audience Satisfaction, Serendipity, Selective Dissemination, Selective Retrieval, and Problem-Solving Assistance. The present plan builds on the earlier plan towards achieving these

objectives. The concept of Technology Transfer, introduced in this plan, is a term that categorizes a class of material aimed towards achieving Audience Satisfaction.

It is not likely, however, that much can be done during this planning period to foster Selective Dissemination and Selective Retrieval beyond what is already in place. However, with improvements in technology, this area should be the main focus of attention in the subsequent three-year plan. In this planning period, such attention should be anticipated: needs should be assessed, technologies reviewed, and discussion and planning of alternatives should be undertaken.

In conjunction with the Director of Publications, during the upcoming planning period the Publications Board also expects to:

- o Revise plans for the marketing of ACM publications both in the U.S. and particularly overseas;
- o Recommend an improved financial structure for the ACM Publications cost center;
- o Continue to monitor and evaluate carefully the role of electronic technologies in the publication process;
- o Complete the Policies and Procedures Manual for the Publications area.

6.0 STAFFING, SCHEDULE, AND RESOURCES

In this section, we make some comments on the staffing implications of the above plan; outline the proposed schedule for implementation; and present the financial implications of the plan.

6.1 STAFFING IMPLICATIONS

The above changes cannot be accomplished by volunteers alone. Volunteers can provide policy guidance and direction. However, the implication of a switch from author-driven to editor-driven materials is that full-time editorial staff must be available at ACMHQ to carry out the operating aspects of the task.

The present staff does an outstanding job of producing CACM in its present format as well as other ACM publications. They can continue to do so. ACM is seriously understaffed in the publications area for what we are trying to produce, even without considering major new directions and expansion. We are fortunate that the staff makes up in professionalism, dedication and quality what is lacking in quantity.

However, the kind of material encompassed by this plan will require augmentation of the staff by people who can not only write and edit well, but who also have a working knowledge of the computing field.

There are a number of ways this can be accomplished. One, for example, is to hire retiring professionals in the field of suitable caliber along with skilled editorial and re-write talent. Another is to hire outstanding technical journalists, of the kind who write, for example, for Science-8x. Perhaps a combination of these and other ways, including use of top free-lancers. What is important, however, at this stage is the recognition that talent will be needed, that such talent is not cheap, and that expenditures will have to increase commensurately.

The same is true for graphics and design. ACM has traditionally used a variety of free-lance designers, some of whom have been good and some of whom have been mediocre or worse. Continuing dependence on external

support will continue to be the most cost-effective way of achieving the desired quality. However, we must expect to pay more than has been our practice in order to achieve the desired level of quality.

The section on "Financial Plan" on page 22 reflects this requirement. First, however, the schedule and page plan for CACM must be developed.

6.2 SCHEDULE

The schedule for implementation of this Plan is outlined in Figure 1 on page 18. Although change to CACM will occur gradually, there will be a most conspicuous point of departure in February, 1983 (3) when the design of CACM will change dramatically. This will signal to readers that a new CACM has been launched - indeed it may cause some non-readers to actually look at CACM and find that change had already occurred (see "Constraints" on page 4). Staff will be hired on a timescale consistent with the overall schedule. Indeed, one dependency of the latter is being able to recruit both volunteer talent and full-time staff on such a schedule.

Although the transformation of CACM is expected to occur steadily following the change in design in February, 1982, it is expected that new material will be introduced sufficiently rapidly so that the changes are noticeable. There simply is not time to make all changes occur by next February.

As a prerequisite to financial analysis, a more detailed page plan is outlined in the next section consistent with the above schedule.

6.3 PAGE PLAN FOR CACM

In order to accommodate the different types of material described in the section on "Directions for CACM" on page 7 and the schedule of the previous section, the size of CACM will necessarily increase over the next three years.

3 This follows the 25th Anniversary Issue of CACM which will occur in January, 1982.

May, 1980	Computing Practices initiated.
January, 1982	Abstracts of other journals printed in CACM
June, 1982	Council approval of Publications Plan.
July-Dec., 1982	Expansion of Computing Practices to 2 articles per issue
February, 1983	New design for CACM initiated
April, 1983	TOCS initiated
Feb.-July, 1983	First articles of 'new' type appear in CACM (one or two. per issue)
	o Publication Overviews
	o Research Overviews
	o Case Studies
	o Technology Overviews
July, '83 - Dec., '84	Steady expansion of Technology Transfer Articles to average of 4-5 per issue
January, 1984	ABACUS-Type articles initiated averaging 1 per quarter
July, '83 - July, '84	Gradual expansion of 'public policy' material to average of 8 pages per issue

Figure 1. Schedule for CACM changes : See text for explanation ("Content:" on page 7 and "Schedule")

This is summarized in Figure 2 on page 19 where it can be seen that CACM is planned to increase from an average of about 72 pages per issue in 1981-82 to about 122 pages per issue in 1984-85. This latter figure we regard as an asymptotic limit.

For comparison purposes, the previous five years are presented in Figure 3 on page 20, where it can be seen that between 1976 and 1981 the number of pages per issue ranged from a high of 89 to a low of 57, the latter occurring right after TOPLAS was launched resulting in most programming language papers leaving CACM.

A ten-year overall perspective is given in Figure 4 on page 21

The balance of material will, however, shift, as can be seen from Figure 2 on page 19:

	1981-82		1982-83		1983-84		1984-85		3-Yr. Incr.
	No.	%	No.	%	No.	%	No.	%	No.
Technology Transfer:									
Abstracts	19	2.2	63	5.9	72	5.5	72	4.9	53
Computing Practices	113	13.0	170	15.7	180	13.8	180	12.3	67
Reports	80	9.2	50	4.6	60	4.6	60	4.2	-20
Articles (1)	40	4.6	80	7.5	220	16.8	350	23.9	310
	252	29.0	363	33.7	532	40.7	662	45.3	410
ABACUS-Type Articles	0	0.0	0	0.0	16	1.2	32	2.2	32
Sub-Total	252	29.0	363	33.7	548	41.9	694	47.5	442
Research Papers:(2)	360	41.5	412	38.2	418	32.0	392	26.7	32
General Material:(3)	256	29.5	303	28.1	341	26.1	378	25.8	122
Total Pages:	868	100.0	1078	100.0	1307	100.0	1464	100.0	596

(1) Includes Contributed Articles, Publication Overviews, Research Expositions, Case Studies, Technology Overviews.

(2) Includes Research Papers, Technical Notes, Special Issues, Reprints, Technical Correspondence, Student Paper Competition.

(3) Includes ACM Forum, Professional Activities, ACM News, Calendar, President's Letter, Industry and World News, Other

Figure 2. CACM: Planned Pages, 1981-85

- o Technology Transfer material will increase from 29% (252 pages) in 1981-82 to 45% (662 pages) in 1984-84;
- o Research Contributions will decline in proportion from 41% to 27% over the same period, although the

	76-77	77-78	78-79	79-80 (1)	80-81	81-82
Tech. Transfer:						
Computing Practices	0	0	0	24	99	113
Reports & Articles	84	37	95	66	103	139
Sub-Total	84	37	95	90	202	252
Research Papers:						
TOPLAS-Related	180	368	276	111	(2)	(2)
Other	380	429	366	228	25	41
Sub-Total	560	797	642	339	315	319
General Material:(3)	143	227	214	260	340	360
Total Pages:	787	1061	951	689	801	868

(1) TOPLAS, Computing Practices initiated.

(2) Papers in Programming Techniques.

(3) Includes ACM Forum, Professional Activities, ACM News, Calendar, President's Letter, Industry and World News, Other.

Figure 3. CACM: Page Distribution, 1976-82

absolute number of pages will remain approximately constant at a level slightly higher than this year. The research paper "drought" which until recently had resulted in a skimpy CACM has ended - the backlog now exceeds 9 months; this figure will be only slightly reduced by the initiation of TOCS in April, 1983, and even this benefit will hardly have any effect on 1982-83.

The level of 400 pages per year represents a reasonable balance between the demands of editorial viability for a research paper section, and the

	'77	'78	'79	'80 (4)	'81	'82	'83	'84	'85
Tech. Transfer (1)	84	37	95	90	202	252	363	548	694
Research Papers (2)	560	797	642	339	340	360	412	418	392
General (3)	143	227	214	260	259	256	303	341	378
Total Pages	787	1061	951	689	801	868	1078	1307	1464

(1) Includes Abstracts, Computing Practices, Reports, Articles, ABACUS-Type Articles.

(2) Includes Research Papers, Technical Notes, Special Issues, Reprints, Technical Correspondence, Student Paper Competition.

(3) Includes ACM Forum, Professional Activities, ACM News, Calendar, President's Letter, Industry and World News, Other.

(4) TOPLAS, Computing Practices initiated.

Figure 4. CACM: Page Overview, 1976-1985.

availability of pages in CACM given financial and physical constraints.

- o General Material will stay about constant in proportion at around 26%. However, this in fact represents an expansion in actual pages from 256 pages in 1981-82 to 378 pages in 1984-85. Most of this expansion will occur in what is now called "Industry and World News", as described in the section on "General Material:" on page 11.

The projected costs of this expansion are analyzed in the next section.

6.4 FINANCIAL PLAN

This section describes a broad financial plan not a budget. It depends upon certain general assumptions which, although they are reasonable, are not intended as a substitute for the detailed analysis contained in the annual budget submission. The latter, of course, depends upon current data which is not available at this time, at least not for future years.

That part of this plan which, for example, contains 1982-83 data is reflected in detail in the 1982-83 budget submission presented separately to Council. That budget submission may actually vary slightly from the numbers presented in this document.

6.4.1 Assumptions:

The assumptions underlying this financial analysis are outlined in "Cost Assumptions." on page 26. In particular, it should be noted that we present our financial analysis in terms of constant 1982-83 dollars, that is, the effects of inflation are ignored since they cannot be predicted with any certainty. Obviously, annual budget submissions will reflect current costs.

Furthermore, the costs per page are all at the 1982-83 CACM circulation level of 60,000. This is for planning purposes only. Again, the annual budget documents will contain more current data. The variable costs of production (printing, presswork and binding) and the costs of distribution will obviously increase with increased circulation.

The costs are summarized by type of material, and essentially increase linearly with the number of pages of each type. Thus (see "Cost Assumptions." on page 26) the cost per page of Technology Transfer material is assumed to be \$930 for non-ABACUS type and \$1680 for ABACUS type; the cost per page of Research Contributions is assumed to be \$780; and that of General Material is assumed to average \$930, although the editorial component of this figure will vary considerably with the type of material.

The costs include all facets of editorial, graphics, production, and distribution. Editorial and graphics costs vary considerably by type of material, following

the precepts of "Directions for CACM" on page 7 and "Staffing Implications" on page 16.

6.4.2 Total Expansion Costs:

Based on these assumptions, the total costs (in constant dollars) for the planned expansion of CACM are summarized in Figure 5 on page 24.

It can be seen from Figure 5 on page 24 that to produce CACM in 1982-83 but with the same content as it contained in 1981-82 (the 'base' assumption) would cost \$1,053,000, or about \$19 per member. The changes envisaged by this plan would increase the costs by \$195,000 or 18% to a level of \$1,247,000 - that is, about \$22.60 per member. A further 17% increase in costs (at 1982-83 constant dollars) is planned for 1983-84, raising the average cost per member to \$26.60; and a further 11% in 1984-84 raising the average per member cost to \$27.70, an approximate 54% increase in cost above the present base for an increase in pages of 68%.

Can ACM afford this increase in order to provide members with the right kind of flagship publication? We believe so. All other things being equal (inflation, circulation - see above) one option is to raise member dues by corresponding amounts to finance the expansion, that is, to raise member dues from \$40 to \$50 over the three-year period. An increase of about \$3 per member per year does not seem to us to be out of line considering the benefit.

However, this will probably not be necessary, at least not to that extent. The Publications Board has other sources of revenue that can steadily be increased over and above the demands of inflation to accommodate part of the expansion. Advertizing; non-member subscriptions; back-issue and single-copy sales; page-charges and other miscellaneous sources are all such sources of revenue. An improved CACM can, for example, be expected to generate more advertizing.

In 1982-83, the Publications Board proposes to finance the planned expansion from its own resources, as will be reflected in the budget. The Board believes that dues increases should, if possible, follow - not precede - the perceived benefit of an improved CACM.

	1982-83	1983-84	1984-85
Increased Costs Over 81-82 Expenditure Levels:			
Tech. Transfer			
Non-ABACUS	\$ 103	\$ 260	\$ 381
ABACUS	0	26	54
Sub-Total	103	287	435
Research Papers	38	42	23
General Material	42	75	107
Design(non-specific) (1)	12	5	5
Total Incr. Over 81-82 Expend.	195	409	571
1981-82 Expenditures:	1053	1053	1053
Total Expenditures (2)	\$1247	\$1462	\$1624
%Increase Over 1981-82	17.9%	38.8%	54.2%
%Increase Over Previous Year	17.9%	17.2%	11.1%
Cost Per Member ('82 Base = \$19)	\$22.60	\$26.60	\$27.70

(1) Does not include increased graphics costs associated with individual pages, which are already included in the appropriate line items above.

(2) In 1982-83 Thousands of Dollars.

Figure 5. CACM. Pro-Forma Expenditure Levels, 1982-85
: (Constant \$ Thousands)

Furthermore, the Board net income provided to the rest of ACM will increase from \$254,000 in 1981-82 to \$409,000 in 1982-83; however, \$137,000 of the latter will be used by ACM to pay the Publications Board for the increased costs of providing CACM to ACM members (instead of raising dues), so the "real" increase in

net income from ACM's perspective will be \$18,000 to a total of \$272,000 in 1982-83.

The proposed budget for 1982-83 also includes provisions to expand TODS and JACM, both of which have unacceptable backlogs of over a year in spite of the most stringent paper acceptance criteria. The Publications Board has been hamstrung in its ability to finance the necessary expansion of TODS and the JACM by growing inroads that have been made into its budgetary flexibility by externally mandated demands, such as the airmail surcharge, that have not been adequately budgeted. The airmail surcharges need to be increased to cover the cost of the service, so that this service is not subsidized by other publications activities. The airmail surcharges must be increased as proposed, so that our publications do not continue to be adversely affected.

What about 1983-84 and 1984-85 ? Although projected costs at constant dollars and present circulation levels are depicted in Figure 5 on page 24, there are nevertheless too many unknown variables to predict with accuracy. Inflation levels and membership growth are unknown. So is the precise long-term impact of price increases budgeted for 1982-83 on such revenue sources as non-member subscription and advertizing. So are the precise financial demands of other publications, particularly Computing Reviews.

Nevertheless a commitment must be made to the proposed changes and expansion as a matter of priority. ACM must have an outstanding flagship publication. We are confident that a combination of increased revenue sources and small dues increases can easily finance the proposed expansion. This expansion, after all, only represents a 10% growth in total Publications Board expenditures over three years.

A.0 COST ASSUMPTIONS.

(To be written).

Base Marginal Costs per Additional CACM Page: (1).\$ 730

Additional Editorial Costs:

Technology Transfer -	
Non-ABACUS Type.....	\$ 150
ABACUS Type.....	\$ 750
Research Contributions.....	\$ 0
General Material (average) (2).....	\$ 150

Additional Graphics Costs:

Design (one-time, FY83 only).....	\$10000
Design, per issue.....	\$ 400
Graphics, Non-ABACUS, per page.....	\$ 50
Graphics, ABACUS, per page.....	\$ 200

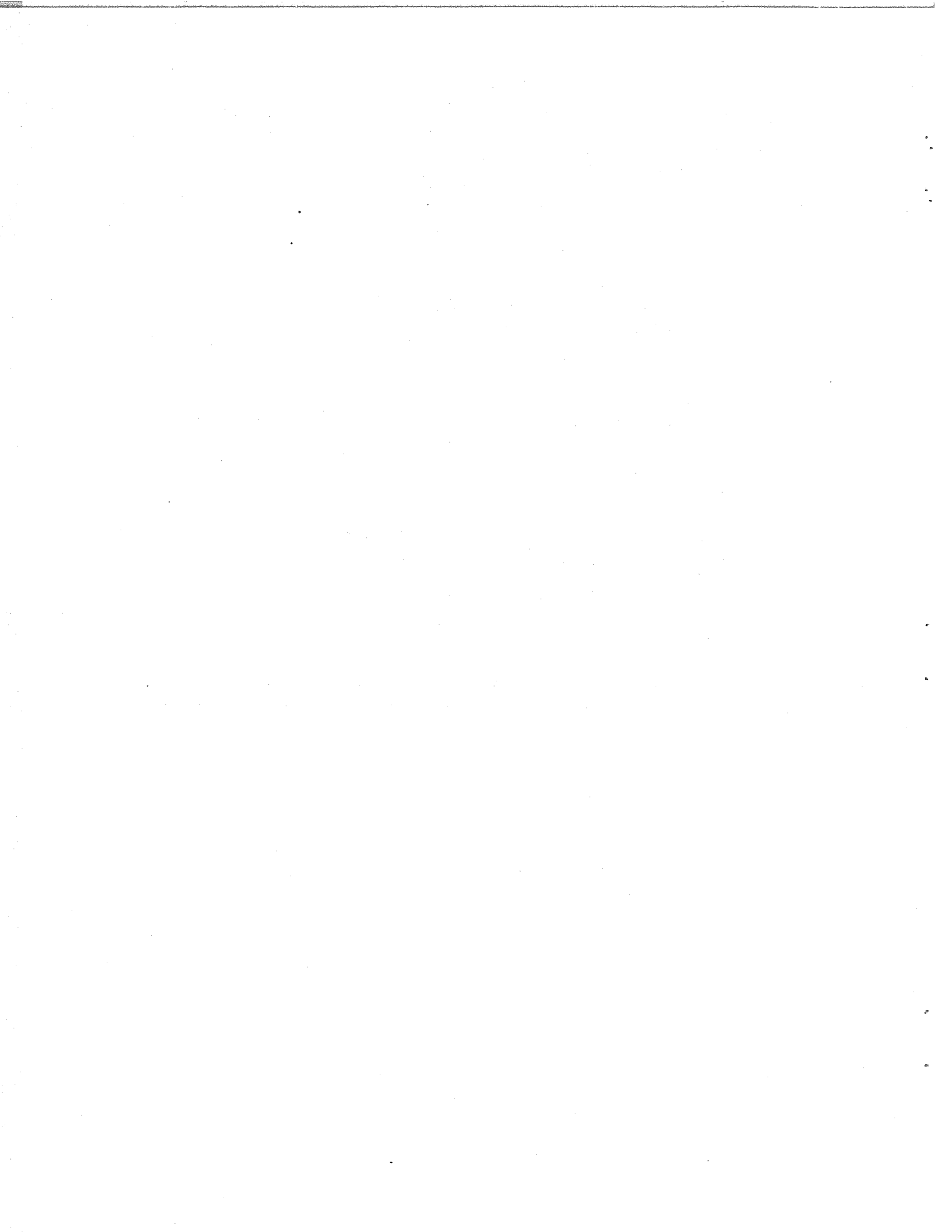
Total Tech. Transfer Costs per Page:

Non-ABACUS.....	\$ 930
ABACUS	\$ 1680
Total Research Contribution Cost per Page.....	\$ 780
Total General Material Cost per Page.....	\$ 930

(1) Includes copy-editing, markup, proofreading, production, distribution, and overhead at 1982-83 circulation levels (60,000).

(2) Actually may range from \$25 to \$250 depending upon type of material.

Figure 6. Unit Marginal Costs Assumed : Constant Dollars



A Long-Term Policy Framework for ACM Publications

Prologue

In January of this year, the ACM Publications Planning Committee submitted to the ACM Council a draft report entitled "A Long Term Policy Framework for ACM Publications." The current Committee members are Robert L. Ashenurst, Michael D. Cooper, M. Stuart Lynn (Chairman), Raymond E. Miller, Christine Montgomery, Joel Moses, Thomas E. Murray, and Evelyn A. Swan. Former members of the Committee include Richard Canning (through December 1977), Peter Denning (through September 1977), and Jean E. Sammet (through October 1977).

The purpose of this Framework is to serve as a policy document to guide ACM publications planning over the foreseeable future. It is not a blueprint for change, but rather a framework within which such blueprints can be developed in a coherent manner. The Committee is currently working on a first three-year implementation plan based on the policy Framework, intending to submit a draft of it to the ACM Council in June 1978 at Anaheim.

In developing the Framework, the Committee examined the extent to which ACM publications presently meet the needs of the Association and attempted to define unmet needs. Based upon these needs, the Committee then defined and prioritized long-term objectives and developed a strategy that would produce a useful publications planning policy. The

Committee welcomes comments on the Framework from members of ACM. Following is a condensed version of that report.

It should be emphasized that the Committee's report is a relatively lengthy and complex document that is difficult to summarize succinctly. Full understanding of the report depends upon knowledge of definitions and classifications that are extensively discussed in the original. For this reason, the Committee stresses the importance of referring to the full-text document for a complete, well documented discussion of processes and conclusions. For convenience in transferring attention from the shortened version to the full text, parts of both are divided and numbered in the same manner through Part VII. Part VIII in the shortened version corresponds to Part XI in the full text version.

Arrangement of the Full Report

Part I of the report defines its purposes and scope. Part II discusses the historical background and outlines the present status of ACM publications. Part III discusses the projected future environment for publications and in particular considers future constituencies to whom publications will be directed.

Future publications needs are defined in Part IV. It is important to note that the document considers only those needs unmet at this time. The Committee assumes that pres-

ently met needs will continue to be satisfied, and so the Framework builds upon present strengths of ACM publications.

In particular, this section outlines factors that have affected the Committee's thinking and carefully defines the terms and data elements that are building blocks for the remainder of the document. Section V.4 in Part V analyzes present ACM publications with respect to how well they approach the unmet needs enumerated in Part IV.

Part VI proposes long-term publications objectives. Since these objectives are based on needs and since some needs are more important than others, the Committee prioritizes objectives here.

The central structure of the Framework is contained in Section VII, which proposes five major directions for ACM publications.

In the full text version, Part VIII defines planning targets and recommends options that best satisfy needs with minimum financial impact on members. Since the Framework is not a plan *per se*, resource implications are difficult to assess, but Part IX discusses interrelationships between the Framework and possible resource implications. Part X concerns itself with how publications and publications planning should be managed in the future.

Parts VIII, IX, and X of the full text version are not summarized in the shorter version, so it is particu-

larly important to consult the original document on matters discussed in these parts.

Part X in the full text document and VIII in the summary version review alternatives that might have been chosen and discuss reasons the Committee thought it best to reject them.

The summary version of the report follows. Although some pointers to the original text have been inserted and an outline appears above, it is again stressed that this extract contains many gaps and is only a selective version of the original larger report.

I. Purpose and Scope

The purpose of this document is to define a long-term policy framework for ACM publications. It is not intended to set forth a long-term plan but rather to describe ideal achievements that could be pursued if ACM were freed from resource restrictions, transition constraints, and other limitations. It is our view that ACM should attempt to develop plans consistent with this Framework but be prepared to change the Framework if it becomes no longer workable or no longer desirable.

II. Historical Synopsis¹

The desire to change ACM publications does not stem from financial considerations or from any feeling that the publications are not of sufficient value to the profession. Most members, whether or not they feel that ACM publications are of value to them individually, do perceive the publications as being of value to the profession as a whole. In general, the mood for change stems from the fact that a substantial number of members feel the material they receive is too specialized, too narrowly directed and primarily of research interest, rather than being more

¹A history of ACM publications from 1947-1972 may be found in an article by Eric Weiss which appears in Vol. B, Appendix 1 of the full text version. Refer to the full text, Part II.1-II.3 for a synopsis of recent developments and status report and to Table 1 for information on the number of subscriptions to ACM publications from 1975-1977.

broadly directed to readers outside the area of specialty. Although the majority (59%) of ACM members who responded to the 1977 Publications Survey are moderately or highly satisfied with ACM publications (including SIG publications) the Committee does not think this implies that the majority wants no improvement.

ACM publications do an excellent job of publishing research-oriented material, and those members whose primary interest lie in this direction generally appear to be well satisfied. It is generally perceived that there is a weakness in publication of practitioner-oriented material. Naturally, for those members to whom such material is important, concern about this weakness is primarily directed toward *Communications*, the one publication that every member receives. Many ACM members view *Communications* as the embodiment of their dues. Even though they receive many other benefits from ACM for their dues, *Communications* is the flag that is waved in front of their eyes each month. Many, it appears, do not even open *Communications*, which may mean that a large number of members are not aware of its recent changes.

III. Future Environment for ACM Publications

III.1 Internal. A long-term framework can only be useful if assumptions made about the future turn out to be correct. For planning purposes, it is often safest to assume the future to be a modified extension of the present. Therefore we will not assume any major changes in ACM membership; we will assume that the constituencies of ACM's members—at least as expressed in their publications preferences—will remain essentially the same.

We also assume that ACM's present structure and fiscal environment will remain essentially the same, implying that ACM will have sufficient funds to make substantial changes in publications but probably not have sufficient funds to embark on massive or risky undertakings like the proposed *Abacus* publication of AFIPS.

III.2 External. The future of the external environment is more difficult to assess than the future of ACM's

internal environment. Recent years have seen a number of computing publications issued by commercial (profit-making) publishers; we expect this trend to continue.

More important in projecting the future external environment for ACM publications is technology like computer typesetting and information retrieval, and changes in the way published material can be delivered to readers. Although we cannot predict exact trends in technologies, we assume that increasingly selective dissemination of material will be facilitated, and that ultimately readers will only receive material in which they have expressed an interest.

III.3 ACM's Constituency. Any discussion of publications planning would be incomplete without more complete discussion of the audiences that such publications are intended to address.

The classification of audiences most appropriate to this Framework is contained in Section II.2 of the final report (November 1974) of the Long Range Planning Committee (LRPC): "Recommended Future Direction for ACM." As a working definition of ACM's constituency, the LRPC report suggests:

"ACM's constituency includes all those people who believe that the conduct of their jobs is, to some extent, improved by the acquisition and use of technical knowledge about computers and their applications. ACM should provide for each such person the degree of technical knowledge he seeks insofar as resources and member interests permit."

The report further states that:

"This definition makes no distinction between specialists, professionals with general interests, or people with only tangential interests in computers. By accepting (the above) definition, we accept a responsibility to be concerned about them all."

The key point is diversity of audience. ACM's present publications structure is primarily directed toward computer science and technology, and gives only secondary representation to the uses and effects of the computer, computer management and personnel, and computer education. Members of ACM who might characterize themselves as "practitioners" are not well served. The Framework must reflect this situation, and suggest some means of dealing with it.

IV. Future Publications Needs

The Publications Planning Committee has identified several major areas of needs which are partially or wholly unmet at the present time. A long-term framework should take into account these needs and be responsive to them.

In essence, the goals of ACM's publications planning activities should be—as far as practically possible—to develop publication plans which are responsive to these needs. *These needs are beyond those needs which are in fact presently being satisfied by ACM's publications, and therefore represent needs which are partially or wholly unmet at the present time.* For example, the Publications Planning Committee feels that ACM is doing a superior job of publishing refereed technical literature, as far as *quality* is concerned, and thus there is no urgency to take steps to improve the quality of such material. However, there are considerable problems with the way such material is disseminated and the *speed* with which it is published. In Section V we identify ways of measuring the needs listed below and assess where present ACM publications stand with respect to these measurements. For convenience, needs are classified into three groups:²

- (1) Needs which are primarily a reflection of the publication requirements for the profession as a whole;
- (2) Needs which are primarily a reflection of publication requirements of individual users³ within the profession (members, subscribers, readers);
- (3) Needs which are a reflection of publication requirements of both the profession and users.

Needs of the Profession

1. *Unification of Profession:* To encourage unification of the computing profession through its body of literature.
2. *Breeding Ground for New Areas:* To nurture the development of new

²Section IV, pp. 28-35 of the full report comprehensively discusses the needs and comments on their importance.

³The term "users" refers in this Framework to users of *publications*, as opposed to end-users of computer systems or applications.

technical areas in the computing field.

Needs of Users

3. *Audience Satisfaction:* To be as responsive as possible to the individual and collective information requirements of ACM members.
4. *Serendipity:* To encourage serendipitous exploration by readers.
5. *Selective Dissemination:* To have members ultimately receive only material in which they have expressed interest.
6. *Selective Retrieval:* To facilitate selective retrieval of information by the professional.
7. *Problem-Solving Assistance:* To allow for the publication of material which is directed toward assisting practitioners and others in the solution of specific problems.

Needs of the Profession and Users

8. *Synthesis of Information:* To allow information to be synthesized in ways appropriate to the heterogeneous interests and requirements of ACM members in particular and the computing profession as a whole.
9. *Consistency of Communication:* To encourage consistency, cohesiveness, and comprehensiveness in communication within the profession and with external milieu.
10. *Rational Framework:* To be allowed to develop within a preconstructed rational framework a publications structure that encourages orderly growth and considers the needs of all.
11. *Responsiveness to Changing Fields:* The publications structure and the Framework under which it develops must be sufficiently flexible to be responsive to changing fields of computing and to their changing interrelationships.
12. *Rapid Publication:* To encourage rapid publication and dissemination of new results and ideas within the field.

It would be most desirable to satisfy the above needs at minimum cost to members, but achieving maximum satisfaction will be expensive. Costs can be recovered in a variety of ways, including:

- (a) *By selectively passing on to members costs associated with choices or options they select.* This represents the principle of unbundling (a principle which this Committee recom-

mends) in which a member only pays for that material that is of most interest to him. However, Council has concurred—and this Committee concurs—that every member of the Association receive some technical material as part of the dues payment, although members may receive different materials.

(b) *By subsidizing publications out of general member dues.* The word "subsidy" is somewhat misleading, since members receive benefits in the form of publications for dues paid. This principle implies that all members should pay for certain publications, whether they want to receive them or not. Insofar as members presently receive two publications as part of their dues (one of which is not necessarily by choice) this approach tends to dominate much of the present packaging of ACM publications.

(c) *By diverting resources from other areas of the Association's activities.* Member dues being used to subsidize other ACM activities may be partially diverted to publications, or surplus funds that are created by another activity may be diverted into publications.

In general, the more narrowly one directs a publication, and the greater the emphasis on unbundling and selective dissemination, the higher the average and incremental costs of the units being disseminated. Thus, in order to achieve maximum satisfaction, members may end up paying more for individual publications, but could pay less in total by not being required to receive material of no interest to them. Some compromise between completely selective dissemination and publication packaging may be necessary for reasons of economy.

V. Measurement of Needs

V.1 Classification of Subject Matter. We find it meaningful to divide the field of computing into five major categories: Theory of Computations, Systems and Programming, Computing Methodologies, Computer Applications, and Computing Milieu. [These categories derive from the Long Range Planning Committee Report cited in Section III.3.] There is some overlap in these categories.

They are, in outline, defined as follows:

(a) *Theory of Computation*: This category includes basic theoretical material of the kind usually found in the *Journal of the ACM*. While much of this is of a relatively general nature, it includes material that directly addresses theoretical issues underlying computing methodologies or applications.

(b) *Systems and Programming*: This category includes much of the "core" of computer science, and concerns general issues such as architecture, communications, languages, and operating systems. These are considered at a level independent of particular applications.

(c) *Computing Methodologies*: This category includes areas of computing and computer science which are more specialized than Systems and Programming, yet more general than particular end-user application areas. Examples are mathematical algorithms and software (numerical analysis, symbolic analysis, mathematical programming, and simulation), artificial intelligence, graphics systems, and computer-aided instruction. Relatively general material on databases is also included, although what is often termed "programming methodology" would be included under Systems and Programming.

(d) *Computer Applications*: This category is comprised of material such as banking or process control that is directed toward end-user applications. Traditionally, such applications have been grouped into either business or scientific applications, but this grouping may be too simplistic for future use.

(e) *Computing Milieu*: This category is concerned with the larger context of computing including computer science education, management of computer services, the societal effects of computers, public policy matters related to computing, and computer personnel research.

V2 Characteristics of Published Material. Defining objectives for ACM publications requires discussion of the type of control to be exercised over material ACM considers for publication and some comments on the form of distribution of such material.

In Table 2 of the full text report, we list 33 "data elements" or classifi-

cations of material to be published by ACM. Examples of data elements include material classified as articles (e.g. research papers, tutorials, surveys, conference papers, algorithms), feature material (e.g. ACM news, letters to the editor, news of the professions, key lectures), and reference material (e.g. bibliographies, calendar/calls for papers, and curricula).

Each data element is annotated according to level of review, importance for ACM distribution, and range of ACM distribution. The *level of review* is broken down into:

Refereed, that is, detailed peer review following a defined, formal process which is uniformly applied. This sort of review is usually given scholarly material to ascertain originality, correctness, novelty, importance, and clarity of exposition. ("Novelty" may refer to the method of exposition—for example, a good survey article—rather than to the content of the material.) With refereed material, the editor and the publication assume responsibility for these characteristics; in practice, referees with technical specialization assist.

Formally Reviewed, that is, a structured evaluation and critiquing procedure following a defined process uniformly applied as with refereeing, but without requiring that the tests of scholarly originality, novelty, and importance be applied.

Reviewed, that is, a more informal and not necessarily uniform process of volunteer review, with standards dependent upon the publication and the type of material. This level of review gives an independent assessment of the importance of the material and of the methods of exposition.

Edited, that is, professionally edited, usually by paid staff, with primary emphasis on exposition, editorial standards and style, and graphic presentation, rather than on content and substance.

No Review, that is, material which is published just as submitted.

Different types of material will have appropriately different levels of review and the particular level of review used will depend upon particular circumstances.

Importance for ACM Distribution defines whether material must, in the Committee's view, be available

for distribution to ACM members, whether such availability is simply desirable, or whether such availability is questionable.

Range of ACM Distribution defines whether, in the Committee's view, the indicated data element must be distributed to all ACM members, whether it is highly desirable that it should be distributed to all ACM members, or whether it should simply be available on an optional basis. Materials that fall within the first two categories are primary candidates for inclusion in any "flagship" publication.

There are many other factors that must be considered when publications are created and which are not readily categorized, namely those that reflect most of the criteria defined in the previous paragraphs. In particular, the Committee has found the following criteria useful in evaluating ACM's publications with respect to the unmet needs of Part IV:

1. *Depth of Coverage*: An evaluation of publications with respect to the level at which they are written. Here we will consider, at one extreme, esoteric research articles directed to a narrow area and, at the other extreme, broad interest reports and articles.

2. *Length*: The length of individual articles ranging from less than a column to full-length papers of twenty pages or more.

3. *Audience*: To which classes of readers is the material directed? Classes will contain those engaged in research in a very narrow area, practitioners involved with applications, and educators, managers, or historians.

4. *Novelty*: Is the material a new result or concept, a synthesis of known results to produce new insight, or a description of known information for survey or tutorial purposes?

5. *Relation to the State of the Art*: Does the published matter, irrespective of its novelty, relate to subject areas which are at the forefront of computing activity, or—at the other extreme—does it relate to some relatively unimportant backwater?

6. *Permanence*: Is the material of transitory interest only; is it of semi-permanent interest in that it will be of use over some limited number of years; or is it of archival importance

in that continued reference to it over an extended number of years should be provided for?

7. *Influence*: To what extent does the material influence the future development of the computing field? Citation indexing might be used to measure this.

8. *Contributed vs. Solicited*: To what extent are the articles actively solicited by editors in accordance with prescribed editorial policies, rather than being unsolicited contributions that are passively considered?

V.3 Horizontal and Vertical Publications. Horizontality and verticality are of importance in assessing publications:

Horizontal publications are publications which are packaged to enhance consistency of style as measured by depth of coverage of review, degree of novelty, and intended degree of permanence across essentially all subject areas. A given horizontal publication may present material at different depths, but it is intended that, essentially, it should do so *uniformly* across all subject areas. This does not necessarily have to be accomplished in a single issue (cf: *Surveys*).

With this definition in mind the following are all considered horizontal publications: *Communications*, the *Journal*, *Computing Surveys*, *Computing Reviews*, and the proposed AFIPS publication, *Abacus*. On the other hand, *Transactions on Mathematical Software*, *Transactions on Database Systems*, and SIG Newsletters are not horizontal.

Vertical publications emphasize specific technical or functional areas but may contain material at varying levels of depth, prepublication review, and so forth. In its most extreme form, a vertical publication would contain all data elements relevant to a given technical area, including research papers, informal technical papers, abstracts, and reviews. The advantage here is that an individual interested in a certain technical area could receive all relevant published material in a single package.

If we more loosely define the term, any subset of the data elements directed only to a particular technical area would be considered vertical. We use this less stringent definition

so that TOMS and TODS are vertical publications. This would suggest that the narrowly focused reader might still have to subscribe to several packages (perhaps all vertical).

There is always some conflict between horizontality and verticality. With reference to the needs discussed in Part IV, horizontal publications tend to foster unification, consistency, responsiveness, new areas, and serendipity. On the minus side, they tend to inhibit selective dissemination, rapid publication, and selective retrieval. Vertical publications are apt to have the reverse effect. Consequently, no single approach is likely to be entirely correct, and a combination of horizontal and vertical publications will probably always be necessary if all needs are to be met adequately.

The following is a list of types of material (data elements) that might naturally appear in either a horizontal or a vertical publication. It should be emphasized that this is not an exclusionary breakdown. Depending upon changing factors, certain elements could appear in either list.

Horizontal

Broad interest technical material, Tutorial, Survey (including history), Public policy, Management, Selected reprints, ACM News, Committee reports, Key lectures, Letters to Editor (e.g. ACM Forum), Industry news, Government news, News of profession, Standards (proposed), Meeting reports, Key book reviews, Critical reviews, Abstracts, Summaries of articles, Titles/contents, Indexes (e.g. ACM Guide), Calendar/calls for papers.

Vertical

Research papers, Specialized technical material, Informal technical material, Education, Conference papers, Algorithms, Work in progress, "How to" features, Bibliographies, Curricula.

There are strong reasons for maintaining an ACM research publication that is horizontal. A horizontal publication is an important vehicle for attracting high quality papers of importance because of the potentially wide audience such papers could reach; it enhances interdisciplinary communication and serendipity; it provides for the publication of research material in new and emerging fields for which no vertical publica-

tions yet exist; and it provides for the publication of those research results which have widespread implications. These are present strengths of ACM publications which should not be lost in restructuring.

VI. Long-Term Publication Objectives

In this Section we summarize long-term objectives for ACM publications that will guide our decisions over the next five to fifteen years. This, in one sense, represents the outcome of our requirements analysis.

The Committee has established long-term objectives for ACM publications by prioritizing the unmet needs. This prioritization is based on Committee consensus, utilizing such factors as the analysis of the status of ACM's publications, the possibility for improvement, perception of membership desires and needs, urgency of need for change, and personal prejudice.

The objectives for ACM in its publications planning are:

A. Extremely High Priority Objectives

- Allow for the publication of practitioner-oriented material directed toward assisting in the solution of specific problems (Need 7).
- Ensure that the publications structure allows for information to be presented, synthesized, and disseminated in a variety of ways reflecting the heterogeneous interests and requirements of ACM members as a whole (Need 8).
- Focus on the development of a rational framework for publications and take steps to develop publications within that framework (Need 10).

B. Very High Priority Objectives

- Attempt to encourage the unification of the computing profession as expressed through its body of literature (Need 1).
- Ensure that publications planning can nurture the development of new technical areas within the computing field (Need 2).
- Attempt to measure and assess the publications requirements of ACM members and take active steps to re-

spond to these requirements in a manner consistent with other objectives and constraints (Need 3).

- Place emphasis on developing structures whereby members select only that material of most interest to them (Need 5).

- Ensure that publications are sufficiently responsive to the changing fields of computing and flexible to their changing interrelationships (Need 11).

- Ensure rapid publication and dissemination of new results and ideas in the field (Need 12).

C. High Priority Objectives

- Attempt to foster serendipitous exploration by readers of ACM publications (Need 4).

- Strive to facilitate the development of means whereby members of the profession can selectively retrieve information upon demand (Need 6).

- Attempt to encourage consistency and cohesiveness in communication within the profession and with those outside the profession (Need 9).

VII. Strategic Directions

The committee has defined five broad strategic directions for ACM publications planning in support of needs and objectives:

1. *A Horizontal/Vertical Publication Structure should be established for ACM publications and this structure should include the following:*

(a) *Horizontal Publications* (supports Needs 1, 2, 3, 4, 7, 8, 9, 10, 11)

It is thought that ACM should always publish one or more horizontal publications (see V. 3 for full discussion). At this point, the Committee leaves open the question of whether there should always be a single "flagship" publication—that is, one publication that all ACM members receive—as opposed to a series of optional horizontal publications containing technical material. In the long term, the Committee feels that such a "flagship" is probably desirable, although it recognizes the difficulty of satisfying all ACM's constituencies with a single publication. Different horizontal publications would be appropriate to different audiences. [For further discussion on this issue see M. Stuart Lynn's letter "Does ACM Need a 'Flagship'?" in

the *Communications of the ACM*, November 1977, pp. 783-784.]

Since serendipity is one of the principal needs satisfied by horizontal publications, the Committee feels that ideally horizontal publications should not be so deep as to jeopardize serendipity.⁴

(b) *Vertical Publications* (supports Needs 3, 5, 6, 7, 8, 9, 10, 12)

It is thought that ACM should publish vertical publications classified according to the following major subject areas:

ACM Series on the Theory of Computation

ACM Series on Systems and Programming

ACM Series on Computing Methodologies

ACM Series on Computer Applications

ACM Series on the Computing Milieu⁵

The schema suggests that there should be related to any given subject area at most one Journal, several Transactions, and a multitude of Special Publications including, for example, SIG Newsletters, conference proceedings, and informal reports.

Thus, for example, we could conceive of an *ACM Journal for the Theory of Computation*, an *ACM Journal for Systems and Programming*, or an *ACM Journal on Computing Methodologies*, but consider it unlikely that there should be an *ACM Journal of Computer Applications* or *Computing Milieu*. (Incidentally, the first three Journals are currently contained in JACM and possibly augmented by many research papers published in CACM or in TODS. If this combined packaging is to continue, we would suggest that the three parts of this combined journal be separately identified.)

With Transactions there is more flexibility and more room for growth. Examples of Transactions presently exist and could be renamed as:

ACM Series on Computing Methodologies:
ACM Transactions on Mathematical Software (TOMS)

ACM Series on Computing Methodologies:
ACM Transactions on Database Systems (TODS)

⁴See Table 3 in the full text for a list of ACM horizontal publications and examples of kinds of materials found in them. Refer to the full text Part VII, for a discussion of the importance and priority of including different classifications of material in ACM horizontal publications.

⁵Refer to Table 4 in the full report for a classification of vertical publications according to type of publication and typical data elements contained.

There are many other possibilities, depending upon technical viability, financial viability, and potential audience:

ACM Series on Systems and Programming:
ACM Transactions on Operating Systems (TOPS)

ACM Series on the Theory of Computation:
ACM Transactions on Complexity Theory (TOCT)

ACM Series on Computing Methodologies:
ACM Transactions on Graphics Systems (TOGS)

ACM Series on Computer Applications:
ACM Transactions on Commercial Applications (TOCAS)

(c) *Monographs*

To complete our argument, we note that monographs are not covered by the above. This is partly because they are not directed toward any *unmet* need. They do not fit specifically into the above structure. The Committee emphasizes, however, that it sees a continuing role for a preeminent monograph series following standards already maintained. Conceivably, there is room for an expanded monograph program.⁶

2. *ACM should strive to increase the proportion of material published which is editor-planned rather than author-driven* (supports Needs 3, 6, 8).

Most of the material ACM now publishes is author-driven. Although Editors-in-Chief structure the publications in broad outline, what ultimately gets published depends to a large extent upon what authors submit. Editors tend not to play an active role in seeking out papers dealing with very specific topics. The primary exception to this is when guest editors are appointed for special issues, as is occasionally done with *Surveys*.

In order to publish much material encompassed by the horizontal/vertical structure, a much more active editorial stance will be required. This is particularly true of nonresearch, practitioner-oriented material such as "Computing Practices." Whether or not this can be accomplished within an entirely volunteer editorial structure is unclear, but it is not likely. Indeed, there is the real possibility that ACM will need to expand the size and role of its paid edi-

⁶See Figure 2 of the full text for an illustration of the Committee's proposed horizontal/vertical publications structure.

torial staff to implement such a concept.

We emphasize that the thrust for more editor-planned content will certainly not apply to all publications; research publications in particular are expected to remain author-driven.

3. *The ACM publications structure should ultimately provide for two-tiered publication methodologies* (supports Needs 2, 5, 6, 8, 11, 12).

Two-tiered publication is the concept whereby material is not necessarily published in full. Carefully edited abstracts, ideally accompanied by critical reviews, are published instead and readers are provided with facilities for obtaining full text material not necessarily in completely published format. Full text material may undergo different levels of review. It may be provided in a variety of physical forms (typed report, computer-generated, microfiche, etc.), possibly depending on reader choice. Two-tiered publication fosters:

- rapid dissemination of results;
- selective dissemination of material
- more efficient use of printed pages;
- wider understanding of key results.

In essence, a *CR* expanded in concept and published *before* not after the fact, becomes a series of pointers to the full text material. One might envision a "Computing Abstracts" periodical which would rapidly publish short abstracts as submitted; later in *CR* the review of the full article could point back to the appropriate abstract.

4. *ACM should attempt to provide an information dissemination and retrieval environment whereby members could selectively request material of defined interest to them* (supports Needs 5, 6, 11, 12).

This recommendation is a logical extension of the previous one. Retrieval and dissemination systems are becoming universally available. To our knowledge, no universally accessible system exists for the computing field. The Committee remains open-minded about whether ACM should provide its own service directly or contract with a commercial organization in order to initiate such a service. The Committee also declines to prejudge technical methods for implementing the service. Rather, we simply encourage that such a program be actively pursued.

5. *ACM should financially package its publications so as to provide as much freedom of choice as possible to its members* (supports Needs 3, 5, 6, 8, 11).

This embodies the concept of unbundling, that is, subject to limitations stated below, ACM should not include publications as part of a member's dues.

It should be emphasized, however, that consistent with the overall purposes of ACM, with Council directive, and with this Committee's recommendations, unbundling should not extend to the point where it would be possible for a member to receive no technical material whatsoever. The Committee feels that every member should receive at least one technical publication. We are open-minded about whether we should strive for a situation where a "flagship" goes to all members, but we certainly feel a "flagship" may not be necessary in the short and medium term. Indeed, it may be preferable not to insist on such a publication in the long term either, depending upon member preferences.

VIII. Rejected Alternatives⁷

In many respects, the structure in Part VII is more important for what it excludes than what it includes. Excluded, for example, by this Framework are the following:

- only horizontal publications;
- only vertical publications;
- an uneven set of publications, e.g. one horizontal publication, a *Transactions on Database Systems*, and a *Journal for the Theory of Computation*;
- only pseudo-horizontal publications like CACM or JACM which are not predominant in the type of material detailed in V.3 as being conducive to horizontal publications;
- a single flagship publication, with all other material being forced into vertical publications;
- single-tiered publications only;
- bundled packaging of publications;
- only author-driven material.

⁷Part VIII in this extract corresponds to Part XI in the full text document. Refer to the full text for its Part VIII, Planning Targets; Part IX, Resource Implications; Part X, Publications Management. These Parts have been omitted from the summary.

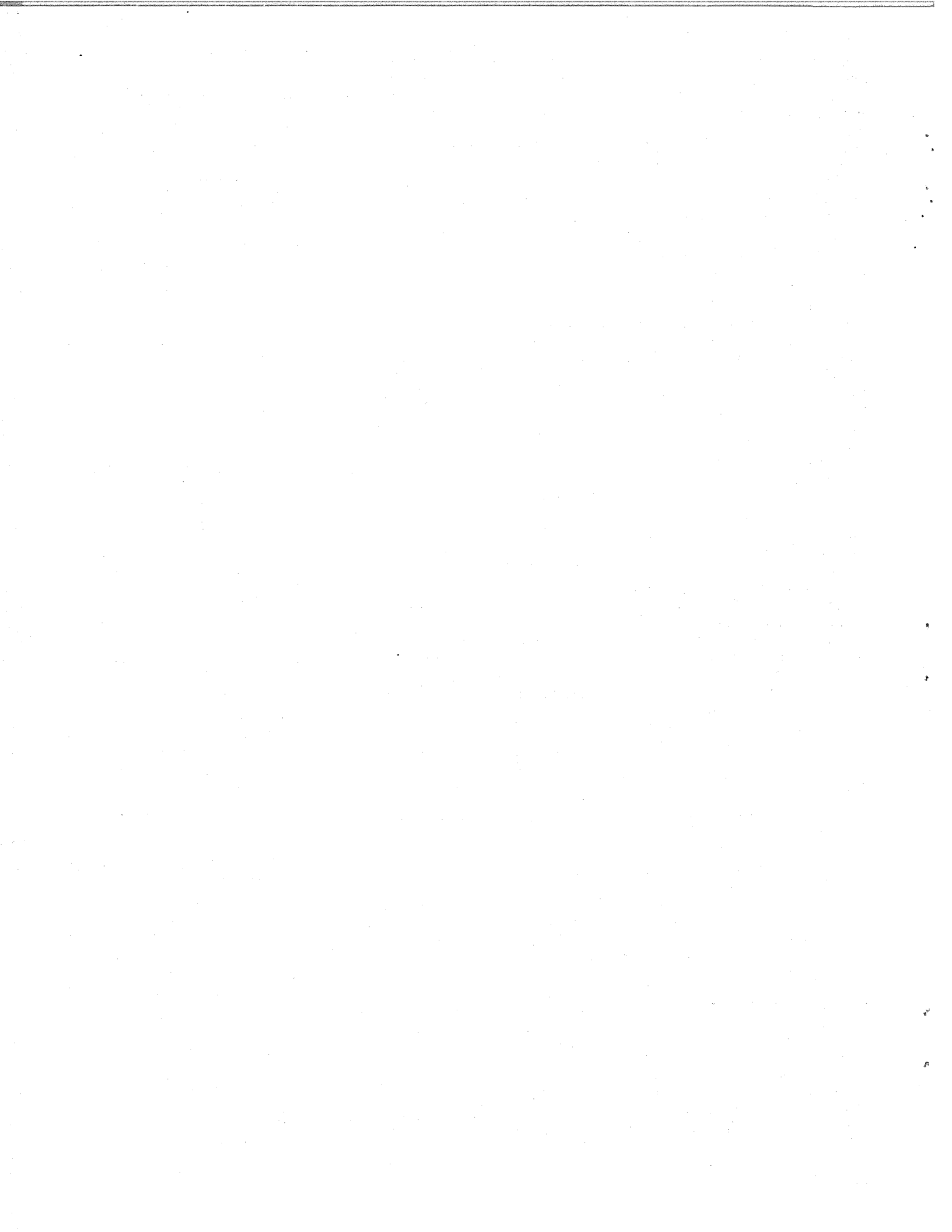
Committee Appointment. President Grosch has appointed George G. Dodd Chairman of the Ad Hoc Committee on Nomination and Election Procedures under the ACM Management Board. The members of the committee are to be announced.

Foreign Airmail Option. Beginning July 1, 1978, ACM members and subscribers who reside outside the United States and Canada may elect to receive *Communications* and other major ACM periodicals by airmail. The service will also be available to residents of Hawaii and Alaska. Members and subscribers who reside in the European Region will continue to receive their publications via air freight to Amsterdam and surface delivery from Amsterdam at no extra charge although optional airmail delivery from Amsterdam will be available.

The airmail service should be ordered at the time of membership or subscription renewal. Information on ordering and a schedule of postage fees will be sent to all eligible persons at the time their next renewal invoice is mailed from ACM Headquarters.

Computers and Society Educational Workshop. ACM, with support from the National Science Foundation, is sponsoring an invitational workshop July 16-19, 1978, in Williamsburg, Virginia, to address a variety of issues involving computers and society educational courses and materials.

The workshop is part of the second phase of a two-phase program in the area. In phase one a comprehensive annotated bibliography of reference materials for such courses was developed, and minimum course objectives for the courses were specified. In phase two of the program, a series of forward looking position



Publications Changes

In December, the Publications Planning Committee (PPC) will present to Council a Plan for specific changes in ACM's publications. This Letter attempts to summarize the principal implications of the Plan, so that members can communicate their views to our Committee or directly to Council members.

This Plan is known as the "Three-Year Implementation Plan for ACM's Publications." It is consistent with and driven by the "Long-Term Policy Framework for ACM Publications," already approved by Council and which was summarized in the June 1978 *Communications*.

The Plan is the outgrowth of almost two years of work. During this period, the Committee developed the above-mentioned policy statement; surveyed the membership (see July 1978 *Communications*); kept members informed of progress in previous President's Letters; solicited and listened to member feedback; and discussed, analyzed, and endlessly debated in various arenas from Committee meetings to Council meetings to Member Forums. The result of all this interaction is a Plan which we believe to be right for the membership at this time.

Early Actions

The Plan calls for gradual but significant change over a number of years. Its first actions will have effect as early as next July. The most important of these are:

(1) **Unbundling.** At present each member receives *Communications* and a second publication¹ as part of his dues. Consistent with principles

established in the Policy Framework and with the views expressed by many members, the PPC is recommending that the second publication become optional, that is, be unbundled from the dues and charged for separately when selected; member dues would then be adjusted appropriately downwards—at time of writing it is not certain what the size of the dues adjustment will be, since this will finally be decided by Council. The PPC will also recommend some further rationalization in the dues structure, in particular a reduction in the member subscription prices to the *Transactions on Mathematical Software* (TOMS) and the *Transactions on Database Systems* (TODS), to take effect either now or at some point in the future after the effects of unbundling are better understood.

Unbundling will likely have a short-term negative financial effect on the Association. The extent depends upon the dues adjustment and upon member subscription patterns. However, we believe ACM can now afford this step in the direction of allowing members greater freedom of choice. Members will be able to opt for no second publication (that is, take *Communications* only), or choose equally for additional publications from among *Computing Surveys*, the *Journal of the ACM*, *Computing Reviews*, TOMS, TODS, or TOPLAS (see next paragraph). Unbundling is also the key to other publication changes.

¹Computing Surveys, Journal of the ACM, or Computing Reviews; an extra \$5.50 is also charged for the latter.

(2) **Transactions on Programming Languages and Systems** (TOPLAS). The PPC is endorsing the proposal by one of its subcommittees (ably chaired by Steve Zilles, who is also SIGPLAN Chairman) to start a new *Transactions on Programming Languages and Systems*. The approximate scope of this Transactions would be that material presently contained in the Programming Languages and Programming Techniques departments of *Communications*—indeed, except as indicated below, such papers would no longer appear in *Communications*. TOPLAS would also contain papers on computer and operating systems which relate directly to programming languages.

The number of papers in these areas continue to increase rapidly; *Communications* can no longer accommodate the growing backlog. A separate Transactions would provide the proper focus for this field, and allow for more pages to be published and for more timely publication.

Papers in this area which are of broad research significance, as opposed to being more narrowly directed, would continue to be published in *Communications*. Similarly, broadly significant research papers in mathematical software or in database systems would in future also be published in *Communications*. This is in contrast to what happened when TOMS and TODS were first established.

(3) **Computing Practices.** ACM publications in general, and *Communications* in particular, have long been criticized by many members for not containing sufficient material of interest to "practitioners" (see Pub-

lications Survey results in July *Communications*, pages 603-608). The Policy Framework emphasized this point.

In response to this need, the PPC is recommending that a substantial part of *Communications* be devoted to an area which we call "Computing Practices." There is not space in this letter to elaborate on the contents, but the name itself should be suggestive to readers. "Computing Practices" would be quite distinct from the existing departments for contributed research papers; it would be a separate section with different acceptance criteria for the papers published.

The difficulty with this kind of section is that it is hard to attract good papers. Such papers are generally not volunteered, since there is not the stimulus of academic recognition normally associated with formally refereed research papers. The PPC therefore recommends that a full-time staff editor be appointed to give impetus to this section and to ferret out worthwhile papers, rather than rely on the usual mechanisms of research papers volunteered by authors to volunteer editors. Papers would still be carefully reviewed; however, definitiveness, interest, and importance to the practice of computing would be emphasized rather than scholastic originality.

It will be difficult to start this section. It is far from clear that sufficient worthwhile papers can be obtained, even with full-time editorial support. However, it is clearly time for ACM to try.

Thus, after these actions have been completed, *Communications* will have evolved into a publication containing the same nontechnical material as at present; "Computing Practices"; and research papers as at present—however, research papers in *Communications* in areas covered by *Transactions* would be restricted to those of broad research significance. *Communications* would also continue to contain papers of more general interest, such as have been published in the "Reports and Articles" department.

Future Directions

The Plan also looks further ahead. Beyond the short-term actions described above, the Plan specifies

that ultimately there should be a change in the character of the publication all members receive. This bundled publication would consist primarily of the present nontechnical parts of *Communications* together with select technical papers of broad interest and significance.

It is questionable as to whether such a publication, at least in its early stages, would satisfy the Council requirement that every member receive at least one publication containing technical material as part of his dues—if not, then members would need to receive a second publication as well. There are other questions that have to be answered before a precise Plan can be developed for such a publication:

- Would it be possible at some point in the future to spin "Computing Practices" off from *Communications* into a separate publication? Although the PPC would like to see this happen, it is too early to tell if such a publication could succeed, either editorially or financially.

- Is there a place for a horizontal research publication generally of the character of the research departments of *Communications*, but where only papers of broad significance are published? As ACM embarks upon the publication of more *Transactions*, the nature of the research departments of *Communications* are likely to emphasize papers of this type. Whether, for example, such papers should ultimately be combined with the *Journal of the ACM*, or whether there should be a freestanding publication, is an open question at this time. Indeed, there are other alternatives.

The PPC does not recommend proceeding with a publication of the type characterized above until the answers to these questions have been resolved. We do, however, believe that the short-term changes to *Communications* and to the dues structure will indeed provide the proper framework in which these questions can be resolved. Depending upon the answers to these questions, the Plan does present several alternative courses of action.

The plan also calls for launching additional *Transactions* over the coming years; and for Computing Notices, a low-cost publication of work-in-progress abstracts.

Conclusion

The PPC believes the proposed plan addresses, within the fiscal constraints of ACM, the major problems associated with the present publications structure. We have considered the concerns expressed by most constituencies of the Association.

- The plan facilitates the publication of more research papers; most such material, however, is ultimately provided only to those who want it and pay for it. The PPC considers it extremely important to maintain ACM's reputation as the leading publisher of computer science literature.

- The Plan embarks upon an ambitious course of publishing more articles of interest to the general practitioner—this material, too, is ultimately provided only to those who want it and pay for it.

- The Plan provides a framework within which ACM can increase the amount of technical material of broad interest and significance that it publishes.

- The Plan generally encourages the principle of selective dissemination, whereby each member only receives those publications of most interest to him, while ensuring that every member must receive at least one technical publication. In the long-term, the Plan does not preclude two-tiered publication (where only abstracts of papers are published, and full papers are only distributed upon request or according to predefined profiles). Two-tiered publication is one extreme manifestation of selective dissemination, and is indeed one strategic thrust of the Policy Framework (see June 1978 *Communications*).

Please let us know your thoughts.

—M. Stuart Lynn

Publications Planning Committee

M. Stuart Lynn (Chairman)

Robert Ashenurst

Michael Cooper

Raymond Miller

Christine Montgomery

Joel Moses

Tom Murray

Evelyn Swan

Highlights From the ACM 1977 Publications Survey

Prepared by the Publications Planning Committee
of the ACM Publications Board

Readers may recall that a survey was sent to all members in June 1977 in an effort to assess attitudes and preferences toward ACM's publications. This was in connection with the present efforts of the Publications Planning Committee to chart a direction for the future of ACM's publications.

The response was extremely gratifying. Over 12,000 valid responses were received, that is, from approximately one-third of the membership. In fact, occasional responses are still being received, mostly from overseas members in faraway places to whom the questionnaire was erroneously mailed by surface mail (rowboat?)—we apologize.

The purpose of this note is to acquaint readers with some highlights of the tabulations received. The work of analyzing the results in detail is not complete — and probably never will be, since it is the intention of the Committee to use the data as a continuing source of information against which it can test its formative ideas. In any event, the task has proceeded more slowly than we had hoped, largely for logistical reasons.

This report is not intended to be written with statistical precision. We are not trying to prove or argue any particular points. The purpose is simply to acquaint readers with the tabulations, and to indicate some possible explanations for certain

data. In its planning efforts, the Publications Planning Committee will certainly consider carefully the implications of many of the results, and be influenced by them, but not be dictated by them as the only input to its planning process.

For all his yeoman volunteer efforts in coordinating the survey design, coding, keypunching, programming and tabulation of the results, we are completely indebted to ACM member Jim Greensfelder, ably assisted by his wife, Margie. Doubtless, the Greensfelder home in Cincinnati, Ohio, was at times swamped by thousands of survey forms being carefully scrutinized for errors and

inconsistencies. Not enough can be said about the many patient hours selflessly contributed by the Greensfelders.

Respondents

It appears that the 12,000 plus respondents represent a fair sample of ACM members. Analysis of the profile of respondents indicates general consistency with previous surveys of the membership, in particular the 1974 Membership Opinion Survey and the 1975-76 Membership Profile (see Table 1). Differences are not of particular significance in the context of the general kinds of guidance the Publications Planning Committee is seeking.

The percentage of student respondents is somewhat lower than membership statistics indicate. This is possibly due to the fact that the Survey was mailed out over the summer.

Again, the overseas response is much lower than membership statistics would lead one to expect, perhaps in part due to some of the mailing mishaps mentioned above. SIG members responded in slightly higher numbers than membership statistics would suggest *a priori*.

SIG memberships of respondents are summarized in Table 2. Compared with known membership data as of June 30, 1977, there are no significant differences to suggest par-

ACM Publications Planning Committee

M. Stuart Lynn (Chairman)
Robert L. Ashenhurst
Michael D. Cooper
Raymond E. Miller
Christine A. Montgomery
Joel Moses
Thomas E. Murray
Evelyn A. Swan

In addition, Richard Canning, Peter J. Denning, and Jean E. Sammet were former members of the Committee and contributed to the survey design. James Greensfelder served as survey Consultant. Alan Corneretto, Director of Publications at ACM Headquarters, provided invaluable assistance to the Committee.

Table 1. Profile of Respondents

	Number of Respondents	Percent of Total	Comparable Data (Percent)
Total Valid Responses	12010	100.0	-
Regular or Associate Members	10057	83.7	79.2 (1)
Student Members	1879	15.6	21.8 (1)
No Answer (4)	74	.6	-
Chapter Members	3542	29.5	28.0 (2)
Non-Chapter Members	8343	69.5	66.4 (2)
No Answer (4)	125	1.0	5.6 (2)
Member of at least one SIG	8090	67.4	61.2 (1)
Member of no SIG	3003	25.0	38.8 (1)
No Answer (4)	917	7.6	-
North American Members	11748	97.8	87.0 (1)
Overseas Members	261	2.2	13.0 (1)
No Answer (4)	1	-	-
Highest Degree Awarded:			
Secondary School Diploma	499	4.2	4.3 (2)
Associate's Degree	234	2.0	1.6 (2)
Bachelor's Degree	3947	32.9	33.9 (2)
Master's Degree	4752	39.6	37.0 (2)
Doctor's Degree	2319	19.3	19.3 (2)
Other	96	.8	1.9 (2)
No Answer (4)	163	1.4	2.0 (2)
Year first joined ACM:			
1950 or earlier	36	.3	- (3)
1951-1960	789	6.6	- (3)
1961-1970	4442	37.0	- (3)
Since 1970	6520	54.3	- (3)
No Answer (4)	223	1.9	- (3)

(1) Membership statistics as of June 30, 1977
 (2) From 1975-76 ACM Membership Profile
 (3) No comparable data available
 (4) No answer or invalid response

Table 2. SIG Memberships of Respondents (Includes regular, associate, and student members)

SIG	Number of Responses	Percent of All Responses Received	Percent of Total ACM Membership as of June 30, 1977
ACT	545	4.5	4.4
ARCH	819	6.8	5.7
ART	1219	10.2	9.1
BDP	1390	11.6	10.4
BIO	386	3.2	2.9
CAPH	78	.6	.5
CAS	433	3.6	2.8
COMM	683	5.7	6.2
COSIM	267	2.2	2.5
CPR	117	1.0	1.0
CSE	694	5.8	4.8
CUE	442	3.7	3.3
DA	176	1.5	1.8
DOC	774	6.5	5.5
GRAPH	961	8.0	7.2
IR	561	4.7	5.0
LASH	191	1.6	1.6
MAP	255	2.1	2.8
METRICS	574	4.8	4.7
MICRO	753	6.2	6.0
MINI	1188	9.9	9.7
MOD	1086	9.0	9.2
NUM	425	3.5	3.3
OPS	2041	16.7	16.5
PLAN	2948	24.5	20.1
STAPL	372	3.1	2.4
SAM	218	1.8	2.1
SIM	465	3.9	4.6
SOC	152	1.3	1.4
SOFT	1575	13.1	12.1
UCC	355	3.0	2.6
Member of no SIG	3003	25.0	38.8
No Answer	917	7.6	-

Table 3. Computing Involvements of Respondents

Areas	Primary		Secondary		Tertiary		1975-76 Membership Profile Primary Involvement Only (Percent)
	Number	Percent (2)	Number	Percent (2)	Number	Percent (2)	
Scientific/engineering applications	1852	18.7	1403	14.2	1034	10.4	19.6
Systems programming	1809	18.3	1835	18.5	1110	11.2	19.7
Commercial/business applications	1805	18.2	1102	11.1	882	8.9	16.6
Research/advanced development	1734	17.5	1632	16.5	1059	10.7	16.8
Teaching/instruction	969	9.8	716	7.2	736	7.4	10.3
Other activities/applications	628	6.3	335	3.4	334	3.4	3.7(1)
Computing system/installation management	395	4.0	439	4.4	302	3.1	3.2
Computing sales/marketing/services	183	1.8	167	1.7	148	1.5	1.5
Computing center operations	182	1.8	340	3.4	390	3.9	1.6
Writing/editing/publishing	110	1.1	355	3.6	538	5.4	.6
Technology assessment/environmental impact/societal impact	62	.6	135	1.4	218	2.2	.3(1)
Technical standards development	46	.5	137	1.4	291	2.9	.2
Computer-related training	39	.4	167	1.7	178	1.8	.3
Computer assisted instruction	29	.3	89	.9	119	1.2	.5
Computer and peripheral equipment maintenance	23	.2	43	.4	60	.6	.2
Computing personnel research	17	.2	28	.3	33	.3	.1
Computing professional ethics/legislation	14	.1	24	.2	47	.5	.1
Total	9897		8947		7479		

(1) Closest comparable category.
 (2) Percentage of total valid sample of 9897.

Table 4. Technical Interests of Respondents

Areas	Primary		Secondary		Tertiary		1975-76 Membership Profile Primary Involvement Only (Percent)
	Number	Percent (1)	Number	Percent (1)	Number	Percent (1)	
Software systems design/programming/implementation	2948	26.0	2235	19.7	1299	11.5	24.4
Applications	1303	11.5	853	7.5	1034	9.1	8.2
Data structures/database management/data retrieval	1213	10.7	1454	12.8	1419	12.5	12.6
Higher level languages (e.g. design, theory, evaluation, use)	969	8.6	1071	9.5	910	8.0	8.4
Operating Systems	958	8.5	1152	10.2	1099	9.7	8.0
Systems analysis/optimization/measurement	633	5.6	1004	8.9	833	7.4	5.6
Mathematics/computation theory/automata	576	5.1	410	3.6	394	3.5	6.7
Equipment design/architecture	458	4.0	351	3.1	516	4.6	4.0
Artificial intelligence	452	4.0	374	3.3	555	4.9	4.6
Simulation/modeling	410	3.6	598	5.3	575	5.1	4.5
Telecommunications	384	3.4	587	5.2	637	5.6	3.6
Graphics/animation	310	2.7	403	3.6	496	4.4	3.0
Linguistic or textual analysis/theory	112	1.0	151	1.3	147	1.3	1.0
Microprogramming	90	.8	287	2.5	352	3.1	1.0
Symbolic mathematical computation	39	.3	62	.5	101	.9	.3
Other	474	4.2	158	1.4	139	1.2	6.1
Total	11329		11150		10506		

(1) Percentage of total 11,329 responses to this question

ticular bias in the responses from this viewpoint.

The data collected on areas of computing involvement may be unreliable due to some evident confusion caused by the way the question was worded. With some editorial interpretation of the responses, however, this data is summarized in Table 3. The total number of respondents to this question is less than the total respondent population of 12,010 due to the large number of

responses which had to be invalidated. Areas of technical interest are summarized in Table 4. Again, these tables are generally consistent with the 1975-76 Membership Profile.

Overall Satisfaction

In Tables 5A and 5B, we summarize the responses to the question: "Considering the totality of ACM periodicals on an overall basis, are they satisfactorily (albeit not perfectly) serving you and the computing

Table 5A. Members' Personal Satisfaction with ACM Publications

"Considering the totality of ACM periodicals on an overall basis are they satisfactorily serving you:"

Category	Number of Respondents	Percent of Total Respondents	Very Satisfied		Moderately Satisfied		Moderately Dissatisfied		Very Dissatisfied		No Opinion		No Answer	
			Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All Respondents	12010	100.0	1574	13.1	5671	47.2	2930	24.4	1180	9.8	159	1.3	488	4.1
Regular/Associate Members	10057	83.7	1207	12.0	4654	46.3	2575	25.6	1090	10.8	114	1.1	410	4.1
Student Members	1879	15.6	356	18.9	987	52.5	338	18.0	80	4.3	45	2.4	72	3.8
Chapter Members (1)	2925	24.4	336	11.5	1321	45.2	750	25.6	376	12.9	24	.8	117	4.0
Non-Chapter Members (1)	7094	59.1	859	12.1	3322	46.8	1821	25.7	713	10.1	88	1.2	285	4.0
Members of SIGOPS, SIGPLAN or SIGSOFT (1)	3506	29.2	560	16.0	1728	49.3	831	23.7	251	7.2	19	.5	114	3.3
SIGBDP Members (1)	808	6.7	55	6.8	313	38.7	253	31.3	145	17.9	9	1.1	33	4.1
Other SIG Members (1)	5817	48.4	603	10.4	2643	45.4	1508	25.9	704	12.1	86	1.5	269	4.6
Members joined since 1973 (1)	3487	29.0	428	12.3	1645	47.2	849	24.3	360	10.3	56	1.6	145	4.2
Members joined prior to 1973 (1)	6430	53.5	768	11.9	2944	45.8	1694	26.3	710	11.0	54	.8	257	4.0

(1) Regular and associate members only.

Table 5B. Members' Views of Service of ACM Publications to Computing Field

"Considering the totality of ACM periodicals on an overall basis are they satisfactorily serving the computing field:"

Category	Number of Respondents	Percent of Total Respondents	Very Satisfied		Moderately Satisfied		Moderately Dissatisfied		Very Dissatisfied		No Opinion		No Answer	
			Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All Respondents	12010	100.0	1271	10.6	5283	44.0	2560	21.3	643	5.4	1390	11.6	819	6.8
Regular/Associate Members	10057	83.7	943	9.4	4374	43.5	2291	22.8	597	5.9	1115	11.1	703	7.0
Student Members	1879	15.6	320	17.0	879	46.8	251	13.4	43	2.3	268	14.3	108	5.7
Chapter Members (1)	2925	24.4	268	9.2	1197	40.9	741	25.3	225	7.7	295	10.1	194	6.6
Non-Chapter Members (1)	7094	59.1	670	9.5	3160	44.5	1551	21.9	371	5.2	814	11.5	499	7.0
Members of SIGOPS, SIGPLAN or SIGSOFT (1)	3506	29.2	383	10.9	1585	45.2	808	23.0	218	6.2	308	8.8	190	5.4
SIGBDP Members (1)	808	6.7	57	7.1	320	39.6	222	27.5	58	7.2	90	11.1	60	7.4
Other SIG Members (1)	5817	48.4	511	8.8	2499	42.3	1279	22.0	324	5.6	724	12.5	461	7.9
Members joined since 1973 (1)	3487	29.0	381	10.9	1546	44.3	711	20.4	160	4.6	425	12.2	251	7.2
Members joined prior to 1973 (1)	6430	53.5	552	8.6	2777	43.2	1552	24.1	429	6.7	667	10.4	434	6.8

(1) Regular and associate members only.

field?" Although it was not spelled out specifically, we might assume most members incorporated their attitudes toward SIG Newsletters into their response, although this cannot be ascertained with any accuracy.

Tables 5A and 5B categorize the responses according to certain classifications which are of preliminary interest to the Committee. Generally the figures indicate a greater degree of overall satisfaction than might have been anticipated—over 60% of respondents are highly or moderately satisfied as opposed to 34.3% who are very or moderately dissatisfied.

In the various subcategories of Table 5, there is generally no statistically significant (so our experts tell us) departure from the overall pattern of satisfaction, except that SIGBDP members (6.7% of respondents) exhibit much higher dissatisfaction (shortage of practitioner-oriented material?), whereas SIGOPS, SIGPLAN, and SIGSOFT members exhibit a

higher than average degree of *satisfaction* (reflecting the predominance of language, techniques, and operations systems material in *Communications?*). Other SIG (other than SIGBDP, SIGOPS, SIGPLAN, SIGSOFT) members are also somewhat more dissatisfied, whereas students are slightly more satisfied.

However, the general figures should not detract from several specific areas of dissatisfaction.

It is interesting to note from Table 5 that members are somewhat more satisfied with how ACM's publications serve them individually than they are with how they perceive them as serving the computing field as a whole. Does this suggest that many of those ACM members who are generally satisfied are nevertheless concerned that others in the profession may not be as well served? The data discussed below might reinforce this view. Additionally, Table 5B suggests that more members (as com-

pared with Table 5A) are uncertain (see "No Opinion" and "No Answer" columns) about how well the field as a whole is served.

Specific Publications

In Tables 6A and 6B, we summarize the responses of member attitudes toward specific ACM publications. We break the overall responses into all members; regular and associate members; and student members. In addition, since many specialty publications are not intended to appeal to broad audiences, we also indicate (all) member attitudes to those publications which they actually *receive* as personal copies (as opposed to having no access or ready access)—in general, one should expect more favorable attitudes by members toward publications they optionally receive or subscribe to; and conversely members may be expected to be less favorably disposed toward those publications they do not receive per-

Table 6A. Degree of Readership of Individual ACM Publications

ACM Publication	Total Respondents		Respondents' Use of Publication			
	(1)	(Percent)	Use for Reference Only (Percent (2))	Read Less Than 15% of Articles (Percent (2))	Read About 15-40% of Articles (Percent (2))	Read More Than 40% of Articles (Percent (2))
<i>Communications</i> (only technical material)						
All respondents	11689	97.3	13.3	42.2	32.6	9.4
All regular and associate members	9800	81.6	14.0	44.0	31.2	8.2
All student members	1823	15.2	9.4	32.6	40.4	15.4
Receive personal copy (3)	11174	93.0	13.0	42.7	32.7	9.4
<i>Journal of the ACM</i>						
All respondents	7673	63.9	45.4	26.9	12.0	3.5
All regular and associate members	6253	52.1	45.6	27.2	11.2	3.2
All student members	1373	11.4	44.9	25.3	16.0	5.1
Receive personal copy (3)	3995	33.3	30.6	39.9	20.7	5.6
<i>Computing Surveys</i>						
All respondents	9991	83.2	12.8	18.7	33.4	30.0
All regular and associate members	8374	69.7	12.3	18.8	33.8	30.1
All student members	1562	13.0	15.3	18.2	31.4	29.7
Receive personal copy (3)	8397	69.9	8.3	18.3	36.4	33.7
<i>Computing Reviews</i>						
All respondents	6157	51.3	46.7	13.8	12.1	13.2
All regular and associate members	5111	42.6	44.0	14.0	13.3	14.7
All student members	1005	8.4	61.2	12.2	6.2	5.4
Receive personal copy (3)	2360	19.7	22.0	20.0	23.7	29.7
<i>Transactions on Mathematical Software</i>						
All respondents	3345	27.9	49.6	11.0	7.1	3.7
All regular and associate members	2672	22.2	46.4	11.6	8.0	4.2
All student members	652	5.4	63.1	8.4	3.2	1.4
Receive personal copy (3)	509	4.2	15.3	30.4	33.0	17.6
<i>Transactions on Database Systems</i>						
All respondents	3920	32.6	38.5	14.6	13.4	10.9
All regular and associate members	3179	26.5	35.8	15.0	14.6	11.5
All student members	718	6.0	51.1	12.6	8.2	8.5
Receive personal copy (3)	1241	10.3	10.7	24.3	30.8	29.2
<i>SIG Publications</i> (only technical material)						
All respondents	7290	60.7	9.3	13.7	30.2	37.6
All regular and associate members	6018	50.1	8.3	13.8	31.2	36.9
All student members	1229	10.2	14.0	12.9	24.9	41.6
Receive personal copy (3)	5672	47.2	3.5	13.1	33.0	44.0

- (1) This number represents the number of respondents who replied to any part of the complete questionnaire.
- (2) All percentages are percentages of number of respondents indicated in first column.
- (3) Numbers and percentages relate to those members who indicated they received a personal copy of the particular publication.

Table 6B. Degree of Value of Individual ACM Publications

ACM Publication	Value of Publication to Respondents Personally					Respondents' Rating of Value of Publication to the Computing Field				
	No Value (Percent) (2)	Little Value (Percent) (2)	Some Value (Percent) (2)	Much Value (Percent) (2)	Great Value (Percent) (2)	No Value (Percent) (2)	Little Value (Percent) (2)	Some Value (Percent) (2)	Much Value (Percent) (2)	Great Value (Percent) (2)
<i>Communications</i> (only technical material)										
All respondents	4.9	20.8	43.4	20.6	7.9	1.1	7.8	33.0	35.8	15.0
All regular and associate members	5.3	22.4	43.7	19.1	6.9	1.2	8.5	34.1	34.9	13.7
All student members	2.2	11.9	41.6	28.5	13.0	0.5	3.6	27.0	40.8	21.7
Receive personal copy (3)	4.8	20.9	43.6	20.6	7.7	1.1	7.8	33.1	36.0	14.9
<i>Journal of the ACM</i>										
All respondents	13.5	31.0	30.5	11.4	5.3	2.6	12.0	30.7	28.3	15.4
All regular and associate members	14.9	32.7	29.6	10.2	4.6	2.9	13.0	31.8	27.3	14.2
All student members	7.4	23.5	34.6	17.1	8.7	1.4	7.7	25.7	32.8	20.9
Receive personal copy (3)	8.3	27.2	37.1	16.1	8.2	2.1	9.4	29.5	31.6	19.8
<i>Computing Surveys</i>										
All respondents	1.7	8.6	31.1	31.8	21.6	0.3	2.7	21.9	38.7	26.9
All regular and associate members	1.8	8.4	31.8	31.8	21.1	0.3	2.8	22.2	38.9	26.3
All student members	1.1	9.2	27.7	31.6	24.7	0.3	2.1	20.1	37.8	30.2
Receive personal copy (3)	1.2	7.1	30.3	34.0	23.6	0.2	2.4	20.9	40.0	28.2
<i>Computing Reviews</i>										
All respondents	6.6	20.2	32.8	18.1	11.0	1.1	7.0	29.2	28.9	19.7
All regular and associate members	6.4	19.6	32.7	18.9	11.9	1.0	7.0	29.1	29.1	20.5
All student members	8.1	22.9	33.7	14.0	6.8	1.3	7.0	30.0	27.8	16.3
Receive personal copy (3)	2.2	10.7	32.9	28.4	21.3	0.6	4.9	24.8	32.9	27.8
<i>Transactions on Mathematical Software</i>										
All respondents	26.4	24.9	20.1	8.7	3.9	1.5	8.6	32.5	24.3	10.7
All regular and associate members	26.8	24.0	20.2	9.2	4.3	1.7	9.0	32.5	24.2	10.9
All student members	25.0	28.9	19.6	7.1	2.1	0.9	6.4	32.8	25.1	10.2
Receive personal copy (3)	2.0	11.9	37.5	28.8	16.8	0.4	5.3	25.5	36.3	2.9
<i>Transactions on Database Systems</i>										
All respondents	15.9	20.0	27.0	14.5	8.0	1.2	5.3	32.2	29.2	12.1
All regular and associate members	15.5	19.4	27.9	14.9	8.0	1.2	5.5	32.6	29.2	11.7
All student members	17.6	22.7	23.6	12.6	8.2	1.0	4.5	30.0	28.5	14.0
Receive personal copy (3)	1.6	10.0	36.3	27.6	19.5	0.6	3.5	27.0	37.7	19.1
<i>SIG Publications</i> (only technical material)										
All respondents	1.9	7.9	34.2	30.1	17.4	0.6	5.4	28.4	32.7	19.5
All regular and associate members	1.9	8.1	34.8	30.5	16.3	0.5	5.4	29.2	33.0	18.2
All student members	1.8	6.6	31.5	28.8	22.7	0.7	5.1	24.5	31.3	25.7
Receive personal copy (3)	0.7	6.1	34.3	32.9	19.7	0.4	4.9	28.1	34.1	20.5

- (2) All percentages are percentages of number of respondents indicated in first column.
- (3) Numbers and percentages relate to those members who indicated they received a copy of the particular publication.

Table 7. Value and Interests of Different Kinds of Material to Individual Respondents, and Views of Adequacy of ACM Coverage

	Total Respondents (1)	Percent of All 12010 Respondents (2)	No Interest (Percent)	Little Interest (Percent)	Some Interest/Value (Percent)	Much Value (Percent)	Very Great Value (Percent)	ACM Coverage Adequate (Percent)	ACM Coverage Inadequate (Percent)
Tutorials	11256	93.7	4.7	8.3	25.7	32.3	22.3	44.2	33.8
Technical research papers	11209	93.3	6.9	22.3	35.4	19.0	9.2	70.7	6.6
Broad interest technical articles	11190	93.2	1.1	5.0	32.7	41.6	12.1	33.3	43.9
Applications-oriented technical articles	11137	92.7	1.6	9.7	31.9	35.2	13.4	29.7	46.5
Survey articles	11255	93.7	1.4	7.0	29.1	37.1	18.5	52.6	24.9
Reviews	10970	91.3	6.0	22.1	36.1	18.9	7.5	61.2	11.9
Abstracts	10891	90.7	9.6	28.1	33.5	14.1	4.9	57.8	13.1
Bibliographies	10876	90.6	11.7	26.1	30.8	15.5	5.8	51.8	18.2
Descriptions of work in progress	10883	90.6	6.2	19.9	39.0	19.2	5.6	35.4	35.2
Practical "How To" articles	11181	93.1	2.5	10.1	27.7	33.3	18.9	19.6	56.1
Standards	10975	91.4	6.9	20.6	34.1	21.2	7.9	47.0	25.0
News of ACM and subunits	10988	91.5	10.0	29.8	40.0	9.1	2.1	68.1	5.3
Public policy material	10776	89.7	10.4	25.5	36.3	13.5	3.4	51.1	19.6
Other	643	5.4	.4	.2	.4	1.3	2.0	1.4	3.3

(1) Counts those who responded to either the personal interest or the adequacy of coverage questions.

(2) Percentage of total sample of all 12010 respondents.

sonally (if they were favorably disposed, they would be more inclined to subscribe). In evaluating specialty publications, the Publications Planning Committee believes more weight should be given to the opinions of subscribers than to those of nonsubscribers.

The results speak for themselves, and do not particularly require interpretation. The strong support for *Computing Surveys* and for SIG Newsletters, both in terms of the amount of material read and in terms of the value to individual members, is evident—over 53% of respondents find *Surveys* to be of much or great value to them personally compared with only around 10% who find it to be of little or no value.

On the other hand, *Communications*—the one ACM publication all members receive whether or not they want it—is found (as far as its technical material is concerned) to be of much or great value to only 28% of respondents, and 25% of respondents find it to be of little or no value. However, an additional 43% find it to be of some value; and furthermore over 50% of respondents find *Communications* to be of much or great value to the computing field as a whole. This, of course, underscores one of the fundamental problems of ACM's publications planning—how to preserve the many good things about *Communications*, which are of importance to many members and which are generally viewed as being of importance to the field as a whole, while at the same time not forcing

the kind of material found in *Communications* upon those members to whom it is of little or no value. This is a more complex problem than may be evident to those who like simplistic solutions.

The more specialized a publication—so the Survey would indicate to nobody's surprise—the less value it is to respondents as a whole. Thus, the *Journal of the ACM*, *Transactions on Mathematical Software* (TOMS), and *Transactions on Database Systems* (TODS) are of much or great value to only 16%, 13%, and 23% of respondents, respectively—the comparatively higher figure for TODS is understandable if one consults Table 4. On the other hand, if one confines attention to those respondents who personally receive a copy of the relevant publications these figures increase to 24%, 45%, and 47%, respectively; 61%, 83%, and 83%, respectively, of this audience find them to be of some, much, or great value.

It should be noted that TOMS and TODS are only available to members as additional paid subscriptions, whereas the *Journal of the ACM* is generally received as a second (after *Communications*) publication bundled into a member's dues (a member alternatively may select *Computing Surveys* or *Computing Reviews* as the bundled second publication, but a surcharge of \$5 is billed for *Computing Reviews*); some members, however, pay extra for the *Journal*, having received one of the other publications as their bundled second publication.

Over 29% of the respondents find *Computing Reviews* to be of much or great value to them personally; furthermore, 49% of those who receive a personal copy of *Reviews* (see above) find it to be of much or great value to them. To some, these figures may seem surprisingly high considering the administrative and other travails to which *Reviews* has been subject over the past few years.

The Survey also requested views on certain commercial publications and those of sister technical societies. Generally, in terms of value to themselves individually, members perceived the more broadly-oriented and well-known of these publications much as they felt about *Communications*; and the more narrowly-focused or less well-known of these publications much as they felt about TOMS.

We note that the number of respondents in Table 6 who indicate they receive their own copy of a publication is generally consistent with known circulation data. This cannot be precisely evaluated, however, since many respondents omitted to check the appropriate box. However, 515 members either did not bother to check the appropriate box or are not receiving their copy of *Communications* (or do not realize they are in fact receiving it).

Rating of Material and Coverage

Table 7 summarizes respondents' attitudes toward the kinds of material they consider to be of value and interest, and their feelings about ACM's

coverage of such material. The views expressed through Tables 6A and 6B can be readily explained through the attitudes indicated in Table 7.

Thus 28% of all 12,010 respondents find technical research papers to be of much or great value, an additional 35% find them to be of some value, whereas 29% find them to be of little or no value. This, of course, is the kind of material which is predominant in *Communications*, the *Journal*, *Transactions on Mathematical Software*, and *Transactions on Database Systems*, and the responses are generally consistent with attitudes toward these publications expressed in Tables 6A and 6B. Furthermore, over 70% of respondents find ACM's coverage to be adequate in this area compared with 6% who find it inadequate. This would suggest general member satisfaction with the job ACM is doing in this area, although the term "adequate" does not necessarily imply that ACM is doing an "outstanding" job. For example, the term does not allow members to express any reservations they may have about long publication delays or about significant gaps in research coverage.

However, there is clear member dissatisfaction with the job ACM is doing in the coverage of what is sometimes termed "practitioner-oriented" material, as indicated by respondents' views on personal interest and ACM coverage of "practical how-to articles," "application-oriented articles," and "broad-interest technical articles." The numbers suggest that this is perhaps recognized even among those members who may be generally satisfied with our publications and to whom such material may not be of primary interest. The Publications Planning Committee obviously takes note of this expression of member concern.

Of course, if ACM is to increase its publication of "practitioner-oriented" material, a group of members interested in doing the work for the publication of articles must be found. Considerable work and planning would be involved for such an activity to create the quality desired for

ACM publications. Paid editorial staff, to complement volunteer activity, may also be necessary to an extent greater than is customary with the Association's present author-driven publications.

Although most respondents consider ACM's coverage of "survey" or "tutorial" articles adequate, many respondents would like to see us do better, presumably either in terms of quality or both. This reinforces the popularity of *Computing Surveys* expressed in Tables 6A and 6B.

Although of somewhat lesser interest to most respondents, a strong majority feels that ACM's coverage of "reviews" and "abstracts" is adequate. Again, this is somewhat surprising considering the difficult times recently experienced by *Computing Reviews* (as mentioned above), and in view of the vocal concerns expressed by some members.

Conclusions

Any opinions or interpretations expressed in the foregoing are those of the Committee only, and are not intended to be taken as statistically watertight conclusions. The Committee's tentative view, which it held prior to the Survey, has been reinforced—namely that whereas most members are generally satisfied with ACM's publications, there are many important specific pockets of dissatisfaction which must be rectified. However, such rectification of weaknesses should extend from ACM's strengths, rather than occur at the expense of dissipating these strengths. If we take the time to do our planning correctly, within reasonable limits we should be able to have our cake and eat it, too. Committee members would not be devoting the time they are to this complex task, if they did not believe that healthy change was indeed possible.

In conclusion, we would like to thank each member who took the time to respond to this Survey—such an overwhelming response is an evident indication of the vitality of our Association, and the interest that members take in it.

ACM Council Members

The names and addresses of the current Council members (as of July 1, 1978) are listed here for reference. A SIG Board Chairman will be elected as of September 15, 1978, by a balloting of the SIG chairmen and will assume the vacant Council seat at that time.

Robert L. Ashenurst Institute for Computer Research The University of Chicago Chicago, IL 60637 312 753-8762	Joseph A. Leubitz Ernst & Ernst 150 South Wacker Drive Chicago, IL 60606 312 368-1800
Fred N. Brand 1053 Wood Duck Avenue Santa Clara, CA 95051 408 743-1875	M. Stuart Lynn Office of Computing Affairs 209 Evans Hall University of California Berkeley, CA 94720 415 642-4083
David H. Brandin Stanford Research Institute 333 Ravenswood Avenue Menlo Park, CA 94025 415 326-6200 X4945	Herbert Maisel 9432 Curran Road Silver Spring, MD 20901 301 439-1564
Anita Cochran Bell Telephone Labs 5A103 Murray Hill, NJ 07974 201 582-7817	Daniel D. McCracken 4 Inningwood Road Ossining, NY 10562 914 941-2100
William W. Cotterman Department of Information Systems Georgia State University University Plaza Atlanta, GA 30303 404 658-3886	Raymond E. Miller IBM T.J. Watson Research Center P.O. Box 218 Yorktown Hts, NY 10598 914 945-2286
Thomas A. D'Auria SYSDOC Inc. 60 East 42 Street New York, NY 10017 212 490-3480	Howard L. Morgan Department of Decision Sciences Wharton School Univ. of Pennsylvania Philadelphia, PA 19174 215 243-7731
Peter J. Denning Department of Computer Sciences Purdue University Lafayette, IN 47906 317 494-8566	Monroe M. Newborn School of Computer Science McGill University Montreal, Quebec, Canada 514 392-8274
Aaron Finerman Department of Computer Science SUNY Stony Brook, NY 11790 516 246-4080	Susan Nycum Chickering & Gregory 111 Sutter Street San Francisco, CA 94104 415 421-3430
Herbert R.J. Grosch 1383 Zurich Terrace Sunnyvale, CA 94087 408 732-0619	Robert D. Parslow 6 Ormond Avenue Hampton, Middlesex England
William C. Healy Jr. Marathon Oil Co. P.O. Box 269 Littleton, CO 80120 303 794-2601 x651	Evelyn A. Swan 2453 Geranium Street San Diego, CA 92109 714 294-6160
Robert R. Korfhage Department of Computer Science Southern Methodist University Dallas, TX 75275 214 692-3082	Jeffrey D. Ullman Department of Electrical Engineering/Computer Science Princeton University Princeton, NJ 08540 609 452-4646
Portia Isaacson Electronic Data Systems Corporation 7171 Forest Lane Dallas, TX 75230 214 661-6241	Marshall C. Yovits Computer and Information Science Ohio State University 2036 Neil Avenue Mall Columbus, OH 43210 614 422-5973