REPORT OF THE BUDGET POLICY COMMITTEE

Following the direction of the CMS at the June 1997 meeting, the President set up an *ad hoc* committee, with the following terms of reference:

- To collect all CMS policies, guidelines and practices which have a direct impact on the budget.
- To determine how much of the budget is mandated by these policies, guidelines and practices.
- To assess to what extent these policies, guidelines and practices are still relevant; if so at what level of support and if not how they should be phased out.
- To determine possible changes in revenue patterns and in budget expenses to assess how the budget might influence policy in the future.
- To propose how we change our processes so that when policy decisions are made they are done so with a full understanding of their potential impact on the budget.

The committee members appointed were:

Arthur Sherk,	Treasurer	(CHAIR)
Richard Kane,	President Elect	
Joan Geramita,	Board Member	
Michael Lamoureux,	Board Member	
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Graham Wright,	Executive Director	(RESOURCE PERSON)

One impetus for the establishment of the BPC in the first place was the observation that there were trends in several revenue and expense lines of recent budgets which needed careful attention. These patterns appeared mostly in the General Accounts, rather than the investment accounts; thus the Committee will have nothing to say about investments, particularly since investment policies and issues are currently under scrutiny by other CMS bodies.

We are very grateful to the CMS Ottawa staff, particularly Monique Bouchard, for supplying each committee member with policy manuals, budget statements and other reports that were relevant to our investigations.

A. <u>REVENUE</u>

1. Income from Grants and Donations is decreasing ($128,453 in 1996 vs $75,380 in 1997). This is mostly because of changes in policy of Government agencies. However, there has been some increase in donations for educational purposes.

2. Membership fees remain quite steady ($72,587 in 1996 vs. $74,350 in 1997) .

3. Comparing the 1996 figures with 1997, we find modest - but perhaps significant - increases in registration fees ($65,558 vs $82,116), advertising and promotional sales ($15,151 vs. $17,985), and interest and foreign exchange ($147,641 vs. $160,493).

4. Our major source of income is revenue from publications, especially sales of subscriptions to the Canadian Journal of Mathematics and the Canadian Mathematical Bulletin. This figure increased from $500,349 in 1996 to $519,817 in 1997, and accounted for slightly over 54% of our total revenue (if we factor in foreign exchange revenue, the figure is even higher). Masked by these figures is the fact that the actual number of subscriptions to our major journals is declining steadily. Only increasing subscription rates keep the income rising.

B. <u>EXPENDITURES</u>

The reader is referred to the Treasurer's Report for the Period ending June 30, 1997 for complete details of comparative expenditures. Here we include only those figures that seem to us to merit special attention (Although recent budgets contain some genuine anomalies, we are disturbed that there may be a growing adverse imbalance between revenue and expenditures.):

1. Production costs (largely the production of periodicals) decreased from $169,597 in 1996 to $134,626 in 1997 (In 1996 the CMS was still producing the special 50th Anniversary volumes.). Comparing this with the

income from publications - and deducting salary, honoraria and other office costs properly charged to publications - we see how important publications are to the financial health of the CMS.

2. Expenditures for Speakers and Prizes rises each year ($61,850 in 1996 vs. $69, 463 in 1997). This is a direct financial consequence of the relatively recent establishment of new initiatives in this area, and is now a significant part of the budget.

3. Salaries and Benefits continue to rise each year ($389,092 in 1996 vs. $437,944 in 1997). These figures include not only remuneration of office personnel spread throughout Canada, but also payment for released time for editors. The latter expense is increasing, as individual universities find it more and more difficult to donate released time of their staff members. There also is a large commitment to CAMEL ($90,100, expected to be partially offset by revenue of $53,312), which is mostly in salaries.

4. Executive, Board and Committee expenses rose from $50,453 to $54,389, and will be even higher in 1998.

The BPC wishes to comment on what seem to us to be the most important issues arising from the observed trends. We isolate nine:

I.	Membership.	II.	Fund Raising
III.	Publications.	IV.	CAMEL
V.	Educational Activities	VI.	Research Activities
VII.	Released time policies.	VIII.	Executive, Board and Committee expenses.
IX.	Administrative Office staff and procedures.		

As a general introduction, we wish to point out the obvious, but sometimes ignored, fact that times have changed and continue to change. When the CMS was organized in 1945, it was seen as an instrument for encouraging the activities of professional mathematicians in Canada. This meant in effect that it was an organization run by university mathematicians for the benefit of university mathematicians, particularly to stimulate research. Thus the Canadian Journal of Mathematics made an early appearance, and it was not long before biennial seminars were held, and the Summer Research Institute was formed. Now with the advent of PIMS, the Fields Inst., CRM and AARMS, we share this important activity with them, and it is not clear that we have yet found our proper new role.

At the same time, we now spend a lot more energy and resources on the development of mathematical talent than previously. **It is not clear that our membership and organizational policies have fully caught up with the changing role of the CMS, or even recognized it.**

The CMS has also had to respond to current social and political issues (Human Rights, Women in Mathematics, Government Affairs, to name three). This of necessity has resulted in an expanding bureaucracy. Policies can proliferate and vie for limited resources. **At some point, the CMS must either increase the size of its administrative staff, or cut down on activities, or establish priorities.** As we look at particular facets of the whole operation, the above options insert themselves.

I. MEMBERSHIP

From the beginning, the core of our membership has been university mathematicians. We need to continue to recruit agressively among that group, particularly among the younger mathematicians. **With the emphasis that we now have on education at all levels, it is unsatisfactory that we have not been able to attract many educators at pre-university levels. It is also important to recruit industrial and commercial individuals with mathematical interests. CMS contacts with applied mathematicians is weak at the academic level, and virtually non-existent at the industrial level.**

We applaud and encourage efforts by the Fund Raising Committee and the Executive to finds ways and means of attracting such potential members. We suggest that the membership fee should be very reasonable; this should not be a major source of new funds.

We also encourage efforts to attract Institutional members. Traditionally, Mathematics departments in Canadian universities have been institutional members, and this is a good base. Suggestions from the Fund Raising Committee that other bodies could also be attracted to institutional membership should be followed up. Corporate membership fees should be modest. It seems to us, however, that corporations that do become members are more likely to make substantial financial contributions to various CMS projects than those who do not.

For both individual and institutional membership, we suggest that attention should be paid to what the CMS has to offer as an inducement to membership. (Again, the Fund Raising Committe has given some attention to this issue.) We need to be better at selling ourselves.

Inducements for Institutional membership recently introduced have been the offering of free on-line access to some periodicals, and reduced rates for advertising on CAMEL. Perhaps an inducement to individual members could be options for certain periodical subscriptions; e.g., pre-university educators might well prefer to receive CRUX WITH MAYHEM, rather than the NOTES.

II. FUND RAISING

Vigorously led by Kathy Heinrich, the Fund Raising Committee has tried several new ways to address the question of attracting gifts for CMS activities. The approach to traditional sources, such as government agencies and sympathetic corporations has had mixed success. Most bodies are lukewarm to a request for funds to support the general work of the Society, but often respond well to particular appeals, especially those that have to do with education.

Another very important initiative of the Fund Raising Committee has been the recruitment of influential and knowlegable people from the corporate sector. These contacts have already borne some fruit, and there is the potential for much more.

The IMO 95 Committee was successful in raising more than enough funds for the 1995 Mathematical Olympiad held in Canada. They used a professional fund-raiser to do this. No doubt CMS efforts at fund-raising would have been more successful if professional help had been used, but, like the IMO effort, it would need to have a very definite and popular focus.

III. PUBLICATIONS

As we observed earlier, it is revenue from publications that keeps the CMS operating "in the black". While revenue has gone up, production costs have gone down, thanks largely to the efficient operation of Michael Doob's TEX office in Manitoba. We have no problem with the current policy of modest increases in the subscription rates each year, even though it is clear that the driving force is to increase CMS revenues, not to cover production costs. Comparatively speaking, the CMS periodicals are still very reasonable in price.

The less rosy side of the publications operations is that a great deal of office time and energy is taken up with administrative matters. While subscriptions are handled mostly by the publisher, the varying subscription rates of any given journal cause much confusion. This translates into a significant amount of time spent by the Managing Editor (Graham Wright) and his assistants in straightening out errors. In fact, it has been necessary to take some special subscription categories out of the hands of the publisher to restore some equilibrium to the operations. It seem to us that too much of the Managing Editor's time is spent in details related to subscription rates; therefore:

<u>RECOMMENDATION</u> 1: *We recommend that the rates schedule for publications be simplified by the elimination and/or amalgamation of special categories.*

Another cause for concern is the declining number of subscriptions to our major journals (Canadian Journal of Mathematics and the Canadian Mathematical Bulletin). We tend to view this as inevitable, given the tight budgets of university libraries and the new possibility of substituting hard copy with on-line material. So we do not recommend a new subscription drive, because we are not optimistic about the results of such a drive. We would like to think that there will still be a substantial demand for hard copy in the foreseeable future. **At the same time, we hope that as the on-line alternative becomes more popular, ways will be found to make it generate significant revenue.** We return to this issue when we discuss CAMEL.

It is a well-known fact that sister organizations such as the American Mathematical Society make good profits out of their publications. **Perhaps we should make an in-depth enquiry into the AMS publication operations to see how we could improve.**

IV. **CAMEL**

CAMEL is now in its fifth year of operation. In that time, its importance to the mathematical community, and to the CMS in particular has become obvious. There are few people, we suspect, who would say that we don't need CAMEL. We are told that the number of "hits" per day on various offerings is highly satisfactory, and we have no doubt that by this means we are reaching many interested people. There is no doubt potential for much greater influence. However, there are many questions and opinions about the operation, and there are concerns about the cost.

No one on this committee claims special expertise on matters related to electronic communications. **We have raised questions about the efficiency of the operation, having as it does two "humps" (one in the West, one in the East), and the presence of technical staff at each place. We also see CAMEL going into many different areas, and ask if, in fact, CAMEL has a focus.** At least one individual, more closely associated with CAMEL than we are, has expressed concern that its focus is so wide that it is unable to keep up with the constant revisions needed.

On the question of a focus for CAMEL, Bob Rosebrugh, Chair of the Electronic Services Committee writes:

"When CAMEL began . . . it was unclear how services like it would develope. So at first it was a matter of collecting information and seeing what got used and also starting up services, some of which grew and some of which didn't. The mandate to collect information is still there, but other newer services are now the main foci. I see two of these, though they are related. The first is the provision of an electronic face for the CMS. This is handled more and more by the Ottawa hump of CAMEL in terms of maintenance, but it is necessary to upgrade and update the face constantly. It is becoming a much more used service as more and more people consult CAMEL for information on meetings etc, then stay to register on-line, or pay membership dues, etc. The second (and currently the most important) focus is the on-line Journals (and eventually the Notes). This is a major project which is being completed by CAMEL at a tiny fraction of the cost of much less impressive efforts."

Loki Jorgenson, Director of the CAMEL office, agrees, and adds that "there is a general trend here at the Camel Office to "narrow" our focus, away from general collections or services and towards specific projects and purposes". Loki invites comments, suggestions or criticisms, regretting that "we have not had more feedback from CMS committees and the membership".

Apart from the question of focus, there is concern over the expense involved. In the beginning the project was successful in attracting start-up grants, but there has been little grant support since. The CMS has directed funds generated by publications to the support of CAMEL, and devoted entirely to salaries of staff. Very little has gone towards equipment replacement, even though this has been requested. So far, CAMEL itself has generated little income by way of sponsors and advertisers. At a recent meeting of the Electronic Services Committee, a resolution was passed: " that the ESC ask the CMS to vigorously explore the possibility of hiring professionals to aid in attracting sponsors and advertisers to Camel."

So the ESC is searching for a solution to the financial problems of CAMEL. We of course encourage this. Our short summary of the focus and cost issues is of course merely introductory. **We are unanimous in our conviction that an in-depth study must be made:**

<u>RECOMMENDATION</u> 2: *That there be a full-scale review of CAMEL, conducted by some person or persons not now in close association with CAMEL, but having sufficient expertise to understand the opportunities and problems involved.*

We do not regard this as hostile action; our hope is that it will be helpful to the development of CAMEL, and that it will give some suggestions on sources of financial support for the project. It would be particularly helpful, from the point of view of future budget planning, to have expert opinion on whether and when CAMEL can be self-supporting.

We are aware of the fact that a task force is proposed to study communications, with terms of reference that include some review of CAMEL. Judging from the proposed terms of reference, we doubt that the review of CAMEL by this task force would be sufficiently rigorous to answer the purposes of the action we propose. **We suggest that both policy and budget issues related to CAMEL have become so important to the CMS that it is necessary to conduct a review devoted exclusively to CAMEL.**

V. **EDUCATIONAL ACTIVITIES**

For some years, the CMS has adhered to the principle that both Educational and Research Activities should be self-supporting (the same is true of Publications, of course, but we expect Publications to do much better than break even). The Educational Activities have increased several fold in recent years, and, by and large, so has the level of financial support. When, however, the large amounts of time spent by the Administrative Staff, and by the Executive Director in particular, are taken into consideration, it is not clear that Education is self-supporting in a strict sense. Preparation for the annual mathematical competitions have taken up much of the Executive Director's time, as has fund-raising, CMS representation at meetings of educational groups, preparation of promotional literature, and other promotional activities. This should not be alarming in itself (after all, education matters form a large part of our total CMS policy), but **it needs to be realized that there are strong budgetary implications to most education-related policies, and that some of these are less obvious than others.**

VI. **RESEARCH ACTIVITIES**

As with Education, Research Activities demand much of the time of the Administrative Staff, and thus has strong budgetary implications. Planning and running of the semi-annual meetings alone takes much staff time. Perhaps this has not been fully realized in the continuing debate on the frequency and nature of our major meetings. **We do not suggest that the large amount of staff time needed should necessarily be a deciding factor in any final decisions. But it needs to be considered.**

VII. **RELEASED TIME POLICIES**

In "the good old days", university Mathematics departments regarded it as an honour to have one of their staff members selected as an editor of one of the CMS publications, and assumed the expenses involved as a matter of course. So appropriate released time was arranged locally. Now with tight budgets everywhere, local chairs expect the CMS to re-imburse the university for the expense of released time. Naturally, CMS has been reluctant to do this, but for some years has been yielding on a case-by-case basis.

<u>RECOMMENDATION</u> 3: *1: Released time payments for editors should be offered as a matter of policy, and such policy should be codified.*

2: Universities which waive the released time offer and handle this themselves should be recognized as contributors to the work of the CMS.

Given the number of precedents that we now have, it should not be too difficult to come up with a good policy. When such a policy is known, it should make it easier for the Nominating Committee to find editorial staff. The downside is that relieving individual universities of this expense weakens their (often already eroded) commitment to the CMS. The second part of the recommendation suggests a remedy, unrealistic though that may be in the face of present fiscal problems facing universities.

VIII. **EXECUTIVE, BOARD AND COMMITTEE EXPENSES**

These continue to rise each year. Formerly, committee and Board members would cover their travel expenses to meetings from their research grants, because they were able to combine business with some stimulation of their research. Many are reluctant to continue this practice now, and in some cases simply don't have the same resources to do so. The number of meetings and of legitimate reasons for travel has certainly not decreased either, although email communication has reduced the frequency of some meetings.

We have no solution to offer. **The CMS must accept the fact that meeting costs are rising.** The problem is not yet of the proportion that it would threaten to cut down on programs, but it needs to be kept in mind.

IX. **ADMINISTRATIVE OFFICE STAFF AND PROCEDURES**

All of the new initiatives have of course placed great strain on the Executive Office Staff. It is usually the Executive Director and his staff who are expected to administer the new procedures while tending to the ongoing business of the Society. We distributed a short questionnaire among the Ottawa staff, asking the questions:
1. What percentage of your time is spent on each item in your Job Description?
2. Are there duties not in your Job Description on which you spend a significant amount of time?
3. Identify new jobs that you are handling that have arisen in the last 2 or 3 years as a result of new initiatives taken by the CMS.
4. In your opinion, what are the relative importances of the jobs that you handle?
5. Do you have any suggestions for changes in office procedure that might improve efficiency or reduce the work load?

Four of the seven respondents reported that over 100% of their job time was used in doing their job, thus indicating that they are in a chronic overtime position. Collectively, 123% of their time is required to handle the work. By rough calculation, 48% is spent on office routines, 14% on communications and publications, 6% on research, 7% on education, 34% on new ventures, 5% on promotion and 11% on sundry other activities.

The staff seemed to appreciate the chance to respond to the survey, and their responses to questions 4 and 5 were candid and helpful. There is no reason to suppose that their estimate of time spent was exaggerated, since it collectively conforms well to the volume of work so far as we know it.

The efficiency level of the Ottawa office compares favourably with similar institutions. We get the distinct impression that some areas of office activity may at the moment be over-managed.

<u>RECOMMENDATION</u> 4. *For increased efficiency, staff with the particular needed expertise should be hired (as distinct from personnel needing "on the job" training), and then be delegated their particular responsibilities with a minimum of supervision.*

This is already happening in the case of computer-related expertise, and we understand that the recently unsatisfactory book-keeping operations are being corrected in the same spirit. If the need for extensive training and checking of individual employees is eliminated, considerable release of supervisors for other activities should result.

Respondents to the questionnaire also gave other suggestions, which reflected their particular views of the operation. Some saw a need for better software to streamline routines, and some mentioned pressure from the constituency as a whole to respond quickly to all communications. A concrete example was the "downside" of email: instant communication tends to assume that instant responses should be forthcoming. In fact, of course, some responses take work to generate, and any given matter may be lower on the priorities of the administrative staff than on those of the enquirer. The result is usually flak directed at the Office.

The above example prompts two suggestions:

<u>RECOMMENDATION</u> 5. *1. The CMS Administrative Office should have priorities for action which are consistent with CMS policies, and which are understood by all CMS members who communicate with the Office.*

2. Some efforts should be made (presumably by the CMS Executive) to apprise the membership of the excessive workload of the Administrative Staff, and to plead for patience.

Of course there is another solution to the Office's overloaded situation, namely to hire more staff. Apart from the formidable budget problems this would create, there is the question of housing. The present housing situation (a bargain, thanks to the University of Ottawa) allows little or no room for expansion. **Our sense is that, while it is no doubt wise to re-configure and/or add modestly to the staff component, the CMS Office should remain in its present location for some time yet.**

CONCLUSION

The last of our five terms of reference calls for a proposal on how to change our processes so that when policy decisions are made they are done so with a full understanding of their potential impact on the budget. We do not have a full formula to offer, and any procedures that might ultimately be codified would have to be tested out in practice for some time. But here are some ideas:

- Policy proposals should be brought to the Board with an approximation of the amount of (additional) paid staff time and unpaid volunteer time required to implement them, and with a plan for assessing the actual costs in time and resources for the next 12 months (or as many as seems appropriate to the proposal). A report should be made to the Board at the first meeting after this time has passed.

- If it does not consume too much of his time, the present Executive Director could be asked to report, for several budget years, on the budgetary consequences of new initiatives. If this becomes a routine part of the annual budget preparation process, it would certainly be valuable material to have.

- Professional help (paid or volunteer) might be solicited to draft guidelines on the costing of new initiatives. Such guidelines would then be available to any individual or committee which proposes new enterprises.

Undoubtedly some otherwise desireable new policies of the CMS will have to be constricted or postponed by budgetary pressures. What is obvious to us is that more attention than ever before needs to be paid to the financial implications of any new ventures into which the Society enters. **Our hope is that this necessity will not unduly stifle vision and initiative**.

May 11, 1998