



**THE
MANITOBA**

PROFESSIONAL
ENGINEER



**bulletin of the
association of
professional
engineers
of the
province of manitoba**

november, 1971



Published by the Association of Professional Engineers of the Province of Manitoba
710 — 177 Lombard Avenue, Winnipeg 2, Manitoba

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The Manitoba Professional Engineer is published under the direction of the Bulletin Committee.
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Opinions expressed are not necessarily those held by the A.P.E.M. or the Council of the A.P.E.M.

WINNIPEG, MANITOBA, NOVEMBER, 1971

Report of the President

In recent years, the major question before the Association has been "How do we adequately undertake our responsibilities as a profession?" The groundwork for a positive answer to this question has been laid well by previous presidents and their councils.

At the 1970 Annual Meeting, a clear mandate was received for your Association to proceed in the direction that accommodated the broad definition of our responsibilities under the Professional Engineers Act of Manitoba. Council have culminated their dedicated efforts on your behalf by unanimously supporting the proposal to our membership for an increase in the annual dues to \$65 to permit them to fulfill these responsibilities. This proposal in turn received major support from the recent Special Meeting. It is now in the hands of the membership, and the future of the profession will be dictated by how you ballot.

The activities of our Association during 1971 are indicated in this bulletin and will no doubt be elaborated on at the Annual Meeting. However, I do not know of any way to adequately describe the considerable time, effort and dedication made by the members of our staff, the committees, and Council during the year. At the beginning of the year, Council established far reaching objectives which were incorporated in a review of the terms

of reference of all committees. The committees achieved excellent results in meeting these objectives and the permanent staff were able to handle the increased workload, through extraordinary effort, without any reduction in the standard set in meeting routine obligations.

I hesitate to refer specifically to the activities of any one committee but I will do so as an example of what all the committees have accomplished. 1971 was the first year for our Practise and Ethics Committee. Under the capable chairmanship of C. Bouskill, P. Eng., the committee has been exposed to many cases which probably would have been hidden from our scrutiny in the past. They not only established a highly professional mode of operation but by their performance clearly indicated that the objective of our Association, which is to properly answer the questions of conduct of members before they become irremedial problems, has been maintained.

What have we done? We have established a common denominator in that we all have the same responsibilities to the conduct of the profession, whether we be public servants or consultants, in industry or the academic community, in management or production. We have established support, by our Association, for the development of a strong national body through CCPE. We have established our

responsibilities for the development and maintenance of the standards of conduct for professional engineers. We have established that we must actively contribute to the development of legislation which affects the activities of our profession, and we must take a positive role in the training and development of future members of our profession. We can no longer sit back and let others define the role of the professional engineer in society and society can no longer condone the practise of our profession by people who are not competent to take professional responsibilities. We have done these things be-

cause of the common responsibility that our profession has to the protection of the public. In summary, we have made considerable progress in moving our profession from the "comfortable pew" to which we have become accustomed.

In conclusion, may I express my sincere thanks to all who gave support to the activities of the profession during 1971.

Respectfully submitted,

R. HOOD, P. Eng.,

President.

Secretary-Registrar's Report

Activities and objectives of the Association, Council, and Committees have been well reported in this and previous issues of the Manitoba Professional Engineer. The following information on some of the other Provincial Professional Engineering Associations and the Corporation, and on services provided by your staff may prove to be timely:

MEMBER/STAFF RATIO AS REPORTED AT THE PERMANENT STAFF OFFICERS' MEETING OF JUNE 3, 1971 (*Figures Revised to October, 1971)

APPROXIMATE MEMBERSHIP	PERMANENT STAFF			RATIO
	Male	Female	Total	
Manitoba	1	2	3	617
British Columbia	3	7	10	650
*Alberta	3	10	13	485
*Saskatchewan	1	1.5	2.5	582
Ontario	9	29	38	803
Quebec	7	9	16	893
New Brunswick	1	1	2	708
Nova Scotia	1	2	3	500
Prince Edward Island	(2 staff members, part time)			60
*Newfoundland5	1.5	2	249

The smaller Associations are obviously handicapped in that they are required to administer the Act which is similar in intent in all Provinces, and also provide services to the members as is provided by the Associations with larger staff resources. The smaller Associations lean heavily on the larger Associations in the areas of research, information, and precedent, and this assistance is generously provided. However, it follows that it must cost the smaller Associations more per member if equivalent protection of the public and service to our members is to

be provided. The membership/staff ratio is not significant in that the demands are not in direct proportion to the numbers of members.

Your present permanent staff (Mrs. Dunklee, Mrs. Calverley, and the Registrar) has been operating under an increasingly heavy work load, and has been only able to cope because there has been no duplication of function, or absenteeism. Work is treated on a priority basis and consequently certain areas are not receiving the staff support necessary to

progress. Present staff functions include: preparation for and business resulting from Council meetings, Committees of Council and many of the standing and pro-tem committees; C.C.P.E. follow-up; attendance at and minutes of most meetings, hearings and boards; budget estimates and expenditure control, assistance with briefs, liaison with industry, government, other professional groups, suppliers, etc.; consulting service re technical qualifications, employment, salaries, conduct, references; a portion of the discipline and enforcement involvement; admissions, assessments; appeals; examination program; accounting and bookkeeping; certificates; awards; office facilities; editorial assistance; interviews; communications; printing and distribution; M.S.C.E.T.T. Inc.; scheduling, notices, agendas, arrangements, liaison re most of all major meetings and social or sports functions; "part-time catering, maid, janitorial and maintenance service."

Staff service to Committees is perhaps the most vital function if the objectives of Council and the Association are to be realized. Certainly additional staff support is needed in this area. Certain alterations are required in our premises to provide more usable working space vs. board room and reception area. The Manitoba Association of Architects, although continuing to pay a good proportion of the combined rent, has agreed to these changes which will only benefit the A.P.E.M.

The employment picture for engineers has not deteriorated, and I am pleased to report that good engineering positions keep turning up. We may be blamed for pollution but we will also be very busy in the future as those who are able to control and reduce it. Our "bracing" climate also helps to keep those who chose to remain in Manitoba profitably employed. (The climate reduces the supply).

Two of our key committees did not report this year due to the transfer from Manitoba of W. N. Isberg and D. J. Sampson, both committee chairmen. A recent article in "Engineering" reported Mr. I. P. Sharp, a top computer expert, as saying that societies of professional engineers tend to take corrective action rather than preventative action and as such are not a useful means of protecting the Public. Some of our members had similar thoughts and as a result our Com-

mittee on Safety in Engineering Practice was established in 1967 as a result of a letter to the President from Mr. Isberg, following the Inland Cement Accident.

The function of the Committee is preventative in nature and to date it can claim considerable success. It has been involved in reviewing situations and making recommendations to prevent wind storm failures of masonry walls under construction, design of falsework structures, adoption and administration of a modified National Building Code by the Province, the design and erection of prefabricated buildings, etc. Members noting potentially dangerous designs or engineering works are invited to inform Council or the Committee through the Registrar.

The Legislation Committee, previously chaired by Mr. Sampson, will now be heavily engaged in the drafting of a new Engineering Profession Act. Prior to Mr. Sampson's departure, a Brief relating to the exclusion of engineers in the Labor Relations Act was being prepared by a sub-committee. Last month, a copy of the Act, the By-laws and the Code of Ethics was circulated to all members and Engineers in Training, requesting comments and suggested revision that would give guidance to the Committee. Only one member has responded to date.

The M.S.C.E.T.T. Inc. continues to grow in numbers and status. Our premises and facilities are shared with the Society and staff assistance works both ways. Members will recall that our Association was instrumental in the establishment of M.S.C.E.T.T. Inc. and mutual respect has been retained and will continue provided that Engineers recognize the Technician and Technologist classifications as meaningful in their own organizations. Many of our members have assisted the Society over the last six years with little or no recognition. The following Professional Engineers are presently serving: Panel of Examiners — R. F. Manning, (Chairman), J. L. Babletek, J. E. Dowell, C. D. Hermanson; Certification Board — A. H. Pask (Chairman), A. E. Anderson, J. R. Herman, H. Wilson. Board and Panel members meet once a month in the evening and review a continuous flow of applications before, during and after meetings. Messrs. Manning and Pask are also members of the Society's Board of Directors, as is K. Hallson, representing the Council of the A.P.E.M.

Despite press articles to the contrary,

my personal impression is that the Engineering Profession is well respected by the Public. You do not get this impression from speaking to engineers but from dialogue with non-engineers, employers, non-engineers seeking advancement, and those seeking registration.

I wish to acknowledge with thanks the work accomplished by Mrs. Dunklee, Mrs. Calverley, and by our President, Council and Committees.

Respectfully submitted,
T. W. ALGEO, P. Eng.

PRACTICE AND ETHICS COMMITTEE

In late 1970 the members of the Association authorized the establishment of a Practice and Ethics Committee by approving a proposed By-law for the establishment of such a Committee. The purpose of the Committee is twofold:

1. To advise members of the Association who inquire on questions of proper professional conduct; and
2. To consider all complaints received in writing against members of the Association.

During the month of January, 1971 the Committee was formed, including the following members:

Carl E. Birston
Charles R. Bouskill, Chairman
Frank M. Fowler
Kenneth A. Hand
James H. MacDonald
R. Craig Sommerville, Vice-Chairman
Thomas E. Weber

The committee commenced functioning in February, 1971. Of the seven cases considered by the committee during the year, the committee has formed an opinion and submitted reports to Council on five cases, one of which resulted in a complaint under oath being filed with the Council. As at mid October, the remaining two cases are still under consideration.

In the course of considering the matters referred to the committee, it became apparent that many members of the Association are either not aware of the existence of the Professional Engineers Code of Ethics, or are not familiar with the contents and provisions of this Code. The Committee members therefore strongly recommend that EACH member of the Association acquaint himself with the Code of Ethics.

All members of the Association are

encouraged to consult the members of this Committee regarding questions of proper professional conduct. It is hoped that by so doing, complaints against members can be reduced to a minimum, if not eliminated. It is in the best interest of the public, each member of the Association and their clients or employers to ensure that engineering is practised in accordance with the highest standard of professional conduct.

We wish to gratefully acknowledge the assistance given to the Committee throughout the year by a number of individuals:

1. Mr. T. W. Algeo — who acted as secretary for all meetings of the committee and assisted in gathering information,
2. Mrs. E. Calverley and Mrs. T. Whiteman — who assisted with the secretarial duties and the recording of the proceedings,
3. Mr. A. Anhang — for his interest and guidance in the effective operation of this committee, and
4. The many members of the Association who have willingly assisted the Committee in the course of its investigations.

I also wish to include my personal thanks, not only to the above mentioned individuals, but also to the members of the Committee for their support during the year.

Respectfully submitted,
C. R. BOUSKILL, P. Eng.,
Chairman.



SOCIAL COMMITTEE

Over 300 Engineers, wives and friends attended the Annual Peacock Ball held at The Winnipeg Inn on February 20th, 1971. This year it was decided to change the

theme of the dance to one of colour. Dress was made optional in order to encourage more attendance from the younger Engineers. In view of the good attendance a similar theme will be adopted for the 1972 Annual Ball. In addition to preparing for the next Annual Ball the Social Committee is working for the Annual General Meeting to be held at The Northstar Inn on November 22nd, 1971.

Thanks are hereby extended to committee members R. R. Foster, B. K. Johnston, B. D. Norrie, L. A. Morison, E. Pentland and G. A. Pratt.

I wish to extend a special vote of thanks to Mrs. Dunklee without whose outstanding efforts the Social Committee would not be nearly as effective.

Respectfully submitted,
D. DUNCAN, P. Eng.,

Chairman.



SPORTS COMMITTEE

As in previous years, the Sports Committee arranged the Annual APEM Bonspiel in January and the Spring and Fall Golf Tournaments.

The 6th Annual APEM Bonspiel held at the Highlander Curling Club on January 21st, 1971 drew a record 32 rinks. With a 32 rink entry, we were able to arrange the Bonspiel into events and the winner of the 1st event with five wins, was the Larry Morison Rink comprised of Larry Morison, Harold Wilson, George Pratt and Bob Zimmerman.

Spring Golf Tournament held on June 21st, 1971 at the Elmhurst Golf and Country Club attracted 63 golfers. Mr. Al Macatavish won the low gross competition and was awarded the Landon Cup.

The Fall Golf Tournament was held on September 21st, 1971 at the Breezy Bend Golf Club and was attended by 49 golfers. Bill MacKenzie was the winner of the low net event and walked off with the Sullivan Cup.

Many thanks to Bud Christie, Doug Dawson, Bill Gobert, Bob Gottfred, Bob Jeske, Boris Hryhorczuk and Gordon Kirby for the assistance in the planning and

carrying out the sporting events for the Association in 1971. Also on behalf of the Sports Committee I offer my sincere thanks to Loreen Dunklee for her assistance. Also special thanks to all who donated prizes.

The entries for the 1972 Bonspiel to be held at the Highlander Curling Club on January 20th, 1972, will be limited to the first 32 rinks so start arranging for your rink now.

Respectfully submitted,
T. J. MONASTYRSKI, P. Eng.
Chairman.



ADVISORY COMMITTEE

A decision to reactivate and reconstitute the Advisory Committee was approved by Council, February 2, 1971, with Terms of Reference as follows:

- (a) To make an assessment of the future of the engineering profession, identifying the present and future needs of the public at large, and those of the members of the profession.
- (b) To develop a series of recommended policy statements for the use of the profession.
- (c) To investigate, recommend and/or report on other matters as referred to it by Council.

Three meetings were held during the year with particular emphasis on item (a) above, with a view to formulating the policy statements referred to in item (b).

Discussions were wide-ranging but gradually brought into focus the complex problem our Association faces in attempting to satisfy the needs and requirements of three diverse groups within its membership, namely:

(1) Consulting Engineers

The Engineers' Act which governs the work of our Association and is more than fifty years old, is specifically dedicated to regulating the work of the consulting engineer for the protection of the Public. This Act is likely to come up for review in the Manitoba Legislature in the near future and our Association will be required to prepare detailed recommendations to provide a more up-to-date definition of the purposes of our Association.

(2) Employee Engineers

Across the country the matter of collective bargaining seems to be one of the foremost concerns of the employee engineer and he is looking to the Association to assume a posture in this matter and provide for his needs.

(3) Engineer in Management

The membership of our Association comprises a number of engineers who are in management positions and, as such, are confronted with many problems of political or corporate nature. These include the profit progress dilemma; and the conflict of corporate aims and objectives with professional conviction and integrity.

Whether or not our Association can adequately serve the diverse needs of these three groups is a matter of grave importance at this particular time. It is the opinion of the Advisory Committee that there is a definite need for closer liaison with the Associations of other professions like the architects, doctors, lawyers, accountants and others. Through an exchange of views we would be in a better position to define our Association's role.

The one recommendation that the Advisory Committee would like to make to Council as a result of its first year's activities, is that the term of presidency in our Association is too short to provide the continuity required to give guidance to the problems of our Association in today's rapidly changing society. It is the recommendation of the Advisory Committee that the constitution of our Association be changed to extend the term of President in our Association from one year to two.

Respectfully submitted,

R. M. BAILEY, P. Eng.

Chairman.

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MEMBERSHIP COMMITTEE

Committee members for 1970-1971 were: L. H. Tough (Chairman); J. B. Sefanson (Vice-Chairman); J. D. Denoon (Secretary); R. S. Menzies (Chairman, Student Liaison Sub-Committee); R. W. Tipper (Chairman, Roster Sub-Committee); M. G. Hammond;

T. A. Williams; M. L. Jeroff; K. J. Sander-son; M. Hirt; D. S. Simons; W. M. Veldman; F. D. Young. The Committee held five meetings during the year. Members were selected to provide a wide representation from industry, government, and academic bodies where large numbers of engineers are employed. A problem which remains unresolved concerns representation from distant areas of the province, such as Pinawa, Brandon, and Thompson. It is suggested that some assistance in this regard might be provided by committee members from firms such as Manitoba Hydro, who may be able to cultivate a more active participation when travelling in these areas. Further effort should be made to establish liaison and promote membership among the more remote groups of engineers within Manitoba.

The terms of reference of the Membership Committee are defined as follows:

- a) To promote membership in the Association to ensure that any person practising engineering in Manitoba is registered as a member or licensed to practise.
- b) To determine, by contact with the members, the areas of satisfaction and dissatisfaction in the operation of the Association and, after thorough investigation of the needs of the membership, make recommendations to Council as to ways and means of meeting those needs.
- c) To promote and encourage Student membership in the Association as Engineers-in-Training and solicit members help to:
 - (i) Act as counsellors
 - (ii) Assist in finding students summer employment
 - (iii) Act as patrons for Engineers-in-Training
- d) To compile and publish the roster
- e) To arrange preparations for Special Meetings as required.

In discharging these responsibilities, the Membership Committee engaged in the following activities:

- a) Direct promotion of Association and canvassing of engineering employees among companies and agencies represented by Committee Members.
- b) Organize Student Dinner — March 23, 1971, Montcalm Motor Hotel.

- c) Solicit advertising for Membership Roster, and arrange advertising layouts, etc.
- d) Select front cover design for Membership Roster.
- e) Representation on panel discussion with Engineering graduating class at University of Manitoba, February 17, 1971.
- f) Organize program for Engineering Student Counselling Service, to be implemented during the University year 1971-1972.
- g) Mail survey to members, describing proposed Student Counselling Program and soliciting support.

The student liaison sub-committee, under the leadership of Dr. Menzies, organized the Engineering Graduates' Dinner on March 23, 1971. Invitations were extended to 230 graduating students, of whom 180 attended the dinner, with proportionate response from each branch. During the discussion period, students this year appeared reconciled to recurring employment problems, and fewer questions were directed to that subject. The majority of questions dealt with the role of the Association in maintaining professionalism, ethics, better public image, salary scales, etc. Only 18 Practising engineers attended the dinner and there was a decided lack of Association members from outside the University. Consequently, most of the questions of a non-academic nature had to be fielded by either the President or the Registrar. This year, a symbolic and topical cover design from a painting by Mr. A. P. Barsalou, P. Eng., was presented on the membership roster. R. W. Tipper with support from J. P. Stefanson, M. E. Hammond, and K. J. Sanderson handled the roster chores very capably, and the revenue from advertising very nearly offset the cost of its publication. All those who worked so diligently to prepare and publish the roster should be complimented on its attractive and professional presentation.

An ambitious undertaking by the secretarial staff this year was the compilation of a card file listing members by place of business. Although it is not planned to publish this separately, this information can be obtained from the Association office.

In order to effect a more active com-

munication and liaison between engineering students and the profession, the Committee this year has begun a Student Counselling Program. A letter has been sent to each member describing the program and soliciting volunteers to act as counsellors. Students will be invited to participate, and three or four will be matched by discipline to each of the counsellors. An introductory evening meeting will be arranged in late fall at which time counsellors and students will be introduced to one another, and the program discussed in detail. The counsellor will be encouraged to invite his students to his place of business, and provide a personal and meaningful introduction to the profession. A follow-up general meeting is planned for early March to evaluate the program, discuss problem areas, and propose an optimum format for the following year. It is felt that this comprehensive communication will be more valuable than the previous student dinner which it replaces.

The present membership in the Association is approximately 1820. Registration figures for 1971 with the corresponding 1970 figures are:

	1971	1970
New Registrations	103	123
Engineers-in-Training	69	67

The members of the Committee express thanks to Mrs. D. L. Dunklee and Mrs. E. E. Calverley for their assistance throughout the year.

Respectfully submitted,
 LESLIE H. TOUGH, P. Eng.
 Chairman.



THE BOARD OF EXAMINERS' REPORT

Members of the Board of Examiners for the year 1971 were: K. M. Adam, D. T. Anderson, J. B. Campbell, G. E. Laliberte, G. A. Morris, M. P. Musick, M. Z. Tarnawcky, A. B. Thornton-Trump, J. Tinkler, W. J. Tishinski, J. Shewchuk, J. D. Wiebe. W. C. Brisbin continued to serve the Board in a consulting capacity.

During the year 1971, the Board convened for six meetings, at which it reviewed the academic qualifications of forty-six applications. In comparative years 1970 and 1969 the numbers were

twenty-five and forty-one respectively. Fourteen of the applications were considered in possession of the necessary academic qualifications for registration; three were conditionally qualified, requiring only to complete their M.Sc. Program at an accredited university in Canada or the U.S.A. Nine applicants were required to write two to four confirmatory examinations to verify their academic qualifications. One applicant was interviewed by a Sub-committee of Board which prescribed one confirmatory examination; one was accredited on the strength of APEO examinations prior to transferring to Manitoba. The remaining eighteen were required to write six or more examinations in fulfillment of academic registration requirements.

For the April, 1971 examination period, a total of twenty exams were written, of which ten were graded with a pass. As a result, three examinees fulfilled academic requirements by examination and were recommended for registration.

On matters of policy the Board reviewed and made recommendations to the C.C.P.E. on the Engineering and Management Course of the Royal Military College. It approved and adopted the C.C.P.E. Syllabi for Agricultural, Aeronautical and Mining Engineering; approved the 1971 issue of the Chemical, Electrical and Mechanical Syllabi, and is expected to rule on the accreditation of the General Motors Institute Engineering Courses in the new year.

We gratefully acknowledge the able assistance given the Board throughout the year by:

Our Registrar—T. W. Algeo, for acting as Secretary at the Board Meetings and for performing the endless chores in preparation.

Mrs. D. L. Dunklee and Mrs. Calverley—for the detailed work of recording and pursuing outstanding particulars of applications, etc.;

University of Manitoba Faculty Members and Registered Engineers—for their assistance in reading and grading thesis.

In conclusion, I extend my personal thanks and appreciation to the aforementioned individuals and to the dedicated members of the Board who served selflessly during the year.

Respectfully submitted,
M. P. MUSIC, P. Eng.
Chairman.

BRANDON AREA COMMITTEE

At the start of the year, this Committee was made an official sub-committee of the Council of which F. Butterfield was appointed Chairman and the other Committee Members were: R. Tinkess (Simplot Chemicals); B. Braaton (Dryden Chemicals); E. Dilliston (City of Brandon); A. McCabe (Underwood McLellan). In addition to this, the Committee had an ex-officio member, Mr. E. Hayward, from the MANSETT organization.

The Brandon area engineers had three meetings this year, two dinner meetings with speakers, and one social. In the fall, Mr. Norm Carter, Operating Superintendent of the Manitoba Hydro Plant in Brandon, gave an excellent talk and explained the construction of the new generator in their local plant. The group then went on a field trip of the Hydro Plant. In March we had another meeting in which Mr. Glen Lawson, P. Eng., spoke to the group on the R.A.M.P. (Rosser Avenue Multiple Parking) proposal for the City of Brandon. An excellent presentation was made and a good discussion followed on the pro's and con's of this new proposal. We then completed the year with a Wine and Cheese social function held at the Canadian Forces Base at Shilo in June. A most enjoyable time was had by all of those participating.

One of the other activities of our Committee this year was to resolve with Council the terms of reference for this Committee.

Discussions were also held with the Registrar as to the request from Council for the need for area representation on Council for those registered engineers not resident of Winnipeg. In general the Committee members felt that the distance limitation on a member from outside Winnipeg would mean a member could not do Council work the same as one living in Winnipeg. We felt that a member of Council specifically responsible for the interests of engineers outside Winnipeg would be adequate for our needs. Certainly Mr. George De Pauw has served in this function the previous year. It is felt that the major needs for the engineers working outside the Winnipeg area and an organization such as the Brandon Area Committee was to provide speakers for technical meetings as there is no other technical society functional for engineers

in the area. In order to organize technical meetings and occasional social functions, we feel that there must be some financial backing from Council.

One point that always seems to come up in discussion of technical meetings is the fact that there has been in the past a formal chapter of the E.I.C. in the Brandon area, which is now defunct. This organization does have a sizeable bank account in existence. It has been suggested that the meetings that we do have should be more formalized under the E.I.C., although the present Committee has felt more duty bound to hold these meetings under the sponsorship of the A.P.E.M.

One additional function the Committee served this year was in career counselling. The Chairman of the Brandon Area Committee has been appointed a member of the career counselling committee of Council in order that he receive minutes of this committee's meetings. We did carry out a presentation at the local career counselling Fair. All Committee members took an active part in this program.

Respectfully submitted,
F. BUTTERFIELD, P. Eng.
Chairman.



EMPLOYEE ENGINEERS COMMITTEE

Committee Members: M. D. McKall, Chairman; F. G. Denson, Secretary; N. Fedorchuk; A. G. Mensforth; R. C. Mills; T. Pataky; D. S. G. Ross; J. P. Stefanson.

1. The Committee has held ten regular meetings in the past year.
2. The report on the Employee Engineers' Committee Questionnaire was completed and forwarded to all members in May, 1971. The report contained observations on "Areas of Dissatisfaction" and observations on "What the A.P.E.M. Could Do," in addition to numerical tabulations of the replies to the questions.
3. The Committee has spent a large amount of time on the question of Collective Negotiations for Engineers. Possible alternatives, status in other Provinces, effects of alternatives, the need for collective action, etc., were

discussed in depth at many meetings. As a result of the work a report was prepared briefly outlining the situation. Three alternate courses of action were developed as follows:

- a) Maintain the Status Quo;
- b) Support Voluntary Groups;
- c) Legally Certified Groups.

The Committee has forwarded the report to Council with a recommendation that the report be sent to all members with a ballot for a vote by the membership on the alternatives. Since this subject is very controversial, it is felt a consensus from the members is necessary before further action can be taken.

4. Work on the salary survey has just started, since the data is now available and will be reported on in the near future.
5. A regular meeting of the Committee is held on the second Tuesday of each month at 8:00 p.m. Interested members are invited to attend to present their views, and/or to acquaint themselves with the work of the Committee. Confirmation and location of the meeting can be obtained from the Chairman or any Committee members.
6. The Chairman expresses thanks to the Committee members for their active participation, interest and sincere effort on Committee work.

Respectfully submitted,
M. D. McKALL, P. Eng.
Chairman.



CONSULTING ENGINEERS COMMITTEE

Committee Members: A. W. Greenberg, Chairman; W. H. Mitchell, Vice-Chairman; J. C. Taylor, Secretary; G. H. Currie, J. Hunter, D. R. Grimes, B. L. Fisher, A. Penman, W. Saltzberg, G. R. Kendall, L. Ingram, J. P. Sinclair.

Seven meetings were held during the course of 1971, and the main theme of our work was set by a council resolution on Saturday, March 20, 1971, requesting our committee to review existing fee schedules, taking into account work done by other Engineering Associations and report back to council by September, 1971.

D. R. Grimes acted as Chairman of a sub-committee to review and, if necessary, prepare a revised fee schedule to clients. W. H. Mitchell acted as Chairman of a sub-committee to review and, if necessary, prepare a revised fee schedule to architects. Both men and members of their sub-committees did an excellent job and the revised fee schedules were presented to council, as requested, in September, 1971.

Mr. G. R. Kendall acted as Chairman of the Advisory Sub-committee which was set up primarily to suggest to the Chairman areas of concern, that should be discussed at the Consulting Engineers Committee meetings. A number of items which were dealt with at our meetings were:

- a) A review of the practice of University staff providing consulting engineering services, using the facilities and staff available to them at the University.
- b) A review and, finally, our offer of assistance to the Province of Manitoba, Department of Youth and Education, to assist in assessing the high cost of school construction, and suggest methods of control.
- c) A review of the practice of some agencies holding back 15% of a consulting engineer's fee until expiration of lien rights under the mechanics lien act.
- d) Review and General Discussion of changing attitudes to the Consulting Engineers Profession, involving such items as legal actions against engineers, engineering seal requirements on mechanical and electrical drawings, Turnkey and Package Deal Proposals, and many others.

Many of the above items were not resolved, but have been discussed, and will be the responsibility of this committee in 1972, to come forward with resolutions to Council.

It has been a good and fruitful year for our committee and as Chairman, I would like to thank each and every member of the committee for devoting a great deal of time and effort, and in this way making the work possible.

Respectfully submitted,
A. W. GREENBERG, P. Eng.
Chairman.

ADMISSIONS REVIEW BOARD

The Admissions Review Board was established to provide a method of reviewing applications for membership in the Association where unusual circumstances such as the loss of transcripts or extraordinary experience do not permit the application to be reviewed on the basis of academic background alone. In addition, the Board provides the opportunity for an applicant to appeal the decision of the Board of Examiners, if he is unsatisfied with their recommendation.

The permanent members of the Admissions Review Board consist of a chairman and a vice-chairman, both of whom are members of Council, and the Registrar, who acts as secretary. For each hearing, a board is formed consisting of the chairman or vice-chairman; the secretary; a member of the Board of Examiners; and two or more members of the Association who are active in the discipline in which the applicant wishes to practise. The applicant presents his case for admission to the Association, and the members of the Board have an opportunity to question the applicant in detail, to satisfy themselves as to his capability and experience. A recommendation concerning the application is made to Council, following the interview.

The current year has been a more active year for the Board than have been the previous two years. In addition to the hearing mentioned in last year's report, the Board has met on three occasions to consider two further applications, and the Board's recommendation has been passed on to Council in each case.

The permanent members of the Board for the year 1971 were: Councillors W. R. Newton, Vice-chairman; A. M. Lansdown, Chairman; and Registrar T. W. Algeo, Secretary.

Respectfully submitted,
A. M. LANSDOWN, P. Eng.
Chairman.



RESEARCH AND DEVELOPMENT

Membership 1971: G. C. Cartwright, P. Eng.; G. W. Swift, P. Eng.; C. M. Hovey, P. Eng.; E. A. Speers, P. Eng., Chairman.

The terms of reference approved by Council are:

1. To keep Council informed of the research, development and innovation activity in the Province, involving members of the Association;
2. To identify and draw to the attention of Council areas requiring stimulation of engineering research, development and innovation activity within the Province;
3. To undertake studies and reviews of specific problems involving engineering research, development and innovation referred to it by Council;
4. Where appropriate, and with the concurrence of Council, assist other agencies in studies and investigations involving engineering research, development and innovation;
5. To prepare for Council a brief report on committee's findings and activity at least three times per year.

The Committee defined Research & Development as applying to the Committee.

The Committee prepared Comments for Council to submit to CCPE on the First Volume of the Report of the Senate Committee on Science Policy.

The Committee prepared a report on the R & D facilities and personnel involved in innovative activity in the Province.

The Committee prepared a Listing of the Research Projects undertaken in the Engineering Faculty, University of Manitoba.

Respectfully submitted,
E. A. SPEERS, P. Eng.

Chairman.

♦ ♦ ♦

AWARDS COMMITTEE

This is a Past-Presidents Committee. The present members are T. E. Weber, R. C. Sommerville, R. T. Harland, F. M. Fowler, S. J. Borgford, J. D. Adam.

The Committee has dealt with the following matters during the 1970-1971 year:

1. Reviewed and up-dated as required the terms of reference of the Awards Committee and of the Merit Award,

Life Membership and Outstanding Service Award (approved by Council in February).

2. Worked with the Donor, Major Charles, P. Eng. and the University to establish an agreement for the Canada Northland Development Award.
3. Requested publicity re the various awards in the Bulletin to solicit candidates for awards, and for the Canada Northlands Development Award at the University.
4. Reviewed candidates and generated others, and recommended same to Council.
5. Recommended a nominee to a National Engineering Awards Selection Committee.

In closing, I would note that awards are a general membership thing. The terms of reference have been up-dated and publicized. The Awards Committee is only an administrative vehicle. So if you want awards, generate your recommendations.

Respectfully submitted,
J. D. ADAM, P. Eng.

Chairman.

♦ ♦ ♦

A National Engineering Award is being established through C.C.P.E. Your nominees including supporting data are requested by November 20, 1971 for the A.P.E.M. Awards Committee review. (See Awards Committee report elsewhere in this publication).

Our nominations have to be in to C.C.P.E. by November 30, 1971.

The terms of reference of this award are:

1. He must be a Canadian citizen.
2. He must be registered as a Professional Engineer (Engineer in Quebec) in any province or territory of Canada.
3. He must be domiciled in Canada.
4. His major achievements which will be the basis of the Award must have been carried out in Canada or on behalf of Canada.

5. The Award recipient must have shown himself to be outstanding in his chosen field and who, by his writings or other endeavours, has made a highly significant contribution to the advancement of standards of excellence and ethical conduct in the field of engineering in Canada.



BULLETIN COMMITTEE

During 1971, the Bulletin Committee attempted to present an interesting and balanced publication. To achieve this, we blended a mixture of articles on Association affairs with columns of a more general interest, as well as humorous comments.

The number of issues was increased to six from the previous four.

I would like to thank all the members of the Bulletin for their endeavours and a special thanks to Mrs. Dunklee for her assistance through the year.

Respectfully submitted,
R. M. STOKES, P. Eng.
Chairman and Editor.



EDITOR CHEERS ON HIS
FAVORITE PENCIL PUSHER

CAREER GUIDANCE AND COUNSELLING COMMITTEE

Regular meetings were held throughout the year with good attendance by the members. The school counselling programme continued throughout the province, with areas outside Metro Winnipeg again being handled by concerned engineers in the particular locale who have no contact with our committee. We would like to hear from these groups, and establish a contact such as we have with F. Butterfield, P. Eng. in Brandon. Continued use was made of the pamphlet prepared last year on "Careers in Engineering."

Due to a complete lack of response from the membership, and our inability to locate a potential sub-committee chairman for a repeat of last year's Manisphere project, the Association did not have a booth this year. We did supply two films on engineering which were shown each day in the film theatre. Our contact with the business community was maintained with regard to "in-house" tours, etc., and apparently one-third are providing such opportunities.

The slide series and commentary on "Engineering Opportunities in Manitoba" has finally been completed in draft form, and will shortly be tested in several schools, and with a group of school counsellors. Following receipt of comments from these groups the final script will be prepared and new photography "shot."

The Committee is looking for six additional members, and anyone interested in our programme would be welcome.

Respectfully submitted,
A. F. ESHMADE, P. Eng.
Chairman.



UNIVERSITY LIAISON COMMITTEE

Approval for the establishment of an A.P.E.M. University Liaison Committee was given by Council on February 2, 1971, with the following provisional terms of reference:

- a) To provide a formal and positive relationship between practising engineers and the academic staff of the engineering faculty of the University of Manitoba.
- b) To assist in the development of the

activities of the engineering faculty relating to the future needs of society and the engineering profession.

To date the Committee has held three meetings. No effort has yet been made to contact the university, rather the Committee has devoted its time to defining its objectives and to discussing the subjects to be considered under them. The objectives, as adopted, are:

- 1) Establishment of a positive relationship with engineering faculty in the form of an advisory committee of practising engineers and faculty members.
- 2) Establish a mentor system or an articling system.
- 3) Involve practising engineers in teaching.

It was felt that the first objective would establish a relationship between the profession and the faculty, the second would establish a relationship between the profession and the students, and the third would assist students in the transition process from students to professional engineers.

Respectfully submitted,
W. R. NEWTON, P. Eng.
Chairman.



OCTOBER COUNCIL MEETING

The entire Council may decide to go back to University. Although they always suspected lawyers were better off than engineers, not until the Association got "down to cases" were they aware of just **how much** better off the lawyers are! Council will request an itemized bill for the recent proceedings. (Although there is no apparent connection, a Special Meeting to discuss two proposals, an Association fee increase and a new Consulting Fee Schedule was announced. Perhaps a good lawyer will be able to establish a link-up.)

The Safety Committee's investigation of the Darlingford Arena failure brought an interesting fact to light. The Public Buildings Act (administered by the Department of Labour) requires that an inspector perform duties necessitating the skills of a structural engineer, yet sets no standards for this position. Apparently, the present inspector was a carpenter.

Two recommendations were made:

- (1) That Council proceed with action against the designer (a maximum fine of \$100.00!)
- (2) That Messrs. Hood, Algeo and DePauw draft a letter to the Minister of Labour recommending:
 - (a) That all public buildings be checked by a Professional Engineer and modified as necessary.
 - (b) That the Act be revised to assure the public that a Professional Engineer has approved the drawings.
 - (c) That the above-named gentlemen meet to discuss this matter in the near future.

Council next met with a delegation of one from the Practice and Ethics Committee—your reporter was happily banished to the adjoining chamber, where he enjoyed the favours of Mrs. Dunklee. (The job is not entirely thankless after all!) After this refreshing interlude, I returned to a discussion in semantics—Manitoba Telephone System professional engineers have formed a "group" and requested recognition by the Association. It is pointed out that "recognition" could give them special status, even power (?), whereas if we "acknowledge their existence," they do not then have this status. (The old psychology association test—made me immediately think of Red China and the U.N.—no offense meant to the Manitoba Telephone System group or to the Association.) This wording had been accepted by the Manitoba Telephone System group earlier and was ratified at this meeting.

The Employee-Engineers Committee has a letter ready to send out to the membership. Mr. Hood wishes to discuss this further with Mr. McKall, after which it should be sent out, in time for discussion at the Annual Meeting.

Only one other item of interest—of the engineers that worked on the C.F.I. project, only 2 were members of our Association—and they were hired during the construction phase (27 licences were issued). Comments?—D.A.C.

Editor's Note: In order to forestall undue interest in the job of Council reporter, we should advise that Mrs. Dunklee's "favours" included only coffee, cashews and intellectual conversation.

AWARDS

Four deserving members of the Association will be honored at the Awards Luncheon at the Annual General Meeting.

Honorary Life Memberships will be conferred on three of the Association's Past Presidents: C. V. Antenbring, B. Chappell and T. E. Storey. Mr. Antenbring, who joined the Association in 1937, served on Council for four years, was Vice-President in 1941 and President in 1942. B. Chappell was registered in Manitoba in 1947 on transfer from Saskatchewan. He served 6 years on Council, was Vice-President in 1963 and President in 1964. T. E. Storey was registered in 1943, served on Council for four years. He was Vice-President in 1948 and President in 1949.

The Association's Outstanding Service Award will be conferred on C. R. Bouskill. Mr. Bouskill was registered in 1956. He has served 11 years on the Board of Examiners, 3 years as Chairman. He has also served on the Advisory Committee, the Admissions Procedures Review Committee, the Admissions Review Board and the Practice and Ethics Committee, of which he is currently the Chairman. Mr. Bouskill is the first member of the Association to receive the Outstanding Service Award.



ECONOMIC QUICKSAND

By E. A. SPEERS, P. Eng.

Recent reports from the Bank of Canada have indicated that of the inflationary pressures during the period 1965-1970, 77% was due to labor factors, 13.8% was due to indirect taxes, 0% to business activity. At the same time labour income increased 66.6%, the GNP increased 53.7%, corporation profits increased 11.2% before taxes.

Normally high wages and income mean prosperity, but when wages outstrip the output per man-hour and where markets are seriously affected from expanding in a normal manner, big increases in wages can produce unemployment and restricted output. Unemployment in Canada has risen from 3.9 to 5.9 percent over this same period.

Labour income has increased 30% faster than the increase in productivity.

If prices have to rise to absorb this increase and if markets do not expand to accept these increases, then production must be cut back and unemployment results. Alternatively heavy labour costs accelerate the investment in labour-saving equipment and again unemployment may result.

There is a way out of this morass, particularly for an economy like Manitoba's.

Federal and Provincial programs to alleviate unemployment traditionally call for public buildings, highways, renovation of homes and social assistance. These are mainly temporary expedients made in the hope that the economy will recover by the time the next winter period of low employment rolls around. These projects are not employment generating on a continuous basis sufficient to meet the needs of today's society.

The social pressures of this generation are equivalent to those of ten industrial revolutions, and the traditional ways of our society are not sufficient to absorb the resultant changes. This generation, since World War II, has been affected by the development of "the" pill, ICBM's, space travel out of our atmosphere and into orbit, computers, automation, TV, with the resultant change affecting jobs, attitudes and capital investments. Increased welfare roles, slums, ghettos, a permissive society and obsolescence of traditional skills has resulted.

If Manitoba would spend part of the current \$15 million to \$20 million of the federal government's incentive money anticipated on a per capita basis, on projects which would require labour input on a continuous basis, there would be a better chance of reducing the depressions of our economy.

The financing of applied research to the development of more secondary industries, is a relatively low-cost method of creating employment opportunities on a continuous basis. A million dollars spent in assisting forty small enterprises based on an innovative approach will employ on the average ten times the personnel than will a million dollars spent with one large well established enterprise—largely because the well established are mainly interested in continuing what they are now doing.

Large companies hire on the average

one person for each fifty thousand dollars of invested capital, while small companies hire one man for each five thousand of invested capital.

It is time we had support for applied research and development in this province. Support of a million dollars a year for ten years could change the Provincial economy to one of "full" employment with a broader tax base, and a place for our technical graduates. We need to "plug-in" this technical group if we are to alleviate the broad unemployment and welfare problems.



RESIGNATIONS

Any members who have retired or moved from the province and who do not wish to retain membership in 1972 should resign in writing by December 31st. Under the by-laws no resignations can be accepted after January 1st, 1972, unless half (or all) of the 1972 fee is paid, with the resignation becoming effective June 30th, 1972 (or December 31st, 1972.) At the Special Meeting on October 20th a proposed amendment to the by-laws was approved and if it passes the letter ballot currently underway there will be a special category of non-practising membership available for \$25.00 annually. The results of the voting on this amendment will be available at the annual meeting and will be sent to members shortly thereafter.



PRESIDENT HOOD SAID IT!

"This profession, like all other professions, has to remove itself from the comfortable pew. We must place ourselves in the position of planning our most effective contribution to society rather than continually reacting to changes."



P. ENG. ON UNICITY COUNCIL

Thank you St. James-Assiniboia. Those of us who live elsewhere in Unicity owe a real debt of gratitude to the residents of St. James-Assiniboia. They have managed their affairs so well over the years that when we all become one big happy

family they will make a sizeable monetary donation to the coffers. On top of that, they elected the only professional engineer, George Minaker, to the Unicity Council. To George Minaker we offer our congratulations and our thanks for having helped to put St. James in the position where it could make such a generous financial contribution to the new big city. Of course every silver lining has a cloud and we will have to take in all those cats. — S.J.A.



FORMER PRESIDENT DIES

We have received word of the death in Vancouver at the age of 91 of Dean John Norison Finlayson, formerly of the University of Manitoba and a member of this Association in its first year in 1920. He was President of the Manitoba Association in 1935 and was on our Council for 6 years. He retired in 1950 as Dean and Head of the Department of Civil Engineering in the Faculty of Applied Science at the University of British Columbia. He was a former President of the Engineering Institute of Canada and was awarded an honorary doctorate from the University of Manitoba in 1940.



NOUGHT OH ZERO OUGHT

If a person lives at 701 Lombard Avenue, he generally gives his address as Seven Oh One Lombard, not Seven Zero One. If his telephone number is 210-4020 he does not generally say Two One Zero Four Zero Two Zero.

However, with the advent of the new postal coding we will have to mend our ways. We restudied the notice we received from the Postal Coding Officer at R3C 0J0, sent to us at R3B 0W9 and we discovered that the O's differ. He is at R three C, Zero J Zero. We are at R three B, Oh W Nine. On the typewriter zero is skinnier than O. So before you launch into this "giant step towards faster and more efficient mail processing," don't just make a bunch of circles, be sure of what is to where for whom and with which and that you know the difference, and can make it clear to the computer.

POETIC ENGINEERING

Mr. Don Morrison, poet and dreamer, writing in his Minneapolis newspaper column, illustrates what can happen when a poet attempts to put his hand to something useful. His fearsome analysis arose in response to a difficulty with the glare of the setting sun reducing visibility at the exit from a new \$8 million tunnel. It is quoted here in part.

"It has been remarked that war is much too important a matter to be left to generals. I long ago decided that the principle could be extended into a theorem that engineering is much too important to be left to engineers.

The highway engineer, when his pants fall down, is rather more publicly exposed than most as he trudges back to the old drawing board. The latest little goof-up to come to light (or dark) is the \$8-million tunnel under the Hennepin-Lyndale Bottleneck.

It is a pity they didn't seek the advice of a small consulting firm I run. We are not heavy on technical knowledge, but our think-tank thrashed it out some years ago that the sun sets in the west. We were even prepared to make the information available gratis as a public service.

While the engineers are toying with current ideas of installing night-lights or something so the motorists won't get frightened in the dark, I'm willing to unleash my team of poets and dreamers on the problem. The engineers have had their shot and where did that get us, except \$8 million down a hole?

Several obvious solutions present themselves. One might be a state law requiring all autos to be equipped with porch-type awnings between 5 and 7 p.m. More esthetically pleasing, however, would be to cover the whole stretch of Hwy. 94 with a gay red-and-white striped canvas cover, like a lawn-party marquee.

Or, possibly a lace-trimmed parasol could be erected near the tunnel to turn the rays of the setting sun. An elegant Graeco-Roman note could be achieved with an elongated pergola supported by a classic colonnade. Trailing wisteria could provide shade.

Those impatient with anything less than technological answers to technological foul-ups might impatiently reject

such cheerful whimsies. All right. Why not mount a huge mirror on St. Mary's Pro-cathedral angled so as to reflect the setting sun into other end of the hole? This light at the end of the tunnel surely would help commuters around the bend.

If these fail, there's always the opportunity to make mistakes amusing. As cars enter the tunnel, they could be hooked onto a chain system that would tow them on a winding course through the darkness while skeletons and phosphorescent bats spring out at them, like a big highway department fun-house.

The best temporary expedient, however, would be to have the highway engineers line up inside the tunnel. Their glowing red faces should provide all the emergency warning illumination required."

In this insistence on a whimsical solution to the problem the poet has overlooked the more obvious remedial measures. For example, what could be simpler than changing to the left-hand rule such as they have in Britain so that traffic would be going the other way? Or they could put that section of Minneapolis on night shift so they would always have the sunrise or sunset at their backs.

To make sure that this situation doesn't recur, an ordinance could be passed decreeing that all thoroughfares in future shall run north-south.

There is also an important sociological move illustrated here which must be resisted at all costs. The arts types are trying to move into the Engineering field. Remember that this same group successfully promoted the idea that movies are an "Art form"—and look what has happened to the movies! — K.M.J.

★ ★ ★

IS A PRE-ENGINEERING COURSE NECESSARY?

By R. J. RENNIE, P. Eng.

When jobs become scarce for engineers, we often hear the practising engineer proposing that we restrict entry of students into engineering faculties by establishing a pre-engineering course. The argument is, that a longer course would tend to inhibit the intake of students by increasing the cost of the degree in terms of education fees and lost salary during

the additional years. Perhaps it is time that we briefly examine this question of pre-engineering education.

The 1971-72 calendar of the University of Manitoba outlines the prerequisites for the Medical, Law, Architectural and Engineering faculties. For entry into the Medical and Law faculties, a student is required to take two years of University courses. Subjects are specified for the Medical faculty, but not for Law, although the Law faculty would prefer a first degree. These two years still do not constitute acceptance into the respective faculties as candidates are required to pass an Application Test and then must be accepted on scholastic and personal qualities.

The Faculty of Architecture has established its own pre-architecture course of three years towards a Bachelor of Environmental Studies degree. This course contains subjects basic to Architecture as well as those from the Faculty of Arts and Sciences. It would appear that no other qualifications are needed for acceptance into a three year course towards a Master of Architecture degree.

The Engineering Faculty has no pre-engineering course requirement other than that the student's average in his Senior Matriculation year must be 60 percent or better.

There are some disadvantages to the prerequisite courses. There is the danger that the additional two years may be enough to turn away the good student with limited funds. A good program of scholarships would help to overcome this. In the case of a pre-engineering course, there is also the disadvantage that the subject matter would be pretty remote from engineering. The first year engineering course now contains subjects similar to those found in pre-med and Environmental Studies. What subjects then would we include in a pre-engineering course? The classics? Anthropology? History? Young people today would certainly spot a phoney prerequisite course such as this. In any case, engineering students who wish to take such courses can now do so in their second, third, and fourth years as non-technical electives.

On the other hand prerequisite courses would have the advantages of restricting student intake because of higher education costs and increasing the chance of failure by poorer students. Both of these

advantages are in support of our aim of reducing the number of engineers coming into the market. We also have the added advantage that a more mature and better qualified student enters the Faculty of Engineering.

In assessing the advantages and disadvantages it can be tentatively concluded that a pre-engineering course is worth considering as a possible method of creating a favorable demand market for engineers as well as raising the quality of engineering, but it may be impractical to implement because of the difficulty in establishing relevant course content.

One suggestion may be to make the first year course, which is common to all engineering disciplines, a more difficult course by increasing the lecture hours to about 35 per week from the present 27. However, this solution will not discourage students having limited funds for education as the number of years of study remain unchanged.

As the answer to pre-engineering courses still appears to be somewhat elusive perhaps we are tackling the wrong end of the problem. It may be that the additional years should be at the end of the engineering course, rather than at the beginning. The fact that there does not seem to be an apparent course content for pre-engineering leads to this conclusion.

There is always a need for more practical training for the student engineer and this training could be part of additional years of study. The medical student certainly does not spend all his time sitting in the classroom. During his 4 years of medical training, for example, he must attend 25 cases of child-birth, 6 autopsies, and administer anaesthetics under supervision. Does the student engineer get an equivalent amount of practical engineering training and experience in his 4 years at University? Practical design experience takes up only 8% of course content in the first three years increasing to 40% in the final year. Is this really enough?

The answer to this question not only lies with the Faculty of Engineering, but also with members of the Association who supervise graduate engineers in the two years prior to licencing and then make recommendations regarding licencing.

We will attempt to shed more light on this question in a future article.

PRIZE DONORS

We wish to thank Spiroll Corporation and Supercrete Ltd. for their generous donation of door prizes for the forthcoming annual meeting.



KEEP THE LAWYERS OUT OF THE SPECS

J. P. Morgan who had done a fair amount of business in his time advised, "Never do business with a man you can't trust."

When an owner retains a consultant the choice is based on integrity and competence. When contractors or suppliers are chosen, why must the choice be hedged by a lot of fine print that nobody needs and nobody understands.

In an age where every law (written by lawyers) requires interpretation by other lawyers, it would be helpful if engineers were to write clear English. If you then deal with honest businessmen the specifications can be reduced in weight to the point that the technical specification is all that is left.

—J.W.J.L.

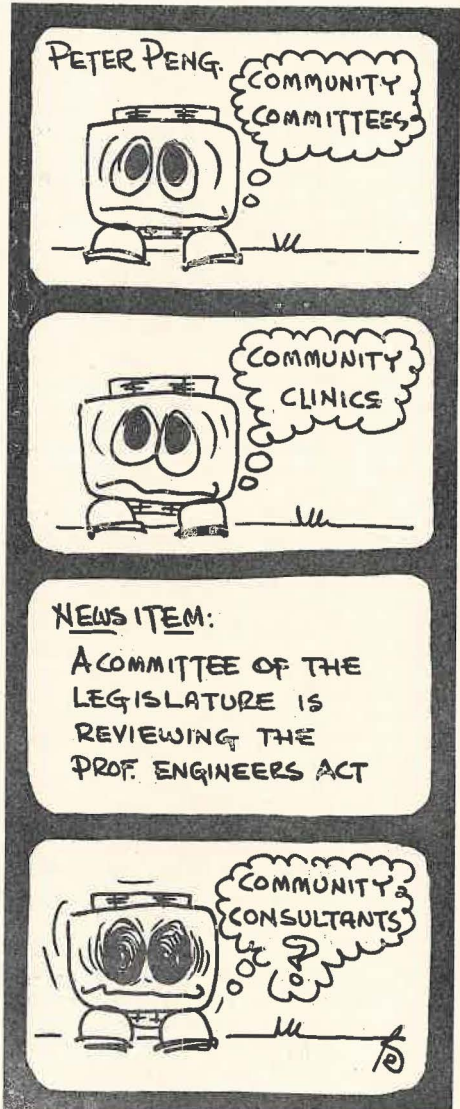


FURTHER EDUCATION BUT WHAT?

When an aircraft manufacturer announced a plant closing, a spokesman for organized labour stated that the company had taken good money out of the plant and therefore the company should pay for retraining the workforce who were now unemployed. In reply the company made a weak reference to the government's retraining scheme. To complete the record we should say that the union had taken handsome dues from the plant, the employees had taken good wages. The local, provincial and federal governments as usual were two time winners by taxing both employees and the company.

Philosophising on other people's problems and responsibilities raises the question, "What would I do if I lost my job today?" The question is worth thinking about because as engineers living in Manitoba the alternative choices are limited and indeed wherever you live.

there is said to be a shortage of job openings. A prudent man might start training today but what could he study that he could be sure would be marketable tomorrow? — J.W.J.L.



STUDENT COUNSELLING

R. W. Menzies, P. Eng., Chairman of the Student Liaison Committee, sent a letter to all members in July, 1971 asking for volunteers to assist in the counselling of engineering undergraduate students. The following members have heeded the call to date: L. G. Scott, C. H. Howard, J. B. Campbell, R. M. Colman, F. C. Swain, H. M. Lapp, R. W. Smith, G. C. March, C. E. Anderson, J. Ferguson, G. Koch, A. M. Lepine, A. D. Round, J. W. Davies, W. McGilvery, P. J. Stewart-Hay, D. A. Shearer, R. J. Karras, L. H. Tough, F. Mooibroek, J. S. Hicks, D. S. Simons, J. T. Atchison, J. L. Babletek, R. W. Haywood, F. A. Jost, A. E. Burstein, D. R. Grimes, L. Bookbinder, G. Spafford, D. L. T. Oakes, J. H. Macdonald, D. W. Snodgrass, G. K. Stewart, L. S. Earp, C. D. D. Howard, J. W. Strong, K. R. Ebborn, J. P. Stefanson, J. M. Millen, M. Hirt, B. Strange, Jabbar Khan, G. E. McLure, J. E. Zuk, A. F. Eshmade, L. M. Harris, A. J. Pankratz.



RADIO AND TELEVISION

If the C.R.T.C. wants to do something of value for the Canadian television viewing public, it could consider proposing some regulations upping the BBC content on Canadian stations — we could do with more programs like the Forsyte Saga, the Maugham series and The Wives of Henry VIII. If upping the Canadian content means Canadians are going to be encouraged to produce programs of this calibre, we are all for it but if it merely means we will get more of John Harvard badgering Joe Borowski — ugh.

Some say this is the Age of Aquarius. We are more inclined to think it is the age of sports-minded voyeurs. There is now no longer a hockey season, or a baseball season or a football season. In September and October, for instance, we are in the hockey-baseball-football season and if you aren't interested in sports you'd better buy a season ticket for the Manitoba Theatre Centre.

On the one hand we have Canadian artists and performers ranting and raving against censorship and insisting that if they want to prance around in a state of nudity mouthing obscenities in the name of culture, art, or whatever, they must have the artistic freedom to do so.

On the other hand we have Canadian artists and performers convincing members of Parliament that the viewers and listeners of this country must not be allowed the freedom to watch and hear what they wish—it all must be "censored" to make the 10% Canadian content mandatory. If Parliament is going to impose some regulations on Canadian radio and television, we would suggest that they concern themselves with standards and not jingoism.



ORANGE BRIDGES

For as long as I can remember the steelwork on our bridges has been painted either a flat aluminum or a dismal off-army-truck-green. Most of these bridges blended in so well with the surrounding land or city-scape that you barely noticed their existence, let alone their features.

The recent painting of two downtown Winnipeg bridges a brilliant orange greatly impressed me originally because it —

1. Relieves the dreary early morning drive for hundreds of downtown workers;
2. Adds sparkle and interest to our essentially colourless city, especially from November until April;
3. Draws attention to the bridges as vital elements in the transportation system of a city built around the junction of two rivers;
4. Draws attention to the bridges as separate entities, with strength, grace and individuality of line and form that were too easily overlooked in their drab colours;
5. Forces acknowledgment of the rivers the historical *raison d'être* of Winnipeg;
6. Reveals remarkable insight, imagination and nerve of the Metro official who recognized these points and acted on them.

Dreamer.

In fact the orange paint was to be used only as the first of three coats; orange, aluminum, green. Contrasting colours were chosen so that work crews could

easily notice missed or thin spots during repainting.

However, public reaction to the orange was so favourable and to the subsequent aluminum on one bridge was so unfavourable and vocal that Metro is considering the use of bright colours in the future. Now if we can only get Hydro to do something about those poles . . . —R.R.M.



MAXIMIZE YOUR PARTY

By K. M. JARDINE, P. Eng.

In 17th century high society, one of the games indulged in was the composition of maxims. The dictionary definition of a maxim is a "general truth drawn from science or experience." The trick of the game was to identify the idea or "truth," generalize it and then express it in capsulated form, stating the idea dramatically, completely but as concisely as possible.

The Duc de la Rochefoucauld, moralist and cynic of the time gives us some excellent examples of maxims. He said "we often forgive those who love us, but we cannot forgive those who find us boring," and "In the adversity of our best friends we always find something that does not entirely displease us." From these examples it is obvious why he was labelled cynic. No less cynical is this — "Little is needed to make a wise man happy but nothing can content a fool. That is why nearly all men are miserable."

And this pithy comment.

"The refusal of praise is the desire to be praised twice."

In composing maxims in a group or party the game proceeds by proposing an idea, discussing all its aspects and then selecting the best phrasing and words to express the complete idea. The idea need not be cynical and can be dressed up in figures of speech.

"Absence lessens moderate passions and intensifies great ones, as the wind blows out a candle but fans up a fire," said Rochefoucauld. And how about this terse statement: "We are never so happy or so unhappy as we imagine."

If you have the right group of people together the maxim game can be hilarious. We tried it at our house the other day and the Engineering background came

immediately to the fore. "Man expresses himself through Art; society through Architecture; Man finds action in feats; society in Engineering," was our first effort. We became quite proud of ourselves when we came up with this composition: "The effort to understand is like a tug of war in reverse; each individual pushing his idea toward the other."

After a short period of whole-hearted participation an understanding truth became evident. "A man's ability to write maxims is outstripped by his assessment of that ability."



POLICE PUBLIC RELATIONS

We in the Association have heard much discussion concerning public relations and our unfavourable public image. However, we can think of at least one organization whose public image is worse than ours, and that is the Canadian Association of Police Chiefs.

Police are charged with the responsibility of controlling crime and making our surroundings safe for all of us. This has always been a difficult task, and in this day and age of permissiveness, it is becoming intolerable. Organized crime is continually increasing and the skyrocketing incidence of drug usage, with its related criminal activities of mugging, burglary, and armed robbery, are making our streets less safe every day.

Do the alarming increases in crimes of every kind mean that the police are performing their duties less efficiently? We think not. Police generally, and police chiefs in particular, are aware that they need expanded powers to combat the criminal element. This is where their lack of a favourable public image hinders their efforts.

At every convention they pass resolutions requesting the powers necessary to do their jobs properly. We are certain that the only reason they pass resolutions asking for the right to wire tap or to enter private property without warrants is because they would like to do their jobs more effectively. Yet this is seldom the way it comes out in the press and seldom the way these resolutions are interpreted. It always seems to sound like the police chiefs want these rights to restrict the rights of all of us.

Apparently the idea that our right to walk the streets in safety is restricted by the criminal element is less repulsive than the thought that the police may in some way be violating our civil rights.

Wiretapping is a naughty word these days but how else can the czars of organized crime be apprehended. Since these men commit no crimes themselves, they have only one weakness. They must tell others to commit crimes and to do this they must communicate. The only way to catch them communicating illegal instructions, is by some form of wire tapping. The men who control organized crime do not hesitate to use whatever electronic devices are available but we expect the police to control them, hamstrung by restrictions on the use of any sort of wiretap.

The right of entry is another contentious issue. I am sure that if a shot or scream came from any of our homes at night we would expect any police in the area to enter immediately, and yet, in asking police to do this we are asking them to break the law.

The police chiefs seldom give a detailed explanation of why they want the rights that they ask for. Perhaps they need a public relations campaign. — R.M.S.



ON HAVING A NOMINATING COMMITTEE

By N. P. FESCHUK, P. Eng.

The function of the Nominating Committee is to ensure that there is one suitable nominee as a candidate for each vacancy to be filled on council. The terms of reference of the committee state "that as far as is practicable the Nominating Committee shall submit the names of such nominees as will maintain on council: (a) area representation, (b) occupational representation and (c) Branch of engineering representation."

In some instances in the past the Nominating Committee has selected some of its nominees from the retiring members of Council and in other years retiring councillors were not considered because the Committee felt that it was their duty to bring forward nominees who have had no previous experience on Council. Because the Nominating Committee has not received any specific instructions from

the general membership in the selection of nominees from retiring members of council, it has been interpreted in some instances by the general membership (and possibly the outgoing Councillor) if a retiring Councillor is not nominated that the Nominating Committee feels the retiring Councillor is not a suitable candidate. On the other hand, if the nominees are selected from the retiring council members, the Nominating Committee could be accused of perpetuating the establishment.

For these reasons it is likely the future of the Nominating Committee will be brought up at the annual meeting. In examining the number of candidates nominated by the membership at large since 1961, it was found that in only one year, 1969, was there an insufficient number of candidates nominated by the membership at large to fill the vacancies on council. In 1964, 1965 and 1967 the number of candidates nominated by the membership at large equalled the number of vacancies on council. In the remaining five of the ten year period the number nominated by the membership at large exceeded the number of vacancies on Council. In other words, in the last ten years the Nominating Committee slate of nominees was required only once to ensure that there was one suitable nominee as a candidate for each vacancy to be filled on Council. Of course under the existing terms of reference for the Committee they were required and did submit each year a name of a suitable nominee as a candidate for each vacancy to be filled on Council. If the terms of reference of the Committee are changed so that the Nominating Committee is required only to compliment the list of candidates nominated by the membership at large and therefore submit only that number of nominees that is necessary to ensure that the number of candidates on the ballot equals the number of vacancies on Council, the Nominating Committee would have only acted once in the last ten years. As a result no elections would have been held in 1964, 1965, 1967 and 1969 since the number of candidates on the ballot would equal the number of seats vacant on Council and therefore the candidates would have been elected by acclamation. This aspect may be unacceptable to a majority of the membership.

Probably what could be done would be to have the Nominating Committee continue under their existing terms of refer-

ence with the exception that none of the committee's nominees be selected from retiring members of Council.

♦ ♦ ♦

NOMINATING COMMITTEE

Purpose —

To submit a written report to the Registrar of the name of one suitable nominee as candidate for each vacancy to be filled on Council.

Composition —

There shall be a Nominating Committee of seven members consisting of the two latest living past presidents and three members elected by the Association at its Annual General Meeting, the remaining two members to be elected within 30 days after the said annual meeting by the Council from those of its own members, except the President, who have yet one year to serve.

Terms of Reference —

1. It shall be the duty of the Nominating Committee to submit a written report to the Registrar of the Association, not later than April 1 next after its election, a list of one suitable nominee as candidate for each vacancy to be filled on Council. Each nominee shall signify in writing to the Nominating Committee his consent to nomination.
2. The Nominating Committee shall require each candidate to submit a short history not in excess of 100 words, of his professional experience and activity.
3. The Secretary shall submit this list to Members by June 30.
4. Should a Nominating Committee member be nominated for Council he shall forthwith resign from the Committee and such vacancy shall be filled by Council.
5. As far as is practicable, the Nominating Committee shall submit the names of such nominees as will maintain on Council:
 - (a) Area representation
 - (b) Occupational representation, and
 - (c) Branch-of-engineering representation.

IT'S A PENCIL, ALBERT!



Although your Editor is known for his dedication to getting his facts straight, this did not get him into the position shown in the photograph above. Neither is he instructing Albert, his dog, in the finer points of flushing quail. Rather betting on the outcome of a recent mayoralty election, Ed put his nose where his money should have been.

With his candidate's loss at the polls, Ed was required to pay off his election bet by pushing a pencil with his nose across the floor of the office cafeteria at the height of the afternoon coffee break.

On the morning of the appointed day, the sound of rolling pencils could be heard from behind Ed's closed office door. An anonymous member of the association managed to catch a glimpse of Ed in practise. Having observed that Ed had perfected his nosing technique so that on his polished office floor he was able to drive a hexagonal shaped pencil three yards with one swing of his nose, Anonymous decided that the final test of Ed's nosing technique should come on a tougher course. Arriving at the cafeteria in the afternoon Ed found the usually highly polished cafeteria floor was covered with an assortment of gum wrappers, paper clips, cut up erasers and rubber bands. Undisturbed, your Editor selected a round pencil (which had been liberated from his son's colouring set) for the course. Cheered on by an overflowing crowd, Ed was able to play his way along through the obstacle-full course in three stokes of his nose. — N.P.F.

SOCIAL RESPONSIBILITY OF THE ENGINEER CONFERENCE

On December 2, 3 and 4, 1971, a conference on the social responsibility of the engineer will be held at the University Centre, University of Manitoba. The conference is being sponsored by E.I.C. Region II, A.P.E.M., the Manitoba Chapter of the Association of Consulting Engineers of Canada, and the Extension Division of the University of Manitoba.

The conference will commence on the evening of December 2nd with a keynote address by the Honourable Jack Davis, Minister of the Environment, which will be open to the public. Closed workshop sessions will follow on December 3rd and 4th with plenary sessions addressed by Pierre Bournival, General Manager of the E.I.C., H. L. Morrison, President of the C.C.P.E., and Earl Levin, Director of Planning for Metro Winnipeg. Wm. G. McKay, a past president of the E.I.C., will summarize the results of the seminar at the closing luncheon on December 4th.

The three main questions which will be discussed at the seminar are:

1. The Engineer as a Citizen

The engineer can contribute much to society because of his special position. Has he an obligation to contribute much more than he has in the past? Should he do this and to what extent can he do this? What changes can he make in his approach to society in order to be able to make a better contribution to society?

2. The Engineer as an Employee

Should professional goals take precedence over employer demands? How can this relationship be altered to allow the employee-engineer the freedom necessary to act as a special citizen? What are the obligations of the employers of engineers to society?

3. The Engineer and the Profession

What is the relationship between the engineer and the profession? What ought the relationship to be between the engineer and the profession?

For further information concerning the seminar, please contact Mr. R. Wickett at 474-8207.

ECONOMICS

By E. E. LACH, P. Eng.

After reading and hearing of misguided governments apparently wrongly treating ailing economics for the past two years I am led to the conclusion that the economists have yet to discover some of the basic laws or governing principles that are influential in controlling the free enterprise economy. To a layman it may in fact appear that economists are more schooled in theory than fact with regard to the free enterprise system and therefore have been slightly guilty of misleading the public. My personal feeling, however, is that the free enterprise system which can run with almost no economic planning does operate on such complex and constantly varying laws as to require the genius of an Einstein upon the scene at regular intervals. How else does one explain the complete reversal of economic policy on August 15th by the President of the United States. Or even closer to home the obvious reversals in economic policies as defined by the Trudeau-Benson budgets of late!

Perhaps President Nixon hit upon the critical factor when he said "Every action I have taken tonight is designed to nurture and stimulate the competitive spirit, to help us snap out of the self doubt, self disparagement that saps our energy and erodes our confidence."

In other words the status of the economy is strongly related to the attitude or disposition of the people.

A minor economics course on the engineering curriculum instilled in me the understanding that economic policy such as money supply, interest rates, taxes, etc. creates the climate which forces a known reaction and thereby governments can control the economy. Not so it seems. In dealing with human beings one is dealing with individuals where specific actions do not result in predictable reactions. The attitude of the people will always influence the impact of a policy. For example the previous outward optimism of President Nixon and his policy of increased spending to rev up a slow economy didn't work on a people where a pessimistic attitude prevailed. Their reaction was one of distrust in the economy and the value of the dollar as expressed in exorbitant wage demands (i.e. railway workers won 42% pay increase for 42 months). Similarly Finance Minister

Bensons' predictions regarding the numbers of unemployed did not materialize.

Another critical factor in the controlling of the economy is the attitude of one particular group of people, namely our political leaders. With governments of the so-called free economy ever increasing their areas of direct involvement in the economy to the point where they now are the biggest spender and employer in the system, it is obvious that if they feel the policies they set are for the economy outside of government only, the policy has little hope of success. Being involved in the construction industry I have experienced anti-inflation economic policies by the federal government which resulted in the complete stoppage of perhaps a dozen, one hundred thousand to a quarter million dollar capital expansion projects by private industry being developed in our office, whereas a twenty-one million dollar government project received the go ahead in spite of the economic policy.

The successes and failures then of the theories and policies proposed by present day economists depend largely on the attitude of the people they should be influencing. Attitudes can change quickly as many newly-weds can confirm, and for unknown reasons, and so as economists move forward in a greater dimension of involvement I wish them Godspeed.

CURLING BONSPIEL

The Curling Bonspiel
will be held
at the Highlander
on

Thursday, January 20th, 1972

It's very encouraging to try to contact a federal civil servant in Manitoba and to learn that he is not available because he is "on French but will be back in three weeks." It is gratifying to know that veterinarians working in the maternity ward in Broadview, Saskatchewan, can now deliver calves in two languages.

It can certainly not be said that Manitobans don't have discriminating tastes. While the ballet, the theatre and the symphony put on extensive membership

drives, Hair is a sellout at \$7.50 a seat, and held over, yet, in the "more intimate" surroundings of the Playhouse. How intimate?

Our insurance agent sent us his last premium notice, together with the policy, some months ago. Our autopac notice came in, complete with book of instructions, which we read — three times — in an effort to find out how much we owed. Finally we phoned the number given. Day after day we phoned but the line was always busy. Eventually we tried on a Saturday morning and we were informed there had been a mistake on the notice sent to us, in that all the pertinent figures had been left off. But, we were advised, if we would go to the Motor Vehicle Branch or an autopac agent we could get the figures. We got the figures. They are higher for less coverage than we paid our agent who sent the policy and the premium notice in one envelope, and involved us in no booklets or telephone calls, or trips half way across town to get figures. The name of the game is socialism.

When you come to cast your ballot on the proposed fee increase, bear in mind that the President and members of Council who are supporting this increase, pay more in parking charges to attend meetings than the amount of the annual fee. Don't inhibit their work by being niggardly.

The Russians operate on a tit for tat system. If the British expel a batch of Russian diplomats, the Russians expel some Britons. When Mr. Kosygin came to Canada to visit, we sent a technical visitor to Russia — none other than our own Carson Templeton.

The Prime Minister came to our town and he suggested our Premier was not behaving in a gentlemanly manner, which raises two points — is the utterance of "Fuddle Duddle" in the House of Commons gentlemanly, and if the Prime Minister thinks our Premier is ungentlemanly whatever would he think of some of our other politicians.

We wish Mr. Toupin would bear in mind that we would prefer that the surgeon who stands over us, knife in hand, is happy and contented in his work.

ANNUAL BALL

The Annual Dance
will be held at the
International Inn

on

Saturday, February 19th, 1972

Other news media referred to Mr. Juba as "Super Mayor" because of his outstanding success at the polls, pointing out that he got 70% of the votes cast. We don't want to appear to be too chauvinistic but . . . Super Councillor George C. Minaker, P. Eng. polled 80% of the votes cast in his constituency.

When you get your ballot to vote on the proposed fee increase before there is any "What does the Association do for me?" whining, consider what the Association does for the President, members of Council and Committees. It affords them an opportunity to work to the point of exhaustion, it takes up all their spare time, it plucks their brains, it extracts hundreds of dollars a year from some of them, it gives them little or no time for recreation, it loads them up with professional responsibilities — and these are the people who want to contribute more in the way of fees so we can undertake more and use up even more of their time. Dedicated people don't grow on trees — let's not stand in their way.

All the Association asks of 80% of its members is the payment of an Annual Fee that is lower than that paid by any other profession, and considerably lower than union dues. It is very little to ask, compared with the contribution that is made and will continue to be made by the 20% of the membership whose annual fee is by far the smallest part of their contribution made annually to the Association. Many of our members pay more for parking to attend meetings than they pay in annual dues.

The loquacious and opinionated radio and TV personality John Harvard said it "galls" him that \$800,000 worth of Canadian advertising dollars is going to Channel 12, a U.S. based TV station (enjoyed by thousands of Canadians) saying this money could be used to improve Canadian television stations, and on the same program he said he went to the U.S. for holidays, which wouldn't do much for the Canadian tourist industry.

DUOPOLY

A TRUDEAU-BENSON FINANCE GAME

It will come as good news to some of our readers that we are thinking of abandoning the field of journalism for a more lucrative endeavour — family games. It must be almost 40 years since Monopoly first made its appearance. We propose to hit the drafting board to work out the details of its successor — Duopoly.

We are indebted to Messrs. Trudeau and Benson for both the name of the game and the theme. Unlike Monopoly, Duopoly will not be played on a square board, since in these days anything or anyone square is an object of scorn. It will be round, and the players will go round and round in circles.

We suspect Messrs. Trudeau and Benson are using tea leaves to forecast the financial future and plan their moves but our game will be more scientific. We will use dice.

The object of the game will be to keep from going broke. The various components that make up the circle will be labelled with such notations as: maxi budget, pay \$2,000.00 in taxes; mini budget, pay \$75.00 in taxes; surcharge budget, pay 3%; supplementary budget to spur economy collect \$35.00; special budget to combat unemployment collect \$25.00; anti-inflationary budget pay \$175.00; interim budget pay \$35.00; Pass "Go" and collect wages \$750.00; Government Opportunity.

If a player lands on a "Government Opportunity" space, he will get a chance at one of several cards reading: CBC deficit increases pay \$25.00; Post Office installs 64½ millions in equipment for new numbers game, pay \$38.00; Go directly to jail do not pass Go, do not collect wages BUT collect \$25.00 from all other players to pay for your upkeep in jail and for riot damage you may cause while incarcerated; Capital gains tax assessed, pay \$200.00; CNR deficit, pay \$22.00; Unemployment Insurance benefit collect \$175.00; Membership fee in "It's all Nixon's fault" Club, pay \$25.00; Last year's wheat payments due, wait three turns to collect.

The game will be designed for players of all ages. One advantage to Duopoly will be it won't be necessary (or even possible) to understand it. Just keep on going around and around in circles.

—S.J.A.

NOTES

FIFTY-SECOND

Annual General Meeting

MONDAY, NOVEMBER 22, 1971

North Star Inn

PROGRAMME

- 8:30 a.m. Registration Opens
- 9:00 a.m. Official Opening by President
Panel Discussion on a new Act
- 10:30 a.m. Coffee
- 11:00 a.m. Panel Discussion on Collective Bargaining
- 12:30 p.m. Lunch, Guest Speaker, Introduction of Guests, Awards
- 2:30 p.m. Afternoon Session — Panel Discussion, Practice and Ethics
- 4:00 p.m. Annual General Meeting Convenes
Introduction of Head Table
Minutes of Annual General Meeting of November 26, 1970
Minutes of Special Meeting of October 20, 1971
Declaration of Councillors Elected
Reports
Report and Appointment of Auditors
Draft Budget
- 4:30 p.m. Coffee — Council Meeting
Special Awards
- 5:00 p.m. Declaration of Officers Elected
Nominating Committee Appointments
Nominating Committee Terms of Reference
Other Business
Ceremony of Turning Over Gavel to Incoming President
Presentation of Past President Certificate
- 6:00 p.m. Reception, Eats and Greetings