

initiating competition procurement on a patented product was not a matter for concern. The procurement procedure was simple. The gov't. took our specifications, changed all references to proprietary items or model numbers, and used them as specifications for a procurement document. This placed us in a rather severe quandry — to bid ourselves on what we regarded as an illegal tender or to take legal action against the gov't. immediately. We would up by bidding and reserving our rights to future legal action against the U.S. Government.

This case, however, is not as important to us as the basic principle. If we have valid patents, or even original ideas, the U.S. Government has no right to steal them. If our patents are not valid the U.S. Patent Office should not have issued them. In either case the government is culpable.

It is easy to say sue, take court action, fight them! But we are a small Canadian company and our adversary is the most powerful foreign government in the world. Could we afford to lose such a case — could we even afford to win? We're aware of the axiom that nice guys don't win ball games and while this is not a ball game we're almost certain that modest people like ourselves are too nice to win.

These are just a few of the cases that I'm personally familiar with — you are undoubtedly aware of others. Taken together they form a frightening picture in which business creativity and entrepreneurship may be stifled by the unfair practices of one of business's increasingly important consumers. And in the end both the private and public sectors will suffer as research and development funds are diverted to other areas.

We are all aware of the importance that our judicial system has historically placed on protecting individuals from authoritarian restrictors. Once again those of you who are most familiar with these laws have an opportunity to see that individuals are protected, not only from the unfair practices of governments, but from the tyranny of incomprehensible laws.

I urge you consider the importance of this work and wish you well in your efforts.

**About the Speaker: Murray R. Maynard, B.S. Before founding Dominion Aluminum Fabricating, Ltd. in 1952, Mr. Maynard taught at the University of Toronto and was an R & D engineer for Union Carbide. His present company specializes in design and manufacture of structural aluminum products.*

NOTICE

Secretaries of all LES Chapters are reminded that a copy of the minutes of each LES Chapter and Director's meetings should be sent in English to all other LES Chapters. This allows all Chapters to coordinate their activities and to be aware of the activities of other Chapters.



Luncheon meeting — Niagara Falls. Peter A. York, Luncheon Speaker at podium.

"THE CANADIAN CLIMATE FOR TECHNOLOGY TRANSFER"

by
P. A. York*

Gentlemen:

It is certainly a pleasure for me to be with you in Niagara Falls today, at what I understand is the first meeting in Canada of the Midwest Region — Licensing Executives Society.

To those members and guests from (across the bridge) I would remind you that this general community has historic significance to our two countries, dating back to the difference of opinion of 1812. This hotel is named after General Sir Isaac Brock, who was the leader of our debating team at the time. I suppose one could state that we have shown some progress in 160 years if we compare the atmosphere in Ottawa recently, in which President Nixon and Prime Minister Trudeau sat down to sign an international agreement to clean up the Great Lakes system.

It is gratifying to note that your society has expanded its influence with chapters organized in Britain, Italy and Scandinavia. Perhaps if your Canadian membership increases appreciably beyond the present thirty-seven, a Canadian Chapter may be worth consideration at some future date.

I have been impressed by the high calibre of the programme arranged by your committee and I am sure the workshop sessions will be most valuable to the participants.

As a provincial government, we are heartily in accord with the aims of your society, and I would like to quote one from your charter.

"To assist its members in improving their skills and techniques in the area of licensing, of educational meetings, the publication of articles and other materials and the exchange of ideas related to domestic & foreign licensing"

When I outline our programmes, I think it will be

evident to you that we too follow this purpose quite closely.

Canada has always been an amenable host to foreign technology. British technology helped to build the railways and American technology boosted our industry. We have not, of course, suffered a complete lack of domestic innovation as attested by products ranging from pabulum to aerospace equipment and Stol Aircraft. However, we are far from satisfied with the rate of technological development in Canada. I shall mention, in the course of this speech, various programmes which governments are undertaking as part of an overall approach to improve the situation.

Ontario's secondary industry had made great strides since World War II and foreign investment has played a major role in its expansion. With the dependence of many subsidiary companies on foreign patents, however, it is perhaps understandable that our domestic research and development has not kept pace with that of other countries. Periodically the question arises "should Canada make or buy technology?" and I do not need to say that it is a controversial subject. As a generalization, the scientific community advocates doing it ourselves while the business community is faced with the need for rapid innovation and a constant flow of fresh technology to enable it to keep abreast of today's fast-paced marketing opportunities.

In 1970-71, Federal Government current expenditures on research and development amounted to an estimated \$543 million. Of this sum, \$302 million was spent directly by the Federal Government, \$110 million by industry and \$126 million by educational and non-profit institutions. A recent bulletin by statistics Canada has also estimated that the Federal Government will spend an estimated \$872 million on scientific activities in engineering and natural sciences in 1973, an increase of 10% over 1972.

Payments to Canadian industry for scientific activities in 1973 are expected to increase by 16% over 1972, while the monies allocated to the higher education and non-profit sector will remain at the same level.

In addition, it may be of interest to you to learn that the Federal Government is undertaking technology agreements with overseas countries. The Minister of Industry, Trade and Commerce has signed with several countries some form of agreement since June, 1970. Notable in the advanced area are those with Belgium, the U.S.S.R., West Germany and the discussions with Japan. At this point the only formally structured agreement is with the U.S.S.R. where areas of mutual investigation have been delineated: construction, forestry, non-ferrous metals, electric power, gas, oil, and expectations that transport and agribusiness will be added. Private industries form working groups with Russian counterparts, initially under Government auspices. The private — I.E. Canadian companies, after initial exchanges under Government introduction are free to pursue individually their interests with U.S.S.R. interests. There is no tenure for the Canadian working group and it is expected there will be rotation of Canadian companies in the working groups. (If it is necessary to provide an example — Timberjack, Koehring — Waterous, Dominion Engineering Works

and Beloit are among those in the forestry group).

Any licensing or other arrangement is expected to be done by private industry on the Canadian side. It is not foreseen that our Federal Government will place licenses for the U.S.S.R. You may have read about possible oceanography projects with Japanese interests but nothing has been established yet and we understand that some Japanese Government constitutional changes are required for them to sign a formal technological agreement.

Nonetheless the Federal Government on March 17th announced that additional discussions will be taking place shortly to identify possible joint Canadian-Japanese endeavours in oceanography such as ocean data buoys and underwater construction machinery for mining in addition to environmental technology and urban and regional planning.

The Federal Government offers several programmes to support research and development in Canadian industry. These range from benefits in the form of cash grants or credits against tax liabilities, to shared costs for approved development of new products and processes.

Some of the key federal programmes of interest to us today are:

DIP — Defence Industry Productivity Programme. The DIP programme provides financial and advisory assistance to the defence industry throughout the product cycle from research and development through production.

IDAP — Industrial Design Assistance Programme. This programme seeks to improve the quality of design for Canadian durable consumer products by sharing in the non-capital costs of design projects.

IRDIA — Industrial Research and Development Incentives Act. IRDIA provides for the payment of grants for expenditures in scientific research and development carried out in Canada by taxable Canadian corporations.

PAIT — Programme for the Advancement of Industrial Technology. The purpose of this programme is to promote products and processes incorporating new and improved technology for commercial markets. The Federal Government shares current expenses for development projects carried out in Canada by companies incorporated in this country.

PEP — Programme to Enhance Productivity. PEP offers grants for feasibility studies leading to high productivity improvement projects in the production phase of manufacturing in Canada.

PIDA — Pharmaceutical Industry Development Programme. This programme provides loans to pharmaceutical manufacturers to re-organize, to improve research, marketing and production efficiency and otherwise to produce high quality products at competitive prices.

The National Research Council in Ottawa with its supporting laboratories is the Federal agency responsible for a broad spectrum of research and development. The National Research Council Laboratories carry out long-term applied and specific research work, largely industrially oriented, although some programmes are directed at important regional or national problems and towards more basic and

backup research. Although most of government-funded research and development is performed in its own establishments, the Government's support of outside research and development has increased noticeably during the past few years. The council's 1969-70 appropriation of \$133 million provided \$65 million for scholarships and grants, \$47 million for the operation of laboratories and \$6.2 million for the Industrial Research Assistance Programme (IRAP).

In our day to day efforts we co-ordinate our activities with those of Federal departments as far as possible, and where international programmes are concerned we achieve a full degree of co-operation from their representatives in countries where we do not have Ontario representatives.

Recent issues have brought into clear relief the whole question of Canadian industrial success, new product lines, licensing agreements and industrial efficiency. The competition act, the new Canada labour code, foreign investment policy and The Science Council of Canada's report sub-titled "The Dilemma of Canadian Manufacturing" have all catapulted our thinking into the major issue of industrial strategy. As I see it, industrial strategy must include the whole-hearted energetic support of private industry, labour and government, co-operating to achieve the best possible results for our industrial sector in the new competitive world environment.

I feel that on the question of foreign ownership, Canada and Ontario will continue to rely on large injections of outside capital, but that governments will attempt to acquire it from as many sources as possible and that some degree of control over the type of new establishment and the products it produces will also be required. Even more significantly, there will be an attempt to achieve a much higher percentage of processing of our own natural resources, than in the past. In this way much-needed employment, technical know-how and satellite service industries will be maintained in Canada.

In a recent speech to the Canadian Club of Toronto, Finance Minister John N. Turner spoke on some aspects of Canadian industrial policy. I would like to quote from four of his passages to provide some insight into the direction I think the Federal government is going:

"... No country, least of all Canada, has the resources to do everything it wants to do. We have to concentrate our efforts, to select our targets. We have to decide at any point in time which industries are most deserving of support. We only have so many chips to play with and we can't afford to scatter them across the broad range of industry. As Darcy McKeough, Ontario's Provincial Treasurer, pointed out in a speech in Toronto only last week, it means that we have to face up to some hard choices. We have to concentrate on doing those things we can do best."

"I am suggesting that the important thing is to have the right mix, the right emphasis in our development pattern. The emphasis must be on the growth industries, the high technology industries, the knowledge industries of the future, the ones which present possibilities of spin-offs."

"Finally, I think we have to decide on what the balance should be between manufacturing industries, resource industries and the service industries."

"... In my view, we need to give a high priority — at least during the next few years — to create jobs in the goods-producing industries. These jobs, of course, will generate more work in other sectors. This is the only way to get the number of new jobs we need to take care of our rapidly growing labour force. It is also the only way we are going to maintain our relative position in world export markets."

The business climate in Canada depends to a major degree on the climate in Ontario and I would like to place our Province in the proper perspective in this regard, if you will permit me to give you a few statistics.

- 1) In 1971, Ontario had an estimated population of 7,815,000 36% of the Canadian population.
- 2) The G.P.P. for 1972 is forecast at 41.9 billion, 41% of the G.N.P. for Canada.
- 3) Last year the per capita income was \$3,584 — about 15% above the national average. By 1972, Ontario per capita income should exceed \$4,100 — up 7% from an estimated \$3,835 in 1971.
- 4) Retail sales in Ontario are forecast at \$12.7 billion for 1972, 39% for all Canada.
- 5) Ontario produces approximately 52% of all manufactured goods in Canada.
- 6) Ontario exports 80% of all Canadian fully manufactured exports.

The Ontario Government is undergoing considerable re-organization and streamlining at the present time and one of the functional changes has resulted in the merger of the former Department of Trade and Development and the Department of Tourism and Information into the new Ministry of Industry and Tourism. The purpose of this move is to strengthen our efforts in support of the manufacturing sector of the economy and tourism, which is our major service industry.

Three basic functions are involved:

FIRST — Those concerned with trade development which promote and develop domestic and export markets.

SECOND — Those concerned with the vitality of the manufacturing and tourism sectors through the establishment of new industries, the expansion of existing production capacity and the provision of assistance to existing business establishments.

THIRD — Those concerned with the planning, co-ordination and communications activities involving inter-ministerial relations. The new concept emphasizes programme delivery in the field through 5 multi-purpose regional offices in Ontario which are being established: and through our network of 15 foreign offices which are established. The new organization thus enhances the department's role as a knowledgeable middleman in business/government relations.

Because of the scope of the departmental programmes, it has become increasingly important to have a strong team of representatives abroad through which first-hand information as to investment potential and market demands abroad is channeled back to the

home office for action. Based on this need, Ontario has built up a system of representatives who report from fifteen major cities around the world. Offices have been established in New York, Chicago, Los Angeles, Boston, Cleveland, Atlanta, and Minneapolis in the United States, and in London, England; Frankfurt, Germany; Milan, Italy; Stockholm, Sweden; Brussels, Belgium; Vienna, Austria; Tokyo, Japan; and Sao Paulo, Brazil.

The Ontario economy is further stimulated by consulting services provided by industrial development officers in the department to Canadian and foreign clients interested in Ontario opportunities.

During the past six years, 952 new plants have been established with reported investment of \$930,051,300. And with direct employment created 49,460 jobs. During the same period, 2,345 plants expanded their facilities, involving investment of \$1,826,543,032 and resulted in additional direct employment of 55,703.

During 1971 only, the department published monthly bulletins listing 708 *Licensing opportunity items* and 152 prospective *joint venture items*. The majority of these leads were submitted by our foreign offices, which provided this service to foreign businessmen who were seeking contacts in Ontario. As an indication of the interest in these new product and new technology opportunities, the department received over 6,000 enquiries from Ontario industry. The annual survey reported that 156 licensing arrangements and 10 joint venture arrangements were completed in 1971.

I.E. A U.S. manufacturer of pumps for the pulp and paper industry was assisted in arranging a licensing contract, under which their sales will jump from \$600,000 to \$1,500,000 in 1972 thus replacing imports.

Manufacturing Opportunities Show. Every three years the department sponsors a manufacturing opportunities show. This year it will be held in the Queen Elizabeth Building, C.N.E. on October 24th, 25th, and 26th. Ontario manufacturers will display imported components so that other Ontario companies can explore the possibility of their production.

Companies from outside of Canada will display products which they wish produced and marketed under license.

Inventors will display new products, looking for Ontario companies with production facilities.

Instant information retrieval — one of the innovative features of the M.O. Show will be a system of where you will be able to read on screen and obtain prints in seconds, of items for discussion.

It is an opportunity for all Ontario manufacturers to increase Canadian content, reduce imports, expand production, and launch new products.

The last M.O. Show was held in 1969. 20,560 parts were exhibited by 119 companies. The total annual value of products was \$64,000,000 of which \$16,000,000 were converted to Ontario production.

Number of Missions — 20 (three years)

Companies participating — 201.

Product Areas — Plastics, fluidics, electronics, telemetering, air pollution control, aeronautics, chemicals, furniture, machine tools, instrumentation,

packaging, textiles, forest products.

Countries visited — U.K., Mexico, U.S.A., Germany, Spain, Italy, Japan, Finland, Sweden.

Benefits — These varied depending upon the industry and specific company but reports from mission members reflect — improved productivity — new and improved products — expanded research and development programmes — additional employment — particularly of skilled labour and technologically-trained personnel — improved production methods — licensing arrangements — knowledge of international competition in high technology industries.

Licensing Missions Abroad (Product Prospecting Missions). In the past 4 years, 10 missions visited 20 major centres including London, Hanover, Milan, Paris, Brussels, Amsterdam, Stockholm, Gotenburg, Basel, Tokyo, etc. 98 Ontario companies participated, and all arrangements made by our foreign offices. 1,139 products investigated.

Results — 9 agreements to manufacture new products such as —

Hydraulic bulldozers	West Germany
Manual Hoists	England
Telescopic Towers	England
Refuse Dumpers	England
Hydraulic Lift Gates	England

Business Opportunity Missions. During 1971 only, 21 Business Opportunity Missions, comprised of teams of industrial counsellors visited major industrial centres in United States, Europe and Asia. These efforts to familiarize foreign businessmen with Ontario resulted in 1,235 interviews, with interest shown in branch plants, licensing and joint ventures in Ontario and marketing of Ontario goods in the country visited.

I am leading similar missions into New York and into Eastern Europe in June and August of this year.

To develop and analyse trade opportunities with new foreign trading areas, the departments *Incoming Mission Programme* brings groups from Pacific Rim countries, South America, South Africa, Europe and Asia.

Last year we sponsored the first official visit of a group of technologically-oriented industrialists from Hungary to North America. This group exhibited selected products and presented papers at a technological seminar to an audience of industrialists. A number of licensing possibilities are being investigated as a result.

Similar visits have been made and others are planned by *Japanese Trading Organizations* such as Sumitomo, Mitsubishi and Marubeni.

Product Development Clinics (started 1969). Number of clinics held — 28 in such places as — Hamilton, Oshawa, North Bay, Sault Ste. Marie, Peterborough, London, Ottawa, Kingston, Renfrew, Brampton, Kitchener. In this series of programmes, 1,098 representatives from 712 companies participated.

Ontario Development Corporation. Our Ontario Development Corporation provides financial assistance to industry to stimulate industrial growth, economic development and employment opportunities in the Province. The corporation includes such programmes as — performance loans for industrial development in

slow-growth areas, *venture capital* loans to assist in the introduction of new technology, and loans to small businesses.

The *venture capital loans* provide financial assistance to small Canadian owned businesses in Ontario to:

- A) Introduce new technology in the industrial field that will help diversify the economy of Ontario.
- B) Establish or increase markets abroad.
- C) Enter into joint ventures with other investors.

Innovators will have the technical and scientific aspects of their inventions and/or new techniques screened by a joint committee of the Ontario Research Foundation and the Ontario Development Corporation.

Normally, a debenture will be taken. However, alternative forms of security may be taken when circumstances warrant. Repayment of principal is tailored to meet the needs of the business. The maximum loan under the venture capital fund is \$100,000.

Loans to small businesses are designed to assist small companies to expand, create employment, establish or increase exports, replace imports and generally, to stimulate economic and industrial growth in Ontario.

Any Canadian-owned small business located in Ontario may qualify if it is engaged in manufacturing or in the service industry closely allied to manufacturing. Service industries which may qualify include the canning industry, and other segments of the food processing industry, machine shops, printing and allied trades.

For the purposes of the programme a small business is normally defined as one in which the owners' investment does not exceed \$300,000.

Term loans up to a maximum of \$50,000 are available. Repayment may run up to a period of ten years.

I must also mention one of our most successful projects, which was the establishment about eight years ago of *The Sheridan Park Research Community* about 17 miles west of Toronto. This 350 acre industrial parkland now houses more than \$40,000,000 worth of research laboratories and facilities. Some 1,600 scientists, engineers and supporting staff are employed by the ten resident companies and corporations at the self-contained community. All research at Sheridan Park has the basic objective of keeping participating companies competitive in world markets through product improvement or development, new processes, increased productivity and greater use of Canada's natural resources. The latest addition to the community has been a multi-company computer centre, which is itself a joint venture. (Eatons/Stelco/TRW)

The nucleus of the community is the Ontario Research Foundation, the largest independent, non-profit research organization of its type in Canada. It assists large and small industries and government agencies by solving technical problems on a contract basis, and provides a technical information service on behalf of the Federal National Research Council. Cross-fertilization of knowledge and resources between the various research centres has been a basic tenet in the concept and development of Sheridan Park. I will not

attempt to detail the many successful projects which have been undertaken, but I can say that a number of them have made and will make a significant contribution to Canada's economy.

Advanced Technology, Education & Information Services. A new programme is being considered to provide liaison and improve communication between industry, universities and government by providing a forum where information on rapidly advancing technologies can be transmitted for practical application to pertinent areas of industry and government.

Representatives from industry, professional or trade associations and government agencies will be invited to seminars where university representatives will describe new technological developments and lead discussions related to industrial applications. Normally, such seminars will be held on the premises of universities.

Technology Merit Awards. To encourage and stimulate the development or improvement of products or processes incorporating significant technological advancements, my department is initiating a "Technology Merit Award" for Ontario manufacturers.

A suitable selection committee will be established to evaluate the projects submitted by industry and to recommend the award of certificates to winners in recognition of the achievement.

Like other industrial countries, Canada has come to the conclusion that the Reassessment of our industrial policy and the formulation of an economic strategy for the future is essential if we are to maintain a healthy economy through the next decade. Employment of Canada's labour force, which is among the fastest-growing in the industrial world, is at stake.

The suggestion has been made that a new industrial and technological strategy should be implemented by the Federal Government, which would create larger industrial units, encourage them to innovate, and build on our natural resource and raw material base more effectively by requiring more processing in Canada.

There are many aspects to the issue of foreign ownership of Canadian industry and the degree of integration with the operation of the parent company. One of the impediments inherent in this control is said to be that it reduces the innovative and growth potential of subsidiaries for national purposes. The differences in innovative and R & D performance between Canadian-owned and Canadian subsidiaries is being examined by industry and government, with a view to the possible development of assistance programmes conforming to Canada's long-term interests.

In addition to the programmes which I mentioned earlier, the Federal Government has moved into this area with the establishment of a *Canadian Development Corporation*, which will attempt to direct investment projects in industry with a view to increasing the Canadian supply of entrepreneurial long-term capital.

A recent editorial in MacLean's Magazine expressed the view, and I quote, "Some kind of government stimulus is assuredly needed, because there are two things wrong with the venture-capital business at the moment — there isn't enough capital and it isn't venturesome enough".

When all the studies of Canada's industrial problems are analysed, there will no doubt be agreement on one point, and that is that technology, with all of its ramifications — patents, licenses, special equipment, manufacturing and marketing know-how, together with enlightened management and adequate capital — must be recognized as the most important set of tools for industrial and economic development. It is no exaggeration to claim that the level of practiced technology has a direct impact on a nation's standard of living.

I hope I have been able to illustrate that the Ontario government's services are designed to ensure economic, social and political stability, and to help Ontario reach its full potential. I hasten to assure you that we have no *magic formula*. This goal requires the help of many organizations, *working in a team effort*.

In this rapidly changing world, we all know that one has to run like hell to stand still. It has been said, "If you do not look to the future, you cannot have one". I herewith submit my recipe for Canada's future:

- Take a good measure of increased productivity
- Warm with enthusiasm
- Add reasonable price and cost stability
- Spice with an invigorating flow of technology
- Garnish with two-way trade programmes
- (Services 21 million Canadians)

I will conclude by assuring you that during this period of appraisal of the future by the Federal Government, Ontario's "Business as usual during alterations" sign will remain up, and I extend a hearty invitation to all and sundry to come and discuss business opportunities with us in Canada's Province of opportunity.

**About the Speaker: Peter A. York, B.S., P. Eng. Mr. York entered Canadian government service in 1962 and has held his present position since 1968. Prior to government service, he had 23 years experience in the electrical industry, holding a variety of engineering and management positions. He is Executive Director, Business Development Division, Ministry of Industry and Tourism, Government of Ontario.*



Leon A. Patt

DEVELOPMENT OF AN INTERNATIONAL LICENSING PROGRAM

by
*Leon A. Patt**

International licensing is a multibillion dollar business and it is a growing and dynamic part of international operations of most corporations.

Between 1965 and 1969 United States receipts from technology transfers amounted to \$6.4 billion. In 1970 U.S. received \$2.48 billion and in 1971 \$2.736

billion in license fees. In Eastern European countries alone license approvals hit a record of \$1.3 billion in 1971 with \$969 million in the fourth quarter and the United States received a very small percentage of this. In 1970 the United States concluded 745 new license agreements with Japan which represented 56% of the total Japanese agreements concluded. U.S. income from Japanese license agreements amounted to 288 million in 1970 and 350 million in 1971.

The Japanese license activity has been strong for the last 15 years. Now the license activity in the Eastern European countries is picking up momentum at an accelerating rate and in a year or two license activity should start with Mainland China.

We still have many opportunities and the United States should more than double its income from this source in the next few years.

However, the sale of industrial property rights be it a patent license or a manufacturing know-how license is a complex business which requires organization, planning and control.

First, let's look at the purposes of international license agreements as shown on Exhibit I.

EXHIBIT I PURPOSE OF INTERNATIONAL LICENSE AGREEMENTS

1. A means of extracting a profit out of a market which is normally not available due to government restrictions on imports as well as investments, poor investment climate or an anti-investment policy on the part of the licensor.
2. To establish joint ventures.
3. To obtain licenses from foreign companies.
4. To help compensate for R & D and technical service rendered to an associate or subsidiary.
5. To help facilitate the transfer of funds out of a country.