Canada Commerce

July/August 1984

New "Think Canadian" Program Launched

Canada's First "Awards of Excellence"

PORT OF MONTRÉAL

Canada Commerce

18
Cover: The Port of Montréal is Canada's largest in terms of facilities, ship handling, and general and containerized freight.

10
Market Development: UTDC has a mandate to develop, prove and make available the most advanced transit products and services.

4
Productivity: Canada's first "Awards for Excellence" program recognizes Canadian products and expertise.

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Canadian Companies & Products — four-page centre spread insert

List of Regional Offices — inside back cover

The gremlins were at it again. An additional zero showed up in the last paragraph on page 20, in May's *Canada Commerce*. The sentence should read "In 1760, 65 000 French inhabitants shared the continent with 1 600 000 English settlers.", instead of "In 1790, 650 000 French. . . . . ". If the latter were fact, the history of Canada would have been a different story.

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Business Review

Trade Month to Stress Exports

The vital importance of export trade to the Canadian economy will be emphasized during the 1984 Canada Export Trade Month in October — the slogan is "Exports Build Canada". The private sector, governments, academia and the public are already gearing up for the month-long campaign.

Planning and implementation is on a regional basis to enhance identification with local export initiatives and activities. The focus is on industry which can best spread the word — to customers, suppliers, shareholders and the general public.

For further information, contact: Market Advisory Group, Export Marketing Bureau, External Affairs, 125 Sussex Drive, Ottawa, Ontario K1A 0G2; Tel: (613) 994-4712.

New Computer Systems Source Book

A new computer systems directory designed to help fill an "information gap" has been released by the Ontario Department of Industry and Trade.

The *Computer Systems Sources* is a guide to more than 900 Canadian producers of computers, word processors, components and software, as well as consultants and other related services.

Copies at $10 may be obtained from the Ontario Government Bookstore, Publication Services Section, 5th Floor, 880 Bay Street, Toronto, Ontario M7A 1N8; Tel: (416) 965-6015 or toll-free 1-800-268-7540.

Apples — Big Business

While Statistics Canada doesn't keep track of every apple blossom that graces the Canadian spring, it does record the apples that grow from them.

In 1983, there were 396 000 metric tonnes of apples picked from Canadian orchards — 183 000 tonnes from British Columbia's Okanagan Valley; 159 000 from the Niagara Peninsula in Ontario; and 54 000 tonnes from the Annapolis Valley of Nova Scotia.

Some 17 per cent of the annual harvest is exported but the majority of all those apples are eaten by Canadians — almost 18 kilograms (40 pounds) per person a year!

Gain and Equity Sharing Publication Available

A new Labour Canada publication, *Gain and Equity Sharing*, describes a number of profit sharing or productivity sharing plans currently in use in various Canadian organizations. A wide range of plans to improve employee relations — from the use of company shares as incentives, to the purchase of companies by employees and worker co-operatives — is also described.

The booklet is available free of charge from Publications Distribution Centre, Labour Canada, Ottawa, Ontario K1A 0J2; Tel: (819) 994-0543.

Canadian Canned Mackerel for Food Aid Programs

The Fisheries Prices Support Board plans to purchase $3.5 million worth of Canadian canned mackerel this year to help meet the requirements of Canadian food aid and development programs. As in previous years, the distribution of the canned mackerel will be administered by the Canadian International Development Agency (CIDA) and the United Nations World Food Program.

New Book on How to Export

A new "how to" book on selling products in the export market has been published by the Department of Regional Industrial Expansion (DRIE). Aimed particularly at the small business community, the *Manual on Export Marketing* answers many of the questions any newcomer to exporting — and many old-timers — may have.

The book, which sells for $14.95, is available in French or English at any federal government bookstore or agent.

Canada at INTERCLEAN 84

Canadian companies were successfully represented at INTERCLEAN 84 in London, England, early in May. Four major companies exhibited carpet cleaners (Nautavac Corp.); hand dryers and hair dryers (Avmor Ltd.); mop heads and holders (Tarbox Ltd.); and floor pads and hand pads (Empire Maintenance).

The Canadian government information booth featured a hands-on computer display designed by the Federal Government. Visitors to the stand could request computerized printouts of the Canadian exhibitors.

The visitors could also identify cleaning machines for which they had a need and the computer would print all Canadian sources for such machines.

DRIE Opens Eastern Ontario Office

The Department of Regional Industrial Expansion (DRIE) has opened an Eastern Ontario Regional Office in Ottawa to serve the whole of Eastern Ontario from Hastings County to the Québec border and including the upper Ottawa Valley.

The new office is located on the first floor of 280 Albert Street, Ottawa, Ontario K1P 5G8.

Booklet on Trade Assistance

A new booklet, *Export Trade Assistance from DRIE*, has been published by the Department of Regional Industrial Expansion (DRIE) and is now available. It contains information on the department and its activities in support of export trade plus information on other export-oriented government departments and agencies. The booklet complements a recently issued publication from the Department of External Affairs entitled *Export Roadmap* prepared by the Canadian Export Association.

Both publications may be obtained free of charge from any of DRIE's Regional Offices or from the Business Centre, First Floor West, Department of Regional Industrial Expansion, 235 Queen Street, Ottawa, Ontario K1A 0H5; Tel: (613) 995-5771.

Customs Service Extended to Arctic Circle

Customs and Excise services will be extended to the Canadian Arctic as soon as appropriate arrangements can be made by Revenue Canada.

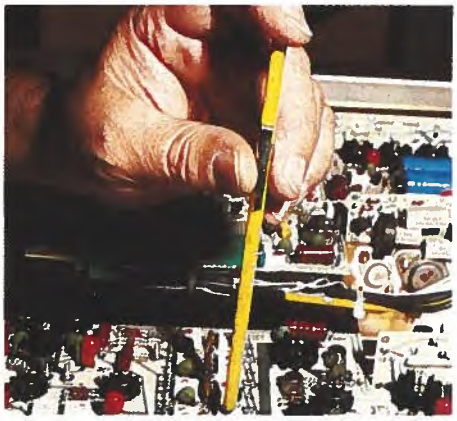
Customs services will be offered for the first time in Yellowknife and ways will be examined to expand the service already provided in Inuvik. In addition, an officer will be stationed in Tuktoyaktuk, on a seasonal basis, to monitor the movement of international vessels in the Beaufort Sea.

Conference Round-Up

Mining and Metallurgy Meeting

The Thunder Bay Branch of the Canadian Institute of Mining and Metallurgy will be the host of the eighth Annual District 4 Meeting, October 1 to 6, in the Airlane Motor Hotel, Thunder Bay, Ontario.

For further information, contact: A.J. Gillis, c/o P.O. Box 936, Thunder Bay, Ontario P7C 4X8.



Computer Exposition

The 2nd Moncton Computer Exposition '84, the largest of its kind in the Atlantic Region, will be held in Moncton, New Brunswick, November 23, 24 and 25. This year, two exhibitions will be held at the same time under the same roof — home computers and video games in one; and the automated office (professional computers) in the other.

For further information, contact: Anne LeBlanc, Moncton Computer Exposition '84, Administration Faculty, C.U.M., Moncton, New Brunswick E1A 3E9; Tel: (506) 858-4555.

Spar Signs Agreement with Mitsubishi

Spar Aerospace Limited of Toronto and Mitsubishi Corporation of Tokyo have signed an agreement under which Mitsubishi will act as the marketing representative in Japan for Spar's Remote Manipulator Systems Division.

The agreement covers marketing of remote manipulator systems for application in future Japanese space projects and reflects the recognition by both companies of the emerging space market in Japan.

Home Improvement Show

Winnipeg, Manitoba, will be the site of a Home Improvement Show in the Winnipeg Convention Centre, September 26 to 30. The show will feature companies in the home product and services industries.

For further information, contact: H. Ivan Berkowitz, H.I. Marketing Services Ltd. 253-375 York Avenue, Winnipeg, Manitoba R3C 3J3; Tel: (204) 944-1464.

International Electrical, Electronics Conference

The 27th biennial International Electrical, Electronics Conference and Exposition (IEEC&E), Canada's foremost exhibition of electronics technology, will be held in the new Metro Toronto Convention Centre, Toronto, Ontario, October 7, 8 and 9.

For further information, contact: Southex Exhibitions, 1450 Don Mills Road, Don Mills, Ontario M3B 2X7; Tel: (416) 445-6641.

Woman's World Exhibition.

Woman's World '84 will be held in Ottawa at the new Congress Centre, October 12, 13, 14, 1984. It offers a complete marketplace of products, information and services of special interest to women. Seminars will deal with business, social issues and career guidance.

For further information, contact: Sandra Levinson, Director, Woman's World '84, 606 Tillbury Avenue, Ottawa, Ontario K2A 0Z8; Tel: (613) 729-1855.

Canadian Affairs Information Available Worldwide

Details of articles in 170 Canadian business periodicals and 10 major daily and financial newspapers can now be retrieved by computer from anywhere in the world. All sectors of Canadian business and industry and all Canadian social, political and economic topics are covered by the one source, according to Micromedia Limited, Toronto.

Anyone with a computer or terminal and telephone hookup can use the service at no initiation or monthly charge. The computer search rate is $72 (U.S.) an hour and the average search is completed in less than 10 minutes.

Micromedia is an integrated information vendor active in micropublishing, database publishing, on-line services and information on demand (offered by research specialists).

For further information, contact: Frank Gagné, Tel: (416) 593-5211 (Extension 230).

Plastics Market Study

A 235-page study of plastics additives in Canada examines demand by type and end-use, with 130 tables on supply and demand patterns and pricing data for a large variety of products.

The publication is available from Corpus Research, Southam Communications Ltd., 1450 Don Mills Road, Don Mills, Ontario M3B 2X7. Single chapters may be ordered separately for $305 each while the complete study sells for $1 055.

First Quarter Wage Settlements

Figures recently released by Labour Canada on major wage settlements by collective agreements for the first quarter of 1984 set a record as the lowest since the start of the wage settlement series in 1967. Average effective increases were 3.9 per cent in comparison with the first quarter of 1983 when the average was 4.1 per cent.

There were 77 major settlements negotiated, covering 265 500 workers, of which 40, covering 172 500 workers, were in the federal and provincial public sectors. The 37 agreements outside the federal and provincial public sectors covered 93 000 employees.

Canada's First "Awards for Excellence"

In a swirl of spotlights and to the fanfare of trumpets, winners of the first *Canada Awards for Excellence* received their Dora de Pédery-Hunt-designed medallions at a by-invitation-only dinner on May 25 in the Grand Ballroom of Toronto's Sheraton Centre.

The awards ceremony capped a precisely-timed round of receptions, displays and presentations honouring innovation, initiative and productivity by Canadian companies and aspiring young entrepreneurs.

The culmination of months of preparation, the day-long event combined both the fifth annual presentation of the prestigious Design Canada Awards and the inaugural selection of the Canada Awards for Excellence recognizing achievements by business and industry.

The new *Canada Awards for Excellence* program, administered by the Awards and Design Directorate of the Department of Regional Industrial Expansion, offered both Awards of Excellence (gold medallions) and Awards of Merit (silver medallions) for significant achievement in seven categories:

- productivity improvement;
- innovative application of a technology;
- innovative marketing of a new product or process;
- outstanding achievement by an entrepreneur in a small or medium-sized business;
- transfer of the results of research or scientific activities to industrial utilization;
- technical merit in an invention; and
- co-operative labour/management implementation of a technological change.

Speaking at the awards dinner, Minister Ed Lumley emphasized "the program establishes and underlines the federal government's commitment to making Canadian industry increasingly competitive in national and international markets through the creative application of technology, innovation and design.

"It is our hope that the Canada Awards will be recognized as prestigious, highly desirable accolades which will encourage other companies to excel in their efforts to attain them."

To ensure their efforts do not pass unnoticed, winners will benefit from an ongoing program designed to recognize their achievements and will have the privilege of using a special Canada Awards logo on their products and in product or corporate advertising.

"Our goal," Lumley said, "is recognition of these awards as the most prestigious in Canada. It is our hope that winners will treat their awards as a badge of honour, as proof to people everywhere that Canada's industrial performance is second to none."

After months of close-knit planning by industry associations, research institutions, organized labour, various government departments and specialists in many fields, the program was launched in March with a distinctive nation-wide advertising campaign.

It drew more than 300 entries from companies and entrepreneurs coast to coast, a first-year response that delighted the program's organizers.

In his brief remarks ("It's not a night for speeches, it's a night for recognition"), Lumley indicated the program will be expanded in future years to include additional categories such as design engineering and design of craft products, and the possible splitting of the marketing award into separate categories for export and domestic marketing.

Also, in association with the International Year of Youth, the competition will be expanded in 1985 to include a special category to recognize the talents of young Canadians. This will be an extension of the program which this year saw 23 young Canadians honoured with commemorative certificates for individual achievements in science or design (see accompanying story).

The Canada Awards program this year operated in tandem with the more-established Design Canada Awards, presented at a luncheon earlier in the day.

Operating under the auspices of the Design Council of Canada, this program saw Awards of Excellence and Awards of Merit handed out to 19 winners in three categories and 10 sub-categories.

This year also saw "Best of Show" awards given in each of the three basic categories — the Industrial Design award went to Versatile Farm Equipment Ltd. of Winnipeg for its bi-directional tractor; the Interior Design prize was given to Restaurant La Stanza of Rosemère, Québec; and the award for Graphic Design was presented to Toronto's Covent Garden Flower Market.

The awards were presented by Mrs. Ginette Gadoury of Montréal who retires this year as chairman of the National Design Council.

In her farewell address, Mrs. Gadoury praised the designers whose "creations have added a new chapter to the already impressive cata-

logue of good design in Canada", but warned that a firm commitment by government, manufacturers and designers is needed for Canada to forge "a really distinctive mark in the world marketplace".

She called on the government for "a genuine national design policy that integrates the design element into the economic renewal plan on an equal footing with other ingredients such as technological innovation, productivity growth, export expansion and regional development.

"At present," she continued, "the National Design Council is governed by legislation which has not been reviewed since 1961. Over the years, the budget allocated to design has shrunk continuously. This trend has to be reversed. We already lag too far behind other countries. Sheer neglect will never get us anywhere."

Mrs. Gadoury urged Canadian manufacturers to "view the designer as a partner who shares their goals and strives to achieve them. Manufacturers and designers have to get to know each other, establish a rapport, understand each other and complement each other in action.

"But, the initial effort," she emphasized, "has to come from the designers themselves. They have to be their own promoters."

Her pride in Canadian achievements and concern they were not always sufficiently recognized, were reflected in Minister Lumley's remarks to the Canada Awards dinner.

"Personally," he told the 500 guests, "I have always been confident, in both my business and public careers, of the excellence of Canadian industrial and business performance. I doubt, however, that the excellence has been sufficiently recognized, either here in Canada or in the countries with which we must compete in the world market."

Marcel Desjardins, chairman of the Canada Awards Grand Jury, said the awards will ensure that Canadian companies' efforts will not go unremarked.

"Innovation, invention and creativity are alive in Canada," he said. "These (award winning) companies are the ones that will be imitated in the future."

— by Ron Johnson
Canada Commerce

Young Exhibitors Steal Show

The "Best of Show" awards may have gone to their elders, but there could be no doubt that the "Most Popular of Show" award would have gone to the displays of the 23 young Canadians invited to take part in the May 25 Canada Awards exhibition.

Brought to Toronto from all across Canada, the students received commemorative certificates honouring their outstanding achievements in science or design.

The students, ranging in age from 16 to 20, were described by federal Minister Ed Lumley as "tomorrow's scientists, designers and managers".

Tucked off in a corner of the huge Sheraton Hall display area, their exhibits — most of them with working models or exactingly descriptive graphics and narratives — proved to be consistent crowd-pleasers, and augur well for the future of technology and design in Canada.

Individual projects ranged from pottery to insect studies, to talking word processors for the blind, to space-age mirror coating — the latter experiment to be carried out during the October flight of the Discovery shuttle mission, which will also carry Canada's first astronaut into space.

The quality and ingenuity of the projects gave full credence to the decision of the Canada Awards for Excellence program organizers to invite the students to participate in the show.

Announcing that next year's Canada Awards competition (1985 is the International Year of Youth) will be expanded to include a special category for young people, Minister Lumley said:

"While the Canada Awards program recognizes the accomplishments of Canadian industry today, we have included these outstanding young Canadians to recognize, at the same, time tomorrow's generation of achievers."

Common Themes Link Award Winners

Common themes linked the many winners of the 1984 Canada Awards for Excellence, according to Andrew Campbell, president of the Toronto-based consulting firm Campbell and Associates and chairman of the judging panel for the *Canada Awards for Excellence in Productivity*.

Writing in *The Globe and Mail*, Campbell said that winning entries tended to be those with management that showed vision, organizational skills, a sensitivity to technological change and an acute awareness of the needs of staff and clients.

"Companies that wish to achieve peak performance do not limit themselves to short-term goals, but look to future challenges," he wrote. This vision leads to a sense of purpose among company staff.

"When all employees are working toward a common purpose, a synergism develops within the organization. This produces a sense of pride and power among the staff that reinforces initial efforts and helps them continue. People become willing to make sacrifices to achieve results. . .

"Emerging trends suggest that employee motivation, organizational design and management systems are as important to a company's success as the product it sells. So managers who can make the best use of their employees' talents and skills will enable their company to gain a competitive advantage."

Campbell also noted that the entrants were companies "in tune with their customers' needs and which oriented their products to meet these needs. The organizations were also administratively lean, encouraging individuals to be responsible for their own work.

"And," he added, "they molded the organizational structure to take advantage of the talents and skills of the staff."

CANADA AWARDS FOR EXCELLENCE

PRODUCTIVITY CATEGORY

AWARD OF EXCELLENCE — IBM Canada Ltd. of Markham, Ontario, has achieved significant productivity improvement through worker training, investment in new technology and employee participation. As a result of these extended programs, IBM has achieved growth over the past five years in revenue, exports and profits per employee.

AWARD OF MERIT — Les Industries F.P. Inc., a Bromptonville, Québec, boiler manufacturer has made major advances in productivity, through establishment of various committees for productivity, security, quality control and improvements in the work area. As a result, the number of grievances and absences has been considerably reduced, manufacturing costs have been cut and company sales have increased 25 per cent.

INNOVATION CATEGORY

AWARD OF EXCELLENCE — Com Dev Ltd. of Cambridge, Ontario, has been innovative in the design of low-loss, dual-mode filters and contiguous band multiplexers with integrated beam reconfiguring networks for use in communications satellites. Com Dev's sub-system equipment is used on 75 per cent of communications satellites currently being built.

AWARD OF MERIT — Standard Tube Canada Ltd. of Woodstock, Ontario, Vari Bore Process combines extruding technology with tool manipulation to produce a variety of internal configurations with the same outside diameter. Major innovative features of this process: maximum cross section required is reduced, metal is distributed to suit design parameters of the part, and the part is formed to finished or near finished size to reduce machining and scrap. Total export sales generated were $3.8 million for 1983 and $5.3 million in orders were on hand for 1984.

ENTREPRENEUR CATEGORY

AWARD OF EXCELLENCE — L.H. Frost Ltd. of Oakville, Ontario, a producer of electromagnetic components was losing money in 1977 when two partners took over the company. There has since been a steady sales growth and the number of employees has doubled to 110. The company's growth can be attributed to production improvements, new products and increased emphasis on marketing.

AWARD OF MERIT — Canparts Automotive International Ltd. of Cambridge, Ontario, manufactures three million disc brake pad sets a year for Japanese and European cars. With 175 employees and sales of $12 million a year, the company exports 88 per cent of its production to more than 50 countries.

TECHNOLOGY TRANSFER CATEGORY

AWARD OF EXCELLENCE — The National Research Council of Ottawa and **Sciex Incorporated** of Thornhill, Ontario, jointly developed an atmospheric pressure chemical ionization (APCI), tandem quadrupole mass spectrometer over the 1979-1981 period. Sciex currently manufactures and markets the instrument as the Taga 6000. Sciex previously manufactured an atmospheric gas analyzer but wanted to expand its applicability to analysis of biological fluids. The NRC developed the tandem quadrupole system and Sciex applied it to its existing product to produce the new Taga 6000. Sciex has sold 15 Taga 6000 systems worth more than $8 million, of which two-thirds have been exported, contributing to Canada's balance of payments.

AWARD OF MERIT — Waterloo Centre for Process Development at the University of Waterloo transferred its patented bioconversion process for pulp and paper wastes to **Envirocon Ltd.** of Vancouver. Envirocon established a pilot plant capable of converting two tons of forest industry wastes into one ton of protein food supplement per day. The plant will have wastes trucked in from Prince George, British Columbia, for up to 18 months to produce protein food supplement to be used in test-feeding of livestock and poultry.

INVENTION CATEGORY

AWARD OF EXCELLENCE — MacMillan Bloedel Ltd. of Vancouver has developed Parallam, an engineered timber material made of long wood veneer strands and a waterproof adhesive. This is a new wood product as well as a new continuous manufacturing process. Because Parallam's moisture content averages 10 per cent compared with kiln dried conventional lumber with a moisture content of 15 per cent, the wood will not shrink, warp, check or split in service. Parallam's combination of strength, optimal sizing and long lengths will result in reduced waste costs in labour and material.

AWARD OF MERIT — The entry of **Ker-Train Systems Ltd.** of Kingston, Ontario, was an advanced transmission technology. One development is the Binary Logic, Incrementally Variable Transmission, a combination of gears and clutches which, when operated according to a binary logic table, offers 64 ratios (speeds). Another is the variator transmission which utilizes non-circular gears and one-way clutches. These technologies are Canadian inventions covered by international patents. To date, three prototypes of the Binary Logic, Incrementally Variable Transmission have been built and the variator transmission is currently being tested for use in an agricultural tractor.

LABOUR/MANAGEMENT CATEGORY

AWARD OF EXCELLENCE — International Woodworkers of America, Local 1-424 and **Lakeland Mills** of Prince George, British Columbia, worked successfully together to modernize an old scrag sawmill into a mill using lasers and computers to increase the amount of lumber produced per log by 30 per cent. The IWA and Lakeland were able to make the technology change by involving and training workers. With the new technology, the mill actually ended up with a few more employees.

AWARD OF MERIT — United Auto Workers, Local 1451, and **Budd Canada Incorporated** used the Ontario Ministry of Labour's "Relationship by Objectives" program to solve serious wildcat strike and low productivity problems at Budd's Kitchener, Ontario, auto frame plant. Indicators of the success of the program include reduced grievances and absenteeism and a lower incidence of wildcat strikes as well as improved product quality and safety records.

DESIGN CANADA AWARDS

INDUSTRIAL DESIGN

BEST OF SHOW (AWARD OF EXCELLENCE)
Recipient:
Versatile Farm Equipment Ltd., Winnipeg
Designer:
GSM Design Inc., Montréal
Product:
Versatile 256 bi-directional tractor — Introduced in 1983, the tractor features a driver's console which swivels through a full 180 degrees allowing the operator to use it in either a push or pull mode.

AWARDS OF EXCELLENCE
Recipient:
Bombardier Inc., Valcourt, Québec
Designer:
Y.-Anseline Lapointe, Sherbrooke, Québec
Product:
To commemorate the 25th anniversary of the Ski-Doo that launched the sport of snowmobiling, Bombardier introduced two new models — the SS-25 high performance, "avant-garde" machine and the Safari two-passenger trail machine.

Recipient:
Fabri-métal Limitée, Anjou, Québec
Designer:
André Morin Designers Inc., Pointe-Claire, Québec
Product:
A complete line of bathroom accessories to permit the firm to attack a market traditionally dominated by European-based exporters.

AWARDS OF MERIT
Recipient:
Kanuk, Montréal
Designer:
Kanuk Design Staff
Product:
The Belzebuth back pack which features a propylene molded internal frame and a pivoting belt to transfer 60 per cent of the weight of the pack to the waist belt.

Recipient:
Ontario Science Centre, Toronto
Designer:
OSC Design Staff
Product:
The Exploring Space Hall designed to demystify the universe through hands-on displays varying from a real moon rock to three-dimensional graphics illustrating what would happen to a person falling into a "black hole".

Recipient:
NCR Canada Ltd., Waterloo, Ontario
Designer:
NCR Design Staff
Product:
The NCR 7710 table-top document encoder designed for the Swiss Post Office to encode information on cheques or coupons used during financial transactions at local offices.

Recipient:
Ambiant Systems Ltd.
Designer:
Paul Epp
Product:
The *Nexus Collection* of chairs designed for ease of manufacturing and featuring a standardization of elements to give clients an unusually wide range of optional styles and finishes.

INTERIOR DESIGN

BEST OF SHOW (AWARD OF EXCELLENCE)
Recipient:
Restaurant La Stanza, Rosemère, Québec
Designer:
Robert Parizeau et Associés Ltée, Montréal
Product:
A 264-seat restaurant designed from the inside out featuring a central atrium area housing service bar, barbecue pit and maître d' desk surrounded by three dining rooms.

AWARD OF EXCELLENCE
Recipient:
Ambient Systems Ltd., Toronto
Designer:
Michael Stewart
Product:
A "jewel box" 6 m by 24 m (20 ft. by 80 ft.) display in the Chicago Merchandise Mart to exhibit the firm's collection of landscaping and interior design products.

AWARD OF MERIT
Recipient:
SunarHauserman Innovations, Norwalk, Conn.
Designer:
Douglas Ball Inc., Sainte-Anne-de-Bellevue, Québec, with Michelange-Panzini Architects
Product:
The two-storey Montréal showrooms housing the firm's eclectic collection of furniture and fabrics.

GRAPHIC DESIGN

BEST OF SHOW (AWARD OF EXCELLENCE)
Recipient:
Covent Garden Flower Market Inc., Toronto
Designer:
Carmen Dunjko & Associates Ltd., Toronto
Product:
A flower shop with a difference — a virtual indoor garden where customers can browse among the blooms and assemble their own bouquets.

AWARD OF EXCELLENCE
Recipient:
Black Cat Café, Ottawa
Designer:
Neville Smith Graphic Design, Ottawa
Product:
A complete visual identity/corporate identity program reflecting the 1930s Art Deco interior of this one-time drug store.

AWARDS OF MERIT
Recipient:
University of Alberta Hospitals, Edmonton, Alberta
Designer:
University of Alberta Design Research and Application Unit
Product:
A simple, highly flexible signage system that would extend from traffic areas around the seven-storey Walter C. Mackenzie Health Science Centre through to the patient's bed.

Recipient:
Produits Traxxion, Montréal
Designer:
Michel Dallaire Designers Inc., Montréal
Product:
The product name and trademark — TRAXXION — evocative of the two interlinked "Xs" featured in this device which is placed under vehicle tires to prevent them spinning on snow and ice.

Recipient:
Beaver Canoe Corporation, Toronto
Designer:
Richard Male Design Associates Ltd., Toronto
Product:
The firm's "beaver logo" evocative of the traditional materials and high-quality craftsmanship of the company's canoes.

Recipient:
Société des alcools du Québec, Montréal
Designer:
Ove Design, Vieux-Montréal
Product:
A new graphics and marketing approach to refresh SAQ's image in the Québec market in order to attract a changing public and meet the needs of its growing number of sales outlets.

Recipient:
Genpack, Cookshire, Québec
Designer:
Ove Design, Vieux-Montréal
Product:
A complete graphics program, including a new trademark and labels, to enable the firm to give a new look to its 100-product line without altering the molds.

Recipient:
Ontario Science Centre, Toronto
Designer:
OSC Design Department
Product:
The CHINA: 7 000 YEARS OF DISCOVERY exhibit using both artifacts and live displays by China's finest craftsmen to illustrate Chinese medicine, arts, culture and the rich array of Chinese inventions which changed the course of European science.

YOUNG CANADIAN AWARDS

COMMEMORATIVE CERTIFICATES
Recipient:
Ruth Jaundrew, Victoria, British Columbia
Project:
Use of aeronautical airflow to rotate aircraft landing wheels and reduce tire friction.

Recipients:
Peter Cherna and Avrum Warshawski, Montréal, Québec
Project:
Word Processor for the blind.

Recipients:
Jean-François Deschesnes and Daniel Roy, Ottawa, Ontario
Project:
Coating mirrors in space.

Recipient:
Ian Dickson, Thornhill, Ontario
Project:
Paintings and drawings, predominantly super-realistic.

Recipients:
Tom Hayden and Chris Rathbone, Saskatoon, Saskatchewan
Project:
Biomass and energy: a comparison of three microbiological processes.

Recipient:
Mychelle Kurbis, Winnipeg, Manitoba
Project:
Effects of environmental stimuli on mosquitos.

Recipients:
André Lang and Charles Levasseur, Edmundston, New Brunswick
Project:
Galvanoplasty: the plating of metals to reinforce and protect them.

Recipient:
Brian Linkletter, Winsloe, Prince Edward Island
Project:
Harnessing the tide in the Bay of Fundy for creation of electrical power.

Recipient:
Robert Mitchell, Chester, Nova Scotia
Project:
Use of the Hilsch Vortex Tube for cleaning polluted air.

Recipient:
Darryl Paddison, De Winton, Alberta
Project:
Tracing the movement of underground fluids with radioactive traces.

Recipient:
Chris Pynn, Wabush, Labrador
Project:
Investigation of the processes involved in the concentration of iron ores and oxides.

Recipient:
Curtis Williams, Wabush, Labrador
Project:
Conversion of solar energy into chemical energy.

Recipient:
Paul Crossland, Brampton, Ontario
Projects:
Design of aerodynamic ski bindings and design of a cottage.

Recipient:
Stephen Kovats, Ottawa, Ontario
Project:
Portfolio of life drawings, abstracts and paper-folding construction using 3-D design theory.

Recipient:
Wilmer J. Shynkaruk, Winnipeg, Manitoba
Project:
Design and construction of a pottery teapot and other thrown containers.

Recipient:
Frank Soldo, Calgary, Alberta
Project:
Technical illustrations and renderings of automobiles, aircraft and buses.

Recipient:
Bruno Drolet, Chicoutimi, Québec
Project:
Original research on the behaviour of tiger beetles.

Recipient:
Stéphane Côté, Saint-Fulgence, Québec
Project:
Perspective and stereoscopic vision using a TSR-80 computer.

UTDC — Moving Ahead of Time

To a model railway buff, a 195-hectare (480-acre) site, 20 kilometres (12 miles) west of Kingston, Ontario, could be a dream come true. From a completely automated and computer controlled tower, operators oversee three kilometres of test track for both conventional and advanced technology rail transit systems. And the transit units they control are among the most modern in the world today.

But this track and adjacent test and research facilities, owned by the Urban Transportation Development Corporation Ltd. (UTDC) is no hobbyist's dream set up, but the testing grounds for the complete transit systems that the corporation has been developing since its inception in 1973.

UTDC, an Ontario provincial corporation, was established to solve the problems of traffic congestion in and between major urban centres. While these problems are particularly acute in the Oshawa-Hamilton area, the Ontario government realized that similar problems exist in urban centres throughout the world and that practical solutions would have good export potential.

This was the province's second venture into electric rail transit. During the first decade of this century, as a means of selling power being developed by its fledging Hydro Electric Commission, the province encouraged and backed the establishment of a series of Radial Electric Railways.

Plagued by intense political bickering and the growing popularity of the automobile, the radials fell on hard times during the 1920s and it was not long afterwards that the last of them — the London to Port Stanley radial — was abandoned. It is ironic that it was the proliferation of the private automobile that created the problems UTDC was set up to solve. UTDC's mandate is to develop, prove and make available the most advanced transit products and services for public authorities to provide economical and efficient transportation services. To do so the company has invested in technology, facilities and, most importantly, the most knowledgeable transit people available.

The Corporation offers a wide spectrum of services that includes management, hardware, operations, maintenance, turnkey construction and financial services. It also transfers technology in the form of licences, engineering services and staff training, and has provided advisory services around the world in such places as San Francisco, Cairo, Brazil and England, to name a few.

The Canadian Light Rail Vehicle, developed to replace Toronto's aging streetcars, is logging millions of successful revenue miles. It is the basic unit of the Articulated Light Rail Vehicle now in test service in Toronto and is capable of doubling passenger loading. In addition to a TTC. order for 52 of the articulated version, Santa Clara County, California, has signed a $50 million contract with UTDC for 50 vehicles of a similar design.

The vehicles are being manufactured at the Thunder Bay, Ontario plant of Can-Car Rail Inc., a UTDC subsidiary and the result of an agreement between UTDC and Hawker Siddeley Canada Inc., former owner of the plant. The agreement created a holding company — RailTrans — which has acquired full ownership of Can-Car. RailTrans itself is owned 80 per cent by UTDC and 20 per cent by Hawker Siddeley.

The first major technological innovation of UTDC was the Intermediate Capacity Transit System (ICTS). The name is derived from the fact that ICTS is designed to fill the gap between the small and large capacity services provided by busses and subways. ICTS technology is being applied in Vancouver under the name ALRT (Advanced Light Rapid Transit) and will be a showcase for Canadian Technology at Expo '86.

Designed to relieve Vancouver's traffic congestion and to provide the major link between the main Expo site at False Creek and the Canada Host Pavilion on Burrard Inlet just two kilometres away in the downtown core, ALRT combines the latest in computerized train control with lightweight vehicles employing linear induction motor propulsion (LIM).

(The 1986 World Exposition — Expo '86, to be held May 2 to October 13, 1986 — is based on the theme "Man in Motion". It celebrates both Vancouver's centennial and the 100th anniversary of the first transcontinental railroad's arrival on Canada's west coast.)

To understand the operation of a linear induction motion, one must visualize a conventional motor laid out flat. The stator with its windings is flattened out and attached to the underside of the vehicle and the rotor (the LIM reaction rail) is placed horizontally along the full length of the track. The thrust or torque developed is continuous and the vehicle moves along the track.

The LIM needs no heavy gear trains or transmissions since it acts independently of the wheels to produce thrust. It also provides primary braking in an energy regenerative fashion. In operation there are two LIMs per vehicle mounted below the trucks. They are powered from a 600-volt DC supply, using two rails (positive and negative) and vehicle collector shoes.

The absence of rotary traction motors and their necessary transmissions reduces undercar clearances. At the same time the maintenance of brushes, commutators and bearings is eliminated and track and wheel friction reduced. This in turn increases performance ratings of the propulsion system on grades.

Another improvement on the ICTS are steerable-axle trucks which further reduce wear on both the steel wheels and steel rails. These patented trucks are also available on UTDC's other transit vehicles.

While revenue service on the 21.4 kilometre Vancouver ALRT system will not commence until 1986, to coincide with the opening of Expo '86, construction of the line is well advanced and the first production vehicles, for demonstration and testing purposes, have been delivered from RailTrans' Kingston plant after undergoing their run-in tests at the nearby test and research track.

RailTrans is also providing similar cars for the Scarborough Rapid Transit as the first application of this new transit concept for Metropolitan Toronto. With the 50 cars ordered for Scarborough and the 114 slated for Vancouver, RailTrans is currently building up production to a two-a-week schedule.

In its first incursion into the American market with ICTS technology, UTDC is also designing and managing construction of a 4.7 kilometre elevated transit loop in downtown Detroit. With a service frequency of 90 seconds and 13 stations, the one-way system is designed to move people throughout the downtown area and is slated to begin operation in 1985.

At the heavy end of the transit spectrum, UTDC is to supply 54 subway cars to Boston in a contract it won in competition with major European and Asian transit suppliers. This is in addition to 126 cars ordered by the Toronto Transit Commission for Toronto's subway system.

UTDC technology has also been adapted for Ontario's GO-ALRT interregional transit program. Routes planned to extend present GO service include a western extension from Oakville to Hamilton; an eastern extension from Pickering to Oshawa; central improvements between Oakville and Pickering; and a northern link from Pickering and Oakville through North Metro, including the Pearson International Airport. Operating on exclusive rights-of-way, the vehicles will be capable of speeds up to 120 km/h at both grade and elevated sections.

With firm orders in Canada and the U.S. and an established international reputation, UTDC is now in position to tackle contracts worldwide.

To cash in on these rewards, UTDC has developed a corporate structure to build on its own and its associates strengths.

Ceeco — Filling a Need for Quality Equipment

During his experience in the wire and cable manufacturing industry, Andre Varga found that most of the equipment needed by the industry required considerable modification. It was proving inefficient and, from a design point of view, obsolete.

Thus it was that, in the late 1960s, Varga founded Ceeco Machinery Manufacturing Limited in Concord, Ontario, to design, manufacture and market superior quality machinery for the fabrication of electrical wire and cable and steel wire rope.

This equipment can be classified into four general types:

- wire drawing equipment to make close tolerance, fine wire from copper or aluminum rod;
- stranding equipment to twist or wind many fine wires into a large diameter but still flexible strand;
- cables or closers which can combine several insulated strands into a single, large multi-element cable for electrical use, or which can form a single, massive steel cable several inches in diameter for use in towing ships, oil rigs, etc.;
- armouring machines which apply a flexible metal sleeve around a finished electrical cable for protection against mechanical damage.

Ceeco was formed to answer the need for an innovative, service-oriented company that would produce wire and cable manufacturing machinery specifically dedicated to the individual customer's needs.

The company was designed to provide a complete manufacturing capacity. From the initial concept, often sketched on the back of an envelope, to the finished product, all the work is done under one roof. Sales, design and manufacturing functions are closely interrelated and mutually supportive. A staff of engineers, with a clear understanding of the latest technological developments in the field, as well as wide experience of the technical problems likely to be encountered, examines a customer firm's requirements and proposes a solution.

The concept is then turned into a workable prototype by a capable, inventive design team.

The risks associated with such a venture, particularly the high costs involved in capital goods research and design, proved to be a challenge. But Ceeco's approach, coupled with its talented and experienced team of workers, has been equal to the challenge.

One example of the company's successful, innovative designs is the Orbistrand system. Orbistrand is a rigid cage strander. The key to its high-speed performance is that the bobbin does not rotate. Previously, convention rigid cage stranders, Ceeco's included, were limited by the tension fluctuations of the heavy bobbin rotating under high centrifrugal force conditions. Why not fix the bobbin to the cage and fly the wire off? The idea seemed to have many advantages and, most importantly, eliminated many of the limitations of conventional machines. A prototype was built and used for as many different products as could be found, to confirm its potential. The result was the Orbistrand cage.

Once the idea was established, demonstrations and discussions took place with prospective customers and other interested parties to establish the degree of sophistication required and the kind of peripheral equipment which would complement such a machine. The dual row loading system worked extremely well — and the Orbistrand system was born. Customers still find uses for the principle, outside the initial objectives, and that has enhanced its appeal even further.

After the company's early success in Canada, it became obvious that a growing market for its products would be in the Third World countries which

Crank arm with overtwist and undertwist mechanism of 48 bobbin planetary strander/cabler

Heavy duty rope closer

Following Ceeco's early success in Canada, it became obvious that third world countries represent a growing and important market.

were beginning to develop their industries and the necessary electrical power generation and transmission services.

The multinational scope of the wire machinery industry creates its own challenges. Differences in the operational requirements of customers; a host of protectionist policies; variation in exchange rates and constantly changing economic conditions — all combine to make the business a complex global industry.

In order to spread design and development costs over a wider geographical base, speed delivery and service time and overcome the high tariff barriers in some countries, Ceeco decided to establish operations outside Canada.

The company became sole owner of the Syncro Machine Company in the United States which simultaneously provided a manufacturing base in that country and added wire drawing systems to the product line. Interests were acquired in companies in Brazil and Mexico and a sales and marketing centre, Wicama Aachen, was established to serve Europe, Africa and Asia.

Today, 95 per cent of Ceeco's customers are outside Canada. The company has become recognized around the world for innovation and diversification. However, in the words of its executive vice-president, Renato Rossi, "Technology in our field changes very rapidly, and products that are in the forefront today may be obsolete by tomorrow. To maintain competitiveness our development plans must be in tune with the industry."

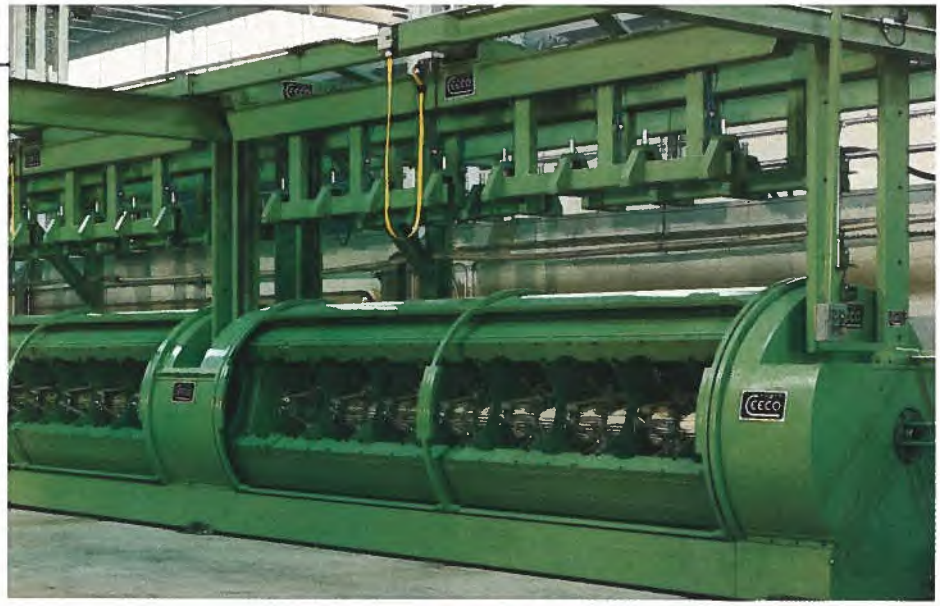
Each company within the Ceeco group operates on a business plan and is monitored continuously to ensure that its objectives and performance are consistent with the overall goals of the group. This entails a co-ordinated approach to R&D and a common manufacturing policy. All members of the group are capable of manufacturing a broad line of equipment and the overall production program is decided on the basis of productivity and delivery requirements.

Manpower is another area which has been carefully rationalized. Within individual manufacturing plants each machinist has been trained to operate several machine centres, so one person can achieve optimum production each day. This provides an edge in international competition and means that, despite the cyclical nature of the capital goods industry, Ceeco's manpower remains relatively constant. People are moved to where the work is.

Tubular strander lines designed to accommodate 26" bobbins

A careful balance is sought in the combination of manufacturing existing products and developing new designs. The high overhead costs of new product development precludes devoting too much effort and expenditure at any one time to new designs for which the basic parameters are unknown. Similarly, limited manufacturing capability should not be concentrated on any one machine, no matter how successful it has proven.

As a result of market changes, Ceeco now offers turn-key systems to contractors constructing, using in-house expertise.



88 bobbin Orbistrand system which will load and unload in less than five minutes

Because of Ceeco's worldwide reputation for innovative design and technical solutions to the industry's problems, its inventions must be properly protected. Constant monitoring of the industry is required and, when necessary, licensing agreements from other organizations are negotiated and secured.

Over the last decade, one significant trend has been noticed: a requirement from customers for the provision of additional engineering expertise, beyond the supply of equipment. This change has opened a whole new market for Ceeco in offering turn-key systems to contractors constructing major facilities. The close personal supervision of Ceeco's project managers ensures the expected high quality of their company's part of the job.

Energetic use of Canadian government support funds for research and development is acknowledged to have been a major factor in Ceeco's leadership in the three categories of equipment currently manufactured in Canada.

In 1975, the company's planning consultants drew attention to the increasing scope of government assistance to industry. A series of R&D grants was obtained under the Program for the Advancement of Industrial Technology (PAIT) and the Enterprise Development Program (EDP) which enabled Ceeco to move to the forefront of the technology in rigid frame stranders and large closers.

The technical success was supported by marketing assistance under various Program for Export Market Development (PEMD) grants and loans, resulting in increased exports to scores of countries around the globe.

Today, sales volumes have climbed to four times the level of 1975 and the factory area has tripled to the present 10 000 square metre (108 000 square foot) modern facility in Concord, Ontario. Naturally employment has expanded to keep pace with business growth.

The staff at Ceeco is united in its support of the company's goals and policies. Dick Schofield, vice-president of the Seeco Group, maintains that "by ensuring that the quality and the performance of our product is the best available to the customer, we achieve our goal and consolidate the future".

That philosophy was echoed by the company's founder Andre Varga when asked about the future, "Ceeco will continue to grow, doing what it does best: drawing on a team with industry experience, listening carefully to customers needs, and providing an innovative range of machines to answer diversified requirements."

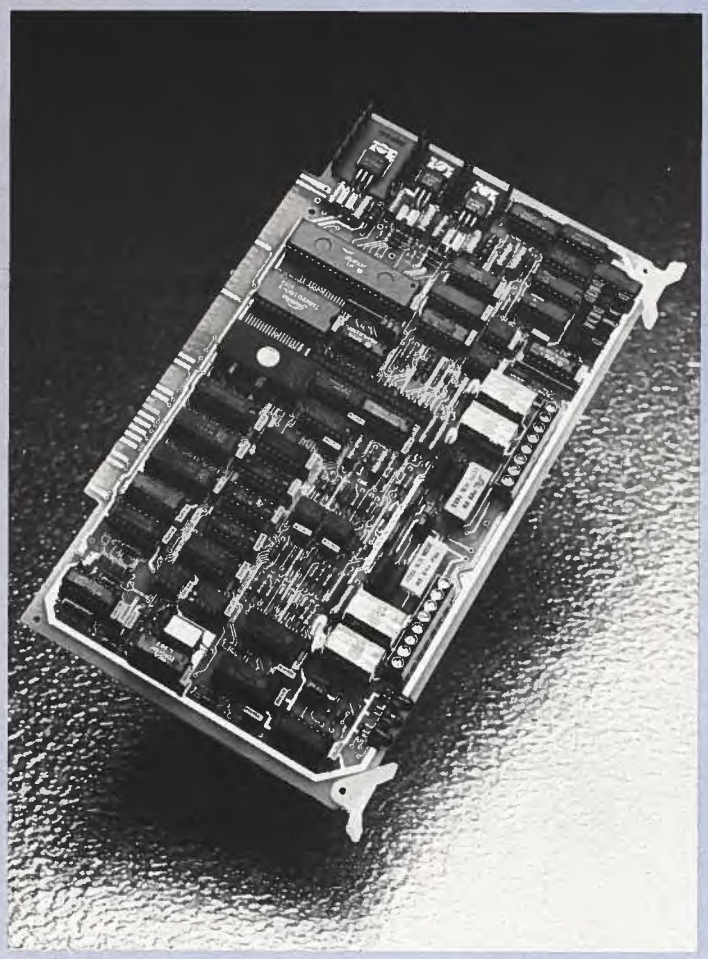
Planetary strander/cabler designed to accommodate 30, 30" bobbins

For further information, please contact:
Ceeco Machinery Manufacturing Limited
65 Basaltic Road
Concord, Ontario
L4K 1G4
Tel: (416) 669-2204

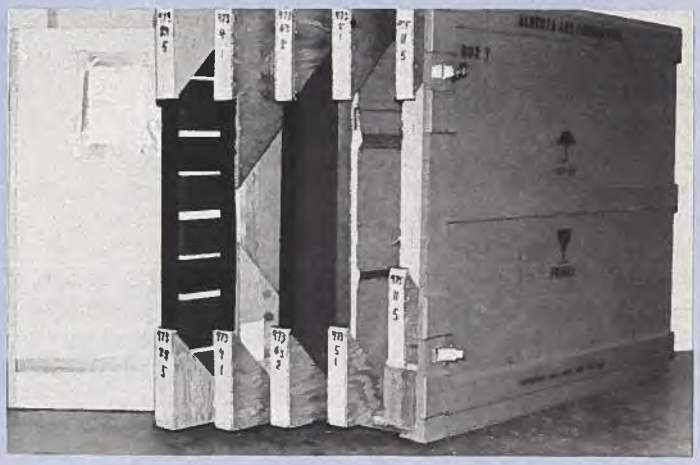
— by Gillian Welbourne
Canada Commerce

CANADIAN COMPANIES & PRODUCTS

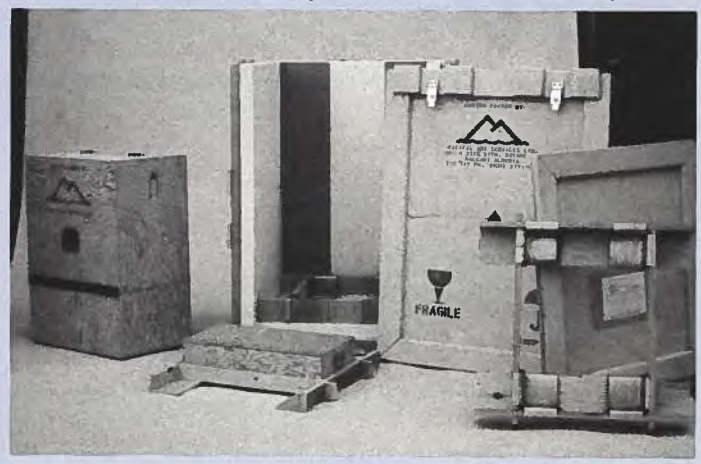
Companies wishing to take advantage of this feature may do so without charge simply by sending sufficient material on product or service for no more than 100 words and a glossy black and white photograph to Canadian Companies & Products, **Canada Commerce** (BCOM), Department of Regional Industrial Expansion, Ottawa, Ontario K1A 0H5. As **Canada Commerce** is produced in both official languages, please send material in both languages if it is available.



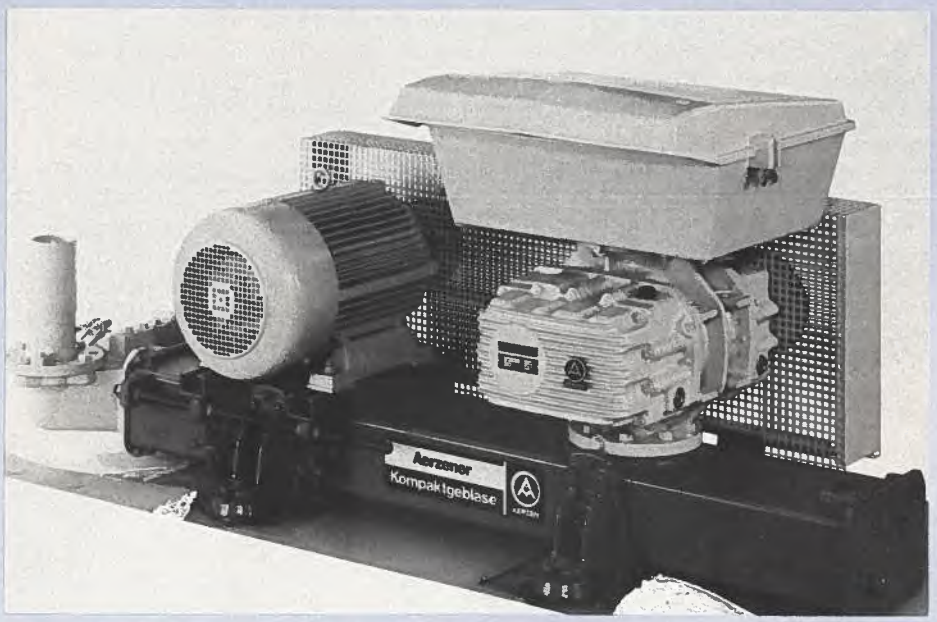
TLM Creates Telephone Management Capability
Control Dynamics, a Canadian corporation with headquarters in Kitchener, Ontario, has introduced an inexpensive telephone-telecommunications management system for small and medium-sized businesses — the TLM. The TLM offers toll denial, tone-to-impulse conversion and line monitoring on any existing phone system, touch tone or rotary dial, and reduces the costly unauthorized long-distance calling. Small, virtually maintenance-free and fully expandable, the TLM system is totally compatible with the newer telephones. It lets even the smallest operation manage its telephone costs without a large commitment.



Fine Arts Transporter Expands Service
With offices in Vancouver (Burnaby), Calgary and Toronto (Scarborough), Pacific Art Services Limited offers a new service to shippers of fine art in Canada and throughout the world. The acquisition of an eastern-based carrier has extended to company's regular transport service right across Canada and to 11 eastern United States. In most cases, works of art do not need expensive or heavy crating to be transported in safety. Using a fleet of vans, specially designed with air-ride suspensions and temperature-controlled environments, and specialty containers where necessary, Pacific Art's experienced and trained personnel safely and efficiently handle fine arts only lightly wrapped for transport.

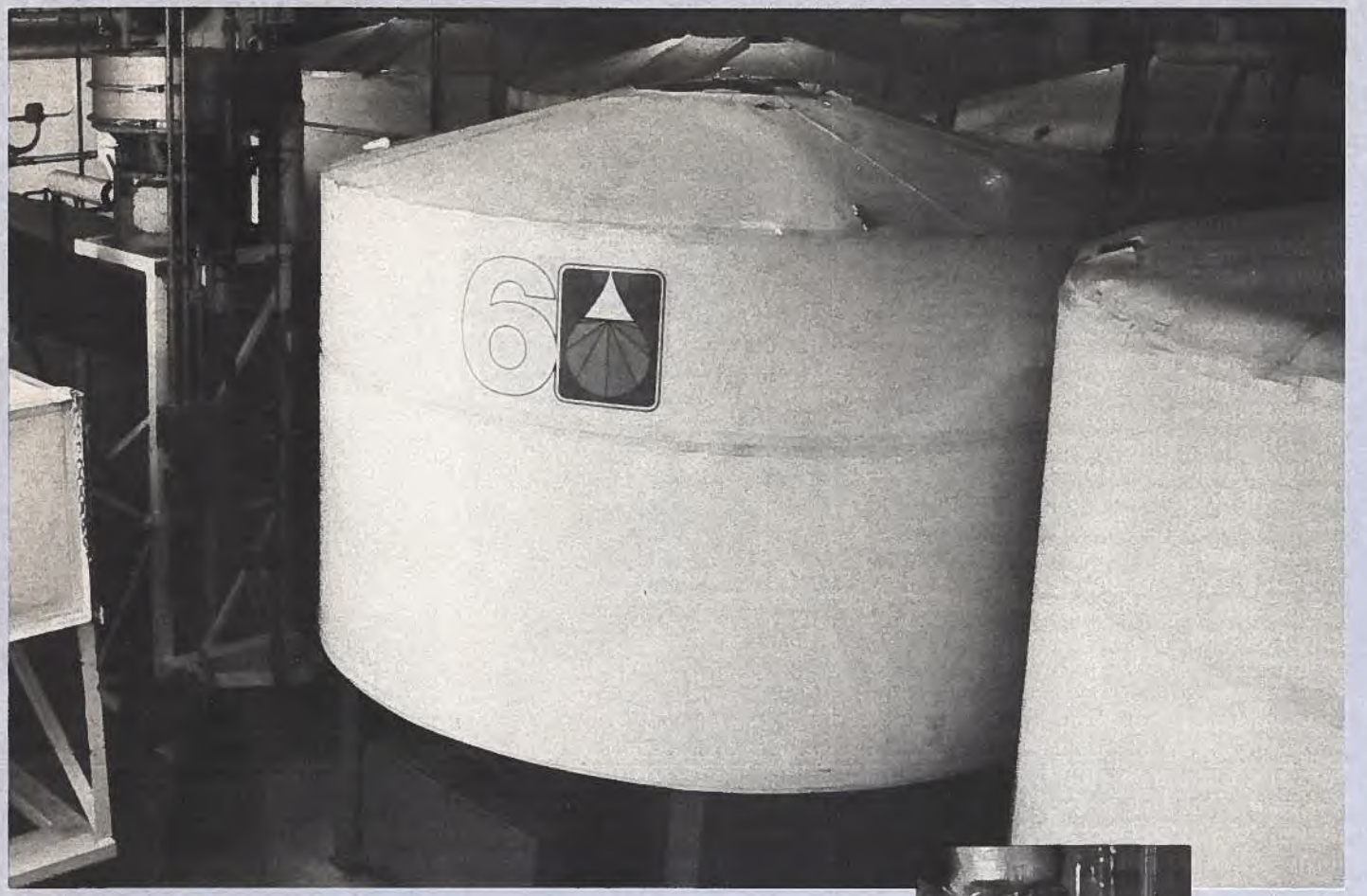


Microwave Cookware for Today's Lifestyles
Supreme Aluminum Industries Ltd. of Scarborough, Ontario, has recently introduced a specialty line of microwave oven-to-table utensiles — the Habitat. The full range of the line has been designed and developed with careful consideration of the needs of the modern consumer. The versatile Habitat can also be used in conventional ovens and in the freezer. Complementing Supreme's quality conventional cookware lines, Habitat also reflects this progressive company's adaptability to changing international markets.

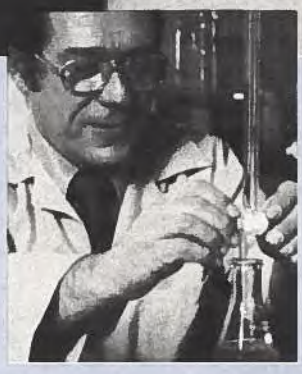


Compact Blowers for a Variety of Applications
Compact Blowers II from Comco Roots Compressor Canada Inc. of Baie-d'Urfé, Québec, can be used as standard machines, ideal for applications where oil-free compression is required. They are specially useful for pneumatic transport; filter flushing in water purification plants; aeration of sewage basins; process technology; and many more applications. Easy accessibility for cleaning and maintenance is a built-in design feature. Because the base frame and discharge silencer are integrated in one piece, Comco Compact Blowers II are the smallest size of compact blower arrangement available worldwide.

Educational, Scientific and Commercial Software
Les Créations Micro Logiciels R.B. Inc., of Charlesbourg, Québec, a company specializing in the creation and adaptation of general or special software for such microcomputers as IBM, APPLE or others, also offers a variety of services including consultation, programming, inputting information systems, analyzing statistics and translation. The company, which produces special educational software for primary level students (first to sixth years), presents a software for text preparation (the Typograph) as well as a software for library inventory following the Dewey system of classification. Called Biblioscope I, this software has a counterpart in the Biblioscope II which records all copies of a publication on fiche. A user can gain direct and almost instant access to the contents on the fiches regarding all volumes in a library. The information desired appears on the computer screen or printed by the computer's printer.



On-Site Alcohol Conversion Plant
On-site alcohol production with plants by Harvest Fuel, Ltd. of Toronto, Ontario, adds real economic value to surplus or reject feedstock which would otherwise be lost. Such plants can provide a ready, reliable source of fuel to an agricultural operation. The alcohol produced is 190-proof ethanol and can be used as a fuel (e.g. in the engines of farm machinery), an octane enhancer, industrial alcohol (solvents, etc.) or sold as an upgrader for the production of anhydrous alcohol. The Harvest Fuel plant can be used with a variety of feedstocks including bananas, molasses, cassava, sugar-cane concentrate, corn and other grains. It is highly automated and simple and reliable to operate (can be run by one person for about four hours a day).



Biofeedback Equipment Monitors Stress
Thought Technology Ltd., a Montréal-based bio-medical electronics company, introduces the latest addition to its extensive line of biofeedback equipment — CALMPUTE™. This international award winning GSR (galvanic skin resistance) monitor allows a user to plug into many popular home computers. It will monitor tension levels through GSR; probe and react to innermost feelings; help teach stress control. Several biofeedback games stimulate the user but teach calmness as the calmer one is the better one does.

Special Abrasives for Special Needs
Young and aggressive, Cheeseman Industries of Montréal, Québec, is Canada's only supplier of specialty abrasives designed for specific tasks. Prime users are the aerospace, tool and die and mould-making industries, among many others. Before the company started operations in November 1983, Canadians had no option but to purchase these products from abroad. Now Cheeseman takes jumbo rolls of material from such Canadian companies as Norton and Carborundum and converts them into finished, coated, abrasive products in various shapes and sizes. In addition to the industrial application sales, Cheeseman abrasives are sold in retail outlets.

New Slides Services Introduced
Management Graphics Inc. of Toronto and Ottawa provides a range of services and products including 35 mm speaker support slides (pie, bar and line graphs; text slides; flow and organization charts) and business graphics hardware and software for general use. A new service is Dial-A-Slide™ which enables clients to produce their own slides by dialing the GRAFAX SLIDE SYSTEM with an ordinary TTY terminal. The company has also introduced software designed to generate business graphics images on a standard IBM PC. By using these two services, Management Graphics believes a client can cut slide costs by as much as 50 per cent.

For further information about the companies, products and services listed, please contact:

Control Dynamics
P.O. Box 485
507 Frederick Street
Kitchener, Ontario
N2G 4A2
Tel: (519) 576-4311

Pacific Art Services Limited
3755 Keith Street
Burnaby, British Columbia
V5J 3B9
Tel: (604) 433-4414

Supreme Aluminum Industries Ltd.
3600 Danforth Avenue
Scarborough, Ontario
M1N 2E6
Tel: (416) 691-2141
Telex: 06-963659

Comco Roots Compressor Canada Inc.
53 Lombardy Road
Baie-d'Urfé, Québec
H9X 3K9
Tel: (514) 457-5120
Telex: 05-822-583

Créations Micro Logiciels RB
6780, 1st Avenue
Suite 160
Charlesbourg, Québec
G1H 2W8
Tel: (418) 622-0122

Harvest Fuel, Ltd.
61 Berkeley Street
Toronto, Ontario
M5A 2W5
Tel: (416) 363-8939
Telex: 06-218982 HARV FUEL TOR

Thought Technology Ltd.
2180 Belgrave Avenue
Montréal, Québec
H4A 2L8
Tel: (514) 489-8251
Telex: 055-66485
Cable: THOTTECH

Cheeseman Industries
Division of Dave Cheeseman Industries Inc.
2354 Letourneux Avenue
Montréal, Québec
H1V 2P2
Tel: (514) 259-4669
Telex: 05-828871 CHEESEMAN

Management Graphics Inc.
2064 Avenue Road
Toronto, Ontario
M5M 4A6
Tel: (416) 485-2855

Ottawa High Technology Show

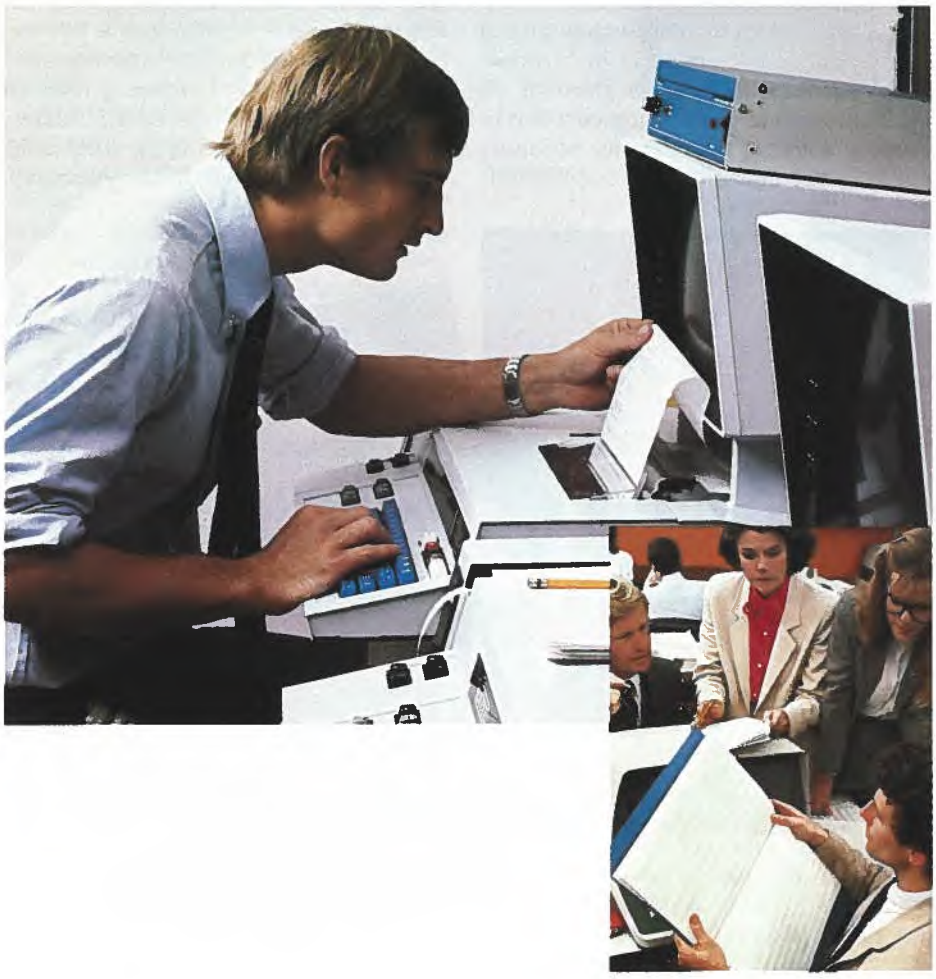
Ottawa's two major showplaces — Lansdowne Park and the new Capital Convention Centre — were filled to overflowing this spring when the Ottawa High Technology Show and Canatech '84 were held simultaneously.

For the hi-tech industry and the hi-tech buff alike, the two shows provided a look at the nuts and bolts of computers, robotics, biotechnology, etc., while seminars outlined the problems and promises of the future for the industry as a whole.

In its new, much expanded format, the Ottawa High Technology Show attracted close to 300 exhibitors whose booths filled the Civic Centre and Coliseum at Lansdowne Park. While the majority of the firms came from the Ottawa-Montréal-Toronto areas, some 15 companies from the U.S. and five from France also exhibited their wares. From analyzers and batteries to wiring accessories and work stations, literally thousands of the most up-to-date products and services were on display.

This year's major seminar, hosted by the Ottawa branch of the Institute of Electrical & Electronic Engineers (IEEE), featured a total of 15 papers on a wide range of technical subjects including: Computer Piracy and Copyright Infringement; Robot Vision and Visual Inspection; Trouble Shooting of Finished Circuits and Components; and Dataflow Architecture for a Hardware Logic Simulator.

The show was opened by Ed Lumley, Minister of Regional Industrial Expansion, who encouraged suppliers to bring the benefit of their ingenuity, knowledge, products and services to the industries of Canada, and to convince them of the payback that investment in advanced technology can provide.



In particular, he felt that the small business community could benefit most by the application of hi-tech. The federal government had allocated $1.5 million over the next two years for the establishment of a National Manufacturing Technology Information Centre. Operated by the private sector, the Centre is designed to serve as a focal point for information to companies, industry associations, universities and provincial agencies on advanced manufacturing technologies.

Turning to social issues, Mr. Lumley pointed out that one of the most serious aspects of Canada's current unemployment statistics is the unacceptably high level of unemployed young people.

"No country can thrive, economically or socially, without the continuing impetus and stimulous of young, energetic and enthusiastic minds. The statistics of today serve as a warning that a whole generation of talent is running the risk of frustration and disillusionment.

"I do not believe Canada can afford that risk," he warned.

He then challenged the business community to make an extra effort to hire and develop young people. If half of the close to 900 000 individual businesses in Canada were to hire just one additional young person, the youth unemployment problem would be solved.

"Employment of young people is, after all, an investment. Like any investment, it involves risk. Young people are inexperienced. But as business people you know that nothing is accomplished without risk.

"And since we readily agree on the importance of innovation in terms of technology, in terms of hardware and software, why should we hesitate to be innovative in terms of human resources?" he asked.

He called for a concerted cooperative effort of business labour and government to embrace the technological revolution as the opportunity it is.

If we did, he said, "we can show not only our young people, but people throughout the world that Canada's leadership, industry and entrepreneurship are second to none."

Québec in the 80s

An Awaking Giant Prepares to Meet the Challenge

Looks can be deceiving in Montréal, hard hit by the recession. Just under the surface, the city and the province of Québec are seething with a new vitality which bodes well for the future.

On the surface at least, the Montréal scene is a far cry from the heady days of Expo '67 and the Olympics when it seemed that every street corner sprouted a vast crane building another glass and steel monument to high finance, the hospitality industry or the corporate pride of industry.

Today many floors of these same monuments are dark and empty, hundreds of shops sprout "going out of business" signs or are bare to the walls; there are few if any cranes in the downtown sections and hardly a day goes by without another company announcing its intention of moving or closing.

But beneath this gloomy exterior, there is another story breaking. It is a story of a people preparing themselves for better days ahead.

It is, in the words of Pierre Laurin, former head of the University of Montréal's school of business administration, "the second wave of the Quiet Revolution". It is, he says, the abandonment of traditional antipathy toward business, once scorned as work for *les autres* (English-speaking).

Laurin, brother of Québec Social Affairs Minister Camille Laurin, is now vice-president of the Aluminum Company of Canada. He claims that economics became a main consideration in Québec as more French Canadians became top company officials.

This awakened interest shows up in the number of Québécois in business administration courses. A third of all such students in Canada are enrolled in Québec whereas the province accounts for only one quarter of the population.

Another sign of the trend is the explosion in the number of business and trade publications being printed in French. One entrepreneur in the business publishing field is Claude Beauchamp, a former editor and publisher of the Québec City daily *Le Soleil*.

With the success of his half dozen magazines, Beauchamp has become a wonder kid of business journalism cashing in on the concern among francophones over making it in the marketplace. And the end is not in sight. He is planning several new ones to join his flagship publication *Les Affaires*, a well written business weekly with a circulation in excess of 58 000. Another newcomer is the weekly *Finance*, published by another former *Le Soleil* staffer, Jacques Forget, covering the stock market and future trends in the economy.

University students, according to Pierre Laurin, now carry copies of *La Revue commerce* and *Les Affaires* under their arms alongside the *Harvard Business Review*.

But, to this writer at least, there are even more tangible indications of the new found business awareness in Québec. It was manifest at an R&D seminar I attended recently announcing the establishment of R&D '84, an international market for new technologies to be held in Montréal October 2-5, 1984 at Place Bonaventure — in the quiet confidence of its sponsors Technica Ltée — Christian Pilot, president, and Michel Robichaud, Michel Pelletier and Jacques Vincent of the firm Robichaud, Poulin and Associates, Inc., consultants in technological innovation. It is evident also in the enthusiasm of Marcel Barthe, editor-in-chief of *Québec économique international*, the new provincial government magazine, published simultaneously in French, English and Spanish for the international marketplace. The province says Barthe is determined to capitalize on its strengths in the fields of electrical power, transportation, pulp and paper and mining to enter the world's technological marketplace.

An indication of the depth of this penetration is the fact that three Québec-based consulting engineering firms — Lavalin, Monenco and SNC (Surveyor, Nenninger, Chênevert) are listed among the 10 largest consulting firms in the world.

While the 1960s and 1970s saw Montréal as the host for both a class one exhibition, EXPO '67 and the Summer Olympics of 1976 with all the attendent growth, the 1980s construction of the Montréal Convention Centre is likely to have a more profound long-term effect on the city and the province than the other two events combined.

Located right downtown, under the same roof, are a congress hall and an exhibition hall, the first capable of handling 5 800 conventioneers at one time and the second with a capacity for 760 booths and some 10 000 visitors (9 300 square metres). The centre is directly accessible by car via an autoroute which runs beneath the building. A Metro station provides the link with Montréal's mass transit subway system which connects to most of the city's major hotels, shopping centres and cultural attractions.

The Congress Hall itself occupies an area of 4 200 square metres which, with an adjoining meeting hall, can serve 5 000 meals an hour. There are over 30 meeting rooms with integrated audio-visual facilities available for groups of 100 to 1 000. The Centre is also equipped with Telidon videotex, to provide a visitor with information on the city, the province and the country.

In short, the Montréal Convention Centre has brought together all the necessary requirements of the world's largest conventions. Backing it up are the city's 12 000 hotel rooms, 8 500 in 18 international chain hotels and 3 500 in first class local establishments.

And while Montréal is widely known as the cultural and economic spark plug of the province, a similar renaissance is evident throughout the province from Gaspé to Baie James, from Arvida to Sainte-Anne-de-la-Pocatière.

Over the past year *Canada Commerce* has chronicled the advances of Québec industry and business both small and large as they prepare to meet the challenges of the eighties and if, as so many economists say, entrepreneurship is the salvation of Canadian business, Québec has a bright future.

— by Bob McDonell
Canada Commerce

Montréal — Gateway to the Great Lakes

Strategically located in the heartland of North American industry and as the eastern terminus of the St. Lawrence Seaway, it is small wonder that the Port of Montréal is Canada's largest, in facilities, ship handling and general and containerized freight.

But it was not always thus. For many decades prior to 1830, when the first Montréal Harbour Commissioners were appointed, Québec City was the chief port of the two Canadas, as Ontario and Québec were then called. Montréal was, of course, a port to a limited degree prior to 1830 but it operated under many handicaps. For one thing there were no public wharves. In some cases, cargo was loaded and unloaded over planks which stretched between ships and the muddy banks. In other instances cargo was unloaded from anchored ships to rafts for transfer to shore and the procedure reversed for loading. Horse drawn carts were also backed into the river to receive goods from a vessel.

At the time most cargo was inbound to support the still primitive commerce of the region. The main exports, mast timbers for the navy and logs, were floated down to Québec in huge driving rafts.

At this time also, Québec, with its adequate wharves and shipping sheds and deep water, was the natural port of entry while Montréal was hampered by the shallow water (three metres) in some sections of the river between the two cities.

It was a long hard struggle for the first Harbour Commissioners and their successors to develop the Port of Montréal into a first class facility. In fact it was not until 1839 that Montréal had its first "Trinity House". This was the term applied to the authorities who regulated shipping. Prior to this all shipping was controlled by Québec. In addition to the construction of harbour front accommodation, if the port was to succeed it required a deeper channel to the sea. Over a long period of time this was accomplished through dredging, from the normal three metres at the shallows to today's depth of almost 10 metres, to accommodate the ever-increasing size and draught of ocean liners.

When the federal government in 1968 undertook to maintain an open channel from Montréal to the sea, to relieve periodic, disastrous flooding along the river, Montréal for the first time became a year-round port, accessible 12 months of the year.

The year 1968 also saw the inauguration of the first container delivery to Canada and the Port of Montréal and the opening in November of the first container terminal. While only 11 374 containers were delivered that year, the port has consistently increased its container trade and now handles over 40 per cent of Canada's traffic and is the third largest container port on the Atlantic coast of North America.

While it took 11 years for the port to handle its first million TEUs (20-foot equivalent units), the second million was handled in less than four years from 1979-83. To maintain its lead in container traffic the Port of Montréal plans on investing $75 million in additional container facilities over the next five years, as well as an equal amount on additional grain handling facilities.

The $175 million, five-year port expansion also calls for a $20 million rail expansion to handle the increased traffic forecast for the port. An indication of the need for expansion, container traffic this year is estimated at 370 000 units and in fact the tonnage handled during the first two months this year was up 20 per cent over the comparable period last year. Present forecasts, according to the general manager, Dominic Taddeo, foresee the handling of 500 000 containers a year before the end of the decade.

But the Port of Montréal is more than a trans-shipment point for Canadian and American commerce. Through an ambitious plan sponsored by the federal government and the city, a mile-long section of the port is being transformed into a people place for the benefit of visitors and Montréal citizens.

The site selected for this "window on the river" is adjacent to *Vieux Montréal*, the oldest section of the city, which has been preserved for historic reasons. While the demolition of two of the oldest grain elevators has its detractors, both within the grain trade and among historians, the park is proving to be a welcome break in the 22.5 kilometres (14 miles) of continuous terminals, sheds, elevators and other structures.

While a rail link is being retained between the eastern and western parts of the port, the linear park has become an attractive setting for concerts and other cultural activities. Open air entertainment includes music, dancing and theatre. There are picnic areas and children's entertainment as well as areas for artisans to display their skills. Flower gardens, shrubs, trees and benches have been added to the site as has a two-lane path for cyclists in the summer and cross-country skiers in winter. Eventually this path will interconnect with existing recreational facilities along the old Lachine Canal, thus providing an integrated regional cycling network.

In common with other major Canadian ports, the Port of Montréal now comes under the Canada Ports Corporation Act which replaced the old National Harbours Board in July 1983. Under the new Act, the port was granted corporation status with a high degree of autonomy.

The corporation now has greatly increased authority in the areas of property management, calling of tenders and awarding contracts and in matters relating to human resources. It originates its own bylaws and sets its own rates instead of operating under uniform tariffs for all ports as it had under the National Harbours Board. It now has authority to enter into contracts up to $10 million as compared to a previous ceiling of $500 000.

The new corporation has been set up to stimulate local initiatives in expanding business and in making the port more attractive to shippers.

And the corporation has some impressive facilities to oversee. They include: 109 berths of which 26 handle liquid bulk, while 26 are designed for general and dry bulk cargo; 28 transit sheds covering an area of 230 000 square metres; open storage areas totalling 903 000 square metres; six container terminals equipped with gantry and mobile cranes, two of which can handle Ro-Ro (roll on-roll off) vessels; three grain elevators with a total storage capacity of 550 000 tonnes; heavy lift facilities that include the SLS Hercules, a self-propelled floating crane with a capacity of 225 tonnes at an outreach of 10.67 metres, and several mobile cranes of varying capacities up to 300 tonnes; and modern ship repair facilities at Versatile Vickers including three floating dry-docks and spacious machine shops.

Racine Terminal, the North American base for CP Ships, Dartcan and Manchester Lines, has just completed an expansion which makes it the largest of the port's six container terminals. The expansion has enabled the terminal to increase its throughput capacity to approximately 225 000 TEUs annually of which 175 000 will be loaded and discharged from vessels and the balance handled through its depot operations. Included in the expansion was an increase in size from 6.8 hectares (17 acres) to 12 hectares (30 acres) and the construction of a third high-speed, dockside container crane. Costing $4.7 million, the 40-tonne capacity crane was built by Dominion Bridge-Sulzer of nearby Lachine. It is the only unit at this site with articulated wheels which allow the crane to navigate the slight bend be-

tween the original site and the new reclaimed expansion area.

A gate entrance building was completed in 1982 to house all of Racine Terminal's administrative offices, the truck and container control sections as well as its computer system.

The terminal has 108 diesel or electric reefer container docks as well as seven tracks that can accommodate up to 70 railtainer flatcars of 27 metres (80 feet). It also has a 5 500-TEU container storage park contoured for drainage, paved and completely illuminated, as well as a 20 388 cubic metre capacity warehouse. The site, which is completely fenced with 24-hour security, is served by the transcontinental rail lines of both

CN and CP Rail and is adjacent to major highway links to Canadian and U.S. points.

Another major general purpose terminal is Bickerdike Pier. While this was originally a coal dock which for decades handled millions of tonnes of soft coal and anthracite, it has been reorganized to handle a wide variety of cargo. One of its most recent newsworthy cargoes was the huge Arctic Cassion Modules which were destined for Japan and eventually the Beaufort Sea (*Canada Commerce*, July/August 1983). The modules, some of them weighing up to 450 tonnes, were manufactured in nearby Lachine, transported by barge to the pier and then loaded on board ship, a specially designed transporter. The units were destined to provide living quarters in the Arctic for a hundred crew members and to act as a drill platform for oil exploration work.

But moving the spectacular is not the Port of Montréal's only link with Canada's regions. For several years it has been a major supplier of goods to the Arctic. In the heat of summer there is an annual exodus of cargo ships from the port headed for various destinations in the High North. Their purpose is to transport supplies for federal government outposts, the government of the Northwest Territories, mining companies, oil and gas exploration crews, heavy construction crews, 25 Hudson Bay Company Stores and several Arctic co-operatives. These ships leave Montréal in early July and complete their final trip in late October. In the first part of the short shipping season, cargo deliveries begin at the most southerly destinations and the ships gradually work northward as ice conditions permit.

There is nothing routine about these voyages. In addition to ice conditions the ships must carry all the equipment necessary to discharge cargo to barges, transfer it to shore and place it above the high water mark.

The port is also a major supply point for Newfoundland and service is carried out weekly to this island outpost of Canada. A significant portion of this trade to Newfoundland and other Atlantic provinces is in petroleum products. These are handled at 19 berths in the eastern section of the port close to the refineries of Canada's major oil producers. The oil companies located in the Port of Montréal mainly distribute refined petroleum — gasoline, fuel oil and distillates. Crude oil is pumped by pipeline to Montréal refineries which then distribute the refined products to ports along the St. Lawrence River, the Great Lakes and the Maritimes. More than 75 per cent of this petroleum traffic is outward bound but the port also provides bunkering services to ships calling at Montréal.

The federal government energy program has greatly increased the crude oil traffic at Montréal. To encourage Eastern Canadian refineries to use more Canadian crude, the government pays the difference in price between Canadian and imported crude.

It is expected that oil shipped through the port will remain constant for several years in spite of recent declines in the amount of refined products due to recession and the switch from domestic heating by oil to electricity and gas. Current annual shipments are in the seven to eight million tonne range.

At one time Montréal was the world's greatest grain port. In its record year, a total of 10.7 million tonnes was handled. The addition of transfer elevators on the St. Lawrence reduced this amount but after reductions in 1981 and 1982, the amount handled in 1983 reached 6.5 million tonnes and with the upgrading of elevator systems at Montréal, capacity is expected to increase for the foreseeable future.

The latest large scale tenant of the Port of Montréal is Mines Seleine Inc., which last year leased 46 500 square metres of land at the eastern end of the port for storage and handling of 400 000 to 500 000 tonnes of salt which will be received annually from the Magdalen Islands. At the present time only deicing salt will be distributed.

In all, more than 30 shipping firms provide frequent regular sailings to over 200 ports around the world and, for nine months of the year, a large fleet of feeder vessels connect Montréal with the heartland of Canada and the U.S.

In addition to the 740 employed directly by the Port of Montréal, an estimated 10 000 are employed by associated companies such as stevedores, shipping companies, maritime insurers, customs brokers and federal agencies.

The Port of Montréal grain handling system is equipped to provide for the needs of local mills as well as delivering grain to ocean vessels. More than a half million tonnes are delivered annually by conveyor directly to two major flour mills and a malting plant. Nearly a million additional tonnes are delivered annually to trucks for transfer to other flour and feed mills in Québec and Ontario.

While more storage and grain handling equipment is in the plans for the future, the port can now unload a 92-car train in eight hours. This rate will be almost tripled when current modernization is completed, and when the upgrading program on elevator No. 4 is finished next year, it will be able to load a 30 000-tonne ship in eight hours.

According to the general manager, Dominic Taddeo, it is estimated that the port's economic impact on the city is in the order of $750 millions.

While present plans for expansion appear to be expensive at $175 million, operating profits for the port in 1983 were $18.6 million, a good omen for its future success.

Thus, over the years, has the Port of Montréal grown from a small adjunct of Québec City to one of North America's major shipping terminals.

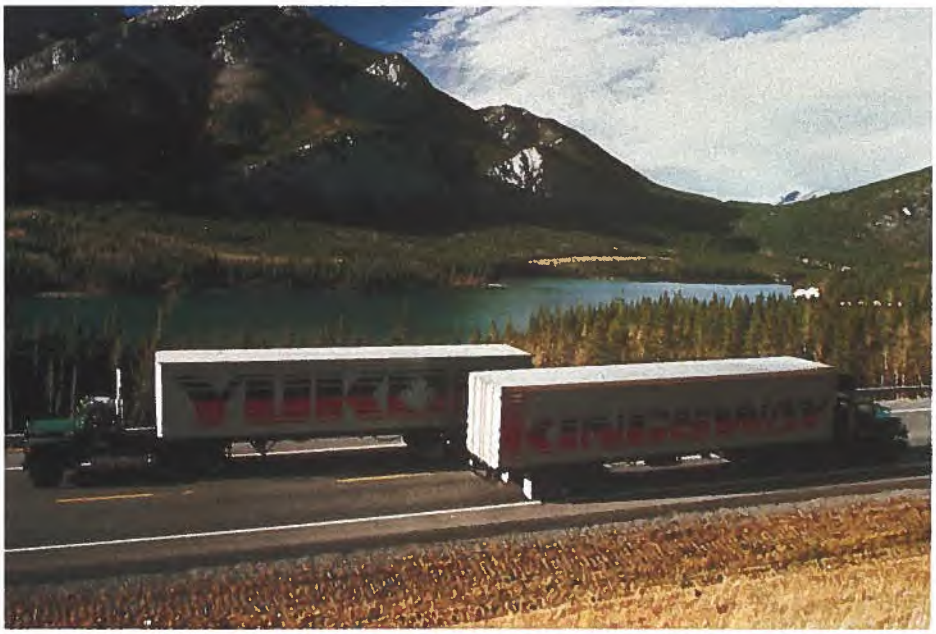
— by Bob McDonell
Canada Commerce

Port of Montréal

Canadian Steamship Lines — A Personal View

If there is any company whose fortunes have been and are tied up with the Port of Montreal, it has to be Canada Steamship Lines, the largest holding of CSL Group Inc., itself one of Canada's largest and most diversified transportation companies.

It was with a sense of nostalgia and curiosity then, that I trudged up the hill from the port to the decidedly Victorian building at 759 Victoria Square, headquarters for CSL Group and the office of Paul Martin Jr., who I was about to interview. Nostalgia, for it was over 50 years before as a youngster that I had last visited the then head office of Canada Steamship Lines with my uncle, an officer of the company, and had been ushered into the office of the president. And curiosity to see how the son of one of Canada's best known politicians of another year had come to control this multi-million dollar empire.



Solid and in some ways stodgy, 759 gives the impression that it somehow resents the towering glass and marble towers that surround it, but is content that it was here long before they were and will be around long after they have outlived their usefulness.

If some things had not changed — the serenity and solid grace of stone and intricately sculptured wood panelling — there was a vast difference in the open, friendly greeting of Paul Martin Jr. compared to the stiff formality of his long-ago predecessor. The office, however, was still adorned with the memorabilia of shipping — maps, charts and ships models — albeit of modern vintage.

When this interview was arranged a few weeks before, one of the topics of discussion was to have been Mr. Martin's views on the establishment of the Industrial and Regional Development Board. The Board, which he had agreed to co-chair with Shirley Carr, executive vice-president of the Canadian Labour Congress, had been set up as a forum of business, labour and academic leaders to advise the government through the Minister of Regional Industrial Expansion on a broad range of policies and issues relating to industrial development in all regions of Canada. But an unforeseen sequence of events had altered the Board's timetable and this portion of the interview would await another meeting.

But on the Port of Montréal, the city and the Province of Québec, Paul Martin had definitely upbeat opinions.

As chairman and chief executive officer of Canada Steamship Lines, a company whose involvement with the Port of Montréal spans almost 140 years, he was enthusiastic about most of the new developments which had taken place on Montréal's waterfront. If there was one sour note, it was over the demolition of Montréal's old No. 2 grain elevator. He, along with other grain handlers, feels that this loss of grain storage facilities has seriously affected the port's ability to service the grain trade. And now many historic site enthusiasts agree that a valuable historic monument has been lost, in spite of the fact that the demolition was undertaken on the grounds that it would facilitate the development of "Vieux Montréal" as a tourist attraction.

"I guess you'd call me a bucker of trends," said Martin when queried about his move to Montréal at a time when there was an exodus of businesses and their leaders from Montréal to Toronto — particularly after he had spent more than half his 45 years in Ontario, growing up in Windsor and Ottawa (where he attended university) and in Toronto where he studied law at Osgoode Hall and was admitted to the Ontario Bar in 1966.

And, in his choice of career in business rather than government service or politics where he was so well connected, Paul Martin Jr. proved his independence and tendency to buck the popular trend. For Paul Martin Sr. (considered the godfather of Canada's medical insurance which he introduced as Minister of Health and Welfare and who was also Canada's Minister of External Affairs and, most recently, High Commissioner for Canada in London) had the right connections for his son to latch onto a government sinecure. But sinecures are not the style of Paul Jr., otherwise, it is doubtful that he would have risked every cent he could scrape together and borrow to gain control of one of

Canada's largest conglomerates in the hurley-burley world of business.

His apparent love of the transportation business was no doubt fostered by three winters of work in the Arctic as a deck-hand on a freighter to pay for his education as well as by his career with Power Corporation, where, as a vice-president, his talents as a trouble shooter and problem solver brought him into contact with the business side of CSL.

He has needed all his skills to bring this conglomerate — it has over 40 bulk carriers and tugs, 2 500 trucks and vans, 350 buses and two major shipyards — through the recent recession which hit just as he took over control from his former boss, Paul Desmarais of Power Corporation.

In spite of the recession, which robbed CSL of 40 per cent of its steel-related shipments of iron ore and coal on the Great Lakes, reduced passenger traffic on its Voyageur busses and wiped out another major trucking firm. (Maislin Transport Ltd.), the conglomerate has actually produced a five per cent increase in revenues since he took control.

He is quick to give credit for his success to those around him, both his top executives and the more than 6 000 employees who man the ships, trucks busses and yards. But there is no doubt that much of the credit must go to Martin himself, whose zeal and enthusiasm have spurred the others to excellence.

Under his tutelage was launched Kourier, a Kingsway subsidiary, which has become one of Canada's largest overnight courier services; much of the lost iron and coal business was replaced by topping off ocean-going ships bound for Europe and Asia while they are in the Gulf of St. Lawrence and at sea (these ships are so large they cannot be completely filled at most U.S. ports without becoming grounded); and his conglomerate has moved into the trans-border trucking business in a large way.

Like so many of Martin's Montréal business associates he is enthusiastic about Montréal's and Québec's future. "There is an encouraging trend to private entrepreneurship throughout Québec," he says "an entrepreneurship that is fostered in our business schools."

He is particularly pleased that so many of the recent business graduates in Québec are entering business for themselves, not into the offices of the large multi-national and foreign-controlled big businesses. This he feels will give Montrealers in particular and Quebeckers in general a hand up in the competitive marketplace over the next decade or so.

"That is what makes Montréal such an exciting city," he enthuses, and it is a reason to stay on over the next few years, even if a life in politics could be his, given his background and obvious dedication to serve Canada.

— by Bob McDonell
Canada Commerce

Canada Steamship lines has just won an Award of Merit under the Canada Awards Program in the Marketing category for its use of self unloader bulk carriers to top-off super bulk carriers where they are limited by port draft restrictions. This top-off system has a particular impact on the export of North American coal, generating $20 million in new revenue for Canada Steamship Lines and $20 million for DEVCO in Nova Scotia in foreign coal sales.

New "THINK CANADIAN" Program

It's a fact — there are Canadian-made products on the market that are as good, as attractive, as competitive as those made anywhere in the world. But most Canadian buyers, both at the retail and business level, are not sufficiently aware of the availability, quality, and price of made-at-home products and services. When was the last time you checked the label on a shirt or blouse to see if it was made in Canada before you bought it? Most of us are just not in the habit of asking ourselves whether a product is Canadian in the process of choosing.

Canada imports $64 billion worth of manufactured goods each year. If some of that business could be diverted to Canadian companies, thousands of jobs would be created. So, to increase our awareness of Canadian-made goods, change our buying habits to seriously consider them when making purchases, and, in the long run, create jobs for Canadians, the federal government has launched the most comprehensive domestic marketing program ever — the "Think About It. Think Canadian" campaign.

Over two-and-one-half years, the government will spend $20.5 million on a wide range of activities — advertising, public relations, retail promotion and co-operative programs with the private sector — to encourage Canadians to buy made-at-home products and services when they are available and competitive in price and quality. The "Think About It. Think Canadian" program theme will be complemented by the in-store retail theme, "Hooray! It's Canadian".

Program for All Consumers

The new domestic marketing program evolved from the "Shop Canadian" program established in 1978. Like its successful predecessor, "Think Canadian" is a voluntary program that will be carried out on a continuing basis over the long term in co-operation with the private sector.

However, while "Shop Canadian" was aimed mainly at retail purchasing and increasing the identification of Canadian-made products, "Think Canadian" is much more comprehensive. It is aimed at increasing Canadian sourcing by manufacturers, processors and retailers as well as increasing consumer awareness of Canadian-made goods through placement of the "Hooray! It's Canadian" symbol on products sold and purchased at retail sales outlets.

Private Sector Participation

To be successful, "Think Canadian" will require the involvement and commitment of suppliers, retailers, labour, consumers and the general business community. In launching the campaign, Ed Lumley, Minister of Regional Industrial Expansion, stressed that the participation of the private sector is essential not only in implementing the domestic marketing campaign, but in advising the government on the direction the campaign should take to achieve maximum impact.

To help accomplish this, the minister has formed a co-ordinating committee consisting of representatives of industry and trade associations, organized labour, and related government departments to provide counsel and guidance on all aspects of the advertising and marketing campaign.

"Think Canadian" has already been supported by many major associations, among them the Canadian Manufacturers' Association, the Purchasing Management Association of Canada, the Canadian Labour Congress, the Canadian Chamber of Commerce and the Retail Council of Canada. The Canadian Chamber of Commerce, in conjunction with its 700 affiliated offices, is committed to sponsoring a series of nation-wide marketing seminars in support of the program.

Government Support

Public sector spending plays a significant role in creating employment and determining the direction of economic and regional development in Canada. Every year, the federal, provincial and municipal governments in Canada spend an estimated $60 billion on the procurement of goods and services. The federal government's portion is approximately one-tenth of that amount, or $6 billion.

With this in mind, the federal government is increasing its own commitment to the purchase of Canadian goods and services whenever they meet the standards of price and quality. Last November, the Minister of Supply and Services announced the Annual Procurement Plan and Strategy (APPS). Under APPS, federal procurement activities are co-ordinated in a conscientious effort to use the government's purchasing power in a way that most benefits Canada and its economy.

In 1984-85, for example, the government will use its massive buying power to initiate a sweeping new program to bolster Canada's fledgling $1-billion-a-year software industry. This year's APPS also calls for more business to be done through Supply and Services' regional offices — $1.5 billion worth, up $100 million from 1983-84. The department also promises to give businesses earlier notice of projected purchases so they have time to create new products to fill government needs.

The federal level isn't the only government that's "Thinking Canadian". Several provinces supported the previous "Shop Canadian" program, and the proposal to launch a new, more comprehensive domestic marketing program was widely endorsed at the February 21, 1983, meeting of federal/provincial industry ministers. A number of provinces have indicated they will be participating directly in "Think Canadian" or introducing complementary future programs of their own.

Program Activities

"Think Canadian" activities will be geared towards two groups of consumers — general consumers and purchasing groups in business, industry and government. Television advertising and mall posters will be directed at both groups to create awareness of the benefits of "Thinking Canadian".

The complementary "Hooray! It's Canadian" theme will be used in store-wide promotions, point-of-purchase displays, and the tagging and labelling of Canadian-made goods, together with direct mail campaigns, to encourage general consumers to comparison shop and give competitive Canadian goods equal consideration when making purchases.

To ensure the success of this campaign, Canadian manufacturers of consumer goods are strongly urged to identify their products with "Hooray! It's Canadian" tags and labels. Industry Minister Ed Lumley has sent out some 43 000 letters to manufacturers across the country, emphasizing the importance of their participation in the program and requesting them to become actively involved. Making retail consumers aware of the value of "Thinking Canadian" is all well and good, but they have to be able to find Canadian-made products in order to be able to buy them.

To determine which products are qualified to use the "Think Canadian" or "Hooray! It's Canadian" symbols, the standard that was developed by the Canadian General Standards Board (CGSB) for the "Shop Canadian" program will be used. According to the CGSB definition, the identification "may be applied to any consumer product in the production of which the last substantial operation was performed in Canada, adding significant Canadian value, in an undertaking equipped for the purpose, resulting in a new product and representing an important stage of manufacture."

In addition to the activities aimed at general consumers, there will be numerous initiatives targetted specifically to public and private sector industrial and institutional buyers. Manufacturers, processors and retailers will learn about the benefits of buying Canadian-made goods and services through such events as "reverse" trade fairs.

At these fairs, the normal procedure is reversed. Instead of Canadian sellers getting together to market their products, Canadian buyers collectively identify their purchasing needs to prospective sellers. Such shows enable Canadian manufacturers to pinpoint existing marketing gaps and plan future operations to fill them. Reverse trade fairs have proved to be very successful in the past, particularly in the mining equipment and health care products areas.

Canadian manufacturers who want to expand their share of the domestic market will also be able to make use of the recently published book, *Manufacturing: A Catalogue of Canadian Market Opportunities*, which identifies market opportunities currently supplied through imports. Over the longer term, the planned improvement of the accuracy and availability of import data will also help these companies design their domestic market expansion efforts.

Canadian sourcing will also be encouraged at specialized industrial shows geared towards local suppliers who could take advantage of the opportunities offered by major projects situated in particular regions. For example, firms wishing to become suppliers to Canada's offshore drilling activities could benefit from a show held in Atlantic Canada to brief them on project needs in the coming years.

Industrial and institutional buyers will also benefit greatly from the revamping of the Business Opportunities Sourcing System (BOSS). Established in 1978, BOSS is a voluntary service that provides a computerized listing of Canadian suppliers and their capabilities. BOSS is distributed widely across government offices and Chambers of Commerce in Canada and Canadian trade posts abroad and is intended to make it easier for Canadian and foreign buyers to source their requirements in Canada.

The current revamping of the system will improve the data base, in both the goods and services areas, and expand the mode of access through on-line computers, indexes and micro-computers. Being registered with BOSS can increase your business' visibility a thousand-fold. So, if your business isn't already registered, we urge you to file an application at the nearest DRIE regional office, listed on the inside back cover of this magazine.

In announcing the "Think Canadian" program, DRIE Minister Ed Lumley said, "While it is essential that Canada continue to encourage the free flow of goods and services internationally, it is also vitally important to create opportunities that will allow competitive Canadian goods to find their rightful place in the Canadian marketplace. Without an active and growing manufacturing and industrial base, we cannot maintain our position among the major industrialized nations of the world."

It is in our best interest to buy Canadian-made products and services when they are available and competitive in price and quality. And it is up to Canadian companies to ensure availability and competitiveness. This new domestic marketing program is vitally important to our well-being as a nation, and it needs the support of every Canadian to make it work. If we all make it a habit to "Think Canadian" when we buy, the benefits to our industry, our workforce, and our economy will be tremendous.

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CanaTech '84

Billions of Dollars at Stake

U.S./Canada Defence Contracts Opening Up for Canadian High Technology Industries as a result of changes in U.S. Defence Procurement policies.

Changes in United States defence procurement policies and offsets in Canada/U.S. production sharing agreements will mean hundreds of millions of dollars in increased markets, delegates to the Can/Am Future Tech Symposium of the recent Ottawa CanaTech '84 show were told.

The symposium was sponsored by the Canadian Advanced Technology Association (CATA) and the National Security Industrial Association (NSIA) of the United States. It brought together top U.S. defence officials headed by Dr. Richard D. De Lauer, U.S. Under-Secretary of Defense, Research and Engineering, a high profile panel of purchasing agents for some of the largest defence contractors in the U.S., and Jean-Jacques Blais, Canadian Minister of National Defence, plus other senior Canadian government officials and representatives of the Canadian high technology industry.

While defence-related trade between Canada and the U.S. has amounted to some $17 billion over the 1959 to 1983 period, Mr. Blais deplored the fact that, by and large, it has led to the development of a build-to-print sort of industrial plant, heavily dependent on foreign technology. The aim now must be to develop, much more so than Canadians have in the past, the inventive knowledge base and research and development capabilities on which a truly significant industry depends.

As if to open the door to greater Canadian participation in defence-related research, several American speakers stressed the fact that future advanced technology purchases by the U.S. Defense Department would emphasize off-the-shelf products in many fields of high-tech, estimated at $33 billion to the end of the 1980s.

The U.S. or its NATO allies cannot afford to waste their defence budgets on R&D which has already been addressed by other members. In the development of new technology there must be a much greater focus on co-operation than has been evident in the past.

Leading edge technology, they said, was far too expensive for any one country to carry out in isolation. In the light of this, the NATO countries are drawing up a list of future priorities in defence research and development which will be divided among the various members of the alliance, both in Europe and North America.

In outlining American priorities for the spending of some $33 billion on defence-related R&D, the speakers identified 17 major emerging technologies that have been targetted in the U.S.

These include:

- **Microelectronics** — Electronic devices capable of large scale integration of multiple components on a single chip.
- **Opto-Electronics** — The branch of electronics that deals with solid-state and other electronic devices for generating, modulating, transmitting and sensing electromagnetic radiation in the ultraviolet, visible-light and infrared portions of the spectrum; the field of sensor technology related to optical devices, laser equipment and others.
- **Acousto-Optic Processing** — Generally very high-speed devices which transform instantaneous single valued functions of light and sound (Fournier) to track moving objects, i.e. Bragg Cells.
- **High Density Monolithic Focal Plane Arrays** — Devices which reduce the wiring complexity of electro-optic sensors by doing some of the signal processing and signal conversion at the point of detection and tracking.

- **Sensor Technology** — The generic name for a wide range of devices that sense either the absolute value or a change in a physical quantity such as temperature, pressure, flow rate and the degree of acidity or alkalinity (Ph). They also measure the intensity of light, sound or radio waves and transform this information into a useful signal for an information gathering system. Therefore, a television camera is a type of sensor as is a transducer. A broad spectrum of sensors is constantly being refined.

(Note: For the most part, the above technologies are used in the detection or targetting of missiles, aircraft, etc., with such systems as radar although they may also be used to develop new materials or control robotics.)

- **Directed Energy Technology** — Laser and particle beam weapons are the front runners. These technologies are fundamental elements of any future outer space ballistic missile defence systems.

- **Super Computers, Artificial Intelligence and 5th Generation Computers** — All are interwoven technologies designed to enable computers to make the quantum leap into intuitive and deductive decision-making processes. Generally, these terms imply much faster and larger processing capabilities with highly advanced software — none of which has been developed as yet.
- **Embedded Computer Systems** — Generally microprocessors or minicomputers which form an element of an overall system and are programmed to perform certain fixed tasks as part of a larger system function. Embedded computers are sometimes reprogrammable but require engineering work to change the fixed tasks they perform.
- **Advanced Algorithms for High-Speed Signal Processing** — The present limit on many military and other sensing systems is the ability to manipulate and analyze sensor data. New and faster procedures for solving mathematical problems are required as a complement of new hardware such as acousto-optic detectors.
- **Rapid Solidification Technology** — The change of a fluid (liquid or gas) into the solid state.
- **Advanced Composites** — The development of new plastics and metals with greatly enhanced properties.
- **Space Nuclear Power** — The development of nuclear as a source of power in space.
- **Large Space Structures** — The development of such structures to serve as defence platforms or as manufacturing sites in space.

Many U.S. defence contractors engaged in the development of advanced technology seek partners to share costs & benefits.

- **Biotechnology** — The application of biological techniques and materials to the development of new or improved substances or techniques.

Any Canadian company which has or is developing new processes in any of these emerging technologies would be wise to advise the local Regional Office of the Department of Regional Industrial Expansion (DRIE) which can steer it to the proper procurement channels of the U.S. Defense Department.

In addition to direct sales to the U.S. Defense Department, representatives of many of the largest U.S. defence contractors pointed out that they were always on the lookout for suppliers of components and sub-systems for their major defence contracts.

Many of these companies are engaged in the development of advanced technology and are looking for partners to spread the high costs of such research and development. Most are well aware of the excellent reputation of Canadian high-tech firms, particularly in the field of telecommunications and space technology.

But these firms (among them Lockheed, Sanders, Newport News, Astro and GTE) were also looking for Canadian partners in other areas of defence and related procurement to balance their off-set commitments with the Canadian government for the purchase of new defence equipment, for example the F18 fighter interceptors.

DRIE Regional Offices have complete lists of the procurement personnel of these companies and a broad cross-section of American defence corporations.

CanaTech '84

Canada-U.S. Mutual Security Focus of Conference

CanaTech '84, the annual showcase of the Canadian Advanced Technology Association (CATA) held recently in Ottawa, this year focused on the close relationship between Canadian and American high technology industries in the development of mutual security based on leading edge technology.

To develop these themes to the fullest, CATA joined forces with the National Security Industrial Association (NSIA) of the United States to attract what was probably the highest profile assembly of defence and high-tech experts ever gathered in Canada.

While the concurrent Ottawa High Technology Show concentrated on the nuts and bolts of the industry, CanaTech dealt more fully with its financial aspects and the close relationships between advanced technology and defence. There was a great deal of common interest in the two shows and a shuttle-bus service transported participants and exhibitors between them.

CATA is a national association of more than 120 Canadian firms engaged in research, development and manufacture of advanced products and services across a broad spectrum of technology, from informatics to biotechnology. NSIA, on the other hand, restricts itself to those companies devoted to national security — some 300, large and small, throughout the U.S.

Investment in high technology, particularly in the realm of research and development, was a major topic dealt with by two speakers at the Canatech '84 conferences.

Andrew Kniewasser, president of the Investment Dealers Association, told delegates to the CanaTech Investor Conference that "savers" must be encouraged to direct more money into risky ventures.

He called on the directors of pension and insurance funds to review the limits they have placed on equity investment managers. These pools of capital represent more than $150 billion in Canada — $86 billion in pension funds, $45 billion in insurance investments and $28 billion in registered retirement plans.

The Investor Conference provided an excellent opportunity for innovators to meet the investors both at formal sessions and informally later, as well as on the main floor of the Ottawa Capital Convention Centre where both groups set up their information booths.

Scores of potential investors and the equally numerous high-tech financial executives were warned by Finance Minister Marc Lalonde that he had almost reached the limit in the amount of money the federal government could afford for high technology without actually harming investor commitment to research and development.

While Mr. Lalonde reaffirmed the government's commitment to R&D, he pointed out that federal support for technology development surpassed $1.2 billion in 1983-1984 — including tax incentives, training assistance, grants, loans and contracts for goods and services.

In particular, he was surprised by the magnitude of private investors' response to letting companies pass unused R&D credits to investors in the form of scientific research credits. More than $1 billion in R&D financing had been provided in the first three months of the program, he said.

"The revenues foregone through tax incentives have a direct bearing on the government's financial position, which is itself a key factor in the investment climate."

He reminded the high-tech investment community that Canada does not yet have the large and well developed manufacturing sector that is the source of R&D spending in other countries. Nor does it have a dominant defence industry establishment capable of supporting the leading edge technologies.

"There is a limit to the pace at which progress can be made effectively and efficiently. We are not engaged in a contest to see how much money can be thrown at any and all R&D proposals in the shortest time," he continued.

Mr. Lalonde further warned of a real danger that badly conceived or excessively generous tax incentives could produce not only diminished returns but some damage to the development of strong and sustainable investor confidence. Such commitment also required investor confidence that the government would maintain strong fiscal responsibility.

He called on the investment community to take the initiative and told them it was worth it since the rewards matched the risks.

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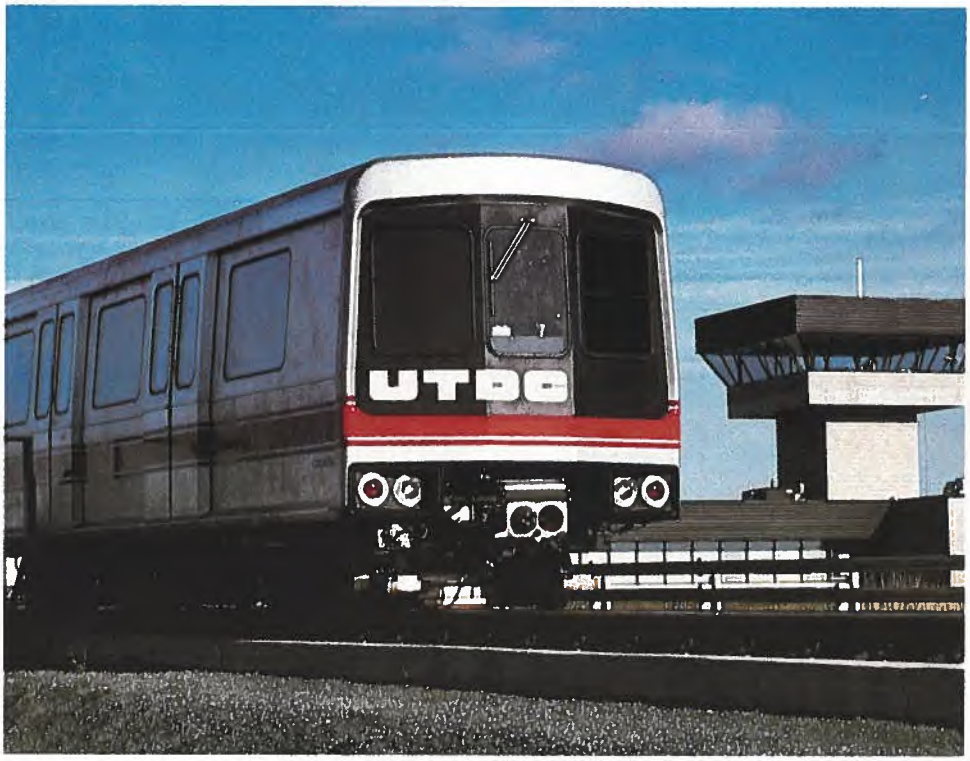

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