CANADA COMMERCE

October 1981

ISSN 0068•7251

Canada Commerce
October, 1981
Published by the Department of Industry, Trade and Commerce (Public Information Directorate)
Established 1904

Managing Editor, Periodicals:
Anna Hibberd

Editor:
Don Wight

Contributing editors:
Bob McDonell
Shirley Plowman

Designer:
Stephen Shewchuk

Correspondence to:
Canada Commerce (98)
Department of Industry, Trade and Commerce
Ottawa, Ontario K1A 0H5

Telephone:
(613) 995-7489

Please note that Canada Commerce is available free of charge in Canada only to interested Canadian manufacturers and business persons.

Publié aussi en français

Contents **Page**

Editorially speaking. . . .

October. The oil pricing agreement of September behind us, the fall budget upon us, and the biggest consumer spending season of the year before us. Were there ever any idle days of summer? Assuredly not for that important sector of the Canadian economy which caters to the tourist trade — and just how important it is, internationally as well as domestically, is revealed in this month's **Economists' Corner** (page 17).

Not for all those harried behind-the-scenes organizers of fall trade fairs and fall conferences, either. Certainly it could not have been a restful summer for those involved with the intricate arrangements concerning the Eighth International Symposium on Small Business which comes to Ottawa this month. Readers may learn more about that — and post-Symposium events — in the **Canada Commerce** special issue on small business which accompanies this edition.

We wish you good reading — and the busiest of seasons.

A.H.

Forestry Industry Prime Market for Canadian Exporters

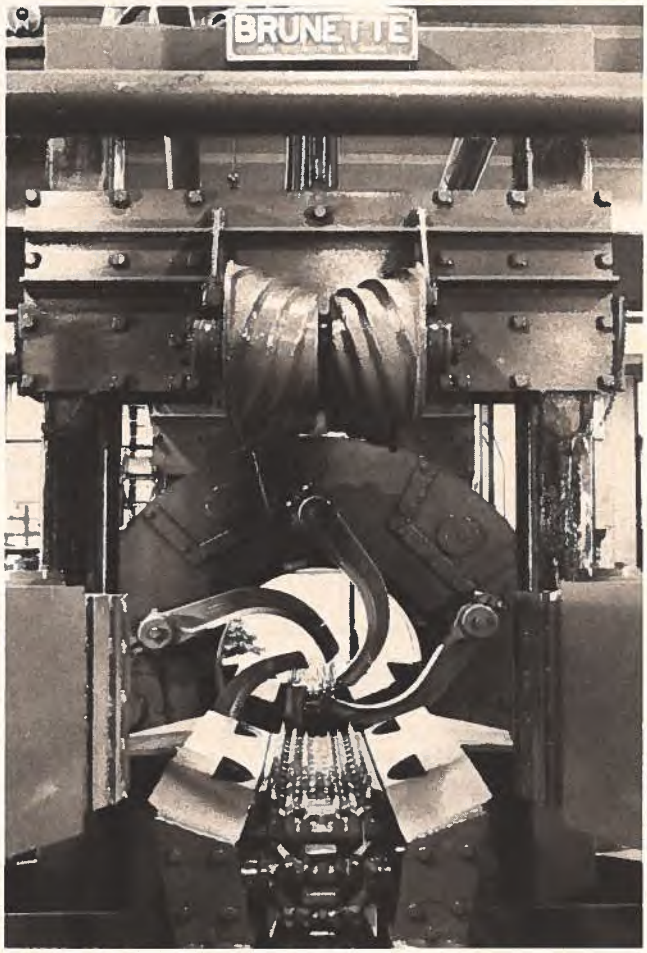
A growing number of Canadians — business persons, manufacturers, consultants and industrialists — increasingly are seeing Australia as a prime market for Canadian products and expertise. Perhaps nowhere is the potential for Canadian exporters greater than in providing equipment and services to Australia's burgeoning forestry industry — "a high growth sector" that has more than $2 billion worth of projects in the pipeline! While several respected Canadian companies are already well established in this lucrative market, there is room for many more, as is evident in this. . . . .

Report from Australia
by Leon B. Stryker, Commercial Officer, Melbourne

A look at a map of Australia, with its forest lands coloured green against the light tonings of the inland 'desert' regions, is clear evidence of the sparseness of this continent's forestry resource. The timber areas are mainly confined to the slopes of the Great Dividing Range running north and south down the eastern seaboard from Queensland, through New South Wales, to Victoria and round the corner towards South Australia. In addition, there are stands of unique species of hardwoods in southwest Australia, while the Tasmanian economy is geared towards the forestry sector.

Statistically, 43 million hectares (106.2 million acres) of Australia's land mass of 3 million square miles (7.7 million square kilometres) are considered productive or potentially productive forest. Of this, only 13 million hectares (32 million acres) are managed as deliberate commercial forest operations.

Despite this seemingly singular lack of resources, the forestry industry in Australia is recognized as a high growth sector and has more than $2 billion worth of projects in the pipeline. Why this paradox? Who will be investing this capital and, more importantly, what will be the opportunities for Canadian logging, sawmilling and pulp and paper equipment? Let's walk through the bush and find out what's happening.



Another Canadian company which has penetrated the Australian market is Brunette Machine Works Limited of New Westminster, B.C. Shown here is the company's heavy-duty ring debarker.

Australia, with only hardwood forests native to this country, has long been dependent on imported softwood pulp and timber from the U.S. West Coast, Canada, Scandinavia and New Zealand. To redress this imbalance, a program of planting softwood trees, mostly pinus radiata, was begun some 80 years ago and, in the years since World War II, has accelerated tremendously. The aim is to make the industry near self-sufficient in all grades of softwood products by the end of this century.

Softwood trees grow quickly in the beneficial Australian climate, producing first-thinning pulpwood at 13 to 15 years and saw logs/pulpwood on an integrated basis from 19 years to final crop (clear felling) at 35-45 years. With about 700,000 hectares (1,730,000 acres) currently planted out to pines, the program, which is being developed and carried out both by State Forestry Commissions and private enterprise, will continue at a rate of 25,000 hectares (61,775 acres) a year reaching an anticipated total area of 1.2 million hectares (2.96 million acres) by year 2000.

The swing away from the indigenous eucalypt (hardwood) timbers is evident by the forecast that, by the end of this century, production of hardwood sawlogs/pulpwood will have fallen from 12.3 million cubic metres (434.3 million cubic feet) per annum to 11.2 million cubic metres (395.5 million cubic feet). By comparison, total production of softwood milling and processing will rise dramatically in the same period from 5.1 million cubic metres (180.1 million cubic feet) to 13.3 million cubic metres (469.7 million cubic feet). Very few countries in the world today face such man-made resource expansion programs as does Australia.

Canadian promotional efforts strong. . .

With developments planned for every phase of the forestry industry in this country, it is obvious there will be increasingly more opportunities for sales of Canadian technology. In the pulp and papermaking segment of the industry for instance, Canada already enjoys an excellent reputation for consultancy services as well as equipment supplies.

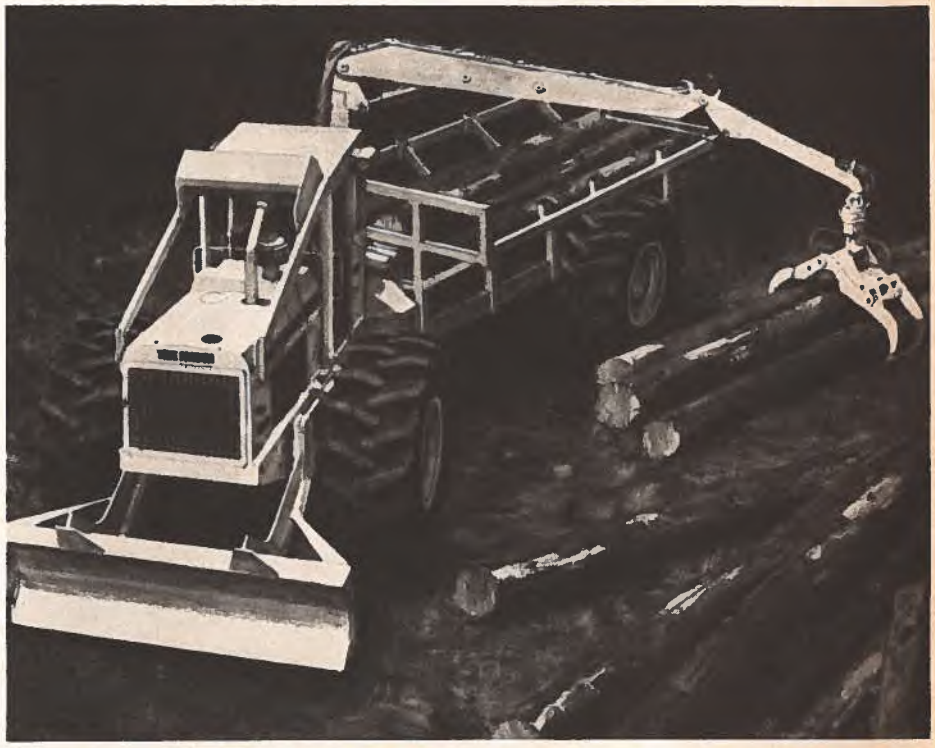
Here we must pause and try and untangle the confusion usually affecting a visitor to these shores when confronted by the acronyms for the three major companies in this field — APM, APPM and ANM.

Australian Paper Manufacturers Ltd. (APM), is the dominant force in the industry, producing more than 200 grades of kraft paper and paperboard for the packaging industry. The country's largest private forest owner on mainland Australia, with 73,500 hectares (181,618.5 acres) of plantations, APM at present has a yearly paper and paperboard production capacity of 800,000 tonnes while its pulp mills can produce 350,000 tonnes a year. This company has several large-scale expansion programs planned which will strengthen its position in the industry.

At its Maryvale mill in Victoria (some 160 km or 100-odd miles east of Melbourne), APM will be expanding its softwood and hardwood pulping operations by 140,000 tonnes with a $300 million project. H.A. Simons Ltd. of Vancouver has been appointed project engineer for this scheme which will eventually reduce APM's dependence on imported softwood pulp. This company is also planning a $75 million TMP mill at Millicent near Mt. Gambier where it will produce an additional 75,000 tonnes of softwood pulp from thinnings becoming available from the South Australian State Forestry pine plantations. The other major project, a $300 million bleached kraft pulp mill in Queensland, has been given a temporary setback by the State Government which has indicated it would prefer to see a printing paper plant built as well as a pulping operation. APM's original proposal was for a 200,000 tonnes/year pulp mill leading eventually, as the market dictates, to the building of a kraft paper mill.

Association Pulp & Paper Mills Ltd. (APPM), is the country's sole manufacturer of a broad range of fine and printing papers as well as telephone directory paper. Total pulp production by APPM is approximately 90,000 tonnes a year while paper production exceeds 230,000 tonnes a year.

APPM, over the past 18 months or so, has engaged in a series of takeovers of Tasmanian-based timber and woodchipping companies in a bid to consolidate its already very strong position on that island — where it is the State's largest private employer. To utilize its significant forestry holdings, APPM has joined forces, on a joint venture arrangement, with a consortium of six Japanese paper companies to build a $400 million chemical pulp mill at its Wesley Vale site. The company's earlier plans to install a lightweight coated paper making machine and ancillary equipment at Wesley Vale (with a price tag of around $300 million) have been shelved pending a reassessment of this proposal.



Tree farmer log skidders, such as this, are just one forestry product made by Hawker Siddeley Canada Ltd. The company recently made a major breakthrough in the Australian market with its "Chip N Saw" system.

Australian Newsprint Mills Ltd. (ANM), Australia's sole producer of newsprint, almost doubled production capacity when its new mill at Albury NSW (on Victorian Border) was opened in August 1981. This mill, which cost more than $250 million, will produce 180,000 tonnes a year in a market currently estimated at 470,000 tonnes a year. H.A. Simons Ltd., who carried out the original feasibility study, was appointed project engineer for the Albury mill. More than 400,000 cubic metres (14,125,760 cubic feet) of softwood thinnings from plantations in New South Wales and Victoria will feed ANM's mill. At its main plant and head office at Boyer, Tasmania, ANM has plans to rebuild its No. 2 papermaking machine at an estimated capital expenditure of $10 million.

Softwood resources belonging to the Forestry Department in New South Wales will become available when proposals for their utilization are considered by the State Government. APM is one of the likely contenders for this allocation which could lead to a 150,000 tonnes/year capacity TMP mill being approved. Across in the west, the Perth-based WA Chip & Pulp Ltd. has plans for a $30 million TMP mill using hardwood residue as feedstock.

Major Developments

Other major developments resulting from the increasing availability of softwood thinnings and sawmill residue include Australia's first medium-density fibreboard plant being built at Wagga Wagga, New South Wales, at a cost of $35 million. A.V. Wehl Industries Ltd. of Melbourne has entered into a joint venture with the New Zealand-based Canterbury Timber Products Ltd. for this project which will use pulpwood from the Tumut district pine plantations and will have an output of 60,000 tonnes of board a year. This new plant is indicative of the growth expected in the particleboard industry in Australia which currently has an annual output of 600,000 cubic metres (21,188,640 cubic feet).

in the market have been fairly

Over the past few years, Eaton Yale Ltd. of Woodstock, Ontario, has enjoyed tremendous success in Australia, particularly with its Timberjack range of grapple-skidders.

The availability of resources has led to the building of highly-automated softwood sawmills in various parts of the country. The main developments have occurred around the Mount Gambier region of South Australia where the first plantings of exotic pines were carried out nearly 100 years ago. Canadian equipment is used at different stages of the operation within these mills, from debarking the logs to lumber sorting and stacking. Companies that have been successful, either on a direct export basis or through licensing arrangements with local sawmill equipment manufacturers, include Brunette, Nicholson Murdie, CAE Machinery, Kockums (originally Letson Burpee) and Newnes.

H.A. Simons Ltd. features prominently as a consultant in this field, having had initial success in Australia with the design and engineering of the Australian Forest Industries Ltd. integrated mechanical pulpmill and sawmill at Myrtleford, Victoria, in the mid-seventies. AFI plans to upgrade this sawmill at an estimated cost of $8 million. Australian Forest Industries, a subsidiary of Bowater Scott Australia Ltd., is adding a $10 million plywood plant to its Myrtleford complex.

Mention must be made of a significant breakthrough into the Australian market by Hawker Siddeley Canada Ltd., Vancouver, with its sale of a "Chip N Saw" system to SAPFOR Ltd. of Mt. Gambier, S.A. The production manager of SAPFOR was invited to Canada in September 1980 with other Australian forest industry representatives on a mission jointly sponsored by the B.C. Provincial Government and the federal Department of Industry, Trade and Commerce (IT&C). As a result of exposure to the "Chip N Saw" concept in several mills in B.C. and other parts of Canada, the SAPFOR executive was convinced this system was appropriate for his company's new $5 million small-diameter logmill to be completed in February 1982. It is expected the success of Hawker Siddeley's equipment at the SAPFOR mill could lead to further sales as more pine thinnings become available in various parts of Australia.

In the softwood logging and harvesting sector of the industry, the demand is for labour-saving processing or integrated units. Hardwood timber, of course, does not lend itself to full mechanization due to the size and type of timber in the bush. Competition is very strong in this sector from the United States and Sweden. John Deere is capturing sizeable sales with its tree harvester, the 743A, while the Kockums/Logma combination is making inroads in several areas. This Swedish company, for example, was successful in winning ANM's contract for mechanical harvesting equipment required to supply logs to the company's new newsprint mill at Albury. Ten harvesting systems will be deployed in this, the largest commercial thinning operation yet undertaken in Australia. Each system will consist of a Kockums 880 feller-buncher, a Logma 310 processor to delimb and dock into required lengths, and a Kockums tractor to transport the logs to roadside.

One Canadian logging equipment company has enjoyed tremendous success over the past two years. Eaton Yale Ltd. of Woodstock, Ontario, with its "Timberjack" range of grapple-skidders and forwarders, now has — from almost zero sales — more than a 30 per cent share of this segment of the market. A combined aggressive approach to the marketing of the "Timberjack" equipment by the Canadian company and its new Australian distributor is responsible for this turnaround.

Canadian promotional efforts in the market have been fairly strong since participation in FIME 80 at Myrtleford in April 1980. Since then the Australian Forestry Mission to Canada was organized in September 1980 in association with the B.C. Government, followed by a Pulp and Paper Equipment Mission to this country in April 1981. Planning is already underway to maintain this momentum to ensure that Canadian suppliers retain and, hopefully increase, their share of the available market.

Manufacturers of equipment of likely interest to the Australian forestry industry should contact the Machinery Branch at IT&C Ottawa for details of these promotional projects. In the meantime, they may wish to contact the Canadian trade offices in Sydney and Melbourne for an on-the-spot assessment of the potential for their equipment in this fast-developing industry in Australia.

Addresses are:

In Ottawa:
Machinery Branch
Mining, Metallurgical and Forestry Division (47)
Department of Industry, Trade and Commerce
235 Queen Street
Ottawa, Ontario K1A 0H5

In Sydney:
Canadian Consulate General
A.M.P. Centre, 8th Floor
50 Bridge Street
Sydney, N.S.W. 2000, Australia
Telex: (71) 20600

In Melbourne:
Canadian Consulate General
Princes Gate East Tower, 17th Floor
151 Flinders Street
Melbourne 3000, Australia
Telex: (71) 30501

Successfully Selling to New England's High Technology Industry

The Canadian Consulate General in Boston has helped literally hundreds of Canadian companies to obtain export contracts with high technology industry in the six New England states — a region that has the greatest concentration of high technology companies east of the Santa Clara Valley in California. The following article explores some of the existing opportunities for components and high technology systems for defence and commercial applications. Also offered is a formula for successful selling in this market.

Report from Boston

by G.M. Lehner, Commercial Officer

The New England market continues to provide Canadian manufacturers of high technology components and systems the opportunity to successfully compete in sophisticated defence and commercially related programs. New England has a population of 12.2 million, or less than six per cent of the American population, but this region usually accounts for about 13 per cent of the DOD prime contract awards. DOD spending for procurement and RDT&E increased from U.S. $53.5 billion to U.S. $68.1 billion between 1978 and 1980. President Reagan's plan for a military buildup is expected to add $184 billion to the defence budget during the next five years, and U.S. industry will be hard pressed to meet deliveries.

Many opportunities in New England relate to major systems being developed by well-known companies such as Sikorsky Aircraft, Kaman Aerospace, General Electric, Raytheon, Consolidated Diesel Electric, Wang Laboratories, Prime Computer, etc. A list of the most significant prime contractors in the Boston Post territory is provided in list 1.

Why have Canadian companies achieved so much success in selling to New England?

For openers, Canada is not "foreign" in the minds of New Englanders. Two-way migration has led to the prediction that more than half of the New Englanders have relatives in Canada. Canadian license plates bear witness to the flow of visitors to New England's beaches in the summer and mountains in the winter. We speak the same business language, and the border has effectively been eliminated by the Defence Production Sharing Agreement which provides duty-free access for most components and products destined for military use. This agreement also waives the provisions of the Buy America Act so that Canadian companies are on an equal footing.

Second, much of Canadian industry is within a day's truck drive of New England. This is a distinct advantage for procurement personnel who, in many cases, must purchase components from as far away as California. Transportation charges from many points in the U.S. are more expensive than shipping the same item from Canada.

Three, Canadian industry has proved itself extremely competitive. The current exchange rate puts the Canadian dollar in a very favourable position when it is compared to the U.S. dollar.

Four, many Canadian companies already supply U.S. original equipment manufacturers (OEM's) and have earned a good reputation for the components and systems they manufacture.

Five, Canadian companies are able to meet the most exacting standards as required by U.S. defence prime contractors. Their quality control systems, in most cases, conform to or can be upgraded to meet MIL-Q-9858A, MIL-I-45208A, MIL-P-55110B and C, etc.*

In other words, the programs and corresponding dollars are here. If you manufacture any of the items noted in Box 2 and are currently marketing these items to the industry(ies) listed in Box 3, the New England territory is the place for you.

How do you take advantage of this active, challenging, exciting, innovative, receptive, stimulating, vibrant and vigorous market?

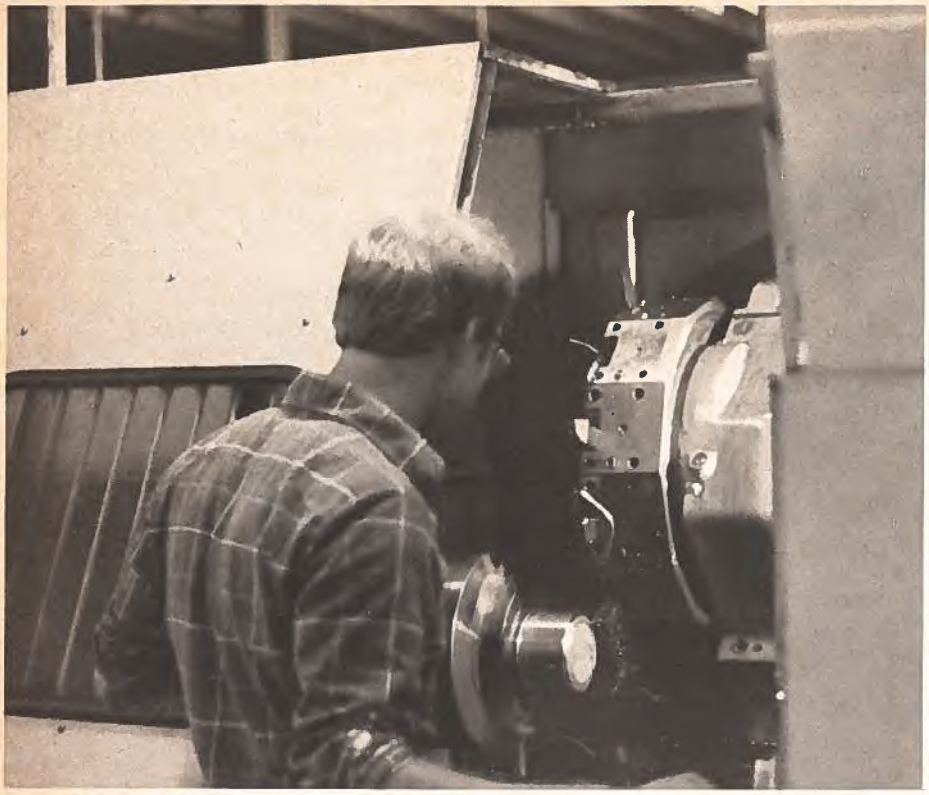
First, provide the Consulate with the following information on your company: Gross sales, number of employees, plant size, descriptive literature, customer list, and MIL Spec(s) your firm meets.

Second, list any special services and capabilities of which your company is capable: e.g. NC or CNC equipment; flex prints; multilayer PCBs to MIL-P-55110C; thick or thin film hybrids; precision grinding; or vacuum cast parts for jet engine blades.

Upon receipt of this information, the Boston Post will provide background information to acquaint you with the New England territory. After you have read and digested this information, contact the Post and make arrangements for a market plan to be developed and implemented.

As a result of the effort which has been put forth in the sector, the Boston Post, in conjunction with the Department of Industry, Trade, and Commerce, Ottawa, will mount its second Canadian High Technology Marketplace in Boston at the Plaza Castle on October 20-22, 1981. This solo Canadian exhibition — in which more than 100 Canadian companies are expected to participate — has been planned to assist U.S. OEM designers and engineers as well as procurement, production, and management personnel to see Canadian expertise in the areas of precision mechanical parts, electrical and electronic components and systems, computer software and hardware, plastics and many other categories. The selection of New England for the second time as the site of the Canadian High Technology Marketplace is a reflection of the high esteem in which this region's industry is held as leaders and innovators in this sector. In Canada, we have such

***Military specifications and standards required by the U.S. Department of Defence which are available by mail from: Noval Publications and Forms Centre (N.P.F.C.), 5801 Tabor Ave., Philadelphia, Penn., U.S.A. 19120 or by phoning (215) 697-3321.**



innovators, and many of them will be represented in Boston, ready to do business.

In summary, the defence and high technology market in New England deserves your time and effort. There are many contracts. New England purchasing agents are pleased with Canadian capability and expertise. Canadian firms have proved themselves worthy of New England purchasing agents' consideration. The opportunity exists. The market has proved itself a strong, exciting, and extremely lucrative medium for Canadian firms to market high technology components. Many Canadian firms are already successful. There are many long-term contract awards. The DOD R&D and Procurement Budget is expected to increase. Let's expand our share!

Canadian Consulate General
500 Boylston Street
Boston, Massachusetts 02116
Tel: (617) 262-3760

A Merand machinist/technician sets up this computer assisted four-axis milling machine.

Significant prime contractors and the products they manufacture. Are you selling to these OEM's?

1

Adams Russell Co., Inc.
Antenna & Microwave Division
Amesbury, MA
Cable Assemblies, Cable Antennae, and Waveguides

Airpax/North American Philips Controls Corporation
Cheshire, CT
Avionics

Avco Corporation
Systems Division
Wilmington, MA
Fuzes, Desalinization Systems, Space Systems, R&D

Avco Lycoming Division
Avco Corporation
Stratford, CT
Jet Engines

Baird Corporation
Bedford, MA
R&D, Night Vision Instruments, Infrared Sensors, Spectrometers, Court Recorders, Photographic Printers, Nuclear Equipment for Medical Diagnosis

Bath Iron Works
Bath, ME
Naval Ships

BIF A Unit of General Signal
West Warwick, RI
Flow Controls

Bostitch Division of Textron Inc.
East Greenwich, RI
Stitchers (Wire), Staples (Machine Applied), Staplers, Automatic Hand Tackers and Container Machinery

Bryant Grinder Corp.
Springfield, VT
Internal and External Form Centerhole Grinders and Special Machinery

Bulova Watch Co. Inc.
Providence, RI
Watches, Fuzes

Centronics Data Computer Corp.
Hudson, NH
Matrix Dot Printers

Century Brass Products, Inc.
General Products Division
Waterbury, CT
Automotive Products for OEM; Brass Strip and Tube

Chandler Evans, Inc.
Control Systems Division
Colt Industries
Gas Turbine Controls, Pumps and Valves, Aircraft Valves and Actuators, Missile Flight Controls

Colt Industries Inc.
Firearms Division
West Hartford, CT
Ordnance

Cone-Blanchard Machine Co.
Windsor, VT
Vertical Rotary Surface Grinders, Multiple Spindle Automatic Bar and Chucking Machines

Consolidated Diesel Electric Company
Division of Condec
Old Greenwich, CT
Ground Support Equipment Aircraft & Missiles, Hydraulic Pneumatic Mechanical & Electrical Test Equipment, Engine-Driven Generators, Amphibious Vehicles, Mobile Bridges, Truck Refuelers

G.W. Dahl Company Inc.
Bristol, RI
Valves

Data General Corporation
Southboro, MA
Computers

Data Products — New England Inc.
Wallingford, CT
Electronic Systems

Digital Equipment Corporation
Maynard, MA
Computers

Dynamic Controls Corporation
South Windsor, CT
Electronic & Electro-Mechanical Controls Aircraft & Missile Field Modular Power Supplies

Eastern Industries LFE
Fluid Controls Division
Hamden, CT
Waste Fluid, Drainage & Dewatering Pumps, Refrigeration Systems, Hydraulic Pumps, Heating & Air Conditioning Systems

Electro Methods Inc.
South Windsor, CT
Jet Engine Parts

The Entwistle Co.
Hudson, MA
Heavy Machinery

Fenn Manufacturing Co.
Division of Amtel, Inc.
Newington, CT
Precision Rolling Mills

Foxboro Company
Foxboro, MA
Digital and Analog Process Control Computers

General Dynamics Corporation
Quincy, MA
Civil and Naval Ships

General Dynamics Corp.
Electric Boat Division
Groton, CT
Submarines

General Electric Company
Small Engine Division
Lynn, MA
Jet Engines

General Electric Company
Ordnance Department of Defense Electronics Division
Pittsfield, MA
Fire Control Systems, Hydromechancal Transmissions, Mechanical Subsystems, Turret Drive Stabilization Systems

General Electric Company
Aerospace Instruments Programs
Wilmington, MA
Jet Engine Instruments, Test Equipment

General Electric Company
Armament Systems Department
Burlington, VT
Ordnance Systems for Military Aircraft, Helicopters, Ships, and Ground Vehicles

GenRad
Concord, MA
Test Equipment

GTE Sylvania, Inc.
Eastern Division
Needham, MA
Communications, Electronic Systems

Hayward Tyler Pump Co.
Burlington, VT
Centrifugal Pumps

Hazeltine Corporation
Electro-Accoustical Lab.
Braintree, MA
Underwater Acoustic Systems

Honeywell, Inc.
Information Systems Division
Brighton, MA
Computer Terminals

Honeywell, Inc.
Electro-Optical Center
Lexington, MA
IR Sensor Systems

Jones & Lamson Products
Waterbury Farrel Division of Textron Inc.
Springfield, VT
Ram & Saddle Type Universal Turret Lathes, Automatic Lathes, Automatic Thread Grinding Machines, Optical Comparators

Kaman Aerospace Corp.
Bloomfield, CT
Helicopters

Kollmorgen Corporation
Electro-Optical Division
Northampton, MA
Naval Periscopes, Electro-Optical Systems and Instruments, Precision Optics

Kollsman Instrument Co.
Division of Sun Chemical Corp.
Merrimack, NH
Gyros, Instruments, Altimeters, Bio-Medical Blood Analyzing Equipment

Lawrence Pumps, Inc.
Lawrence, MA
Nuclear, Chemical, Propeller, Centrifugal Scale Pit, etc., Pumps

Maremont Corporation
New England Division
Saco, ME
Ordnance

Microwave Associates, Inc.
M/A Com Company
Burlington, MA
Microwave Components

Morgan Construction Company
Worcester, MA
Rolling Mills, Wire Drawing Machinery Morgoil Bearings, Furnace Equipment

The Nash Engineering Company
Norwalk, CT
Heavy Pumps

Nashua Corporation
Nashua, NH
Machinery, Equipment & Supplies Relating to the Copier Industry

New England Telephone & Telegraph Co.
Boston, MA
Telephone Systems, Communications Service

Northrop Corporation
Precision Products Division
Norwood, MA
Inertial Platforms, Gyro Systems and Accelerometers

Polaroid Corporation
Cambridge, MA
Cameras

Prime Computer
Framingham, MA
Computers

Raytheon Company
Norwood, MA
Data Terminal Systems, Minicomputers Digital Microwave Radio Systems

Raytheon Company
Equipment Division
Sudbury, MA
Computer Systems, R&D

Raytheon Company
Equipment Division
Waltham, MA
Microwave Equipment and CRT's

Raytheon Company
Equipment Division
Wayland, MA
Computer Display Communications, Laser Systems, Newspaper and Advertising Composition Systems, Radar R&D

Raytheon Company
Missile Systems Division
Tewksbury, MA
(Purchasing Department for Andover and Lowell Divisions) Guided Missiles, Electronic Systems and Space Vehicles

Raytheon Company
Submarine Signal Division
Portsmouth, RI
Sonar Systems

R.C.A.
Automated Systems
Burlington, MA
Airborne and Ground Electronic Systems

Sanders Associates Inc.
Nashua, NH
Avionics, ECM

Simmonds Precision
Vergennes, VT
Avionics Equipment

Stanley Tools
Division of the Stanley Works
New Britain, CT
Hand Tools

Terry Corporation
Windsor, CT
Multi-Stage Steam Turbines, Speed Increasing and Reducing Gears

Texas Instruments Incorporated
Attleboro, MA
Clad Metals in Sheet, Strip & Wire Forms Thermostat Metals & Parts, Controls and Control Systems, Electromechanical & Electronic

The Perkin-Elmer Corporation
Wilton, CT
R&D Space Systems, Electronic Optical Systems, Precision Electronic Components and Lasers

Timex Corporation
Waterbury, CT
Watches, Fuzes, and Gyroscopes

United Technologies Corporation
American Bosch Division
Springfield, MA
Electric Governors, Fuel Injection Systems, Hydraulic Starters, Accumulators

United Technologies Corporation
Hamilton Standard Division
Windsor Locks, CT
Propeller Systems, Control Systems

United Technologies Corporation
Norden Division
Norwalk, CT
Avionics, Radar, and Military Computers

United Technologies Corporation
Pratt & Whitney Division
East Hartford, CT
Jet Engines

United Technologies Corporation
Sikorsky Division
Stratford, CT
Helicopters

United Technologies Corporation
Power Systems Division
Farmington, CT
Peaking Power Plants

Varian Associates
Beverly, MA
Microwave Components and Subsystems

Western Electric
North Andover, MA
Telephone Transmission Equipment

Does your company manufacture any of the following?

2

Castings and Forgings
Ferrous Investment Castings
Non-Ferrous Investment Castings
Stellite Sand Castings
Non-Ferrous Permanent Mould Castings
Non-Ferrous Die Castings
Ferrous Sand Castings
Non-Ferrous Sand Castings
Ferrous Forgings

Machining:
Screw Machine Parts
Swiss Screw Machine Parts
Precision Machining
General Machining
Machine Tooling
Stampings
Gear Assemblies & Singles
Gun Drilling
Beryllium Machining

Sheet Metal:
Dip Brazing
Sheet Metal Cabinetry and Parts

Electrical and Electronic:
Motors
Transformers
PCB Computer Generated Artwork
PCBs (Multilayer and Two-Sided PTH)
Flex Prints
Edge Lit Panels
Cable Harnesses
Component Assemblies
Precision Electronic Components (Specials)
I C (Specials)
Hybrids
Fibre Optics
Servos, Synchros & Mag Wheels
Computer Hardware and Software Systems; e.g. Applicable for Military Development

Others:
Weldments
Injection and Compression Molded Plastic Parts
Fibre-Reinforced Plastics
Autoclave Bonding
Analog Panel Meters — Electrical
Current, Voltage, Temperature, Pressure, Speed, Altitude, Position, and Intensity
Generators, Duplexers, Coalescers, Filters

Are you aware that Canadian companies are doing business with New England OEM's manufacturing:

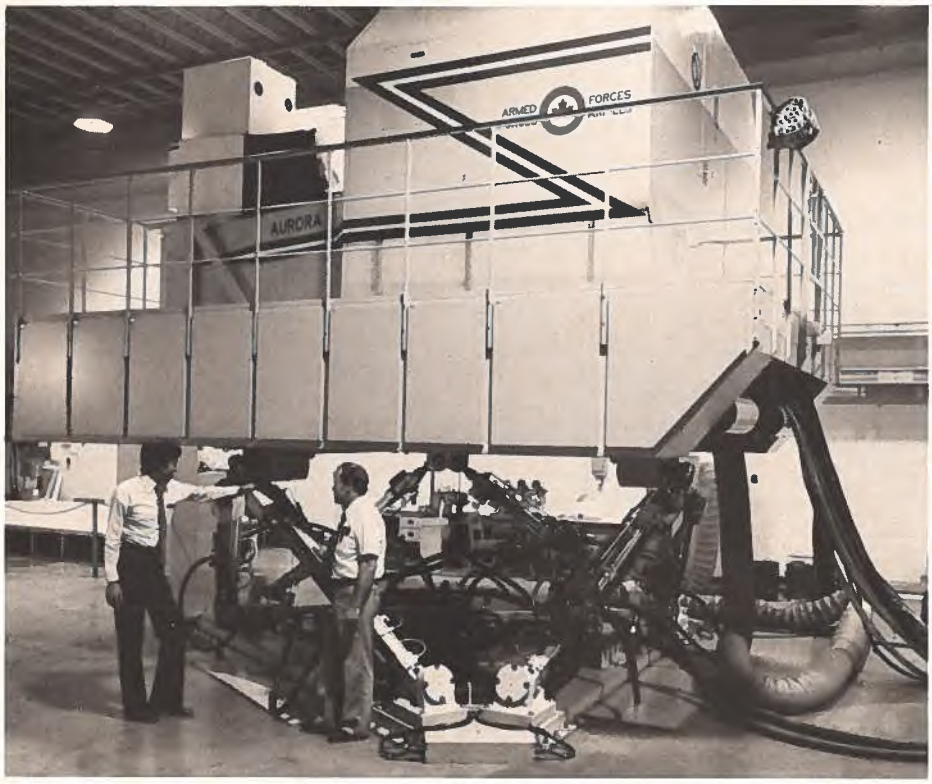
3

Bearings
Cameras
Cryogenics
Electric Hand Tools
Electric Hardware
Electronics
Fibre Optics
Fuses
Helicopters
Laser R&D
Missiles
Munitions
Ordnance
Radar Domes
Sonar Systems
Spectrometers
Steam Turbines
Transformers
Avionics and Aircraft Instrumentation
Communications-Radios
Desalinization Systems
Equipment for Power Plants
Heavy Duty Transmissions
Heavy Machinery and Machine Tools
Heavy Pumps and Valves
Heavy Standby Generators
Inertial and Rate Gyroscopes
Infrared Sensor Systems
Jet Engines and Ancillary Hardware
Medical Instrumentation
Microwave Components
MIL-Spec Black Boxes
Night Vision Sensors
Periscopes
Propeller Systems for Aircraft
Ships Shaft Seals Components
Space Systems and R&D

The following article, submitted by a Canadian businessman with first-hand experience in the topic under discussion, looks at the opportunities that exist in the United States for Canadian companies capable of providing products and services to that country's massive defence industry. That U.S. President Ronald Reagan, in a March 10-11, 1981, visit to Ottawa, reaffirmed the 1959 Canada-U.S. Defence Production Sharing Agreement, is further confirmation that. . . . .

Canadian Opportunities Exist in U.S. Defence Market

by John McManman



It would appear that the word "defence" may be spelled with an "s" or a "c", depending in which country we live — the United States or Canada. Either way — it expresses an opportunity for Canadian industry.

In a recent brief issued by sources at the United States Pentagon it was suggested an "all-up" figure of $1.6 trillion will be expended during a four-year period for defence. It is possibly a little difficult to imagine such a vast sum of money to be allocated to security, but unfortunately world tensions indicate it prudent to be prepared.

What does this mean to Canada and our industries? It allows Canadian industry an opportunity to become involved. We as Canadians are capable of keen competition in many disciplines and yet we may be too conservative in the approach to "off shore" markets for an increase in our productivity. In many instances we depend on markets provided within our nation's bounderies.

During 1959, the Canadian and American governments signed the Defence Production Sharing Agreement providing Canada with an equal opportunity to compete with United States industry for defence contracts.

Duties, taxes and the "Buy American" act were waived to allow Canadians to get the job done. Many Canadian companies both large and small have taken advantage of the opportunity and with success. How did they accomplish the "shouldering in" to this market? This success was the result of determination, market research and planning and an ongoing vigorous approach to American buyers.

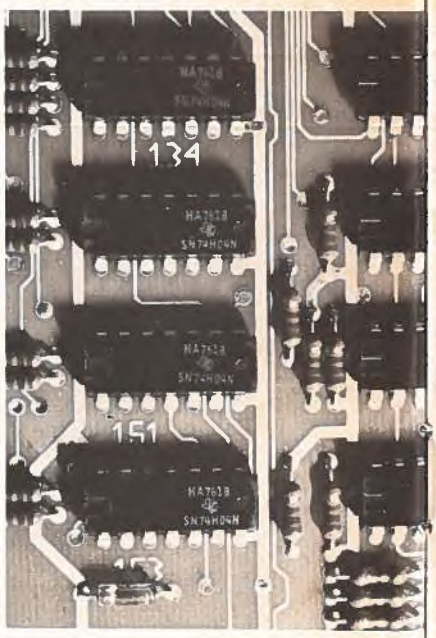
There is a natural reluctance to pursue this work as so many questions come to mind:
Who are the companies?
Where are they located?
Who do we contact?

The Department of Industry, Trade and Commerce will answer these questions and provide many other services designed to increase this opportunity.

For example: IT&C conducts an annual High Technology Conference in Ottawa to allow Canadian industry to speak with our Consulates worldwide, who will supply the latest information related to export, and in particular the U.S. defence market.

These conferences provide confidence in assessing your capabilities and answer many questions such as "How do we get acquainted with this program?".

Discuss your products or services with IT&C. The department will assist you in determining the geographical areas most



suitable to your industry. When a decision is made as to the area you wish to visit, once again IT&C will suggest potential companies that you should meet. Prepare a market plan including brochures, equipment lists and your abilities to produce good products.

More assistance is provided by IT&C with outgoing and incoming missions to encourage U.S. buyers to visit Canada.

During October, IT&C is conducting a High Tech Conference in Boston, Massachusetts, to allow Canadian industry to display their products to American buyers. Past conferences have seen many lucrative contracts awarded to Canadian business.

Although Canada and the United States have many things in common, the conducting of business differs somewhat from our Canadian methods. Periodic personal calls to American buyers must be established. This is a custom of the American business man and it is expected of us. Do not rely on the telephone or letter to introduce your company. Visits and competence in your discipline are the primary methods to success. It is only natural that some may find the initial calls in the United States somewhat difficult, but in a short time you will realize the effort is most rewarding and your contacts very enjoyable.

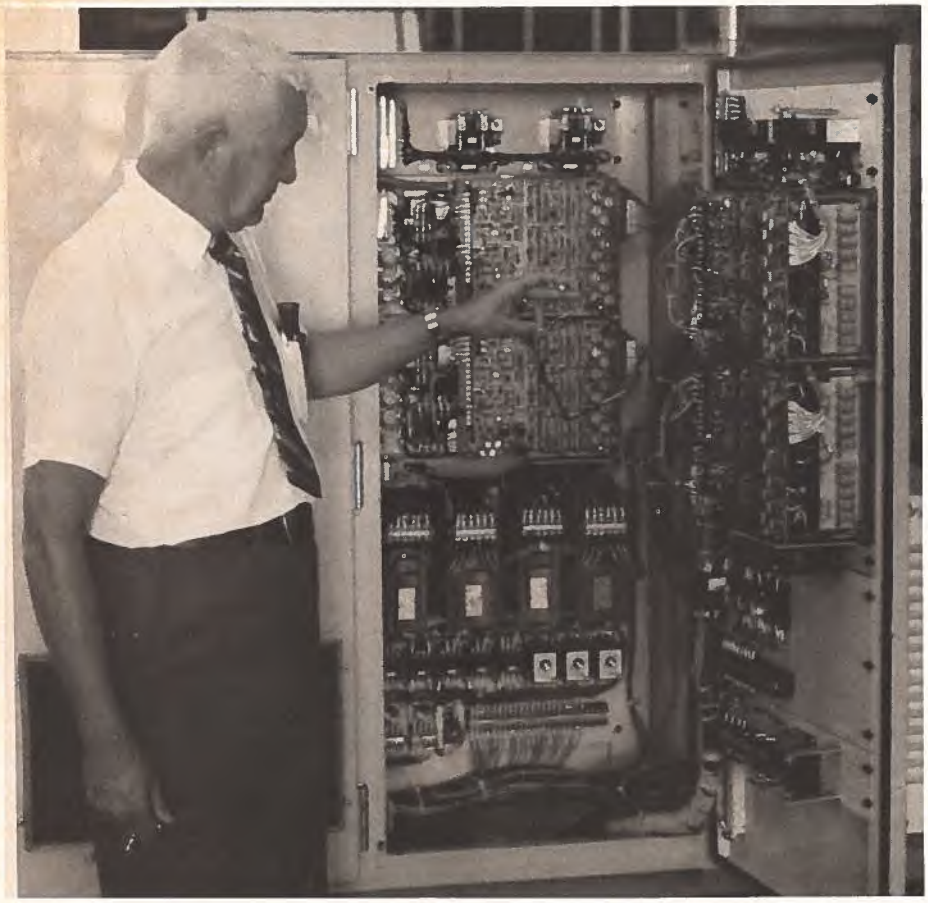
A matter of great concern to all of us doing business "off shore" is the administration of contracts. Questions arise concerning insurance, inspection services and many more related subjects.

We are fortunate to have the CCC a Crown Company to assist in this area. I quote from the CCC Publication "Services of the CCC" Page one, paragraphs A & B.

Canadian Commercial Corporation

The Corporation

The Canadian Commercial Corporation (CCC) is a Crown Corporation wholly owned by the Canadian Government. It was established by the CCC Act of 1946 to assist in developing trade between Canada and other nations. CCC reports to Parliament through the Minister of Industry, Trade and Commerce (ITC). Its 10 member Board of Directors (including seven from the private sector) has extensive experience in international trade.



John McManman, marketing advisor for Merand Ltd., Kingston, points out the computer controls of the firm's four axis milling machine. Designed to translate computer assisted designs into computer assisted machining (CAD/CAM), the machine is entirely controlled by tape outlining the various steps required to turn out its finished product milled to tolerances of .001 of an inch in the four axis configuration.

CCC Services

CCC provides a specialized service to Canadian **suppliers** and foreign **customers** to facilitate Canadian exports. These services include:

1. Helping foreign customers find **Canadian sources** of goods and services.
2. **Contracting** with foreign governments and international agencies on behalf of Canadian suppliers. CCC acts as a prime contractor with a commitment to deliver a product or a service to a foreign customer, offset by a back-to-back obligation from a Canadian supplier.
3. Following through on all aspects of the sale, including:
   a. inspection and acceptance
   b. shipping services (e.g. consolidating multiple items shipment, arranging packaging, transportation, documentation and insurance)
   c. paying suppliers and collecting from customers (often providing some short-term credits).

For the most part these services extend to Canadian industry an opportunity to accept export contracts and operate in a Canadian business environment. It has been our experience, as part of Canadian industry, that the services provided by the federal government ministries are very effective.

It should not be expected that instant success will result in the use of these services. Much time and effort must be applied where it counts — in the field!

The final analysis indicates that Canadian industry is in a position to further develop the high technology skills required to increase exports.

Canadians are well accepted in the United States and it has been my experience that a growing list of American companies are more than interested in contracting work to Canadians.

It is quite evident that this market will only increase in the next decade giving greater opportunities with lower risk.

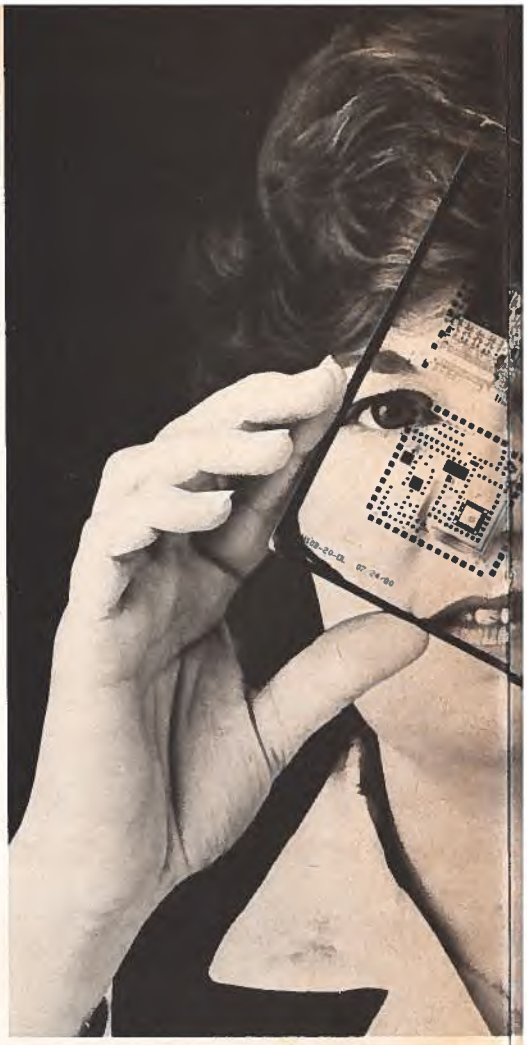
I have been taking note of a small Canadian high technology machining facility that has followed this outline and is more than pleased with the results. It is currently contracted to the United States Department of Defence and is looking to expand to meet the market.

This "small company" is ours — Merand Ltd., Kingston, Ontario.

Further information on U.S. defence markets may be obtained by contracting:
Defence Programs Branch (32/2)
9th Floor East
Industry, Trade and Commerce
235 Queen Street
Ottawa, Ontario K1A 0H5
Tel: (613) 995-7386

Microelectronics Support

When it comes to microelectronics, the world of tomorrow is here today. Technologically, it is revolutionizing industry to such an extent that businesses which fail to change with the changing times are apt to find themselves out in the cold. To help Canadian companies keep abreast — and preferably, ahead — of developments in this rapidly transforming field, the Department of Industry, Trade and Commerce has introduced a Special Electronics Fund and a Microelectronics Support Program. Both are highlighted in the following article by Phil Holton, an IT&C Trade Commissioner who, for the past two years, has been working in the policy area of the department's Electrical and Electronics Branch. The message is clear: In the world of microelectronics. . . . . .

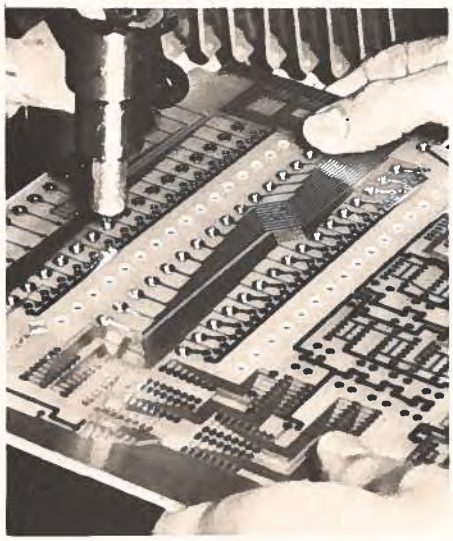


Manufacturers Must Adapt to Meet Modern Market Demands

by Phil Holton

Whatever you make, microelectronics probably has the potential to revolutionize your production process or your products. In the long run, the very survival of your firm may depend upon the new technologies because, if your competitors adopt them and you don't, you could be pushed out of the market.

Microelectronics is being adopted in sector after sector around the world and it is providing two kinds of opportunity — opportunity for users of the technology who can increase their productivity or improve their products; and opportunity for manufacturers of the technology who make the production equipment that is fuelling this new industrial revolution.



To help Canadian electronics manufacturers undertake the huge investments necessary, the Minister of Industry, Trade and Commerce introduced the Special Electronics Fund (SEF), which has funded major investments in the electronics industry. To date, $29 million has been allocated to electronics firms to increase production and step up research and development.

It is now imperative that knowledge of the benefits and challenges of the technology spread through the rest of the manufacturing community, since its application to the production process is the key tool for productivity growth. All sectors of industry are potential users, and the rate at which Canadian industry adopts new manufacturing technologies will determine its ability to compete internationally for years to come.

The benefits being offered extend beyond the traditional goal of increased output per person-hour to include better quality control, more efficient use of raw materials and energy, reduction of maintenance costs, and, very significantly for smaller firms, the possibility of more economic short production runs. In fact, one of the main benefits of the new technologies in the Canadian context could be the reduction of change-over time between short production runs or batches.

It is important to Canada and to you that you bridge the "awareness gap" and find out how your business can reap the benefits of increased productivity or better products. Your neighbours who have taken this important step range from food producers to automobile manufacturers, machine shops to knitting mills. Applications run the gamut from the replacement of a mechanical appliance timer with an electronic one to the total restructuring of assembly lines by the introduction of robots.

If your company is not using microelectronics, how do you find out if it should be? As a component of the Special Electronics Fund (SEF), Industry, Trade and Commerce (IT&C) has instituted the Microelectronics Support Program (MSP) to make it easy for the neophyte to put together the information required to make a rational investment decision.

Call a consultant to have a quick look at your operation. If he thinks there may be an opportunity, he will provide you with a proposal outlining a feasibility study he would like to undertake.

Fill out the very brief MSP application form, and submit it along with the consultant's proposal. If the project makes sense and meets the program criteria, IT&C will pay the cost of the feasibility study up to a maximum of $10,000.

By this stage you should have enough information to make a decision, and information is the key. Realizing this, the Honourable Herb Gray, Minister of Industry, Trade and Commerce, recently announced the establishment of a number of Centres of Advanced Technology at universities across Canada. These Centres will become experts in the application of microelectronics to local industry. In addition, plans are underway for an Awareness Program to carry the story of productivity through new technology to every region of the country, beginning with a series of seminars aimed at senior management.

If the feasibility study convinces you that you should go ahead, IT&C stands ready to help you at this stage with Project Support. The department recognizes that you are getting into unfamiliar territory and facing some unaccustomed risks, so, under the MSP, you can apply for a contribution toward the work required to incorporate microelectronics in your product or manufacturing process. The department may contribute up to 75 per cent of eligible costs up to a maximum contribution of $100,000.

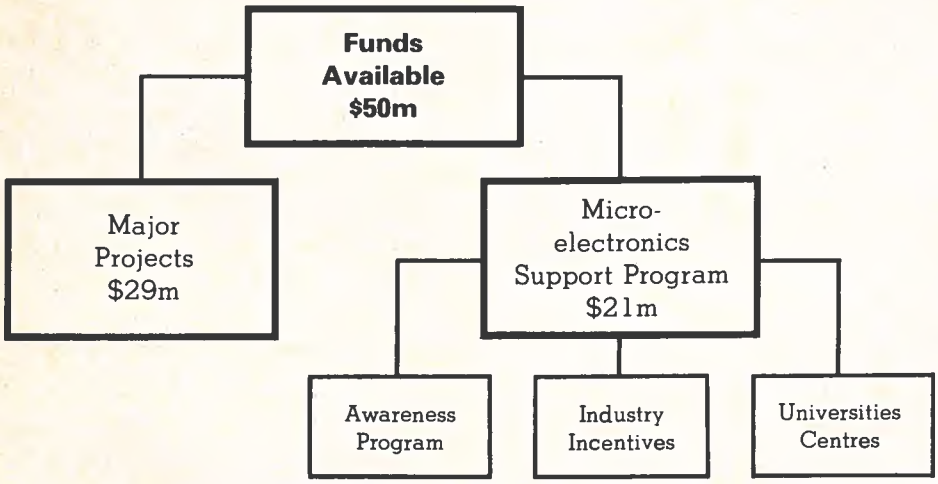
These two elements of the MSP, Feasibility Studies and Project Support, are aimed at the manufacturer who has not yet made any significant use of microelectronics. To round out the story, a third element, aimed at more experienced users, should be described. Sometimes a product incorporating microelectronics can be made more efficiently or can be given more competitive features by incorporating a custom-designed microelectronic device. In this case, the department may contribute up to 75 per cent of the design costs up to a maximum contribution of $100,000.

Embarking on a program that can so fundamentally change the operation of your company will initially have an effect on your employees. To help you deal with this potential problem, the Canada Employment and Immigration Commission (CEIC) has a number of programs and services available, including training or retraining employees to help them reap the maximum gains from the new technology.

Technological change is posing the most important challenge facing Canadian industry. Advances in electronics are changing the nature of many products, the way that practically all products are produced, and the very structure of industry. As Mr. Gray said in announcing the University Centres,

Advances in electronics are fast changing products, processes and the very structure of Canadian industry.

Special Electronics Fund



"Canada must stay in the vanguard of new industrial applications of microelectronics to ensure that we remain competitive in world markets."

To obtain further information about the Microelectronics Support Program, contact:
Microelectronics and Instrumentation Division
Electrical and Electronics Branch (45)
Department of Industry, Trade and Commerce
235 Queen Street
Ottawa, Ontario
K1A 0H5
Tel: (613) 593-4481

or the nearest IT&C Business Information Centre. Regional Offices are listed on the inside back cover.

Canadian businesses may find it interesting to catch a glimpse of how our Embassies work behind the scenes on their behalf. The following article by Fred D. Grimmer, First Secretary (Commercial), gives a blueprint of the way the Canadian Embassy in Athens generated a strong interest among Greek business for Canadian foodstuff and other unrelated products.

The Canada-Greek Connection

When a select clientele of 150 Greek agents and buyers seeking suppliers for the Greek, cruise ship and Middle East markets met during the week of May 11-15 in the Commercial Division of the Canadian Embassy in Athens, it was a triumph for Canadian business.

The agents came there to view food product samples, promotional material and packaging provided by 47 Canadian manufacturers. On display were products ranging from fresh and salt water fish through a variety of canned and processed foodstuffs to bulk commodities such as rapeseed, rapeseed oil, milk powder and beans.

More than 40 agents and buyers paid return visits to the show for concrete business discussions with IT&C and Embassy officers.

Initial planning for this no-budget, in-house "bonus project" began in October 1980. Although Canadian exports of food products to Greece had grown from $2.3 million in 1976 to $6.4 million in 1980, it was felt we could do better in this sector. We also believed that Greece's accession to the EEC on January 1, 1981, would offer new and better defined access to the Greek market — one that Canadian suppliers with demonstrated competitiveness in other EEC markets might wish to exploit.

As the Embassy has a decent-sized conference room suitable for the type of show we had in mind, we approached William Curran of the Agriculture, Fisheries and Food Products Branch, IT&C (Ottawa), who provided his full support and expertise in co-ordinating the liaison between interested Canadian firms and IT&C regional offices.

Greek agents of Canadian suppliers are hosted at special reception in their honour at the Canadian Embassy in Athens.

A letter from the Commercial Division was sent on February 5 to more than 100 Canadian firms, resulting in 20 immediate positive replies. Strong interest from Canadian processors of fish and seafood products helped the list of participants grow to 47. Another big boost was the co-operation received from the Alberta Department of Agriculture following a fortuitous visit to Athens by International Trade Director Cliff Wulff in February.

Invitations went out to a carefully selected list of 200 Greek agents and buyers, supermarket owners, cruise ship operators, hotel operators and Middle East distributors based in Athens.

Each firm was requested to advise the Commercial Division which representatives would be attending so that they could be sent a formal invitation. Greek agents of Canadian firms were also asked to name buyers and customers they would like to invite. With a good idea of expected attendance and specific interests, we were able to ensure adequate staffing for the show and anticipate the type of information we would be expected to provide.

Two receptions were hosted by the Commercial Division back-to-back on the afternoon of Tuesday, May 12. The first reception from 1 to 2 p.m. was in honour of present Greek agents of Canadian suppliers, and to brief them on opportunities to meet possible new clients during the general reception held from 2 to 4 p.m. During this latter period some 40 follow-up private meetings were arranged for in-depth discussions during the remainder of the week. These discussions were perhaps the most valuable feature of the show.

In both specific and general terms, results were positive. Specific enquiries by telex and letter to many of the Canadian participants by the Commercial Division and Greek participants underline a new interest on the part of many Greek firms in doing business with Canadian suppliers.

Canadian firms continue to report new contacts by Greek participants and three Greek agents decided to visit Canadian suppliers during the summer. Several opportunities for doing business in the Middle East were discussed and are being developed. Interest was expressed in many products other than those shown and a sourcing program is underway.

More generally, as a result of the show, the Commercial Division gained a much better insight into the food trade in Greece and the interests, relationship and capabilities of various agents and buyers. We also gained knowledge of Middle East trade and distribution possibilities.

The show was very much an Embassy operation to which personnel from all sections made valuable contributions. In

particular, the Embassy is indebted to IT&C's Louis Gaetan who attended and worked the show. His knowledge and experience in Canadian fishery matters and his recent contacts with Canadian industry ensured that Greek buyers received useful up-to-date information.

Although it is difficult at this time to accurately estimate business arising from the show, there is no doubt it was a success in terms of interest generated — interest that will soon be translated into increased sales of Canadian food products in Greece.

First Secretary (Commercial) Fred Grimmer chats with Vasso Papanicolaou, Greek agent for H.B. Nickerson & Sons Ltd. during the Canadian Food Samples Show in Athens.

Flying High Down Under

by Shirley Plowman

The decision of Australian airlines to stick with Canadian-built aircraft is highlighting congestion problems at the overcrowded Kingsford Smith International Airport in Sydney.

Australia has fallen in love with the de Havilland Canada Twin Otter, which has become an aviation classic in just 15 years.

Since 1966 when the national domestic carrier, TAA, took delivery of the first Twin Otter to roll out of de Havilland's Downsview, Ontario, factory, the Otters have earned a well deserved reputation for performance and reliability. Australia now has more than 800 Canadian Twin Otters.

Just this summer, three new de Havilland Canada Twin Otter 20-passenger airliners (Series 300) were delivered to the Australian operator Aeropelican at Newcastle. The new series has more powerful engines and seats two more passengers than previous series aircraft.

Aeropelican provides a commuter link between Newcastle and Sydney, but increasing congestion at Sydney's international airport limits the services to 15 trips daily.

Demand for the service is intense.

"We have the highest density commuter operations in Australia," says Aeropelican chief pilot Michael Hunt. "Last year we flew more than 1,000 passengers."

Australia has one of the highest air safety records in the world. "Even with the limitations, each Twin Otter clocks 1,500 hours a year on the 60-minute Newcastle-Sydney round trip. As an indication of the reliability of these aircraft, 97 per cent of departures over five years have been within five minutes of advertised time."

The Otters are not causing the congestion — in fact they could well be a solution to it if local authorities would allow the introduction of the Stub runway landing system.

Stub runway operation involves relatively steep approaches, using just half the runway not in use at a major airport.

Developed by DHC for its Dash 7, Dash 8 and Twin Otter aircraft, it allows previous generation turboprops and big jets to use the main runway while modern turboprops with their more flexible landing performance use only a fraction of the length of the intersecting runway.

This means that a relatively slow but manoeuvrable commuter turboprop does not have to hold up a single stream of traffic that can include Jumbo Jets, DC9s and fast business jets.

Australian Aerospace's Don Newson said there has been a definite upswing in Twin Otter sales in the region and that several other orders were in the final stages of negotiation.

The Canadian company recently doubled its Twin Otter production line capacity to five aircraft a month.

Going into business for yourself has its risks as well as its rewards. In this, the second in a three-part series on the subject (Buying an Existing Business was featured in the September 1981 issue of Canada Commerce), the Federal Business Development Bank perceptively considers the advantages and disadvantages of. . . .

Buying a Franchise

There are many advantages to buying a franchise as a way of going into business for yourself. You can start with limited experience. You are selling an established product. You may need less working capital. And you'll be part of an organization which will provide you with the benefits of national advertising and promotion, volume buying, continuing training and advice, and current market research.

But there are disadvantages too. Buying a franchise means that you have bought the right to sell a specific product or service in a specified way within a specified market for a specified period of time. These restraints can be frustrating for the small businessman.

That is why it is so important to be sure of the reasons why you want to go into business for yourself. Is it because you want the independence of being your own boss? If so, you should think twice before you buy a franchise. You may be the owner of a franchise but the way you manage it, the rules you must observe, are laid down by others.

But being your own boss isn't the only reason for wanting to be in business for yourself. There is the challenge of showing what you can do on your own. There is the possibility for increasing your income. There is the experience to be gained. The purchase of a franchise may be just the right answer. But you need to be sure that you are prepared to meet the conditions.

Once you have determined that buying a franchise is the most satisfactory way for you to go into business for yourself, the next step is decide what sort of franchise it should be. Many products and services are offered through franchised outlets. Your best choices are those with which you have had some experience or for which you have a personal preference.

Having made your choice, you are now in a position to evaluate the franchise opportunities that are available. That evaluation should be as complete as you can make it. It should also be thoroughly objective. You shouldn't allow your judgment to be coloured by your desire to be in business for yourself.

The process of evaluating a franchise — and, for that matter, any other business opportunity — consists of obtaining satisfactory answers to many questions — in this instance about the franchisor, the product or service, the franchise contract, the market and about the position of you, the potential franchisee.

You need to learn everything you can about the franchisor — how long in business, what sort of track record, how helpful to franchisees and how scrupulous in dealings with them. You can obtain many of the answers by asking existing franchisees. You can also obtain from them an indication of the volume of business they do, the restrictions imposed by the conditions of the franchise, the opportunities for growth and development.

You can evaluate the product or service by casting yourself in the role of consumer. Is it a product or service that sells on merit? Can it be repeatedly sold? Is it seasonal? Will sales keep expanding or is it a fad?

You should have legal help in evaluating the contract. You'll want to know not only the benefits you derive but the liabilities you could incur such as the cost of unsold goods. You'll also want to know how and under what conditions you can resign the franchise or sell it to another.

Questions about market are essentially the questions to be asked in any business but with one important addition. To what extent might you be prevented by the terms of your franchise from taking full advantage of market growth and development? You also need to know how free you will be to meet specific price or other competition within that market.

Finally, you must make sure of

what your costs will be and know that you can meet them. You should also have worked out your return over the first six months, the first and second years. And having done that you should compare cost and return from a franchise with cost and return from buying an existing business or starting from scratch.

So far, a franchise has been discussed as if it were the whole of a business. But many franchises are for goods and services which might constitute only one or two components of a business. In such instances, someone buying an existing business — say a hardware store — might want to supplement his line of merchandise with a franchised product. Or someone starting from scratch might want a franchised product as a source of sustaining income until he builds up his market for his own products.

Buying a franchise is a quick and relatively easy way of going into business for yourself. But the conditions for a successful franchise can be exacting. Before you decide that it's the way for you, you must be sure that you can meet those conditions and still achieve your personal objectives.

Next: The advantages and disadvantages of going into business for yourself by starting from scratch.

Should you be interested in finding out more about going into business for yourself, the Federal Business Development Bank offers a self-instructional program, **"Evaluating a Business"**, which may be of interest. Known as a Management Clinic, it consists of a 20-minute audio-visual presentation and accompanying workbook. This Management Clinic is available, at a nominal charge, at any FBDB branch office across Canada.

Market Research at the Ready

The 1981 Statistics Canada edition of the Market Research Handbook is now available.

The 751-page Handbook provides the most comprehensive array of Canadian marketing information contained in a single volume. Within its covers are key economic data on the provinces and territories, including 23 metropolitan areas and 35 population centres. Market specialists in particular, will find the publication indispensable for sound decision-making, but it will also be of immense interest to economic analysts, researchers, educators and other interested professionals.

Sections of the publication zero in on selected economic indicators, government revenue, expenditure and employment (federal, provincial and local), merchandising and services, population characteristics, personal income and expenditure, housing, motor vehicles, household facilities and equipment, metropolitan area data and census agglomeration data.

The Handbook also features an index of the major subjects examined statistically. A section devoted to definitions of terms with special notes will help users to make accurate interpretations of the tabulated data.

Priced at $25 in Canada ($30 elsewhere), the 1981 edition of the Market Research Handbook (catalogue number 63-224) can be ordered by contacting Maurice Massaad, Merchandising and Services Division, Statistics Canada, Ottawa K1A 0V4, Tel: (613) 995-4198 or any of StatsCan regional reference centres.

PEMD Shares Financial Risk

About 954 Ontario firms are on their way to a sound financial footing with the help of IT&C's Program for Export Market Development (PEMD). The firms represent more than 60 per cent of the 1,514 companies that applied to the Ontario Regional Office for assistance during the fiscal year 1980/81. Some $3.4 million was granted.

This program shares the financial risk of entering foreign markets by providing contributions of up to 50 per cent of the costs incurred in breaking into a new market. If sales are achieved as a result of the assistance, contributions are expected to be repaid.

PEMD assistance covers specific project bidding, market identification, participation in trade fairs, invitations to foreign buyers and assistance in forming export consortia. It also helps develop markets for agriculture, fisheries and food products and provides contributions to non-profit organizations. PEMD is available to all businesses in Canada — from the smallest to the largest.

Drydock Delivered in Fine Fashion

Escorted by a flotilla of tugs, the new floating drydock "Burrard Yarrows" passes Vancouver's Lion's Gate Bridge en route to its berth at the Burrard-Yarrows shipyard. IT&C contributed $28.8 million toward the approximately $50 million cost of the project.
B.C. Jennings Photo

One of the largest vessels ever to enter the port of Vancouver arrived in late August to a welcome of blowing whistles on a flotilla of tugboats. The vessel itself is the new floating drydock called the "Burrard Yarrows" and it was towed from Japan by the tugboat "Dahlia".

The all-steel drydock was built by Mitsubishi Heavy Industries in Hiroshima and crossed to Canada by the great circle route powered only by the 12,000-hp tug. The voyage began July 15 and ended on August 25.

It is 204 metres (670 feet) long and 45.8 metres (150 feet) wide and can handle ships up to 75,000 dead-weight tons, which includes most of the large ships entering Vancouver Harbour today. Its deck area is big enough to accommodate the Grey Cup Game and the Super Bowl Game at the same time.

The drydock is capable of being lengthened to 240 metres (787 feet). At its ultimate length, it will accommodate virtually all existing tankers and bulk carriers up to 125,000 dwt and some vessels up to 150,000 dwt.

Industry, Trade and Commerce contributed $28.8 million toward the construction of the drydock facilities which were needed, according to former IT&C Minister Jack Horner "if Canada is to maintain and increase its share of the international market in the repair of large foreign vessels." Mr. Horner also said the federal government saw the need for federal assistance toward the facility to offset incentives provided by other countries.

The British Columbia Government contributed $1.5 million to the project in recognition of the importance of such a facility to Vancouver as a world port.

In addition to this recognition is the fact that the new drydock will require between 250 and 300 additional workers of Burrard-Yarrows as the shipping world learns about this important new development in ship maintenance.

Industrial Benefits Initiatives Announced

New federal government initiatives will help Canadian industry and workers to supply goods and services on a more competitive basis for major projects, it was announced recently by The Hon. Herb Gray, Minister of Industry, Trade and Commerce.

The measures will increase the federal government's ability to identify and stimulate industrial benefits associated with the development of Canada's natural resources.

They also respond to the need to have a system that would administer the industrial provisions of Bill C-48 (an act to govern oil and gas exploration and development activities on Canada Lands) as soon as it is adopted by Parliament. . .**more on this in the November issue of Canada Commerce.**

Economists' Corner

Since the mid-1960s international tourism has reached major proportions in the world's economy, becoming the fastest growing industry and one of the leading income earners in international trade. One measure of this growth is the estimated increase of 5.5 per cent international tourist arrivals in 1980 which matched the average annual rate of increase achieved over the period 1974-1979 despite the major oil price boost during 1978/80 and subsequent world economic recession (between 1974 and 1979, international tourist arrivals and international tourism receipts increased 5.3 per cent and 21.0 per cent respectively per annum). Furthermore, this growth has not been at the expense of domestic travel which, according to the World Tourism Organization, showed "a strong recovery in comparison with tourist seasons in previous years".

Tourism and the Canadian Economy

The tremendous social and economic importance of tourism was given a formal blessing and recognition by the United Nations as "a basic and most desirable human activity deserving praise and encouragement of all peoples and governments", and "an important factor in economic development and international trade, . . .(which) can and does make a vital contribution to economic growth" (United Nations Conference on International Travel and Tourism, Rome, 1963).

Tourism in the Canadian Economic Context:
Tourism contributions to Canadian economic goals are equally impressive. Between 1971 and 1978 tourism receipts increased by 236 per cent, surpassing the growth of 204 per cent achieved by the economy as a whole. Foreign visitors spent $3,349 million in 1980, the seventh largest single source of foreign exchange earnings for Canada.

Tourism Stimulates Economic Growth:
Collectively Canadians and foreign visitors spent in excess of $14,768 million while travelling in Canada in 1980, representing more than 5 per cent of Canada's gross national product and 9 per cent of the total value of personal expenditures on goods and services. This original spending has effectively generated more than $25,250 million of personal incomes for Canadians.

Tourism Creates Jobs:
One of the main benefits of tourism is its great potential for job creation. In 1980, for example, tourist expenditure supported directly or indirectly about 1,130,000 jobs for Canadians, approximately 9.8 per cent of the Canadian labour force. This fact should not be too surprising, however, since tourism makes up a large portion of the service industries and since there has been a shift in North America from an economy dominated by the production of goods to one dominated by services.

Tourism Induces Business Investment:
The tourism industry is a visibly important outlet for both public and private investment. For example, the Federal Business Development Bank granted close to $200 million tourism-related loans in 1980, nearly a quarter of all its lending. It is estimated that more than $2 billion in public and private capital is required annually to support development of "plant" to meet the demand directly created by travellers.

Tourism Distributes Incomes:
It has been demonstrated that tourism can and does contribute significantly to the economic development of less developed regions.

Tourism flow tends to yield net economic benefits to underdeveloped areas where natural conditions are generally unsuitable for agriculture or industry, but provide snow for winter sports, hills and mountains for climbing, hiking, etc., and land for cottages, national and provincial parks. Tourism allows these less developed areas to take their place in regional and national growth. Resources, which are unproductive for other industries, become a source of wealth through tourism. Thus tourism, being income elastic, can cause substantial flows of income to less developed areas creating demand and investment while, at the same time, lessening the pressure on demand for goods and services in urban centres where inflation predominates.

Tourism Acts as a Catalyst for Conservation:
Tourism is deeply involved in conservation. In fact, the very future of tourism is highly dependent upon the proper conservation of a country's and of mankind's historic and cultural environment; tourism can do much to encourage good conservation measures. It can also do much to promote the appreciation of Canada's historic and cultural heritage. Tourism has also been cited as a major contributor to international goodwill and as a prime means of developing social and cultural understanding amongst all peoples of the world.

Conclusion:
Tourism growth in the post second world war period has been facilitated by rising discretionary incomes, increasing leisure time, improved travel facilities and services, declining costs of air transportation and innovation in product packaging. This growth has occurred in many areas irrespective of the existence of development and marketing planning efforts.

Tourism has also demonstrated its resiliency to inflation and economic recession. Research has proved that tourism is an integral part of modern society. It is primarily a response to modern man's needs (social, educational, economic and health).

There is no reason to doubt the growth of tourism in Canada in the years ahead. The patterns of growth, however, will change. With rising costs and depletion of the reserve stock of natural resources

Table 1
Comparative Growth Rates of selected Major World Export Commodities 1973-1979

Commodities	% Annual Compounded Rates of Increase
International Tourism Receipts (1)	19.4%
Gross Domestic Product in OECD Countries (2)	13.3%
Total World Export Trade (3)	18.8%
Total World Export of Agriculture Products (3)	13.7%
Total World Export of Manufactures (3)	17.9%
Total World Export of Minerals (3)	11.5%
Total World Export of Fuels (3)	31.2%

(1) World Tourism Organization
(2) OECD — Economic Indicators
(3) GATT — International Trade

(especially energy resources), the future affluent, aged and/or liberated traveller will be much less mobile and more aggressive and demanding in his needs for services and facilities. He will be highly selective in terms of travel destinations and much less inclined to take multi-destination trips. His annual travel plan will include frequent short-distance, long weekend trips to destinations near his urban residence and infrequent, extended vacation holidays in foreign or new lands.

Most tourism experts predict at least a doubling (in real terms) in world spending for international tourism by the end of this decade, from $180 billion (including transportation fares) in 1979 to about $370 billion in 1989. If Canada simply preserves her market share she will have earned (in real 1979 U.S. dollar terms) $5.1 billion worth of foreign exchange by the end of 1989.

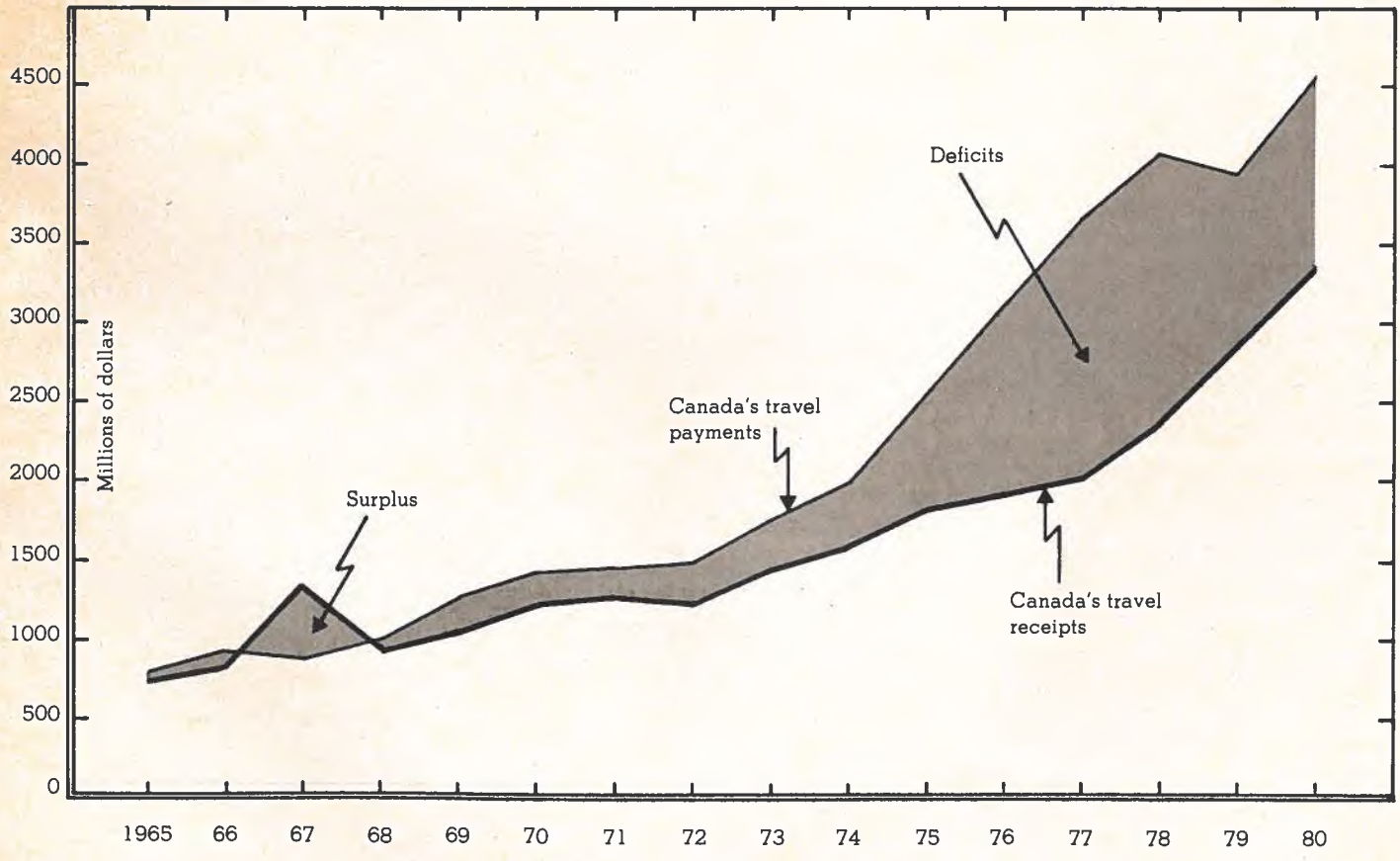
Canada's share of world tourism receipts went from 6.3 per cent in 1965, to 5.9 per cent in 1971 and 3.1 per cent in 1979. Between 1971 and 1978, her international travel balance of payments deficit jumped from $202 million to $1,706 million. There was a marked improvement in this deficit in 1979 to $1,068 million. But a further worsening in 1980 to $1,228 million, suggesting that the deficit is on an upward trend again.

Canada is endowed with all the qualities necessary for a very profitable tourism industry and her bountiful natural and cultural resources are situated contiguous to a very rich and populous nation. The question is, how prepared are we to foster the orderly growth of tourism and to optimize tourism contributions to Canada in the face of rapid changes and fierce competition both at home and abroad?

Peter H. Chau
Policy, Planning and Co-ordination
Canadian Government Office of Tourism
Industry, Trade and Commerce
Tel: (613) 995-8127

Chart 1

Canada's International Travel Account 1965-1980



Source: Statistics Canada, Cat. 66 – 201

Multilateral Project Opportunities

The following list of multilateral project opportunities has been prepared by the Bureau of Pacific, Asian, African and Middle Eastern Affairs (PAM), a merger of the former Office of Overseas Projects, the Bureau of Asian and Pacific Affairs and the Bureau of African and Middle Eastern Affairs. The objective of this list is to inform Canadian companies of the projects being considered or already approved for financing by the international financing institutions such as the World Bank, the Asian Development Bank and the Inter-American Development Bank.

PLEASE NOTE that further information is available on approved projects only and may be obtained from the respective geographical divisions of PAM listed below.

In order to capitalize on these export opportunities, experience has shown that getting in on the ground floor by advance marketing activities or use of local agents has increased the probability of success. Smaller companies may wish to consider participating as sub-suppliers or as part of a consortium bidding on equipment packages.

Projects Under Consideration

Due to a reorganization in the Department, certain names and telephone numbers are subject to change. Sorry for any inconvenience this may cause.

The Bureau of Pacific, Asian, African and Middle Eastern Affairs is prepared to assist companies in formulating their bids, and to suggest the appropriate contacts for companies interested in obtaining insurance, bonds and performance guarantees which are often required as part of tender specifications.

In addition, our Trade Commissioners abroad are ready to assist you in pursuing business, such as arranging meetings with personnel at the executing agencies. The Department also maintains liaison officers in Washington and Manila, who are prepared to undertake enquiries on your behalf. However, we recommend that you initially contact the appropriate officer listed below.

If any of the approved projects interest you, contact: **The Bureau of Pacific, Asian, African and Middle Eastern Affairs (PAM)**, Department of Industry, Trade and Commerce, 235 Queen Street, 9th Floor East, Ottawa, Ontario K1A 0H5, or call the telephone numbers which are listed.

AFRICA (613) 996-8188

CAMEROON
Contact: J. Desjardins
Education IV
World Bank (IBRD) — $40.0 M

CENTRAL AFRICAN REPUBLIC
Contact: R. Bélanger
Cotton Areas Integrated Rural Development
World Bank (IDA) — $15.0 M

EGYPT, ARAB REP. OF
Contact: R.J. Rutherford
Technical Assistance (Agriculture Sector)
World Bank (IDA) — $6.9 M

EQUATORIAL GUINEA
Technical Assistance in the petroleum sector
World Bank (IDA) — $1.0 M

IVORY COAST
Contact: J. Desjardins
Soubre Hydroelectric Project
World Bank (IBRD) — $50.0 M

LESOTHO
Contact: S.A. Reid
Health/Nutrition
World Bank (IDA) — $12.0 M (approx.)

DFC III (Third Line of Credit)
World Bank (IDA) — $7.0 M (approx.)

MALAWI
Contact: S.A. Reid
Education V
World Bank (IDA) — $20.0 M

MAURITANIA
Contact: J. Desjardins
Planning Technical Assistance
World Bank (IDA) — $2.9 M

MAURITIUS
Contact: S.A. Reid
Sixth Line of Credit to Development Bank of Mauritius (DBM)
World Bank (IBRD) — $5.0 M (approx.)

MOROCCO
Contact: J. Arsenault
Establishment of 30,000 ha. of forest plantations
World Bank (IBRD) — Amount to be determined

Small-scale Industry Project
World Bank (IBRD) — $70.0 M

NIGERIA
Contact: P. McLachlan
Borno State Water Supply
World Bank (IBRD) — Amount to be determined

SENEGAL
Contact: J. Desjardins
To provide motive power, rolling stock, workshop and track works for the railway subsidiary of Industries Chimiques du Senegal.
World Bank (IDA) — $19.3 M

SIERRA LEONE
Contact: P. McLachlan
Education III
World Bank (IDA) — $10.0 M

Agricultural Services
World Bank (IDA) — $10.0 M

SOMALIA
Contact: R.J. Rutherford
Fisheries
World Bank (IDA) — Amount to be determined

SUDAN
Contact: R.J. Rutherford
Program Credit — Industrial Rehabilitation
World Bank (IDA) — Amount to be determined

TANZANIA
Contact: S.A. Reid
Technical Assistance III
World Bank (IDA) — $20.0 M

Education VIII
World Bank (IDA) — $20.0 M

TUNISIA
Contact: J. Arsenault
Water supply project focussed on rural areas
World Bank (IBRD) — Amount to be determined

UGANDA
Contact: S.A. Reid
Phosphate Engineering
World Bank (IDA) — $5.0 M

ASIA (613) 992-0356

BANGLADESH
Contact: N. Barber
Drainage and Flood Control III
World Bank (IDA) — $45.0 M (approx.)

Foodgrain Storage III
World Bank (IDA) — $45.0 M (approx.)

Fisheries II
World Bank (IDA) — $20.0 M (approx.)

Phosphate Gypsum
World Bank (IDA) — $25.0 M (approx.)

Rural Roads & Marketing
World Bank (IDA) — $30.0 M (approx.)

Second Greater Dacca Gas Transmission and Distribution
Asian Development Bank (AsDB) — Amount to be determined
Consultants will be required.

Second Chittagong Port Development
Asian Development Bank (AsDB) — Amount to be determined
Consultants will be required.

Seeds Improvement
Asian Development Bank (AsDB) — Amount to be determined
Consultants will be required.

Urban Development of Dacca
Asian Development Bank (AsDB) — Amount to be determined
Consultants will be required.

Power System Master Plan
Asian Development Bank (AsDB) — Amount to be determined
Consultants will be required.

BURMA
Contact: N. Barber
Yenwe Multipurpose (TA Loan)
Asian Development Bank (AsDB) — $4.0 M (approx.)
Consultants will be required.

INDIA
Contact: M. Vandenhoff
Upper Indravati Hydroelectric
World Bank (IBRD) — $250.0 M

Fifth Power Transmission
World Bank (IDA) — $150.0 M

Oil Refinery Conversion
World Bank (IBRD) — $150.0 M

Subernarekha Irrigation (Bihar)
World Bank (IDA) — $100.0 M

Subernarekha Irrigation (Orissa)
World Bank (IDA) — $45.0 M

UP Tubewells II
World Bank (IDA) — $75.0 M

Fertilizer Distribution Project
World Bank (IBRD) — $50.0 M; (IDA) — $50.0 M

Chambal (Madhya Pradesh) Irrigation II
World Bank (IDA) — $42.0 M

Chambal (Rajasthan) Irrigation II
World Bank (IDA) — $50.0 M

KOREA
Contact: A. Pacher
Cement and Coal Distribution
World Bank (IBRD) — Amount to be determined

Seventh Small & Medium Industry Bank
Asian Development Bank (AsDB) — $60.0 M (approx.)
No consultants required.

NEPAL
Contact: N. Barber
Mulghat Hydropower Development
Asian Development Bank (AsDB) — Amount to be determined
No decision made whether consultants will be required.

Second Hill Irrigation
Asian Development Bank (AsDB) — Amount to be determined
No decision made whether consultants will be required.

Hetauda Cement (Supplementary Loan)
Asian Development Bank (AsDB) — Amount to be determined
Previously engaged consultants for construction component expected to continue.

PAKISTAN
Contact: N. Barber
Structural Adjustment Loan
World Bank — To be determined

Baluchistan Valley Development
World Bank (IDA) — $25.0 M (approx.)

Second Health and Population
Asian Development Bank (AsDB) — Amount to be determined
Consultants will be required.

Baluchistan Fisheries
Asian Development Bank (AsDB) — Amount to be determined
Consultants will be required.

Sind Livestock
Asian Development Bank (AsDB) — Amount to be determined
No decision made whether consultants will be required.

Khairwala Drainage
Asian Development Bank (AsDB) — Amount to be determined
Consultants will be recruited by the Bank.

SRI LANKA, DEM. SOC. REP. OF
Contact: N. Barber
Graphite Mining
Asian Development Bank (AsDB) — Amount to be determined
No decision made whether consultants will be required.

Health and Population
Asian Development Bank (AsDB) — $5.7 M
No decision made whether consultants will be required.

Drug Production and Distribution
Asian Development Bank (AsDB) — Amount to be determined
Consultants will be recruited by the Bank.

Ratnapura Integrated Rural Development
Asian Development Bank (AsDB) — Amount to be determined
Consultants will be recruited by the Bank.

SOUTH EAST ASIA (613) 996-8661

INDONESIA
Contact: J. Brenchley
Irrigation XVII
World Bank (IBRD) — $75.0 M

Surabaya Power Distribution
Asian Development Bank (AsDB) — $42.0 M
No decision made whether consultants will be required.

Rural Water Supply Sector (TA)
Asian Development Bank (AsDB) — Amount to be determined
Consultants will be recruited by the Bank.

Inland Waterways Development (TA)
Asian Development Bank (AsDB) — Amount to be determined
Consultants will be required.

Second Irian Jaya Fisheries Development
Asian Development Bank (AsDB) — Amount to be determined
No decision made whether consultants will be required.

Sixth Road
Asian Development Bank (AsDB) — $70.0 M
Consultants will be required.

Brackishwater Aquaculture
Asian Development Bank (AsDB) — Amount to be determined
Consultants will be required.

LAO, PEOPLE'S DEM. REP.
Contact: P.A. Rolland
Agricultural Training
World Bank (IDA) — Amount to be determined

MALAYSIA
Contact: P.A. Rolland
Mini Hydropower
Asian Development Bank (AsDB) — $25.0 M (approx.)
No decision made whether consultants will be required.

East-West Highway (Phase II)
Asian Development Bank (AsDB) — Amount to be determined
No decision made whether consultants will be required.

PHILIPPINES
Contact: J. MacLeod
Cotton Development
Asian Development Bank (AsDB) — Amount to be determined
No decision made whether consultants will be required.

THAILAND
Contact: T. Greenberg
Health and Population
Asian Development Bank (AsDB) — Amount to be determined
Consultants will be required.

JAPAN AND SOUTH PACIFIC (613) 995-7752

TONGA
Contact: R. Beare
Second Multiproject Loan
Asian Development Bank (AsDB) — $1.5 M
No consultants to be financed under Bank loan.

LATIN AMERICA AND CARIBBEAN (613) 996-5357

BARBADOS
Contact: F. Spoke
Scotland district soils conservation
Inter-American Development Bank (IDB) — $4.5 M

COSTA RICA
Contact: F.R. Harris
Third stage of preinvestment program
Inter-American Development Bank (IDB) — $5.6 M

Livestock, industrial, fishery and forestry multisectoral development program
Inter-American Development Bank (IDB) — $50.0 M

GUATEMALA
Contact: F.R. Harris
Power V
World Bank (IBRD) — $80.0 M

HONDURAS
Contact: F.R. Harris
Water supply, sewerage and drainage
World Bank (IBRD) — $13.0 M; (IDA) — $12.0 M (approx.)

JAMAICA
Contact: F. Spoke
Technical and Vocational training
World Bank (IBRD) — $7.7 M

PERU
Contact: F. Spoke
Urban Development II
World Bank (IBRD) — $60.0 M (approx.)

Emergency rehabilitation of the road infrastructure of the corridor of the Central Region
Inter-American Development Bank (IBD) — $9.5 M

Agricultural sector program
Inter-American Development Bank (IBD) — $80.0 M

MIDDLE EAST (613) 593-4362

TURKEY
Third Agricultural Credit
World Bank (IBRD) — Amount to be determined

Structural Adjustment Loan III
World Bank (IBRD) — Amount to be determined

Fertilizer Rehabilitation II
World Bank (IBRD) — Amount to be determined

Approved projects

AFRICA (613) 996-8188

BENIN
Contact: J. Desjardins
Borgou Province Rural Development
World Bank (IDA) — $20.0 M

Fourth Highway
World Bank (IDA) — $11.3 M

BURUNDI
Contact: R. Bélanger
Third Highway
World Bank (IDA) — $25.0 M

EGYPT
Contact: R.J. Rutherford
Beheira Provincial Water Supply
World Bank (IDA) — $56.6 M

Egyptian Iron and Steel Company Rehabilitation
World Bank (IBRD) — $64.0 M

ETHIOPIA
Contact: R.J. Rutherford
Fifth Education
World Bank (IDA) — $35.0 M

KENYA
Contact: S.A. Reid
Railway
World Bank (IBRD) — $58.0 M

LESOTHO
Contact: S.A. Reid
Third Education
World Bank (IDA) — $10.0 M

MADAGASCAR
Contact: R. Bélanger
Accounting and Audit Training
World Bank (IDA) — $11.5 M

MOROCCO
Contact: J. Arsenault
Third Water Supply
World Bank (IBRD) — $87.0 M

NIGER
Contact: J. Desjardins
Education
World Bank (IDA) — $21.5 M

NIGERIA
Contact: P. McLachlan
Kano Agricultural Development
World Bank (IBRD) — $142.0 M

Bauchi State Agricultural Development
World Bank (IBRD) — $132.0 M

SIERRA LEONE
Contact: P. McLachlan
Northern Integrated Agricultural Development II
World Bank (IDA) — $8.5 M

Second Highway
World Bank (IDA) — $10.0 M

SWAZILAND
Contact: S.A. Reid
Third Power
World Bank (IBRD) — $10.0 M

TOGO
Contact: J. Desjardins
Fourth Highway
World Bank (IDA) — $20.0 M

TUNISIA
Contact: J. Arsenault
Textile Rehabilitation
World Bank (IBRD) — $18.6 M

Health and Population
World Bank (IBRD) — $12.5 M

Third Power
World Bank (IBRD) — $41.5 M

Northwest Rural Development (Phase I)
World Bank (IBRD) — $24.0 M

ZAMBIA
Contact: S.A. Reid
Eastern Province Agricultural Development
World Bank (IBRD) — $11.0 M

ASIA (613) 992-0356

BANGLADESH
Contact: N. Barber
Agricultural Credit
World Bank (IDA) — $40.0 M

Hand Tubewells
World Bank (IDA) — $18.0 M

INDIA
Contact: M. Vandenhoff
Second National Cooperative Development Corporation
World Bank (IDA) — $125.0 M

Maharashtra Agricultural Extension
World Bank (IDA) — $23.0 M

Tamil Nadu Agricultural Extension
World Bank (IDA) — $28.0 M

Madhya Pradesh Agricultural Extension (Phase II)
World Bank (IDA) — $37.0 M

KOREA
Contact: A. Pacher
Third Agricultural Credit
World Bank (IBRD) — $50.0 M

National Urban Land Development and Housing
World Bank (IBRD) — $90.0 M

PAKISTAN
Contact: N. Barber
Agricultural Research
World Bank (IDA) — $24.0 M

Grain Storage
World Bank (IDA) — $32.0 M

SRI LANKA
Contact: N. Barber
Construction Industry
World Bank (IDA) — $13.5 M

SOUTH EAST ASIA (613) 996-8661

INDONESIA
Contact: J. Brenchley
Fourth Urban Development
World Bank (IBRD) — $43.0 M

Nucleus Estates and Smallholders V
World Bank (IBRD) — $161.0 M

THAILAND
Contact: T. Greenberg
Power Subsector
World Bank (IBRD) — $100.0 M

EUROPE (613) 593-4884

ROMANIA
Contact: R.E. Evans
Caracal-Titu Irrigation
World Bank (IBRD) — $80.0 M

YUGOSLAVIA
Contact: R.E. Evans
Kosovo Railway
World Bank (IBRD) — $34.0 M

Kosovo Agricultural Development
World Bank (IBRD) — $90.0 M

JAPAN AND SOUTH PACIFIC (613) 995-7752

PAPUA NEW GUINEA
Contact: R. Beare
Agricultural Credit
World Bank (IDA) — $15.0 M

LATIN AMERICA AND CARIBBEAN (613) 996-5357

BRAZIL
Contact: J.G. Carson
Multi-State Water Supply and Sewerage
World Bank (IBRD) — $180.0 M

Alcohol and Biomass Energy Development
World Bank (IBRD) — $250.0 M

COLOMBIA
Contact: F. Spoke
Guavio Hydro Power
World Bank (IBRD) — $359.0 M

Village Electrification
World Bank (IBRD) — $36.0 M

First Irrigation Rehabilitation
World Bank (IBRD) — $37.0 M

ECUADOR
Contact: F. Spoke
Puerto Ila-Chone Rural Development
World Bank (IBRD) — $20.0 M

MEXICO
Contact: J. Pearce
Second Urban and Regional Development
World Bank (IBRD) — $164.0 M

NICARAGUA
Contact: F.R. Harris
Managua Water Supply Engineering
World Bank (IBRD) — $3.7 M

PARAGUAY
Contact: J.G. Carson
Livestock Development
World Bank (IBRD) — $30.0 M

Rural Primary Education
World Bank (IBRD) — $17.0 M

MIDDLE-EAST (613) 593-4362

JORDAN
Fourth Power
World Bank (IBRD) — $25.0 M

SYRIA
Second Education
World Bank (IBRD) — $15.6 M

TURKEY
State Industrial Enterprise Finance
World Bank (IBRD) — $70.0 M

Fertilizer Rehabilitation & Energy Saving
World Bank (IBRD) — $110.0 M

YEMEN, PEOPLE'S DEM. REP.
Contact: P. Furesz
Al Mukalla Water Supply Rehabilitation
World Bank (IDA) — $3.5 M

Third Highway
World Bank (IDA) — $12.5 M

Wadi Beihan Agricultural Development
World Bank (IDA) — $8.0 M

Department of Industry, Trade and Commerce Regional Offices

NEWFOUNDLAND

B.W. (Brian) Holmes
Regional Director General
Newfoundland Region
P.O. Box 64
Atlantic Place
Suite 702
215 Water Street
St. John's Newfoundland
A1C 6C9
Tel. (709) 737-5511

NOVA SCOTIA

E.A. (Ed) Coolen
Regional Director General
Nova Scotia Region
Suite 1124, Duke Tower
5251 Duke Street, Scotia Square
Halifax, Nova Scotia
B3J 1P3
Tel. (902) 426-7540

PRINCE EDWARD ISLAND

T.A. (Trevor) Charles
Regional Director General
Prince Edward Island Region
P.O. Box 2289
Dominion Building, 97 Queen Street
Charlottetown, Prince Edward Island
C1A 8C1
Tel. (902) 892-1211

NEW BRUNSWICK

J.B. (John) McLaren
Regional Director General
New Brunswick Region
Suite 642, 440 King Street
Fredericton, New Brunswick
E3B 5H8
Tel. (506) 452-3190

QUEBEC

P.A. (Paul) Théberge
Regional Director General
Quebec Region
P.O. Box 1270
Station "B"
Suite 512
685 Cathcart Street
Montreal, Quebec
H3B 3K9
Tel. (514) 283-6254

G.P. (Gilles) Morin
Director
Quebec City Office
Suite 620, 2 Place Québec
Quebec, Quebec
G1R 2B5
Tel. (418) 694-4726

ONTARIO

J.D. (John) Blackwood
Regional Director General
Ontario Region
1 First Canadian Place
Suite 4840
P.O. Box 98
Toronto, Ontario
M5X 1B1
Tel. (416) 369-4951

MANITOBA

G.G. (Gus) Rezek
Regional Director General
Manitoba Region
507 Manulife House
386 Broadway Avenue
Winnipeg, Manitoba
R3C 3R6
Tel. (204) 949-2381

SASKATCHEWAN

J.R. (John) Mihalus
Regional Director General
Saskatchewan Region
Room 980, 2002 Victoria Avenue
Regina, Saskatchewan
S4P 0R7
Tel. (306) 359-5020

ALBERTA & NORTHWEST TERRITORIES

D.H.M. (Doug) Branion
Regional Director General
Alberta & Northwest Territories Regions
500 Macdonald Place
9939 Jasper Avenue
Edmonton, Alberta
T5J 2W8
Tel. (403) 420-2944

BRITISH COLUMBIA & YUKON

H.S. (Stew) Hay
Regional Director General
British Columbia & Yukon Regions
P.O. Box 49178, Suite 2743
Bentall Centre, Tower 'III'
595 Burrard Street
Vancouver, British Columbia
V7X 1K8
Tel. (604) 666-1434

Next Month:

Plastics Processing: Canada's Fastest Growing Industry

Government of Canada / Gouvernement du Canada
Industry, Trade and Commerce / Industrie et Commerce

Canada