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Editorially speaking. . . .

While all sides of the reorganization puzzle involving four major government departments, including this one, are not yet all-of-a-colour, appropriate personnel transitional services are in place and work of the various task forces is pressing ahead.

Transitional periods are never easy but every effort is being made to ensure that departmental services to the Canadian business community continue with minimal disruption — including one in the form of Canada Commerce! Meanwhile, business persons should continue to contact those agencies and people with whom they have dealt in the past.

ENERGY. These days it's a subject receiving much attention. To keep abreast of developments, we begin in this issue (Solar Energy — Capturing the Sun, Page 1) a series on energy and its alternate forms.

It may come as a surprise but the Canadian solar heating equipment industry is growing steadily — mainly through sales to export markets. The industry now sells more than $20 million worth of solar installations a year and another $10 million worth of solar collectors!

Canadian solar equipment is used to heat some 600 homes in Egypt; for a desalination plant in Kenya; a dairy operation in Italy; for swimming pools in the United States; and for a host of household uses in the Caribbean.

And various governments are involved too — as Commerce's Bob McDonell points out in the first of his series.

Energy has been expended as well by a number of Canadian companies which, through hard work and determination, have done well both in domestic and export markets. Throughout this issue are several success stories — from a baiting system that captures markets (Page 7) to an electronics firm that is a master in many fields (Page 18).

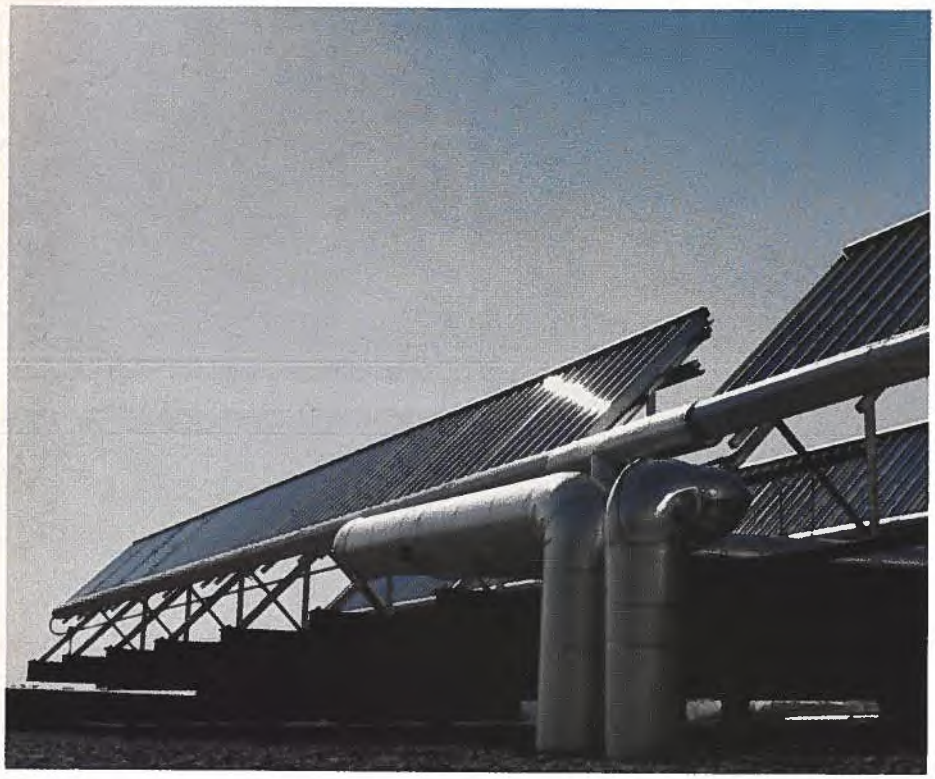
And there's more! Read on. . . .

D.E.W.

READERS ARE LIKELY TO RETAIN THIS ISSUE FOR MANY MONTHS — IT CONTAINS THE PROMOTIONAL PROGRAMS LISTINGS FOR THE 1982-1983 PERIOD.

Amid a confusing welter of statistics, predictions, claims and counterclaims, it is small wonder Canadian business executives feel at sea when they consider the implications of alternate energy — either as a market to consider in their corporate planning or a viable alternative for their energy requirements. For the past several months, Bob McDonell of Canada Commerce has been gathering material for a series of articles on energy and in this issue considers one of the many alternatives.

Solar Energy — Capturing the Sun



Ever since the world's energy picture was turned upside down by OPEC in the mid-seventies, Canadians, in concert with industrial countries throughout the world, have been scrambling to develop alternate sources of energy — either because of the rapidly increasing costs of petroleum or natural gas or the very real worry faced by the rapid depletion of this finite resource.

While there may be some room for argument about the amount of oil and gas still in the ground throughout the world, there is little doubt that the costs of this energy will continue to escalate as the costs of recovery mount.

Canada is in the fortunate position of having large reserves of petroleum based feedstocks — trapped deep in the Rocky Mountain Trench, locked in the tar sands of Alberta or in the heavy oil deposits of Cold Lake on the Saskatchewan/Alberta border, and off the coasts and Arctic islands.

Thus, while the question of availability is not as pressing for Canadians as it is in other industrialized nations, the question of cost will continue to be very much in the forefront of business planning.

Already, the question of energy costs has spawned a multi-faceted reply from industry, the first and probably most important, being the need for energy conservation (see Canada Commerce March '81 — "Energy! Dollars and Sense of Conservation").

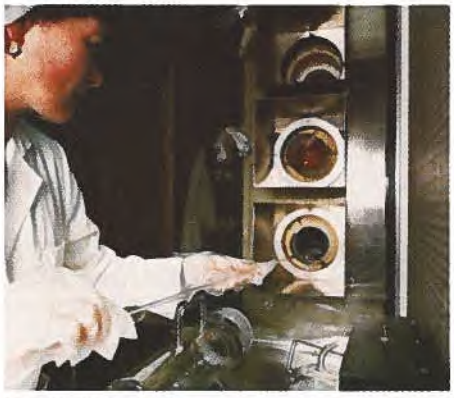
The second response is the increased interest displayed by Canadians in alternate energy sources. Since most energy, whether petroleum, tidal wind, hydraulic etc. with the possible exception of nuclear is or was solar generated, we have decided to devote this, the first in the series of energy articles, to the Canadian solar situation and explain to the best of our ability what is happening in Canada.

As with all forms of alternate energy, the final line for solar is cost in relation to other forms of energy. And in Canada, except for specialized uses, solar energy is not yet cost competitive with many existing forms of energy in spite of the latter's rapid escalation in recent years.

Before we have the wrath of the thousands of solar backers descend upon us, we must hasten to add that in many applications and backed by new and exciting construction techniques, solar energy can have an important role to play in both individual and national energy policies. There is no doubt that over the years, it will supply a much larger proportion of our energy needs. However, even the most optimistic solar proponents do not foresee it supplying more than 10 per cent and, perhaps more realistically, five per cent of Canada's total energy requirements. (up to 40 per cent of space and water heating).

SOLAR

While Canada's severe climatic conditions have placed numerous restraints on the domestic use of solar energy, this has led to the development of a more sophisticated industry capable of meeting the world's most stringent performance, quality and endurance tests. The range of products extends from the simplest air and water heaters to large industrial and commercial water heating installations and the latest in photovoltaic cells designed to provide electrical power in remote locations. In the photos, below, a lab worker loads silicon chips into furnace and another examines a photovoltaic panel.



Because of Canadian climatic conditions — the winter months, when demand for energy is greatest, also coincides with our months of least solar gain — shorter days and increased cloud cover — Canadian solar utilization tends to be more sophisticated than is the case in the more temperate zones and has forced Canadian suppliers to develop technologies and manufacturing standards which are among the most advanced in the world.

To provide a market for this technology, IT&C has taken a lead role in formation of the Canadian Solar Industries Association (CSIA) and has assisted manufacturers in their efforts to export.

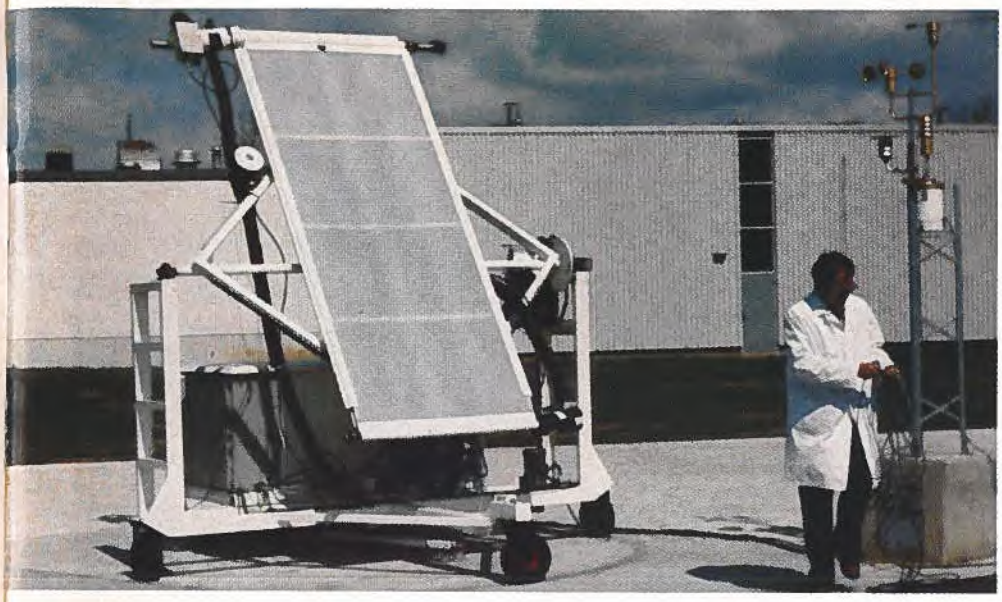
The CSIA provides potential customers with ready access to more than 200 corporate members — manufacturers, distributors, engineers, designers, builders and mechanical contractors working in the solar energy field.

Its "Solar Product Data File" provides hard technical facts on all solar equipment manufactured in Canada. Presented in a standardized format for easy reference and product comparison, the Data File includes independent test results on all collectors.

In addition to its vital information role, the Association requires a high ethical standard of members, introduced a fully-insured warranty program, established improved quality control procedures and is standardizing product labelling.

To assist Canadian companies reach satisfactory economies of scale and to provide valuable operational experience and data, provincial and federal governments have introduced a number of programs over the past few years. For the most part, these programs have concentrated on the supply of supplementary space and water heating, both residential and commercial.

A good example of this is the federal government PUSH (Purchase and Use of Solar Heating) program administered by the Department of Public Works.



Under this program, solar energy systems are given an advantage over competing systems for the space and water heating equipment for federal government buildings. This "premium" is based on the projected life cycle cost of solar versus competing systems.

A total of $125 million has been set aside for the program and, when added to similar programs instituted by various provincial governments, adds up to some $350 million in the next five years in the highly visible public building sector alone.

Governments are also taking a lead role in sponsoring private sector use of solar through subsidies, demonstration projects and the underwriting of monitoring costs, as well as research and development.

To help maintain the impetus provided by these programs and assist Canadian firms to achieve the required economies of scale, IT&C has helped the industry develop overseas markets. As a result, Canadian companies already ship products to a score of countries, are licensing technology in Europe, Asia and the United States and entering into joint ventures in other parts of the world.

While it may solve only part of the energy problem, solar is a good bet for Canadians in industrial, commercial and domestic applications.

The Canadian Solar Industry

The Canadian solar industry manufactures a complete range of solar products. Some 25 manufacturers produce a score of different liquid flat plate collectors, two evacuated tube modules, four air collector panels, 17 domestic hot water systems, glazed and unglazed pool collectors, photovoltaic cells and other equipment.

These products are used on large-scale industrial process water applications, space heating systems, desalination plants, domestic water heating and agricultural applications such as solar irrigation, crop drying and greenhouses.

Sales of Canadian solar equipment have doubled every year since 1977. Domestically, government interest and on-going program support have created a sizeable market, particularly for large-scale installations and hot water systems. This latter market is expected to increase substantially as new housing projects are built.

Internationally, Canadian firms are establishing themselves as major exporters through licensing agreements, joint ventures and direct sales. Canadian equipment is now at work in Egypt, Korea, Kenya, Italy, Germany, France and other countries in the Caribbean, Africa, the Far East and Europe. Our products are also capturing a share of the U.S. market, particularly in California and Florida.

The Products

Industrial and Commercial Hot Water — The engineering and manufacturing expertise in industrial and commercial water heating systems is well developed. Some 200 large systems are in operation, a number of which involve more than 500 collectors.

Residential Water Heating — The industry manufactures a wide variety of water heating systems for residential use. These include closed loop and drain back systems for use where freeze protection is required and low-cost thermosyphon systems for seasonal use or export to warmer climates.

Space and Process Air heating — Air solar collectors are used in Canada for residential and commercial space heating, industrial process heating and for the preheating of ventilation make-up air. Agricultural applications include drying, heating and ventilation of livestock and crop storage barns, and solar heating of greenhouses to extend the growing season. An important adjunct to space heating is thermal storage — liquid, solid and phase change, i.e. — Glaubers Salts.

Low Temperature Applications — Several Canadian solar manufacturers specialize in collectors for low-temperature applications such as swimming pool heating. Both metal and plastic pool collectors are available in either glazed or unglazed models for both residential and institutional pools.

Passive Solar and Conservation — Canada's cold climate and high space heating demands have forced the industry to develop a number of highly specialized products to help conserve energy and maximize passive solar heat gain. This is another instance of Canadian manufacturers turning a difficult climate to a positive advantage.

Photovoltaic Cells — The manufacture of photovoltaic cells is a smaller but rapidly growing segment of the Canadian industry. Photovoltaic systems are applied to specialized markets in Canada such as remote weather stations and navigation aids, but are now applied to irrigation systems, largely for export.

Solar Components — Canadian companies manufacture a broad range of efficient solar collectors for use in custom designed systems. They also produce a variety of other solar hardware including solar storage tanks, heat exchangers, differential controllers, valves, dampers, solar sensors and selective solar surface strip.

Research and Development — Canadian solar equipment has been designed during an extensive government sponsored research and development program. Continued research is keeping Canada in the forefront of world solar technology. Canadian systems are being tested at some of the world's most advanced solar testing facilities and under some of the world's most severe weather conditions.

For further information on solar programs and products contact:

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Close co-operation among Canada's academic, government and business sectors has resulted in a biotechnical breakthrough — the Single Cell Protein Process — which was announced at the Canadian Pulp and Paper Association's recent annual meeting in Montreal. Here Commerce's Bob McDonell reports that the. . . . . .

Single Cell Protein Process Promises Rich Rewards

Dr. Murray Moo-Young, developer of the Single Cell Protein process, explains how this laboratory model, developed at the Waterloo Centre for Process Development, converts carbohydrate waste material to protein.

The 69th annual meeting of the Canadian Pulp and Paper Association was an appropriate forum to announce the construction of a new pilot plant in British Columbia to demonstrate the economic and technical viability of producing protein animal feed supplements — appropriate because the feed stock is derived from waste materials of the pulp and paper industry!

The new process is based on the initial laboratory work of Dr. Murray Moo-Young who isolated the bacteria used in the Single Cell Protein (SCP) process at the University of Waterloo. At Waterloo, Dr. Moo-Young has been instrumental in the development of one of the most active biochemical engineering processes in North America.

In 1978 the federal government entered the picture, providing funds for the establishment of the Waterloo Centre for Process Development. Using seed money supplied by Industry, Trade and Commerce and operated by the University of Waterloo, the Centre was designed to facilitate the development of new or improved chemical processes and initiate their exploitation by industry. The single cell protein development became one of the Centre's first projects.

Forestry residues such as sawdust and pulp and paper mill sludges, and agricultural and agro-industrial wastes such as straw, corn stover, bagtasse (sugar cane or grape waste), coffee grounds and animal manure, can be used in the process to economically produce an animal feed ingredient containing up to 45 per cent protein.

In the intervening years the Centre has improved upon the initial laboratory trials and has developed novel equipment designs and techniques.

Since the Waterloo-developed system is more economic than other SCP processes, it is of great interest throughout the world — particularly in protein-poor, carbohydrate-rich developing countries.

At present, 33 countries have expressed interest in the process and some — notably Yugoslavia — have already signed agreements for the use of the technology.

In Canada a piece of the action is going to Envirocon. These are Vancouver-based consultants and producers of production plants and equipment for the forestry and chemical industries.

With the assistance of an Enterprise Development Program (EDP) grant from Industry, Trade and Commerce, Envirocon will construct in the Vancouver area the first full scale pilot plant to use the Waterloo process.

The EDP grant will cover approximately 75 per cent of the $1.5 million project. In addition to plant construction and monitoring, the project will also undertake test feeding of animals and poultry.

If the pilot plant results are as positive as the test results obtained at the Waterloo Centre for Process Development, the payoffs of the project could prove most impressive:

In the pulp and paper industry alone some 300,000 to 400,000 tons of wastes of the kind used in the SCP process must be disposed of — usually in landfill sites (and this with their attendant environmental problems) and at a cost estimated to be $20.00 a ton.

Yet, using a 50 per cent conversion rate in its SCP plants, Envirocon expects yields in excess of 200,000 tons of protein feed supplement, greatly reducing the large quantities which now are primarily imported.

With its closest competitor in the animal protein field — soybean oil meal — selling in the neighbourhood of $200.00 a ton, this means a potential of some $40 million annually from pulp and paper mill waste alone!

The financial picture improves considerably if the potential for conversion of other forestry and agricultural wastes are taken into consideration.

With increasing worldwide interest in the process — which can be enhanced only when current plans prove the economic feasibility of the project on an operating scale — the net economic benefit to Canada will be felt by the Centre: through licensing fees; by Canadian manufacturers of process equipment through domestic and export sales; and by Canadians in general through decreased imports of protein supplements and increased exports which will assist in our balance of payments.

As Envirocon President Richard Buchanan told the the CPPA meeting: "We are able to make this commitment because of close and co-operative work on the part of Canada's academic, government and business sectors."

Having developed the single cell protein process, the Waterloo Centre for Process Development is hardly sitting idle. Other activities at the Centre, now in the pilot plant development stage, include: the Waterloo Cyanide Recovery Treatment Process; the Microwave Drying Process; the Pelletizer Process; and the Waterloo Scrubber.

Information on these and other projects may be obtained from:
Waterloo Centre for Process Development
Waterloo, Ontario
N2L 3G1

New Zealand is a $6 billion import market all too often neglected by potential Canadian exporters, according to the Japan and South Pacific Bureau at IT&C. And there are big things happening in that country right now which should encourage Canadian companies to . . .

Explore the New Zealand Market

As a developed country of large consumer expectations coupled with limited manufacturing capability, New Zealand has long been a substantial importer. Per capita imports are in fact approaching $2,000.

A newer development and one which augurs well for Canadian exporters is the "big project approach" to economic development.

In 1980, Canada exported to New Zealand $112 million worth of goods, of which 54 per cent were classified as partially or fully manufactured. Canadian exports for the first three-quarters of 1981 have reached $103 million, and the percentage of processed or end products is approaching 60 per cent. A newer development and one which augurs well for Canadian exporters is the "big project approach" to economic development.

New Zealand feels it desirable to diversify somewhat its still predominantly agricultural economy. This fact, together with significant hydro resources in the South Island, large gas reserves offshore and the rapid maturing of introduced pine, will result in some $6 billion worth of major projects over the next decade, concentrated in the hydro, petrochemical and forest product sectors.

Projects of particular interest include the $1 billion expansion of New Zealand Steel Ltd., a $200 million methanol plant, a $750 million facility to convert natural gas to gasoline, the $500 million Clyde power station, and a $200 million newsprint machine at Kawerau.

New Zealand is a developed country and Canadians cannot expect to win, for example, a pulp mill project in the same manner that a total turnkey contract might be obtained in a developing country. Moreover, New Zealand is, not unnaturally, eager to maximize local content in major projects, and there are groups in both the public and private sectors working to that goal. Our efforts are aimed at obtaining, through active marketing and competitive financing, those components of major projects which cannot be obtained in New Zealand and in which Canada is internationally competitive. The Export Development Corporation (EDC) is favorably disposed to financing into New Zealand and the corporation's signed agreements in that country total $117 million.

Canadian capabilities must be brought to the attention of New Zealand agents in areas where these key people are unaware of them.

Canadian trade interests are not, of course, limited to major projects. Although Canadian exports to New Zealand are already broadly based, there is a feeling that Canada's performance can be improved upon. New Zealand has very strong ties with Britain and, in all too many cases, traditional supplier-agent relationships have survived the loss of the preferential trading relationship between the two countries. On the other hand, roughly 65 per cent of Canada's exports enter New Zealand under preference, with the beneficiaries often being small or medium-sized Canadian firms. First, Canadian capabilities must be brought to the attention of New Zealand agents in areas where these key people are unaware of them. Secondly, Canadian firms should not overlook this market simply because of its size and remoteness. New Zealanders do business much as Canadians do, and exporters will find it much easier to write business there than in other, more "glamorous" markets. Businessmen are encouraged to consider both the New Zealand and Australian markets together. Remoteness becomes a less inhibiting factor when the two markets are attacked together. For some firms, New Zealand turns out to be a better market than Australia. EDC has in fact been far more active there than in Australia.

Another approach not to be overlooked is investment in New Zealand, which welcomes it. Joint ventures involving the export of components to New Zealand for assembly are particularly sought. It is clear that this approach is much more attractive to the local authorities than purchase of finished goods. Such arrangements are all the more promising in that they offer improved access to the booming Australian market; in many cases, New Zealand goods benefit from preferences over and above those which Australia extends to Canada.

If New Zealand is a valued market with its similar business methods and its cultural affinities, it is also one that Canada has tended to take for granted. Significant developments are occurring in New Zealand, and opportunities there call for aggressive promotion on the part of Canadian companies.

For further information, please contact:
The Japan and South Pacific Bureau (33)
Industry, Trade and Commerce
Ottawa, Ontario K1A 0H5
Tel: (613) 995-7752

Type of project, size of company make for "textbook case"

Baiting System Catching Orders

by David Mulroney
Assistant Trade Commissioner, Newfoundland Regional Office, IT&C

The Jennex baiting system is starting to show up on more and more of the small inshore fishing boats that work the waters of Newfoundland's many bays and coves. The baiter is a compact device — something like a squat alpine horn. The boat's trawl line runs into one end, hooks dangling at intervals; it emerges from the other, its hooks now baited and ready for action.

The idea of designing a simple and inexpensive baiting machine is not new in Newfoundland, but thanks to inventor Bruce Gill, metal fabricator Sandy Jenkins and IT&C's Enterprise Development Program, it's one that's finally found its time.

Traditionally, most inshore fishing in Newfoundland has been done by means of gill netting, a system that can mean poor quality catch, since the fish can quite literally drown before they're recovered. The alternative, fishing by hook and line, produces better results but has always been more labor-intensive — not to mention exhausting. "I fished as a boy," says Jenkins. "You'd fish in the day and bait hooks by night."

While there are several imported machines on the market, their size and sophistication puts them in a price bracket — from $35,000 to $100,000 plus — that's beyond the range of many inshore operators. What keeps the Jennex system well within the average fisherman's price range is its simple design and energy-efficient operation. Inventor Gill designed a baiter with no moving parts: the boat's motion pulls the line through the machine. Yet, for all its simplicity, tests have shown it to bait with 96 per cent accuracy, which puts it in the same league as its higher-priced foreign competitors.

Gill's design was brought to Jenkin's attention by the people at the Provincial Department of Fisheries, who were eager to see an efficient baiter developed. Jenkins had done some custom fabricating work for the department in the past, but he was looking for a production item. The baiter seemed the ideal project.

After some initial experimentation, a crude bench model was fabricated. The project still looked promising, but a number of critical technical problems had been raised, and solving them would mean time, money and outside expertise.

It was at this stage that Jenkins got in touch with the St. John's Regional Office of IT&C.

After consultation with a regional officer, a project was devised under the Enterprise Development Program that helped Jenkins overcome his hurdles — sharing the financial risk and sourcing the expertise needed to get the baiter from bench model to commercial production.

From the point of view of the Regional Office, it was a textbook case. "The project was ideally suited for the size of the company," says the Regional Director General, Brian Holmes. "Mr. Jenkins has a small, high quality shop and knows a fisherman's requirements. He matched his know-how and capability with a product that would sell. A sign of the equitable relationship between project and company is the fact that production and sales began only nine months after the start of the EDP contract. What's more, the fact that Sandy Jenkins developed a good marketing plan — and stuck to it — was an essential contribution to the company's success."

Since putting his first baiters on the market, Jenkins has returned to the drawing board to meet newly identified opportunities. There are now three sizes available, each designed to meet the needs of sub-sections within the small boat category. Prices on the baiting systems, which include a unit for storing hooks and line, are in the $3,000-$5,000 range, and more than 130 have been sold locally. Dealers are making increased sales in Quebec and Nova Scotia.

And now Jenkins is looking farther ahead. He recently made use of ITC's Program for Export Market Development to attend Fish Expo, a major fishing equipment show in Seattle, and he has set up agents on both coasts of the U.S.

TM 25 — The Dreamboat that Became a Reality

by Shirley Plowman

Wanted: An enterprising manufacturer interested in marketing and producing a remarkably swift 8.5-metre (25-foot) racing yacht that will leave other racing fleet several light waves behind.

That was John Thorpe's dream advertisement. The Nova Scotia boat designer always knew that one day his ship would come in — first. But until he designed the TM 25, his dream was still as misty as the fog that sometimes wraps itself round Lunenburg Harbour.

Thorpe of Thorpe Maritime, Petite Rivière, Nova Scotia, a multi-discipline design firm with 15 years experience, first realized his dream was becoming reality when his prototype TM 25 was launched last June.

As the newly christened "Flight" slipped gracefully into the cool waters of Lunenburg Harbour, Thorpe let out a gusty cheer. "It's only when a boat floats off her cradle that the designer knows for sure that his calculations of mass distribution are correct," he explained. "Our boat settled in the water precisely immersed, complementing the repainted line round her hull."

The summer of 1981 "allowed us to severely test the boat in the North Atlantic waters off our coast and expose it to a variety of weather conditions."

Word of its performance spread rapidly, enticing Robby Robinson, editor of the U.S. Magazine SAIL, to fly in from Boston to test the promising new racer.

"The TM 25 seems bound to be a boat to beat in the fiercely competitive world of today's mini-racers," reported the intrigued Robinson. "John Thorpe has mixed tradition with innovation, and art with science to achieve a light, powerful performer that makes no sacrifices in, her commitment to speed," Robinson enthused.

Thorpe and his builder had selected a mix of eastern white spruce and birch with Okume plywood and teak. To hold it together, the Wood Epoxy Saturation Technique was used — a new approach to the builder.

"The wood boat they developed is bright and beautiful," says Robby Robinson.

So what's so different about Thorpe's "Flight"?

Enthused Robinson: "Her hull form and rig shape are within conventional norms but the TM 25's deck, cockpit and keel/rudder fins are all remarkably innovative. Her unique shape is mirrored in her balanced rudder, making her strikingly nimble."

The heeled deck makes walking secure, and the weather rail, with its stanchions angled outboard, provides a comfortable seat and well-engineered backrest. Cross sheeting is made easy too; the jib winches are on elevated pedestals.

But TM 25, like a sleek race horse, is impatient to feel the wind in full sail.

With her stern knuckled up to gain unrated sailing length, tapered single-spreader spar that requires no runners, balanced fractional rig and minimal wetted surface, the TM 25 was not built to drag her fins.

Says Thorpe: "A fin beneath the water catches the high lift of a straight keel and the low drag of a raked one."

The project was conceived in the fall of 1979 as a means to publicize Thorpe Maritime services and to provide income in the form of licensing fees and royalties. The length of 8.5 metres (25 feet) was selected to put the boat in the most competitive size range for sailboats in North America.

"We felt that producing a yacht that was successful in the most formidable arena — racing — would be of greater credit to our capabilities," explained Thorpe. "To be innovative, demands that the designer is willing to risk his reputation, as a good deal of the success of a design is often left to intuition. So we were finding ourselves in a situation that few designers experience — putting our money where our mouth is."

The design development ranged from an initial review of what made Thorpe's other designs perform so well to research into unique hydrodynamic shapes. To ensure that a crew could function well under both severe and placid conditions, Thorpe studied anthropometric data for the body (human) in numerous situations.

"Material selection meant critically evaluating accepted techniques and opting for an unusual, yet impressive specification," said Thorpe.

Not being classed as manufacturers

and faced with a very tight budget with no government assistance, Thorpe Maritime's organization and planning were paramount.

Manufacturers of the various items that go into the making of a sailboat were carefully selected, keeping in mind item performance and quality, price and availability.

"We tried to use Nova Scotian products as much as possible. For instance, the boat's construction utilizes 'home grown' lumber that was hand-picked and kiln dried. Sails were sewn in a local sailmaking loft, and local boat builders were invited to bid on the construction of the hull and deck."

Other items, however, like extruded and post-shaped aluminum spars, winches and other hardware came from outside the province and as far away as Britain and Australia.

The wooden TM 25 can be built on a semi-custom basis, but John Thorpe is now busy searching for a manufacturer that is interested in marketing the TM 25 in fibreglass.

"The assistance received from IT&C's Ed Kendall in the Halifax office was enthusiastic and is invaluable," Thorpe says. "By contacting Canadian Trade Commissions in several European countries, he helped us compile a mailing list of prospective manufacturers."

Thorpe has already contacted 56 boat builders in Britain and Europe and with assistance from the Halifax office and overseas Trade Commissions, he's looking forward to securing a very satisfactory licensing arrangement that will lead to demand for future Thorpe Maritime designs.

Once the TM 25 is in production, the company intends to establish its yacht design services overseas, hoping to introduce its sailboats to developing nations where recreational sailing is relatively new.

"We believe that by investing in and proving the capabilities of TM 25, we can offer prospective builders an assurance that's quite unique. By utilizing the prototype to act as a pattern for moulds, they can avoid the expensive and time-consuming tasks of lofting and pattern construction."

And rather than basing their hopes on a set of drawings, builders can see for themselves that TM 25 is a real winner!

There is a postscript to this story. Since it was written, John Thorpe, with the help of IT&C's PEMD (Program for Export Market Development) funding, has made a triumphant trip through Britain and Europe attending boat shows in London and Düsseldorf. Negotiations are now underway with interested and enthusiastic builders.

Dallas Hosts Marine Industry Show

The second largest "trade-only" show in the United States — the Southwest Marine Industry Trade Show — will be held in the Dallas Convention Centre on August 27-29, 1982.

The Dallas/Fort Worth Metroplex ranks fifth for the number of boats registered in the United States — surprisingly ahead of the seaport cities of Seattle, Tampa and San Francisco. There are 54,000 boats registered in Dallas County as well as an estimated 36,000 not registered.

Although boat sales have been depressed during the past two years, dealers' hopes are being raised by the continuing population shift to the Sunbelt and the rising number of households in the 25 to 40 age bracket — those most keen on the sport. An upsurge of interest in sailing is accounting for 11 per cent of marine sales.

To add to dealer optimism, there are 21 lakes within 161 km (100 miles) of Dallas and economic conditions are much more buoyant in the oil-rich state than in the rest of the country.

The Southwest Marine Industry Trade Show is a good opportunity for Canadian boat manufacturers to get a slice of the action. It is expected that about 300 marine manufacturers will be represented at the show and more than 4,500 dealers.

Interested Canadian manufacturers should contact: Neil Currie, Consul and Trade Commissioner, Canadian Consulate General, 2001 Bryan Tower, Suite 1600, Dallas, Texas 75201, Tel: (214) 742-8031; or **David Keebler, Southwest Marine Industry Trade Show,** 411 Adolphus Tower, Dallas, Texas 75202, Tel: (214) 744-0003.

At press time last month, the federal government announced the designation of two industries eligible for aid under the Industry Specific Restructuring Program (ISRP), part of the Industrial and Labour Adjustment Program (ILAP) announced in 1981. Last month Canada Commerce covered the auto parts industry and this month we cover the other. . . . .

Major Appliances and Components (ILAP)

Over the next two years, $15 million has been set aside by the federal government to encourage firms engaged in the manufacture of major appliances and components to undertake viable restructuring necessary to maintain the industry in the '80s.

Unlike the Community-Based Industrial Adjustment Program, also part of ILAP, which provides assistance to firms wishing to locate or restructure in designated communities and which offers a labour adjustment package to workers in these communities, the ISRP provides restructuring assistance to firms in the designated industry sector — wherever they are located.

At the same time as the two industry sectors (auto parts and major appliances) were designated, the federal government also announced the extension of the Community-Based Industrial Adjustment Program to four new communities — L'Islet/Montmagny, Quebec; McAdam, New Brunswick; and Brantford and Chatham, Ontario. These designations will be covered in more detail in upcoming issues of Canada Commerce.

The $900 million-plus domestic market for major appliances in Canada faces a number of serious challenges throughout the '80s and is currently experiencing widespread unemployment and layoffs. While short-term market conditions have played an important role, the real problems of the industry are more fundamental structural ones including the need to upgrade plant capabilities. The next two years will be a critical period in which the long-term competitiveness of the industry will be determined.

Basically the industry in Canada faces a number of problems and challenges:

THE PROBLEMS

- The high growth rates of the early seventies have dwindled to the stagnation point.
- Family formation and housing starts, long the traditional indices of major appliance demand, are stable to declining (as the post-war baby boom has passed through the family formation stage).
- A very high market saturation in the industry's core products of refrigerators, ranges and laundry equipment precludes a sudden surge in demand.
- The industry is characterized by continued overcapacity despite a decade of rationalization and consolidation — the industry has dropped from 43 firms in 1961 to 11 today, three of which supply a full line of product and eight of which specialize in a single product or a limited range. Unfortunately, this consolidation in itself has led more to a consolidation in the ownership of brand names and of marketing networks than to a rationalization of production facilities.
- Tariff protection which buoyed the market for domestic Canadian products will start to decline in 1983, as a result of the last round of negotiations under GATT (the General Agreement on Tariffs and Trade), from the present 20 per cent to 12.5 per cent in 1987. However U.S. duty, now between four and eight per cent depending on the product, will decline to between zero and five per cent by 1985.
- The current weak value of the Canadian dollar against the American has provided the industry with a competitive advantage which will be eroded over the longer term if, as expected, the Canadian dollar approaches par with its American counterpart.
- The financial health of the companies within the industry varies from average to desperate — Canadian Admiral, for instance, the only Canadian controlled "major" is in receivership and has ceased operations.
- Major competitors in the U.S. and abroad have or are in the process of investing heavily in new equipment and plant modernization.

The next two years will be a critical period in which the long-term competitiveness of the industry will be determined.

THE CHALLENGES

- To restructure the industry in such a way that existing firms can reach the economies of scale required to compete in both our domestic markets and export markets both in the U.S. and abroad.
- To modernize plants and equipment to increase both productivity and technical advancements.
- To encourage the development of top of the line and unique new models or concepts to capture a larger share of these markets, for example, down scaled sizes of multi-use products taking into consideration changing lifestyles.
- to develop energy saving appliances — an excellent sales advantage in the face of rapidly escalating energy costs.

According to R. J. Dixon and David Mulcaster, Electrical and Electronics Branch, IT&C, it is hoped that the $15 million aid to the industry sector will generate up to $150 to $200 million investment in the industry for new equipment and plant modernization. The component side of the industry faces much the same problems as the prime producers and are offered the same type of help. The moneys allocated are in addition to funds provided through other programs such as EDP and STEP.

Major appliance suppliers and its parts suppliers can obtain further information on the program from:
R. J. Dixon or D. Mulcaster
Electrical and Electronics Branch (45)
Department of Industry, Trade and Commerce
235 Queen Street
Ottawa K1A 0H5
Tel.: (613) 593-4481

When early surveys indicated a young company with a new product would have little success in Canada, export markets became the successful alternative. With export assistance from Industry, Trade and Commerce and aid through IT&C's Enterprise Development Program (EDP), a small and dynamic company proved that. . . .

Size Reduction Expands Profits

by Shirley Plowman

Weight Watchers Incorporated isn't the only business that makes a living out of size reduction.

Quadro Engineering Inc., a St. Jacobs, Ontario, company created "The Comomil" a stainless steel construction that reduces substances to powders and granules into the low micron ranges. It also has no problem with usually difficult-to-handle high moisture materials.

The company was the brainchild of Willi Cussler, Quadro's President, who had a 15-year background in the process industry in Europe. Cussler came to Canada with one dream. He was determined to design an innovative machine for effective size reduction or "comminution" as the process engineers like to call precise and controlled particle size reduction.

"The criteria for the machine," says Eddie Kock, General Manager, "was that it proved to be a major departure in design and technology from existing equipment — energy efficient and built of stainless steel construction to preserve a high degree of ingredient purity and maintenance. It also had to offer an appreciable increased performance efficiency and be readily adaptable to particular process requirements."

From a two-man operation in 1967, the first prototypes began to take shape and an extensive period of testing and redesigning was underway with the assistance of the Ontario Ministry of Industry and Tourism. This was the essential bridge that turned the prototype into a marketable product.

Quadro started out in 1975 in Breslau, Ontario. Earlier market studies clearly indicated that a young company with a new product could not find a large enough market in Canada to support an operation.

"Export became our password and key to securing our future," Kock pointed out. "The U.S. market was the logical one and Quadro was greatly assisted by the Department of Industry, Trade & Commerce — a most vital export service."

With early successes in the U.S. tucked under its belt, the company realized that an even wider marketing base would assure the future and continued growth of Quadro.

"At the same time, more sophisticated process equipment had to be developed and processing versatility had to be expanded." explained Kock. "Again the Department of Industry, Trade and Commerce assisted Quadro through its Enterprise Development Program (EDP). Additional assistance was provided by the Ontario Ministry of Industry & Tourism."

Quadro is now well represented in the U.K., Australia, New Zealand, New Guinea, Venezuela, South Africa and all of the United States — with exports exceeding 85 per cent of the total 1981 sales.

Since the introduction of the first unit, Quadro's unique approach to size reduction and processing versatility has been demonstrated in the food, chemical, pharmaceutical and cosmetic industries and research laboratories, with many large international companies use Quadro equipment.

"Sales have nearly doubled each year since 1977," Kock enthused. "With a staff of 26 we have almost reached the limit for St. Jacobs and a small branch operation in Gorrie, Ontario. Our company is lean and muscular with more knowledge than ever. To remain competitive our plans call for a new modern plant in 1982.

"To maintain a much longer period of liquidity in an inflationary and high interest period seems to have become more of a criteria for evaluation and stability than earnings, yet it is the company's objective to substantially increase productivity by at least 10 per cent annually and profitability by 20 per cent annually over the next four years."

Quadro recognizes that, above all, people are its most valuable resource.

"There is a country-wide shortage of skilled craftsmen and exports require a high quality of workmanship and ingenuity. To this end, the company is very active in an apprenticeship program for junior craftsmen and also encourages part-time continued education by providing financial assistance to our employees," said Kock.

"Anytime a person at Quadro improves his or her skills and knowledge, everyone benefits. That's why Quadro is pursuing a long-term goal of developing and accelerating craftsmen, technicians and managers in-house."

The company continues to follow an agressive expansion and exporting plan with the realization that research and development must continue to be part of the total endeavour.

"With the much-appreciated help of IT&C and the National Research Council, an on-going R & D program is vigorously maintained to bring new expertise and process equipment to the marketplace. Quadro's ultimate goal is to become known worldwide as a 'total process equipment company."

There is little doubt it will reach this goal.

Venture capital (or equity financing) is extremely important as a source of financial base for start-up, development or expansion of a company. The Federal Business Development Bank (FBDB) has become a major participant in the venture capital field and for any company looking for such financing, it might pay to look into. . .

Equity Financing from the FBDB

Venture capital (or equity financing) might be needed at any stage of a firm's development and the bank places no restriction on the size, type, location or stage of development of a business in which it is prepared to invest.

The Federal Business Development Bank (FBDB), though perhaps better-known among the business community for its term lending activities, has in the past six years become a key participant in the venture capital field in Canada.

In 1975, when the Federal Business Development Bank Act was proclaimed, restructuring what was formerly the Industrial Development Bank as the FBDB and broadening its mandate to include management services in addition to financial services, the bank's investment activities were increased as well. Since then, the number of investments has grown and FBDB is now an important source of venture capital financing in Canada.

Venture capital (or equity financing) might be needed at any stage of a firm's development and the bank places no restriction on the size, type, location or stage of development of a business in which it is prepared to invest.

This type of financing could be required to provide the necessary financial base for start-up, at the development stage or for expansion.

Generally, equity financing could be needed in the following cases:

- to accommodate corporate growth at a time when additional borrowing might exert undue strain on cash flow, or might create an unbalanced financial position;
- to provide financial assistance when debt financing is unavailable;
- to facilitate the arranging of other financing, a grant, guarantee or performance bond;
- to finance innovative or developmental projects with attractive growth prospects; or
- to facilitate a change of ownership of the business.

The bank structures the investment to accommodate the future cash flow, working capital and growth characteristics of the business being financed. Its investment criteria are purposely broad. As in its term lending activities, FBDB seeks to meet the financial needs of businesses which have been unable to obtain assistance from other sources, in this case, of investment capital.

The bank's investments tend to be smaller on the average and are spread more widely across the country than are those of others in the venture capital industry whose investments are generally located in larger centres.

The bank is also more active in new investments and in start-up situations with the bulk of its support going to the manufacturing sector.

During the year ended March 31, 1981, FBDB-authorized investments totalled $13,617,000. More than 30 per cent of these investments assisted the start-up of new businesses and 43 per cent were used to develop and expand enterprises. Some three-quarters of its equity investments are in manufacturing — much of it high technology — and the remainder is in service industries.

An investment by the bank in a business may take several forms. It will invariably involve a partial ownership position through share purchases or through a right to acquire shares.

Stock ownership will most likely be coupled with a shareholder's advance which may or may not be secured. Security could consist of a debenture or other charge on the company's assets.

The bank's investment may also be in the form of a convertible debenture which provides that the advance or a portion thereof could be converted at a later date into shares of the company at a predetermined price or a formula price. These debentures are often subordinated to existing and planned debt to permit the company to obtain chartered bank line of credit financing or secure other credits.

Investment in the form of share capital does not normally impose direct fixed charges on the company. Shareholder advances, including convertible debentures, may, on the other hand, require that interest charges be paid or accrued. Regular payments on principal may also be needed. The rate of interest charged on these advances is set at the time the investment is made and is usually in line with the rates charged for regular term loans.

Each investment must offer the bank the potential to earn a return commensurate with the perceived risk.

The involvement, motivation and competence of the firm's management should be evident and the company projects and plans should be realistic. Its markets should be fairly well identified and its products or services should be such as to provide a reasonable competitive advantage in the marketplace. The company should also have clearly defined objectives and should be able to provide a fairly precise business plan against which the future performance can be measured.

The bank must be able to identify the needs and purposes of its funding. It should be reasonably satisfied that the investment will assist the company to reach its goal and that its participation is acceptable to the various parties concerned.

The percentage share ownership of the bank in a company is determined by negotiation, but it will usually consist of a significant minority position. Factors influencing the determination of the percentage equity will include such elements as past and anticipated results, the level of required funds relative to the existing capitalization, the stage of development of the business, etc. In certain instances, the bank's ultimate percentage ownership may be increased or decreased depending on how well the company performs.

The bank seldom becomes active in the day-to-day management of the company, except under most unusual circumstances. It will, however, monitor the company's progress through regular visits and meetings with the management of the firm and through periodical reports supplied by the company. In addition, the bank might want to participate in all strategic decisions which could change the basic product/market character of the company and in any major investment decisions that might divert or deplete the financial resources of the company. It will, therefore, generally ask for the right to have a representative on the board of directors of the company. These various terms and requirements will usually be incorporated into a special agreement between the shareholders, the bank and the company.

The bank must be able to identify the needs and purposes of its funding. It should be reasonably satisfied that the investment will assist the company to reach its goal and that its participation is acceptable to the various parties concerned.

FBDB normally intends to recover its investment by allowing the company or its principals to buy back its shares. Usually there is no buy-back agreement at the time of investment; however, the company and its principals are usually given the right of first refusal on any offer for sale by the bank. The bank is always prepared to consider any reasonable offer, taking into account past and anticipated results as well as various other factors which might affect the value of the company and the benefits it should provide to its shareholders.

Further information on equity financing is available from any branch of the Federal Business Development Bank.

Further information on equity financing is available from any branch of the Federal Business Development Bank.

Though it is not necessary to present a formal business plan to the bank at an initial visit, such a plan could assist the bank staff in gaining a full understanding of the businesses' needs and opportunities.

The plan should comment on the company's shareholders and directors; its management team; its products and markets; its facilities and expansion projects; as well as its financial plans and prospects.

Making and presenting a business plan will not guarantee that a company will be able to secure equity financing. Not making one, however, could certainly reduce the chances of obtaining the financial assistance required.

Economists' Corner

Canada's Merchandise Trade in 1981

A favourable element in Canadian economic developments in 1981, particularly in light of the weakening in worldwide economic activity, was the achievement of the large merchandise trade surplus totalling $6.5 billion. This surplus was much higher than had been anticipated earlier that year and compares with the record surplus of $7.8 billion in 1980 and the previous high of $4.1 billion in 1979.

CANADA'S MERCHANDISE TRADE

(Balance of Payments Basis)

		1981[1]					
				Seasonally Adjusted Quarterly, 1981			
	1980	Total	United States	Other Countries	IQ	IIQ	IIIQ	IVQ
			(millions of dollars)					
Exports	76,170	84,029	56,079	27,950	20,227	21,521	21,042	21,239
Imports	68,360	77,522	53,439	24,083	18,542	20,198	20,207	18,575
Balance	7,810	6,507	2,640	3,867	1,685	1,323	835	2,664

The large, but somewhat reduced, trading surplus last year was the result of the reduced pace of export gains at 10 per cent in 1981 compared with an expansion of just under 17 per cent in 1980 and 23 per cent in 1979. Growth in imports on the other hand continued at around 12 per cent as was the case in 1980, or at about half the rate of 25 per cent in 1979. Generally, both exports and imports were on an upward trend in the last half of 1980 and the first half of 1981; however, import growth was the stronger. The level of imports reached a trend peak in June 1981 whereas exports reached their peak a month later. Thereafter, imports declined faster than exports, thus explaining the sharp improvement in the trade balance during the final quarter of the year.

[1]Geographic breakdown, estimated by Economic Intelligence Directorate as balance of payments information for certain countries and regional foreign markets, as well as for selected commodities, is unavailable until it appears in Statistics Canada's quarterly Balance of International Payments publication.

After adjustments are made for price changes it is estimated that exports rose some 3½ per cent compared with no real change in 1980. However, imports increased by about 2 per cent compared with a decline of 4 per cent the previous year. Thus the overall trade balance actually improved between 1980 and 1981 in volume terms although the balance in current dollar terms declined.

The record merchandise trade surplus in 1980 had been largely due to an escalation in export prices; by way of contrast the deceleration in trade prices in 1981, especially for exports, was the main factor behind the reduced merchandise surplus.

Canada's trade performance in 1981 was the result of a number of important developments.

Factors contributing to a strong trade balance were:

- the rapid short-term recovery in the United States economy from mid-1980 to the spring of 1981 which resulted in a rapid increase in Canadian exports to that market during the same period;
- the sustained improvement in Canada's international competitive position although the recent strengthening of the Canadian dollar in relation to most foreign currencies, other than the United States dollar, has tended to dampen exports to countries other than the United States in 1981; and,
- the continued but somewhat reduced surplus in Canadian trade in all forms of energy combined in contrast to the deficits in most industrialized countries.

Factors contributing to the reduced but still large trade balance were:

- the economic recovery in Canada in early 1981 resulted in an increase in domestic demand for imported goods;
- the continued surge in Canadian demand for small-sized fuel-efficient foreign cars, particularly from Japan, in a period of reduced overall car sales;
- the weakness in the economies of Western Europe which meant a reduction in demand for goods from Canada and other foreign sources;
- continued deterioration in the value of the Canadian dollar vis-à-vis the United States dollar contributed to increased costs of foreign oil (priced in terms of U.S. dollars) at a time of increased import volume due to the temporary reduction of production of Alberta oil;
- the sharp decline in international prices for wheat, other resource commodities and resource-based products in 1981 following the escalation in such prices during 1979-80 meant a sharp deterioration in Canada's terms of trade (i.e. the ratio of export prices over import prices); and,
- strikes in Canadian forest and steel industries in the summer and fall, as well as loss of production at one steel mill because of the relining of a blast furnace, contributed to increased imports of these products.

The key factor among the above-mentioned developments affecting Canadian

trade was the timing of turning-points in the business cycles in Canada, the United States, Japan and Western Europe. In respect to Canada's strong surplus in merchandise trade, the traditional large trade surplus with the United States, which had all but disappeared in 1979 and 1980, bounced back to $2.6 billion in 1981 (see table).

The greatly reduced surpluses with the United States in the previous two years to less than $1 billion, including a low of only $0.3 billion in 1979, were largely due to the down-trend in housing starts and car sales, especially for larger North American type automobiles. Fortunately, the economies of Western Europe and Japan showed no real weakness until the second half of 1981. As a result of previous strength in these overseas economies, Canada's merchandise trade surplus with "overseas" countries (i.e. with all countries other than the United States) soared from $1.4 billion in 1978 to $3.8 billion in 1979 and to $7.1 billion in 1980.

While the reduced trade surplus with the United States in 1979 and 1980 was more than offset by the expansion in the surplus with overseas countries, the improvement in Canada's trade surplus with the United States by $1.9 billion in 1981 was not sufficient to offset the reduction by $3.2 billion in the surplus with overseas countries.

While it is apparent that the Japanese economy showed domestic weakness in 1981, Japan's export performance was particularly strong. However, Canada's large trade surpluses of some $1.5 billion or better in 1979 and 1980 fell to only $0.2 billion in 1981. This reduction resulted from a combination of a mere 3 per cent increase in Canadian exports to Japan in 1981 and a surge in imports from that country by 44 per cent. While automobiles alone were responsible for half of the increase in imports from Japan, other consumer goods such as televisions, radios, stereos, telecommunication equipment, cameras and watches were important contributors.

There was a moderate reduction in Canada's trade surplus with Britain in 1981, a much larger decline in the surplus with other EEC countries and a dramatic drop in the surplus with non-OECD countries from $1.2 billion in 1980 to a near balance in 1981. Contributing to the deterioration in the balance with this latter group of countries was the rapid expansion in both volume and value of imports of oil from Mexico, Algeria, Libya and Nigeria.

Although the total volume of overall oil imports continued to decline in 1981, the volume was considerably higher in the second and third quarters of the year as a result of temporary production cutbacks in Alberta. Concurrently, there

was a considerable reduction in the volume of oil imported from Canada's principal sources of Venezuela, Saudi Arabia and other Middle East sources, although not in value due to higher prices in terms of Canadian dollars.

In addition, certain newly-industrializing countries such as South Korea and Taiwan contributed to the reduction in Canada's trade balance. For instance, there was a substantial increase in imports of plywood, clothing, footwear, stereo and other electronic components and other end products from Taiwan; and plywood, iron and steel products, televisions, radios, stereos, clothing and other manufactured goods from South Korea.

While Canada continues as a large and growing exporter of wheat and other commodities to Russia and China, there also has been a substantial increase in our imports from these two important customers. The increase in imports from China in 1981 was largely in peanuts and walnuts, while the expansion in imports from Russia in the past two years was largely in automobiles.

Commodity Trade Balances (Customs Valuation Basis)

In order to better understand the contribution of various commodities to the overall merchandise trade balance, groups of commodity exports and imports are often added and subtracted to obtain so-called "trade balances" on a customs valuation basis.[2] On this basis there was a severe deterioration in Canada's trade balance in manufactured products (using the proxy of inedible fabricated materials for primary manufactured goods plus inedible end products for finished manufactured goods) from a small surplus of $0.5 billion (including re-exports) in 1980 — the first surplus since that of $0.3 billion in 1970 — to a deficit of $2.3 billion in 1981. The surplus for fabricated materials declined slightly from $16.8 billion in 1980 to $16.4 billion in 1981 while the deficit in end products increased sharply from $16.4 billion to $18.7 billion in 1981.

[2]Such measures are not completely consistent with the annual balance of payments measures which are as yet unavailable for all of 1981. To be so, a number of adjustments would have to be made to the customs data. These include timing adjustments to exports of crude petroleum, natural gas and wheat and to receipts and payments for capital equipment; the deduction of transportation charges included in the customs returns; and the reduction of import values calculated for customs duty purposes to values reflecting transaction prices.

The proxy balance for manufactured goods referred to above tracks rather well the balances generated by allocating commodities to various industries, making use of the Standard Industrial Classification, as is undertaken periodically by the Department of Industry, Trade and Commerce. However, the proxy always produces more favourable balances than the "semi-official" trade deficit in manufactured goods calculated by IT&C. On this "semi-official" basis the trade deficit in manufactured goods in 1981 was probably about $3.5 billion[3] compared with $1.8 billion in 1980.

The important automotive sector was not responsible for the sharp deterioration in end products trade in 1981.

Actually, the trade deficit in automotive goods improved slightly from $2.4 billion in 1980 to $2.3 billion in 1981. However, the trade data should be examined with caution due to reporting changes in imports for a certain portion of **automotive parts** from the United States and the subsequent export of these parts as knocked-down (i.e. KD) **vehicles**[4] to overseas markets. While Canada's trade surplus with the United States in motor vehicles improved by some $740 million in 1981, the deficit in parts deteriorated by over $620 million. However, if parts imported for KD vehicles are taken into account, the parts deficit would show a worsening of only some $220 million.

As noted earlier, there was a rapid expansion in Canadian imports of motor vehicles in 1981 from Japan and the U.S.S.R. Therefore, it is not surprising to find that the Canadian deficit in motor vehicles with overseas countries went from $566 million in 1980 to $1,114 million in 1981. If the re-exports to overseas countries of $406 million in automotive parts (i.e. KD vehicles) are assigned as a credit against imports from the United States, the surplus in automotive parts with overseas countries was $251 million. Similarly, the overall trade deficit in automotive goods with overseas countries showed a deterioration to $864 million.

[3]The concordance of commodity data to industrial sectors cannot be done until the detailed commodity trade tapes are available some 10 to 13 weeks after the reference period whereas the more general data in the preliminary trade statement from Statistics Canada is available some five weeks after the reference period.

[4]Since last summer these crated KD vehicles have been reported in the trade statistics as re-exports of automotive parts as certain parts were often missing and actually not complete vehicles.

Canada is a resource-rich country and commodities of a resource nature have always been important in our export trade. Last year was no exception. For 1981 the surplus in "foodstuffs" of $4.3 billion showed considerable improvement over the 1980 level as exports rose by 14 per cent — although wheat exports declined 2 per cent — while imports increased by 8 per cent. For crude materials the 1981 trade surplus of $3.1 billion was somewhat below the $3.4 billion balance in 1980; exports went up by only some 3 per cent while imports rose by 7 per cent reflecting the 13½ per cent expansion in the value of oil imports due to higher prices in terms of Canadian dollars.

While the cyclical downturn in international prices for many resource-based commodities affected trade values for crude materials and fabricated materials, strikes at Canadian steel and forest industry establishments, as well as loss of production at one steel mill because of the relining of a blast furnace, contributed to the reduction in the trade surplus for fabricated materials. In addition, reduced demand abroad for lumber and non-ferrous metals resulted in Canadian exports of fabricated materials increasing by just under 5 per cent whereas imports rose by 14 per cent led by a 60 per cent jump in iron and steel products and other sizeable increases for both plywood and paper.

Among industrialized countries Canada has a large surplus in its overall trade in energy materials. While Canada has been a "net" importer of crude petroleum since 1975, exports of natural gas along with such commodities as propane, butane, electricity, uranium, etc., contributed to a record overall surplus of $3.6 billion in 1979. The somewhat smaller surpluses of $2.8 billion in 1980 and an estimated $2.3 billion in 1981 were the result of higher import prices for oil combined with the temporary cutbacks in production in Alberta, as well as continuing weak demand in the United States for natural gas from Canada due to the availability of cheap residual oil to industrial users.

Principal Market Development
(Customs Valuation Basis)
While Canadian exports to all markets increased by 10 per cent to $83.4 billion, those to the United States rose 15 per cent to $55.3 billion whereas shipments to overseas markets at $28.1 billion were fractionally above the level in 1980. Thus the pace of export growth to overseas countries of some 33 per cent a year in 1979 and 1980 ground to a halt in 1981 while growth in exports to the United States quickened again following increases of 19 and 8 per cent, respectively, in 1979 and 1980.

By contrast, Canadian imports from all countries rose 14 per cent in 1981 to $78.7 billion compared with 10 per cent in 1980. Imports from the United States increased nearly 12 per cent in 1981 to total $54.1 billion compared with a rate of more than 28 per cent in 1979 but only 6½ per cent in 1980. However, the pace of imports from overseas countries in 1981 of 19 per cent to $24.5 billion meant a continuation of the growth rate experienced in 1979 and 1980. These developments in regional trade resulted in a substantial improvement in Canada's merchandise trade balance with the United States but also meant a reduction in the very large trade surplus with overseas countries in 1980.

In respect to overseas markets in 1981, Canadian exports to Britain increased by only 4 per cent to $3.4 billion while those to the other EEC countries declined by 13 per cent to $5.5 billion. Exports to Japan increased by only 3 per cent to $4.5 billion whereas shipments to other OECD countries fell 3½ per cent to $2.4 billion in 1981. However, the largest increases in overseas shipments were those of 6 per cent to Latin America — to $4.2 billion — and 8 per cent to other non-OECD countries (i.e Eastern Europe including Russia, Middle East, Africa and Asia, excluding Japan) — to $8.1 billion. The disappointing trade picture with the other EEC countries was brightened somewhat by increased shipments of office machines and other equipment and tools (excluding transportation) concurrent with a sharp drop in such crude materials as meat, fish and iron ore as well as certain fabricated materials such as iron and steel, lumber and pulp.

As noted previously, there was a substantial jump of 44 per cent in imports from Japan to $4.0 billion, with cars accounting for about half the increase. Other notable increases included a 25 per cent advance in goods from Latin America — to $5.1 billion and a 13½ per cent advance to $20 billion in commodities from other non-OECD countries. Although these gains were largely due to higher Canadian prices for imported oil there were sizeable increases in goods from Russia and a number of newly-industrializing countries. Canadian imports from Britain increased by 13½ per cent to $2.2 billion and from other EEC countries by nearly 14 per cent to $4.1 billion.

The recent weakness in both the Canadian and American economies, in association with similar weakness in the economies of Canada's major overseas trading partners, does not bode well for the expansion in Canadian trade in 1982, particularly in the first half. If there is no change in the current outlook, growth in Canadian exports in 1982 would be somewhat slower than the 10 per cent pace last year whereas growth in imports could be about half the prevailing rate of 14½ per cent in 1981. This suggests a widening in the Canadian merchandise trade balance in 1982, particularly in the first half.

For further information, please contact:

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Ottawa, Ontario K1A 0H5
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WORLD THERMAL COAL MARKET SURVEY 1981

This study of the thermal coal industry was compiled from information obtained with the assistance of the Canadian Trade Commissioners in each of the 19 countries considered to be the major potential steam coal importers in the 1980s.

Prepared with the co-operation of the provincial governments of Alberta, British Columbia and Nova Scotia, and the federal government departments of Regional Economic Expansion, Energy, Mines and Resources, and Industry, Trade and Commerce, it provides details on the volume, specifications and timing of future thermal coal requirements in those countries, and background on the structure of the market and channels of trade. A statistical summary of the industry in each area and any primary influencing factors in the individual business environment is included.

English, 260 pages.

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For copies contact: Ray Mulvihill, Resource Industries Branch (52), Metals and Minerals Group, 235 Queen Street, Ottawa, Ontario, K1A 0H5, Telephone: (613) 992-1581

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PROCEEDINGS OF THE EIGHTH INTERNATIONAL SYMPOSIUM ON SMALL BUSINESS

The text from the proceedings of this symposium held in Ottawa October 19 to 22, 1981, includes papers presented and synopses of the opening and closing ceremonies. It will be of interest to anyone involved with the Canadian small business community. The book can be obtained in English and French from:

The Canadian Government Publishing Centre
Department of Supply and Services Canada
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CANADA COMMERCE WINTER 1982 — SPECIAL SUPPLEMENT ON HIGH TECHNOLOGY

A look at the present and future of high technology industries — robots, fibre optics, biotechnology, software and lasers, space, telecommunications, manpower and financing — with particular reference to Canada's role.

English, 33 pages.

French, 33 pages.

FOOD SERVICES EQUIPMENT

A catalogue of Canadian food service industry manufacturers with descriptions of their products.

English, 47 pages.

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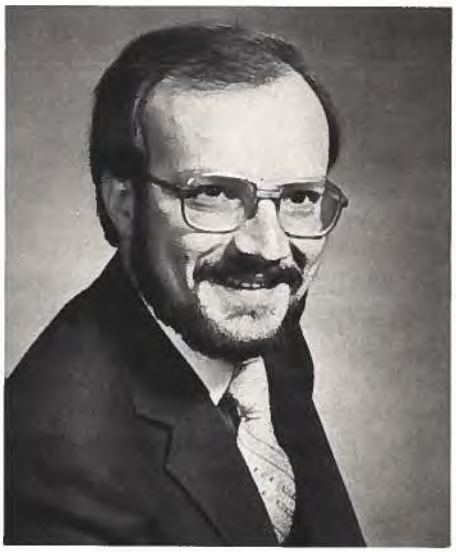
Digital language laboratory, "Polylab LLD-24."

Travelling through the Province of Québec, Canada Commerce contributing editor André Fortier has come across a number of companies that have been remarkably successful in both domestic and export markets. Here he finds that a unique electronics firm — with expertise in a variety of fields — is proving to be. . . .

A Jack of All Trades — And Master Too!



Jacques Landry

It is indeed rare for a new firm in the electronics sector to have oceanographic, education and data processing divisions. However, such is the case with J.L. Electron Ltée of Rimouski, a firm that is creating quite a stir beyond the borders of Quebec and Canada.

The business was founded in 1973 by Jacques Landry, a technical research officer with expertise in microprocessing technology. Even though the firm now has gross sales of only three-quarters of a million dollars, these may well skyrocket in the next few years, since many of the firm's products are unequalled in the world.

Although, as Jacques Landry says, the data processing division is currently the heart of the company, the future of J.L. Electron lies with its oceanographic division. We can already begin to see why.

J.L. Electron's oceanographic division has devised a programmable oceanographic release mechanism (POR) consisting of a compact, self-contained unit

that enables users to close oceanographic bottles when taking water samples at programmed depths. The oceanographic parameters of conductivity, temperature and depth can be collected by the instrument and then transferred to a data bank.

At present, most systems serving this purpose are linked to a vessel by electrical and traction cables. The POR unit, however, does not require a communications cable if connected to the vessel by the traction cable.

In 1979-1980, a world-wide market study of 540 research and government institutions revealed a lively interest in this new technique, which has no direct competition anywhere in the world and is currently being patented in Canada, the United States and Europe.

As proof of its confidence in J.L. Electron's future, SODEQ has just invested $100,000 in this young firm.

Another product of the oceanographic division of J.L. Electron is an electronic signal unit for buoys, which flashes at programmed intervals to position and identify anchorage points. Its 20 to 65 per cent efficiency rate is higher than other units on the market. In 1981, J.L. Electron sold 15 such units to research institutions in Quebec.

The Data Processing Division

This division, which is currently the firm's commercial backbone, has perfected the ARAMOS operational system with the help of the federal Department of Industry, Trade and Commerce's Enterprise Development Program (EDP). ARAMOS is an operational system and control device compatible with the APPLE II micro-computer system.

Ten million characters per cartridge can be stored on Honeywell-Bull disks. The ARAMOS system also automatically corrects readings or entries in cases where transactions are unsuccessful. If required, the user can also compile these data.

One interesting fact about the Honeywell-Bull ARAMOS system is that it can handle 10 million characters (compared to 100,000 characters on a conventional mini-disk), thereby increasing the speed of the system.

Discussions are currently under way with Irwin International, which has developed a new fixed-disk unit with copy on cassette. The two companies are exploring the possibility of having J.L. Electron manufacture the communications module to connect the Irwin unit with the APPLE II computer by means of the ARAMOS system.

Among the data processing division's other achievements are a sports timing system, the GESCOM computer and the SESAME electronic lock.

For such a small firm, J.L. Electron is making a tremendous effort to diversify and develop new products. It employs a small but very specialized team of about 30 engineers, technicians, programmers and draftsmen.

Justice to this effort could not be complete without mentioning the achievements of the firm's education division or saying a few words about J.L. Electron's current major product.

Education Division

This division has developed a laboratory called "Polylab LLD-24" which, in addition to operating like a conventional laboratory, provides an interactive communications model. It has also produced a digital coastal generator, which is apparently the only one of its kind in the world and which generates a signal compatible with any maritime radar system; a SATNAV simulator, which simulates the operation of a SATNAV receiver used to position a ship at sea; a morse code transmission system; and a digital maritime radar simulator. Once again, some of these products are unique. There is no equivalent, for example, of the code transmission system in the entire field of education.

The research and development work undertaken by this dynamic small electronics firm in Rimouski is in many cases closely related to maritime interests, and it is in no way surprising that the Institut Maritime du Québec is located in the town.

As Jacques Landry has pointed out, the future belongs to this kind of firm, and the distributors of oceanographic products have demonstrated a great deal of interest in the achievements of J.L. Electron. Such was the case when the Rimouski firm participated in trade fairs in Halifax and Houston.

Also taking part were the Office d'instrumentation hydro-graphique de France; MSE Engineering Systems Ltd. of Downsview, Ontario; Remotec Applications Inc. of Saint John's, Newfoundland; and Continental Offshore Services Ltd. of Halifax.

Some of these firms are interested in the whole range of products of J.L. Electron's oceanographic division, while others would like to sign a distribution agreement for the company's self-contained oceanographic buoy. This, although not yet finalized, is currently the firm's major project.

Once in its final form, the buoy will be self-contained, adapted to sea conditions and able to anchor in water 500 metres deep. It will enable researchers to make regular measurements for a number of months at low cost in order to understand the ocean's physical processes.

Self-contained oceanographic buoy.

This project has already been presented to the Lavalin group of Montreal, which in turn has presented it to Dome Petroleum.

The least that can be said is that there is considerable interest in the new product and a waiting market.

Canadian Sweaters Fit Snugly in Ireland

It's a bit like selling coal to Newcastle — and that takes some doing! Such success also says a great deal about the products of the company concerned.

In this case a Vancouver-based company is selling its knitwear, specifically its sweaters, to the Republic of Ireland — a land noted internationally for the manufacture of fine-quality sweaters.

While Kalpakian Knitting Mills Inc. has exported to Europe over the years, this is the first time the company has successfully penetrated the market in the Republic of Ireland.

"We must say we are very pleased with the results," says company president S.H. Kalpakian. "We hope at least to double in 1982 the quantities we exported in 1981."

And, other than having a top-notch product, to what does Kalpakian attribute this major coup? It's attending trade fairs — many of which are sponsored by Industry, Trade and Commerce.

"This order was obtained when we were showing our products at the Men's Wear Show — SEHM — in Paris, France," says Kalpakian.

"Our buyers were so pleased with our products that, during the year, they placed another order. We understand they have also done very well with the second repeat order," he enthused.

The success is likely to continue: at time of writing, the president of Kalpakian's client in Ireland was coming to Vancouver, says Mr. Kalpakian, "with the object of discussing the supply of sweaters and cardigans to the Republic of Ireland during 1982."

USAF Offers R&D Opportunities

At least 400 representatives of Canadian universities, research facilities, governments and some 250 companies attended two recent seminars, in Ottawa and Toronto, on "Research and Development Opportunities with the United States Air Force." USAF and U.S. Department of Defense experts described how to identify, locate and pursue competitive R&D contracts with the USAF, and briefed delegates on bid evaluation procedures and technical documentation requirements associated with competitive R&D proposals. U.S. officials included representatives of the U.S. Department of Defense; USAF Headquarters; USAF Air Force Systems Command; USAF Aeronautical Systems Division; USAF Wright Aeronautical Laboratories; USAF Electronic Systems Division; and the U.S. Embassy in Ottawa.

Trade Fair Round-Up

The Canada Sports Show held January 12-14, 1982 had 27 Canadian exhibitors — the biggest ever hosted by the Canada Trade Centre in Tokyo — and plans are already underway to make it even bigger in 1983. **In the three years the CTC has operated it has helped introduce more than 250 Canadian companies to Japan who have made sales in excess of $100 million to date.**

Representatives of Benner Industries Ltd., from Charlottetown, P.E.I., maker of Benner skis, found a new potential market for their products half way around the world in Japan at the Canada Sports Show in Tokyo, January 12-14, 1982.

The Sportswear/Sports Equipment Show, held in Tokyo, January 12-14, 1982 has been considered a stunning success.

Of the 28 fairs held in the Canada Trade Centre in Tokyo during the past three years, the sportswear/sports exhibit was the largest.

The 27 exhibitors reported on-site sales of $435,600 with anticipated follow-up sales during the next 12 months of more than $4,400,000.

Visitor traffic was heavy, averaging about 200 a day and included the largest and most active trading companies in the Japanese sports market.

Personal contact is an important factor in successful marketing in Japan. The major ice sport companies (CCM, Cooper, Micron, Lange, Bauer, Canpro, Sherbrooke) reported that all of their top clients visited their exhibits and discussed the markets with Canadian officials and Japanese agents. These meetings strengthened and deepened the relationships between Japanese buyers and Canadian manufacturers.

Intensely interested in high fashion skiwear apparel, the Japanese were irresistably drawn to Russill Morin and David Reid. Morin's talented designer, John Ditrani, unveiled his 1982 style collection at the show, attracting strong press attention that had a beneficial effect not only on Morin and Reid but on the other nine manufacturers exhibiting their apparel.

The 11 apparel manufacturers presented not only high fashion skiwear but down-filled sportswear, hiking and mountaineering garments, team jerseys, fashion leather garments and headwear. The apparel manufacturers reported total sales of $2.5 million and the naming or pending appointment of 16 agents.

Three companies featured among them alpine and cross-country skis, ski bindings, ski carriers for cars and ski finishing and sanding machinery.

Other companies showed curling supplies, fishing tackle, bodybuilding equipment, archery, protective equipment, backpacks and flotation devices. These companies were all new to the Japanese market and reported strong interest from buyers seeking an alternative to the traditional U.S. and European sources.

The major Japanese television network carried news reports and a press conference on the show, which were seen by an estimated 1.4 million viewers.

Exhibitors and officials were amazed at the intensity of interest displayed by the Japanese visitors, many of whom stayed for several hours to ask serious and penetrating questions. Exhibitors had been carefully briefed to expect cautious and slow approaches by the usually reserved Japanese businessman. The unexpected enthusiasm and aggressiveness of Japanese agencies clamouring to carry Canadian lines was an unexpected and happy surprise.

The Japanese apparently want to be on the ground floor with Canadian goods in anticipation of strong market growth for these products.

It is felt that Canadian efforts in the past few years have reached a degree of fruition. The "foot is in the door" and there is every indication of a warm welcome just beyond the threshold.

Another first for Canada in Japan came in the form of the Health Care Products Show — the first of its kind for the Canada Trade Centre.

Japan bought more than $10.9 million dollars worth of health care products in 1980, a fact which encouraged IT&C and the Post to expect enthusiastic Canadian industry participation.

The show, which took place in Tokyo from November 14-17, 1981, had an excellent response. Exhibitors were gratified by the eager interest in their products — some of which were new to the Japanese market.

The very newness of some of the products, however, made it difficult to confirm the value of on-site sales: Japanese Ministry of Health and Welfare's import regulations and approval procedures take six months to two years. Despite the possible delay, six of the participants estimated that sales would reach about $2 million over the next 12-month period.

The health care products show planners hope that the next exhibit will have an even greater participation of Canadian manufacturers of medical electrical equipment, pharmaceutical products, hospital supplies, dental equipment and health food supplements.

Invitations are expected to be extended to importers and distributors in Hong Kong, Korea and Singapore who may be able to time business trips through Japan to coincide with the next health care products show in Tokyo possibly slated for November 1982.

Promotional Projects Program 1982/83

The following list covers the confirmed and proposed 1982/83 promotional projects for the European, Pacific, Asian, African and Middle Eastern areas as well as the United States, Latin America and the Caribbean. Since some of these events are subject to change, subsequent CANADA COMMERCE editions will carry updated lists so that those planning to attend can adjust their schedules.

PROMOTIONAL PROJECTS PROGRAM 1982/83 (P)
EUROPEAN AREA

Project No.	Event	Date	Project Manager
Trade Fairs and Information Booths			
82/47526	20th Children's Book Fair Bologna, Italy	April 1-4, 1982	L.V. Ford
82/47548	Milan International Trade Fair Milan, Italy (Information Booth)	April 14-23, 1982	M.P. Pearce
82/47527	'International Treffpunkt' Hanover Fair '82 Hanover, West Germany (Information Booth)	April 21-28, 1982	H. Schroeter
82/47528	INTERSTOFF '82 — International Trade Fair for Clothing Textiles Frankfurt, West Germany	May 4-7, 1982 November 2-5, 1982	L. Sarda
82/47520	SITEV '82 — 9th International Exhibition for the Suppliers of the Vehicle Industry Geneva, Switzerland	May 11-14, 1982	M.P. Pearce
82/47519	IDEE — International Defence Electronics Expo Hanover, West Germany	May 18-20, 1982	J. Harman
82/47546	Budapest International Spring Fair Budapest, Hungary	May 19-26, 1982	
82/47501	DRUPA '82 — 8th International Fair Printing and Paper Dusseldorf, West Germany	June 4-17, 1982	H. Schroeter
82/47543	Poznan International Fair Poznan, Poland (Information Booth)	June 13-22, 1982	H. Schroeter
82/47542	Royal Agricultural Show Kenilworth, England (Information Booth)	July 5-8, 1982	
82/47503	Offshore North Sea '82 — Conference and Exhibition Stavanger, Norway	August 24-27, 1982	M.P. Pearce
82/47547	UN Space — Outer Space Conference and Exhibition Vienna, Austria	August 1982	L.V. Ford
82/47534	ISPO '82 (Autumn) 17th International Sports Equipment Exhibition Munich, West Germany	September 9-12, 1982	
82/47515	AUTOMECHANIKA '82 — International Trade Fair for Motor Car Workshop and Service Station Equipment, Automobile Parts and Accessories Frankfurt, West Germany	Sept. 14-19, 1982	J. Harman
82/47529	Zagreb International Autumn Fair Zagreb, Yugoslavia	Sept. 14-22, 1982	H. Schroeter

Project No.	Event	Date	Project Manager
Trade Fairs and Information Booths			
82/47530	SICOB — 33rd International Data Processing, Remote Processing, Communication and Office Organization Trade Fair Paris, France	Sept. 21 - Oct. 1, 1982	L. Sarda
82/47532	34th Frankfurt International Book Fair Frankfurt, West Germany	Oct. 6-11, 1982	L.V. Ford
82/47544	Bucharest International Trade Fair Bucharest, Romania (Information Booth)	October 1982	
82/47528	INTERSTOFF '82 — International Trade Fair for Clothing Textiles Frankfurt, West Germany	May 4-7, 1982 Nov. 2-5, 1982	L. Sarda
82/47531	ELECTRONICA '82 — 10th International Trade Fair for Components and Assemblies in Electronics Munich, West Germany	Nov. 9-13, 1982	L. Sarda
82/47533	SIAL '82 — International Food Products Exhibition Paris, France	Nov. 15-20, 1982	H. Schroeter
82/47512	HEIMTEXIL — International Trade Fair for Home Textiles Munich, West Germany	Jan. 13-17, 1983	M.P. Pearse
82/47535	ISPO '83 (Spring) — 18th International Sports Equipment Exhibition Munich, West Germany	Feb. 24-27, 1983	
82/47538	DOMOTECHNICA '83 — International Fair for Household Appliances, Fittings and Components Cologne, West Germany	February 1983	
82/47537	International Spring Fair 1983 Birmingham, England	February 1983	
82/47540	SIMA '83 — 54th International Exhibition of Farm Machinery Paris, France	March 1983	
82/47541	SIA — International Agricultural Show Paris, France	March 1983	
82/47545	Leipzig International Spring Fair Leipzig, East Germany (Information Booth)	March 1983	

EUROPEAN AREA

Project No.	Event	Date	Project Manager
Trade Missions			
82/48511	Automotive Parts Buyers Mission from Europe to the Canadian International Automotive Show — Toronto	April 1982	L. Sarda
82/48512	Housing Mission from Italy	April 1982	J. Harman
82/48515	Computer Mission to Germany and Switzerland	May 1982	
82/48523	Fish Buyers Mission from Spain	May 1982	
82/48525	Defence Products Mission from Spain	May 1982	
82/48519	Eastern Lumber Mission to Italy, France and the Netherlands	May 1982	
82/48507	Industrial Cleaning Equipment Mission from Europe	June 1982	L.V. Ford

Project No.	Event	Date	Project Manager
Trade Missions			
82/48521	Mission from France to Farm Progess Show, Regina	June 1982	
82/48524	Seed Mission from Hungary	June 1982	
82/48522	Seed Potato Mission from Hungary	August 1982	
82/48517	Coal Mission to Scandinavia	September 1982	
82/48518	Timber Frame Mission from West Germany	October 1982	
82/48520	Hardwood and Dimension Stock Mission to West Germany, France and Italy	October 1982	
82/48514	Mission from Europe to the Canadian Apparels Fashion Fair, Winnipeg	February 1983	
82/48513	Mission from Europe to the Children's Apparels Show, Montreal (CAMA)	March 1983	
82/48526	Canola Mission to Hungary and Czechoslovakia	March 1983	
82/48527	Canola Mission to Norway and West Germany	March 1983	

PROMOTIONAL PROJECTS PROGRAM 1982/83 (P)
PACIFIC, ASIAN, AFRICAN AND MIDDLE EASTERN AREA

Project No.	Event	Date	Project Manager
Trade Fairs and Information Booths			
82/47603	Royal Easter Show Sydney, Australia (Solo presentation)	April 2-13, 1982	
82/47610	Canada Week Abidjan, Ivory Coast	April 1982	
82/47607	AG QUIP — Agricultural Equipment Trade Fair Gunnedah, N.S.W., Australia	August 1982	
82/47611	19th Algiers International Trade Fair Algiers, Algeria	September 1982	
82/47612	Baghdad International Trade Fair Baghdad, Iraq	October 1982	
82/47606	Foodex Japan '82 — The 7th International Food Exhibition Tokyo, Japan	March 1983	
82/47605	In-Store Restaurant Fish Products Promotion in Japan	March 1983	
82/	MARINTEC — International Exhibition of Shipcare Interisland Cargo Handling Singapore, Singapore	March 1983	
82/47604	In-Store Food and Beverage Promotions in Japan	All year	
82/47608	Canada Trade Centre Shows Tokyo, Japan	All year	
82/47609	Catalogue Shows — Newsletter and Direct Mailing Camping New Zealand	Unscheduled	

PACIFIC, ASIAN, AFRICAN AND MIDDLE EASTERN AREA

Project No.	Event	Date	Project Manager
Trade Missions			
82/48627	Ministerial Mission from South Korea (Minister of Agriculture)	Spring 1982	
82/48615	Buyers Mission from Australia to the Canadian International Automotive Show — Toronto	April 1982	
82/48631	Home Builders Mission from South Korea	April 1982	
82/48632	Airport Vehicles Mission to Malaysia, Indonesia, Philippines, Thailand, South Korea	April 1982	
82/48634	Rural Telecommunications Mission to Nigeria	April 1982	
82/48644	Defense Products Mission to Saudi Arabia	April 1982	
82/48606	Heavy Electrical Equipment Mission to Australia	May 1982	
82/48616	Automotive Parts Joint Venture Mission to Japan	May 1982	
82/48638	Buyers Mission from the Ivory Coast	May 1982	
82/48613	Timberframe Housing Mission from Japan	May 1982	
82/48643	Canola Oil Mission to Israel and Egypt	May 1982	
82/48607	NTT Technical Mission from Japan	June 1982	
82/48610	Farm Equipment Buyers Mission from Australia and Nigeria to Canadian Farm Progress Show	June 1982	
82/48630	Primary Wood Products Mission to China	June 1982	
82/48617	Cantrade Buyers Mission from Asia and South Pacific	June 2-4, 1982	
82/48637	Ministerial Trade Mission to the Ivory Coast and Cameroon	June 1982	
82/48614	Jewellery/Silverware Products Mission to Australia/New Zealand	July 1982	
82/48645	Industrial Process and Equipment Buyers Mission from Saudi Arabia	July 1982	
82/48601	Fish Wholesalers Mission from Australia	August 1982	
82/48646	Railway Services and Equipment Mission from Saudi Arabia	August 1982	
82/48605	Instrumentation and Process Control Mission to Austech 1, Australia	August 1982	
82/48620	Livestock and Forage Methods and Material Mission to China	August 1982	
82/48609	Technical Seminars — Agricultural Machinery, Australia	August 1982	
82/48604	Mission from State Electrical Utilities, Australia	September 1982	
82/48647	Fish Products Mission to Nigeria and Egypt	September 1982	
82/48608	Pulp and Paper Machinery Equipment Mission from Australia	September 1982	
82/48641	Ministerial Trade Mission to Nigeria	September 1982	
82/48621	Hydro Electric Equipment Mission from India	September 1982	
82/48628	Oil and Gas Equipment Mission and Seminars in Indonesia, Singapore and Malaysia	September 1982	

Project No.	Event	Date	Project Manager
Trade Missions			
82/48629	Mining and Metallurgical Equipment and Services Mission to India	September 1982	
82/48602	Forage Seed Mission from Japan	September 1982	
82/48635	Gas and Oil Processing and Services Mission to Saudi Arabia	September 1982	
82/48639	Oil and Gas Technology Project Mission from Algeria	September 1982	
82/48636	Airport (Stol) Mission from Angola	September 1982	
82/48603	Fish Products Mission from Japan	October 1982	
82/48612	Oil and Gas Equipment Mission and Seminars in Australia and New Zealand	October 1982	
82/48625	Canola Oil Mission to China	October 1982	
82/48648	Processed Food Mission to Saudi Arabia and Kuwait	November 1982	
82/48649	Oilfield Services and Equipment Mission to Iraq, Kuwait, Qatar and the Emirates	November 1982	
82/48619	Computers and Micro Electronics Equipment Mission to Australia	November 1982	
82/48622	Hydro Electric Equipment Mission to China	November 1982	
82/48626	Canola Oil Mission to India and Pakistan	January 1982	
82/48611	Packaging and Printing Machinery Mission to Australia and New Zealand	February 1983	
82/48642	Canola Oil Seminars in Saudi Arabia and Nigeria	February 1983	
82/48633	Offshore Oil and Gas Equipment Mission to South-East Asia	February 1983	
82/48508	Buyers Mission from Australia to the Canadian Hardware Show — Toronto	February 1983	
82/48540	Ministerial Trade Mission to Egypt	February 1983	
82/48618	Telecommunications Equipment Mission to Australia	March 1983	
82/48623	Telecommunications Equipment Mission to Singapore	March 1983	
82/48624	Fibre Optics Mission from Singapore	March 1983	

PROMOTIONAL PROJECTS PROGRAM 1982/83 (P)
UNITED STATES AREA

Project No.	Event	Date	Project Manager
Trade Fairs and Information Booths			
82/47706	Southern Furniture Mart Highpoint, North Carolina, U.S.A. (Contribution)	April and October 1982	T. Matthews
82/47513	FMI — Food Marketing Institute Convention and Exhibition Chicago, Illinois, U.S.A.	May 9-12, 1982	M. Samson
82/47525	63rd National Restaurant Hotel-Motel Show Chicago, Illinois, U.S.A.	May 22-26, 1982	J. Butcher
82/47709	Packaging Materials Solo, Detroit, Michigan, U.S.A.	May 1982	J. Butcher
82/47522	Offshore Technology Conference and Exhibition Houston, Texas, U.S.A.	May 3-6, 1982	T. Matthews

Project No.	Event	Date	Project Manager
Trade Fairs and Information Booths			
82/47702	California Visual Merchandising Aid Show San Francisco, California, U.S.A.	May 1-4, 1982	J. Lambermont
82/47704	AFCEA — Armed Forces Communications and Electronics Association Expositions, Washington, D.C., U.S.A.	June 15-17, 1982	M. Samson
82/47514	National Computer Conference Houston, Texas, U.S.A.	June 1-10, 1982	T. Matthews
82/47710	Empire Farm Days Hartford, New York, U.S.A.	August 10-12, 1982	
82/47511	Impact '82 International Woodworking and Furniture Supply Fair, Louisville, Kentucky, U.S.A.	September 11-14, 1982	T. Matthews
82/47705	Farm Progress Show Wolcott, Indiana, U.S.A.	September 1982	M. Samson
82/47707	High Technology Market Place (Defence Industry) Philadelphia, Penn., U.S.A.	October 5-7, 1982	J. Butcher
82/47521	National Fish Expo '82 Boston, Mass., U.S.A.	October 1982	T. Matthews
82/47703	Water Pollution Equipment Fair, St. Louis, Missouri, U.S.A.	October 1982	
82/47712	APAA — Auto Parts and Accessories Association Show Chicago, Illinois, U.S.A.	November 24, 1982	J. Butcher
82/47711	Solo Business Furniture Show Boston, Mass., U.S.A.	February 1983	M. Samson
82/47713	America East '83 — Building Materials Show Boston, Mass., U.S.A.	January 1983	M. Samson
82/47714	National Housewares Show Chicago, Illinois, U.S.A.	January 16-20, 1983	
82/47715	Snow Show Las Vegas, Nevada, U.S.A.	March 1983	J. Butcher
82/47716	ASIA — Automotive Service Industry Association Show Chicago, Illinois, U.S.A.	March 1983	

UNITED STATES AREA

Project No.	Event	Date	Project Manager
Trade Missions			
82/48702	Auto Parts Buyers Mission to AIA Show — Toronto	April 4-6, 1982	
82/48703	Malting Barley Mission from the United States	May 16-17, 1982	
82/48711	Mission to Plastic Product Introductory Days, Philadelphia, Penn. U.S.A.	May 1982	M. Samson
82/48704	Buyers Mission from U.S.A. to Canada Farm Progress Show-Regina	June 16-17, 1982	
82/48705	Buyers Mission from U.S.A. to Toronto Jewellery Show	July 1982	J. Butcher
82/48707	Lumber Seminar, Philadelphia, Penn. U.S.A.	September 1982	J. Butcher
82/48706	Computer Mission to the West Coast of U.S.A,	September 1982	J. Butcher

Project No.	Event	Date	Project Manager
Trade Missions			
82/48708	Annual Lumber Industry Meeting (Seminar) Boston, Mass. U.S.A.	October 1982	J. Butcher
82/48709	Health Care Products Mission to Philadelphia, Penn. U.S.A.	January 1983	T. Matthews
82/48710	Canadian Builders Products Seminar Cleveland, Ohio, U.S.A.	March 1983	J. Butcher

PROMOTIONAL PROJECTS PROGRAM 1982/83 (P) LATIN AMERICA AND CARIBBEAN AREA

Project No.	Event	Date	Project Manager
Trade Fairs and information Booths			
82/47801	Health Care Products Solo Show, Port of Spain, Trinidad	May 1982	
82/47524	Latin American Oil Show Caracas, Venezuela	June 28 - July 2, 1982	
82/47806	Information in Canacintra Mexico	July 1982	
82/47508	Bogota International Trade Fair Bogota, Columbia (Information Booth)	July 10-25, 1982	
82/48707	International Animal Fair of Rio Grande Do Sul Porto Alegre, Brazil	August 1982	
82/47803	Expomedica '82 International Exhibition of Medical Equipment and Instruments	September 1982	
82/47808	Agricultural Machinery Show Mexico City, Mexico	October or November 1982	
82/47805	EXPOMOTRIX '82 International Exhibition of the Automotive Industries Caracas, Venezuela	November 1982	
82/47804	Technoforest — International Sawmill and Forest Harvesting Exhibition Lima, Peru	November 19-28, 1982	
82/	Canadian Textile Solo Show Chile	March 1983	

LATIN AMERICA AND CARIBBEAN AREA

Project No.	Event	Date	Project Manager
Trade Missions			
82/48816	Salt Fish Mission to South America	Not Specified	
82/48506	Railway Mission to Venezuela, Columbia and Peru	Not Specified	
82/48809	Alternative Energy (Mini-Hydro) Mission and Seminar in Mexico	Not Specified	
82/48802	Computer Technology Mission to Mexico	Not Specified	
82/48804	Farm Machinery Mission from Mexico and Argentina to Farm Progress Show	Not Specified	
82/48808	Ocean Industry (Oil & Gas Developments) Mission to Brazil	Not Specified	
82/48803	Food Preparation Equipment Mission to Caribbean	April 1982	
82/48815	Textile Yarn Mission from Cuba	May 1982	

Project No.	Event	Date	Project Manager
Trade Missions			
82/48807	Environmental Equipment Mission from Mexico	May 1982	
82/48814	Fisheries Equipment Technical Mission to Mexico	June 1982	
82/48801	Electrical Power Seminars and Mission to Ecuador, Peru and Chile	June 1982	
82/48812	Seed Potato Mission from Panama	August 1982	
82/48505	Airport Vehicles Mission to Latin America	September 1982	
82/48806	Offshore Oil and Gas Equipment Mission from Mexico	September 1982	
82/48805	Pork Mission to Latin America, Mexico, Venezuela, Colombia and Argentina	October 1982	
82/48813	Feed Mission from Mexico	October 1982	
82/48505	Mission to Canadian Hardware Show from Barbados, Trinidad and Cuba, Mexico, Venezuela and Argentina	February 1983	
82/48817	Farm Machinery Mission to Cuba and Venezuela	March 1983	

Exporting to Germany

Interested in learning more about the opportunities presented by Canada's fourth largest export market? Do you know how to approach it? Questions such as these will be answered in a seminar organized by the Canadian Manufacturers Association, in co-operation with the Bureau of European Affairs, Department of External Affairs, on April 22, 1982. Location, Hyatt Regency Hotel, Montreal.

For additional information and registration contact:
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Tel: (514) 866-7774

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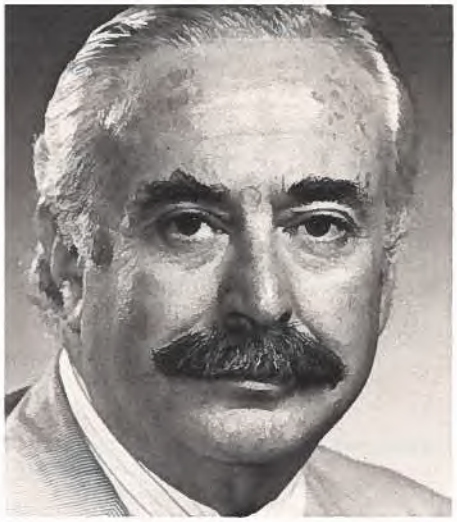
Brian Holmes is a native of British Columbia, where he graduated from the University of British Columbia with a B.Sc. in Metallurgical Engineering. With the exception of eight years at Alcan involved in engineering, marketing and production and a one-year stint as Operations Manager for the Canadian Construction Information Corporation, Mr. Holmes has held a variety of government positions. He has been Regional Director General for the Newfoundland region since August 15, 1979, and is stationed at St. John's.



Gus Rezek was born and educated in Vienna where he received a general arts degree and a degree in economics. Later he earned a third university degree in mechanical engineering in Tel Aviv. His career in the diplomatic corps has taken him from Bonn where he served as Counsellor, Defence Production, to Ottawa, and then to Oslo as Counsellor (Commercial) and Consul. Mr. Rezek is now Regional Director General for Manitoba and has been stationed in Winnipeg since August 5, 1980.

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