

INSIGHT INTO INDUSTRY

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News of Industrial Advances in British Columbia

Fall 1990

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ECONOMIC TRENDS

International Outlook

Wild times on the international front. Just when everyone was trying to figure out how to divide the spoils of the Pentagon's budget cuts, Saddam Hussein gave the military-industrial complex a "new and improved" Middle East market. Global inflation was also given a helping hand as uncertainty over petroleum supplies has pushed world oil prices to \$40+ a barrel.

Elsewhere, the UK economy remains stagnant and the robust pace of growth in Japan has begun to ease. The Bank of Japan raised its discount rate 75 basis points at the end of August - although this only pushed it to 6% - in reaction to

inflationary concerns over oil prices.

Western Europe is still showing good growth as everyone gears up for 1992. However, the re-uniting of West Germany with the poverty-stricken side of its family will undoubtedly weaken the EEC's economic powerhouse, at least over the short term.

In the U.S., economic weakness persists. Unemployment rose sharply over the summer, while retail sales and industrial production were flat. Housing starts fell steadily over the first two quarters of 1990. However, many forecasters believe that the looser monetary regime in the U.S. will allow the Americans to avoid an all-out recession.

Canadian Outlook

Uncertainty (oil prices, native land claims, GST), moderating world demand and persistent inflation will likely see not only the return of the "R" word but also that old pumped-up bachelor party "stagflation".

However, Canadian companies learned some unforgettable lessons in the early 1980's and their conservative stance on inventory levels and debt loads suggests that the present economic slowdown will be less severe and shorter than last time.

As interest and exchange rates gradually decline, the nation's gross domestic product will start to see some positive, though moderate, growth by the spring of 1991. Canada's GDP will likely average 0.7% for 1990 and creep up to around 1.2% in 1991.

Provincial Outlook

It's a bit of a mixed bag in BC right now. Migration (inter-provincial and international) kept demand for goods and services strong in the past quarter and tourism revenues are up over last year. However, business and personal bankruptcies grew through the summer

(up 29%) and forestry plant closures and difficulties in the coal industry signal problems for the economy - especially beyond the Lower Mainland.

Low vacancy rates (office and residential) and major projects are keeping construction activity high, but non-commercial starts are down and this signals a wave of softening. Don't be surprised if housing starts decline to 1986 levels.

On the brighter side, the energy sector, in the wake of the Gulf crisis, has seen some increased activity as the sale of



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Canada

"The message: The river is foreign competition, the thunderstorm a recession, and the steps the giraffe took were things like: planning, training, R&D, acquisition of new technology."

oil and natural gas drilling rights will hit a 10-year record this year. In the run-up to the provincial election the Social Credit government has vowed to accelerate \$20 billion in capital projects to off-set any softening in our economy.

BC is beginning to experience the weaker economic times seen both in Eastern Canada and internationally. However, continued immigration, more diverse export markets and a wider economic base will help to reduce the impact of this downturn.

Speech Openers & Closers by Toastmasters

Response to a flattering introduction:

"That introduction reminds me of the man, who on judgement day, stuck his head out of the grave to read his headstone and said: 'Either somebody is a terrible liar, or I'm in the wrong hole.'"

Long-windedness:

Once upon a time a lion ate a bull and felt so good he roared and roared. A hunter heard him and killed him with a single shot.
Moral: When you're full of bull, keep your mouth shut.

MANAGEMENT PRACTISES

The Ostrich & the Giraffe: A Competitive Fable

The giraffe and the ostrich are racing across the desert to the high ground to get into the forests of leafy green. All of a sudden, a thunderstorm appears, with great rumbles and lots of lightning.

The ostrich, scared witless of the lightning, finds a trench, sits down and sticks his head down a hole.

The giraffe, however, keeps her head

up and her viewpoint long. "This is dangerously low ground," she tells herself. "And that river over there is rising fast. Yes, the lightning could fry me. But beyond that, if I hang around here, I'll get drowned." So she plans, lowers her head, studies the terrain and all the while takes steps towards the high ground. And as it happened, the lightning never hit her, and soon she was safe in the forests of leafy green.

But down in his retrenched position, the ostrich's hole has filled with rain-water. Choking and sneezing, he pulls his head out and struggles to his feet - feathers waterlogged. But now the river has burst its banks and he is washed away.

The message: The river is foreign competition, the thunderstorm a recession, and the steps the giraffe took were things like: planning, training, R&D, acquisition of new technology.

U.S. Income Tax Changes for Foreign Firms

The Bad News: If you are a Canadian company doing business in the United States and currently do not pay U.S. taxes, you may have missed a June 12, 1990 deadline to submit a newly required tax form to maintain your tax exempt status and may now be liable for a \$10,000 fine!

The new rule applies mainly to companies that are exempt from U.S. taxes because they do not maintain a permanent establishment in the U.S. **The Good News:** For Canadian companies that have inadvertently failed to file before the June 12th deadline, the penalty may

be waived if such a waiver is requested upon submitting the 1120F tax form (for companies) or 1040NR form (for individuals).

Copies of these two forms are available from ISTC's Business Service Centre 666-0266. However, it may be prudent for you to obtain professional tax advice on this matter.

"It is more of a dirty hands process in that you do the work and then put in your application for credit, based on the documented SR&ED work done"

TECHNOLOGY

ShREDDed TIPS on R&D Refunds

Its not new, but last year the Scientific Research & Experimental Development (SR&ED) Tax Incentive Program dished out \$800 million in tax credits and refunds! In British Columbia there were 800 SR&ED claims, of which 90% were eligible for the program.

The assistance that a Canadian company can receive from the SR&ED depends on which of two broad categories it falls into. Smaller companies, whose taxable income was less than \$200,000 in the last tax year, can receive a tax credit for 35% of all SR&ED expenditures to a maximum of \$2 million/year. Additional credits are available, at a lower rate, for expenditures in excess of \$2 million/year. The best part for small firms, however, is that credits not used to reduce federal income tax can be taken as cash refunds! Refunds are available for 100% of the credit for non-capital expenditures and 40% of the credit for capital expenditures.

For companies whose taxable income was over \$200,000, tax credits of 20% are available for an unlimited yearly amount of SR&ED expenditures. Cash refunds are not available to companies with taxable income over \$200,000, but unused credits can be carried forward to other tax years, provided that the business to which the credits relate continues to be

carried on in that year.

We spoke to Gerry Hunter, a Science Advisor with Revenue Canada in Vancouver, to get an idea of what pitfalls

potential applicants might avoid. Hunter said the biggest problem they have is getting applicants to provide the technical information required to determine their eligibility. "A lot of people send in information telling us what they want to do and not what they've done. It is more of a dirty hands process in that you do the work and then put in your application for credit, based on the documented SR&ED work done".

What activities qualify for the program? Supported activities fall into three broad categories:

1. **Basic research**-work undertaken for the advancement of scientific knowledge without a specific practical application in mind;

2. **Applied research**-work under-



taken for the advancement of scientific knowledge with a specific practical application; or,

3. **Experimental development** - use of the results of basic or applied research for the purpose of creating new or improved products or processes.

Activities that are not supported include:

- routine engineering & design develop.
- commercial production of a product
- quality control
- style changes
- market research
- sales promotion
- mining, oil and gas exploration
- research in the humanities or social sciences.

With this in mind there are three essential tests that you must pass in order to establish your eligibility: The

The workshop will also feature displays of the BC Business Network and ISTC's DISTCoverly opportunities database. Anyone interested in new products, production processes, joint ventures or strategic alliances should plan to attend.

new product or process must embody a scientific or technological advancement; there must be uncertainty that the technique or approach undertaken will succeed in meeting the desired objective; and, the activities must have scientific and/or technical content, i.e., a process was followed which involved systematic experimentation and analysis conducted by qualified staff.

Eligible expenditures include the direct wages, salaries and related benefits for personnel involved in the SR&ED activity; non-capital materials and supplies; research contracts; payments to universities and other institutions for SR&ED; and, incremental overhead costs. Expenditures

on capital equipment may also qualify provided they are tangible assets used almost exclusively for SR&ED work. Certain prototypes and pilot plants may also qualify.

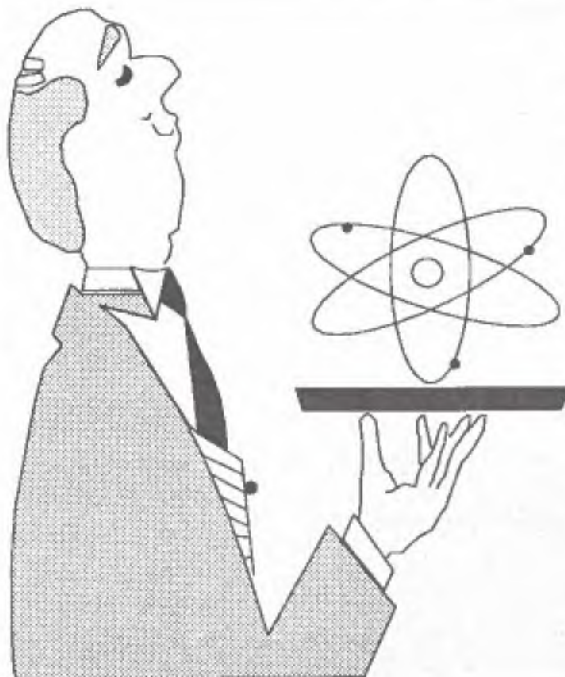
Ineligible expenditures include rent, buildings or leasehold interests; the purchase of rights or patents; and, capital items used previously for purposes other than SR&ED.

While the BC office has one of the fastest processing records in the country, it still takes 6 months for small businesses to receive refunds when claimed. However, Hunter added that "this return time can be trimmed to 2 months if the company had a successful application in the

previous year, there has been no change in the control of the company and expenditures claimed in the current year are comparable".

Further information, including presentations for associations and other groups, can be obtained by contacting:

Revenue Canada
SR&ED Tax Incentive Program
1166 West Pender St.
Vancouver, BC
V6C 3H8
Telephone: (604) 666-8349



Technology Transfer Workshop

Industry, Science & Technology Canada (ISTC) is planning a one-day workshop December 6, 1990 on Technology Transfer. Workshop topics include:

- How to plan, negotiate and manage strategic alliances;
- How to find new products, processes and joint venture partners;
- Overview of worldwide technology/business databases.

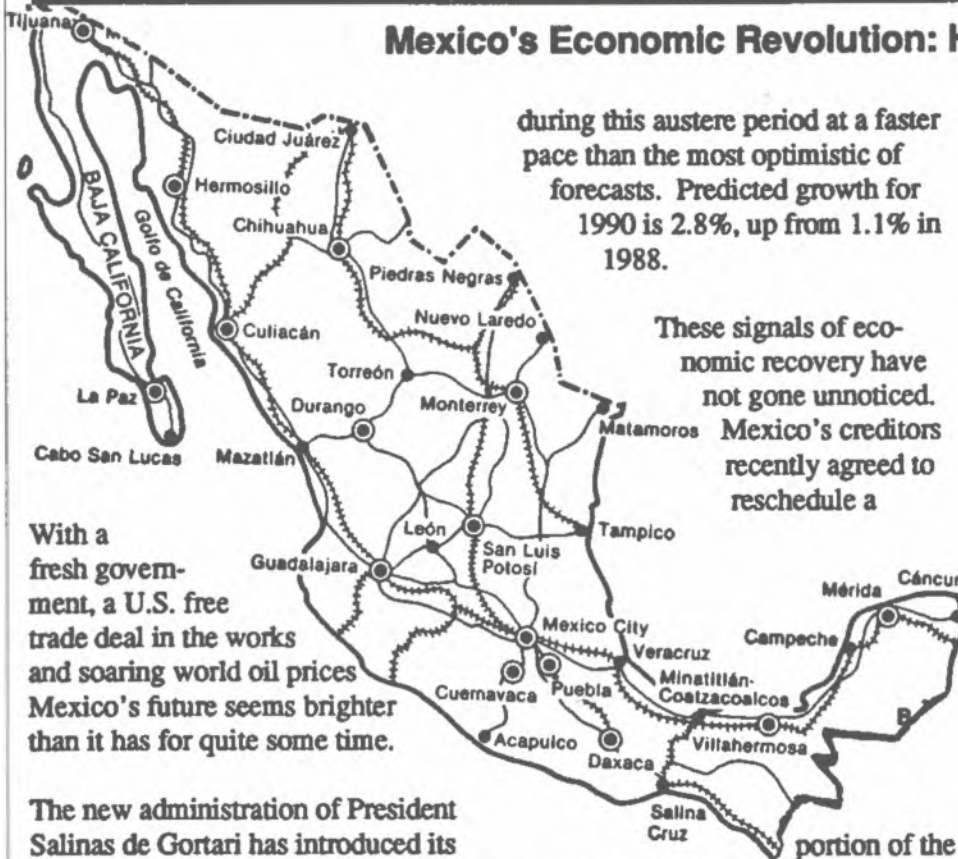
The workshop will also feature displays of the BC Business Network and ISTC's DISTCoverly opportunities database. Anyone interested in new products, production processes, joint ventures or strategic alliances should plan to attend.

For further information contact John Wiebe at: (604) 666-1406, Fax: (604) 666-8330.

Canadian - Mexican trade is also testament to our Latin partner's growing prosperity, as the flow of goods and services between the two countries is forecast to increase by as much as 25% this year.

EXPORT MARKETS

Mexico's Economic Revolution: Hot Stuff South of the Border



With a fresh government, a U.S. free trade deal in the works and soaring world oil prices Mexico's future seems brighter than it has for quite some time.

The new administration of President Salinas de Gortari has introduced its own version of perestroika - taking aim at corruption, enhancing diplomatic and economic relations with the United States, reforming taxes, and facilitating direct foreign investment.

The President's "Pact for Economic Stability and Growth" has maintained a set of austerity measures to reduce the country's run-away inflation. The results have been remarkable. Mexico's inflation rate, which ran at an excruciating 160% in 1987, was tamed to between 15-18% in 1989. What is even more remarkable is that the country's economy has grown

during this austere period at a faster pace than the most optimistic of forecasts. Predicted growth for 1990 is 2.8%, up from 1.1% in 1988.

These signals of economic recovery have not gone unnoticed. Mexico's creditors recently agreed to reschedule a

portion of the country's admittedly crushing debt load, giving the government a little room to manoeuvre.

Canadian - Mexican trade is also testament to our Latin partner's growing prosperity, as the flow of goods and services between the two countries is forecast to increase by as much as 25% this year.

Opportunities abound in virtually all market sectors and Export Development Corporation (EDC) financing is available. Some areas - both goods and services- that have been identi-

fied as particularly inviting include:

Grains & Oilseeds

Mexico is Canada's second largest market for canola and there is potential to expand this market. There is also a good market for Canadian wheat and Mexico's large brewing industry consumes sizable quantities of barley.

Agricultural Products and Services

The Mexican government has pledged to increase the supply of milk, beef and pork to meet strong domestic demand. Consequently, export opportunities are good for powdered milk, beef & dairy cattle and swine.

Telecommunications

It is estimated that Mexico will invest \$15 -18 billion in telecommunications infrastructure over the next decade. Major opportunities will exist for Canadian firms in rural telephone systems, switching equipment, satellite communications, microwave equipment, etc.

Transportation Equip. & Services

Airport and rail modernization programs are a priority for Mexican commerce and tourism. Improved commuter systems are urgently required for Mexico City, the State of

To prepare and file a relatively straightforward patent application in one country will cost you upwards of \$3,000.

Mexico, Monterrey and Guadalajara.

Industrial Machinery & Equipment

Mexico's expanding industrial production requires major investments in modern machinery and equipment. Good market prospects exist for plastics, metal working and food processing machinery and environmental equipment.

Chemical Products

The expanding plastics industry offers opportunities for exporters of resins, machinery tools and dies. Foreign investment restrictions have been eased to encourage investment in secondary and tertiary petrochemical industries.

The economic and political reforms

in Mexico look very encouraging, for both Mexico and its trading partners. Further information can be obtained from:

ISTC's Business Service Centre
900 - 650 West Georgia St.
Vancouver, BC V6B 5H8
Tel: (604) 666-0266
Fax: (604) 666-0277

SPECIAL FEATURE

Protecting Yourself When the Big Light Bulb Goes On: Patents

An article in the last issue of *Insight* looked at turning good ideas into good business opportunities. Building on this theme, we spoke to Tom Bailey of Barrigar & Oyen, a Vancouver, law firm which restricts its practice to intellectual property law, to see what is involved in patenting a good idea.

A patent grants its owner a legal right to exclude others, for a specified period of time, from making, selling or using the invention to which the patent relates.

When considering patent protection, Bailey's first bit of advice is to: "budget the cost of obtaining, maintaining and policing a patent vs the expected financial returns from exploiting the exclusive patent rights. For example, it doesn't make economic sense to patent technology which is likely to quickly become obsolete". To prepare and file a rela-

tively straightforward patent application in one country will cost you upwards of \$3,000. In Canada it usually takes 3 or more years for a patent to be granted. In the United States, patents generally issue more quickly (1-3 years). Expedited examination may be requested in appropriate circumstances.

You should also ask yourself whether your invention might be better protected if kept secret. A patent requires you to fully disclose how your invention works. If it is impossible to reverse engineer the workings of your invention, you may gain more protection by simply keeping your invention a secret.

Then ask: is your invention patentable? To be patentable it must meet three requirements, it must be: **new, unobvious and useful.**

The newness, or novelty condition

requires that the invention be original to the inventor. Usually it is desirable to conduct a preliminary patentability search to assess whether an idea is truly new. For example, inventions from the 1800's whose patents have long since expired can't be re-patented because the ideas they cover are not new. Tom explained that the distinction here is between obtaining a patent oneself and infringing a patent owned by a third party: "people often confuse these two concepts. A person may have a great idea for a wood burning stove, but, after conducting a preliminary search, it may turn out that the idea was patented in the 1890's. The inventor often doesn't understand why he can't be granted a patent. He can't be granted a patent because the idea isn't new, but because the patent has expired the individual is free to use the idea without risk of patent infringement".

Proving that your invention is **unobvious** is often the most difficult of the

On the subject of protection it is important to realize that patent rights are territorial. Thus, a patent granted in Canada does not protect your invention in the United States.

three conditions to satisfy. What the condition seeks to do is separate discoveries that embody some inventive ingenuity from those which merely make obvious alterations to an existing product, eg: changing the size, colour or material of the object like tartan coloured baseballs or wooden hub caps.

The final condition is that the invention be **useful**. The term useful in the context of patents means that your invention must have some kind of commercial utility and be suitable for its intended purpose. For example, Patent Examiners routinely reject patent applications for perpetual motion machines since the inventors cannot demonstrate that the machines actually work as described.

Having fulfilled these three conditions, inventors must be careful to avoid premature disclosure of their invention to the public. In some countries public disclosure of an invention before filing of the application can prevent the grant of a valid patent. In Canada and the United States, a patent application must be filed within one year of the first public disclosure.

However, Canada has recently adopted a "first to file" patent system. This means that an applicant who files an application first generally

has priority over any other applicant claiming the same invention. This is the case even if the second applicant can prove an earlier date of invention.

Some Successful BC Patents

Developer	Invention
Western Clinical Engineering	Pneumatic tourniquet
Durand-Raute Industries	Spindleless veneer lathe
TIR Systems	Light piping technology
International Hardsuits	Newtsuit diving suit
Pure Air Products	Furnace register humidifier
EXCO Industries	Single log feeder
Pacific Asia Technologies	Preservation of cut and segmented fresh fruit pieces
TRIUMF Meson Research Facility	Method and apparatus for 3-D encoding

It is therefore highly advisable to file patent applications promptly (and before any public use, sale or disclosure of the invention).

On the subject of protection it is important to realize that patent rights are territorial. Thus, a patent granted in Canada does not protect your invention in the U.S.. Consequently, you must make a judgment as to how wide

a market there is for your product and whether you are prepared and/or resourced to obtain patents and police and enforce them in more than one country. The term of patent protection varies according to country. In Canada the term of patent protection is 20 years starting from the *filing* date. In the U.S. the term is 17 years from the date of *patent issuance*.

What are the most frequent kind of inventions that come across Bailey's desk? He quipped: "Ventilation systems for bathrooms. I guess the bathroom engenders a kind of quiet reflective environment that starts the creative wheels turning".

If you have an invention that you want to patent, Mr. Dumitru Olariu is the Regional Advisor for the Canadian Patent Office, tel: (604) 684-0647. Dumitru can provide you with general patent information and a representative sample of U.S. and Canadian patents, in the area of your invention, free of charge. This sample search is not comprehensive, but it will give you an indication of whether you should proceed. Tom Bailey, quoted earlier in this article, can be reached at (604) 669-3432.

ISTC is considering sponsoring a patent information seminar early in the new year. If you would be interested in attending such a seminar, please contact Kraig Short at: (604)666-0266.

Calendar of Selected Events

New Strategies for Independent Businesses. Five one-day seminars starting October 16 and ending November 13, 1990 at the Vancouver Board of Trade. Presented by SFU as part of their Breakthrough Management Series and is sponsored by Price Waterhouse. Topics include business planning, expanding in the U.S., GST, asset management, Personal Property Security Act, and tax strategies. Cost: \$95 for each session. Contact: Marilyn Chaplin 291-4621

African Development Bank (ADB) Seminar. November 5, 1990 Simon Fraser University. Morning: representatives from External Affairs and International Trade Canada and the ADB will discuss lending programs, and opportunities for procurement and contracting. Afternoon: individual meetings with officials can be arranged. This seminar is coordinated by CIDA and the Vancouver International Trade Centre of ISTC. Contact: Del Bacon 666-1440

Free Trade Agreement: Temporary Access for the Service Sector. November 6, 1990, Kelowna. The second in a series of seminars for the Institute of Chartered Accountants of BC. Contact: Brian Anderson 666-1414

Pacific Paper Expo '90. November 7 - 9, 1990. Western Pulp & Paper Conference and Show. For more information contact: Roger Bryenton 666-4905

Economic Outlook Conference: Challenges of Today and Tomorrow. November 13 & 14, 1990, Hyatt Regency Hotel. The 19th annual conference of the Association of Professional Economists of BC (APEBC) includes presentations on economic and financial outlook as well as Pacific Rim trade, energy, sustainable development, and real estate. Cost: APEBC members \$245; others \$325 before October 31, \$345 after this. Contact: Richard Allen 737-5014

Barriers and Bridges for Women in Engineering. November 16, 1990 (afternoon and evening), The Engineers' Club. Sponsored by the Canadian Committee on Women in Engineering and the Association of Engineers and Geophysicists of B.C., this forum will bring together Western Canadian women in engineering fields to discuss barriers to women in engineering. Cost: \$20. Contact Nicole O'Gorman 736-9808

Doing Business in Asia. November 21, 1990, Kelowna. Luncheon presented by ISTC with the Kelowna Chamber of Commerce. Contact Lynda Peach 666-1426

Selling to the U.S. Federal Government. November 26, 1990 Westin Bayshore Hotel. The Free Trade Agreement has opened up over \$3 billion annually in U.S. federal procurement opportunities. Senior officials of the U.S. General Service Administration will discuss how the U.S. government procures goods and services and how to become listed as a potential supplier. This seminar is sponsored by the Canadian Exporters' Association and External Affairs and International Trade Canada. Cost: \$75. Contact: Jacalin Crosfield 666-1440

DISTcovery Workshop. December 6, 1990. An ISTC seminar on technology sourcing, transfer, and alliances (See page 4). Contact: John Wiebe 666-1406

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