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Bombardier markets Disney monorail and people-mover systems

The licensing agreement signed last September with Walt Disney Productions in Florida to market, build and operate Disney-designed "WEDway PeopleMover" and monorail systems has made Bombardier Inc. of Montreal the only manufacturer in the world to offer a full range of fixed guideway transit technologies: monorail, light rail, heavy rail, high-speed rail, commuter cars and people movers.

Moreover, Bombardier is the only manufacturer to be granted a licence for the transportation systems originally developed by the Disney organization for Disneyland in California and Walt Disney World in Florida.

Bombardier has been involved in the research, development and operation of mass transit vehicles for more than 25 years and plans to market both the monorail and WEDway People-Mover systems in the public transit sector. The company began working on design modification of the

Disney systems prior to the signing of the agreement to meet the specific demands of public transit. They will provide not only the vehicles but the complete operating systems.

Executive Vice President Raymond Royer of Bombardier said: "We feel these time-proven designs can be combined with our experience in manufacturing mass transit vehicles to fulfill an immediate need for public transit systems which provide more than just a ride. The Disney systems not only move people efficiently and economically; they make the journey a positive experience."

Company officials have identified a significant potential for the monorail system in urban transit applications and for people movers in more specialized public transport applications such as in airports, commercial centres, fair grounds, university campuses and others.

The advantages offered by the Disney systems in relation to the current needs and concerns of the public transit sector are considered unique by the company. The systems cost less to build than competing systems and can be operated and maintained at lower cost; the systems are



Bombardier is adapting, building and marketing the Walt Disney monorail system for public transportation services.

safe and reliable, as proven by their successful use for many years in the Disney theme parks; they are also more attractive than conventional structures.

Monorail systems

In North America, monorail systems have traditionally been associated with recreational, non-urban settings and are only now being recognized as a viable alternative in the ongoing search for innovations in public transit.

Bombardier engineers are modifying current designs to increase the capacity of



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monorails without increasing costs. Current capacities are in excess of 7 000 passengers per hour and as they are capable of operating at speeds of up to 100 kilometres an hour, the quiet, rubber-tired monorail system could comfortably accommodate as many passengers as six lanes of traffic, significantly reducing traffic congestion, air and noise pollution, energy use and transit costs.

The all-electric Disney monorail system, operates on a 26-inch-wide beamway. The total width of the two-lane monorail structure measures just over half that of a conventional 30-foot rail structure. This feature will enable cities to reduce the loss of valuable, taxable land needed for conventional rail systems.

The monorail beamway both supports and guides the cars, in contrast to standard elevated guideways whose rails are added to massive support structures, thereby increasing costs. In addition, monorail beams have a hollow core, designed for minimum weight, maximum strength and minimum cost. Consequently, monorail guideways can be built for 30 per cent less cost than those of conventional systems.

Monorail systems are also considered more aesthetically pleasing. The narrowness of monorail beams results in an open-looking guideway system which casts fewer shadows than the massive, conventional elevated structures.

A major operating cost advantage lies in the negligible track maintenance requirements. The 15 miles of track at Walt Disney World are maintained by a team of only two.

People movers

The term "people movers" fits transit vehicles of all types, from airplanes to automobiles, but the term is increasingly being reserved for systems designed to handle concentrations of pedestrian traffic over relatively short distances. This feature distinguishes people movers from the more widely recognized monorail system which is used in applications requiring higher speeds and greater intervals between stations.

The Disney-designed PeopleMovers are noise-free, pollution-free horizontal elevators. In operation at Disney World in Florida since 1975, they have also proven to be reliable, and energy efficient with low operating and maintenance costs.

The Disney PeopleMover train is driven by a series of computer-controlled linear induction motors that are embedded in the track to create a magnetic field which propels the vehicle. The car itself has no on-board propulsion equipment. Sensors along the track ensure that power is applied only to those motors directly under a train.



Monorail systems are recognized as viable, cost-effective alternatives for public transit.

The cars themselves have a very small number of moving parts which reduces wear and maintenance costs. The PeopleMover is also known for its high safety record.

Extensive exports

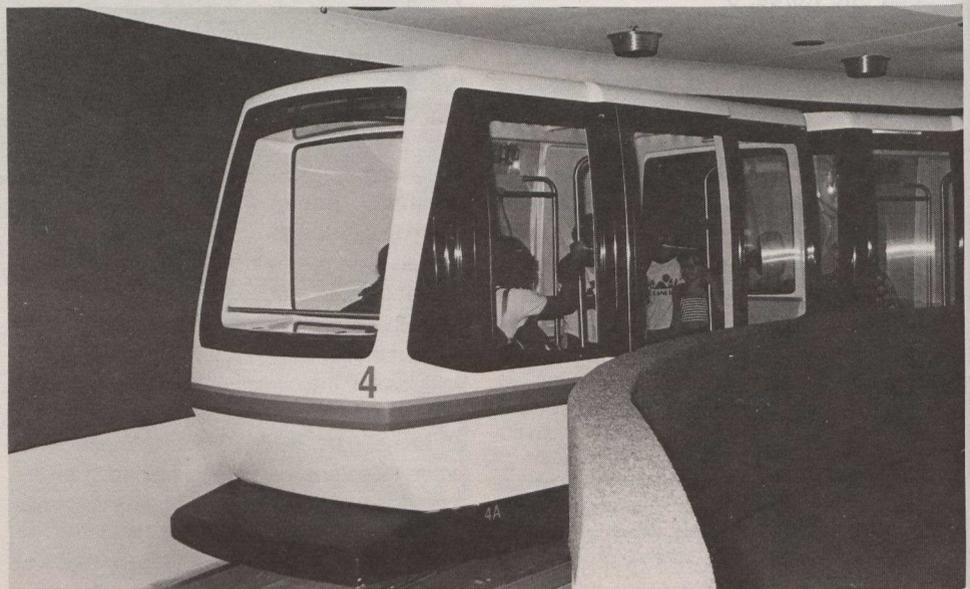
Bombardier Inc., founded in 1942, is a multi-divisional, Canadian corporation with multinational markets and activities in seven Canadian, two American, and two Austrian plants. More than 50 per cent of the Canadian production is exported, to be sold in some 50 countries on five continents.

The company is involved in the design, development, manufacture and marketing of transportation-related equipment and products including snowmobiles, diesel-electric locomotives and diesel engines, logistic vehicles for the military market, all-terrain

tracked utility vehicles and mass transit equipment. In 1984 total sales amounted to \$491 million (Cdn).

Created to supply cars to the Montreal subway system in 1974, Bombardier's Mass Transit Division now offers a full line of transit equipment including rapid transit cars, light rail vehicles, inter-city passenger trains, commuter cars, monorails and people movers. It has sold transit equipment in Montreal, Chicago, New Jersey, Mexico City, Portland and New York City, and high-speed trains in Canada. The Austrian Division in Vienna, Bombardier-Rotax, manufactures tramways for the Austrian market.

The company is currently negotiating to build an extension of the monorail system at Disney World in Orlando, Florida, and for sales of a people mover system.



The WEDway PeopleMovers are fully automated, noise-free, pollution-free horizontal elevators designed to move pedestrians over relatively short distances.

Spacotel satellite system

Communications Minister Marcel Masse has announced the start of a six-month field trial of Spacotel, a Canadian-developed satellite communications system.

The trial is being conducted by the branch of the Department of Communications (DOC) responsible for provision of telecommunications networks and services for the federal government.

"The field trial will explore ways in which the federal government can use innovative satellite communications technology such as Spacotel to provide extensive, cost-effective telecommunications services," said Mr. Masse. He added that Spacotel is not only "a promising means to extend high-quality telephone services to underserved areas, but it can also be used to provide private voice and data network services for business".

Spacotel was developed by Microtel Limited of Burnaby, British Columbia. It allows a person in a remote area to instantly receive a dial tone from the telephone network in an urban centre.

With Spacotel, a portable earth terminal sends a signal to the 14/12 GHz *Anik C* satellite in geostationary orbit 36 000 kilometres over the equator. The satellite then relays the signal to a central control station, where the call is linked automatically with the national telephone system. The whole process takes only a fraction of a second.

The field trial will test delivery via Spacotel of a variety of voice and data telecommunications services to government installations ranging from unmanned lighthouses and a remote weather-monitoring station to an air traffic control centre. Microtel is providing the Spacotel terminals for the field trial.

The first segment of the field trial will connect four terminals in eastern Canada with a central control station at DOC's Communications Research Centre at Shirleys Bay, west of Ottawa. Terminals will be located at unmanned coast guard lighthouses in Point Petre and Nine-Mile Point, Ontario; the Transport Canada air traffic control centre in Riverview, New Brunswick; and DOC headquarters in Ottawa.

In the second part of the field trial, scheduled to begin this spring, a Spacotel terminal will provide telephone service between government offices in Prince George and Vancouver, British Columbia.

Another terminal will transmit two-way voice and data communications from Environment Canada's Atmospheric Environment Service monitoring station in the Queen Charlotte Islands.

Agreement by trade ministers

Following the Federal-Provincial Trade Ministers' Conference in Vancouver, British Columbia on May 28, Minister for International Trade James Kelleher announced that the trade ministers from the provinces and territories agreed that there is "an urgent need for a comprehensive agreement to secure and expand our access to the US market".



James Kelleher

The ministers committed themselves to develop a closer federal-provincial consensus on trade and they agreed that diversification of markets is essential, particularly in Asia/Pacific.

Issues discussed by the ministers at the conference included: follow-up to the Quebec City Trade Declaration, including Canada/US trade relations and multilateral trade negotiations; a report by Mr. Kelleher on his consultations across the country on access to export markets and on export financing; an update on the national trade strategy; and establishing greater links in federal-provincial trade activities abroad.

PCB identification standards

The National Research Council (NRC) of Canada has developed the first international standard for the identification of individual compounds included in the toxic mixtures known as polychlorinated biphenyl (PCB). The synthesized PCB compounds for the new reference materials were developed and purified by Wellington Environmental Consultants Inc. of Guelph, Ontario.

The NRC's chemical reference package, known as *CLB-1*, is the first to be offered for sale with technical support from an agency concerned mainly with quality assurance, said Dr. W. David Jamieson, head of analytical chemistry at NRC's Atlantic Research Laboratory in Halifax. The package consists of four solutions containing individually synthesized, purified chlorinated biphenyls. These include 51 of the more toxic compounds of PCB and those most likely to be found in the environment. There are 209 possible PCB compounds, all closely related.

The new *CLB-1* reference materials will be used to identify specific PCB compounds by laboratories employing gas chromatography or mass spectrometry equipment.

Reliable reference materials are needed

to accurately identify and measure the concentrations of individual PCB compounds since the toxic and cancer-causing properties of PCBs vary with the type of PCB compound, said Dr. Jamieson.

Until now, government agencies and private companies specializing in chemical analysis usually have had to rely on a variety of commercial sources for laboratory PCB reference. The accuracy of those materials has not been assured by an independent authority.

PCBs were manufactured for half a century before being banned in Canada in 1977 in response to growing evidence that they are toxic and carcinogenic. They have been used as a coolant and dielectric in electrical transformers, in office supplies and in plastics. The resistance to chemical and biological breakdown which made them popular now has become the prime obstacle in the handling and disposal of PCBs.

Human resource development in Third World

Minister for International Relations Monique Vézina recently announced that Canada will contribute \$875 000 over the next three years to the Foundation for International Training (FIT), an international non-governmental organization (NGO) focusing on human resource development in Third World countries.



Monique Vézina

The program contribution will be administered by the Canadian International Development Agency (CIDA) for projects which this year range from holding a seminar in China to train government cadres and enterprise managers in negotiating joint ventures, to training instructors and preparing training materials for the Foundation for Entrepreneurial Development in the Dominican Republic.

Incorporated in Toronto nine years ago, FIT works in both the private and the public sectors, running training sessions for managers and administrators, designing curricula and training manuals, sponsoring personnel exchanges, and building links between Third World NGOs. FIT works to upgrade specific skills that already exist within Third World institutions and organizations.

By the end of March 1984, some 200 projects had been completed in over 40 countries. CIDA has provided a total of almost \$6.4 million to FIT since 1977.

Commitment to the protection of ozone layer

Canada was among the 20 nations that signed a convention to protect the world's ozone shield from chemical destruction. The Convention for the Protection of the Ozone Layer was signed by half the participating countries at the week-long diplomatic convention held in Vienna in March.

Allan Sullivan, the Canadian permanent representative to the United Nations Office at Vienna, signed the convention on behalf of Canada.

Announcing Canada's commitment to the protection of the ozone layer, Secretary of State for External Affairs Joe Clark said that "it is significant that Canada has taken a leading role in the development of this convention". He added that "this clearly demonstrates Canada's desire to co-operate in protecting the global environment for all mankind".

The convention commits participating nations, including the US and USSR, to protect human health and the environment against adverse effects resulting from modifications to the ozone layer. It also provides for international co-operation in research, monitoring, scientific assessment and exchange of information on matters pertaining to the status of the ozone layer.

The pollutants to the ozone layer are chlorofluorocarbons (CFCs), which are non-toxic gases with unique physical properties. They are widely used to propel aerosol sprays, manufacture foam plastics, and operate refrigerators and air conditioners.

Increased radiation

While these gases are not harmful at the earth's surface, they diffuse into the stratosphere where they are broken down into their constituent elements by intense ultraviolet radiation. The chlorine which is thus released depletes the ozone layer and permits increased amounts of ultraviolet radiation to reach the earth's surface.

Current chemical models of the stratosphere indicate that even modest growth in CFC use could result in substantial depletion of the ozone layer within 50 to 75 years. The resulting exposure to ultraviolet radiation would cause increased incidence of skin cancer, affect the human body's immunological response and decrease production of some of the world's most important food crops, including wheat, rice, corn and soybeans.

The diplomatic conference also requested the United Nations Environment Program to continue work on a protocol to the convention which would provide for internationally agreed upon measures to control equitably global production, emissions and

use of CFCs. As agreement on a protocol is not expected for some time, the diplomatic conference urged all states "to control their emissions of CFCs by any means at their disposal" during the interim.

Active role

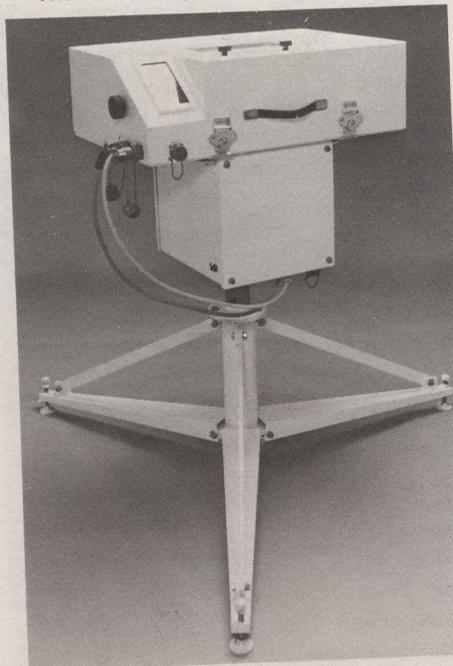
Canada has been an active participant in the research, monitoring and regulatory measures to protect the ozone layer for many years.

Ground-based ozone monitoring stations are in operation in Toronto, Edmonton, Churchill, Goose Bay and Resolute Bay. Weekly ozonesonde soundings are taken at the latter four locations for the World Meteorological Organization (WMO). Canada also operates the World Ozone Data Centre for WMO, archiving and publishing ozone data from around the world for the past 25 years.

Brewer spectrophotometer

The newest instrument developed to measure atmospheric ozone and sulphur dioxide in unattended remote operation, the Brewer spectrophotometer, was developed in conjunction with the Atmospheric Environment Service of Canada. Manufactured and marketed internationally by SCI-TEC Instruments Inc. of Saskatoon, Saskatchewan, it has already been sold in Sweden, Germany, Belgium and Greece.

The Brewer spectrophotometer is fully



The Brewer ozone spectrophotometer, developed and manufactured in Canada, is a sophisticated modern instrument used in atmospheric ozone and sulphur dioxide measurement by scientists and researchers.

automated and its direct sun total ozone measurement has a ± 1 per cent accuracy. It has a much greater accuracy than the Dobson spectrophotometer which has been used for the past 40 years.

Canadian scientists regularly participate in US stratospheric experiments conducted by the National Aeronautics and Space Administration (NASA). Many of these involve measurements of stratospheric trace constituents on board large stratospheric balloons which get to altitudes of 30-35 kilometers and rockets which reach altitudes of 50 kilometres.

Marc Garneau, Canada's first astronaut, carried equipment aboard the space shuttle *Challenger* in October 1984 to take measurements of the ozone layer using a solar spectrophotometer. These data are currently being analyzed to deduce profiles of ozone, water vapour and aerosol concentration for comparison with satellite instruments, which cannot be calibrated directly.

Lumber sales soar in Japan

The export program of Westar Timber Limited has resulted in more sales to Japan in the first two months of 1985 than its entire 1984 total sales of 16 million board feet of lumber.

The sales jump was achieved by cutting the lumber to the sizes and standards that are the norm in the Japanese house-building industry, said Bruce Howe, president of Westar's Vancouver-based parent, British Columbia Resources Investment Corp.

A similar strategy in 1984 brought Westar Timber increased lumber sales to Britain and a gold medal of excellence in marketing. This was particularly impressive because lumber is such a mature product, said Mr. Howe.

Until four years ago, all of Westar Timber's export lumber sales were to the United States. Sales to Japan began two years ago, and more than a quarter of the company's production went to non-US markets last year. The long-term target is to have about half of its production going to the US market and half to non-US buyers, said Mr. Howe.

Mining contract

Another export gain for a Westar firm was the \$30-million contract of Westar Mining Limited to sell coking coal to Japan.

In 1984 Westar Engineering Limited signed its first contract to sell mining technology. This sale was to the mining industry in Australia, which is Westar's main competitor in coal markets.

Westar Engineering currently has a protocol with China.

Tim Lee

Canadian high-tech in China

The province of Ontario and a Vancouver-based company, International Geosystems Corp. have signed two separate agreements in China involving Canadian high-technology.

The agreement with the province of Ontario is for the establishment of a combined trade office and technology centre in China and the agreement with Geosystems involves the supply of technological expertise to China's mining industry.

The trade office and technology centre will be built in Nanking, the provincial capital of Jiangsu. The centre will serve as a training base for Chinese middle managers, a contact point for technological exchange and as a window for Canadian-Chinese trade, said Wu Xi-Jun, chairman of Jiangsu's Science and Technology Committee.

The centre, to be ultimately staffed mainly by Chinese engineers, will also provide consulting services for both Chinese and Canadian businesses, she said.

Co-operative efforts will be focused in six areas: food processing; fibre optics; energy conservation and alternative energy sources; management training; computer software; and modernization of small and medium-sized enterprises.

For Ontario, some of the key functions of the new centre which is expected to open next spring, are the identification of trade and joint-venture opportunities and as a technology showcase.

"The office will provide an adequate return on investment on the basis of the trade that we do," said Industry Minister Andrew Brandt at the formal signing ceremony in Toronto.

In the joint venture agreement, Vancouver-based International Geosystems Corp. will supply systems and software for the upgrading and expansion of mines in China and for the training of Chinese personnel. The agreement, valued at \$50 million over the next three years, was signed with a Chinese government-operated engineering firm.

Geosystems is a computer company that has developed advanced computer systems for deposit evaluation and open-pit design which will be used in the first two projects: the expansion of a copper mine to a capacity of 90 000 tonnes a day from 30 000 tonnes, and the final feasibility and design work for a new gold mine.

As well, the company's GEOLOG system — modified to handle Chinese characters — will be used to process exploration data.

The company says about 500 mines in China have been targeted for upgrading and expansion over the next five to ten years.

Significant sales in offshore equipment

The 36 Canadian companies that participated at the Offshore Technology Conference and Exhibition (OTC 85) in Houston, Texas, May 6-9, presented one of the world's most comprehensive displays of offshore technology that led to the signing of many new contracts. On-site sales amounted to \$7.2 million and some \$109.8 million in follow-up orders were made.

The companies at the national stand, sponsored by the Department of External Affairs, also appointed 17 agents and distributors for their products and services, with another 42 agents pending, and received more than 640 serious inquiries.

Besides Canada's national stand, Newfoundland and Alberta were also repre-



Artist's conception of a model of a heavy-lift air vehicle presented in Houston by Magnus Aerospace of Ottawa.



Port Moody B.C.'s International Submarine Engineering president James McFarlane (right) demonstrates the company's remote manipulator arm to Bruce Stephen, representing a Texas manufacturing firm.

sented in Houston by 14 and 22 companies respectively.

The products and services displayed by the Canadian companies at the trade fair included drilling units, ice-breakers, oceanographic survey services, submersibles, diesel engines and custom engineered equipment products and technical services. Survival and immersion suits, heavy lift air vehicles, wire ropes, offshore pressure vessels, cranes, remote-controlled underwater vehicles, colour imaging sonar, recovery units, solar-powered intelligent buoys and helicopters, were also among the items on view.

Switching systems for southern US states

Northern Telecom Limited of Mississauga, Ontario recently announced the signing of a four-year supply contract with BellSouth Services Inc. covering purchases by its affiliated telephone operating companies, Southern Bell and South Central Bell in the US. Roy Merrills, group vice-president, Integrated Network Systems, Northern Telecom Inc. of Nashville, Tennessee said purchases under the contract in 1985-86 are expected to reach \$300 million (US).

The contract covers Northern Telecom's DMS-100 switching systems, traffic operator position systems (TOPS), Integrated Business Network (IBN) features, and other associated features and support services.

The DMS-100 is a combination of hardware and software that provides telephone companies with the switching capabilities to route local and long distance calls, TOPS is a computerized workstation for telephone company operators and IBN is a software package that allows telephone companies' central office switches to provide businesses with integrated voice and data features.

To date, BellSouth's affiliated operating companies have placed 35 Northern Telecom DMS-100 switching systems and 39 DMS-10 systems in service. There are more than 530 DMS-100 systems and more than 1 100 DMS-10 systems currently being used in the world.

Canadarm underground

Spar Aerospace Limited, the Canadian high-tech firm that developed the robot arm for the National Space Administration Agency (NASA)'s space shuttle, is currently discussing the possibility of developing a robot mining system with a consortium of four Canadian mining companies, led by Inco Limited of Sudbury, Ontario.

The remote manipulation system based on Canadarm technology, could be designed to erect safe underground roofing in tunnels that pose a danger to workers, said Spar chairman Larry Clarke. "The remote arm could go into a shaft and put up a solid roof at the face of a mine automatically," he said. "That's where most of the cave-ins occur so it could be a strong safety feature," he added.

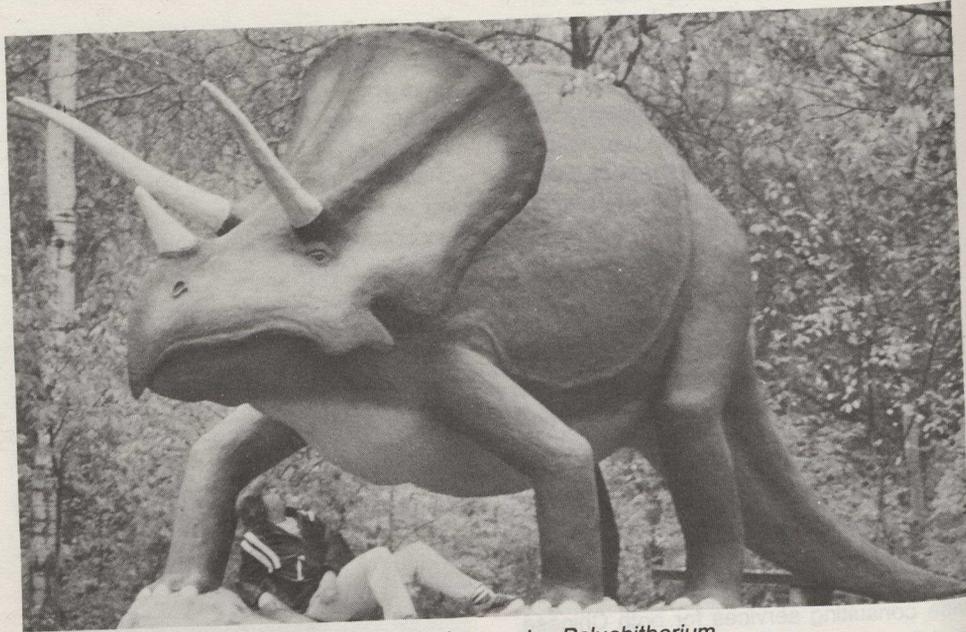
Mr. Clarke also said a remote control system could be developed for open-pit mines that use large drag shovels. Currently in drag mining, an operator is located in a booth that is often a great distance from the actual site of digging.

Spar Aerospace is continually searching for new applications for its remote manipulation division. Last year the company signed a \$35-million contract with Ontario Hydro to repair faulty pressure tubes in the Pickering nuclear reactor site.

A special remote arm, designed with a 6-metre reach and lift capacity of 2 270 kilograms, is used at the face of the nuclear reactors where plant workers are exposed to the highest levels of radiation.

New applications and rapid growth in the telecommunications and defence industries will boost Spar's annual sales to \$250 million in 1985, predicted Mr. Clarke. "The telecommunications market will triple by the end of the decade and we hope to sell about \$45 million in earth satellite stations alone in 1985," he said.

Monsters from another time populate park



Gisèle Grignon, The Citizen

Morley Seaver of Rockland, Ontario looks up at a Baluchitherium.

Prehistoric World in Morrisburg, Ontario is rapidly becoming the largest park of its kind in the world.

Owners Paul and Serge Dupuis said that in terms of tonnage, with displays of everything from the popular Tyrannosaurus Rex to the frog-like Bradysaurus Bainsi, it may already be the largest.

The tourist park now has 37 lifesize concrete dinosaurs, more than double the number on display when it opened in 1982. This year the owners plan to add a 110-tonne Apatosaurus, commonly known as a brontosaurus, and later, the largest land animal that lived, a Super-Saurus, measuring 15 metres high and weighing 278 tonnes. Within seven years the park expects to show 100 prehistoric or extinct animals, said Mr. Dupuis.

When the Dupuis brothers bought the

53 wooded acres near Upper Canada Village and began to build the huge detailed sculptures, it was the second largest public prehistoric park in Canada after the one in Calgary, Alberta. It took six months to clear the forest and set up nature trails that weave around monsters such as the Iguanodon Bernissartensis, which towers 6 metres above the ground.

The creation of a concrete sculpture takes an average of one month of 14-hour days. The metal skeletons for the larger animals are assembled in pieces, set on a floating cement slab in the park and filled "bucket by bucket" with concrete.

The largest sculptures can require up to 200 bags of cement. The heads and some upper bodies are filled with foam. The cement exterior is then sculpted and finally painted with latex exterior paint.

Sport exchange agreement between Canada and Korea

Minister of State for Fitness and Amateur Sport Otto Jelinek and Republic of Korea Sports Minister Lee Yong-Ho recently signed a memorandum of understanding on sports exchanges between Canada and Korea.

The signing came at the end of Mr. Jelinek's five-day visit to Seoul, the capital of Korea, which will host the 1988 Summer Olympics.

The exchange — the first of this nature signed between the two countries — will allow athletes to compete and train in each country's Olympic facilities in the years leading up to the 1988 Winter Games in

Calgary and Summer Games in Seoul.

Mr. Jelinek said, however, that the most vital benefits from the agreement will accrue in the long term. "I look at this sports exchange as far more than just a mere exchange of athletes. It goes way beyond that," he said.

One matter discussed between Mr. Jelinek and the South Korean sports minister was the possibility of exporting the Canadian technology currently being employed in the construction of the Olympic facilities in Calgary.

"It can go beyond the construction of

sports facilities," said Mr. Jelinek. "Once we get the Canadian corporations into Korea to start constructing sports facilities, I'm quite certain that they will have the door open to bid on other projects, whether it's transportation systems, subway systems or bridges. It's unlimited," he added.

The Canada-Korea sports exchange was the second such agreement signed in the past two weeks by Mr. Jelinek and the third since he became Minister of State for Fitness and Amateur Sport. He signed a similar agreement earlier in March with the People's Republic of China, as well as another last December with the Union of Soviet Socialist Republics.

Young people's theatre on tour in Pacific Rim

Green Thumb Theatre for Young People from Vancouver, British Columbia is currently on tour in the Pacific Rim presenting more than 100 performances of its most successful shows, *New Canadian Kid* and *One Thousand Cranes*. The tour began at the Hong Kong Arts Centre on April 16 and will conclude on August 9 in Auckland, New Zealand after performances in other New Zealand cities and in Singapore and Australia.

The tour is being sponsored by the federal government through the Department of External Affairs and the British Columbia government through the B.C. Cultural Fund and Lottery Revenues.

Green Thumb's performances in Hong Kong were also assisted by Reliance Photographic Reproduction, who have offices in Hong Kong and Victoria, B.C., and the Hong Kong office of CP Air.

Concerns of youth

Green Thumb Theatre addresses topical issues of concern to young people and their families, and the two shows on the tour in the Pacific Rim are examples of the type of work done by the theatre company.

New Canadian Kid, written by Green Thumb artistic director Dennis Foon, is the story of a young immigrant, Nick, and the



David Cooper

Wendy Noel and Brian Linds are appearing in Dennis Foon's *New Canadian Kid* on tour in countries of the Pacific Rim.

struggles he faces adjusting to a new country, language and lifestyle. Nick's situation is made very immediate in a simple but powerful manner — Nick and his mother speak English, while the other characters

in the play speak a gibberish that was created for the show.

New Canadian Kid has toured throughout Canada, the United States, Britain and other European countries, and has been produced by companies in other parts of the world.

One Thousand Cranes has been praised by educators, critics and children for its sensitive treatment of a difficult subject — the threat of nuclear war, and its effect on children today. The play's title refers to the bird that has become a symbol for the survivors, a symbol of peace, hope and happiness.

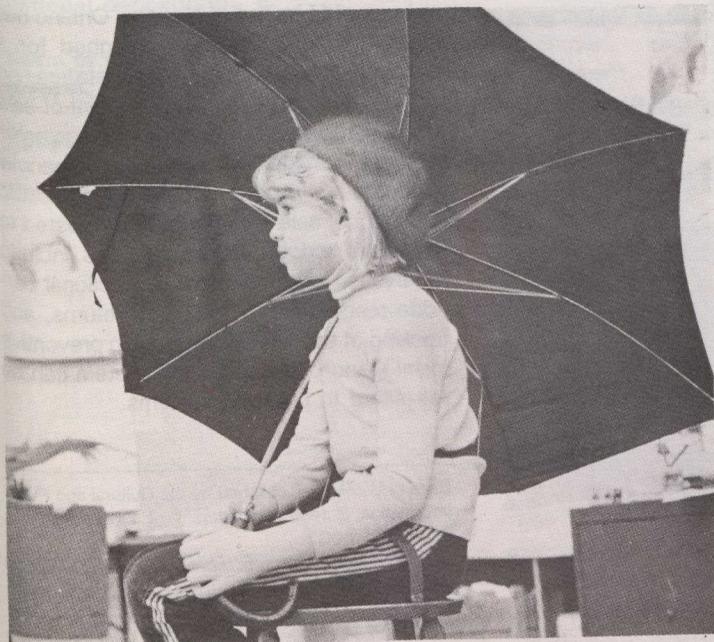
Truth and fiction

The stories of two children are interwoven in the play: the true story of Sadako Sasaki, who was a victim of leukemia due to exposure at Hiroshima, and a fictional account of a young Canadian boy who is frightened by the possibility of nuclear war.

One Thousand Cranes has also been performed widely and in 1984 won the Chalmers Award for Best Canadian Children's Play, as well as the Jessie Richardson Award for Best Children's production.

One Thousand Cranes and *New Canadian Kid* were designed by Marti Wright and are being directed by Dennis Foon. Cast members include Barbara Duncan, Daphne Goldrick, Brian Linds, Wendy Noel and Brian Torpe.

Artistic expression focused through the eyes of a child



A young aspiring artist (right photo) at the Winnipeg Art Gallery is intent on his portrayal of the "Model with Umbrella". The Winnipeg gallery is one of the many Canadian galleries that organizes art courses on weekends and during holidays to enable children to find expression through paint, paper, clay and wood. Oblivious to chatter and clatter around them, the children are usually found immersed in their work, their attention riveted on the immediate project.

News briefs

Secretary of State for External Affairs Joe Clark and Minister of Environment Suzanne Blais-Grenier have announced that Canada will send ecologist M. Jackson to assist in determining the environmental consequences of the raging fire on Isabela, the largest of the Galapagos Islands World Heritage Site and Biosphere Reserve, which belong to Ecuador. The fire started in early March and has threatened the survival of unique fauna, including giant land turtles. Earlier the government of Quebec despatched three experts to the islands to determine the nature of the problem and they also provided two CANSO water bombers to help flight the fire.

Agriculture Canada held a one-day seminar in Winnipeg, Manitoba, May 9 to promote agricultural trade between Canada and Mexico. The seminar was hosted by Canadian Wheat Board Minister Charles Mayer and attended by Mexican Secretary of Agriculture and Hydraulic Resources Eduardo Pesqueira Oléa, who was in Canada for a seven-day visit to meet with Canadian agricultural officials. Canadian producers, Mexican and Canadian government officials and international shipping agents and carriers also attended. Information to facilitate exporting to Mexico was published by Agriculture Canada in *Canada-Mexico: A Guide to the Physical Distribution of Agricultural Products*.

Minister for External Relations Monique Vézina has announced that the federal government will contribute \$200 000 to relief efforts for victims of the cyclone that left thousands dead or missing in coastal areas of southern Bangladesh. The contribution is a response to an international appeal for aid launched by the League of Red Cross and Red Crescent Societies. The league is seeking a total of \$2.2 million to provide food, clothing, shelter and medical supplies to 120 000 people in the worst-affected areas. The Canadian Red Cross Society has donated \$20 000 to the international effort.

Gandalf Technologies Inc. of Manotick, Ontario, a leading designer, manufacturer and supplier of electronic data communications equipment and information network systems, has reached an agreement in principle to acquire Eurotech B.V. in the Netherlands. Gandalf Nederland will be responsible for marketing, installing and maintaining Gandalf's data communications equipment and information network systems in the Netherlands. Gandalf Technologies Inc. operates through subsidiaries in Canada, the United States, Britain, Switzerland and Australia.

Leigh Instruments Limited of Ottawa, Ontario, has announced that two British helicopter operators have agreed to purchase 80 deployable crash position indicators, which assist in the location of downed aircraft. The crash beacons are installed on the outside of

aircraft structures and turned on automatically in a crash. The deal is worth more than \$1 million. In addition the company has received a \$30-million contract from the Canadian government to supply 40 tactical air-navigation systems. The government also took an option for 20 more navigational systems.

Statistics Canada has predicted that there will be a 5 per cent increase in construction activity across Canada this year. Activity is expected to increase to \$58.962 billion in 1985, compared with \$56.13 billion last year and \$55.947 billion in 1983. Forestry construction shows the largest percentage increase, with the value of work projected for 1985 being 16.1 per cent higher than in 1984. Mining construction activity is expected to increase 13.4 per cent and construction in the finance sector is expected to rise 11.7 per cent.

The Export Development Corporation has signed a \$41.68-million (Cdn) financing agreement to support a sale by The de Havilland Aircraft of Canada, Limited of Downsview, Ontario, to LIAT (1974) Ltd. of St. John's, Antigua, West Indies. The sale involves the supply of five *Dash-8* aircraft, spare parts and related equipment.

ABI Biotechnology of Winnipeg, Manitoba and Bio-Technology General Corp. of New York have an agreement in principle for clinical testing and commercial development in Canada of a human growth hormone produced by recombinant-DNA technology. The hormone is used for treatment of dwarfism and has potential use in treating bone fractures, burns and bleeding ulcers.

Logicaid Limited of Nepean, Ontario has introduced VCC which is designed for a market that includes home video retailers and renters. The system handles point-of-sale functions, inventory maintenance, customer profiling, management information, financial accounts and reports. Transactions created at a point of sale are automatically posted to a general ledger. VCC's features include reservation of rental items, an optional bar-code reading facility for batch returns, and tracking of equipment for periodic preventive maintenance. Its accounting system can be retrofitted to previous systems.

Modulator retransmits satellite signals



The SM36 designed and manufactured by Electrohome Limited of Kitchener, Ontario, is a modulator that takes detected baseband audio and video signals from a satellite receiver, a video tape recorder, or camera and retransmits them as selected on as many as 36 different television channels. The company also manufactures the SR24, a micro-processor-controlled satellite receiver designed for cable systems and the SRM-36 which adds a full output modulator to the SR24. Electrohome was one of 11 Canadian companies that have made advances in the communications industry and participated in Canada's exhibition at CAST '85, held in Birmingham, England from April 16 to 18.

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