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Canada Weekly will not be published during the weeks of August 6, 13 and 20 but will reappear starting the week of August 27.

Telesat stands on threshold of new era in Canadian communications

"In 1980, tempered by ten years of development and growth, by major successes and occasional reverses, Telesat ... stands mature and confident on the threshold of what promises to be a decade of unprecedented growth and development in the field of domestic satellite communications in Canada," said Telesat Canada's president D.A. Golden in the Crown corporation's 1979 annual report.

Excerpts from the report entitled, **Ten Years and Counting,** ***follow:***

...Telesat has matured and grown during its first ten years; it has successfully launched and operated four satellites in two series; it has awarded multi-million dollar contracts for two new series of larger and more powerful satellites scheduled to enter service early in the decade and, in so doing, has materially contributed to the growth and development of the high technology space and communications industry in Canada.

The most recent example of this was the awarding in 1979 of the largest single contract in the company's history – the $78.6-million procurement agreement for the *Anik D* series of satellites – to a Canadian prime contractor, Spar Aerospace Limited of Toronto. Canadian content in the *Anik* satellite procurements has ranged from approximately 20 per cent in the *Anik A* series; 30 per cent for *Anik B;* 40 per cent for the *Anik C* series to 50 per cent, with a Canadian prime contractor, for the *Anik D* series.

With the single exception of a Telemetry, Tracking and Command station in 1971, Telesat's entire earth station requirements have been supplied by Canadian manufacturers.

Abroad, Telesat has earned for itself, and for Canada, a reputation as a leader in the domestic satellite communications field and as a model for proposed domestic satellite systems in other countries.

[In Canada], 1979 was a profitable, productive and challenging year for the ten-year-old company....

During 1979, the company's expendi-

Telesat President David Golden (right) *and Chairman of the Board of Spar Aerospace Limited L.D. Clarke sign the contract for provision of the* Anik D *series of spacecraft.*

tures on property amounted to $60.1 million. Of this amount, $7.2 million was provided by the Government of Canada as a contribution towards the Canadian content premium costs for the *Anik C* and *D* spacecraft programs and $52.9 million was invested by the company.

Net satellite expenditures during the year amounted to $38.9 million. Both the *Anik C* and *D* series of satellites were under construction during the year. There are three spacecraft in the *Anik C* series, which will operate in the 14/12 gigahertz (GHz) band and two spacecraft in the *Anik D* series, which will operate in the 6/4 GHz band.

Earth segment expenditures during the year amounted to $14 million of which $5.6 million related to the 14/12 GHz earth station construction program; $8.4 million was invested in earth station facilities and equipment for the provision of 6/4 GHz service and satellite control equipment....

Growth in services

The one-hundredth earth station in the Telesat system went into service at Manouane, Quebec, in January and by year's end there were 109 permanent earth stations in service in the system. At various times during the year, up to 19 transportable earth stations were in service, providing temporary broadcast, message and data service for customers.

A ten-year agreement for satellite services on up to ten *Anik* radio frequency channels was reached between the Trans-Canada Telephone System and the Canadian Broadcasting Corporation. This agreement was filed with the Canadian Radio-Television and Telecommunications Commission (CRTC) and has been partially approved on an interim basis.

Negotiations between the company and Bell Canada for the renewal of existing services were nearing conclusion at the end of the year.

In September 1979, the company filed with the CRTC an all inclusive tariff. The proposed Telesat tariff provides a broad and extremely flexible schedule of radio frequency channel services for both full period and occasional use.

In the spring of the year, the decision by the Federal Government to permit outside ownership of television receive-only stations was greeted with enthusiasm by the cable television industry, some of whose members almost immediately placed sizable orders for earth stations to implement several proposed national and regional satellite-distributed cable TV networks. At the same time, serious negotiations were begun by cable consortia for the radio frequency channel services which will be required to implement their services.

This renewed interest in commercial broadcasting application of satellite technology was further spurred by the findings of the Consultative Committee on the Implications of Telecommunications for Canadian Sovereignty, commissioned by the Minister of Communications and headed by J.V. Clyne. The report included 26 recommendations for statutory, regulatory and institutional changes affecting the Canadian telecommunications system and aimed at enhancing the ability of the system to contribute to the country's economic strength and to its industrial, political and cultural sovereignty.

In 1979, a delegation from the People's Republic of China visited Telesat. Heading the delegation were (right) *Li Yukui, Vice-Minister of Posts and Telecommunications, and Jinag Xikui, Managing Director of Posts and Telecommunications Appliance Corporation.*

The Clyne Committee Report was followed by a series of meetings of representatives of the federal and provincial governments, telecommunications carriers, broadcasters, cable operators and others to attempt to construct a Canadian satellite broadcasting package which would meet the often diverse needs of the consuming public for services and of the suppliers and regulators to provide these services.

In November 1979, the federal Minister of Communications and the Acting Chairman of the Canadian Radio-Television and Telecommunications Commission (CRTC) announced that the CRTC would hold public meetings to deal with the questions of extending television services to remote areas, satellite distribution of television programming and the introduction of pay-television services in Canada.

Satellite-to-home programming

Another stimulus to these efforts to take maximum advantage of present and future satellite technology has been the encouraging results to date of the Department of Communications experimental program

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Satellite program before Telesat

In 1962, ten years before the launching of *Anik A 1,* the world's first geostationary domestic communications satellite, Canada launched *Alouette I,* the first of a series of Canadian-built scientific satellites.

Alouette I and its successors, *Alouette II* and *ISIS I* and *II* were Canadian-built satellites which formed this country's contribution to joint Canada-U.S. experimental programs to chart the ionospheric environment in which future commercial, military and scientific satellites of both countries would operate. The four Canadian satellites were launched by the U.S. as its contribution to the joint program, and the information gained in the programs was shared by both countries.

The historic reliance of Canadians on communications and transportation to link their vast country, and the early entry of the country into satellite technology made it natural that Canada was quick to appreciate the potential of satellite communications for domestic service.

Legislation to create an organization to plan, design, build and operate a national system of communications by satellite was introduced in the Canadian Parliament in 1968 and the statute, the Telesat Canada Act, was passed and received Royal Assent in the summer of 1969; on September 2, 1969 Telesat Canada first opened its doors for business.

Canada signs rubber agreement

Canada recently signed, in New York, the International Natural Rubber Agreement (INRA), Secretary of State for External Affairs Mark MacGuigan has announced.

The five-year agreement establishes an international producer/consumer agreement designed to stabilize the price of natural rubber through the establishment of an internationally financed and controlled buffer stock and a contingency buffer stock, and a council which would administer the provisions of the agreement.

As a major producer of synthetic rubber, Canada welcomes this agreement as being of benefit not only to consumers and producers of natural rubber but to the synthetic rubber industry as well. Canada has been involved over the past two years in the negotiations for this agreement which were held under the auspices of the United Nations Conference on Trade and Development (UNCTAD) in Geneva.

EC-Canada environmental talks

A delegation of environment experts from the Commission of the European Community (EC) met with their Canadian federal and provincial counterparts in Ottawa, Quebec City and Toronto July 7-11.

The talks were held within the context of the EC-Canada Exchange of Letters on Environmental Co-operation of November 1975 and the EC-Canada Framework Agreement for Commercial and Economic Co-operation of July 1976.

Since then the European Community and Canada have co-operated in exchanges of information on policies and programs concerning the environment in such areas as sewage treatment, noise pollution and environmental impact assessment.

Topics on the agenda for the meetings included: acid rain, the socio-economic impact of environmental legislation, water quality, pesticides and environmental aspects of forest management. The two groups also examined their co-operation in the field of environmental protection within the international organizations concerned with these questions (e.g., United Nations Environment Program, Organization for Economic Co-operation and Development, etc.).

Embassy staff honoured

Eight Canadians, who were involved in the sheltering and evacuation of six American diplomats in Iran, were recently honoured by their country.

Five of the eight received the Order of Canada, while the remaining three were awarded the Order of Military Merit.

The announcement was made on Canada's birthday, July 1, and the decorations were presented to the recipients by Governor-General Edward Schreyer at an investiture in Ottawa on July 25.

The recipients of the Order of Canada and their levels of decoration are: Kenneth Taylor, officer; Laverna Dollimore, member; Roger Lucy, member; Mary O'Flaherty, member; and John Sheardown, member. Mr. Taylor, who recently was named to the post of Consul General in New York, was the former Ambassador to Iran. The remaining four named to the Order of Canada are members of the Department of External Affairs.

The three members of the Canadian Armed Forces, who were named to the level of member of the Order of Military Merit, are: Master Corporal George Brian, Sergeant James Edward and Sergeant Joseph Gauthier.

The Queen is the Sovereign of the Order of Canada and of the Order of Military Merit, which were established in 1967 and 1972 respectively.

Ken Taylor, Canada's former Ambassador to Iran, was recently named Consul General in New York.

First Arctic gas sale

The first sale of natural gas from the Arctic islands, worth $4 billion over the life of the contract at projected export prices, was announced recently by the Arctic Pilot Project, a consortium led by Petro-Canada.

The sales agreements call for Arctic islands gas to be sent to eastern Canada, freeing western Canadian gas for export to the United States.

The sale, subject to Canadian and U.S. regulatory-agency approval, calls for the delivery by 1985 of 450 million cubic feet of gas daily. Delivery of the gas is to begin in 1983 with export of 225 million cubic feet of gas from western Canada.

Under a complicated swap arrangement, delivery of the remaining 225 million cubic feet of gas will begin in 1985. The Arctic islands gas will actually be consumed in eastern Canada, and the western gas it displaces from Canada's pipeline system will be exported.

Although 225 million cubic feet is contracted as Arctic islands gas, all of the gas going to the U.S. will come from western Canada through the swap arrangement.

Petro-Canada chairman W.H. Hopper said the other half of the contract volume would be supplied from gas fields in western Canada, mainly Alberta.

Panarctic, a government-industry consortium of which Petro-Canada owns 45 per cent and provides the bulk of the exploration budget, has spent $400 million in the last 20 years in the Arctic islands.

The Arctic islands gas agreement is for 20 years, while the delivery from western Canadian fields, is for 15 years.

Wheat sales to China

The Canadian Wheat Board has announced a sales contract involving shipment of 1.4-million metric tons of wheat to China.

The Wheat Board said shipments will start in August and continue for six months through January 1981. All shipments will be made from Pacific coast ports. The grade options included in the contract provide for shipments of No. 1, No. 2 and No. 3 Canada western red spring wheat as well as small quantities of No. 1 Canada western red winter wheat.

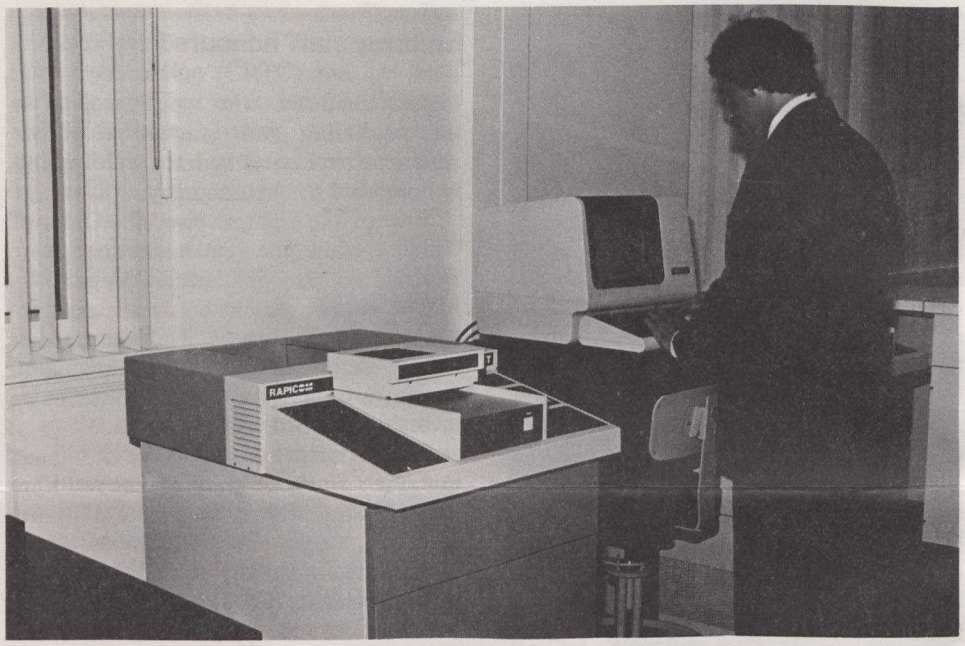
The contract is the second under a three-year agreement with China.

Canada/Britain instant mail

Canada Post and Teleglobe Canada recently introduced a new communications service that can transmit mail by satellite within minutes between Toronto and London, England. It is the first electronic mail service of its kind to be inaugurated on an international basis.

At a basic cost of $5 a page, the service called INTELPOST, allows businesses such as banks, stock brokers, and importers and exporters, to send facsimiles of letters, photographs, drawings and charts to their correspondents in England.

At an INTELPOST centre in Toronto, the customer's original document – written or graphic material – is passed through a high resolution scanner that converts this information into digital electronic signals. This information is then transmitted by CNCP Telecommunications' domestic facilities to Teleglobe Canada's international gateway switch in Toronto for transmission by satellite to a receiving station in England. In London, a high quality facsimile of the original is produced and inserted into an INTELPOST envelope for pick-up at the INTELPOST centre by the addressee or for delivery through Britain's Express Post service. Messages originating in Britain arrive at Toronto's INTELPOST centre where they may be picked up at the counter or delivered by First Class mail or Special Delivery.



The clerk types in the correct does on the computer keyboard for transmission of INTELPOST message to London, England.

INTELPOST handles almost any communication that is printed, typed, handwritten, drawn or photocopied onto a sheet of paper no smaller than five inches by five inches (127mm x 127mm) and no larger than eight-and-a-half inches by 14 inches (216mm x 356mm). This material is scanned by a facsimile reader that converts the text or graphic information on the original document into digital electrical signals.

Access to the *Intelsat* satellite, used in transmission, is provided by Teleglobe's Laurentides earth station in Weir, Quebec. Inaugurated in September 1979, this facility is the first Canadian earth station for international communication to be located inland.

Federal health department studies effects of acid rain

Health and Welfare Canada has launched several studies into the potential health hazards resulting from acid rain and the pollution causing it.

Peter Toft of the department's chemical hazards bureau said that researchers are studying the effects of the pollutants responsible for acid rain, which is killing off certain fish populations and is threatening croplands in eastern North America.

Toxic metals in drinking water

Mr. Toft says scientists are also examining possible changes in drinking water as certain toxic metals may be leached from the soil into water because of the acidic precipitation.

"Acidic water passing through metal pipes could also lead to the corrosion of these pipes," he said.

The Department is monitoring the levels of certain pollutants from federal environment stations across the country and has sponsored research projects at two Ontario universities.

In certain circumstances high levels of air pollution have been known to cause severe health problems, particularly among people suffering from respiratory diseases such as asthma, he said.

However, scientists want to know how the body copes with continuous exposure to low levels of the toxic substances in the air, particular sulphur dioxide, nitrogen oxides and related compounds. These combine and undergo chemical changes in the atmosphere, creating acid rain.

The pollutants are mainly a result of the combustion process, from coal-fired plants both in the United States and Canada as well as fuel exhaust from cars and trucks.

Researchers at the hospital at Queen's University in Kingston, Ontario are examining certain organs and the fat of cadavers for 14 chemical compounds found specifically around the Great Lakes. These chemicals include DDT and Mirex, two pesticides banned in the 1970s because of their insolubility, and the toxic pollutant polychlorinated biphenyls.

By the end of next year researchers hope to have data on 100 cadavers where death was caused by natural causes or in car accidents.

Monitoring respiratory health

Scientists at McMaster University in Hamilton began work in 1978 monitoring the respiratory health of 3,000 school children who would be exposed to air pollution from two sources: nearby smelters located in the steel-producing city and contaminants that drift hundreds of miles from their source.

University of Toronto scientists are investigating the impact of air pollution on asthma patients.

Bombardier wins transit contract

The largest contract for public transit equipment in the United States this year has been awarded to Bombardier Incorporated of Montreal.

The Canadian company won the $50-million (U.S.) contract to build 57 passenger railcars for New Jersey's commuter services over competitors Budd Company of Troy, Michigan, and Vickers Canada Incorporated, also of Montreal.

The deal includes an option for an additional 58 cars which, if exercised, would put the total value over $100 million.

Although Bombardier already has substantial U.S. orders ($27 million for self-propelled double-decker commuter cars in Chicago and a $10-million lease-purchase agreement for two high-speed, lightweight intercity trains for Amtrak), this one is the biggest yet.

To comply with provisions of the U.S. Buy America Act, Bombardier will set up an assembly plant in the United States, probably in New England or New Jersey.

Under the U.S. law, 50 per cent of the cars' content must be made in the United States and all American-made components must be assembled in the United States.

The cars are scheduled for delivery in July 1982.

Simple solar system saves money

A New Brunswick landlord is saving 30 per cent on his heating bill because of a simple solar system he has built onto his three-storey apartment building.

Philip Massey of Saint John, New Brunswick, had experimented with solar assistance for domestic hot water in the mid-Seventies before buying an eight-unit frame apartment building.

The three-storey building sparked Massey's imagination with its southerly orientation. It encouraged Massey to exploit the sun to boost the building's conventional oil-fired hot-air heating system by building an extremely simple solar collector.

Two-by-fours and corrugated greenhouse plastic transform most of the south wall of the building into a walk-in solar collector. Massey says materials and labour together cost only $2,500. The plastic is suspended about eight inches from the structural back of the building, enclosing fire-escape stairs to one side, and an air space to the other.

A timber and thermostat-equipped fan drives heated air from the top of the three-storey collector down a duct to the basement. There, it effectively preheats air carried through the building's conventional hot-air duct work.

Vertical aspect

Massey believes the collector's vertical aspect, while less than perfectly efficient, does pick up extra heat in the winter from reflection off snow, while cutting down on undesirable heat collection in the summer.

By way of aiding the solar effect, the building's south, east, and west walls are painted matte black. The north wall is a light tone.

Records Massey kept during 1979 show temperatures of 32° Celsius inside the collector on a sunny -1° Celsius day in January. At -5° Celsius and overcast outside, the inside temperature averaged 13° Celsius.

"When the sun's out," Massey says, "the furnace rarely comes on. It would be (saving) 30 to 40 per cent anyway" on heating costs.

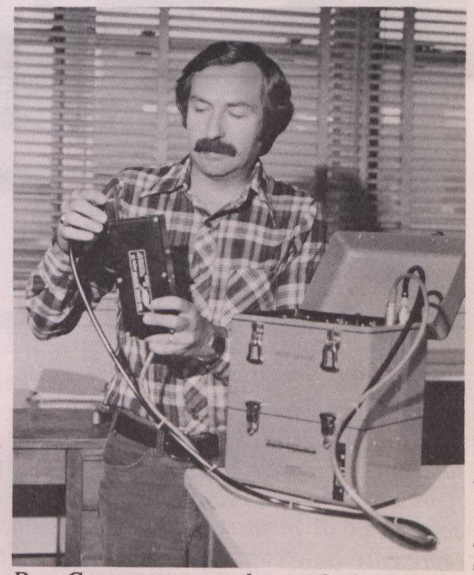
The Saint John landlord says the oil bill before he bought the building in 1977 was $2,400 a month in winter. Weather stripping, and the addition of eight inches of attic insulation to the 50-year-old building, reduced that to $1,400. Twelve months later, while oil prices skyrocketed, the solar addition kept the heating costs the same.

(Article by Chris Wood in Canadian Renewable Energy News, *June 1980.)*

Instrument rapidly determines radioactivity level

The federal Department of Energy, Mines and Resources has designed a device that could become the standard instrument worldwide for determining the radioactivity level in uranium mines relevant to the health and safety of uranium miners.

The Pylon WL-1000 working level meter, produced by Pylon Electronic Development Company Limited of Ottawa, is a lightweight, compact, portable, rugged, battery-operated instrument which tells miners quickly and accurately how much radioactivity they are receiving.



Information EMR

Don Carson, a researcher with the Department of Energy, Mines and Resources, demonstrates the Pylon WL-1000, which he developed.

Specifically, the instrument measures the radon and thoron daughters at the site and displays directly the working concentration of radioactive ions in the atmosphere and the working level. Previous techniques were non-automatic, counted only radon daughters, and required calculations to be made at the end of the day.

The term "daughters" refers to the radioactive products created by radon and thoron gases, two gases which are present in certain uranium mines, such as at Elliot Lake, Ontario. "Working level" refers to the amount of radiation a person can safely receive.

This new instrument is simple to use: the mining inspector (or whoever is testing the site) places a specially treated piece of filter paper in the sampling detector head. During the next ten minutes the instrument automatically goes through the sampling stage.

(During this time, air from the site is pumped through the filter paper. The radon and thoron daughters, which like dust particles are suspended in the air, remain on the filter paper.)

For the next 60 minutes, the instrument's microprocessor counts the radon and thoron daughters and then calculates the working levels. The inspector then pushes certain keys on the keyboard and reads the results on the display.

The instrument can also be used in laboratories for research work and for calibrating other instruments.

A cage without bars

A farm near London, Ontario is the home for one of the largest collections of rare birds in North America.

Jack Griffin, a retired farmer, has turned his 400-acre (160-hectare) farm into a habitat for thousands of birds, to which he devotes nearly all of his time.

"The wilder the environment, the more success you have with birds," he claimed. More than 23 species of bird in his collection are endangered species.

Mr. Griffin, who is a member of the Eastern Game Bird Breeders Association, has poultry, water fowl, turtle-doves and 42 species of pheasants, whose oriental origin dates back several hundred years. Some of these birds were discovered in the Orient by the British.

One of his rarest birds is the mountain dove, also called the witch dove. It gets its name from its cry. "When the Spanish first came to Barbados, they heard this terrifying sound coming from the mountain," Mr. Griffin explained. "When they asked the natives about it, they were told that these strange sounds were uttered by witches."

Mr. Griffin spends almost the entire morning feeding his birds. He uses nearly two tons of feed a month, in addition to corn which he grows himself.

He has to have a federal permit to keep migratory birds. Among his birds, there are 20 varieties of Canada geese, including the largest white geese which nest in the Arctic. He also has several red-breasted Siberian geese.

Refugee program costs

The Federal Government will have spent about $122 million by the end of the year to settle 60;000 Indochinese refugees in Canada, the Immigration Department says.

The $122 million covers the cost of resettlement, language training, transportation and the operation of staging centres in Montreal and Edmonton, where the refugees are first received and processed.

More than 38,000 refugees from Vietnam, Laos and Cambodia have arrived in Canada since last year under government and private sponsorships.

Immigration officials have said they expect almost all of the 60,000 refugees to be in Canada by the end of October.

Rabies vaccine tested

Canada's largest commercial laboratory believes it has come up with a superior rabies vaccine which will reduce by more than half the number of injections needed for immunization or treatment, reports Margaret Munro in the *Ottawa Citizen,* June 3.

Single-cell virus factories at Connaught Labs in Toronto can now produce such a potent vaccine that six – instead of 14 to 21 – rabies shots appear capable of preventing the disease, which threatens 1,000 Canadians each year.

Connaught has started human trials on the new "diploid" vaccine and it could be licensed for commercial use as early as next summer, firm spokesman Dr. E.W. Pearson said.

The firm tested the vaccine on 350 human volunteers last winter, and Dr. Pearson said the results are encouraging.

He said the diploid vaccine is much purer than current rabies vaccine, which is produced in rabbits and contains impurities which provoke painful cramps that can lead to paralysis in rare cases.

The process involves infecting lung or kidney cells growing in the test tube with rabies viruses.

After the parasitic viruses are finished with the cells, which Dr. Pearson said "act like clean little factories", the cells and viruses are separated.

The viruses are killed, and once injected into the body trigger production of antibodies which fight off live rabies viruses.

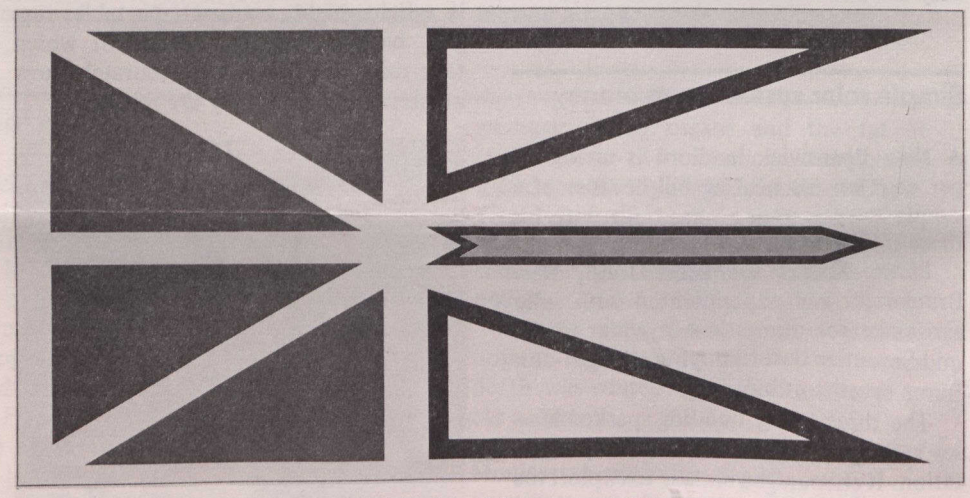
Effective as boosters

The tests showed the vaccine is effective as a booster in those already inoculated and is a method of preventing the disease in animal handlers never bitten by a rabid animal.

The second stage of tests to begin this summer will put the vaccine to the all-important test of its ability to fend off infection in victims bitten by rabid animals.

Hundreds more human guinea pigs will be given six injections for those tests, Dr. Pearson said, adding that antibody levels in their blood will determine the vaccine's effectiveness. They will not have to be bitten to be tested.

Newfoundland's new flag raised for first time



Newfoundland Premier Brian Peckford and Lieutenant-Governor Gordon Winter introduced the province's new standard at a recent flag-raising ceremony in St. John's. In the flag, the primary colours of red, gold and blue are placed against a background of white to allow the design to stand out clearly. White is representative of snow and ice; blue represents the sea; red represents human efforts and gold represents Newfoundlanders confidence in themselves. The blue section (left) *most reminiscent of the Union Jack represents Newfoundland's Commonwealth heritage. The red and gold section* (right), *larger than the other, represents the province's future. The two triangles outlined in red* (upper and lower right) *portray the mainland and island parts of the province reaching forward together. A golden arrow* (right centre) *points the way to what the province believes to be a bright future.*

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News of the arts

UNESCO cultural meeting

The Canadian Commission for the United Nations Educational, Scientific and Cultural Organization recently hosted an international meeting in Montreal to discuss the role of cultural industries in the cultural development of societies.

The purpose of the meeting was to examine cultural industries as a whole (books, films, records, etc.) and in particular its content, production methods, promotion, and impact as well as the role of the artist. Discussions focused on multinational cultural firms.

Twenty specialists — cultural policy decision-makers, researchers and artists — participated in a private and professional capacity and not as representatives of their countries. Among the participants were: Mahdi Elmandjra, professor at Mohammed V University, Rabat, Morocco and president of the World Future Studies Federation; Augustin Girard, head of the Study and Research Section, Ministry of Culture and Communications, France; Margaret Gallagher, professor at the Open University in Great Britain; Guy Morin, President-directeur général, Société québécoise du développement des industries culturelles; and economist Albert Breton, professor at the University of Toronto.

M. Makagiansar, UNESCO's assistant director-general, culture and communications sector, signs the City of Montreal guest book. Standing are: (left to right) *Montreal Mayor Jean Drapeau; Montreal city council member Justine Sentenu; UNESCO's director of cultural development M.J. Ziolkowski; Canadian Commission for UNESCO secretary-general Claude Lussier; and Canadian Commission for UNESCO president Vianney Décarie.*

The conclusions and recommendations of the meeting will be forwarded to UNESCO's international secretariat in Paris for use in planning its programs and will be distributed as reference material to specialists in various countries.

International symposium on conserving contemporary art

The National Gallery of Canada recently sponsored the first international symposium of conservation of contemporary art from July 7-12 in Ottawa.

The symposium was organized as part of the gallery's hundredth anniversary celebrations.

The expansion of artistic vision over the last 30 years coupled with the introduction into art of synthetic materials and processes developed by rapidly advancing technology has led to the advent of many new artistic experiences. It has also led to the emergence of a whole range of new problems concerned with the preservation of these works of contemporary artistic expression which cannot be solved by traditional means.

The symposium, involving participation from artists, curators, collectors, conservators and conservation scientists, attempted to reassess traditional methods and attitudes and propose new solutions. There were plenary sessions and workshops in the National Gallery, the Canadian Conservation Institute, the Canadian Council Art Bank and the Public Archives of Canada.

The program, organized by an international advisory committee chaired by Ian Hodkinson, Head of the Restoration and Conservation Laboratory of the National Gallery, dealt with the theory, philosophy and practice of creating, collecting and preserving contemporary art. There were more than 30 speakers from Europe and North America. These included, in addition to National Gallery conservation staff, the Viscount Dunluce (Keeper of Conservation, The Tate Gallery, London); Dr. Heinz Althöfer (Curator, Kunstmuseum and Director of the Modern Art Conservation Institute, Düsseldorf); V.R. Mehra (Head of Paintings Conservation, The Central Research Laboratory for Objects of Arts and Sciences, the Netherlands); Dr. E. de Witte (Head of the Scientific Department of the Institut Royal du Patrimoine Artistique, Brussels, Belgium); Marion Mecklenburg (Washington Conservation Studio, U.S.); and Peter Vogel (Chief, Fine Art and Polychromes Laboratory, Canadian Conservation Institute, Ottawa).

Summer program for student artists

Thirty-two outstanding art students from high schools throughout Ontario are participating in the Art Gallery of Ontario's Summer Scholarship course.

For the fourth consecutive year, the provincial government is paying all expenses for travel, accommodation, meals and studio materials. The program provides students with concentrated art study and practical experience in the Art Gallery's Activity Centre.

Eligible secondary school students aged 16 and over are selected by the gallery's summer school faculty on the basis of artistic ability and potential development as well as geographical distribution within the province.

The students live in the University of Toronto residences with their art history supervisors, Andrew Gregg and Patricia Cipriani, and work in the Gallery's Activity Centre. Staff instructors, all producing artists, are David Buller, painting; Ted Rettig, drawing; Dieter Grund, print-making and Tonie Leshyk, sculpture. The curriculum also includes visits to other Toronto art institutions.

Telesat *(Continued from P. 2)*

of direct satellite-to-home reception of video programming. The pilot project is currently being carried out on 14/12 GHz services leased by the department on Telesat's *Anik B* satellite. This new application holds considerable promise for national and regional networks of educational and other programming.

The capability of higher frequency satellites to make video services available in remote, rural and urban markets alike without intermediate terrestrial re-transmission or local cable distribution is also evoking the active commercial interest of broadcasters, producers, packagers and distributors of premium and special interest programming not now available in Canada.

Satellite launches

The delays being experienced in the U.S. Space Transportation System, better known as the Space Shuttle System, are publicly known and of concern to Telesat. Although there has yet been no official revision by the National Aeronautics and Space Administration of the proposed November 3, 1981 Shuttle launch of *Anik C 1*, there are indications that this launch may not be possible until August 1982.

During 1980, the company will continue to monitor the progress of the Shuttle program closely. In any event, contingency plans for the alternative of a Delta launch for either or both of the first *Anik C* and *Anik D* launches are proceeding apace, and no major dislocation of Telesat's spacecraft launch schedules is anticipated.

Australian opportunity

Not directly related to Telesat's primary responsibility to provide state-of-the-art satellite communications services in Canada, but a reflection of the company's unique record of achievements as a domestic satellite communications carrier, has been the interest shown by the Australian Government in Canada's satellite system.

For a number of years, the Australian Department of Posts and Telecommunications has maintained close contact with Telesat in the growth and development of [Canada's] satellite system, preparatory to deciding on a course of action for an Australian system. Australia shares with Canada the difficult problem of providing modern telecommunications for a relatively small population scattered across the length and breadth of a vast country.

In Australia, during the summer of 1979, at the request and under the sponsorship of the Canadian Department of Communications, Telesat took part in a series of briefings, workshops and demonstrations of Canadian satellite communications technology and its applications. In Canada, Telesat received several high-level delegations of Australian government officials and private sector broadcasters studying the Canadian system.

The Australian Government is expected to reach a decision on a domestic communications satellite system during 1980. Telesat and a number of Canadian spacecraft and earth station manufacturers have officially registered their interest in various phases of the Australian project. If the high level of interest shown by the Australians in the Canadian experience is translated into action, considerable business could accrue to Telesat and other Canadian high technology organizations.

News briefs

In its first season as an operator of east coast offshore exploration programs, Petro-Canada, the federal oil corporation, will spend about $70 million and use three drillships to sink at least three wells. The costs of the 1980 activities will be shared by Petrocan, 35.24 per cent; Gulf Canada Resources Inc. of Calgary, 25.93 per cent; Calgary-based Aquitaine Co. of Canada Ltd., 18.83 per cent; Suncor Inc. of Toronto, 10 per cent; and Agip Canada Ltd., 10 per cent.

The Ontario government has set up an emergency planning office, Solicitor-General Roy McMurtry has announced. Retired Brigadier-General C.L. Kirby will oversee plans by police and fire officials to handle all major accidents including fires, nuclear spills or air crashes. Mr. McMurtry said the government looked at emergency planning after the Three Mile Island accident but, after the Mississauga train derailment, officials decided to extend the plans to cover all accidents. The government also has commissioned the Institute of Environmental Studies to do a $150,000 study on the evacuation and impact on Mississauga after the accident.

The Canadian Government and eight Canadian companies took part in Oil Show 1980, the international oil industry trade show held in Rio de Janeiro July 1-4. The show, attracting over 400 exhibitors from 30 countries, displayed equipment and techniques covering all aspects of the petroleum industry – prospecting, exploration, production, transportation and refining. Canadian participating companies were: Davie Shipbuilding Limited, Lauzon, Quebec; Dreco Limited, Edmonton; CanOcean Resources Limited, New Westminster, British Columbia; Marinav Corporation, Ottawa; International Submarine Engineering Limited, Port Moody, British Columbia; Canadian Fracmaster Limited, Calgary; Walsh Process Control Limited, Montreal; and Conair Aviation Limited, Abbotsford, British Columbia.

Manitoba park ranger Robert Enns has been awarded the 1980 International Snowmobile Industry Association's Award of Merit for his efforts in promoting snowmobiling in Manitoba and in particular, Spruce Woods Provincial Park. Mr. Enns received his award in Niagara Falls, New York, at the twelfth International Snowmobile Congress Awards Banquet.

For the first time in the 85-year history of the International Skating Union a Canadian has been elected to its Council. Donald Gilchrist of Ottawa was voted into the Council at its annual Congress in Davos, Switzerland. The International Skating Union is the rule-making body for both figure and speed skating. The council is made up of one president and vice-president, three council members and two substitutes. Mr. Gilchrist will serve as the second member. Prior to this appointment, Mr. Gilchrist had served on the technical committee for figure skating for 13 years.

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