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Telidon — a triumph in two-way television technology

Canadian researchers have developed a system of two-way television that has been described as the most superior technology of its type in the world. Telidon, which may become a reality in Canadian homes in the 1980s, has the potential to create a multi-million industry in new communications equipment and information services to the public.

The system allows access by telephone to information stored in data banks, which is then displayed in writing or graphics on a modified television screen in the home.

Developed by the Communications Research Centre, a branch of the Department of Communications (DOC), Telidon could transmit information by coaxial cable, phone or optical fibre. Direct contact between users would also be possible.

The interest in interactive services, particularly in those that use television, is growing by leaps and bounds as Britain, France, West Germany, the United States and Japan race towards marketing the new product.

Limitations of other systems

While there are several videotex systems elsewhere, Britain's is the most elaborate. There are, however, significant differences between the British and Canadian systems. On the British systems, the page or image appears line by line, left to right, because they tie the horizontal row of character display on the TV to the transmission bit-rate capacity of the TV horizontal scan-line interval; i.e., transmission media and display structure are locked together.

Antiope, the French system, is similar to the British Ceefax and Oracle systems, with one major difference: the French one uses packet data transmission and the picture display is independent of the data transmission approach.

Canadian independence

The Canadian technology, however, which has taken an approach totally different from any of the other systems, has a

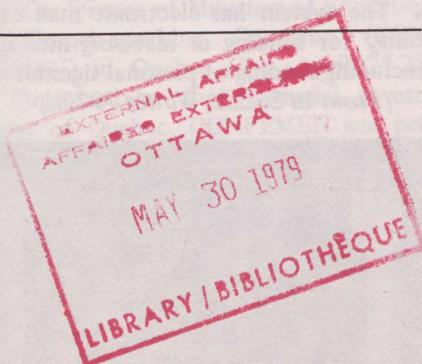
number of important advantages. When work on Telidon began at the Communications Research Centre, several years ago, Herb Bown manager of DOC's image communications labs, said: "We were determined as engineers not to make the videotex terminal dependent in any way on the communications media or on the receiving display hardware.

"We wanted this independence because we know there are different rates of change for the terminal, transmission and data-base-management technologies. For example, existing communications are constantly being improved with fibre

- Telidon may change the way we shop, the way we do business and the way we are educated. Electronic newspapers could be displayed on a modified TV set at the touch of a button.
- Telidon also enables one to type a message, draw a picture and send it directly to a friend's terminal, without contact with the central data bank. Two people will be able to work on a text or graphic even though they are hundreds of kilometres apart.
- The Canadian technology claims to be more advanced than its competitors in other countries, it is more flexible and it won't become outmoded because of future changes in transmission methods or display terminals.

optics, satellite and other broadband services as well as improvements in the telephone networks and we know the resolution of TV itself may well be improved or it may even be replaced by a totally new display technology. The additional electronics we're putting into a TV to allow it to display this new alphanumeric, graphic and tonal image material will also change rapidly with advances in micro-processors and memory systems and large-scale integration.

"It is important we adopt a methodology and an over-all systems approach



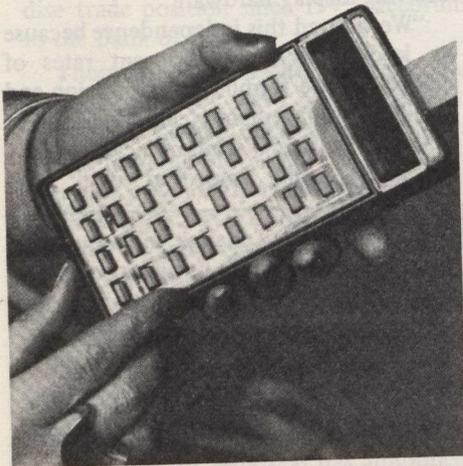
Thirteen years ago yesterday... came the announcement that, with provincial co-operation, the Federal Government-sponsored medicare program would begin on July 1, 1967.

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that permits independence of information storage from the delivery and receiving systems. Otherwise, we'll be stuck with a system approach with a life of about five years before much of the information in the data banks will have to be redone for the next generations of systems. That's one area where our approach is far superior to what the Europeans have done."

Telidon's component parts

Bown and his team built further flexibility into Telidon so that a number of component parts could be used depending on the degree of sophistication needed. A user could, for example, phone a data bank and by punching a few buttons on a keypad retrieve pages of information for display on his modified TV set.



Keypad used for calling up "pages" of information for display on TV.

Attached to the TV set is a special interface device which receives instructions from a computer and converts these signals into texts and images to appear on the screen. The interface device is about the size of an attaché case although the process of reducing it in size and cost is going on now. Within two years, an integrated circuit version will be available which could be incorporated into the TV. The current model of the interface device is plugged into an ordinary electrical outlet and has two cables running from it into the antenna jack of the home TV set for simple applications, or directly into the red, blue and green guns of the TV for more demanding applications or higher resolution. For home use, a keypad or for business use, a keyboard (like a typewriter's) can be wired to the box or operated by remote control.

With a keyboard wired to his set, the user could introduce information to a

PUBLIC ACCESS INFORMATION SYSTEM	
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Example of index of a public access information system using Telidon.

data bank for retrieval by others. This opens up a range of possibilities for small entrepreneurial electronic publishers. In future, the user could also transmit the information to a friend or business colleague who has a similarly modified TV or video display terminal (such as those with which some word processors are equipped).

The business user could also have a light pen (with which a line can be drawn on the screen) or "joy stick" (a lever which controls a marker on the TV screen) to further manipulate or alter the information on the screen. In the case of terminal-to-terminal connection, users would in effect be sharing an electronic blackboard.

Advantages of Canadian system

The Canadian technology has many advantages over other systems, the most important being the way in which an image on the screen is described. Telidon uses picture description instructions (PDIs). Their approach was to describe or code images as being composed of geometric elements: a point, line, arc, area and polygon. An image does not appear line by line as it does on the British system; it can be composed using the natural language of drawings in terms of geometric shapes. The PDIs also include an instruction to define photographic images when the contents of the image cannot be described by these geometric shapes.

Since the image is progressively composed on the screen, comparatively few instructions from the central computer (where the information is stored) are sent out at a time to individual terminals. Thus, much less network capacity is needed. It also means that much higher resolution of an image can be obtained

using the Canadian system. A line, for example, is drawn as a moving point, not composed of a closely joined series of squares.

Among the other advantages of the Canadian technology cited by John Madden, DOC's co-ordinator of new home and business services, are:

- With its superior resolution, it can reproduce maps, charts, cartoons and engineering drawings clearly and accurately and with flowing lines.
- Because the data base coding is independent of the display terminal and communications media, changes in the standards of display terminals or communication media will not affect the data bases.
- A terminal based on the Canadian system can easily be modified to also display signals from other countries' systems. The converse is not possible.
- The videotex terminal with its built-in computing power can act as a mini-computer for home or office use.
- The design permits one terminal to communicate directly with another without need of a central computer.
- The system has electronic mail capability for sending or receiving messages, including sending of personal signatures.

(From *In Search*, Winter 1979.)



Dining out? Check Telidon first.

Dollar up debts down

The Federal Government has repaid \$1.9 billion in bank loans that were taken out last year to help the weakening Canadian dollar, which is steadily gaining strength. Out of the almost \$5 billion that was borrowed from domestic and foreign banks, \$1.3 billion was repaid to the United States and overseas banks and \$600 million to banks in Canada.

Foreign debt cleared

The payment eliminates the Government's foreign currency debt with banks outside the country, although an arrangement remains which leaves a stand-by credit open to Canada of \$3 billion in U.S. currency.

The Government still owes Canadian banks \$500 million and has further stand-by credit with them of \$2 billion U.S.

At the end of April, the Government's reserve holdings of U.S. dollars were \$3.002 billion, a \$227-million-drop from the March figure. Holdings of other foreign currencies dropped by \$4.4 million to \$13.3 million. Gold on reserve dropped to \$985.8 million from last month's \$996.7 million.

The reserve in the International Monetary Fund dropped by \$28.4 million and its special IMF drawing rights decreased by \$8.6 million. A large part of this apparent decline, was, however, a reflection of weakness of the U.S. dollar, the basis of Canada's reserves, measured against other major currencies.

French education ministers meet

Canada hosted the thirty-second session of the Conference of Ministers of Education of French-speaking Countries (CONFEMEN) in Quebec City, April 25-27.

Organized by the provincial government of Quebec, CONFEMEN was preceded by a meeting of experts of the African and Malagasyan Council of Higher Education (CAMES).

The major purpose of the conference is to promote adjustment of systems of education to the changing conditions of the modern world and to the economic and social development needs of member countries.

The agenda of the April session included the theme "School and Life", as well as questions such as the production

of pedagogical material and pedagogical research and innovations. This conference and the Conference of Ministers of Youth and Sport of French-speaking Countries (CONFESJES) together with the Agency for Cultural and Technical Co-operation (ACCT) constitute the inter-governmental institutions of *la Francophonie internationale*, in which Canada has participated since 1969. They have been held annually in one of the member states.

The Canadian delegation to CONFEMEN was led by Jean-Pierre Ouellet, Minister of Youth, Leisure and Cultural Resources of New Brunswick. Quebec was represented by Jacques-Yvan Morin, Deputy Premier and Minister of Education, who was elected vice-president of the conference at its session held last year in Ouagadougou, Upper Volta. Ontario was represented by Gérard Raymond, Assistant Deputy Minister of Education, and Manitoba by Gérard Lécuyer of the Department of Education.

A dinner given by Jeanne Sauvé, federal Minister of Communications and Adviser for Francophone Affairs to the Secretary of State for External Affairs, was attended by ministers and heads of delegation. Following the conference, delegates visited Fredericton April 28-29 as guests of the government of New Brunswick.

The member states of the CONFEMEN are: Belgium, Benin, Burundi, Cameroun, Canada, Congo, Ivory Coast, Central African Empire, France, Gabon, Haiti, Upper Volta, Mauritius, Madagascar, Mali, Niger, Rwanda, Senegal, Chad, Togo, Zaire. Djibouti became a member at the April conference.

Invited as observers were: Cape Verde Islands, Comores, Dominica, Guinea, Guinea-Bissau, Lebanon, Luxembourg, Morocco, Mauritania, St. Lucia, São Tome & Principe, Seychelles, Tunisia.

Human genetics centre established

What is believed to be Canada's first Human Genetics Centre has been established at Montreal's McGill University, and will integrate the university's teaching, research and clinical activities in the field.

The appointment of Dr. Leonard Pinsky as director became official on January 1, the date the centre opened.

Dr. Pinsky already holds a number of appointments at the university, the Jew-

ish General and Montreal Children's hospitals, all of which he will retain. His research at the Jewish General, which will continue to occupy most of his time, is concerned with the responsiveness of human cells to the sex hormones secreted by the body.

Firsts in the field of human genetics are not new to McGill. In 1951, Canada's first Department of Medical Genetics was established at the Montreal Children's Hospital (then the Children's Memorial Hospital) under the direction of F. Clarke Fraser. Later, a Human Genetics Sector was formed within the Department of Genetics (now part of the Biology Department). ("Medical genetics" and "human genetics" mean approximately the same thing, "medical genetics" being used to describe the application of human genetic knowledge to disease.)

In 1972, the Canadian Medical Research Council created at McGill the first Group in Medical Genetics in the country.

Australia/Canada cut air fares

Canadian and Australian air transport authorities have agreed to new low air fares between Vancouver and Sydney.

The Minister of Transport, Otto Lang, said he was encouraged by the sizable reduction in economy and off-peak excursion fares although there would be some increases for first class travel and for peak season Advance Purchase Excursion (APEX) and Group Inclusive Tour fares.

"The travelling public will be able to take advantage of a new off-peak APEX price which is 43 percent less than it was last year," Mr. Lang said. "With similar fare reductions for travel out of Australia, the new fare structure will stimulate additional traffic and boost tourism and trade between our two countries."

The return fares in Canadian dollars between Canada and Australia (Vancouver-Sydney) are:

	Old fare		New fare
First class	\$2,650	Stop over	\$3,090
		Point to point	\$2,688
Economy	\$1,814	Stop over	\$1,842
		Point to point	\$1,600
APEX	\$1,166	Peak	\$1,330
		Shoulder	\$1,030
		Low	\$ 674
Group inclusive tour	\$ 950	Peak	\$1,130
		Shoulder	\$1,030
		Low	\$ 674
Group inclusive tour children		All year	\$ 566

Demand for Canadian goods and services continues to be high

A broad review of Export Development Corporation (EDC) business conducted in 1978 and a general outlook for potential export sales in 1979 are featured in the Corporation's annual report for 1978, just released.

John A. MacDonald, chairman and president of EDC, points out that, despite widespread predictions of a slowdown in the economic growth in many areas of the world, the lower exchange rate of the Canadian dollar has acted as a major stimulus for exports. He expects the demand for Canadian goods and services to remain strong, particularly in the developing countries.

In 1978, EDC's business volume more than doubled, rising to over \$6 billion from \$2.6 billion in 1977. It is calculated that the availability of EDC financing was responsible for approximately 50 per cent of the export of capital goods and services outside North America. EDC's profit of \$29.5 million for 1978 is up substantially over the amount of \$18.7 million earned in 1977, reflecting the Corporation's increased volume of business activity and asset base.

During 1978, the Corporation arranged 32 lending transactions, including guarantees and lines of credit, in 20 countries, involving more than 300 Canadian exporters and major suppliers across Canada, for a record amount of \$3.6 billion, representing a threefold increase over the 1977 volume.

Largest agreement ever

EDC also signed its largest-ever financing agreement for a single project in 1978, as the major participant in a U.S. \$730-million financing arrangement for construction of a natural gas-processing plant in Algeria. Loans and guarantees totalling \$88 million were also made on behalf of the Government of Canada.

Lines of credit continued to be an important tool in assisting Canadian exporters to market abroad. EDC signed an unprecedented \$1.2-billion line of credit with Algeria in 1978. Agreements were also signed with a number of other countries, including Mexico, Indonesia and the Soviet Union.

The Corporation's insurance support — surety, export credits insurance and foreign investment guarantees — increased in volume to over \$3 billion in 1978 from



Over 100 of these off-track universal carriers, made by Canadian Foremost Ltd., of Calgary, have been sold to the U.S.S.R.

\$1.5 billion in 1977.

EDC issued a record \$2.95 billion in export credits insurance on its own account in 1978 and \$31 million on behalf of the Government of Canada. At the end of 1978, EDC had some 950 Export Credits Insurance policies in effect across Canada, covering sales of goods and services to buyers in 150 countries.

Coverage under the insurance program was extended to exporters' sales which are invoiced in 17 freely-convertible currencies, including Canadian and U.S. dollars.

The Corporation's foreign investment guarantees facility now encompasses a new type of cover. The recent boom in world-wide oil exploration has created opportunities for a number of Canada-based oil exploration and development companies showing expertise and capacity in the field. EDC has responded by expanding coverage against political risks to eligible companies for the exploration phase as well as the production phase of a project. Among the potential benefits to Canada from production-sharing agreements of the Canadian investing companies is the opportunity for new sources of oil. The aggregate coverage outstanding for the foreign investment guarantee program totalled \$202 million at the end of 1978 compared to \$184 million in 1977.

Credit rating high

All borrowings during 1978 to fund the lending transactions of EDC were under-

taken by the Corporation in its own name as will be those required for future years. Mr. MacDonald explained that, in 1978, EDC raised all its borrowing requirements, amounting to \$450 million, from public and private capital markets throughout the world. EDC's "triple A" credit rating and status as a profitable Crown corporation allowed it to borrow money at attractive rates.

Ryanodol synthesized by Sherbrooke scientists

After 11 years of research, two chemists from the University of Sherbrooke, Quebec, Pierre Delongchamps and Luc Ruest, have succeeded in synthesizing what is believed to be the most complex molecule ever constructed by man — ryanodol.

The synthesis was as difficult as that of Vitamin B-12, which won the Nobel Prize in Chemistry for Robert Woodward of the United States in 1965.

Ryanodol is no more valuable in itself than Vitamin B-12; in fact, it is easier and less expensive to extract it from certain South American plants. But the work of the two chemists has enabled the discovery of various chemical reactions previously unknown, as well as the creation of 300 new compounds, and the development of new techniques for use in research and in the pharmaceutical industry.

Women's image in advertising

"The use of sexist stereotypes in advertising is an impediment to the changing status of Canadian women and...the negative portrayal of women is becoming increasingly offensive," stated Communications minister Jeanne Sauvé at a meeting of the Second International Advertising Show in Montreal recently. Because of Government's concern over this, a committee to monitor sexist stereotyping in the electronic media had been formed, said Mrs. Sauvé, which would look particularly at advertising for sexist content and would make its findings public.

The image of women as presented by the media, said the minister, was important in the promotion of the status of women.

The 12-member committee, chaired by Stella Baudot of Montreal, held its first meeting April 27.

News of the arts

Computer calculation for satellite crash sites

If the orbit of the Soviet satellite *Cosmos 954*, which crashed in the Northwest Territories in January 1978, had lasted a few minutes longer, scientists say the radioactive debris could have landed in a densely populated area like Toronto. *Skylab*, the 77.5-tonne United States space station launched in 1971, is expected to fall somewhere on earth this summer. Uncertainty about space-craft landing sites has resulted in a demand for improved satellite tracking networks and closer international co-operation in handling such emergencies, writes Phil Kinsman in the Ottawa *Citizen* (April 12, 1979).

Dr. S.C. Garg and a team of University of Toronto scientists working on contract with the Department of Communications, have completed an exhaustive review of the literature on satellite orbit lifetimes and patterns of re-entry in the atmosphere as a first step in the development of a computer model that would predict impact to within 16 kilometres and a few minutes' notice. Existing technology allows for only about an hour's warning and a possible deviation of hundreds of kilometres in the landing spot.

Atmosphere drag

The main reason a satellite decelerates and eventually plummets is that it enters the atmosphere at some point and becomes caught in what scientists call atmosphere drag. The difficulty in predicting a craft's trajectory and location of impact lies in the number of variables in-

involved. Incomplete information on air density at high altitudes, the existence of air pockets which vary in behaviour according to chemical composition, sunspot activity and shifts in the atmosphere related to the earth's rotation, complicate the task of tracking a falling satellite. Moreover, the shape and size of the craft influence the pull exerted by the atmosphere.

Advance information necessary

Researchers are trying to design a computer model of a satellite's motions using known mathematical formulae for predicting orbits and a probability factor for the behaviour of the atmosphere at a given altitude. Data on the size, shape and speed of the craft must be available. As well, scientists will need sufficient time to program the computer before a satellite's orbit begins to decay. Garg adds that the most critical calculation scientists must make is "predicting precisely which orbit is the last one. If you can predict the last orbit, you can...specify within a radius of 30 miles; you can also predict time within a few minutes".

Although an estimated 6,000 pieces of space debris have fallen to earth and there are yet over 4,000 man-made objects travelling above the skies, it is a truism in the aerospace industry that an individual's chances of being struck by a piece of satellite are only slightly greater than the probability of being knocked down by a pig with wings. Relax, Chicken Little.



Scientist approaches debris from *Cosmos 954* on Great Slave Lake, N.W.T.

French-speaking mayors pledge close co-operation

The founding congress of the International Association of French-speaking Mayors ended a two-day meeting in Quebec City May 2 with a pledge by the 20 participants to exchange experts and information on such topics as urban planning, housing, public transit, traffic and industrial pollution.

"Such initiatives will help maintain and strengthen the French-speaking world," declared Jacques Chirac, the mayor of Paris, who was elected president of the association.

Quebec City mayor Jean Pelletier was elected vice-president.

The meeting drew representatives of 13 cities in Africa and four in Europe, as well as Beirut, Lebanon, Montreal and Quebec City.

At a news conference following the meeting, the mayors said they would consider holding international conferences to study common problems and allow municipal officials to make extended working visits to other French-speaking cities.

They also promised to study cultural questions and those related to youth, such as teaching, delinquency, unemployment, amateur sport and drugs. They excluded youth exchanges and tours by performing groups because of high costs.

College enrolment increases

Figures from Statistics Canada show that community college enrolment last autumn was up 3.7 per cent and university enrolment was down 1.8 per cent over the previous year's figures.

The preliminary figures released on April 23 show 244,423 students enrolled last autumn in community colleges, while there were 324,447 undergraduates enrolled full-time in university programs.

The only province reporting increased university enrolment this year was Quebec, where a 3.3 percent rise in undergraduates was reported. The province also reported a 1.9 percent increase in community college enrolment.

Several provinces reported large increases in community college enrolment this autumn, especially Alberta with an 11.2 percent increase over last year's enrolment and New Brunswick with a 10.4 percent increase.

Jobs, women and welfare

The Organization for Economic Co-operation and Development in Paris has published a study, *Manpower and Employment, Problems and Prospects*, by R.A. Jenness, senior policy adviser to the chairman of the Economic Council of Canada.

The study was submitted as background documentation to an OECD experts' meeting on "Structural Determinants of Employment and Unemployment" in March 1977. It is the first study by a Canadian economist ever published by the OECD.

Manpower policies

The study reviews the manpower policies followed in the main OECD countries, including Canada, and relates these to their education, their insurance programs, income security and unemployment, and to labour market problems likely to develop in the 1980s. In most western European countries, manpower policies are administered through a mixture of public and private intervention, so that employers through their associations, or as a result of regulations, surtaxes or some variant thereof, are directly involved and responsible, along with unions, for the administration and funding of most manpower policies.

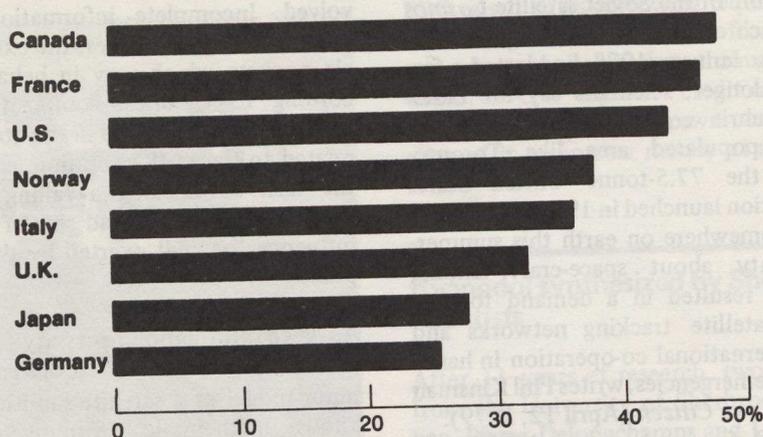
By contrast, employers in Japan, as part of the reciprocal lifetime commitments with their employees, bear virtually all of the costs of occupational training and mobility, and of keeping unemployment rates low. At the other extreme, in Canada almost all manpower initiatives involve government programs that are funded from general tax revenues.

Female participation

A hallmark of the 1960s and early 1970s has been the shifts in family expenditures patterns away from manufactured products and foodstuffs towards personal services and travel or towards collective goods such as education and hospital and medical services. It has also coincided with increasing participation of women in the work force throughout the OECD area. The increasing role of women has undoubtedly broadened their opportunities, and contributed to rising family incomes. But not without sacrifice.

Jenness cites a UNESCO report which shows that, when both housework and child-care are included as work, a wage-

STUDENTS IN HIGHER EDUCATION UNDER AGE 25 YEARS PROPORTION OF FEMALES



Source : OECD; *Educational Statistics Year Book*, Volume II, Paris, 1975.

employed wife toils about three hours a day longer than a wife who stays home, and over one hour a day longer than do employed men. Moreover, males still enjoy preferential treatment not only in employment and wages but also in their prior educational opportunities. In Norway, Britain, Germany and Japan less than 40 per cent of students in higher education are women. In Canada, women represent close to half of all post-secondary students, a higher proportion even than in the United States.

OECD countries have enjoyed over the past two decades, industrial productivity increases of over 4 per cent annually. But taking account of the growing service-orientation in family expenditures it is not at all clear that their own demands for manufactured goods will grow fast enough to keep pace with their growing labour forces. If this is so, the implication is that most OECD nations including

Canada will have to broaden their reliance on international trade and look to wider markets for their industrial output. Jenness concludes that with the evolution to service-oriented economies: "Increasing numbers of the labour force will have non-permanent jobs, either from their own inclinations, the dictates of consumer demand, or simply the competitive pressures of wage costs. As basic wage rates rise, it will pay entrepreneurs to use part-time help, or to lease workers in order to avoid the overhead costs of regular employees...services cannot be stockpiled as can material goods, and many demands for services involve daily, weekly or seasonal peaks or troughs which result in corresponding ebbs and flows of jobs..."

Who winds up in these "secondary jobs"? Usually those with the least bargaining power in the labour market, the least interest in a permanent career, or the least qualified.

Residents share the wealth in British Columbia

Every British Columbian will become a shareholder in the province's resource industries under a unique plan to distribute shares of the British Columbia Resources Investment Corporation (BCRIC) to every eligible man, woman and child in the province.

Every person who is a Canadian citizen or has qualified and applied for citizenship and who has lived in the province for at least one year prior to filling out an application for shares, is eligible. Each resident may receive one unit of five com-

mon shares on which dividends will be paid.

Applications are being handled by credit unions, banks, trust companies, and investment dealers in the province, and must be completed by June 15. Shares will be distributed as of British Columbia Day, August 6, 1979. At the same time, residents may order additional shares up to 5,000 shares a resident. Funds will go directly to B.C. Resources so that the people may share in direct ownership in the province's resource industries.

News of the arts

Photos by Frank Royal

A selection of the photographs by Frank Royal, well-known Canadian photographer, were recently exhibited at the Public Archives of Canada.

The 44 photographs provide compelling, and often stark, portraits of the environment. Royal captured the solitude of nature in various locales, including Canada's east coast, the Prairies, the United States' western desert and the Rocky Mountains.

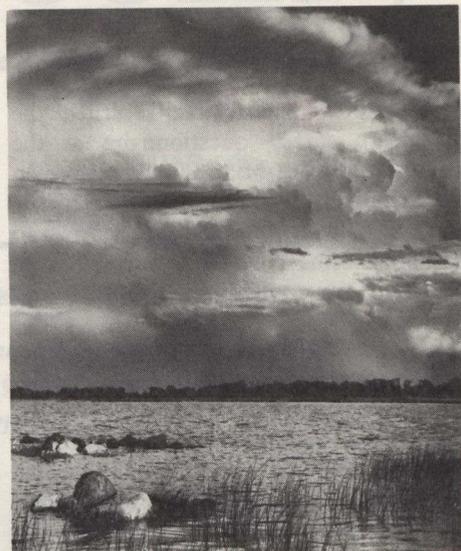
Royal began his career as a photographer with the Royal Canadian Mounted Police and the *Winnipeg Free Press*. During the Second World War, he took part in and photographed the Dieppe raid in 1942 and the landings in Italy in 1943.

A pioneer in a number of photo techniques, he served as chief photographer at the National Film Board for four years. In 1952, he became director of technical services of Gevaert Canada Ltd., film manufacturers.

It was in the last 25 years of his life, (he died in 1975), when he was not known as a working photographer, that



Public Archives Canada photos



Two of Royal's photographs in the Archives exhibition: Indian Church near Lillooet, B.C. (1969). and Storm over Lake Winnipegosis, Manitoba (1967).

Royal produced the photographs shown in this exhibition.

"There is a strong affirmation of the self-sustaining powers of the natural world in this work," says Andrew Birrell of the National Photography Collection, Public Archives of Canada. "Royal once

explained, 'To see — not merely to look — is an act of perception that involves the mind as well as the eye. To photograph is to express this philosophy through the clarity of the photographic process.' This exhibition demonstrates the degree to which he realized his ideal."

Stratford star ex-chorus

Victoria Snow, a young actress who turned professional only last summer, has been chosen to replace the leading lady of the Stratford Festival production of the musical *Happy New Year*.

Initially engaged to play a small role in the production, Miss Snow was chosen to understudy the major role of Linda by director Burt Shevelove when Virginia Sandifur, the leading lady, fell ill with pneumonia after only a week's rehearsals. Doctors said that Miss Sandifur would be unable to rehearse for at least two weeks, which led to a search in both Canada and the United States for an actress/singer to understudy the role. Shevelove, one of the most experienced people in musical theatre and a connoisseur of theatrical talent, decided that the young Canadian actress should have a chance.

Victoria Snow performed the role of Linda — opposite Edward Evanko and Leigh Berry — at rehearsals during the weeks that followed. When Miss Sandifur's illness forced her to withdraw from the production, Victoria was lifted — literally from the chorus — into the leading role.

Canadian arts and artists boosted

The Canada Council has approved a policy giving new emphasis to the use of Canadian artists and works in determining the subsidies it grants to theatres.

A statement issued by the council recently says Canadians should be given "first and due consideration" in filling senior artistic and administrative positions in publicly financed theatres.

It also says most subsidized theatres should include Canadian plays in their programs.

Any theatre which appoints persons from outside the Canadian theatre community to senior artistic or administrative positions "should be able to demonstrate that all reasonable efforts have been made to fill them from within", the statement says. When non-Canadians are appointed, they should "have a knowledge of and commitment to Canadian culture and theatre".

The new policy does not override existing law, under which the Citadel Theatre in Edmonton appointed Peter Coe of Britain as its artistic director last year.

His appointment, like that of Robin Phillips as artistic director of the Strat-

ford Festival in 1975, aroused controversy because Canadians were not given the posts. Mr. Phillips has since declared his intention to remain in Canada.

The Shaw Festival at Niagara-on-the-Lake, committed to producing the works of George Bernard Shaw and his contemporaries, will be encouraged to do more Canadian plays.

"Unless the mandate of a given publicly funded theatre precludes the production of Canadian works, it should not be unreasonable to expect theatres to demonstrate a knowledge of and commitment to Canadian works by producing them in an appropriate space and in a manner consistent with the production values accorded other works," says the statement.

Anne of Green Gables will headline the Charlottetown Festival for the fifteenth time, but a new musical by Toronto writer Jim Betts, *On a Summer's Night*, will officially open the annual event on June 25. The third show on the main stage will be a return of *Les Feux Follets*, which played there in 1973.

Readership survey interim report

Some 1,000 readers had returned the readership survey questionnaire at the end of April, out of 13,000 who were on the mailing list when the January 31 issue went out. Since then the list has grown to 15,500. Forms are still coming in from distant points and also from places nearer to home.

Address changes are being incorporated into the mailing list daily, though analysis of the returns will require more time. A consensus will be arrived at eventually; interests vary widely and some readers want more of this and less of that, but efforts will be made to please the majority.

Our readers

Copies of *Canada Weekly* are sent mainly abroad to business and government organizations, the media, libraries, universities, schools, embassies and private individuals. About 5,700 copies of *Hebdo Canada*, the French-language version and about 2,000 copies of *Noticiero de Canada* are also mailed — the latter twice a month. *Profil Kanada*, the German-language version, was dropped last July for several reasons, the most important being that the Canadian Embassy in Bonn could fill the gap with its own publication, *Focus*.

The constructive criticism expressed by readers helps enormously in trying to produce something with diverse subjects in a confined space, for such a wide audience in all countries. Staff is once more a problem because of budget cuts.

Thank you for taking the time to send back the questionnaire — particularly as prepaid postage was not possible. If you haven't done so, it is still not too late. And thank you very much for your encouraging and complimentary remarks.

Ed.

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Cette publication existe également en français sous le titre Hebdo Canada.

Algunos números de esta publicación aparecen también en español bajo el título Noticiero de Canadá.

News briefs

A realignment of senior management at Atomic Energy of Canada, effective May 1, has been announced by Energy Minister Alastair Gillespie. Ross Campbell relinquished his duties as chairman of AECL to assume duties as president of Atomic Energy of Canada International, an operating division of AECL responsible for international marketing of the Candu reactor system. He will also continue as a director of the corporation. The new chairman is T.K. Shoyama, who has served as a director of AECL for the past three years. Mr. Shoyama, until recently Deputy Minister of Finance and a former Deputy Minister of Energy, Mines and Resources, will also continue in his duties as a special adviser to the Prime Minister on the Constitution.

Foothills Oil Pipe Line Limited has applied to the National Energy Board for permission to build an oil pipeline along the route of the planned Alaska Highway natural gas pipeline. Cost of such a pipeline has been estimated at between \$1 billion and \$2 billion, depending on the length and route.

The Federal Government and its 12,000 secretaries and stenographers have signed a one-year agreement calling for an average 7 percent wage increase. The maximum annual rate for the most populous level will increase to \$9,993 from \$9,168.

The Canadian dollar will probably average about 86.5 cents (U.S.) in 1979 and move up to a 90-cent average in 1980, but there will be some sharp swings up and down during this period, Emery Grosland, a foreign exchange executive at the Royal Bank, told a seminar in Toronto sponsored by the Canadian Importers Association. He noted that the balance-of-payments deficit would probably increase to \$6 billion or more next year, even though the surplus on merchandise trade should rise above \$4 billion.

Alcan Aluminum of Montreal has agreed to sell its 25 percent share interest in Ardal og Zundal Verk of Norway to the Norwegian Government for \$70 million (U.S.). The Norwegian Government holds the remaining 75 percent interest.

Two provincial byelections held in Quebec on April 30 were won by the Liberal candidates, one of them the new leader of the provincial Liberal Party, Claude Ryan.

Chinese delegates at a three-day trade meeting announced plans to export to Canada small hardware and kitchen products for the first time. Since 1970, main imports from China have been textiles, canned foods and handicrafts, amounting last year to \$95 million. The bulk of Canada's \$600-million exports to China last year was in wheat and resources such as woodpulp. At the meeting, Canada reiterated its aim of selling more high technology items especially telecommunications equipment power development and metal processing technology. An agreement is expected to be signed soon.

Husbands and wives should be able to sue each other for injuries suffered in automobile accidents, says the Institute of Law Research and Reform of Alberta. If the insurance company pays the bill, such a change "would probably contribute to family harmony rather than dissension", says the institute in a report released at the beginning of May. Two other reports published at the same time, recommend that hitch-hikers and passengers in a car should be able to recover damages for negligence of the driver.

Amcan Castings, a division of Centurion Equities Corporation of Toronto, is expanding its plant at Guelph, Ontario at a cost of \$1.3 million to accommodate orders for an aluminum automatic transmission case for Ford Motor Company of Detroit. Production is to begin in 1980.

Principal E.S. Graham of Victoria's Royal Roads Military College points out that Royal Roads was the first in Canada to offer an undergraduate degree in oceanography. *Canada Weekly* dated February 21, Page 8, reported that the University of British Columbia "says it will be the first in Canada to offer an undergraduate degree in oceanography". Cadets at RRMC were admitted into the third year of a degree program in physics and physical oceanography in 1975. UBC's degree emphasizes biological and chemical aspects, while RRMC concentrates on the physical, which is the area of greatest interest to the Canadian Forces.

Montreal and Boston had each won three games in the semi-finals of the Stanley Cup play-offs, May 9. New York Rangers had beaten New York Islanders 4-2 and were awaiting the winner of the seventh Montreal-Boston game, slated for May 10, to start the best-of-seven game finals for the National Hockey League's annual coveted prize.