

seminars and conferences as well as information dissemination including the publication of studies and reports prepared for the use of the institute.

— To foster, fund and conduct research on international peace and security issues of particular interest to Canadians or the government of Canada.

— To work in liaison with existing Canadian groups and organizations operating in this field and with other international institutions of a similar nature.

"Improving the climate among nations requires knowledge, creativity and a determination to find solutions. Reflecting Canada's concern about current international tensions, the government will create a publicly funded centre to gather, collate and digest the enormous volume of information now available on defence and arms control issues. Fresh ideas and new proposals, regardless of source, will be studied and promoted."

From the Speech from the Throne, December 7, 1983.

Air Canada plans world-wide cargo service

Having successfully started a freighter cargo service into Brussels at the beginning of this year, Air Canada is seeking to expand the service world-wide.

The airline plans to begin testing the market in the Middle East and the Pacific — possibly starting with cargo in the bellies of passenger aircraft — in the next year, with an extension of the Brussels service to India and Singapore.

The possibility of a Canada to Singapore service came with the recent signing of a new bilateral air agreement between the two countries.

"In the case of cargo, we have the ability to go beyond Singapore to three points and the ability to come back across the Pacific, so that for the first time, a Canadian airline has the ability to go around the world with cargo," said Bernard Gillies, vice-president.

"What we need to do now is develop the marketplace and negotiate other bilateral agreements for suitable points beyond Singapore so that we could continue east across the Pacific."

Ideally, the service would leave Toronto or Montreal and make a first stop in Britain, France, West Germany or Switzerland where the aircraft would unload and take on passengers and cargo, before going on to India, Singapore, Thailand and South Korea.

In addition, Air Canada is looking ahead to extending cargo services to points in Africa, the Middle East and South America as the federal government completes other bilateral agreements in the coming years, he said.

Structure of the institute

The institute will be governed by a board of directors, headed by a chairman, an executive director and including not more than 15 other directors. The chairman and executive director and at least eight of the directors will be Canadian citizens.

It will be financed jointly by the Departments of External Affairs and National Defence. The budget for the 1984-85 fiscal year will be \$1.5 million, rising to \$5 million by 1988-89.

At the beginning of the year, Air Canada started an all-freighter weekend service from Montreal and Toronto into Brussels. From there, the cargo is trucked to major European cities within five or six hours.

The service has been so successful that the airline is considering increasing the number of weekly flights in coming months from the current four each way.

New satellite monitors forest growth, ice conditions

Unable to see the forest for the trees, Canadian scientists hope to use a planned multi-million dollar satellite to closely monitor forest growth.

Researchers at the National Forestry Institute in Petawawa, Ontario, say Radarsat, a sophisticated remote sensing probe Canada planned for launching in the early 1990s, could help them keep an accurate eye on changes ranging from forest depletion to fires. The \$500-million satellite is scheduled for launch within a decade. Although the US and Britain will contribute, Canada is to pay most of the bill.

The country's top researchers think it can also be used to get detailed information about ice conditions on Arctic shipping routes, and geological characteristics for mining and farmland conditions.

Radarsat will stay in a low Earth orbit, providing radar and infrared pictures of the land below it. The forestry institute thinks its advanced equipment will

provide a better picture of logging operations, re-growth and other "gross changes in forest patterns".

Although forestry officials now use aircraft to fly over areas of interest, they are unable to provide any information if there is rain or cloud cover.

Meanwhile, France and Canada have entered into a competition to prepare a satellite-based search and rescue system by 1990. At an international symposium held recently in Toulouse, France, both Matra-Espace of France and Ottawa-based Telesat Canada announced they had satellites capable of providing complete surveillance of the globe. Both systems would require four to seven satellites to provide world-wide search and rescue coverage for pilots, sailors, explorers, skiers and mountain climbers.

Earth stations for oil rigs

Oil rigs off Canada and China will be the first recipients of earth stations produced by Spar Aerospace of Toronto, that will enable them to use domestic communication satellites.

In an announcement made recently, federal Communications Minister Francis Fox said Spar would receive a \$295 400 grant to manufacture a commercial version of the stabilized satellite earth terminal developed by the Department of Communications (DOC) engineers at the Communications Research Centre in Shirley Bay, Ontario.

The oil rig terminal will consist of a standard earth station antenna placed on top of a special stabilized platform that uses gyroscopes and hydraulic devices to compensate automatically for the motion of the rig and keep the antenna aimed precisely at the satellite. Without such a platform, the rig's constant movement would make it impossible for communications with the shore via satellite.

The earth station terminal will operate in the higher 14/12 Gigahertz frequency range of Telesat Canada's Anik C satellites allowing for a small diameter antenna (about one metre).

Satellite communications will allow the rigs to transmit and receive vast amounts of data — including television pictures — much more quickly and will result in improved emergency and personal communications from the rigs, Mr. Fox said.

DOC developed prototypes of the terminal are being tested on two rigs, one in Newfoundland and one in Nova Scotia.