

Revolutionary communications system for Third World

Two Ottawa men, working with teams in the US and Britain, are attempting to build a low-cost high-powered communications satellite to help transmit messages to help people in development projects in the Third World.

The satellite, called PACSAT, is being modelled after an experimental computer now in orbit that was built largely by Larry Kayser, a manager for Bell Canada data networks, and Hugh Pett, a micro computer expert for the federal Department of Supply and Services.

With the launch of PACSAT in 1987, a field worker will be able to ask agricultural experts thousands of miles away for help simply by typing a message into a battery-operated, lap-style computer attached to a radio transmitter. The answer can appear on the worker's computer screen the next day.

Study of prototype

A prototype computer lodged inside a satellite, UOSAT-2, was launched from Vandenberg Air Force base in California on March 1, 1984. UOSAT-2, which is about the size of a packing box, circles the earth every 100 minutes in an orbit 690 kilometres above the earth's surface. It passes over every spot on the globe at least twice daily, and is capable of relaying messages anywhere in the world.

The project was co-ordinated through the space science program at the University of Surrey in Guildford, England. Volunteers in Technical Assistance (VITA), a private, US non-profit organization that helps to solve technical problems facing the people of developing countries and the Radio Amateur Satellite Corporation (AMSAT), a non-

profit group of radio "hams" active in amateur space communication, were involved in its development.

Mr. Kayser had been a "ham" radio operator who built parts for amateur satellites for many years before he became interested in using his skills to help Third World development. In 1981 he was asked by a VITA member to help build a computer that would revolutionize communications in the developing world. He was joined by Hugh Pett in August 1983.

Rural development

Once in orbit, the computer in PACSAT is expected to have many uses, all aimed at improving communications in the rural Third World, where the lack of roads, telephones, electrical power and transportation services limit the effectiveness of development projects.

Some of its more important uses include: greater and quicker access to technical information from experts; aid to local and international development agencies in monitoring the progress of their projects and keeping in touch with workers and farmers; and improvement in relief efforts in drought-stricken areas by co-ordinating the shipment of food and reporting information.

The satellite will be operated on earth by "ground stations", each consisting of a small personal computer, a simple transmitter-receiver the size of a portable radio, and a vertical antenna. Each station will be portable and battery or solar-powered.

"Our intention is to put a ground station in a corner of a village and point the antenna in the right direction," said Mr. Kayser. "A

field worker would only have to check it for a few minutes each day. It would sit there and accumulate messages," he said.

It is expected that up to 300 groups could use the service, including VITA and Inter Pares, a Canadian non-government organization that works with about 30 Third World groups to improve the health, literacy and economic self-sufficiency of developing countries. A spokesman for Inter Pares said the organization might help groups in the Third World buy ground stations.

The Ottawa-based International Development Research Centre, which supports scientific research and development work in the Third World, is also interested in possible uses of the satellite.

Visit by Iraqi trade minister

Minister of International Trade James Kelleher and Iraqi Member of the Revolutionary Command Council and Minister of Trade Hassan Ali jointly presided over the first meeting of the Canada/Iraq Joint Commission which was held in Ottawa May 7-8.

The meeting was held during Mr. Hassan Ali's five-day official visit to Canada, the first by a minister of the government of Iraq. During the visit, the two trade ministers explored means of expanding and strengthening bilateral economic ties between the two countries.

Mr. Hassan Ali also visited the facilities of Bell Northern Research near Ottawa and toured the James Bay hydro-electric installations in Quebec.

Exports rise

Statistics Canada reported that Canadian exports of goods rose a sharp 7.6 per cent in March from February to a record \$10.4 billion. During the first three months of the year, Canadians sold a record \$29.7-billion worth of goods. This reversed a declining trend in export sales, which had set in during the final quarter of 1984.

Exports to the United States, where some 78 per cent of Canada's goods are exported, rose by 8.9 per cent to a record of \$8.1 billion in March.

Statistics Canada said the strongest increases were registered in the energy sector followed by the automotive and consumer goods sectors.

Imports also rose, climbing 2.6 per cent to \$8.2 billion in March. The difference between exports and imports — the trade balance — was \$2.2 billion, the second-largest monthly surplus to date.



Larry Kayser (centre) and Hugh Pett discuss project with team associate George Roach (left).

Pat McGrath, The Citizen