

TELESAT owns and operates one of the most respected domestic satellite systems in the world.

the first country in the world to have a nation-wide domestic telecommunications system using satellites in the geostationary satellite orbit. This capability has resulted in telecommunications consulting contracts and the production of complete satellites. Canada (Spar Aerospace) provided a communications satellite for Brazil. Canada has also co-operated extensively with developing countries including the People's Republic of China where some 26 earth stations, related technology, and a central control station for their domestic system are under construction. The company is also providing training for their space communication programs.

The testing of systems like the Canadarm for the U.S. space shuttle or of very large satellites, such as the European Space Agency's Olympus, is another highly specialized capability. Canada's David Florida Laboratory is one of the few facilities in the world that can perform simulated launch and space environment tests on large satellites and subsystems and components for spacecraft. The laboratory is located in the Communications Research Centre of the federal government, and its facilities are available to industry and government agencies on a cost-recovery basis.

Telesat Canada, the world's first domestic communications satellite company, transmits and distributes all forms of telecommunications by satellite in Canada. It is a combined venture of the federal government and several telecommunications companies. Experimental transponders on the Telesat *ANIK-B* system have permitted a wide range of investigations into services such as direct broadcasting, voice and data message services to small earth stations, teleconferencing, distance education and telehealth. Microtel Ltd. produces a "Spacetel" system ideally suited to provide both

Microtel Ltd. produces a "Spacetel" system ideally suited to provide both voice and television signals to remote locations. Spacetel consists of distantly located terminals that provide communication links to one another via leased satellite circuits. The main terminal is the master control station which performs the common control functions of the system and interfaces with public or private networks. The remote terminals may be single or multiple channel types thus providing users great flexibility to meet any size of system they require.

Satellites currently provide Canadians with many important daily services, but one of the most dramatic and exciting roles has been to rescue accident victims using the SARSAT system. This specialized satellite system was developed by Canada, the United States and France to improve marine and aviation search and rescue operations. It works in co-operation with the Soviet system COSPAS. COSPAS/SARSAT has already played a major role in many rescues.

The future holds promise of even more exciting new space systems. Canada is committed to the development of MSAT, a mobile satellite service, to provide effective communications to mobile radio users outside the major metropolitan areas or in remote locations.

INTERNATIONAL ACTIVITIES

CANADA HAS CONSISTENTLY demonstrated its confidence in international co-operation and the extension of international networks. It is an active member of the committees of the International Telecommunication Union (ITU) which it joined early in the century. In a combined government-industry effort Canada holds a significant continuing administrative and technical presence in this international forum. A continuing commitment of delegates to leadership roles in the administrative counsel and technical areas such as data, digital switching and signalling, telematics, integrated services digital networks (ISDN), operations and maintenance, microwave radio, satellites and the new broadcasting satellites is fully supported by current technical contributions. Canada lent its assistance to the work program of the International Commission for world-wide telecommunications development and is actively helping the ITU and the international telecommunication authorities to implement its recommendations. It supports the Centre for Telecommunications Development established in Geneva. Canada also plays an active role and is an important contributor to the World Bank, the African, Asian and Inter-American Development Banks, the Commonwealth Telecommunications Organization, the Pacific Telecommunication Council, the Inter-American Telecommunications