

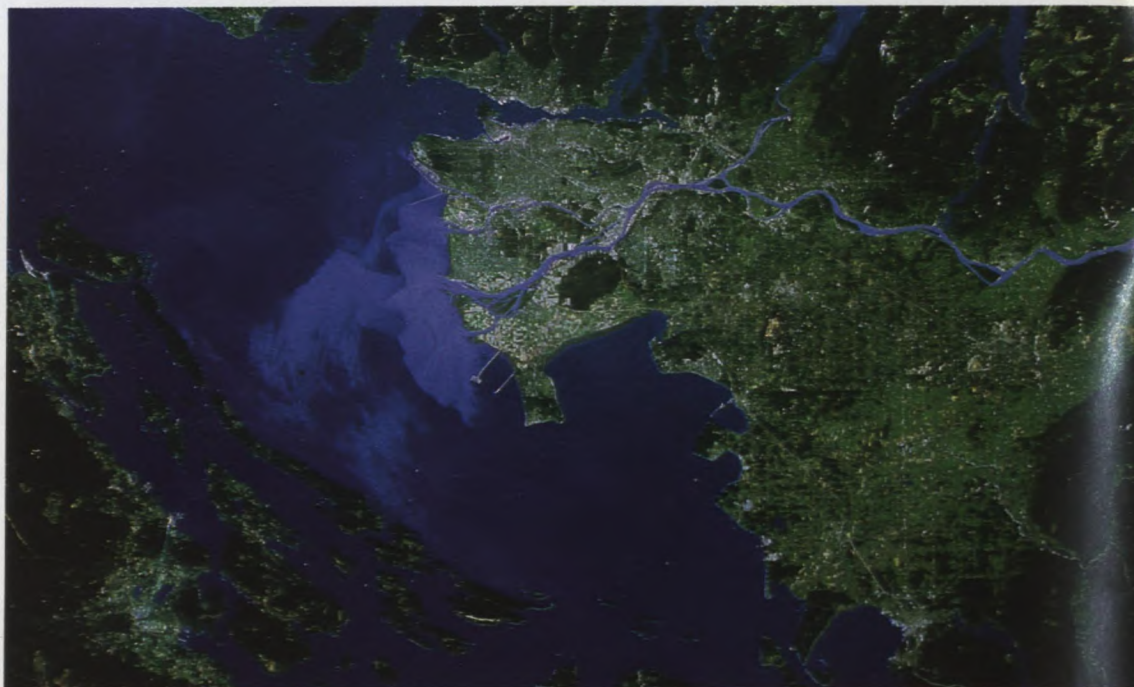
Remote sensing by airborne and satellite collection systems, a means of observing and measuring the environment, is an essential method for managing vital resources everywhere in the world. With this tool, environmental changes can be monitored for applications such as crop and forest management, land-use planning and water resource control.

The instruments carried aloft by earth observation satellites and aircraft are capable of doing what the human eye and ordinary photography cannot. They can gather information instantly from vast areas of land and water, from great heights, in all weather conditions. And these instruments — cameras, infrared scanners, lasers and radars — produce images in such detail that planners and resource managers now have new capabilities to analyze, evaluate, compare and make decisions.

Canada is a leader in the development of this advanced technology and in the design and manufacture of systems for its application. Much of Canada's effort is aimed at making the technology affordable and accessible to decision-makers in developing countries.

This guide outlines Canadian capabilities — in industry and in government, and in the two working together. It introduces the reader to Canadian firms that can provide the latest in advanced equipment to solve the most challenging problems in remote sensing technology.

With its background in research and development, its practical experience in providing systems to suit diverse clients, its skills in training and education, Canada offers technology and expertise that are appropriate, applicable and affordable.



Capable and experienced ... throughout the world

Private remote sensing companies in Canada have sharpened their skills and technologies during a generation in which they have risen to the challenge of finding, developing and managing this country's vast natural resources.

Forty years ago, large areas of Canada had still not been surveyed in detail. At that time the Canadian government made a crucial decision: it contracted out to newly forming private firms the task of aerial photographic surveying of most of the millions of square kilometres of Canada's land mass. Equipped only with the technology left over from wartime operations, Canadians, like other nations entering new eras of discovery, created their own particular expertise, moving from a standing start to the top of this new field.

A domestic industry was built on that government decision, and beginning in the 1950s, Canada became the first country to export its newly acquired technologies, techniques and services to more than 100 other nations throughout the world. Since that time, Canada has been in the forefront of developing airborne sensors, satellite data ground stations, data processing and image analysis technologies since the launch of the first U.S. TIROS weather satellites in the 1960s and LANDSAT earth resources satellites in the 1970s. Canadian companies are now among world leaders in manufacturing equipment for gathering and interpreting remote sensing data.

With the coming of the "space age" and new ways of "looking" at the earth, Canada became the third nation in the world with the capabilities and determination to design and build its own communications satellites and the instruments they carried.

LANDSAT-5 image of Vancouver, Canada, processed on the MacDonald Dettwiler MERIDIAN System.

Holding these key skills, Canadians have become international leaders in airborne and spaceborne technologies.

In Canada, remote sensing is being used to manage the country's extensive resources and to monitor environmental changes. It has taken ingenuity and adaptability to the difficult climatic conditions and varied terrain of Canada to develop the efficient systems, installations and services that Canadian firms now offer to the world.