



*Users of MSAT include emergency workers such as firefighters.*

*Radarsat is expected to be launched in the late 1980s.*

*In this satellite scan of some 100 kilometres of range land in Brooks, Alberta, the deeper red tones denote denser vegetation. A digital image analysis system called Aries II was used to enhance the picture.*

An operational MSAT spacecraft would create a nation-wide system of mobile communications. Drivers travelling from coast to coast, for example, would be able to make calls from their cars' mobile radiotelephones to any point that can be reached from their home telephone. MSAT could even be used for phone calls from passengers aboard airplanes.

The market for an MSAT system is expected to grow at a rapidly accelerating rate well into the twenty-first century. The ultimate goal is a commercially viable communications system in which one MSAT satellite could serve several thousands of low-cost terminals outside major centres. Reliable voice and data communications would be provided to places, people and machines now unserved, at costs comparable to present rates for mobile services in large cities.

#### **RADARSAT**

Data from US remote sensing satellites have been used by Canada since the early 1970s for crop inventory, forest and wildlife management, land use studies, ocean mapping, ice reconnaissance and mineral and petroleum exploration. Canada has so far concentrated on the ground-based segment of remote sensing satellite systems. However, because of the vital importance of remotely sensed data to effective resource management, especially navigation through ice-filled seas in the North, we are considering the development of our own spacecraft to serve Canada's special interests.

Radarsat, if approved for launch in the late 1980s or early 1990s, would improve on current remote sensing satellite systems by using a special radar sensor that could operate day or night, regardless of weather conditions, and produce high-resolution, map-like images of the earth and oceans. Information derived from Radarsat would assist not only Arctic navigation, but also Arctic energy exploration, agriculture and the fisheries.