

## Transportation

Canada has large transportation systems, carrying people and materials across vast distances. To make effective use of rolling stock and right of ways, it has been necessary to install equipment and communications systems for monitoring the usage of these transportation systems.

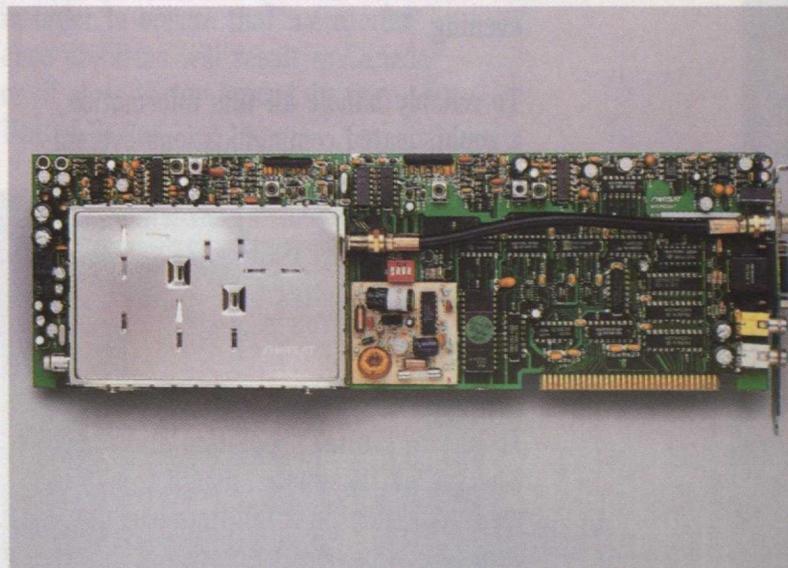
Canada's two national railways have always formed an important transportation link in Canada and played a major role in the early development of the country. They established early communications technologies that were not only used to control rail traffic, but also served as a messaging system for the general public. Their contribution continues to this day.

The backbone of the railway's communications network is a terrestrial microwave system, coupled with fibre-optic links, that follows the right of way. In addition to operational communications, the network also carries leased circuits for private networks and a public data network.

For local distribution, the railways operate trackside communications systems. These comprise circuits that permit continuous voice communications with railway locomotives, control of railway switches, location of trains, and systems that monitor the movement of cars and equipment. All these systems have led to a more efficient operation of the rail network.

Another important mode of transportation in Canada is mass transit. This sector is continually expanding its use of communications technology, as a means of improving operating efficiency and maximizing public safety. Buses are now being equipped with communications equipment that automatically informs the dispatcher of the number of passengers on each bus and its location. Two-way communication permits the vehicle operators to contact the dispatcher in an emergency. It also makes it possible for dispatchers to reroute vehicles during peak traffic periods, or provide emergency assistance as required.

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