

Other provinces have used the public switched network to provide access to lecturers via audio conference facilities. The one factor all the systems have in common is the desire to provide equitable education by using Canada's extensive communications network.

### Mobile Communications

Canada has historically had an extensive mobile communications network for those working and travelling in remote areas. Engineers in the mobile communications field are continually exploring innovative ways of providing wide area coverage that is cost efficient and highly reliable. They have developed low-power mountain-top repeaters that can operate unattended for long periods at extremely low temperatures. Another innovation is the creation of radio systems that permit several different user groups to share the same system with complete privacy. But in spite of all the advances, some areas of Canada are still too remote to be served economically.

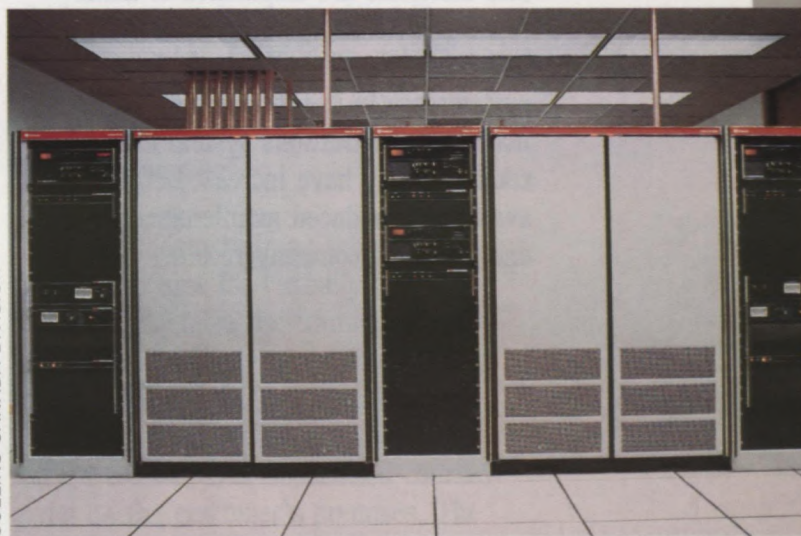
Canada is now undertaking the development of a mobile satellite system which, it is hoped, will provide coverage to all remote areas. The new system, designated MSAT (Mobile Satellite), is based on satellite communications. In this system, each mobile unit will communicate directly with the satellite — an approach that will achieve wide area coverage. After several years of planning, the universal parameters for the system have been established, and technology is now being developed to permit implementation.

### Communications Network Support

As the infrastructure of a country's communications system becomes more and more complex, tools must be developed to assist those in regulatory areas, system design, network operation and maintenance. Canada is no exception to this rule and has developed a leadership position in many of these systems.

To regulate the Canadian frequency spectrum, the Canadian government has developed a management system based on computer technology. Prior to issuance of any operating licence, the system is used to check frequencies, in order to ensure that no interference problems will result in Canada or, if close to the border, in the United States.

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