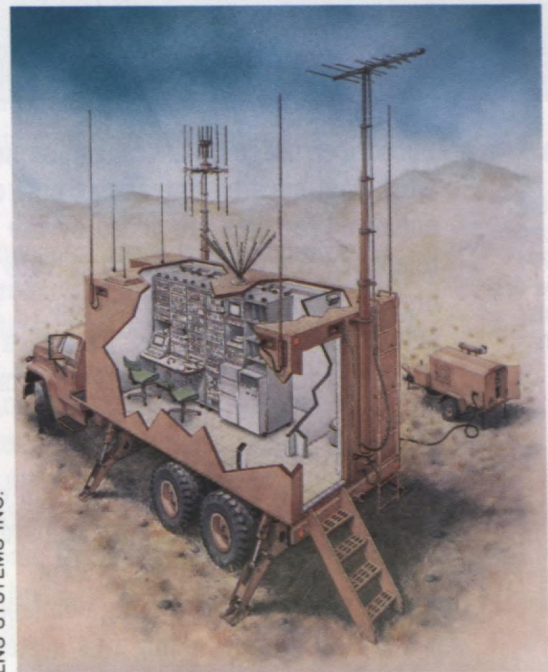


Though Canada's telephone system includes many different companies, it operates as a single entity, thanks to establishment of interface specifications, performance standards — either meeting or exceeding those recommended by the International Telegraph and Telephone Consultative Committee (CCITT) and International Radio Consultative Committee (CCIR) — and rate-sharing schedules. This is an enormous advantage for users, giving them direct dial connection to all other subscribers in Canada, and to many other countries in the world.

The conversion of voice communications from analog to digital technology is well under way in Canada. Conversion of the telephone network was started in earnest approximately a decade ago and is proceeding rapidly. Toll switching is now estimated to be 75 per cent converted, with local switching lagging slightly. A 90 Mbit digital radio spanning more than 6 000 km was placed into service in the early 1980s and has been expanded several times since. A 7 000-km buried transcontinental cable, with 12 optical fibres operating at 545 Mbits per fibre pair, will be operational by 1990. The final section of this cable will employ state-of-the-art laser frequencies.

To support this massive conversion to digital, Canada has developed its own product designs, acquired state-of-the-art manufacturing capability and modernized its construction methods. Because of the network's increased complexity, data acquisition systems have been improved and expanded to monitor overall network performance, and to reduce maintenance costs. This in turn has increased the network's ability to handle traffic.



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