Today, the Canadian public is served by two data networks which are accessible to virtually everyone. The two public data networks, Infoswitch and Datapac, are owned and operated by the railways and the major telephone companies respectively. Both networks are based on packet switching, using CCITT X.25 protocol standards. Because the systems conform to international standards, both can be used for offshore or border-crossing communications.

Universal data access has led to the development of electronic mail and messaging services. For example, customers can subscribe to an international messaging service that permits them to post electronic messages in mail boxes provided by the operator's central computer. The messages may be retrieved via a private terminal or one of the many public terminals located in areas such as airports, railway stations and hotel lobbies. Similarly, the electronic mail service may be accessed by any individual wishing to deliver a hard-copy message to another location. In this case, the message is either given to a system operator or directly input and then transmitted to the receiving terminal, where it is printed and delivered through the normal mail system. Through international gateway connections, users of electronic mail can access similar systems in many parts of the world.

An additional service provided by Canadian data networks is the accessing of large electronic databases, in Canada and associated countries. These databases include libraries, newspapers, technical journals and government files. Charges for the service are based on access fees, on-line time and the amount of data transferred.

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■ *NovAtel's 370 cellular telephone handset*

As Canadian data network suppliers continue to expand, access is being extended in remote areas and tariffs are being reduced. In addition, systems are under development that permit assignment of bandwidth on demand at standard PCM (Pulse Code Modulation) hierarchical levels. This latter development will eventually lead to the integration of voice and data and ultimately ISDN.