

Telidon offers numerous text and graphics capabilities and can be used for such functions as teleshopping, telebanking and reservation services.



BELL NORTHERN RESEARCH

More and more Canadians are using computers for essential services.

Increased information flow from digital services

One of the most important recent developments in telecommunications has been digital technology in which speech, characters and images are coded in streams of off/on pulses. Based essentially on computer technology, digital systems offer many benefits and advantages over analog systems which send and receive telecommunications in electrical waves that vary in strength and frequency.

Digital systems also allow new features to be added to basic services. Instead of accessing one network for telephone, another for high-speed data and yet another for video, the office of the future will have an integrated system carrying all types of information in digital form — the integrated services digital network (ISDN).

ISDN is not a separate, new network, but will evolve from the gradual transformation of existing networks in accordance with international standards, including those developed for OSI. The first set of ISDN standards were adopted in 1984 by the International Telegraph and Telephone Consultative Committee (CCITT), an international planning body, to simplify communications in an information-oriented society.

Canada is well positioned to move into the world of ISDN since so much of its communications system is already digital. The telephone companies started on the road to digitization in the mid-1960s. Today approximately 80 per cent of telephone traffic is handled by digital switching and transmission facilities. National public data networks introduced in the 1970s were the first in the world. They are used by many small- and medium-sized businesses.

The installation of digital microwave systems began in 1977. Canada's Anik C satellites, launched between 1982 and 1985, were designed for full high-speed digital transmission. Because of their enormous information-carrying capacity, fibre optics systems are well suited to ISDN. Finally, Canadian manufacturers of computers and other telecommunications products are quickly evolving their product lines to meet the next generation of ISDN standards now being developed within the CCITT.