# Work in progress: Bell Canada's digital network takes shape

A worldwide technology evolution that Canada helped bring about is causing the greatest change to the country's telecommunications since the introduction of automatic dialing in the 1950's and '60's.

The technology behind this change is digital - a method of handling telephone, data or image calls much faster and at less cost than older systems.

The increasing use of digital technology is about to have an explosive effect on the marketplace, as both business and residential telephone customers take advantage of new offerings such as Automated Calling Card Service<sup>TM</sup>. Call Management Services (CMS)<sup>TM</sup>, and more new services on the way over the next six months.

The newest of these is 800 Plus 111, a business long distance service unveiled by Pierre Chagnon. Bell Canada's vicepresident-engineering, at a media briefing at Toronto's Harbour Castle Hotel.

"We are at the threshold of a new era...an era in which the company's commitment to digital technology is paying solid dividends in the form of new, high-value services." Chagnon said.

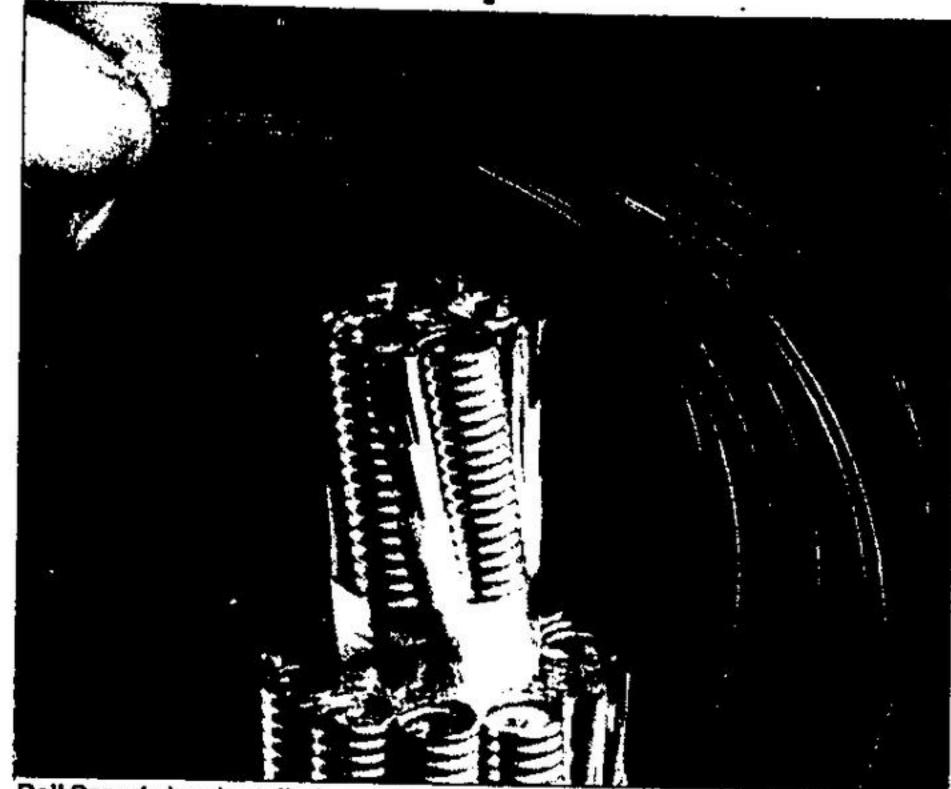
"Initially, our (modernization) emphasis was on the toll network -both transmission and switching which is largely digital today." he said, pointing out that Bell is now bringing digital to the local network.

Bell already uses digital technology in 35 per cent of its local switching network, compared to 23 per cent by the regional Bell operating companies in the U.S.

The company has just embarked on a new, faster modernization program of 450,000 lines a year, part of its approved \$2.2 billion construction program for 1989.

This represents an increase of 134,000 lines a year from the previous program.

Bell is considering even faster modernization, to 660,000 lines a year.



Bell Canada has installed more than 100,000 fiber kilometres of optical fibres in its network. Fiber optics has almost unlimited potential capacity to carry information and along with digital switching and advanced signalling techniques like Common Channel Signalling (CCS#7) provides the foundation for the telecommunications network of the future.

But this is dependent on the company's financial situation, which is tied to the economy, Chagnon said.

The increasing use of digital in Canada's telephone networks helps explain industry productivity levels that far exceed the national average.

In one example, Bell Canada registered productivity gains of 4.2 per cent a year on average from 1980-88, compared to a national average of .0 per

As a result. Bell has been able to accommodate long distance rate reductions of 25-30 per cent in the last two years, with only a 3.9 per cent increase in consumer prices.

Digital technology is also the driving force behind what promises to be the biggest change of all - the Integrated Services Digital Network (ISDN). This network of the future. being trialed today across North Amer-

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ica. (including Bell trials in Ottawa), promises to deliver all forms of information, improved control of networks for business, and many more new services to customers through one wall jack. rather than today's separate connections.

As part of its move to digital, Bell's modernization plans also call for \$625.4 million on new fibre optics links over the next five years. The company has already spent more than \$600 million on fibre links from 1985-1988, and has 100.000 fibre kilometres of fibre cable in place today.

The company's annual \$2.2 billion construction program for 1989 is now being reviewed in Ottawa by the Canadian Radio-television and Telecommunications Commission. The program includes about \$12 billion worth of construction and modernization over five years

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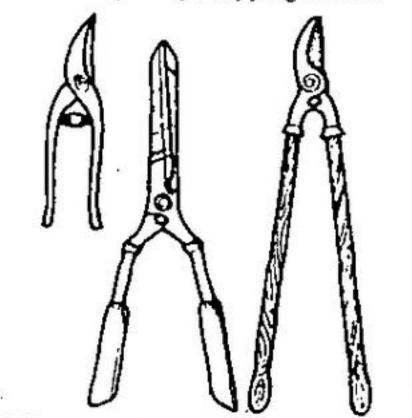
## Summer pruning — it's easy

If the thought of pruning intimidates you, or if you think it is a mysterious art best left to professionals - read on. It might help you to understand why pruning is so good for a plant's health.

Basically, pruning is the removal of part of a plant's growth for the good of the whole plant, for example, the removal of dead or diseased parts, or the pinching back of new shoots to encourage bushier side growth. Pruning is also essential for ensuring healthy transplants, directing growth to avoid crisscrossing branches, and to increase blossom and fruit production.

The cuts you make can beneficially affect your whole yard. You can increase the movement of air, alter the degree of sunlight and shade, change air temperature and even improve soil condition!

The only tools you'll need are a good pair of hand pruners, pruning shears and perhaps lopping shears.



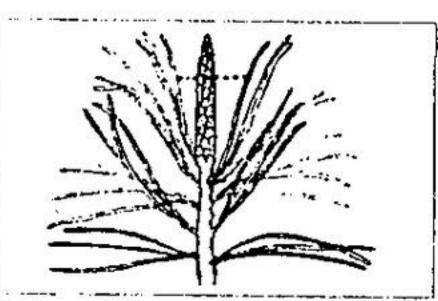
Hand pruners, pruning shears, lopping shears, NC

Now is the ideal time to prune many evergreens and spring flowering shrubs. With most evergreens you should al-



low the new growth to lengthen in June and then prune off as much of the new growth as is required to direct growth and shape. On some evergreens like Mugho Pines, new growth appears in the form of 'candles'. Cutting off one third of the candle now will promote that area to fill out next year. You can cut these candles in mid-summer even though they may have "broken" into needles. However, repeatedly removing the entire candle will eventually cause the death of the plant. On conical or cone-shaped evergreens, prune back straggly growth by reaching just inside the plant then make your cut so that the overlapping foliage hides unsightly stubs.

The tips of spreading evergreens can be pinched back with just your thumb and forefinger, or use garden shears to shape at this time of year.



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There is a wide variety of healthful, nutritious breakfast foods. Natural fruit juices and fresh fruit can be prepared and refrigerated the night before for refreshing appetizers. Fresh fruit is also a flavorful, natural sweetener for whole-grain cereals.



KATHY HAJAS Diet Center Counselor

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what e ery great detective must do during an investigation. You must do the same if you plan to trace your family tree. This means collecting heirlooms. favorite anecdotes, letters, books, photographs and anything else that might shed light on your family's fascinating past

The next step is your local library where handbooks and guides will provide you with useful research tips and information on where actual records are stored. Almanacs and directories will help you to locate the names and addresses of genealogical and historical societies. Contacting these groups can be very informative. They often offer workshops for beginners and provide a great forum to discuss your detective work with like-minded enthusiasts.

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