VISTA system tested

Canada's largest field trial of videotex service was inaugurated recently by Bell Canada and the federal Department of Communications (DOC).

Participants in the $11-million trial, selected to represent a cross section of potential users of the service, will be able to call up a wide variety of information, delivered by means of Bell's existing telephone network, for display on their home television screens.

Bell will operate the trial, using the Telidon technology developed by DOC engineers, under the name of VISTA – a name chosen to project the "excitement, vision and scope" of the novel communications medium.

VISTA, a technological "marriage" of television and the telephone network, will be tested at nearly 500 user terminal locations in Toronto and the Quebec City area for the balance of this year and through 1982.

Bell Canada is spending approximately $8.5 million on the trial, with the federal government contributing $2.5 million in computers and terminals. Content for the system will be supplied by a number of information providers, both public and private.

Users of the VISTA system are expected to have fingertip access to up to 70,000 "pages" of information, provided by a number of organizations who will supply such things as travel schedules, news, weather and sports headlines, stock market quotations, consumer bulletins, entertainment guides, classified ads and "Yellow Pages" listings.

Bell Canada

The VISTA system permits access to up-to-date information.

Laser tests

In addition to the VISTA trial, the federal government, CNCP Telecommunications of Toronto and the Ontario government, are conducting tests in Toronto to see if Telidon terminals can be connected by laser communications.

A colour graphics picture will be transmitted by laser from a Telidon terminal on the CN Tower to a terminal in Queen's Park. The test, which is being conducted over a few months, is part of an evaluation of alternative data communications paths.

Voice, video and data can all be transmitted up to 15 miles, eliminating the need for coaxial cables. The technology also has an advantage over microwave transmission, since it is not susceptible to interference and is not hampered by regulatory constraints.

Computer helps doctors monitor heart condition

Toronto General Hospital and the University of Toronto are conducting a project that in the long term might lend insight into the workings of the heart, and perhaps help in finding a cure for heart disease.

Heart surgeons at the hospital are implanting 11 tantalum markers in the hearts of their patients, who will have to be monitored for months or perhaps years.

The markers, each 1 millimetre by .5 millimetre of non-corrosive metal, are screwed into the perimeter of the patient's left ventricle and can be seen clearly on X-rays. The X-rays are shot at 60 frames a second, reproduced as a moving picture, and are monitored by Alven, the "left-ventricle performance consultant".

Alven is a computer system used to evaluate the motion of the left ventrical. The system, developed by John Tsotsos at the University of Toronto, is being studied, evaluated and refined as an experiment in the medical application of artificial intelligence.

Improving diagnosis

While a patient is recuperating after open-heart surgery, his left ventricle, considered to be the crucial part of the heart because it pumps oxygenated blood throughout the body, can be analyzed by Alven. The computer projects the tantalum markers on a converted television screen and prints the analysis of their motion on another screen. In the short term, the researchers hope that the system will improve surgeon's post-operative diagnosis.

"Instead of the doctor just making a diagnosis by studying X-rays, the computer can analyze in more detail than the human eye is capable of perceiving," Dr. Tsotsos explained.

Once programmed, in a matter of seconds, Alven can easily supply about 20 pieces of information on the motion of the left ventricle.

Some of the benefits of the system include knowing more about the exact behaviour of the heart, which might lead to finding a cure for heart disease. Diagnostic accuracy may improve because doctors will base their decisions on more conclusive information. The computer can keep more complex information than the human mind, so treatment may become more sophisticated to counterbalance the complexity of some heart problems. The computer can also act as a quality-control machine or a backup device which the doctor can use to qualify his diagnosis.