Telidon, the Canadian-developed videotex system, will soon transform the familiar television set into an innovative information tool, and, eventually, a two-way communications centre from which viewers may conduct business, take educational courses, or send and receive mail at the speed of light.

With the basic Telidon service, the user can phone a data bank and then, by punching a few buttons on his keypad terminal, retrieve pages of information for display on his modified TV set. With a keyboard terminal, a business user with more sophisticated needs could exchange information with a friend or colleague possessing a similar unit. In either case, the information displayed could be either textual or graphic.

This graphic information can be precise: the Telidon system can transmit and display signatures accurately enough for legal purposes. Telidon images have a much higher resolution than those of the European videotex systems.

Designed primarily for the display of textual information, the European systems build up a page or image on their screens line by line, moving from left to right. In effect, their screens are divided into a mosaic, with each small square being filled by a letter. Though these squares can be subdivided for graphic displays, a diagonal line on the screen will still look jagged and resemble a flight of stairs.

In contrast, Telidon uses the natural language of drawing, building up an image progressively from its basic geometric elements. The result is much higher resolution. Telidon images also employ about 40 per cent less network capacity and require much less storage capacity.

Telidon can describe images with much higher resolution than a typical color TV and can meet the standards of the highest-resolution TV monitors in the world. The system, however, will only resolve an image to the degree required by the display monitor in use. It will also be adaptable to all display monitors in general use for the foreseeable future. For images indescribable in terms of geometric elements, the system contains a photographic capability: an image, such as a photograph, can be displayed on a point-by-point, facsimile-like basis.

The federal Department of Communications is conducting several field trials to test Telidon and encourage industrial participation. Residents of the small town of Elie, Manitoba, for example, will have access to stock exchange reports and will also be able to experiment in teleshopping.