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This is Telidon

TELIDON

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What is Telidon?

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What is Telidon?

Telidon is the most sophisticated Videotex system in the world. It was researched and developed in Canada, and has been adopted by many of the world's largest communications companies. Telidon turns a home television set into a powerful information centre and brings electronic shopping and banking right to the user's fingertips.

Designed to be user-friendly, Telidon is easy to operate and requires the minimum equipment.

Videotex is the generic name for a system which integrates computer technology with a television set and allows for two-way communication.

Telidon's pictures are crisper and far more realistic than those of other Videotex systems which were designed before the price of computer components became affordable to home users. Telidon is flexible enough to be used in a whole range of situations including armchair shopping, public displays, sales seminars and the Office of Tomorrow.

Telidon's novel Picture Description Instructions Language is the key to its success. Because it is fully compatible with the electronic systems of the future it will not easily become outdated.

Telidon can be brought into the home or office by a range of carriers; Telidon equipment and services for every application.

Telidon's uses are endless. From home to office it provides a complete information system with the advantages of talking back to a data bank.

In a typical Telidon system each page is stored electronically in a computer or data bank which holds tens of thousands of individual Telidon images. When requested by the user, these pages are transmitted to the home or office by means of telephone lines, cable TV, broadcast television or optical fibre links.

In a stand-alone system the pages are stored on a disc or tape which can be attached to the Telidon system.

Telidon pages are created on a page creation terminal and fed to the data bank. The page creation terminal typically consists of a microprocessor, keyboard, monitor screens and electronic tools for the artist. Text for each page is typed on a conventional (ASCII) keyboard and stored in the microprocessor which may also act as a text editor. The keyboard is also used to send specific instructions to the microprocessor and data bank computer. These instructions are displayed on a small black and white monitor. The Telidon page itself can be seen on a color television screen.

▼ *Some typical Telidon system components and accessories:*

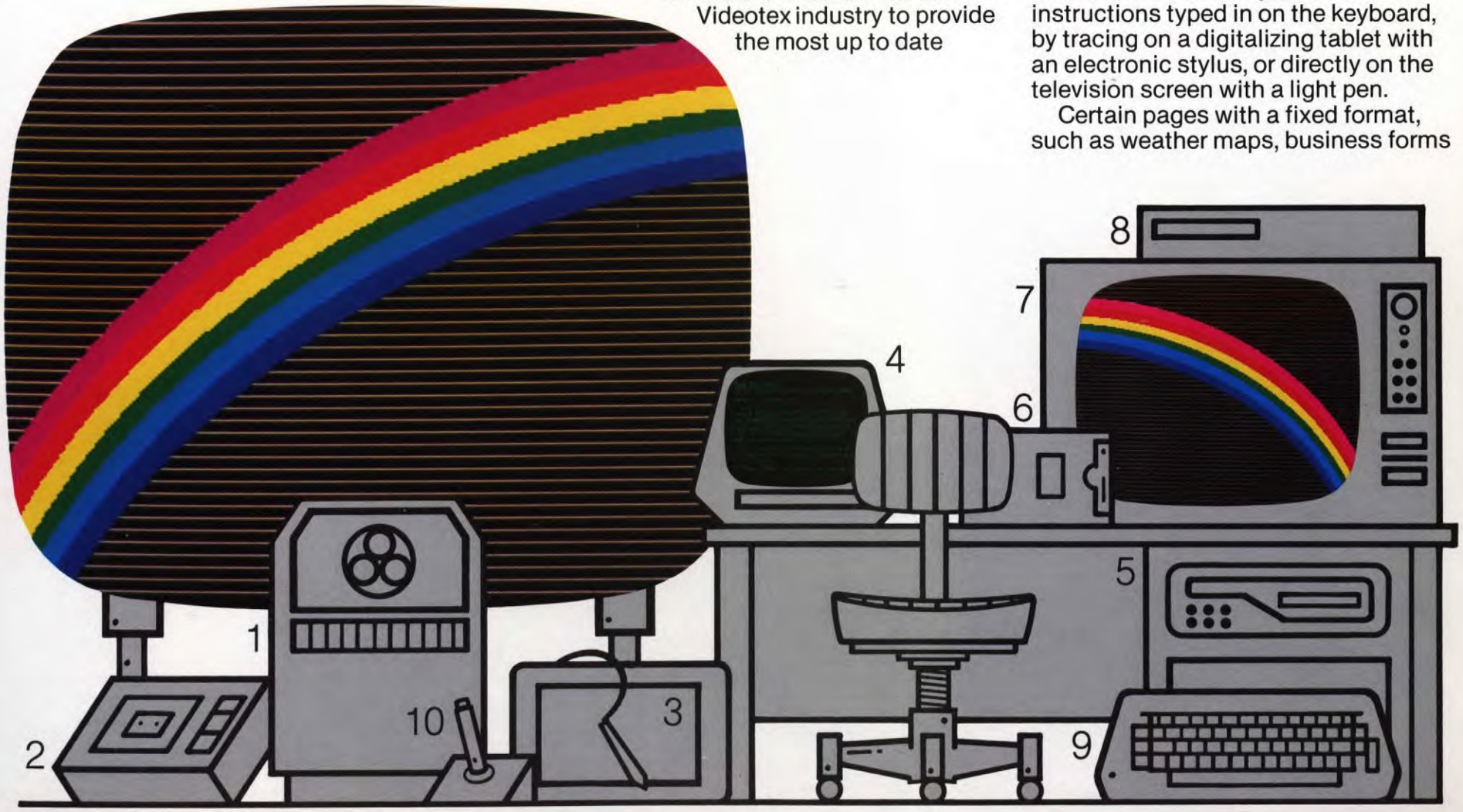
1. Large screen projector system 2. Cassette storage device 3. Digitalizing tablet with electronic stylus 4. Computer monitor 5. Image creation system 6. Floppy diskette 7. Modified T.V. set or colour monitor 8. Decoder 9. Keyboard 10. Joystick

telephone, cable TV, optical fibres, broadcast television and, in the future, laser beams and radio. There are even portable and display stand-alone systems for special uses.

Canadian scientists and engineers work hand in hand with the Videotex industry to provide the most up to date

Diagrams, maps and graphics are built out of elementary geometrical components—point, line, rectangle, arc and polygon—using Telidon's unique Picture Description Instructions. These pictures can be created in several ways; as instructions typed in on the keyboard, by tracing on a digitalizing tablet with an electronic stylus, or directly on the television screen with a light pen.

Certain pages with a fixed format, such as weather maps, business forms



and stock market reports are used over and over again as information changes. In such cases the basic design is created and stored electronically. It can then be automatically updated as new information is received.

Pages are obtained by the user on switching to a particular channel on a TV cable or by dialing the required data bank on the telephone. These pages are in the form of an electronic code which passes down the telephone line or TV cable. This code must then be translated before text and images can be seen on the television screen.

Decoding of the pages is performed by the Telidon terminal, a small microprocessor which can sit conveniently on top of a television set or may even be built into it. The terminal contains a computer memory which gives temporary storage to the electronic pages. In this way, transmission media are used only for short bursts and left free for other traffic.

The pages that are displayed on the screen can be selected by keyboard or hand-held key pad. In addition to selecting pages the key pad or keyboard communicates through the Telidon terminal to the data bank for electronic shopping, banking and other transactions.

The Telidon pages are arranged in the data bank according to one of several schemes and can be located by, for example, the use of key words or rapid scrolling. Another common form of storage is the Information Tree.

The first page, or trunk of the tree, contains a list, or menu, of information headings. In the case of a city directory it will list the headings; Hotels, Restaurants, Cinemas, Theatres, etc. If the user wishes to visit a restaurant, he or she will press the page number shown beside that listing and enter a branch of the Information Tree.

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Another Canadian Success Story

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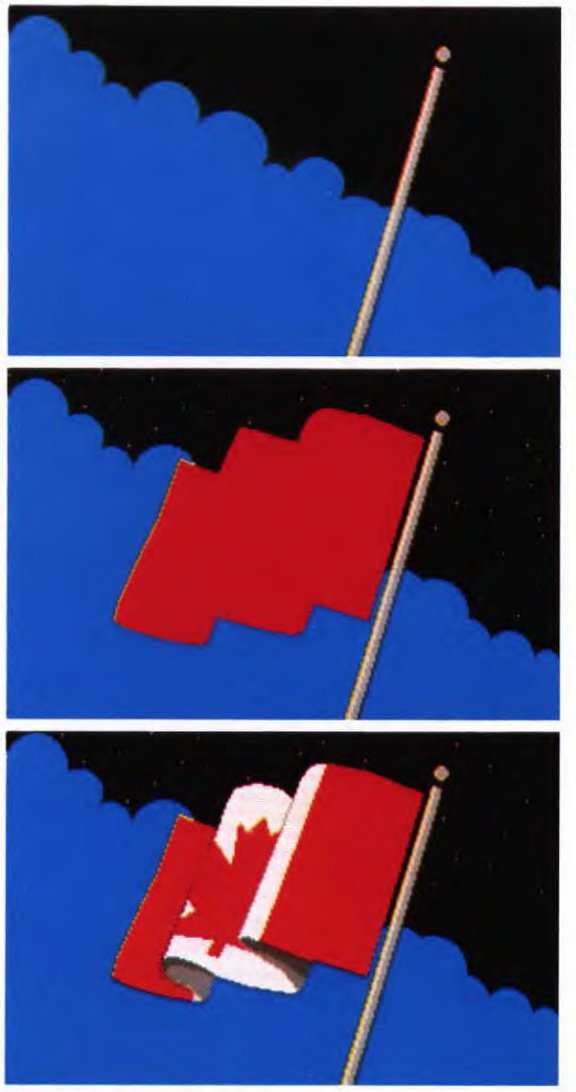
Another Canadian Success Story

Telidon is proudly Canadian. It was developed by Canadian government scientists and engineers and is manufactured by Canadian business. As a result of joint co-operation and extensive R & D efforts, Canada today leads the world in the design and production of sophisticated Videotex hardware and software.

The Telidon story begins in the late 1960s when revolutions in electronic miniaturization had reduced computers to desk top size. This new technology made it feasible to develop electronic information centres for the home and office. At the heart of such centres would be an interactive television system capable of displaying pictures, sound and text.

Canada had long been a leader in the field of telecommunications.Its scientists believed that they could make a significant breakthrough in interactive television. Research on a superior graphics system was carried out during the first half of the 1970s at the Communications Research Centre of the federal government's Department of Communications. In 1975 the scientific team had reached a point where a Canadian company was given a contract to develop compatible hardware and software. Two years later, Telidon's revolutionary Picture Description Instructions Language



▲ *Telidon is proudly Canadian. A Telidon graphic display sequence is illustrated above.*

was complete and three patents were applied for.

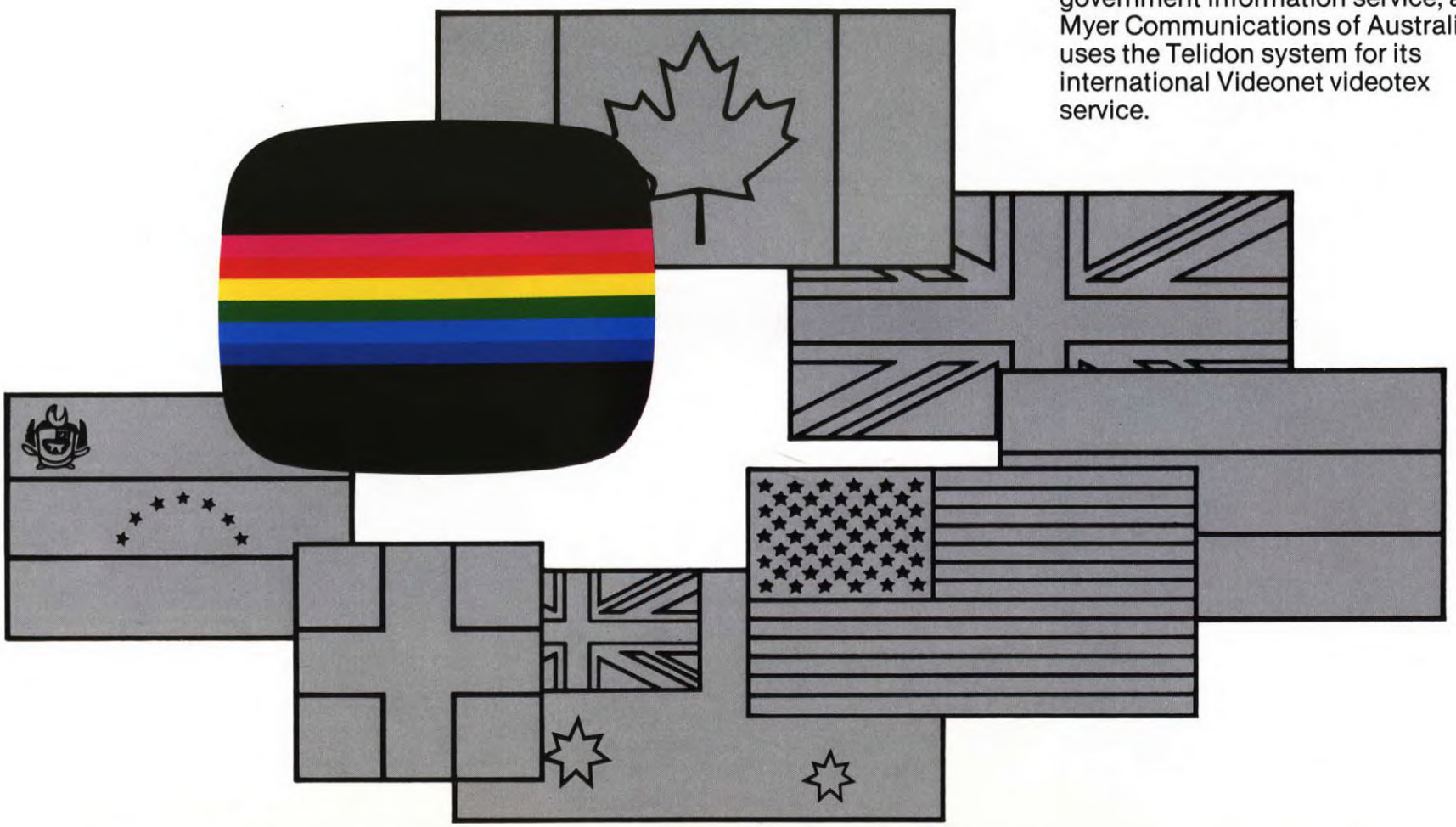
At the same time, other countries were competing to corner the lucrative Videotex market. In 1977, Canadian policy makers decided to review the various Videotex systems and realized that the approach that had been developed in their own Communications Research Centre was considerably superior. In consequence, the research team was encouraged to press ahead with its work.

Through government funding, Telidon technology continued to

◀ *Today Telidon has become the Videotex system of choice for several major corporations and governments throughout the world.*

develop and programs were established to assist in its transfer to private industry. The federal government also assisted in Telidon sales and marketing.

Today Telidon has become the Videotex system of choice for several major corporations. It forms the heart of the North American videotex standard adopted by the American Telephone and Telegraph Company. Time Inc. is using Telidon for its multichannel teletext service. The Government of Venezuela has purchased a Telidon network as a government information service, and Myer Communications of Australia uses the Telidon system for its international Videonet videotex service.



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Telidon at Work

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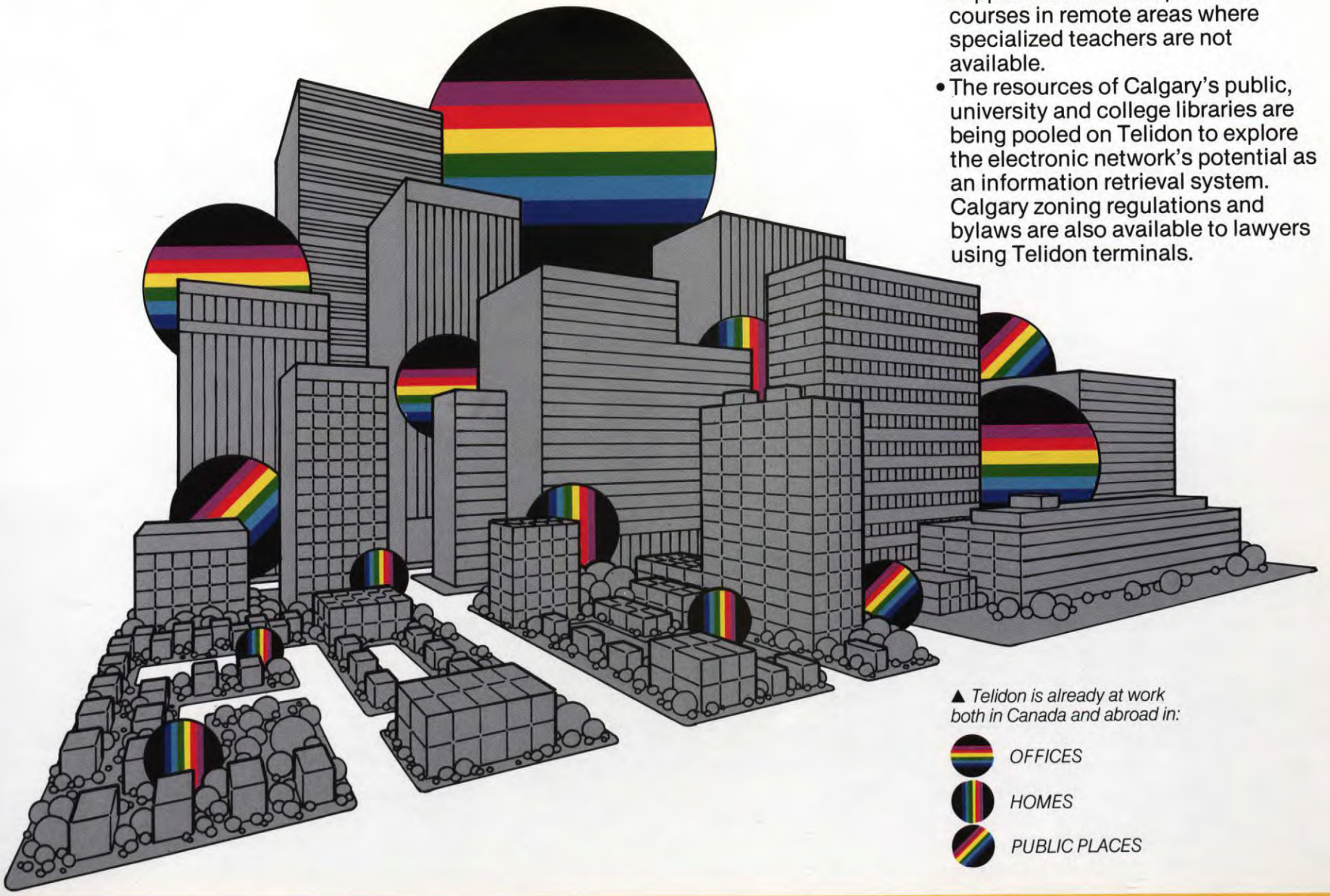
Telidon at Work

Telidon is already at work in offices, homes and public places both in Canada and abroad. In addition to its use by public and private corporations, the Canadian government has helped to fund a number of projects which demonstrate Telidon's potential.

Just a few of Telidon's many current applications are listed below.

- "Grassroots", a province-wide information service to the agricultural community, grew from a Telidon field trial in Manitoba. Its data base will contain 20,000 pages by the end of 1982 and is regularly updated with information on weather, farming, livestock and commodities. In addition, the service provides interactive shopping, games and mortgage calculations over the telephone lines. The success of this program has led to a similar Telidon service being started in California's San Joaquin valley.
- The Trans-Canadian telephone service is supplying 70,000 Telidon pages across Canada. Information comes from banks, real estate agencies, publishers, educational institutions, government agencies and major retail stores.
- In certain rural communities, optical fibres are used as the transmission medium. Telidon is integrated into a system which also provides digital telephones, cable TV and stereo FM.
- The Toronto city directory contains 50,000 pages of free information to the public with 2,000 Telidon terminals to be located in shopping malls, hotel lobbies, train stations, airports, bus terminals and tourist spots.
- Marketfax, an information bank available by subscription, provides an analysis of international stock and commodity markets.
- A display for shopping centres includes a large scale screen with continuously looping Telidon pages. Smaller, touch-sensitive screens allow the passer-by a more selective choice of information.
- The University of Waterloo's campus network is exploring new ways of retrieving Telidon data. This includes personal pages and codes which allow immediate access to frequently used information.
- iNet, a trans-Canadian intelligent telephone network, supplies a Telidon service with electronic mail and messages along with a directory of databanks.
- La Presse publishes an electronic version of its newspaper which is continuously updated by a special editorial staff. Additional services will include direct public access to the newspaper's library.

- Telidon is being used as a supplement to correspondence courses in remote areas where specialized teachers are not available.
- The resources of Calgary's public, university and college libraries are being pooled on Telidon to explore the electronic network's potential as an information retrieval system. Calgary zoning regulations and bylaws are also available to lawyers using Telidon terminals.

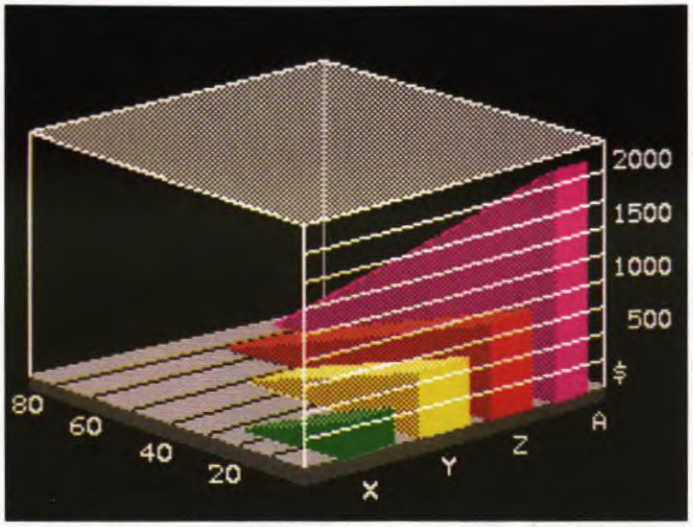


▲ *Telidon is already at work both in Canada and abroad in:*

OFFICES

HOMES

PUBLIC PLACES



▲ *Telidon is designed to adapt to any anticipated revolution in electronic information processing.*

- Tamper proof Telidon terminals have been installed in public places, information caravans and government offices across Canada. The 45,000 page data base on government services and programs has recently been extended to include a national job bank service.
- Teletext broadcasts on the Canadian Broadcast Corporation's national network will be available to anyone with a Telidon decoder. The project will explore the international impact of Telidon on the broadcasting market. Pages will include news, weather, sports, program listings and closed captioning.
- Phonologue, a record catalogue available on Telidon, will be used by record stores and radio stations. It is expected that Phonologue will expand into an electronic jukebox.
- Other Telidon projects include university courses, emergency information, pages from an encyclopedia and tourist information. Page creation terminals have been placed in schools so that children can write their own Telidon pages.
- On the international market, the government of Venezuela has purchased Telidon terminals and page creation terminals to supply public information about government services.
- Time Inc. has purchased Telidon for its teletext service via satellite and cable TV.
- Station WETA in Washington, DC provides a teletext service with information supplied by newspapers, US government agencies and public libraries.
- The US city of Portland, Oregon will offer a Telidon service of information, tele-shopping and pay TV on its multi-tiered cable service.
- Standard Telephone and Radio has developed a Telidon service in Switzerland that is compatible with the British Prestel Videotex system.
- Banking and ticket purchases may be made over a Los Angeles based Telidon service, operated by Times Mirror Videotex.

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Advantages of Telidon

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Advantages of Telidon

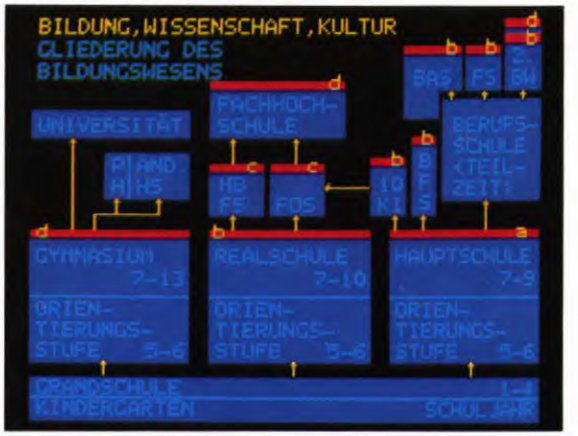
Telidon's superior graphics speak for themselves. They make the system the most sophisticated in the world. In addition, Telidon is designed to adapt to any anticipated revolution in electronic information processing.

Other Videotex systems initially built their graphics out of colored squares. The pictures look crude, with curves and diagonal lines being represented by a series of steps. Users of such systems have already faced the prospect of replacing terminal equipment as these systems become outmoded. Attempts to upgrade the images with methods such as Dynamically Redefinable Character Sets (DRCS) can improve their quality somewhat, but require more data storage space and longer transmission times than Telidon. By contrast, an investment in Telidon equipment is protected, for as technological breakthroughs take place, Telidon will look even better.

The heart of Telidon's success is its unique Picture Description Instructions language which creates graphics out of points and natural lines. Telidon's alphageometric computer language is so advanced that its picture potential is ten times greater than any existing television set. Even when future innovations occur, Telidon pages will be compatible with

Telidon reception and transmission is possible with a wide variety of equipment and over many different carriers. Systems are available at a variety of prices and can be selected for a specific use or situation.

▼ *Telidon's superior graphics speak for themselves. They make the system the most sophisticated in the world.*



both new and old equipment.

Telidon's page instructions are electronically coded in a highly efficient way and make the best use of computer and terminal memories. They also allow more information to be transmitted at lower cost.

The alphageometric coding scheme is simple to learn and writing a Telidon page does not requires expensive equipment. Telidon page creation is therefore accessible not only to large businesses but to the small user with a simple message.

Telidon is designed to be independent of transmission media, Television sets and data banks. As advances in electronics occur, Telidon pages will not become outmoded, and old and new equipment can be used together.

From the home to the office Telidon's applications are endless. Here are just a few of them:

VIDEOTEX APPLICATIONS

- News
- Teleshopping
- Electronic mail
- Opinion polling
- TV listings
- Restaurant menus
- Stock analysis
- Agendas
- Process control
- Assembly instruction
- Bus routes
- Children's stories
- Pay-TV controls
- Tourist tips
- File maintenance
- By-laws
- Convention messages
- Tele-betting

VIDEOTEX APPLICATIONS CONTINUED

- Classified ads
- Best seller lists
- Reference material
- Bargain finders
- Self-education
- Computer games
- Signature samples
- Evacuation plans
- Currency conversion
- Computer art
- Tele-software
- Legislative news
- Word processing
- Community events
- Emergency numbers
- Racing forms
- Press releases
- Movie sub-titles
- TV tele-prompters
- Auction catalogues
- Weapon controls
- Application forms
- Alarm controls
- Knitting patterns
- Music sheets
- Sports
- Telebanking
- Messaging
- Speaking notes
- Purchase orders
- In-studio graphics
- Electronic auctions
- Soil conditions
- Personnel records
- Utility metering
- Quizzes
- Delivery schedules
- Weather
- Reservations
- Phone listings
- Advertising
- Theatre guides
- Stock reports
- Tax calculations
- Inventory control
- Real estate listings
- Briefings
- Library indexes
- Grocery specials
- Government services
- Service manuals
- Tele-medicine
- Emergency messages
- Tele-poetry
- Electronic blackboards
- Cartoons
- Bill payments
- Program notes
- Travel schedules
- Astrology
- Interoffice memos
- Maps
- Sales presentations
- Book catalogues
- Price comparisons
- Hotel listings
- Personnel training
- Tele-Gospel
- Magazine highlights
- Electronic billboards
- Videodisc controls
- University calendars
- Mailing lists
- First-aid instructions
- Blood-stock records
- Program captioning
- Funds transfers
- Graphics displays
- Audience analysis
- Recipes
- Job opportunities
- Gardening hints
- Crossword puzzles
- Zoogeography

TELETEXT APPLICATIONS

- News
- Advertising
- Theatre guides
- Astrology
- Classified ads
- Price comparisons
- Tele-education
- Emergency messages
- Bus routes
- Movie sub-titles
- Gardening hints
- Crossword puzzles
- Sports
- TV listings
- Restaurant guides
- Maps
- Best seller lists
- Grocery specials
- Computer games
- Computer art
- Emergency numbers
- Evacuation plans
- Cartoons
- Tourist tips
- Racing news
- Soil conditions
- Knitting patterns
- Sheet music
- Weather
- Program notes
- Travel schedules
- Real estate listings
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Telidon Systems

Telidon is a particularly flexible system for it can be used in three basic ways:
• Videotex • Teletext • Stand alone each of which is ideally suited to particular applications

VIDEOTEX is a complete interactive system used as an information centre and for electronic mail, banking and shopping. Telidon pages are transmitted over telephone lines, cable TV or optical fibres. These links also carry the user's instruction back to a central computer. Telidon Videotex systems can be integrated with home alarms, utility metering and stereo sets. With additional equipment, the user can create pages of text which may be stored for the future or sent to friends, interest groups or community newsletters.

Videotex pages will be supplied by information banks and electronic publishers as a community service or by subscription with charges for time and pages used.

TELETEXT is a one-way information system ideal for electronic newspapers, weather reports, TV program notes and community billboards. Telidon pages are broadcast on the unused lines of a TV picture or via a dedicated television channel. In the former case about 200 pages can be supplied and 20,000 in the latter. Pages may be provided free, as a public service, or paid for by advertisers or subscribers.

The advantage of Teletext is that it is independent of telephone lines and can be received anywhere within the range of the television signal. Telidon can also be used to add graphics to conventional cabletext systems.

Pages are selected by key pad or keyboard but the full interaction of electronic banking and shopping is not possible.

With hybrid systems the user can switch from Teletext to Videotex in response to a catalogue item or advertisment. In this way full two way communications are possible.

STAND ALONE systems can be fully portable for sales, briefings and seminars or larger units for public displays.

Telidon pages are stored on an ordinary audio cassette or desk top computer where they can be transferred to the Telidon Stand Alone terminal. Pages are selected by the user or programmed into a sequence along with music and narration.

Presentations can be made on standard television sets, touch sensitive screens or large format

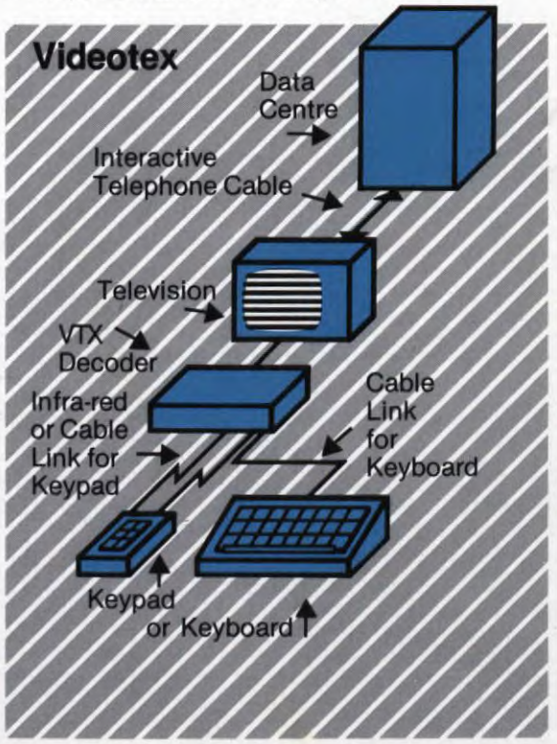
displays. Stand alone hybrids can also be connected to a TV cable or telephone line to provide full Videotex services.

PAGE CREATION TERMINALS

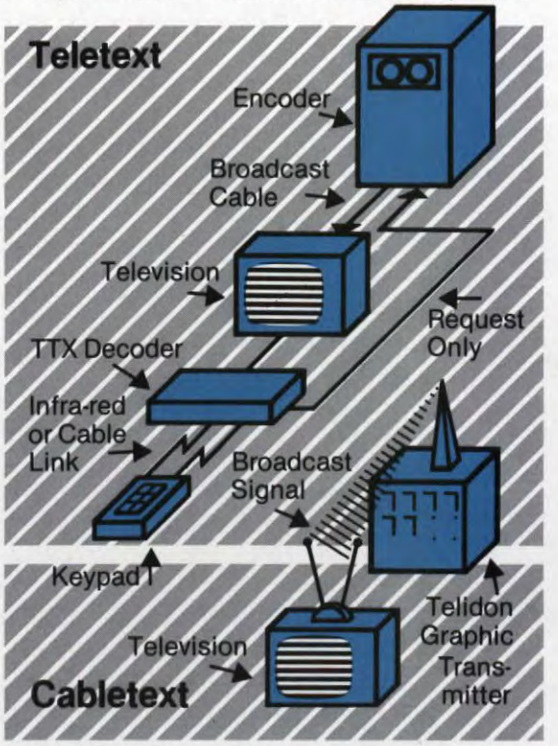
Telidon pages are built up on a Page Creation Terminal and then fed to a computer or data bank.

The typical system consists of tools for the electronic artist together with a microprocessor, keyboard and two monitors. The microprocessor ranges from a full business computer which

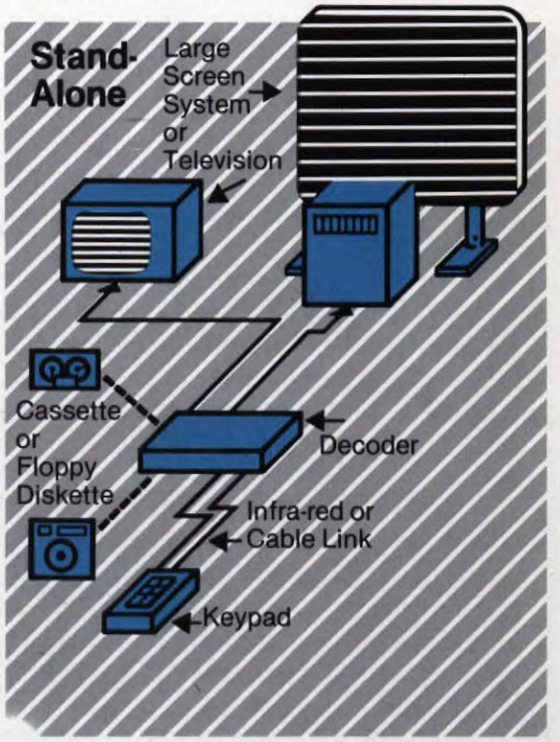
▼ *A representative Videotex system.*



▼ *Representative Teletext and Cabletext systems.*



▼ *A representative Stand-alone system.*



can be used for many other tasks to desk top models which may include text editing facilities.

Text for each page is typed on a standard (ASCII) keyboard with cursor controls and displayed on a color television screen. Microprocessor and computer instructions are also entered in this way and can be seen on a smaller black and white monitor.

Graphics can be created in a number of ways, by typed instructions, digitalized tablet and stylus, light pen, track balls, cursor control and zoom control. Additional equipment permits photographs to be scanned and electronically coded.

When pages are to be regulalry updated, a basic design is stored electronically in the microprocessor. If the terminal has additional computing features, it is possible to create such pages automatically.

DISPLAY SCREENS

Telidon pages can be dispayed on any kind of display screen. With a home television set the quality of the graphics is limited only by the standards of the set itself. For special purposes, better quality pictures can be obtained by using a high resolution display.

Touch sensitive screens enable the interactive possibilities of Telidon to be used without the need for a keypad.

For public displays, a large screen projection system may be preferred.

TELIDON DECODERS

Canadian manufacturers supply Telidon terminals in a wide variety of models. Some can connect directly to a TV cable or telephone coupler. Others requires connection through an intermediary modem.

In addition to the basic Telidon terminal there are models which incorporate picture zoom and automatic dialing to data banks and can be linked to home alarms and utility meters.

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Telidon and Tomorrow

Telidon is ideally suited to today's information explosion. Telidon will continue to grow with tomorrow.

Telidon's unique design makes it the most up to date interactive television system in a rapidly changing world. It will interface with the latest information systems, including magnetic bubble memories, videodiscs and other storage systems. Telidon products are already the most advanced in the world but research continues to improve hardware and services. Radio transmission of Telidon, for example, will bring the service to ships, mobile units and remote communities.

As the cost of electronic components continues to drop, the user at home will be able to manipulate Telidon images and create his own pages of text. These will be electronically stored for future use or transmitted to friends, community newsletters or interest groups.

Improvements in Telidon image capabilities have been developed in the laboratory. These include improved animation and three-dimensional effects. Music and voice can also be stored electronically along with page information and image compression which will further reduce the cost of electronic storage and transmission.

Telidon's full conferencing potential the need to make copies. Financial statements and sales figures are immediately available in every branch office. Urgent messages are received at electronic speed and Telidon mail reduces office work. Electronic filing is faster and more efficient. It also frees needed office space. A head office can hold remote conferences with its branches and valued employees are always available for consultation.

The retail and wholesale trade can benefit from Telidon. Advertising enters every home and can be constantly updated to show bargains and special offers.

A complete inventory is presented to the customer and electronic shopping reduces overhead and makes the storage and movement of stock more efficient.

Banks and trust companies can speed up their transactions and reduce paperwork. The customer line-up will become a thing of the past. Credit card companies can streamline their operations and avoid dependence on a mail service.

Doctors and other professionals can use Telidon to store their records, charts and diagrams in absolute security. Telidon's two-way capabilities allow remote consultations and the exchange of important material.

is on the way. New terminals will make it possible for a speaker's voice and sketches to be transmitted to a distant location. An audience will be able to ask questions and modify drawings over a Telidon link. Artists, designers and architects in different cities will be able to confer and work together.

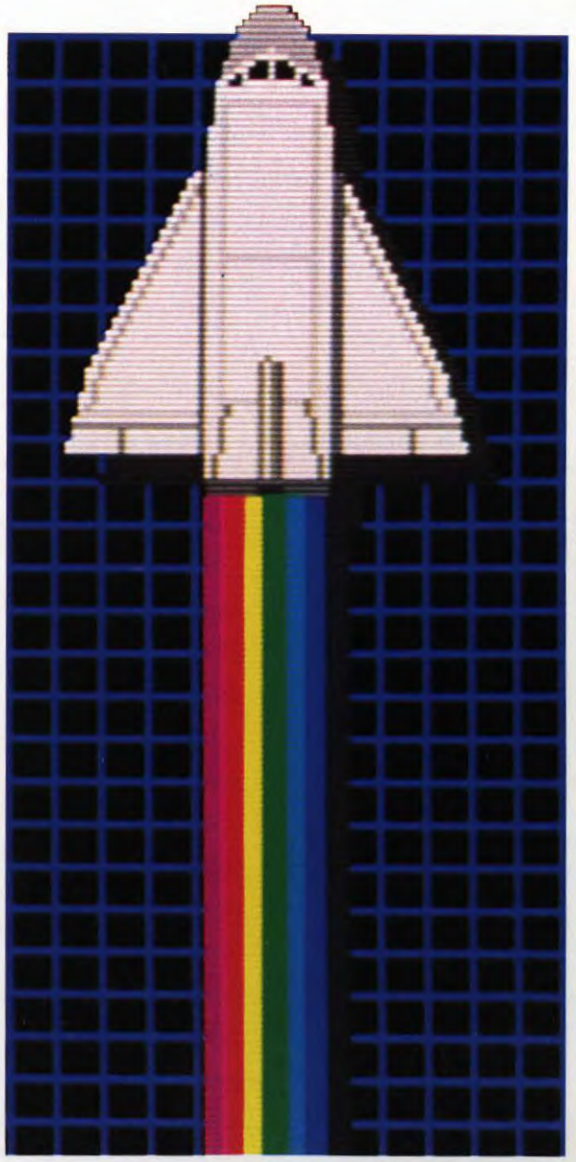
Telidon terminals with enhanced memory units are already entering the market. They turn Telidon into a computer in the home by performing calculations, playing sophisticated games, carrying out programmed instructions and displaying color photographs as well as showing Telidon pages. Transmission costs are lower because these terminals can receive high speed data and store larger numbers of pages.

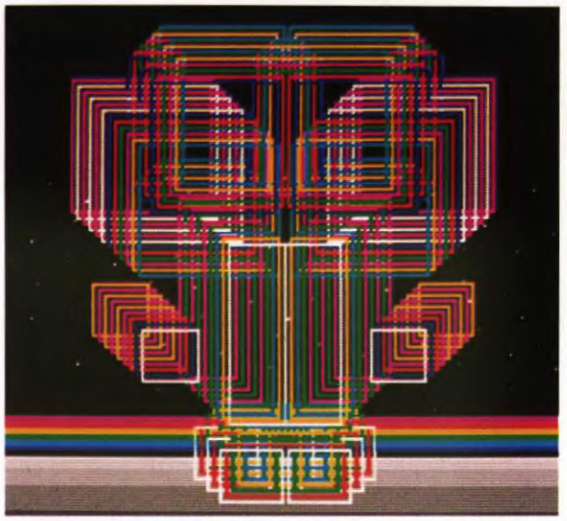
Terminals for the handicapped, children and specialized groups are being developed. Inputs have been designed for those who are unable to use their fingers but have residual control over other parts of their body. Non-verbal displays will be used by persons with cerebral palsy or severe stroke.

Telidon's impact on the future is far-reaching. It will transform business and the marketplace. It will be indispensable in the home.

A Telidon business terminal is at the heart of the Office of the Future. It is a text editor for typists. It can send electronic circulars to thousands of customers across the country without

▼ *Telidon will continue to grow with tomorrow.*





▲ *The future of Telidon is exciting and extends to the limits of human ingenuity and imagination.*

Schools, universities and adult education centres can expand their activities with a range of electronic courses. Examinations and tests can make use of Telidon's interactive potential and extensive resource material can be provided for schools in remote areas.

At home the user can keep in touch with community activities and government programs. Electronic newspapers and magazines are constantly updated. Banking and shopping become fast and simple, while for recreation a range of electronic games are available. With enhanced memory terminals each home can have the power of a large central computer. Telidon terminals can help with housework, daily accounts and income tax returns.

Telidon can serve as a home notice board, send messages to friends or act as a reminder of important dates and meetings.

The electronic future is exciting and extends to the limits of human ingenuity and imagination. One thing is certain. Telidon will be at its centre, serving the world.

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The Telidon Directory

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The Telidon Directory

This directory lists some of the Canadian companies that are involved in the Telidon industry.

DIRECTORY INDEX

Hardware Suppliers

- Electrohome Limited
- Gandalf Data Limited
- AEL Microtel Limited
- Norpak Limited
- Sony of Canada Limited
- United Audio-Visual Resources

Software Suppliers

- Cableshare Incorporated
- The Genesys Group
- Infomart
- Tayson Information Technology Incorporated

Systems Consultants

- Systemhouse Limited

Communications

- CCG, The Trans Canada Telephone System
- Teleglobe Canada

Vispac

- Vispac members

This is Telidon

Glossary

Alpha Geometric Computer instructions for building a Telidon picture which are based on elementary geometrical forms: line, point, rectangle, arc, polygon.

Alpha Mosaic Computer instructions for building a picture from a mosaic of squares. Used by rival Videotex systems.

Baud Unit of data transmission speed. One baud is equal to about one bit per second.

Bubble Memory An advanced, high speed, high capacity solid state memory.

Byte Unit of electromagnetic information or "word". The number of bytes defines a computer's memory capacity, and thus the speed at which it handles data.

Cabletext Basic cabletext: Telidon pages converted to video signals by the cable operator and transmitted to all cable subscribers. No terminal is required by the subscriber.
Cable teletext: A full cable channel devoted to a teletext cycle of about 20,000 pages which can be selected by subscribers with a terminal.

Decoder A Telidon decoder translates electronic information about a transmitted page into a TV signal.

Encoder A piece of hardware used to insert Telidon pages in a broadcast signal for Teletext or Cabletext systems.

Fibre Optics Technology which uses modulated light signals travelling in a flexible glass fibre as a high speed, high capacity transmission medium.

Hardware The physical units connected with a Telidon system—terminal, information provider, etc.

High Resolution Display A special screen which provides pictures of much higher quality than a normal TV set.

Page Creation Terminal Hardware used to create Telidon pages.

Interface Electronic connection between two different pieces of hardware.

Modem Hardware used to interface a transmission medium to a Telidon terminal. A telephone modem converts digital data into analog sound that travels along a telephone line. From MODulator - DEModulator.

Glossary

Microprocessor A miniaturized, low-cost computer.

Non Volatile Memory A memory system whose contents are preserved when the device is switched off.

Pixel Smallest controllable element that can be illuminated on a display screen.

RAM Random access memory. Information may be obtained without having to read sequentially through a list.

Software The programs and electronic instructions of a system.

Stand Alone A Telidon terminal need not be attached to a transmission medium. It serves as a portable or display unit but has no interactive exchange with a data bank.

Telidon Trademark (certification mark) of Canada's Videotex system.

Telidon Page A complete unit of data which is defined by a page number. It generally consists of a complete frame but may also comprise a sequence of frames.

Teletext Interactive television system that receives its pages by television broadcast. Users cannot interact directly with a data bank.

Videodisc Disc recording of sound and images that is read by laser beam or magnetic head.

Videotex Two way interactive television system.

CREDITS

Published by:
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The Robert Scott Advertising Group Limited, Ottawa, Ontario.

This is Telidon

Hardware Suppliers

Electrohome

Electrohome

INTRODUCTION

Electrohome was incorporated in 1933 from predecessor companies dating back to 1909. Electrohome's principal business in the early 1970s was the production of home television receivers. In 1976, the company moved to concentrate its electronic capabilities in industrial markets with particular specialization on video display products and technology.

Since then it has built up a solid engineering design and development capability focused around video displays, transportation microcomputers, satellite receivers and Videotex colour graphic terminals.

In 1980, Electrohome designed and manufactured the first integrated Videotex Telidon terminal which contained the colour video monitor and the PDI decoder electronics in a single package. This set the trend for desk top terminals.

In 1978 Electrohome introduced the RGB TV Receiver/Monitor which is a standard television and an RGB video monitor combined in one product.

Both of these developments gave Electrohome a technological advantage in the Telidon - Videotex field.

PRODUCTS AND SERVICES

Electrohome manufactures integrated Videotex Telidon terminals and RGB colour monitors specifically adapted for Telidon use.

These terminals follow either CRC 699 or CRC 709 Telidon specification. One of three keyboards is included - numeric keypad, alphanumeric keypad or full ASCII keyboard. A Videotex modem (1200Rx/150Tx) and RGB synch outputs are available as options.

These terminals have application as low cost colour graphic ASCII business terminals.

Telidon products include:

- **TELCO-R-NK-** Integrated Telidon Videotex terminal, CR 699 compatible, numeric keypad and RS232C interface.
- **TELCO-RM-NK-** Integrated Telidon Videotex terminal, CRC 699 compatible, numeric keypad, Videotex modem (1200Rx/150Tx) and RS232C interface.
- **EGTO3-R-AK-** Integrated Telidon Videotex terminal, CRC 699 compatible, with 80 x 24 dumb terminal mode, RS232C interface.
- **Alphanumeric keypad-** contains A to Z, 0 to 9 CR BS and punctuation symbols. TTL levels.
- **ASCII Keyboard-** Full ASCII keyboard, typewriter paired, sculptured profile, numeric keypad, TTL levels.
- **EGTO4-R-** Integrated Telidon Videotex terminal, CRC 709 (AT&T PLP) compatible, RS232C interface, TTL keyboard interface.
- **EGTO4-RM-** Integrated Telidon Videotex terminal, CRC 709 (AT&T PLP) compatible, modem with auto dial, RS232C interface, TTL keyboard interface.
- **EGTO5-R-** Integrated Telidon Videotex terminal, CRC 709 (AT&T PLP) compatible, 80 x 24 terminal mode, high resolution monitor, RS232C interface, TTL keyboard interface.
- **EGTO5-RM-** Integrated Telidon Videotex terminal, CRC 709 (AT&T PLP) compatible, 80 x 24 terminal, high resolution monitor, modem with auto dial, RS232C interface, TTL keyboard interface.
- **RGB Synch Outputs-** Available as an option on any Integrated Terminal.

Monitor Products include:

- **C-50-** 19" colour TV Receiver/Monitor with RGB inputs
- **ECM 1302-1-** Medium resolution, 13", TTL RGB colour monitor
- **ECM 1302-2-** High resolution, 13", TTL RGB colour monitor
- **I 1302-TEL-** Telidon RS170 RGB interface for ECM 1302 series monitors, converts TTL RGB to RS170 RGB.

FOR FURTHER INFORMATION:

Electrohome Limited
809 Wellington St. N.
Kitchener, Ontario
N2G 4J6

Electrohome

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Hardware Suppliers

Gandalf

INTRODUCTION

Since 1971, Gandalf Data Limited has been connecting people with information through the manufacturing of a variety of data communications equipment, including modems, multiplexers and PACX contention switching systems for data. More than 50 different products are sold and serviced in over 25 countries. Gandalf Data Limited is the Canadian subsidiary of Gandalf Technologies Inc., which also owns manufacturing facilities in the United States and England. By fiscal year end 1982, total consolidated sales are forecasted to exceed $50 million. More than 1,000 employees work for Gandalf worldwide.

PRODUCTS AND SERVICES

For Telidon, the Company manufactures modems to meet the communications specifications of videotex users. Two compatible modems are available, the AM1512 and AM3150.

AM1512-Remote Site Modem—

- Desk top modem designed for adjacent attachment to terminal
- Designed for operation over public switched or private line networks at 1200 bps receive and 150 bps transmit
- Easy installation - no adjustments required

AM3150-Computer Site Modem—

- Rack mount version offers full auto answer operation on public switched telephone network.
- Compatible with 1200 bps full duplex computer configurations.
- Up to 14 units can be accommodated in Gandalf 3000 rack shelf.

For both modems, OEM versions have already been delivered, and inquiries are welcome.

FOR FURTHER INFORMATION:

To obtain copies of our videotex literature and catalogue, contact Fiona Gilfillan at:

Gandalf Data Limited,
9 Slack Road,
Ottawa, Ontario
K2G 0B7
Tel: (613) 225-0565
Tlx: 053-4726

gandalf

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Hardware Suppliers

MICROTEL

AEL Microtel Limited

INTRODUCTION

Microtel is a major designer, manufacturer and marketer of Videotex products to telephone companies, information services, government, educational institutions, systems operators and closed user groups, and the major newspaper chains. The company has demonstrated a high level of reliability throughout its long-term involvement in world-wide telecommunications. Microtel is capable of providing a comprehensive source of assistance for planning any scale of Videotex system.

PRODUCTS AND SERVICES

Current offering consists of a family of Videotex products. The VTX 202 is a fully integrated terminal which consists of a decoder and colour monitor within a desktop cabinet. The terminal interprets Telidon picture description instructions to display graphic and alphanumeric information fully in accordance with the North American Presentation Level Protocol Standard. Some of the features offered by Microtel's terminal within this standard include 16 colours from a palette of 4,096 shades, infinitely variable character sizes, and dynamically redefinable character sets. The basic terminal interfaces with the data base over a standard EIA RS-232-C connection for high speed transmission and reception of data. The terminal can be equipped with either a full keyboard or an alphanumeric keypad. The standard package includes self-diagnostic test capabilities. Optional equipment includes an internal modem with either a manual dialer or an automatic dialer, and a video printer port to enable production of hard copy of any terminal display on the user's own printer.

The VTX 208 offers all the features provided by the VTX 202 terminal, plus the ability to operate as a standard computer terminal displaying text information in an 80 x 24 character format. The VTX 208 also contains additional firmware intelligence to allow it to emulate the VT 52 protocol with the additional feature of multicoloured text. Other terminal protocols will be supported.

The VTX 101 display controller is a stand-alone Telidon decoder designed to drive an RGB colour monitor. This unit also fully interprets the North American PLP Standard.

The Microtel display monitor is designed for use in the Videotex industry but can be used as a display unit for perscnal computers. The monitor is housed within its own cabinet and accepts RGB and sync in accordance with RS170.

Microtel's Pedestrian Information Terminal also operates fully in accordance with PLPS and provides a free-standing terminal for use in public areas such as hotels, airports and bus stations, shopping malls, and entertainment parks. The vandal-proof Telidon terminals first attract attention by cycling pages of information about the location in which they are situated. This automatic continuous display can be changed at any time by the owner of the local system. The terminal is immediately responsive to a user and can provide direct connection to a data base via a dedicated line. A wide range of tourist information can be made freely available, in a user-friendly format, for access by any passer-by - without any need for experience in computer keyboard operation. The first pedestrian information terminal was installed by the Province of Ontario for use in the Teleguide System.

All Microtel terminals conform to the full North American Presentation Level Protocol (PLP) Standard. Versions of these terminals have been configured for European power characteristics and display rates. Electronic subassemblies are produced in the company's facilities in Brockville, Ontario, where many of the world's most sophisticated electronic telephone exchanges are manufactured. Telidon circuit boards are made to exactly the same high standards as all telecommunications equipment and therefore provide the best possible quality and reliability. At the same time, the company's high volume production methods keep costs down and enable Microtel to offer a very sophisticated product at a competitive price. The terminals are assembled and tested in Vancouver, B.C. by Viscount Industries Limited - a Microtel subsidiary.

MICROTEL

Microtel's success in the Videotex industry is the result of its responsiveness and ability to develop effective hardware and software solutions to user needs. Organizations within North America and overseas are currently taking advantage of this expertise and future developments will keep Microtel in the forefront of new Videotex products.

FOR FURTHER INFORMATION:

For further information about Telidon terminals and assistance with planning any scale of Videotex system, contact:

Business Information Systems,
AEL Microtel Limited,
205 - 4664 Lougheed Highway,
Burnaby, B.C.
V5C 5T5
Telephone: (604) 294-8321
TWX: (610) 953-4921

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Hardware Suppliers

norpak

Norpak Limited

INTRODUCTION

NORPAK Ltd. was founded in 1975 and develops, engineers, manufactures and markets a range of colour graphics display terminals and associated digital electronic hardware. In 1981 Noranda Mines through its wholly-owned subsidiary Maclaren Power and Paper acquired a substantial interest in NORPAK Ltd.

Originally based in Pakenham, Ontario, NORPAK Ltd. opened a new facility in Kanata in September 1981, as Phase 1 of a 9,300 m^2 (100,000 sq. ft.) expansion program. A second building (Phase 2) was added in January 1982. The two buildings house corporate headquarters, engineering and marketing offices, and the Hemton Group, with the original Pakenham plant continuing as a production facility. Some of NORPAK's recent ventures include an agreement between NORPAK and Consolidated Electronic Industries of Melbourne, Australia, on the manufacture of Telidon-compatible products incorporating Canadian-made components; an agreement with Infomart of Toronto and Time, Inc. of New York, to provide Time, Inc. with a broadcast videotex system; and an agreement between NORPAK and the Graham Poulter Group, England, to distribute videotex systems in England and Europe.

PRODUCTS AND SERVICES

NORPAK products include interactive computer graphics and image processing systems, ranging in sophistication from very high resolution visual data processors for the demanding engineer through products designed for the general consumer. NORPAK is a principal developer and major manufacturer of videotex system hardware, playing a substantial role in the continuing research and development of Telidon in Canada and throughout the world. NORPAK products implement PLP, the North American Videotex standard. NORPAK designs and manufactures systems for educational applications, process control and computer-aided design systems for industrial and commercial use.

Other NORPAK products have been customized for Canadian military use in electronic warfare, command and control, and training applications. Development of videotex-based military information handling systems is also underway.

In November of 1981 NORPAK Ltd. gained full ownership of Hemton Corporation. Hemton's expertise in page creation services and electronic slide projection systems were integrated into NORPAK's operation. NORPAK Ltd. is now able to provide not only hardware, but also page creation and operator's training.

norpak

Norpak Products Include:

- **Teletext Encoder System (TES 2)** for Full Channel or Vertical Blanking Interval (VBI) operation. The system enables a television station or cable TV operator to transmit a continuous set of teletext data from which a user can select pages for display.
- **The Information Provider System (IPS 2)** is an image preparation terminal providing a convenient and "user friendly" means for creating, editing, showing and recalling Picture Description Instruction (PDI) encoded images for use with Videotex decoders.
- **Norpak's Graphics Computer (GC 1000)** is an all-in-one desktop unit which includes a 6809 micro-processor with 128K RAM, dual 5 1/4" disk drives, 13 inch colour monitor, videotex decoder and graphics generator, and full ASCII keyboard. Perfect for business or education, the GC can receive, create and store videotex pages as well as function as a fully intelligent personal microcomputer or ASCII computer terminal.
- **Integrated Videotex Terminal (IVT):** IVT's attractive modular design combines 13 inch colour monitor, videotex decoder, integrated modem and detachable ASCII keyboard. The unit may be used to access a North American videotex database or to communicate as an ASCII computer terminal displaying 24 lines of 80 black and white characters.
- **Norpak's PDI** decoders provide a business and residential two-way access information system with capability of receiving and displaying stored data such as sports news, educational material, and of being distributed via telephone or cablevision. Private or "closed loop" systems for data storage and retrieval by individual companies may also be provided. NORPAK decoders implement the North American videotex standard.
- **The Mk IV Videotex Decoder** includes such options as built-in modem, RGB or RF output, wireless keypad, and ASCII keyboard.
- **The Mk IV Teletext Decoder** is compatible with both the North American videotex standard and the North American transmission protocol (DOC Broadcast regulation BS14). Standard features include wireless (infra-red) keypad and station/channel indicator on the front panel.
- **Electronic Projector System (EPS 1)** for the display of information that is ideally suited to business and educational applications. The EPS 1, a PDI decoder with added memory, can retrieve information (in videotex page form) from either its own local storage or from a remote database. These pages (or slides) can be loaded into the EPS 1 directly from an IPS or from an audio-cassette tape where the pages have been recorded and stored.

Custom Products

NORPAK develops OEM PLP products for the expanding computer graphic market, the Apple II Telidon Interface Card being one example of the co-operative engineering projects undertaken by NORPAK.

Services

NORPAK's Hemton Group provides expert videotex page designing and creation services and offers on-site or in-house training programs for the IPS 2. The Hemton Group is currently creating an electronic library of graphic images and international symbols to facilitate speed of preparation for presentations. Layout, design, scriptwriting, studio soundtracks and 35mm slides presentations are among the creative services available to clients.

FOR FURTHER INFORMATION

For more information about NORPAK Ltd. and their graphics display products please contact:

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Vice-President
Marketing & Sales
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(613) 592-4164
TLX: 053-4174

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Canada

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Hardware Suppliers

Sony of Canada Ltd.

INTRODUCTION

Sony Corporation was founded in May 1946, and ever since has operated in the environment of innovative ideas. Sony's leadership in the industry has come about as a result of its philosophy in constantly seeking new ideas and new products, always keeping in mind quality and customer satisfaction. This has brought about many "firsts" in the electronics industry, including transistor radios, solid state TV, Trinitron colour systems, U-Matic and Betamax videocassette recorders. In addition to this, Sony was one of the pioneers in developing 1-inch C-format broadcast VTR equipment.

Sony products are represented in Canada by Sony of Canada Ltd.

PRODUCTS AND SERVICES

Sony, as a total manufacturer of electronic communication products, will supply the Telidon market with high quality display systems as well as a full range of video products including video tape recorders, video disc players, video cameras, and magnetic tapes.

FOR FURTHER INFORMATION:

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Communication Products Division
411 Gordon Baker Road
Willowdale, Ontario
Canada M2H 2S6
Phone: (416) 499-1414
Telex: 06-986773

SONY®

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Hardware Suppliers

United Audio-Visual Resources

INTRODUCTION:

United Audio-Visual Resources and A.V.E.C. Service Audio-Visuel are the marketing divisions of L.C.D.H. Audio-Visual Ltd., a Canadian Company based in Ottawa. Our total array of Audio-Visual and video products and services has enabled us to handle the equipment requirements of numerous government and industrial clients. It was decided in late 1980 we could be of even greater assistance by adding videotex hardware to our product mix. By applying our experience with the traditional audio-visual communications hardware, we have been able to develop a number of Telidon based products which have proved to be very effective marketing, training and communication tools for the boardroom, classroom or exhibition booth. We have provided our services throughout Canada and the U.S. for a number of significant Telidon users and welcome the opportunity to be of service to you.

PRODUCTS AND SERVICES:

Our sales department will be pleased to assist you whether you are looking for a single piece of equipment or a total videotex system. The range in product includes information providers, decoders, data base hardware, terminals (from 10 inch to 20 foot video projection systems), custom ruggedized keyboards and equipment shipping cases.

The systems division can assist you in designing anything from an information booth with a single interactive terminal to a multi-location information retrieval system. The boardroom of the future will have to be designed to allow for teleconferencing and videotex retrieval. The key to effective use will be the selection of reliable equipment and the design of an **easy to use** control system. Our audio visual control systems have assured our clients of making maximum use of their slide shows and videotapes and by applying the same expertise to your Telidon hardware, we can be certain that your videotex presentations are bound to have impact. For example, our new GP-3 EPS Interface allows you to use the standard Kodak slide projector control to present your videotex slides.

There are times when purchasing equipment and services is not advisable, the ideal alternative is to rent. Our rental department can provide you with equipment, delivery and set up services, skilled operators, conference planning and back it up with 24 HOUR EMERGENCY SERVICE. Our regular customers know that they can count on us to have the equipment up and running when it's time for their show to go on. So, if you are making a presentation to 2 or 2,000 people we have the equipment, staff and experience to do it for you. After all, we can only look good by making you look better.

United Audio-Visual Resources

AVEC service audio-visuel

United Audio-Visual Resources

AVEC service audio-visuel

OUR PRODUCTS

- **Adeum**- Ruggedized Keyboards
- **Aquastar**- Video Projectors
- **Califone**- Cassette Recorders
- **Electrohome**- Terminals
- **Freen**- High Gain Rear Projection Screens
- **Genesys**- Data Base Systems
- **Norpak**- Decoders and Information Providers
- **Sony (Profeel)**- Terminals and Video Projectors
- **Tayson**- Data Base Hardware
- **3M Polacoat**- Rear Projection Screens
- **U.A.V.R.**- Control Systems, Custom Shipping Cases

(**Please Note:** We also handle the complete range of standard A/V products.)

OUR SERVICES

- Rentals
- Facilities Design
- Information kiosk and electronic messaging
- Teleconferencing
- Video Projection

FOR FURTHER INFORMATION:

United Audio-Visual Resources
10 Bayswater Avenue
Ottawa, Ontario
K1Y 2E4
(613) 729-4351
Kirk E. Lidbetter

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Canada

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Software Suppliers

Cableshare

Cableshare Incorporated

INTRODUCTION

Cableshare Inc. became involved in Telidon technology in 1979 when it developed an over-the-air Telidon broadcast system for T.V. Ontario. Since then Cableshare has developed a series of business presentation and advertising oriented products based on Telidon.

Cableshare's broad computer expertise extends to computer communications, package business systems for large distributed companies and facilities management in our London, Ontario head office computer centre. Sales offices are located in Toronto, Calgary, Philadelphia, Los Angeles and London, England.

PRODUCTS AND SERVICES

The Picture Painter is a system that combines superbly crafted hardware with Cableshare's world-leading computer graphics technology. The result is a stroke of genius that allows almost anyone to actually design and edit videotex graphics. At last, a simple-to-use system with all the capabilities of much more expensive picture creation systems. An electronic drawing board and its touch-sensitive pen become your brush and pallet. A full keyboard adds text, at high speed, to complete the picture. A television screen becomes your canvas and instantly displays your professional masterpiece.

The Picture Painter improves the quality of your graphics as it reduces the time and money you spend. This system has full compatibility with Cable TV, Electronic Advertising, audio-visual presentations and other information provider systems.

Now anyone can create videotex graphics. A few hours with the easy-to-follow instructions will raise anyone's efforts to an art.

All common elements such as circles, squares, and special graphics are kept in the memory of the system for your immediate use. More complicated and irregular graphics are achieved by simply tracing the shape with the touch-sensitive pen. As well, a complete and regularly updated art clip file will be available to all Picture Painter users.

Whatever your subject, the Picture Painter will provide colorful graphics with a touch of the pen. Its programming provides the capability to scale up, scale down, highlight, crosshatch, blink on and off, automatically center, choose any color combination or type size, and more. Features can actually "grow" into position. The "pen" will create any shape you desire...in any position you desire...in any color you desire. If you want to make a change, another touch of the "pen" will alter your graphic instantly.

Presentation Theatre- A combination of large screen presentation hardware and computer graphics technology catapults your company into the presentation future.

Starting now, you can produce the best business presentations ever. And, compared to conventional slide-show methods, you can prepare them in an instant.

Cableshare's Presentation Theatre completely eliminates these time-intensive functions: artwork, typesetting, colour-masking, photo production, photo processing, slide dyeing and slide mounting. The picture painter, described above, provides visuals which will thrust you far beyond your competition. If you are making a presentation to a prospective client, you can personalize the visual messages to include the names of those in the audience and their company logo.

You will show graphs that have moving features. Bars, lines, type and other features will actually "grow" with action; entertaining, involving and commanding the audience's attention. This is all accomplished without the annoying buzzing and clicking of slide projectors.

You will show product illustrations, maps, charts, plans and trends. Your presentation will be fast-paced and action-packed. Your audience will pay closer attention, understand your message and retain the important details.

As well, at the touch of a button, your presentation can be augmented by videotape or videodisc which can be shown on the same large screen.

Cableshare

Presentation Theatre means better visuals. Better visuals mean better presentations. Better presentations mean more customers, more sales and more profits. Leave your competition behind...just like magic.

The Electronic Advertising System is a new medium for presenting advertisements to consumers in public areas such as shopping malls. The system utilizes four foot television screens to display a continuous cycle of advertisements and sponsored information pages such as weather and lottery numbers using Telidon graphics to present attractive, entertaining and informative messages. Each public location can have a number of Telidon terminals with touch-sensitive screens that are easier to use than conventional keyboards. Consumers can obtain specific information about local stores and products by touching the terminal's screen on top of a displayed item; such information is then automatically displayed. The Electronic Advertising System uses the Picture Painter to provide the advertiser with a unique ability to create and change an advertisement and display it to the public within minutes.

The Cable Advertising System can display Telidon graphic advertising on vacant channels presently available on some cable television systems in the United States. Each channel can show a cycle of advertising pages interspersed with items of general interest such as television listings, weather or sports news. The utilization of Cableshare's Electronic Advertising System on these channels will provide a new source of revenue for cable television systems in the United States.

FOR FURTHER INFORMATION:

Frank A. Vecchiarello,
Regional Sales Manager,
Cableshare Inc.,
Plaza Office Centre,
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Mount Laurel, New Jersey
USA 08054
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Arnold Huffman,
Manager, National Accounts,
Telidon Systems,
Cableshare Inc.,
Suite 1810, 25 Adelaide St. E.,
Toronto, Ontario. M5C 1Y2
(416) 365-7322

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Software Suppliers

the genesys group

The Genesys Group

INTRODUCTION

We are a Canadian company actively developing Telidon Videotex business applications. We combine extensive experience in Videotex technology with a sound knowledge of EDP software development principles to provide solutions to your needs. As software and systems consultants located in Ottawa, we became involved in the development of the Videotex Host database management system in 1979, and since then have accumulated almost 30 man-years of experience in this area.

In today's economic climate our systems and services are designed to be cost-effective and beneficial. In bringing the technology to the marketplace, the cost-justification required can be realized by the effective application of the technology to businesses whose client base requires a high degree of public interaction. Such industries include banks, retail merchandising, transportation and electronic publishing. Our software, services and systems address both the videotex and teletext markets.

VIDEOTEX:

As a software supplier we can supply the following business applications.

For the Retail and Business sector:

- Teleshopping
- Telebanking
- Real Estate Services
- Classified Search and Find
- Private Newsletter and Wire Services
- Cable Feed Systems

These application packages can be delivered either as stand-alone software for DEC hardware or can be integrated into existing application packages on a variety of hardware; IBM, Sperry-Univac, Tandem, H-P, Perkin-Elmer.

For the corporate office our GENESYSTEM turnkey system provides stand-alone private videotex services to meet your needs. These systems support the following functional capabilities:

- Messaging
- Management Information Reporting Systems
- Teleconferencing
- Convention Centre Systems

As a system consultant and service operator a comprehensive service for large closed user group systems is also available. The areas addressed include:

System Installation

- Database layout and setup
- Host system configuration
- Software installation and checkout
- Performance evaluation
- System tuning
- Training
- Complete maintenance

Facilities Management

- Co-ordination of field trial activity
- Complete system management and administration
- Database administration
- Technical support service for IPS
- IPS co-ordination
- Communications management

In the area of turnkey systems, our small yet powerful integrated systems are designed to make effective use of the videotex host database management software. These systems which are based on the powerful and reliable range of DEC PDP-11 systems can be configured with a variety of disk and CPU combinations to handle the specific needs of the application. Currently configured GENESYSTEM models are:

- **Genesystem 20-** LSI based host for specific application needs supporting up to 32 users

the genesys group

- **Genesystem 30-** PDP 11/24 based host with similar capacity to the model 20 but allowing greater flexibility in choice of peripherals and database capacities.
- **Genesystem 40-** PDP 11/44 based host with great flexibility in application support and user capacity of up to 100 users in retrieval mode.
- **Genesystem 70-** PDP 11/70 based host to fit into large scale videotex host systems - to service the majority of requirements. The networking of these systems is feasible to extend the service offering to a public database environment.

TELETEXT

To complement our videotex experience, we also have indepth experience in software consulting for Teletext systems. Our areas of expertise relate to:

- Inserter Software
- Captioning-Transcoder
- Text Editing

SUMMARY

The Genesys Group has been involved in the development of Telidon systems for well over three years. Our consultants and systems specialists have provided solutions to a variety of businesses and organizations. We are able to provide YOU with cost effective videotex solutions. The following list of customers and business opportunities indicate our capabilities and diversity in the Videotex business:

Department of Communications: Systems design and implementation of all major components of the Telidon Host Database Software; sale of a GENESYSTEM Telidon Turnkey System; facilities management of the DOC database machine; ongoing consulting.

Alberta Government Telephones: Installation and maintenance of the Telidon Software System; provision of upgrades, enhancements and consulting.

New Brunswick Telephones: Installation and maintenance of the Telidon Software System; provision of upgrades, enhancements and consulting.

Bell Canada: Installation of the Telidon Software System; expansion to 64 ports; checkout and acceptance test prior to the VISTA field trial.

British Columbia Telephones: Installation of the Telidon Software System; provision of support.

Atmospheric Environment Services: Installation of the Telidon Software System; provision of support upgrades and enhancements.

Canada Systems Group: Licence of IBM Telidon Software; provision of consulting services.

Sperry UNIVAC: Provision of UNIVAC and V77 Telidon Software; OEM for V77 minicomputer systems.

Digital Equipment: Design and development of layered Telidon software for VAX; conversion of the PDP11 based GENESYSTEM to VAX.

Macrotel: Sale of GENESYSTEM 20 Telidon Turnkey System and provision of consulting and marketing support for this subsidiary of the Erie Savings Bank.

Atex: Sale of a GENESYSTEM Telidon Turnkey System.

Consolidated Electronics of Australia: Distribution agreement for GENESYSTEM products and services.

Graham Poulter Group, United Kingdom: Distribution agreement for GENESYSTEM products and services throughout the UK and Ireland.

Canadian Broadcasting Corporation: Provision of consulting and engineering services for the CBC Teletext Trial; development of a page creation system and captioning transcoder.

FOR FURTHER INFORMATION:

The Genesys Group
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K2C 3J2
(613) 729-5103

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Canada

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Software Suppliers

Infomart

Infomart

INTRODUCTION

Infomart provides a full spectrum of Telidon videotex products and services, including: page creation; systems design; installation and operation; software development; training and consultation; as well as R&D and applications analysis, development and implementation.

Infomart Telidon System Software (ITSS) is capable of supporting a network of terminals interfaced with private and public databases. ITSS is a user and operator friendly, interactive system linking users with Telidon host computers and other databases — via gateway software.

Large numbers of users can simultaneously use the system for messaging, computations, games, telebanking, teleshopping, reservations, wire service, commodities and stock exchange information, etc..

TELIDON SYSTEMS SALES:

Infomart has sold Telidon systems world-wide and operates three centres in Canada. Infomart sales include the following:

The Times Mirror Company and Infomart have formed Videotex/America and have launched a system to provide consumers in the Los Angeles area with 350 Telidon home terminals for telebanking, teleshopping, ticket reservations, wire services, and data retrieval, including news items from the Los Angeles Times.

The Government of Venezuela has installed Telidon terminals in storefront information centres to provide the public with information on government health, social and economic aid programs.

Time Inc. is conducting a national teletext service trial in the United States using Telidon. Broadcasting by satellite to cable companies, Time Inc. provides a full-channel teletext service to home television viewers.

Canadian Record Catalogue is an online catalogue of recordings using Hybrid — a combined Telidon/Basis system, using Infomart gateway software—for the Canadian Independent Record Production Association (CIRPA).

Teleglobe, a telecommunications crown corporation, is developing an international telecommunications system using Telidon technology.

Infomart commercial applications include:

Teleguide to Ontario— 20,000 pages of information on dining out, accommodations, special events, sports, entertainment, leisure activities, shopping, weather, transportation, where to obtain information and services — made available to residents and visitors to Ontario through Telidon terminals in malls, hotel lobbies, libraries, airports, information centres, and other high traffic public locations.

Grassroots— information for the Manitoba agribusiness community is provided through Grassroots, an Infomart and Manitoba Telephone System project. Commodities, livestock prices, market analysis, weather information and capabilities such as 'what is' are provided.

Canatel— Infomart operates Canatel for the Canadian Federal Government to provide the public with 50,000 pages of information on government services, including an extensive employment opportunities database, accessed through 100 terminals and interfaced with a Telidon host computer, as part of the Task Force on Services to the Public project.

FOR FURTHER INFORMATION:

Infomart
164 Merton Street
Toronto, Ontario
Canada M4S 3A8
Tel: (416) 489-6640

Infomart

External Affairs Canada | Affaires extérieures Canada

Canada

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Software Suppliers

Tayson Information Technology Incorporated

INTRODUCTION

Tayson Information Technology Incorporated is a full service videotex company, providing cost effective, application oriented Telidon systems to the international marketplace, from offices currently located in Calgary and Toronto.

The principals of Tayson are Professional Engineers combining over 20 years of computer application and data communications experience. Over four years of Telidon system development has culminated in the ultimate in Telidon business systems, providing absolute flexibility in hardware and software design.

Tayson specializes in adapting the technology to meet the user's specific needs, delivering the most cost-effective, fully functional Telidon systems available.

Tayson is a videotex hardware and microcomputer outlet providing individual hardware or complete turn-key systems that best suit your application needs.

Tayson operates a commercial page creation service bureau in Calgary, staffed by seasoned professional graphic artists specially trained by Tayson's own technical staff in using the Telidon medium to its maximum potential.

As Telidon is a natural augmentation to existing video systems, Tayson also provides video production services and specializes in integrating the two media for optimum information delivery.

Tayson's unique application approach to Telidon system development provides affordable entry into the Videotex technology using a standard microprocessor (the IBM Personal or any CPM compatible processor). The systems developed deliver the ultimate in user-friendliness and functionality: i) down-line loading of pages from remote hosts or other systems ii) text editing iii) interactive electronic billboarding iv) database management. Tayson has installed systems across Canada, servicing a variety of information needs (eg. a-v presentations, cable head-ends, electronic billboards).

PRODUCTS AND SERVICES

Consulting Services- The diverse business experience of Tayson's principals ensure the development of Telidon systems which reflect unparalleled functionality, & user friendliness. Tayson is adept in developing specialized software, turnkey systems, or handling project management.

Hardware Suppliers- Tayson is an outlet for most manufacturers of Telidon equipment and microprocessor computer equipment. With a diversity of product line, Tayson can provide appropriate hardware configurations tailored to meet your application needs and budget. Being a turnkey supplier ensures prompt delivery and responsible servicing.

Software Suppliers- Tayson has developed a number of Telidon CPM/Basic software products, currently running on the IBM Personal Computer. With emphasis on delivering full functionality, affordability, and user friendliness, these programs include the following features:

- down-line loading of Telidon pages from remote databases, IP terminals, or other processors
- page storage on diskette or hard disk
- complete emulation of page retrieval processes on large databases, including random page addressing
- database maintenance functions such as the copying, re-arrangement, deletion and textual editing of pages and transfer of pages between diskettes
- local textual page creation
- independence from Telidon terminal equipment
- electronic billboarding which can be overridden by the keypad for interactive page retrieval

By using a local micro-based database, the user is able to:

- control the security of his information,
- avoid transmission errors which could be catastrophic to information content,
- increase transmission speed (& therefore the speed of drawing) by at least 3 fold, and take full advantage of Telidon's functionality through the use of in-house software dedicated to the user's specific requirements.

Cable Head-End/Electronic Billboard Software- The Tayson system can schedule pages to cable head-ends on a 31 day, 24 hour basis. Hence for scheduling pages for cable, you have the potential to set up a monthly scheduling process. Pages can be loaded from an Information Provider Terminal simultaneously while the scheduler sends pages to the channel. You may also select the number of seconds each individual page is to be displayed on the screen, to take advantage of dynamic display functions and simulated motion which can be built into each Telidon page. Database can be either on diskette or hard disk depending on storage requirements. The above capabilities coupled with the local textual page creation provides an extremely flexible cable system.

Page Creation- Tayson provides complete Telidon page creation services to satisfy your graphic needs at very competitive rates. Professional graphic artists, specially trained by Tayson's technical staff to make full use of the Telidon medium, will design effective pages that you can load on remote Telidon database or your own local microcomputer. Tayson can also provide 35mm, 5x7 polaroid or videotape of the same Telidon graphic pages.

Video Production- The integration of video with Telidon is an attractive combination. Tayson will produce video training and orientation packages which incorporate cost-effective Telidon graphics, live pictures and sound, custom tailored to your need.

FOR FURTHER INFORMATION:

Tayson Information Technology Limited
P.O. Box 30104
Station 'B'
Calgary, Alberta
T2M 4N7

Office locations:
Head Office
4 1303 45th Ave. N.E.
Calgary, Alberta
T2E 2P3
(403) 230-5998
Wayne Taylor

Regional Office
328 Consumers Rd.
Willowdale, Ontario
M2J 1P8
(416) 497-4981
Peter Richardson

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Affaires extérieures Canada

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Systems Consultants

Systemhouse

Systemhouse Limited

INTRODUCTION

Systemhouse is the largest independent computer systems consulting organization in Canada, and one of the top 10 companies in the United States. There are more than 1100 Systemhouse professionals in 21 Systemhouse offices throughout North America. Systemhouse also has an established office in Malaysia, and considerable experience in a variety of other countries including Australia, India and Nigeria.

In its 8 years of operation, Systemhouse has engaged in thousands of projects for virtually every industry sector and level of government. Systemhouse has gained a thorough understanding of a variety of fields including finance, manufacturing, retailing, hospitals, education, transportation, communications, social services, mapping, engineering, architecture, energy management and more. All these industries and endeavours are able to take advantage of another Systemhouse capability: Videotex Systems and Services.

VIDEOTEX SYSTEMS AND SERVICES

Systemhouse is not a manufacturer of Videotex components. It is an integrator and supplier of total Videotex and Teletext solutions.

Systemhouse has extensive capabilities in the areas of planning, feasibility investigation, requirements analysis and design activities for field trials, prototype developments and full commercial system implementations. They can develop, install and support these systems as prime contractors/turnkey solution suppliers or in a variety of supporting roles. They can assist with marketing and social research aspects, offering a full range of survey management, operations research, management consulting and data processing support services.

This "full service" approach to computer-based systems makes Systemhouse unique in the Videotex marketplace.

With emphasis on Videotex, not as a technology but as a solution, -specific management problems can be resolved and new opportunities realized for business organizations. Ideally positioned to objectively provide the in-depth consulting expertise, Systemhouse offers the latest hardware technologies and the best software for the client's specific needs. Moreover, the Systemhouse commitment to on-going research and development and to the practical application of technologies means integration, not obsolescence...now, and in the future.

Quite simply, Systemhouse can evaluate your own unique situation, tell you exactly what you need, and where to get it. And follow through, acquiring the pieces, integrating them, and implementing an effective total solution to meet your needs.

TELIDON

Although Systemhouse has professional expertise in alternate technologies, their commitment to Telidon reflects their objective assessment that Telidon provides the best solution for most Videotex and Teletext requirements, today and in the foreseeable future.

Telidon's alphageometric approach to Videotex has earned world-wide recognition for superior graphics, flexibility and simplicity of design.

Systemhouse has assisted the Canadian Department of Communications with Telidon research and development initiatives since the beginning of its evolution. A sampling of recent Systemhouse experience with Telidon includes:

- Total responsibility for the supply of a comprehensive turnkey system to support military operations display needs.
- Planning, requirements definition, development and installations of a system to support a field trial by a major Canadian telephone company.
- Technical Support in the development of a prototype Teletext system.
- Installation of a system to enable a large Australian retail organization to demonstrate Telidon to its potential information community.

SYSTEMS CONSULTANTS

- Several studies of technical feasibility, market opportunities, and strategic planning for varied businesses including construction, banking, and communications.
- Various lectures, workshops, and seminars conducted on a number of Videotex topics.

SYSTEMHOUSE SERVICES

Supporting Systemhouse efforts in the Videotex field are a broad spectrum of services and products including:

Management Consulting- The Consulting Services Group in Systemhouse provides a full range of services to support managers in the planning, organizing, designing and administration of information systems.

Systems Development- Systemhouse is well-established in the business of designing and building custom computer software to satisfy the unique needs of a large and varied clientele. Approximately $100 million worth of systems developed to date has enabled Systemhouse to evolve an effective multi-phase methodology and project management style, combining practical application knowledge with the intricacies of advanced technologies.

Integrated Turnkey Solutions- Systemhouse is an experienced systems integrator. Combining unmatched depth of consulting, technical, engineering, and system development expertise with excellent computer hardware supply channels, and a corporate emphasis on project management, accountability and cost effectiveness, the Systemhouse "team" approach to turnkey system implementation is highly successful.

Education- Systemhouse provides both packaged seminars and customized educational courses.

Facilities Management- Systemhouse has developed capabilities and experience in Facilities Management, Applications Management, and a variety of related customer support services.

Systemhouse Products- Systemhouse offers high quality total solutions to meet specific marketplace needs. Their growing portfolio of software packages includes business systems for distributors, manufacturers, hospitals and specialist markets, and a family of specialized graphics systems for map-making, computer-aided drafting and similar applications.

FOR FURTHER INFORMATION

For further information, or to discuss your own specific needs:

Gary Phippard, Manager
Videotex Systems and Services
90 Sparks Street, 4th floor
Ottawa, Canada
K1P 6K2
(613) 234-6544
TLX 0534215

Fairfax Square
9900 Main St., Suite 401
Fairfax, Va., U.S.A.
22031
(703) 385-0970
Telecopier (703) 273-5821

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Communications

CCG TransCanada Telephone System

CCG, The TransCanada Telephone System

INTRODUCTION

CCG, The Computer Communications Group, was established in 1972 as the competitive data communications arm of the TransCanada Telephone System, in recognition of the growing need in business for reliable, cost-efficient and effective data communications. CCG's mandate is to serve its customers, and provide the best information transfer services at the lowest possible cost, coast-to-coast in Canada, with access to the rest of the world.

In the past decade, CCG has been heavily involved in the development and finalization of international networks standards, such as the CCITT X.25 protocol for packet switched networks and more recently, the Teletex standards for communicating word processors and electronic typewriters.

The great need for communications in the Telidon videotex environment has led to CCG's involvement in that area as well with the recent announcement in 1981 of the iNet Gateway trial — a multi-service concept which will allow universal access to information service providers.

PRODUCTS AND SERVICES

CCG designs and support data communications systems, by engineering, installing, routing network traffic and managing customer networks to fulfill customers' data communications needs.

CCG's major network services are **Data**route and **Data**pac.

The **Data**route, a nationwide, public digital data transmission service introduced in 1973, currently connects 77 Canadian cities. The recently-announced **Data**route International now links **Data**route service with the DATAPHONE® Digital Service offered by AT&T Long Lines, a unit of the American Telephone and Telegraph company in the United States.

Datapac, introduced in 1976, was the world's first commercially-available digital packet switched network. Entry into the **Data**pac network is provided by seven access services, divided into two categories: those which provide access for packet-mode terminals using the X.25 protocol, and **Data**pac services for non-X.25 terminals.

Datapac also has international capability, through **Data**pac International. This service allows access to the Telenet, TYMNET and DASNET networks in the U.S., and through Teleglobe Canada, to networks in more than 20 foreign countries, including West Germany, France, Switzerland, Italy and the United Kingdom. In addition, incoming service is available from more than 25 other foreign countries.

CCG is also involved in and experimenting with many innovative services and technologies such as electronic mail through its Envoy 100 messaging service, satellite communications through its Integrated Satellite Business Network, fibre optics data transmission, **Tele**tex service and iNet.

iNet- The iNet Gateway™ is an intelligent network concept developed by CCG in recognition of the need for more universal accessibility to information providers and computer-based services.

It is designed to offer a single point of access to satisfy all business information needs, from virtually any location in Canada.

A wide range of features, such as an electronic directory of available services, automatic access to connected hosts, individual user profiles recognized by the network, and consolidated billing create a user-oriented information environment.

Standard alpha-numeric or Telidon videotex terminals can gain access via **Data**pac, DDD or dedicated circuit service. **Data**pac access also allows users to link with the U.S. and other countries having international packet switched networks.

The iNet Gateway is designed to simplify the process of gathering, using and communicating information for managers, executives, salespeople, or anyone else requiring simple but effective access to information.

CCG TransCanada Telephone System

The iNet Gateway will offer a full shopping list of vendors and information, eliminating the need for the user to perform many access functions.

A one-year field trial of iNet starts in July of 1982, involving a wide range of both information providers and users.

Telidon databases in the iNet trial include:

- CANATEL: Canadian Government Department of Supply and Services;
- DATAVISION: New Brunswick Telephone;
- GRASSROOTS: Manitoba Telephone System/ Infomart
- NOVATEX: Teleglobe Canada;
- TELEGUIDE: Government of Ontario/Infomart;
- TELIDON IN BC: B.C. Telephone;
- VISTA: Bell Canada/Canadian Government Department of Communications

Telidon services will also be offered by Canada Systems Group, Financial Post, Infomart, I.P. Sharp and Official Airline Guides, Inc.

In addition to the Telidon-oriented services, many of the information service providers listed above will offer other data base services. Some of these include: Infoglobe/Marketscan; New York Times; Orbit/Infomart; QL Systems; Royal Bank/Cash Command; National Library of Canada/DOBIS; National Research Council Canada/Canada Institute for Scientific and Technical Information and the Universities of Waterloo, Guelph, Carleton and Québec.

The 400 trial participants will use 250 Telidon terminals — including 125 Telidon Displayphone units, plus 125 full keyboard Telidon terminals, and 150 standard alpha-numeric terminals.

These users represent several industry groups, including: banking, bibliographic, communications, energy, real estate, legal, travel and government. These users are also experimenting with the use of Telidon in their respective industries as both consumers and providers of information.

OTHER PRODUCTS AND SERVICES

- **Tele**tex- A CCITT-approved service, which will allow communicating word processors and electronic typewriters of various manufacturers to communicate with each other.
- **Data**link- A pay-as-you-use, end-to-end circuit switched digital data transmission service.
- **Envoy**100- A store-and-forward electronic messaging service, allowing users from across the country to prepare, correct, send, distribute, access and file messages within and between subscribing companies.

FOR FURTHER INFORMATION:

For more information on iNet, please contact
John Hunt
CCG iNet Group, Ottawa
(613) 239-2853
For general information on CCG products and services, call
Ruth Foster
CCG Public Relations, Ottawa
(613) 567-3748

External Affairs Canada Affaires extérieures Canada

Canada

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Communications

Novatex from Teleglobe Canada

Teleglobe Canada

INTRODUCTION

Teleglobe Canada is a Crown Corporation with a mandate to bring Canadians affordable and reliable international telecommunications services. Over 200 countries are linked through Teleglobe's network of satellites and undersea cables. A variety of public services are derived from these advanced telecommunications systems. Services that include telephone, telegraph, telex, Globedat, Intelpost, Inmarsat and now, Novatex.

NOVATEX

Novatex is a computerized international business information service based on modified Telidon technology which will become the North American standard for videotex service. Novatex provides decision makers with instant access to data banks of condensed, high-value business information through one convenient source. Novatex offers managers a significant improvement over other information services because it is centralized, up-to-date, pleasingly presented in text and graphics, and easy to use.

The attractive, easy-to-use terminals may be modified television sets, multi-use terminals or dedicated monitors. The Novatex data bank is accessed via a hand-held alphanumeric key pad over normal dial-up telephone or data lines. Telidon technology ensures that text and graphics are received on the terminal screen in superior detail and in full colour.

Novatex will prove useful to virtually any organization doing business internationally. Instant access is provided to a centralized data bank, in textual and graphic form, of information gathered from around the world.

Early users of Novatex are Canadian Embassies and High Commissions in various parts of the world. These include 9 locations in Europe, 3 in the Far East, 2 in South America and 10 in North America. The world capitals of New York, Los Angeles, Paris, London, Rome, Sydney and Tokyo are represented in these groups. These and, to a large extent, other Novatex users can access information supplied by the following departments of the Canadian Government:

- External Affairs
- Industry, Trade and Commerce
- Canadian Government Office of Tourism
- Employment & Immigration Canada
- Agriculture Canada
- Foreign Investment Review Agency (F.I.R.A.)
- Fisheries and Oceans
- Statistics Canada

Novatex will offer users three major types of service:

Major Service Applications—

Information and transactional services of interest to specialist business sectors will be provided online by established information providers in each sector. The information will be of high value and of immediate interest to executives and others who presently must rely on trade journals and specialized publications.

The major value of this service includes ease of use and instantaneous update and will be available to users on a subscription basis.

Novatex
from Teleglobe Canada

Corporate Applications—

Space will be available in the database for use by multinational organizations for private, in-house applications. Videotex has been used successfully by a number of organizations for domestic in-house services; Novatex will provide the opportunity for international expansion of these applications. For example, applications may include:

Company Management
- Financial Information
- Monthly and annual reports
- Statistics
- Corporate news

Marketing Support
- Stock control and availability
- Stock ordering facilities
- Maintenance and technical data with illustrations
- Technical and service inquiry facilities
- Sales force coordination and feedback
- Market research

Intersite Communications
- Message facilities
- Presentation materials and graphics, teleconference support material

Training

The colour graphics and interactive characteristics of the technology are particularly appropriate for training programs, e.g. field force training.

Note: Private users will have access to the public sectors of the data base at the normal public charges.

Public Business Applications—

The Novatex data base will include a wide spectrum of data directed towards the general business user. It will include continuously updated business news services, performance and price of top stocks, international commodity and monetary information as well as statistical and other data relating to international trade.

THE ADVANTAGES OF NOVATEX

Concise information
- Significantly reduces time required for information research

Instant 24-hour access
- Saves time. Aids decision-making.

Regularly updated
- Ongoing instant availability of current information which is so necessary to the process of decision-making and planning.

Logical information structure,
Centralized information source
- Third party data banks can be accessed from the same terminal.

Simplicity of usage
- As easy to use as a pocket calculator. No specialized training is required.

High quality text and graphics
- Faster comprehension of business data (user). More effective presentation of information (information provider)

Cost effective
- Little or no capital investment (information provider). Cost compares well with all-text data base (user).

Interactive
- Information can be retrieved and manipulated to suit individual needs.

Messaging
- Provides instantaneous communication with other system users.

FOR FURTHER INFORMATION:

Novatex inquiries should be addressed to:
Teleglobe Canada
Novatex Group
680 Sherbrooke Street West
Montreal, Quebec
Canada H3A 2S4
Tel: (514) 281-5736
Telex: 05-25690
Answerback: TGLOBE MKT MTL
Cable address: Teleglobe Montreal

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VISPAC Members

VISPAC

VISPAC, the Videotex Information Service Providers Association of Canada, is a voluntary grouping of some 60 organizations, varied in size and location, but planning to be involved now or in the future as an information or service provider in a videotex system. Formed in 1979, it is recognized as a vital part of this emerging industry and is playing an important role in shaping developments in Canada.

The following companies are members of VISPAC:

Alliance of Canadian Travel Associations
Banff Centre
Bank of Montreal
Bell Canada
British Columbia Telephone Company
Broadcast News Ltd.
Butler Cox & Partners Limited
Calgary Herald
Calgary Public Library
Calladine & Baldry Limited
Canadian Association of Information Science
Canadian Broadcasting Corporation
Canadian Hospital Association
Canadian Library Association
Citizen
Community Information Centre of Metropolitan Toronto
Consumers' Association of Canada
Department of Communications
Dominion Directory Co. Ltd.
Edimedia Inc.
Electrohome Electronics
Globe & Mail
Great-West Life Assurance Company
Hudson's Bay Company
IBM Canada Ltd.
Infokinetics Inc.
Infoman Inc.
Infomart
Information Industry Association
L.M. Berry and Company
Manitoba Department of Agriculture
Manitoba Telephone System
Manulife
NABU Manufacturing Corporation
National Library of Canada
New Brunswick Telephone Company Limited
Norpak Ltd.
Ontario Educational Communications Authority
Ontario Ministry of Energy
Premier Communications Limited
Proulx Brothers
Reuters
Royal Bank of Canada
Southam Inc.
St. Catharines Standard Limited
Statistics Canada
Stewart A. Searle
Tayson Information Technology Incorporated
Tele Direct
Teleglobe Canada
Telsys Consultants Group Inc.
Thompson Lightstone & Co.
Times Mirror Videotex Services, Inc.
Toronto Star
Torstar Corporation
University of Calgary
University du Québec
University of Western Ontario
Vancouver Community College
Videolink
Wescom Communications Studies and Research Limited