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A guide for the information
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A GUIDE
FOR
THE INFORMATION PROVIDER

Dept. of External Affairs
Min. des Affaires extérieures

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Prepared for the Department of External Affairs by

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A GUIDE FOR THE INFORMATION PROVIDER

SECTION 1: THE CHANGING INFORMATION INDUSTRY

1. Information: Different Media for Different Needs
2. New Information Technologies
3. The Information Provider

SECTION 2: OPPORTUNITIES FOR INFORMATION PROVIDERS

1. Who can be an Information Provider?
2. Where do you begin?
3. Potential Revenue Sources
4. What are the business opportunities for an Information Provider

SECTION 3: DISTRIBUTION OF THE INFORMATION PRODUCT

1. Overview of System Operators in Canada & U.S.
2. Profiles of Selected System Operators

SECTION 4: ISSUES FACED BY INFORMATION PROVIDERS

SECTION 5: SUMMARY REMARKS

Information is THE resource of the newly emerging Information Society. The ability to gather, process, transfer and distribute information at a speed and on a scale never before possible has altered the way we do business, enjoy our leisure, gain knowledge of the world around us and communicate our ideas and experiences with others.

There are two major forces pushing us into what is often called the Information Explosion. Firstly, our society has become increasingly more complex and interrelated. Our ability to deal with this complexity and its associated rapid economic, political and social change is in large measure dependent on our access to information from many diverse sources. Knowing what information is required, being able to locate, extract, compare, combine and use it, when we need it, and in the form we require, allows us to be able to respond and adapt to this complexity. Secondly, the dramatic developments in microchip technology have accelerated this information Explosion. A microcomputer with a telecommunication link to a telephone, cable and/or satellite network provides its user with immediate access to new sources of information.

Supplying the needed information and distributing it in a timely, flexible, simple and cost-effective manner which exploits both computer and telecommunications technology has created new information industries such as the videotex industry. This guide has been developed to allow potential providers of information to gain an understanding of the changing nature of the traditional information industry, the emerging business opportunities, the issues faced by Information Providers and the markets that are developing for the distribution of their information products and services.

1.1 INFORMATION: DIFFERENT MEDIA FOR DIFFERENT NEEDS

Gutenberg's combination of paper, ink, press and movable type triggered the first information revolution which resulted in the wide dissemination of ideas, general literacy and established contact between an individual and the world outside his immediate social, political and cultural environment.

The technology of mechanized print created the concept of mass proxy, a concept which is inherent in all contemporary media. Ideas are gathered, recorded, organized and interpreted by informed providers of information and are then distributed by various media to a wide audience. The recipient or user of this information is distanced from the source of information or events. While this allows vast amounts of information to be readily available, it limits the individual's understanding of ideas and events to the information he or she may have access to, rather than to his or her direct experience.

When assessing the suitability of various media to meet the information needs of an individual, several factors must be considered including the amount of necessary information; the need for the information to be immediate or timely; the need to be able to combine, relate or merge information from different sources in different forms; the need and ability to interact with the information media, to focus in on detail or to expand the scope of the search or scan as required; and the cost of distributing the information to its target market.

Examining traditional information media will provide an understanding of the potential impact of the new information access and distribution technologies.

PRINT

Gutenberg's technology allowed the distribution of ideas to a much broader audience, first in the form of printed books, then newspapers and magazines. Each of these means of distribution lends itself to different types of information.

Books permit the capture and distribution of a coherent and related set of information in a permanent form. Reference books such as encyclopedias, dictionaries and technical manuals are excellent means of providing access to comprehensive, cumulative information in a standardized format. They are, however, cumbersome and expensive, involve lengthy research and production, and often require a fair degree of skill to locate the needed information. In a society where the total information doubles every ten years, reference books are frequently out of date before the ink has dried.

Newspapers provide their readers a quick view of the world and encapsulate coverage of both local and distant events, in a timely and low cost manner. Newspapers are more easily produced, more immediate in public impact and less permanent than books. Usually, they serve a defined geographic area. They satisfy the need for timely availability of information on a mass scale, in a non-interactive form. The sources of the information contained in newspapers include staff and free lance reporters and as well as photographers, syndicated features, news services, letters to the editors, commercial advertising and classified ads.

Magazines are print sources of information which are generally targeted to a specific audience over a large geographic area. Designed to be informative, attractive and entertaining, magazines combine the reportorial aspects of newspapers with glossy, colored photographs and illustrations to provide the reader with highly formatted and graphic information. Magazines are more flexible and accessible than books and provide broader although less immediate coverage than newspapers.

BROADCAST

The technology of voice broadcast over continuous wireless wave established a new form of communication, one much more immediate on the receiver than print. The distribution of constantly updated information on a mass scale had a profound social, cultural, and political impact on the audience. Freed from the need for a long production lead-time, radio provided a more personal contact between the source of the information and the user.

With television, technology once again brought the recipient of information one step closer to the provider or source of the information. Now the user could see as well as hear the event. By encapsulating and highly editing the information content, the packager of the information service, eg. news editor, could alter the meaning of the message being communicated. The greater sensory involvement of the user in receiving and absorbing the information and the lack of a more permanent record of the communication, can potentially alter the user's perception of ideas or events.

SUMMARY

In summary, the traditional media all serve to bridge the gap between the information user and the described experience. While the print media is limited to a visual experience, the elements of sound and sight and the movement of video make the communication of information through radio and television more vital and more immediate than through print.

1.2 NEW INFORMATION TECHNOLOGIES

With the dramatic developments in computer and communication technologies, technology has once again created a new means of communication: two-way, interactive communication which can be under the control of the user with respect to time, place and method of access.

VIDEOTEX

Videotex is a merging of computer and communications technologies and provides easy access to information and information services available from information utilities through telephone, cable or satellite communication networks. The information is usually comprised of both text and graphics and is accessible by the user through a videotex terminal in the home, office or in a public access location such as a library, airport, shopping mall or hotel. The graphics capability of videotex systems can range from no graphics (ASCII text) to aphasal graphics (eg. Prestel and Antiope protocols) to enhanced alpha-geometric graphics such as those generated using the Telidon or the North American Presentation Level Protocol Standard (NAPLPS). Videotex systems are designed to be "user-friendly" or easy to use. Sitting at home in front of a television set, the user has access to the power and complexity of the central computer. At the touch of a fingertip, commands are given through a calculator-like keypad attached to a special decoder. The interactive dialog is established using the telephone or cable network. What is important to the user is knowing what information is required at that particular time, how it can be located and whether or not it is adequate to meet his or her need.

In a sense, videotex provides the ability for the user to extract only that information which is relevant or useful to him, creating a personalized electronic "newspaper" or "magazine" every time the information utility is accessed. In addition to providing access to the central information banks, videotex provides an electronic mail facility through which the users on a system or service can communicate.

TELETEXT

Teletext, like videotex, is a communication technology that makes text and graphic information available through a special decoder attached to a television screen. Unlike videotex, it provides a limited capability for the user to interact with the system. Lacking the two-way communication capability of videotex, teletext does not allow the user to send information to the originating information utility or to other subscribers on the service. The advantages of teletext systems, however, are that they are cheaper to install and easier to operate and use. The European marketplace is primarily teletext.

Electronic "magazines" can be retrieved by the user from a continuous stream of text and graphic information transmitted on the vertical blanking interval of regular broadcast transmission of television programming. This vertical blanking interval is the period between scannings of the camera image and represents a limited capacity for information service transmission. Where economically feasible, the information transmission capability can be significantly increased with full channel transmission.

BROADCAST SERVICES

Traditionally, radio and television programming has been provided on public broadcast networks to wide audiences. New technology developments such as low-power television will provide special programming to meet inexpensively the needs of smaller audiences. Digital video and low-cost computer memory will expand the teletext services which will be available to both mass and mass and special interest audiences. Teletext and videotex decoders are already available as built-in components of the home television.

CABLE SERVICES

The first generation of cable networks provided one-way transmission of television programming through coaxial cable to the home. New multichannel cable systems now provide an expanded range of programming and non-programming services including pay-TV, full channel teletext and distribution of games. Significant developments are underway in two-way cable systems which would provide full interactive videotex, electronic mail and voice and data communication. The broad bandwidth of cable allows the transmission of more complex graphics and images to enhance the information content and services which can be distributed from the headend production facilities of cable operators such as Rogers and Skyline Cablevision.

IMPACT OF NEW INFORMATION TECHNOLOGIES

The technology now exists to provide Teletext and Videotex information and services to the mass home and business market through the traditional voice, data and entertainment communication networks. The television and the microcomputer will become information "appliances" which will link the user with vast networks of information banks and a diversity of entertainment, advertising, communication and financial services. The constraints to the mass market acceptance are two-fold: the reduction in the cost of special hardware (or software) decoders and the availability of useful information content and services which can be of sufficient value to attract consumers willing to pay for its access and use. Without quality content, the technology has no context.

1.3 THE INFORMATION PROVIDER

The Information Provider (IP) is a key element in the creation and the evolution of the new information industry. The Information Provider assembles, adapts and distributes information in a useable and saleable form for distribution through an information utility. In some instances, the Information Provider may also choose to operate a specialized network providing information to the subscribers directly or through gateway services with other utilities. (eg. CompuServe provides its subscribers access to the Official Airlines Guide network through a gateway).

Information Providers will be required to develop quality content to feed the rapidly increasing demand for information to service the home, business and public access markets. Like the newspapers and magazines which preceded the electronic distribution of information, this information content will serve to inform and entertain its audience while providing a new medium for advertising as well as commercial and financial services.

Information Providers will play an important role in the emerging information society. Those providers who can adapt or create useful and marketable content in a form suitable for distribution through information networks will be able to benefit from the opportunities which are only now developing.

SECTION 2 OPPORTUNITIES FOR INFORMATION PROVIDERS

2.1 WHO CAN BE AN INFORMATION PROVIDER?

An Information Provider can be any individual or organization who has access to or can produce information which may be of commercial value either to the end user or to organizations who would benefit from the distribution of that information.

Examples of the types of individuals or organizations who could become Information Providers include:

1. those who are currently involved in the traditional information industries
eg. writers, publishers, syndicators
2. businesses who need to make information available to their consumers or support their business activities
eg. stores, banks, catalogue shopping
3. individuals involved in classifying, organizing, interpreting and presenting information
eg. educators, librarians, researchers
4. individuals with special interests or expertise, members of a "closed group" who may provide both content and contact electronically to other members of their "closed group"
eg. hobbyists, collectors, professionals

In addition, there are significant opportunities for visual artists to apply their creative skills to the new media.

2.2 WHERE DO YOU BEGIN?

When considering possible information services which can be offered, there are some basic questions that must be considered.

USER Who will be the targeted user of the service?

NEED What will be the users real information needs?
 What benefit can the user of the information gain through faster or easier access to the required information?
 Is the timeliness of the information important?
 Is there a need for easy access to large stores of information?
 Are graphics required or desirable?
 Is there as need to have communication with the users, or between the users

OPTIONS How is that information currently found, accessed and used?
 What are the inadequacies of that source and process?
 How would that information service benefit from videotex or teletext distribution? What would it lose?

VALUE Does the information itself or information service have a commercial value to the user? If so, what would the user be willing to pay for such a service?
 Is there a commercial value to a sponsor or advertiser in having their message associated with the information or service? If so, is this advertising value limited to a particular area or region, or is it national?

**OPERA-
TIONAL** Does the information or service require frequent updating?
 How would that be done? At what cost?
**CONSIDER-
RATIONS** If communication between users is necessary or desirable, what resources will be required to administer the electronic mail network.
 What resources would be required to develop the information and/or the information service? (people, hardware, software, overhead, etc.)

**REVENUE
SOURCES** What are the potential sources of revenue from the proposed product(s)? (see discussion below)

2.3 POTENTIAL REVENUE SOURCES

The basic sources of revenue for the Information Provider are from the user of the information; the distributor of the information; the sponsor who can use the content as a medium to support an overall advertising or marketing strategy; public access and/or point-of-purchase applications; and contract development or adaptation of information.

1. USER FEES

A subscriber or user of a videotex service may be assessed fees which cover, partially or totally, the costs associated with the search for and access to specific information. Such fees may include:

- a. fixed monthly fees for a basic set of information and information services (eg. news, weather, games, etc.)
- b. special monthly charges for access to a particular service or tier of service (eg. home banking, financial services)
- c. hourly charge for access to a basic set of services (as in a. above)
- d. surcharge on the basic hourly rate for access to a particular service (eg. Official Airlines Guide - OAG)

The monthly charges encourage frequent use of the information service and are usually found in system environments in which there is a substantial base of advertising to cover the cost of making both the information content and the commercial message available directly to the consumer.

Hourly charges and surcharges are usually found in services which provide information of a commercial or economic value to the user (eg. stock market quotations, new services, airline reservations). These services are not normally supported by advertising revenue. The onus is on the user to be very familiar with the system and its search capability and to have a good idea of the information being sought in order for usage costs to be kept reasonable. It should be noted that such user charges are in addition to the communication costs. Although each system operator or information utility develops its own approach to user billing based on the specifics of its environment, most cable-based services are implemented on a flat fee basis while many telephone-based services are based on usage sensitive charges.

Depending on the system operator's business environment and on the commercial or advertising value of the information service, the Information Provider may share in the revenue generated from the user and collected by the system operator.

TABLE 1

OVERVIEW OF CANADIAN VIDEOTEK SYSTEM OPERATORS

COMPANY	SYSTEM NAME	LOCATION	TYPE OF SYSTEM	GRAPHICS	PRIMARY APPLICATIONS & SERVICE	TYPE OF SUBSCRIBERS	DATABASE SIZE	TYPE OF NETWORK	RATES	USERS
Cableshare	Video Press	London, Ont.	Videotex	NAPLPS	Shopping Information in Mall	Consumers	1,000 - 10,000 pages	telephone	Advertisers only \$475 for 6 months \$875 for 12 months	125,000/wk
Faxtel	Marketfax	Toronto, Ont.	Videotex	NAPLPS	Stock Market / Financial	Brokers Business	300,000 pages	telephone	\$350/mo for 8-12hr \$600/mo for 12-20hr \$800/mo for 20-35hr	not available
Government of Canada Supply & Services	CANTEL	Ottawa, Ont.	Videotex	NAPLPS	Government Information	Government Offices Centre for Service	35,000 pages	telephone	\$150 annually incl. 3hrs usage/month Additional usage at \$3/hr	1,800
Globe & Mail	Infoglobe	Toronto, Ont.	Ascii	non-graphic	News Retrieval	Business		telephone	not available	not available
Infowart	Brasroots	Winnipeg, Man.	Videotex	NAPLPS	Agribusiness Home Services Business Services	Farm, Agribusiness Home Business	148,000 pages	telephone	\$15/mo or \$150/yr	3,100
	Teleguide	Toronto, Ont.	Videotex	NAPLPS	Tourist Information Restaurant Guide Weather information for pilots	Public Access Hotels	17,000 pages	telephone	Free to user Advertiser pays \$200 annual listing fee \$1 storage & processing	\$50,000/mo
Saskatchewan Telecommunications	Agritex	Regina, Sask.	Videotex	NAPLPS	Agribusiness News Services Business services	Home	8000+ pages plus gateway to data bases in Canada & US	telephone	\$14.40/month incl. 3 hr. usage Additional usage at \$0.06/min.	750
TELCON Canada	Inet 2000	Ottawa, Ont.	Network Access to Information Utilities	depending on terminal & database	Intelligent Gateway	Business	380 databases	telephone	Usage: \$3/mo & .06/min One time service charge of \$25	400
Videotron / Videophone Communications	Vidacon	Montreal, P.Q.	Cabletext Videotex		General services	Home Consumer	20,000 pages	cable	not available	450

TABLE 2A

OVERVIEW OF U.S. VIDEOTEX SYSTEM OPERATORS

COMPANY	SYSTEM NAME	LOCATION	TYPE OF SYSTEM	GRAPHICS	PRIMARY APPLICATIONS & SERVICE	TYPE OF SUBSCRIBERS	DATABASE SIZE	TYPE OF NETWORK	RATES	USERS
Bank of America	Home Banking	San Francisco, CA	ASCII	non-graphic	Home Banking News Home Shopping Education	Home	not available	telephone	not available	115,000
Chemical Bank	Pronto	New York, NY	Videotex		Home Banking Messaging Education Catalogue Shopping	Home Business	not available	telephone	\$12/m	111,000
CompuServe Information Systems Inc.	CompuServe Information System ICISI	Columbus, OH	Ascii	non-graphic	Broad Range of Information & Services including: Home Shopping Home Banking Games Travel reservations	Home Business Closed User Groups Electronic Mail	31,000,000 pages	telephone	9am-6pm \$12.50/hr 6pm-5am \$8.00/hr weekends \$6.00/hr	1150,000
Dow Jones & Co.	Dow Jones News Retrieval	Princeton, NJ	Ascii	non-graphic	Financial and Business Services Home Shopping	Business	1 billion characters	telephone	Usage 0.60-1.20/min Option A: \$100/yr with 1/3 discount on off-peak usage Option B: \$50/mo with 1/3 discount on all usage	1170,000
General Videotex Corporation	DELPHI	Cambridge, MA	Videotex		Home banking Home shopping Electronic Mail	Home		telephone		15,000
Keycon Electronic Publishing	KEYFAX Interactive Information Services	Schaumburg, IL	Videotex	NAFLPS	News & Information	Home Closed User Groups	20,000 pages	telephone	Basic terminal \$24/mo Service Fee \$9.95/month depends on no. of hours used.	20
	KEYFAX	Schaumburg, IL	teletext	Prestel/Comfax	News & Information	Home	275 pages	broadcast TV via satellite		
Radio Shack / Fort Worth Star Telegram	STARTEXT	Fort Worth, TX	Other		News & Information Home Shopping	Home	2,500 pages	telephone	\$7.95/month	1,

2. LICENSE FEES

Upon entering into an agreement with a system operator to distribute information to its users or audience, the Information Provider may negotiate a one-time or ongoing monthly or annual license fee. Such a fee may cover installation as well as the periodic update and maintenance of the service

3. ADVERTISING REVENUE

In some instances, the information provided on a service has a value not only to the direct consumer or the distributor but also to a sponsor or advertiser for whom there is a commercial interest in having the information delivered to the target consumer. Information services which have a potential value as an advertising medium can therefore be made available to the desired consumer at a lower cost than those whose cost must be borne by the user and/or the distributor.

Participation of the Information Provider in actual sale of advertising and the sharing of the resultant revenue would be the subject of specific contract negotiations with the system operator.

4. PUBLIC-ACCESS APPLICATIONS

Some information services may have a potential commercial value as point-of-purchase marketing tools or as sources of information in public places. Thus the Information Provider may find it profitable to make available their information products through special public-access booths or kiosks available directly to merchants to be used in support of their sales and promotional activities in supermarkets, specialty stores, shopping malls, etc.. Tourist and restaurant guide services can also be provided as a public-access application (eg. Teleguide service of Infomart).

5. CONTRACT DEVELOPMENT

Information Providers may find an additional source of revenue from contracting for custom development or adaptation of information services for specific clients. Such clients may include organizations whose information is currently available in print form or information directly related to an advertiser's product.

6. VISUAL PRESENTATION

Information Providers may find additional revenue from the preparation of visual presentations for businesses, combining the graphic capability with the information retrieval capability. Use of videodiscs to provide moving images and sound can further enhance the presentations.

2.4 WHAT ARE THE BUSINESS OPPORTUNITIES FOR AN INFORMATION PROVIDER?

There are three basic types of businesses for Information Providers:

1. Page Creation

The page creation business focuses primarily on the graphic design and the adaptation of specific information (usually of a commercial nature) to the videotex medium. Often it is an outgrowth of graphics design and / or advertising experience. Much of the revenue is from contract work for Information Content Developers, Advertisers and the System Operators who may require the specialized skill of the page creation shop. One example of this type of business is St. Clair Videotex of Toronto, Ont. or Videographics of Winnipeg, Man..

2. Information Content Development

The primary focus of the content developer is on the information itself. They may develop original information content or adapt existing content to the videotex medium. The graphics and design work may be contracted out to page creation businesses. One example of this type of business is Home Management Systems of Winnipeg.

3. Information Service

Like the Information Content Development business, the Information Service business supplies content to the videotex industry. Because of the nature of the information it provides; ie. timeliness, special market expertise and the frequent need to establish and maintain a link with the end user, a full information service is provided through the system operator. In some instances, the Information service maintains its own videotex database and provides a gateway serviced to its supplier. An example of this type of business is the OAG - Official Airlines Guide which runs its own service and allows other utilities such as CompuServe to direct its users to the service.

WHAT ARE THE MAJOR MARKETS?

The major markets which are currently developing for the videotex industry include:

- the business market (for financial, stock, business news, technical reference and other business information and perhaps an electronic newsletter);
- the home market (for games, home reference information, home management services, shop-at-home services);
- retail point-of-sale systems
- closed user groups (professional, special interest, community, libraries, museums, etc.)
- education

WHAT ARE THE BUSINESS RELATIONSHIPS?

Having decided on the type of business, the market and the product, the Information Provider must consider the desired relationships which need to be established within the videotex and information industries. Some of the available options are:

1. Contract Development

- ie. developing custom information banks and services for a specific client under contract
- potential clients may include advertisers, publishers, system operators, corporate users, retailers or the government

2. Special Relationships

- establishing joint development activity with a client or an information utility. It should be noted that such an arrangement may reduce some of the risk of a development project.

3. Independent Information Provider

- develop information content and services independently and then distribute to a broader range of system operators.

It should be noted that this alternative requires the highest level of resources committed well in advance of any revenue being generated by the development project and therefore may entail the greatest business risk.

SECTION 3 DISTRIBUTION OF THE INFORMATION PRODUCT

3.1 OVERVIEW OF SYSTEM OPERATORS

The primary distribution vehicle for an independent Information Provider are the growing number of videotex System Operators which, from a central host computer operate an information utility servicing targeted users in a particular geographic area. An overview of the major current System Operators in Canada and the U.S. is provided in Tables 1, 2A & 2B which follow.

It should be noted that given the rapid changes in the industry, any information such as this will be out of date in a very short time. There these tables can only provide a general indication of the major distribution channels for information content as of the first half of 1984.

3.2 PROFILE OF SELECTED MAJOR SYSTEM OPERATORS

More detailed information is provided on selected corporations who have already established themselves as significant players in the videotex marketplace. All information provided in the Videotex System Operator Fact Sheets was provided directly by companies involved. Unfortunately, not all corporations wished to participate in the survey.

Potential Information Providers would be advised to contact system operators who are providing services at the same target audience as the proposed content to be developed. As each service operates in different technical and business environments, it may be necessary to select the key distributors of the information content early in the development process.

Videotex System Operator Fact Sheets are provided on the following corporations:

- CompuServe Incorporated
- Gateway (sm) Times Mirror Videotex Services
- Infomart (Grassroots)
- Infomart Ottawa Business Telidon Service
- Infomart (Teleguide)
- Keycom Electronic Publishing
- The Source Telecomputing Corporation
- Viewdata Corporation of America

COMPANY: COMPUSERVE INCORPORATED

5000 Arlington Centre Blvd.
Columbus, Ohio
43220

CORPORATE INFORMATION:

CompuServe was established in 1971 and operates a network service as well as business, executive and consumer information services.

Related companies:
H.R. Block (parent company)

VIDEOTEX SERVICE: CompuServe Information Service (CIS)

MARKET INFORMATION:

Number of Users:	120,000	
Type of users:	residential and business	
Market projection:	not available	
Initial System:	Columbus, Ohio	
Market Area:	North America	
User charges:	9 a.m. to 6 p.m.	\$12.50/hr
	other hours plus	\$ 6.00/hr
	weekends & holidays	

TECHNICAL ENVIRONMENT:

Terminals supported:	ASCII
Network:	Telephone. Available through TYMNET, TELENET, DATAFAC and CompuServe's own network
Central Computer:	DEC FDP 10s,11s & 20 Vision 50
Videotex Software:	VIDTEX (tm). Can be used with any communicating software.
Page Capacity	unlimited
Graphics:	ASCII - type

MAJOR DATABASES & SERVICES:

Databases available:
Over 245 databases including Official Airlines Guide (OAG), Commodore Business Machines, Grolier Electronic Publishing's Academic American Encyclopedia, AP Viewdata news, NOAA weather, Electronic Gourmet (tm), and games.

Interactive Services:
CB service, network games, electronic mail, Special Interest Groups (SIG), the Electronic Mall (tm).

ADVERTISING POLICY:

Currently Information Providers are not allowed to include advertising within their database. The Electronic Mall (tm) is a test of the potential of advertising and merchandising on the CompuServe Information Service.

INFORMATION PROVIDER POLICY:

Courses and standards available for Information Providers.

For further information, contact:

Richard Baker, Director of Public Relations
David Eastburn, Director of Marketing
(714) 540-2515

COMPANY: GATEWAY (sm) TIMES MIRROR VIDEOTEX SERVICES

3100 S. Harbor Boulevard
 Santa Ana, CA
 92704

CORPORATE INFORMATION:

Gateway (sm) TIMES MIRROR VIDEOTEX SERVICES was established as a wholly-owned subsidiary of the Times Mirror Company.

Related companies:

Times Mirror Company
 Videotex America (joint venture of Times Mirror & Infomart)

VIDEOTEX SERVICE: GATEWAY

MARKET INFORMATION:

Number of Users: not available
 Type of users: residential
 Market projection: Target subscribers are from 160,000 households in the initial roll-out area
 Initial System: Orange County, CA
 Market Area: U.S.
 User charges: \$19.95 / month

TECHNICAL ENVIRONMENT:

Terminals supported: NAPLPS
 Network: Existing Telephone system
 Central Computer: DEC VAX-1170
 Videotex Software: ITSS-Z (Infomart)
 Page Capacity: unlimited
 Graphics: NAPLPS

MAJOR DATABASES & SERVICES:

Gateway database includes a wide variety of data aimed at the residential consumer market including Canadian products such as the Electronic Gourmet (tm).

ADVERTISING POLICY:

Advertising space and sponsorship available. During 1st year of operations, advertising sold in annual package. Advertisers solicited from national and local producers of consumer goods and services.

INFORMATION PROVIDER POLICY:

Gateway contacts selected Information Providers whose information meets the needs determined by the editorial staff.

For further information, contact:

Penny Welsch
Manager, Marketing Communications
(714) 540-2515

COMPANY: INFOMART (Grassroots)
 511-1661 Portage Avenue
 Winnipeg, Manitoba
 K3J 3T7

CORPORATE INFORMATION:

Infomart was established in 1975 by Southam and TorStar and operates three videotex services out of three Canadian cities: Grassroots (Winnipeg), Teleguide (Toronto) and CANTEL (Ottawa).
 Related companies:
 Infomart Telidon System Software (International Sales operating out of Toronto)
 Southam Communications (major shareholder)
 Videotex America (joint venture with Times Mirror)

VIDEOTEX SERVICE: GRASSROOTS

MARKET INFORMATION:

Number of Users: 1600
 Type of users: primarily farm (residential & business)
 Market projection: not available
 Initial System: Winnipeg, Manitoba
 Market Area: available throughout Canada
 expansion into U.S. begins July, 1984 in Delaware, Virginia and Maryland
 User charges: \$15 / month or \$150 annually

TECHNICAL ENVIRONMENT:

Terminals supported: Telidon terminals or FC's with Telidon software decoder
 Network: Telephone: direct dial, Datapac, iNET and specialized local phone services such as Agritex (Saskatchewan)
 Cable: available through cable on a trial basis in Thompson, Manitoba
 Central Computer: DEC VAX-11/780 (duplex) operating under VMS 8 Megabyte /CPU, 768 Megabyte disk storage /CPU
 Videotex Software: ITSS (Infomart)
 Page Capacity: unlimited
 Input format: Standard ASCII formatted data; Telidon / NAPLFS pages
 Graphics: NAPLFS

MAJOR DATABASES & SERVICES:

More than 32 databases with over 500 Megabytes of data including: Grassroots, 5 CANTEL databases, Teleguide, Financial Post, Richardson Greenshields, Bulletin of Business Opportunities, Electronic Gourmet, games, farm management programs plus interactive services including: teleshopping, home banking and messaging (electronic mail)

ADVERTISING POLICY:

Service primarily funded by advertising. Advertisers can sponsor existing packages or can pay to put their own product information on Grassroots.

INFORMATION PROVIDER POLICY:

Agreements with Information Providers are negotiated individually. Information Providers are generally those with information that is of use or interest to a largely agricultural audience although consumer services such as home-banking are of a more general interest.

For further information, contact:

Bruno Leps, General Manager
or Leigh Sigurdson, International Marketing
(204) 772-9453

COMPANY: INFOMART Ottawa Business Telidon Service
 Suite 300, 141 Laurier Avenue West
 Ottawa, Ontario
 K1P 5J3

CORPORATE INFORMATION:

Infomart was established in 1975 by Southam and TorStar and operates three videotex services out of three Canadian cities: Grassroots (Winnipeg), Teleguide (Toronto) and CANTEL (Ottawa).
 Related companies:
 Infomart Telidon System Software ITSS
 IMG - information management
 Southam Communications (major shareholder)
 Videotex America (joint venture with Times Mirror)

VIDEOTEX SERVICE: CANTEL

MARKET INFORMATION:

Number of Users: approx. 475
 Type of users: commercial, public
 Initial System: Ottawa
 Market Area: Canada
 User charges: \$150 subscription fee

TECHNICAL ENVIRONMENT:

Terminals supported: Telidon and NAFLPS terminals
 Network: telephone
 Central Computer: DEC VAX-11/780 operating under VMS
 6 Megabyte, 1.4 gigabytes disk
 storage /CPU
 Videotex Software: ITSS (Infomart)
 Page Capacity: unlimited
 Input format: Standard ASCII formatted data;
 Telidon / NAFLPS pages
 Graphics: NAFLPS

MAJOR DATABASES & SERVICES:

Currently a total of 75,000 pages of information on the
CANTEL and Grassroots databases.

ADVERTISING POLICY:

No information provided

INFORMATION PROVIDER POLICY:

No information provided

For further information, contact:

Nathan Leslie, General Manager, Ottawa
or Leigh Sigurdson, Director, Corporate
Communications

COMPANY: INFOMART (Teleguide)

164 Merton Street
Toronto, Ontario
M4S 3A8

CORPORATE INFORMATION:

Infomart was established in 1975 by Southam and TorStar and operates three videotex services out of three Canadian cities: Grassroots (Winnipeg), Teleguide (Toronto) and CANTEL (Ottawa).

Related companies:

Infomart Telidon System Software ITSS
IMG - information management
Southam Communications (major shareholder)
Videotex America (joint venture with Times Mirror)

VIDEOTEX SERVICE: TELEGUIDE

MARKET INFORMATION:

Number of Users: 850,000 users/month
Type of users: commercial, public
Market projection: worldwide
Initial System: Toronto
Market Area: Toronto, San Francisco, Sacramento,
Honolulu, Pheonix
User charges: free to the public

TECHNICAL ENVIRONMENT:

Terminals supported: Teliguide public access terminals
Network: dedicated Dataline network
Central Computer: DEC VAX-11/780 operating under VMS
6 Megabyte /CPU, 1280 Megabyte disk
storage /CPU
Videotex Software: ITSS (Infomart)
Page Capacity: unlimited
Input format: Standard ASCII formatted data;
Telidon / NAPLPS pages
Graphics: NAPLPS

MAJOR DATABASES & SERVICES:

Individual databases installed for each of the systems operating in Toronto, San Francisco, Phoenix, Sacramento and Honolulu.

ADVERTISING POLICY:

Service totally funded by advertising. Advertisers pay to have their information available on Teleguide.

INFORMATION PROVIDER POLICY:

The advertisers are the providers of the information content which is then re-created as videotex pages of text and graphics.

For further information, contact:

Chris Smith, Branch Manager, Teleguide
or Leigh Sigurdson, Director, Corporate
Communications

COMPANY: KEYCOM Electronic Publishing, Inc.
1501 Woodfield Road, Suite 110 West
Schaumburg, Illinois
60195

CORPORATE INFORMATION:

Company established in 1982 as a joint venture of Centel Corporation, Honeywell, Inc. and News America Publishing, Inc.

VIDEOTEX SERVICE: KEYFAX Interactive Information Services

MARKET INFORMATION:

Number of Users: not available, will complete launch by end of 1984
Type of users: residential and commercial
Market projection: not available
Initial System: Chicago and six surrounding counties
Market Area: U.S.
User charges: on request

TECHNICAL ENVIRONMENT:

Terminals supported: Honeywell, personal computers
Network: specially engineered network which makes all calls to database charged at no more than one message unit fee
Central Computer: Honeywell DPS 8
Graphics: full SRM NAPLPS and ASCII

MAJOR DATABASES & SERVICES:

Approximately 80 databases including Official Airline Guide, Chicago area restaurant and entertainment listings, Ticketron, Chicago Corporate Videofile, several merchants, games, educational services, news, weather, sports and several business services.

ADVERTISING POLICY:

On request.

INFORMATION PROVIDER POLICY:

On request.

For further information, contact:

Jeffrey Ballowe
Public Relations Coordinator

COMPANY: THE SOURCE TELECOMPUTING CORPORATION

1616 Anderson Road
 McLean, VA
 22101

CORPORATE INFORMATION:

The Source Telecomputing Corporation was established in June, 1979.

Related companies:

A subsidiary of Reader's Digest Association, Inc.

VIDEOTEX SERVICE: THE SOURCE

MARKET INFORMATION:

Number of Users:	57,000	
Type of users:	40% residential	
	60% commercial	
Market projection:	not available	
Initial System:	McLean, VA	
Market Area:	North America	
User charges:	Hook-up fee	\$100
	300 baud service:	
	7a.m. to 6p.m.	\$ 20.75/hr
	Other times	\$ 7.75/hr

TECHNICAL ENVIRONMENT:

Terminals supported:	Ascii terminals, IBM PC, APPLE
Network:	Telephone. Uninet, Telenet packet-switched networks Sourcenet data communications network available in New York, Chicago, Philadelphia and Washington, D.C.
Central Computer:	not available
Page Capacity	not available
Input format:	not available
Graphics:	Have developed communications software for using THE SOURCE with an IBM PC or APPLE. Limited graphics are available when this software is used.

MAJOR DATABASES & SERVICES:

Over 700 databases available covering Communications, Business & Finance, News & Sports, Travel, Games and Consumer Services. Extensively used electronic mail service.

ADVERTISING POLICY:

Currently do not sponsor paid advertising on THE SOURCE, although members often place ads in the bulletin boards or via electronic mail.

INFORMATION PROVIDER POLICY:

Potential information providers must send a proposal to the Database Acquisition department. Information Providers are usually paid on a royalty basis - a percentage of our billable usage of their product.

For further information, contact:

Ms. Nancy Beckman

COMPANY: Viewdata Corporation of America, Inc.
 1111 Lincoln Road
 Miami Beach, Florida
 33139

CORPORATE INFORMATION:

Company established in 1978 as a subsidiary of Knight-Ridder Newspapers, Inc., a nationwide information and communication company. Related businesses include newspaper publishing, television operations, business news and information services, newsprint production, videotex operations, specialized mobile radios and book publishing.

Related companies:
 Knight-Ridder Newspapers, Inc.

VIDEOTEX SERVICE: VIEWTRON

MARKET INFORMATION:

Number of Users: 2700
 Type of users: residential
 Market projection: not available
 Initial System: Tri-county area of South Florida including Dade, Broward and Palm Beach U.S.
 Market Area:
 User charges: Sceptre Terminal \$600 (introductory)
 \$900 (regular)
 Viewtron Service \$12 / month
 Pulselink \$1 / hour
 (phone network)
 Viewtron Service Package (Leasing)
 \$39.95 / month

Includes:

Home delivery, installation & demonstration of Viewtron and the AT&T Sceptre terminal by a Viewtron representative.
 10 hours a month of basic Viewtron service plus use of AT&T Sceptre terminal
 An introductory bonus of 30 additional hours of use during first 3 months.
 Initial payment of \$125.84 includes first three months of service and sales tax.

TECHNICAL ENVIRONMENT:

Terminals supported: AT&T Scepte
Network: Pulselink, a packet switching telephone network developed by Southern Bell connecting Viewtron with home telephone lines.
Central Computer: TANDEM TXP
Graphics: NAPLPS

MAJOR DATABASES & SERVICES:

The Viewtron database includes gateways to:
CNS, Stock Quotes
AAE, American Academic Encyclopedia
American Express
DAGEE, Official Airlines Guide
EFH, EF Hutton
VFS, Video Financial Services
JCPenny
Peterson's Guide to Colleges

ADVERTISING POLICY:

No information provided

INFORMATION PROVIDER POLICY:

No information provided.

For further information, contact:

Mary Bulterman
Company Spokesperson
(305) 674-3457

SECTION 4: ISSUES FACED BY INFORMATION PROVIDERS

1. New Technology

Videotex is a new information technology which, although it has its roots in traditional data processing and telecommunications, must be approached in fundamentally different ways. It must first and foremost, be viewed as a communications medium, not unlike the traditional communications media of print, newspapers and broadcast. In approaching videotex, it is important to focus on the user of the information and on the potential and constraints of the medium as a communications vehicle. To the Information Provider, knowledge of the technology itself is not necessary, other than to the extent it impacts the access and use of the information.

2. Industry in Early Development stages

The initial focus has been on standards and field trials. The Canadian government, through the Department of Communications, has contributed significantly to the creation of the industry with the development of Telidon, promotion of standards and support of the initial field trials. The Department of External Affairs continues to provide key support for the export marketing of videotex hardware, software and information content products. As a direct result of these efforts, Telidon was accepted as the basis for the North American Presentation Level Protocol (NAPLPS). With the technology proven and various field trials in Canada and the U.S. completed, the industry is moving into a significant growth period. The rate of that growth will be in large measure dependent on the success in addressing the real information needs of the consumers, the end users.

As the industry is positioning itself for a rapid takeoff, there are relatively few models for the type of business relationships that will emerge as the industry matures. Potential Information Providers are advised to become familiar with the many joint ventures which have been formed as companies seek to gain entry and experience in the new industry. Annual videotex conferences and trade shows are held in major centres in the U.S. and Europe. These provide an opportunity to gain knowledge of the recent developments in the industry and to make valuable contacts. Associations such as the Videotex Industry Association (VIA) and the Videotex Information Service Providers Association of Canada (VISAPAC) have been formed to provide important communication links within the industry.

3. Information Content is Expensive to Develop

The potential Information Provider must be prepared to make a significant investment in the development of quality content. The emphasis on quality cannot be ignored as the audience that is to be reached has grown up with the TV industry and has become very sophisticated in its expectations of information available through a screen. The Information Provider must consider not only the initial investment in people and technology but also the ongoing support costs associated with maintaining the information on a timely basis, distributing it to the various services and supporting any interactive services available through the electronic mail services which may put the end user in direct contact with the source of the information. It is recommended that the Information Provider consider having initial capital to cover at least one year's operating costs until the revenue from sales will be available. For those providers of information without such resources, it is advisable to consider contract development for an advertiser or another specific client as an entry into the industry. It is important to realize that, by and large, the investment in development of content cannot be recovered through a single implementation, or solely through license fees or user fees. Until the home market breaks open, both System Operators and Information Providers will be concentrating on establishing market positions while minimizing their costs. When the projected mass home market materializes, the significant source of revenue will be from the advertisers, with users essentially paying communications costs and minimal user fees.

4. Need to educate your market

The Information Provider who distributes through a System Operator has two different levels of users. While the ultimate or end user must be considered in the design of the content or service, the immediate customers are the distributors and the System Operators. While those who have been in the market for some time have realized the importance of independent producers of information content, many of those just beginning still think of the business primarily in technological terms. The fact that something is possible technically does not necessarily mean that it is feasible, meets a user need or can be financially viable. In many ways, the Information Provider must educate the potential client and must ensure that the content is appropriate for the technical and business environment of the operator. Failure to do so may result in substantial loss of valuable time and resources.

5. Need to establish fair market value of the information

Establishing a fair market value for the information you develop may be one of the most critical elements to your business success. In most cases, the development costs can not be recovered from a single client. Therefore, you must consider the market potential in the light of multiple clients who in turn will distribute the content to the ultimate user. Depending on the content and the overall business strategy, the various sources of revenue outlined earlier in the Guide must be considered carefully. When the industry and market matures, it is anticipated that the value of information will be in large measure dependent of the readership base, not unlike the cost of advertising space in the print medium.

6. Negotiation for distribution of Content

In negotiating the distribution of the Information Content product and services, the Information Provider must consider the particular environment of the System Operator and propose the appropriate mix of user fees, license fees and advertising royalties to ensure an attractive financial return for both parties. If, for example, the environment was such that no user fees were charged, then the license fee and the advertising split would need to generate sufficient revenue. If, on the other hand, the advertising on the service was fully established, perhaps a split of the advertising revenue could be the only payment to the Information Provider.

Furthermore, as the industry is evolving, both parties need to develop a business relationship which allows each to share in the risk inherent in bringing up new systems as well as in the long term benefits which will accrue from mature operations. The Information Provider will need to develop a flexible but pragmatic approach to negotiation with system operators and may need to balance short term cash flow against long term revenue potential.

7. Copyright

The issue of copyright protection for information in electronic form is a very important one for Information Providers. At the essence of the issue is the fact that information which is expensive to create is subject to easy and inexpensive copying and pirating. Information Providers and System Operators alike have a mutual interest to prevent wholesale pirating of information stored in central data banks. The copyright laws must recognize the realities of the new information technologies and must be amended to provide adequate protection and recourse.

From a practical perspective, however, once the information has been retrieved by the user electronically through a telecommunications network, it can easily and without trace be captured by the recipient on electronic storage or in print. Depending on the information and the business environment of the service, that may be either desirable or undesirable. In the end, the critical element may be found to be whether such electronic copying represents a loss of business revenue or simply an enhanced service to the end user. With large volumes of constantly updating information, volume copying of videotex information retrieved by an end user through a videotex terminal is slow and extremely expensive. In the end, that may be the major deterrent.

The videotex industry presents both an opportunity and a risk to the potential Information Provider. It is exciting and provides tremendous scope for creative, innovative entrepreneurs. The investments made today will generate returns in the long-term. Therefore, the decisions which are critical to the potential Information Provider relate to both the information content itself and to the industry.

Perhaps a useful model to consider is the television industry in its early stages. The initial technological development required the establishment of broadcast facilities and the development of a consumer receiver, the home television, to create an initial market. During the first decades, a limited audience viewed a limited number of programs, many either recreations of traditional stage productions, games shows or broadcasts of movies. The full cost of productions for a program would usually be covered by one sponsor corporation which would then "own" the particular show (eg. Kraft Theatre, General Motors Playhouse). The mass market awaited two critical developments: an affordable television set and sufficient content to justify the purchase for other than novelty reasons. Sufficient added value had to be provided by television over its precursor, radio. Contrary to some predictions, one medium did not replace the others. The presentation of news, for example, is substantially different on radio, television, newspaper and newsmagazine. Each traditional medium had to recognize and adapt to the new.

Today, the television industry is substantially different and is itself now the traditional industry having to make room for and adapt to the new information technologies. The industry is totally funded by advertising revenue with advertising use targeted very specifically at audience. Cable, satellite dishes, pay-TV, pay per view and specialized networks bombard the user with a wide variety of programming. Low power stations now make it economical to provide very specialized programming to very limited audiences. Furthermore, the VCR has given the user control over time and the viewing of commercial messages raising concern on the part of advertisers and producers of content. Pirating of signals and protection of copyright represent potentials for significant loss of revenue. On the program production side of the industry, independent production companies license their products to networks. Networks, in turn sub-license the program content to affiliate stations or cable operators for eventual distribution to the mass audience. The various licensing arrangement define a specific breakdown of revenue through the various distribution channels with the ultimate value of the product dependent on advertising revenue potential, which in turn is dependent upon audience size. No longer is it economical to consider custom production for a single client for a single implementation.

As the videotex industry matures and develops its mass market, the role of the independent producer, the Information Provider, will be a crucial one. Without quality content, the technology has no context. Become an Information Provider and be part of the an exciting and challenging new information industry.

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