# The Electronic Information Industry in Canada

## Volume I: Survey Results

**Prepared for:**

**Government of Canada**
**Department of Communications**

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IDC Canada

# EXECUTIVE SUMMARY

The present study was undertaken as a first step in better understanding the online information marketplace in Canada. While qualitative, results suggest that the Canadian market is lagging compared to the U.S. market.

The project was completed in two phases. In Phase I, telephone interviews were conducted with 57 users of online information from large organizations representing a variety of economic sectors. In Phase II, 97 telephone interviews were conducted with librarians, marketers and financial analysts from 42 organizations in potentially "low use" sectors. In both Phase I and II, establishments were selected from the FP500 list of companies, or were considered to represent leading organizations within their sectors.

Phase I identified that the online information market *among users* in Canada is relatively healthy:

> Users today access a wide range of services -- both Canadian and U.S. -- to meet their varied information needs.

> Almost all users are satisfied with the services that they currently use.

> Users expect to increase their use of Canadian suppliers as coverage of Canadian information increases. However, information which is global in nature (e.g. scientific & technical) will increasingly be accessed through U.S.-based suppliers.

> Users currently believe that electronic information is somewhat overpriced (Phase I), but affordable (Phase II). The fact that so much information in Canada is available at no charge, or at cost, makes it more difficult to educate decision makers in the price/value of information, including electronic information. Users expect only moderate growth in expenditures for online information over the next few years.

> The market for specific types of information apparently varies between Canada and the U.S. The demand for corporate and economic information may represent a larger part of the total market in Canada. On the other hand, business and consumer credit information is relatively more important in the U.S. market.

Real industry growth will occur by stimulating use among current *non-users*. Certainly, the findings of Phase II suggest that current penetration, even among the FP500, is lower than would be expected at this stage of the industry's development.

> The way in which information is organized and made available within an organization may reflect its perceived value. Information specialists -- i.e. librarians -- did not exist in almost two thirds of the companies/organizations contacted in Phase II. The infrastructure for use of information may be different in organizations in Canada vs the U.S.

> Where they exist, librarians in large organizations are typically users of online services. On the other hand, penetration among financial analysts and marketers is low, especially when compared to U.S. data on these end-user segments.

- More than experience or awareness, *attitudes* toward information usage and electronic information services were critical in differentiating non-user groups. The most significant factors are
  - The perceived demand for information within the organization.
  - The expectation that the budget for information will increase.
  - The perception that the costs of electronic information are affordable.
  - The perception that electronic information is relevant.
- Non-users typically see dramatic change in their use of information over the next five years. This includes increased penetration of PCs/workstations, increased use of more targeted sources of information, and increased use of online or other electronic information services.
- This study suggests that there is demand for specialized databases and more Canadian content. However, there appears to be a lack of the critical mass necessary to support the development and marketing of very specialized databases to a unique Canadian market. This contrasts with the U.S. market where specialized vendors have emerged to capitalize on niche market opportunities.
- A lack of critical mass also inhibits supply-side factors (such as investment in R&D) that, in turn, influence current and future use.

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# Section 1:

# Purpose

# 1. PURPOSE

Much has been said about the relative state of the Canadian online information marketplace. Forecasts vary widely, but usually predict phenomenal growth over the remainder of the decade. However, analysts typically consider the industry in Canada to be lagging compared to the U.S. market.

There are several reasons that explain why the online information marketplace in Canada is particularly difficult to assess. As one Canadian vendor described it --

> "There are so many different facets of this industry. There is a complete matrix including a wide selection of data types, a wide spectrum of industries and a wide spectrum of functional areas within companies. Therefore, it's not possible to estimate market size without studying this fully."

In the U.S., the online information marketplace can be defined largely by the use of U.S.-based services, and supplier-side surveys are appropriate to quantify the market. In Canada, users rely on both national and international (especially U.S.) services, and estimates of market size based only on Canadian suppliers are inadequate. In addition, the market is highly competitive and led primarily by privately-held companies. As a result, accurate revenue figures are very difficult to obtain.

To make appropriate policy decisions in this area, it is essential for government organizations to understand the dynamics of the online information marketplace in Canada. This study was undertaken by IDC Canada as a first-step toward obtaining a realistic view of this market.

Ultimately, a quantitative evaluation of market sizes that allows direct comparison with the U.S. market may be appropriate. However, this approach is resource-intensive. Instead, a preliminary evaluation of the market was undertaken, in two phases, as the appropriate first stage in the analysis.

The present study of the Canadian market is therefore limited in scope. The objective of the study was to provide a qualitative assessment of the Canadian online information marketplace, including:

> A qualitative assessment of relative market sizes in Canada versus the U.S.

> Key online information sources within each sector

> Inhibitors to use of online information among non-users.

Since supplier-side surveys are considered inadequate, this study focussed on the Canadian market from the perspective of users and non-users. To provide a basis for comparison, the framework for the analysis is a recent report published by LINK Resources, a subsidiary of IDC, entitled "Electronic Information Industry Forecast, North America, 1986-1991".

# Section 2:

# Definitions & Scope

# 2. DEFINITIONS & SCOPE

The definitions used in this study are consistent with those used by LINK Resources.

Electronic information is information which has been converted into electrical energy and digitally encoded for storage, delivery and display. It covers electronic information products delivered via the following media:

> Online interactive;

> Online broadcast;

> CD-ROM and other optical media;

> Audiotex or interactive voice;

> Magnetic tape and cartridges;

> Floppy magnetic diskette.

Online interactive services are distinguished from online broadcast services by the ability of the user to effect direct upstream communication with the online host. While online broadcast services do not provide for direct upstream communication, they are included here if they present an aspect of interactivity at the user interface.

The focus of this study is online information services which:

> Are utilized interactively;

> Are offered publicly (although purchase may be limited to a class of professional organization);

> Are accessed and purchased by users in Canada;

> Maintain rigorous editorial standards and/or perform substantial value-added processing on contributed data.

Examples of services which are not included are:

> Mailing list services, because they are not used interactively;

> Broadcast television, for the same reason;

> Newswire services, wherever they are not offered interactively, e.g., via teleprinter;

> Customized hardcopy printouts or live recitations from electronic databases which are not generated through direct customer interaction with the database;

> Value-added database access via timesharing bureaus or inhouse where access is not public;

> Special interest groups, "chat" services, or other forms of messaging and computer conferencing, because they lack editorial packaging, or value added processing, or both;

> Microfiche or hardcopy information products.

LINK Resources segments the market from four different perspectives: information type, job function, industrial classification and distribution technology. These same categories are discussed to a somewhat more limited extent in this report.

The electronic information industry has been divided into various categories of Information Types:

> Vertical Market Information includes databases which were developed to support or monitor the operations of a specific vertical market or industry plus a few distribution services that are directed at the external information needs of selected vertical markets. Major categories in the vertical market operational category (VMO) include transportation, insurance, library and real estate. Smaller VMO categories cover agriculture, construction, energy, pharmacy management, and weather.

> Credit Information includes the sub-categories of consumer and business credit data.

> Financial and Economic Information encompasses a wide range of data and services including securities, commodities, foreign exchange & money markets, fundamental corporate information, and economic data.

> Marketing and Media Information includes audience assessment, demographic databases, product movement, and product information.

> Legal and Government Information is comprised of legal, legislation & government, and patents and trademarks databases.

> News is made up of wire services, newspapers & magazines, newsletters, and other sources from global to specific news.

> Scientific Information includes materials of life sciences (with emphasis on biomedical sciences, pharmaceuticals, and health care), chemistry, earth science, physical sciences, social science & the humanities. The data is still largely bibliographic.

Each of these categories are defined by subsegment in Section 6 of this report.

The online industry consists of three principal groups of players: information providers, database producers or publishers, and database distributors, retailers or vendors. Briefly defined,

> Information providers are the organizations that originate or create information.

> Database producers or publishers are the organizations responsible for the creation, processing and updating of databases in electronic form, using information supplied by information providers.

> Database retailers or vendors store data and information bases created by others or themselves on their host computers and provide access links through computer terminals, software and communications services to subscribers.

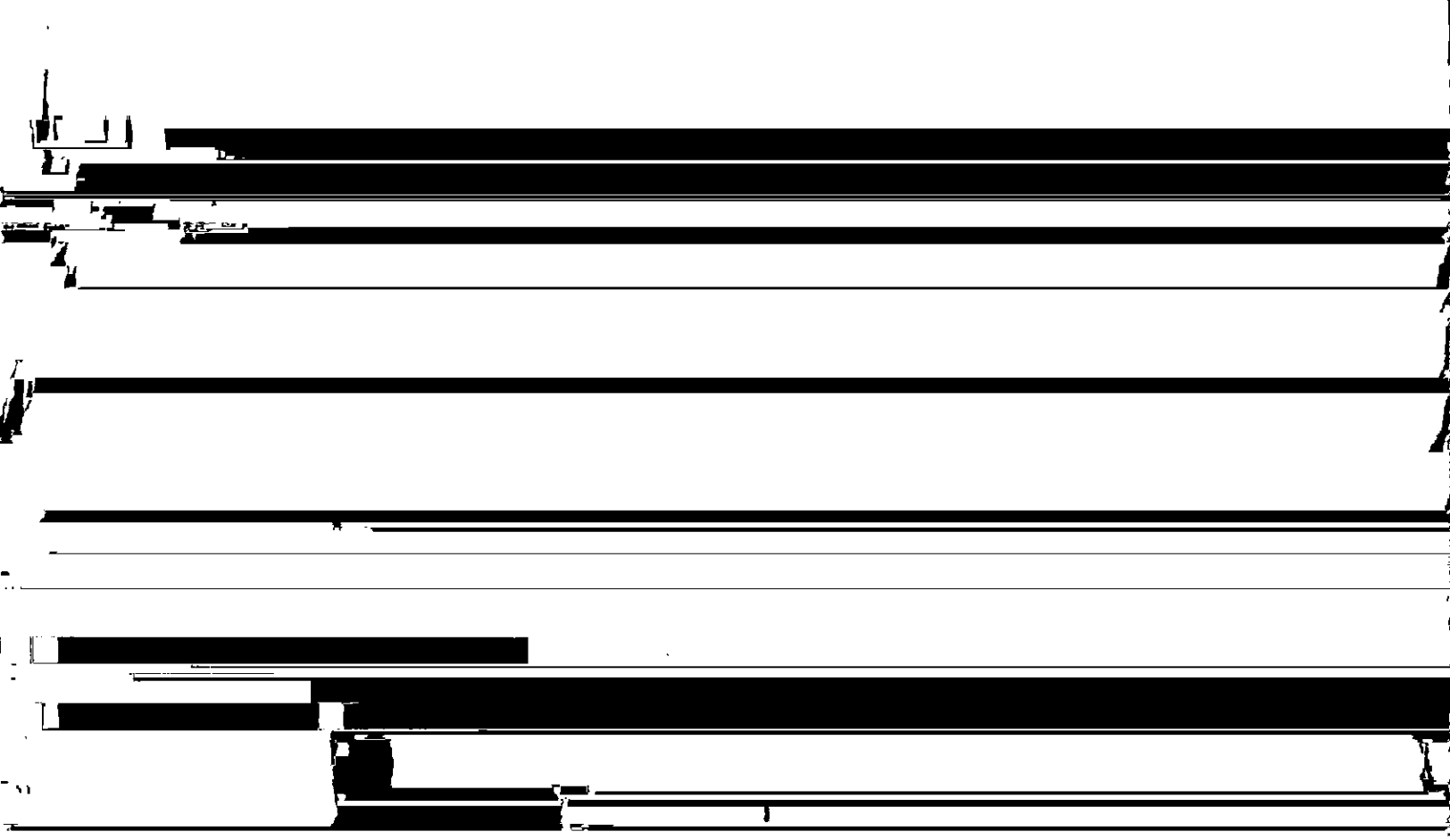
As noted, this study includes databases that are accessed and purchased by users in Canada. For the purposes of this study, Canadian-based services are defined as those residing on a central processor located in Canada. Canadian-based vendors are those that

primarily produce or market services that reside on a database in Canada, although they may also market U.S. services. U.S-based vendors primarily produce or market those services that reside on a processor in the U.S.

Throughout the report, standard industry terminology has been used to define "users" and "non-users". That is, users are those that access the data directly, through appropriate communications channels. Non-users do not access the data directly, although they may receive the output via other media (e.g. print).

# Section 3:

# Phase I



## 3.1 Methodology

### 3.1.1 Objectives

The key objectives of Phase I included:

> A qualitative assessment of relative market sizes for online information in Canada versus the U.S.

> Key information sources within each economic sector.

### 3.1.2 Scope

The study included qualitative analysis of:

> Use by category of online information

> Growth in online information categories

> Online information services/vendors used today

> Use of Canadian- versus U.S.-based services/vendors

> Average monthly expenditures for online information

> Distribution of use by electronic media

> Attitudes toward the cost of online information

### 3.1.3 Method

Phase I was based on the results of a telephone survey of 57 users of online information. The survey was conducted during December 1987 and January 1988 from the Toronto office of IDC Canada. All interviews were conducted in English. A copy of the Phase I telephone interview questionnaire appears as Appendix A.

In addition to the 57 completed interviews, another 32 organizations were contacted where qualified users of online information could not be located. These organizations were targeted for follow-up in Phase II.

### 3.1.4 Sampling Method

Since the study was qualitative in nature, no attempt was made to obtain a random sample that was representative of online information users in Canada. Rather, every attempt was made to ensure that a cross-section of economic sectors was represented in the user interviews.

Large companies and leading organizations within each sector were considered to be among the most likely to use online information. Thus, sources for Phase I sample selection included:

> The Financial Post list of the top 500 companies in Canada

> Industry associations

> Well-known organizations within specific economic sectors (e.g. health care; education/non profit).

### 3.1.5 Composition of Respondents

*Job Title*

In pretests, IDC attempted to locate end-users of online information by targeting job functions that typically have a need for specific information categories (e.g. locating marketing managers with a potential need for audience assessment data). This method of locating end-users proved unsuccessful. After considerable searching within the organizations, those with a need for this type of data could be found, but they were not online users.

As a result, the key respondents for Phase I typically included information resource centre personnel and librarians. These individuals were:

> most likely among potential respondents within the organization to be users of online information

> typically most knowledgeable about the types of information used within the organization

> most knowledgeable about the budget for online information.

> relatively easy to locate by job title

*Type of Organization*

The distribution of respondents by source is shown in Table 1.

Table 1

Distribution of Respondents by Source

| Type of Organization | | # of R | % of R |
|---|---|---|---|
| FP500 | | 45 | 79% |
| Non FP500 | | | |
| | Leading within Sector | 8 | 14% |
| | Non Profit/ Education | 3 | 5% |
| Associations | | 1 | 2% |
| Total | | 57 | 100% |

*Geographic Distribution*

Since a small number of personal interviews were considered a possible next-step in the analysis, organizations were drawn primarily from large metropolitan centres, especially Toronto. The distribution by geographic region is shown in Table 2.

Table 2

Geographic Distribution of Respondents

| Region | # of Org. | % of Org. |
|---|---|---|
| British Columbia | 2 | 4% |
| The Prairies | 2 | 4% |
| Ontario | 45 | 79% |
| Quebec | 8 | 14% |
| Total | 57 | *100% |

*May not add to 100% due to rounding

### 3.1.6 Areas of Questioning

Respondents in Phase I were asked to speak, to the extent of their knowledge, on the use of online information within their company or organization, rather than their own personal use of online information.

They were asked to describe **separately**:

> The categories of online information purchased by their company or organization

> Their suppliers of online information services

> Spending for online information services.

More detailed questioning may have determined specific spending by vendor/supplier and by category of information. However, this level of detail was considered beyond the scope of this preliminary analysis, especially given the additional information requirements (i.e. future use of online services) considered in Phase I.

# 3.2 Overview of Results

## 3.2.1 Distribution of Respondents

*Economic Sector*

Table 3 provides the total number of organizations contacted during Phase I by economic sector, and the extent to which online users were located.

Users were invariably found within organizations in the financial sector -- banks and trust companies, insurance, and investment banking/management/brokerage. This sector is also a high use group in the U.S. in terms of 1986 subscription rates and revenues.

As well, users in this study were readily located in advertising and market research firms, whose core businesses rely heavily on current demographic and marketing information. However, based on the relative size of this industry sector in the total distribution of businesses, this group tends to comprise a relatively small part of the total U.S. market in terms of subscriptions and revenues.

Consistent with U.S. findings, users were not located in the lodging & food services, freight transportation and the consumer electronics/ appliances sectors, even though large corporate entities were targeted.

Table 3

## Distribution of Users By Economic Sector

| Economic Sector | #Organizations Contacted | #Users Located Per Sector | #Users Not Located Per Sector |
|---|---|---|---|
| Advertising Agencies and Market Research | 5 | 5 | 0 |
| Banks and Trust Companies | 5 | 5 | 0 |
| Education & Non-profit | 7 | 4 | 3 |
| Insurance | 4 | 4 | 0 |
| Investment Banking/Management/Brokerage | 4 | 4 | 0 |
| Legal & Accounting Services | 7 | 4 | 3 |
| Energy/Fuel | 4 | 3 | 1 |
| Food & Beverage | 3 | 3 | 0 |
| Agriculture | 5 | 2 | 3 |
| Chemical & Drugs | 2 | 2 | 0 |
| Entertainment | 3 | 2 | 1 |
| Health Care | 5 | 2 | 3 |
| Metals & Metalworking & Machinery | 2 | 2 | 0 |
| Paper & Forest Products | 2 | 2 | 0 |
| Retailing | 3 | 2 | 1 |
| Transportation (Passenger) | 2 | 2 | 0 |
| Aerospace/Aviation | 1 | 1 | 0 |
| Automotive | 1 | 1 | 0 |
| Construction & Building Materials | 3 | 1 | 2 |
| Containers & Packaging | 3 | 1 | 2 |
| Household & Personal Care Products | 2 | 1 | 1 |
| Office Equipment & Computers | 1 | 1 | 0 |
| Publishing/Printing | 2 | 1 | 1 |
| Telecommunications | 1 | 1 | 0 |
| Other (Real Estate) | 1 | 1 | 0 |
| Lodging & Food Service | 3 | 0 | 3 |
| Transportation (Freight) | 3 | 0 | 3 |
| Consumer Electronics | 2 | 0 | 2 |
| Industrial Conglomerates | 2 | 0 | 2 |
| Credit Card | 1 | 0 | 1 |
| Total | 89 | 57 | 32 |

Government users were not addressed in this study. With the number of departments that use or could potentially use online information services, inclusion of a small number of representatives was considered inadequate.

### 3.2.2 Usage by Categories of Online Information

*Major Information Categories*

Based on reported revenues by suppliers, LINK identifies market share by major market category in the U.S. as follows (Table 4):

Table 4

Online Information Market Share
(by Major Information Type)

| | 1986 | 1991 | Change |
|---|---|---|---|
| Vertical Market/Operational | 25.9% | 22.8% | -3.1% |
| Credit | 25.0% | 19.8% | -5.2% |
| Financial & Economic | 21.7% | 27.4% | 5.7% |
| Marketing & Media | 13.9% | 15.3% | 1.4% |
| Legal & Government | 5.6% | 6.3% | .7% |
| News | 5.0% | 5.3% | .3% |
| Scientific | 2.8% | 2.9% | .1% |

In 1986, vertical market/operational represented 26% of the North American (primarily U.S.) electronic information marketplace, generating $1.16B in revenue. Major applications include transportation, insurance, library and real estate, with smaller categories including agriculture, construction, energy, pharmacy management and weather.

Consumer and business credit comprise a second major component of the market for electronic information services.

However, it is the financial and economic category which is considered to show a "burst in growth" between 1986 and 1991 to take the major market share with revenues of $3B.

No comparable data (i.e. revenues) were collected in this study of the Canadian market. However, Table 5 provides the distribution of all mentions of types of information by these same Major Market Categories.

Table 5

Major Information Categories
(% of All Mentions)

| Category of Information | U.S. (Share of 1986 Rev) | Canada (% of All Mentions) |
|---|---|---|
| Vertical Market/Operational | 25.9% | 7% |
| Credit Information | 25.0% | 10% |
| Financial & Economic | 21.7% | 31% |
| Marketing & Media | 13.9% | 20% |
| Legal & Government | 5.6% | 16% |
| News | 5.0% | 10% |
| Scientific | 2.8% | 6% |

As LINK identified, cost per subscription is the critical factor that separates reports of use (i.e. frequency of mention) from importance in terms of revenue. For example, while news is purchased by more people than any other type of information in the U.S., the average spending per subscription (and thus overall revenue) is relatively low.

However, given their importance in terms of revenues in the U.S., it is significant that vertical market/operational information and credit information were mentioned much less frequently by these Canadian users.

Alternatively, Canadian users already depend on online financial & economic data. As well, marketing & media, and legal and government information were mentioned more frequently than would have been expected based on U.S. data.

*Information Types*

The frequency of mention of specific types of information services by respondents in Canada appears in Table 6 and Figure 1.

Table 6

Distribution of Mentions of Use
By Type of Information

| Type of Information | Number of Mentions | % of All Users |
|---|---|---|
| News | 37 | 65% |
| Corporate Information | 34 | 60% |
| Economic | 33 | 58% |
| Business Credit | 25 | 44% |
| Product Information | 25 | 44% |
| Demographic | 24 | 42% |
| Legislative & Government | 22 | 39% |
| Scientific | 22 | 39% |
| Legal | 20 | 35% |
| Foreign Exchange & Money Markets | 19 | 33% |
| Patents & Trademarks | 18 | 32% |
| Vertical Market/Operational | 17 | 30% |
| Securities | 16 | 28% |
| Product Movement | 15 | 26% |
| Consumer Credit | 14 | 25% |
| Commoditles | 13 | 23% |
| Audience Assessment | 9 | 16% |
| Real Estate | 8 | 14% |
| Other* | 1 | 2% |

* By respondent in Household & Personal Care Products sector.

General business information such as news and corporate information were mentioned by the majority of users, consistent with LINK data on the number of individual subscriptions to these services in the U.S.

Widespread use of seemingly "industry specific" information across organizations is also apparent. For example:

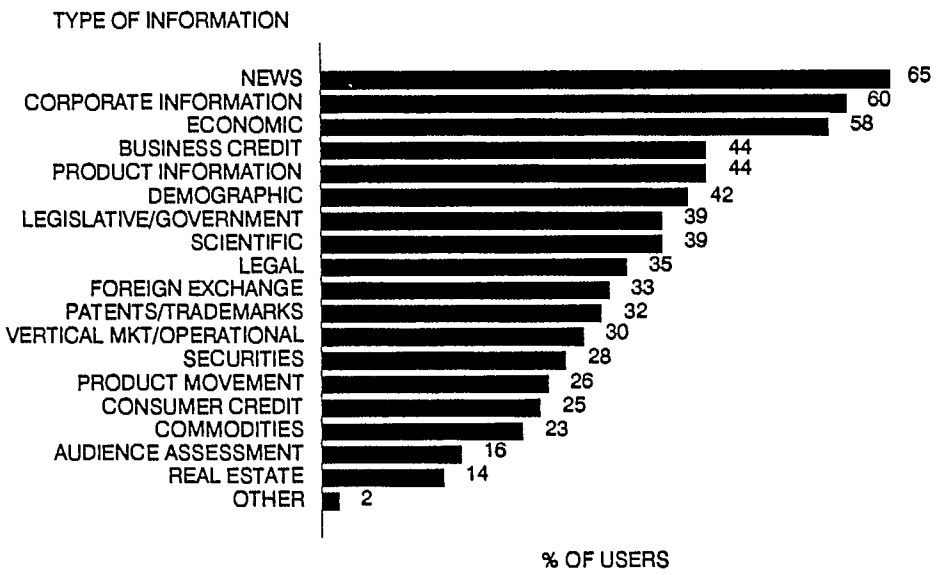
> While only 4 organizations from the legal & accounting sector were included in the study, 20 users (35%) reported use of legal databases.

> While 5 organizations represented the advertising agency/market research sector, 9 organizations mentioned the use of audience assessment data.

There are obviously a variety of information needs served by online information services within large organizations. These needs are apparently related more to the functions performed within the organization than the functions performed by the organization.

Figure 1

Frequency of Mention By Information Type
(% of All Users)



The number of mentions of use by specific information category allows a second, albeit qualitative, comparison of the U.S. and Canadian markets. As noted, Figure 1 shows usage by information type for the Canadian market. Figures 2 & 3 show the use of information types measured by individual subscription and company subscription (respectively), identified in the LINK Report.

Figure 2

Type of Information Used by Individual Subscribers (U.S.)

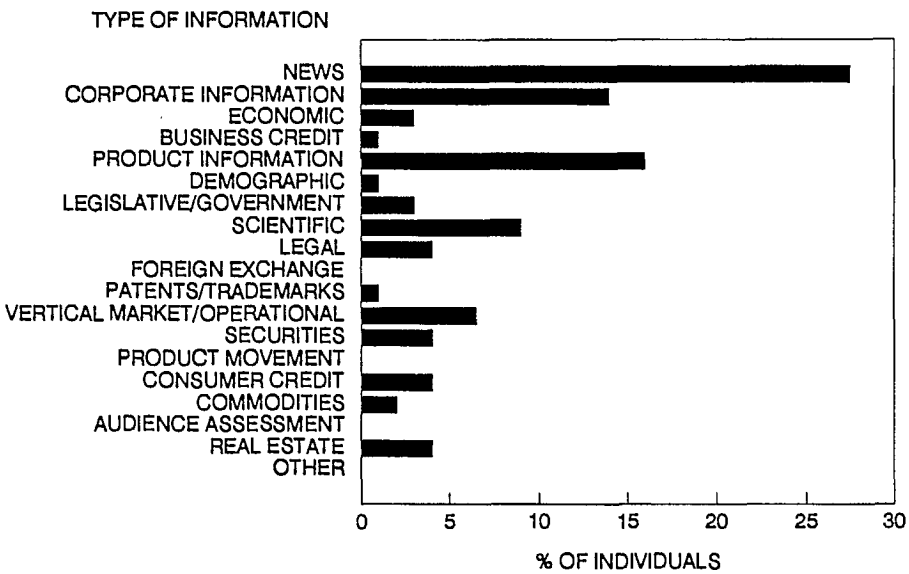
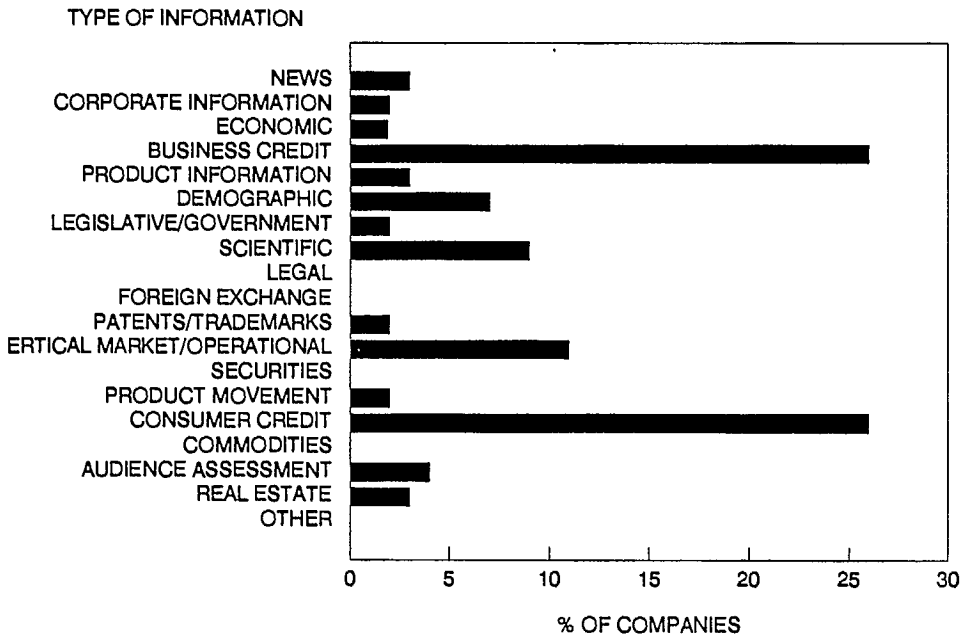


Figure 3

Use of Information by Company Subscriptions (U.S.)

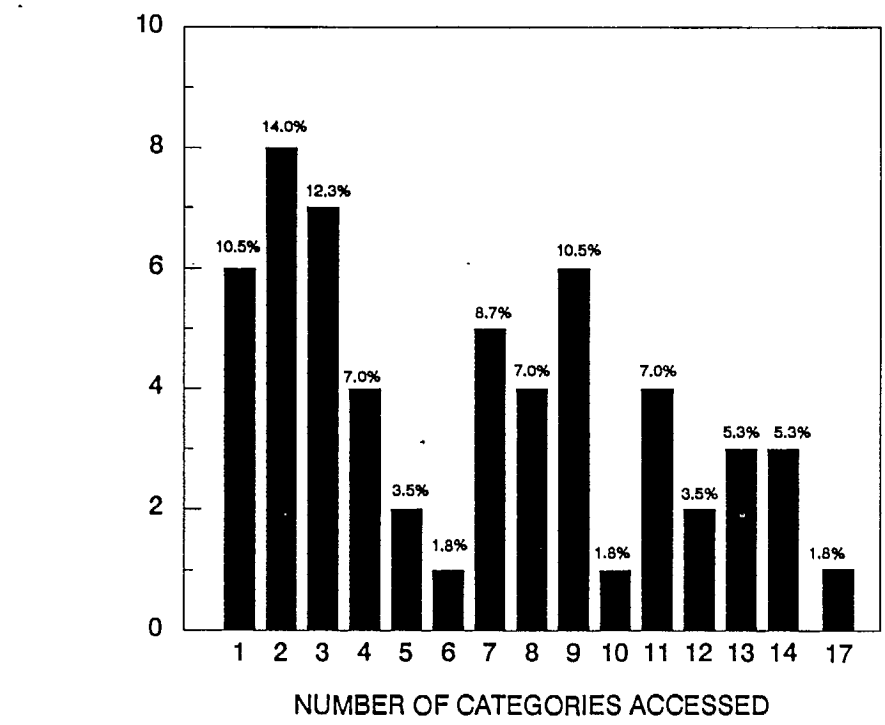



The Canadians in this study mentioned use of almost every category of information to a greater extent than would have been predicted by the U.S. data, especially corporate and economic information. On the other hand, business and consumer credit may play a more important role in the U.S. market.

The average number of categories of online information mentioned by respondents was 6.5. The distribution of respondents by number of categories is shown in Figure 4.

Figure 4

Distribution of Respondents by Number of Categories of Online Information Accessed



### 3.2.3 Growth by Information Category

Users were asked what information categories they expected to add over the next five years.

Interestingly, respondents generally expected no major changes in the categories of information that their organizations were likely to access, with only 27 total mentions of new information types. As well, no information category was mentioned by more than three users, suggesting that usage of specific categories will remain relatively stable in the foreseeable future (Table 7).

Table 7

Frequency of Mention of New Information Types

| No. of Mentions | Information Type |
|---|---|
| 3 | Corporate Information |
| 3 | News |
| 3 | Real Estate |
| 3 | Securities |
| 2 | Demographic |
| 2 | Economic |
| 2 | Legislative & Government |
| 2 | Vertical Market/Operational |
| 2 | Other |
| 1 | Commodities |
| 1 | Foreign Exchange & Money Market |
| 1 | Legal |
| 1 | Product Information |
| 1 | Scientific |
| 27 | Total |

The fact that there were relatively few mentions of additional information categories does not imply that use within specific types of information will not increase. However, the data suggest that the range of online information services currently available is generally sufficient to serve users' needs, and that job functions are specific enough that diversity is unlikely in terms of type of information.

A note of caution in this interpretation is advised. In studies of this nature, "future intentions for purchase" is extremely difficult for users to assess, especially when they lack hands-on experience with the alternatives available.

### 3.2.4 Information Services Used

*Major Vendors*

A total of 67 separate database vendors and services were mentioned by the 57 respondents. The majority of these were related to specific job or economic sector functions, and were mentioned less than 5 times (including 38 single mentions). Thirteen vendors were mentioned by five or more respondents (Table 8).

Table 8

Frequency of Mentions of Specific Database Vendors or Services

| Number of Mentions | Number of Services |
|---|---|
| 5 or more | 13 |
| 4 | 2 |
| 3 | 4 |
| 2 | 10 |
| 1 | 38 |

The use of such varied databases (like the data related to use of new information types) suggests that there are not obvious voids that are not being met in today's on-line information environment.

The frequency of mention of specific vendors cannot be suggested to be representative of users in Canada for a variety of reasons:

> The sample in this study is not representative of all users in Canada.

> Users often do not differentiate information providers vs. producers vs. retailers, and more specifically, may not distinguish databases accessed through "gateways" from the vendor distributing the service.

However, those vendors mentioned most frequently are expected to represent the largest players in the Canadian market and are thus presented (alphabetically) in the context of the above caveats:

## Canadian Services

CAN/OLE
CSG
Dun & Bradstreet
FP Online
Info Globe
Infomart
IP Sharp
QL Systems

## U.S.-based Services

BRS
Dialog
Dow Jones
Mead Data
Pergamon/Orbit

*Use of Major Canadian vs. U.S. vendors*

Among those services mentioned most frequently (i.e. by 5 or more users), the ratio of total mentions of Canadian vs. U.S. vendors was 2:1, suggesting the very high awareness and visibility of Canadian vendors.

Users were asked to estimate the amount of log-on time and budget spent on Canadian versus U.S. services, as well as how they expected the ratio to change by 1991. Respondents perceive that slightly more than 50% of both time and budget are currently spent on Canadian services. By 1991, use of Canadian services is expected to increase, with log-on time increasing at a somewhat faster rate than spending (Table 9).

Table 9

Use of Canadian vs U.S. Services:

| | 1987 Cdn/US | 1991 Cdn/US |
|---|---|---|
| Log-on time | 55/45 | 65/35 |
| Budget | 53/47 | 58/42 |

### 3.2.5 Average Monthly Expenditures

Spending estimates varied widely between respondents, and many (32%) could not or would not provide spending figures. As well as the usual limitations of a study of this nature in determining budgets, it may also be suggested that:

> When usage is decentralized, the respondent may be aware of the types of services used, but not the amount spent for these services.

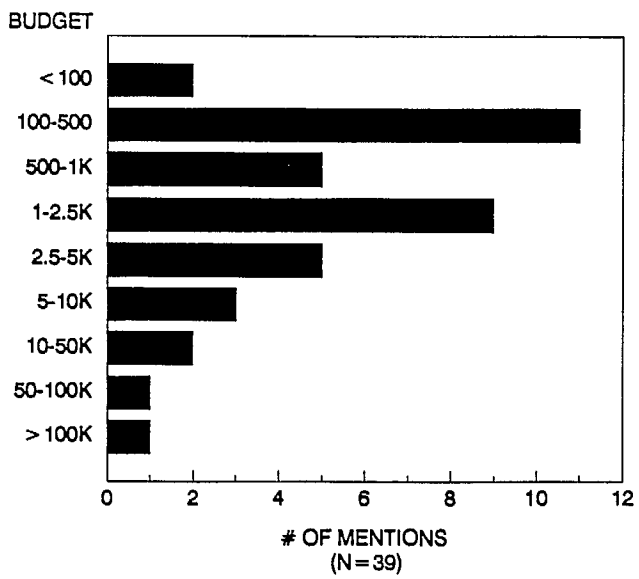
> Budgets for online information services may not be accounted for separate from other information and resources budgets.

Remembering that the organizations contacted for this study represented large entities who were expected to be major online information users, it may not be surprising that the average monthly expenditures for 1987 was reported at $15,950.

However, spending ranges varied from less than $100 to more than $100K (Figure 5), suggesting that average monthly figures are skewed by a small number of users in the upper end of the range. The more realistic spending figure may be the median dollar value, which falls in the range of $1,000 to $2,500 per month.

Figure 5

Monthly Expenditures



Even fewer respondents (22 or 38%) were willing to project their spending to 1991. However, among those that did, the compound annual growth rate was 6% to 8%.

### 3.2.6 Distribution Media

In addition to online interactive information, magnetic tape was used by a significant number of respondents in this study (21%) (see Table 10). While other alternatives were mentioned less frequently, the use of CD ROM was surprisingly high compared to reported use in the U.S.

Table 10

Distribution Medium

| Distribution Medium | #Mentions | % of All Mentions | % of Users |
|---|---|---|---|
| Online Database, Interactive | 56 | 65% | 98% |
| Magnetic Tape | 12 | 14% | 21% |
| CD-ROM | 7 | 8% | 12% |
| Floppy Disk | 5 | 6% | 8% |
| Online Databases, Broadcast | 3 | 3% | 5% |
| Interactive Voice, Audiotex | 3 | 3% | 5% |
| Total | 86 | 100% | |

### 3.2.7 Attitudes Towards the Cost of Online Information

Users were asked to rate online information services on a scale that varied from "very affordable" to "prohibitively costly" (Table 11).

Almost half of users declined to answer the question. Of the remainder, only 6% rated services as affordable, while 94% rated the service from "affordable to somewhat overpriced" to "prohibitively costly". The majority of respondents believed online information services to be "somewhat overpriced".

Table 11

Attitude Toward Cost of Online Information

| Attitude | # of Mentions | % of Mentions |
|---|---|---|
| Very Affordable | 0 | 0% |
| Affordable | 2 | 6% |
| Affordable to Somewhat Overpriced | 5 | 16% |
| Somewhat Overpriced | 18 | 56% |
| Somewhat Overpriced to Prohibitively Costly | 2 | 6% |
| Prohibitively Costly | 5 | 16% |
| Total | 32 (56% of users) | 100% |

The data does not suggest that, in fact, online services *are* overpriced -- merely that users *perceive* them to be -- and this was also reflected in the specific comments provided by users. However, a number of users also noted that:

> More education is required in the price/value of on-line information services

> The end-users of information and corporate decision makers are currently not educated in the concept of *paying* for information, given the wealth of information that is apparently available without charge or at cost.

As important, given that these respondents -- representing large organizations who have experience with online information services -- perceive services to be somewhat costly, it may be essential to determine whether this perception of price is a critical factor impacting acceptance by non-users.

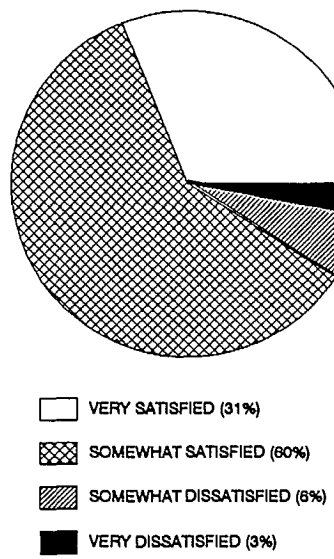
However, of note, users were not asked to rate the prices for online services in relation to the value received -- especially in terms of the variety of tactical and strategic advantages they provide and the gains which they can allow. As is identified in Phase II, although users may rate online services as "somewhat overpriced" on a scale of one to five, services are generally perceived as affordable.

### 3.2.8 Level of Satisfaction with Current Online Information

Users were asked to identify their level of satisfaction with existing online information by information type. As shown in Figure 6, users are generally satisfied with their current services, with 91% of ratings falling into the categories of "very satisfied" to "somewhat satisfied" across all information types.

Figure 6

Satisfaction Ratings Across All Types of Information
(% of all ratings)



# Section 4:

# Phase II

# 4. PHASE II

## 4.1 Methodology

### 4.1.1 Objectives

Phase I suggested that the online information market among users in Canada is relatively healthy. Awareness is high, the level of satisfaction is high, and no major voids in information types are obvious. Increased Canadian coverage, as well as software enhancements to improve ease of use, are required, but this direction is consistent with the objectives of online information vendors. While the general perception is that the price of online services may be slightly high, there is no evidence that lowering price will stimulate use.

However, the penetration of use of online services appears lower than would be expected at this stage of the industry's development. Even though a high-use job category (i.e. librarian) was targeted among large and leading organizations in Phase I, users could not be located in 36% of contacted organizations.

The objective of Phase II was therefore to determine the major inhibitors to use among non-users of online information.

### 4.1.2 Scope

Key areas of investigation in Phase II include:

> The use of specific types of information

> Distribution media

> Frequency of use of sources

> Canadian vs U.S. sources

> Perceptions of online services in terms of price, ease of use, etc.

> The impact of centralized vs decentralized information resource systems

> The impact of penetration of PC's

> Awareness of specific sources of online information

### 4.1.3 Method

The results of Phase II are based on a survey of 97 respondents representing 42 organizations. As in Phase I, the survey was conducted by telephone, using a brief (10 to 15 minute), structured questionnaire. All interviews were conducted in English. A copy of the questionnaire appears as Appendix B.

The sample was not random, nor considered representative of all non-using organizations in Canada. Instead, target organizations included those where users could not be located during Phase I, and additional organizations representing low-use economic sectors. Again, the focus was on the FP500, or other large

organizations that were considered representative of each sector.

IDC attempted to complete three (3) paired interviews in each contacted organization: one with the librarian or information resource centre manager, one with a marketing manager, and one with a corporate financial analyst. These individuals were expected to be among those most likely to be using online information services, based on Phase I results. That is, if users were to be found in these low-use sectors, they would most likely holding "information intensive" job functions such as librarian, marketing manager or financial analyst.

### 4.1.4 Sampling method

*Sample Frame*

IDC began by re-examining the list of 32 organizations where users were not located during Phase I.

Fifteen (15) of the original list of 32 Phase I organizations were contacted to determine whether

a. librarians existed on a departmental basis

b. online users with other job functions (i.e. marketing and finance) could be located.

Seventeen (17) organizations from the original list were replaced for the following reasons:

1. Industry associations (where users were not found in Phase I) were replaced by FP500 or other well-known organizations that would be considered more representative of the sector.

2. Organizations were added or replaced to ensure that the results were representative of the sector. For example, the credit card company in Phase I primarily handled transaction processing, while marketing and customer service were handled by financial institutions (already known to be a high use sector). In Phase II, this company was replaced by another credit card company that was independent of financial institutions.

As well, 10 organizations were added to provide a larger base for analysis and comparison.

The final sample was therefore comprised of the following (Table 12):

Table 12

## Sample Selection

| | Total | Ph I | Phase II | | |
|---|---|---|---|---|---|
| | # of Orgs | Users Not Found | From Orig Ph I List | Re-placed | Added to Sector |
| Agriculture | 4 | 3 | 2 | 1 | 1 |
| Construction & Building Materials | 2 | 2 | | 2 | |
| Consumer Electronics | 3 | 2 | 2 | | 1 |
| Containers & Packaging | 2 | 2 | 1 | 1 | |
| Credit Card | 1 | 1 | | 1 | |
| Education & Non-profit | 3 | 3 | 1 | 2 | |
| Energy/Fuel | 1 | 1 | 1 | | |
| Entertainment | 2 | 1 | 1 | | 1 |
| Health Care | 3 | 3 | 1 | 2 | |
| Household & Personal Care Products | 3 | 1 | 1 | | 2 |
| Industrial Conglomerates | 2 | 2 | 1 | 1 | |
| Legal & Accounting | 3 | 3 | | 3 | |
| Lodging & Food Services | 4 | 3 | 2 | 1 | 1 |
| Publishing/Printing | 2 | 1 | | 1 | 1 |
| Retailing | 2 | 1 | 1 | | 1 |
| Telecommunications | 1 | 0 | | | 1 |
| Transportation (Freight) | 4 | 3 | 1 | 2 | 1 |
| | 42 | 32 | 15 | 17 | 10 |

### 4.1.5 Composition of Respondents

*Job Function*

In total, 42 organizations were included in the initial Phase II analysis, for a total of 126 potential completions. However, in 29 instances, respondents with the targeted job function could not be found within the organization.

The job function of librarian was most likely to be "not found" (Table 13). These organizations typically had no centralized facilities for searching for information, and instead used less formal resource centres (e.g. mini-libraries for publications) typically located within various departments. IDC conducted informal interviews with the person responsible for these centres and found that they were invariably managed on a part-time basis by secretaries.

Table 13

No. of Occurrences Where Specific Job Function was Not Found

| | |
|---|---|
| Central librarians/ Information Resource Personnel | 26 |
| Marketing Managers | 2 |
| Financial Analysts | 1 |

The occurrences by economic sector are shown in Table 14.

Table 14

No. of Occurrences Where Specific Job Function was Not Found, By Economic Sector

| Economic Sector | Total No. of Organizations | # Where Job Function Was Not Found | | |
|---|---|---|---|---|
| | | Librarian | Marketing | Finance |
| Agriculture | 4 | 3 | | |
| Construction & Building Materials | 2 | 2 | | |
| Consumer Electronics | 2 | 2 | | |
| Containers & Packaging | 2 | 2 | | |
| Credit Card | 1 | 1 | | |
| Education/Non-profit | 1 | 1 | | 1 |
| Energy | 1 | | | |
| Entertainment | 2 | 2 | | |
| Health Care | 2 | 1 | 1 | |
| Household & Personal Care | 3 | 3 | | |
| Industrial Conglomerate | 1 | 1 | 1 | |
| Legal & Accounting | 3 | | | |
| Lodging & Food Services | 4 | 4 | | |
| Publishing | 1 | 1 | | |
| Retail | 1 | 1 | | |
| Telecommunications | 1 | | | |
| Transportation (Freight) | 4 | 2 | | |
| Total Not Found | | 26 | 2 | 1 |
| Total Respondent Base | 42 | 16 | 40 | 41 |

Those instances where marketing or finance respondents did not exist represented a clear minority across all sectors, but were a logical extension of the primary activity of the organization. For example, in the industrial conglomerate included in the study, neither a librarian nor marketing manager was located. These functions would be performed in the subsidiary companies owned by this parent. The non-profit organization is well-known but small in terms of staff, with the president managing the financial operations of the company.

*Type of Organization*

Eighty percent of the organizations surveyed in Phase II are included in the FP500 list. The remaining 20% were well-known organizations representing the following sectors: entertainment (1), credit card (1), household & personal care (1), health care (1), education/nonprofit (3).

*Geographic Distribution*

The distribution of Phase II organizations by geographic region is shown in Table 15.

Table 15

Geographic Distribution of Organizations

| Region | # of Org | % of Org |
|---|---|---|
| British Columbia | 1 | 2% |
| The Prairies | 5 | 12% |
| Ontario | 27 | 64% |
| Quebec | 9 | 21% |
| Total | 42 | *100% |

*May not add to 100% due to rounding

The sample of companies in Phase II was more heavily weighted toward central Canada than would be predicted by the distribution of FP500 companies. This resulted from geographic distribution bias introduced by organizations included in Phase I, and the fact that the sample included a range of economic sectors that are not necessarily evenly distributed geographically.

### 4.1.6 Areas of Questioning

Based on Phase I results, several hypotheses were developed to explain major inhibitors to use of online information services. These included:

> Individuals are satisfied with their current sources of information, and are not motivated to change from current methods.

> Sources are used infrequently.

> There is a low recognition of the availability of online services.

> There is a low level of awareness of online alternatives to current sources.

> There is a low level of experience with online services and its benefits.

> Organizations that do not have central library facilities are less likely to use online information.

> Users' needs are primarily met through internal information and information that is available free of charge. Non-users consider price of online services to be an inhibitor.

> There is a low penetration rate of PCs/workstations, especially with modems, that makes ease of access an inhibiting factor.

> Non-users hold attitudes that inhibit use, such as perception of price, ease of use, relevance of available online information, etc.

Phase II was intended to test these hypotheses or determine through respondents' other comments what factors might inhibit use, or alternatively, what methods might stimulate use.

## 4.2 Overview of Results

There are several critical factors affecting the use of on-line information today.

This study identified the following:

1. Online users differ in several respects from non-users, including the way in which information is organized within their company, the types and sources of information used, and their attitude toward online services.

2. The organization of information within the company -- whether it is centralized in one location or decentralized on a departmental basis -- also has a major effect on the use of and attitude towards information within the company.

3. The attitudes of potential users can be differentiated on the basis of following perceptions:

   > The demand for information within the organization

   > The expectation that the budget for information will increase in the following year

   > The affordability of electronic information services

   > The relevance of electronic information services.

Several other factors were included in the analysis but appear to be much less relevant. This includes previous experience with online services, awareness of specific al-

ternatives to current sources, or the fact that online services have been considered at some point.

As well, attitudes towards ease of use, the likelihood of using based on the financial performance of the company or general economic conditions, marketing efforts of vendors, corporate awareness of online services, and word-of-mouth regarding online services appear much less critical to differentiating potential users than the attitudes noted above.

In this section, a general overview of findings is provided, with these three critical areas presented at length.

### 4.2.1 Distribution of Respondents

The distribution of respondents (excluding those where specific job functions were not found in the organization) by type of company and job function is shown in Table 16.

Table 16

Completed Interviews by Economic Sector and Job Function of Respondent

| Economic Sector | No. of Orgs | No. of Resp | Completed Interviews Libr | Mktg | Fin'l |
|---|---|---|---|---|---|
| Agriculture | 4 | 9 | 1 | 4 | 4 |
| Construction & Building Materials | 2 | 4 | 0 | 2 | 2 |
| Consumer Electronics | 3 | 7 | 1 | 3 | 3 |
| Containers & Packaging | 2 | 4 | 0 | 2 | 2 |
| Credit Card | 1 | 2 | 0 | 1 | 1 |
| Education/Non Profit | 3 | 7 | 2 | 3 | 2 |
| Energy | 1 | 3 | 1 | 1 | 1 |
| Entertainment | 2 | 4 | 0 | 2 | 2 |
| Health Care | 3 | 7 | 2 | 2 | 3 |
| Household & Personal Care | 3 | 6 | 0 | 3 | 3 |
| Industrial Conglomerate | 2 | 4 | 1 | 1 | 2 |
| Legal & Accounting | 3 | 9 | 3 | 3 | 3 |
| Lodging & Food Service | 4 | 8 | 0 | 4 | 4 |
| Publishing/Printing | 2 | 5 | 1 | 2 | 2 |
| Retailing | 2 | 5 | 1 | 2 | 2 |
| Telecommunications | 1 | 3 | 1 | 1 | 1 |
| Transportation (Freight) | 4 | 10 | 2 | 4 | 4 |
| Total | 42 | 97 | 16 | 40 | 41 |

In the methodology section, it was noted that the job function of librarian did not exist in a significant number (62%) of these companies or organizations. In these cases, information is maintained on a local or departmental basis -- typically by a secretary who includes it with other job functions. This finding is significant -- it may reflect not only the way in which available information is organized, but the demand for, or value of, information to these organizations.

### 4.2.2 Users vs Non-Users of Online Information

*Distribution of Users*

Twenty of the 97 respondents were users of online information services.

Generally, the penetration of online use across all economic sectors in Phase II was found to be low (Table 17). Penetration within the retail, entertainment and publishing/printing sectors in Canada is substantially lower than would have been predicted by U.S. market data. However, the results of low use in household/personal care products, construction & building materials, and the containers & packaging sectors is generally consistent with U.S. market figures.

Needless to say, this comparison with U.S. data will be somewhat misleading, based on different methods of deriving the data. It is clear that if the extent of online information was equivalent in Canada and the U.S., this study should find higher levels of reported use. It is, after all, the leading companies in Canada that are included in this study, and one can presume that if online information services are not penetrating these companies, they are also unlikely to be penetrating smaller companies in the same economic sectors.

Table 17

## Users of Online Information by Economic Sector

| Economic Sector | No. of Orgs | No. of Resp | No. of Users | %. of R | No. of Non-Users | % of R |
|---|---|---|---|---|---|---|
| Agriculture | 4 | 9 | 1 | 11% | 8 | 89% |
| Construction & Building Materials | 2 | 4 | 0 | 0% | 4 | 100% |
| Consumer Electronics | 3 | 7 | 2 | 29% | 5 | 71% |
| Containers & Packaging | 2 | 4 | 0 | 0% | 4 | 100% |
| Credit Card | 1 | 2 | 1 | 50% | 1 | 50% |
| Education/Non Profit | 3 | 7 | 2 | 29% | 5 | 71% |
| Energy | 1 | 3 | 1 | 33% | 2 | 67% |
| Entertainment | 2 | 4 | 0 | 0% | 4 | 100% |
| Health Care | 3 | 7 | 1 | 14% | 6 | 86% |
| Household & Personal Care | 3 | 6 | 0 | 0% | 6 | 100% |
| Industrial Conglomerate | 2 | 4 | 1 | 25% | 3 | 75% |
| Legal & Accounting | 3 | 9 | 4 | 44% | 5 | 56% |
| Lodging & Food Service | 4 | 8 | 1 | 13% | 7 | 87% |
| Publishing/Printing | 2 | 5 | 0 | 0% | 5 | 100% |
| Retailing | 2 | 5 | 0 | 0% | 5 | 100% |
| Telecommunications | 1 | 3 | 2 | 67% | 1 | 33% |
| Transportation (Freight) | 4 | 10 | 4 | 40% | 6 | 60% |
| Total | 42 | 97 | 20 | 21% | 77 | 79% |

Not surprisingly, librarians were most likely to be users (63%) compared to other job functions (Table 18). While this speaks well for the penetration of online services among this group, it must be remembered that the position of librarian did not exist in the majority of the 42 companies contacted. That is, of major companies and organizations across all "low use" sectors, 62% did not have a librarian, 24% had librarians who were online users and 14% had librarians who were not using online services.

Seventeen per cent (17%) of respondents from financial-related job functions were using online information, although it is in the transportation (freight) sector that users were concentrated. In this sector, they were the most likely of job categories to be using online information. In other sectors, penetration of online services is low.

Across all sectors, the penetration of online services among marketing respondents is lowest (8%). This sharply contrast with figures from the U.S., where marketers represented the third highest usage category, ahead of both librarians and financial analysts.

Table 18

Job Function of Users of Online Information by Economic Sector

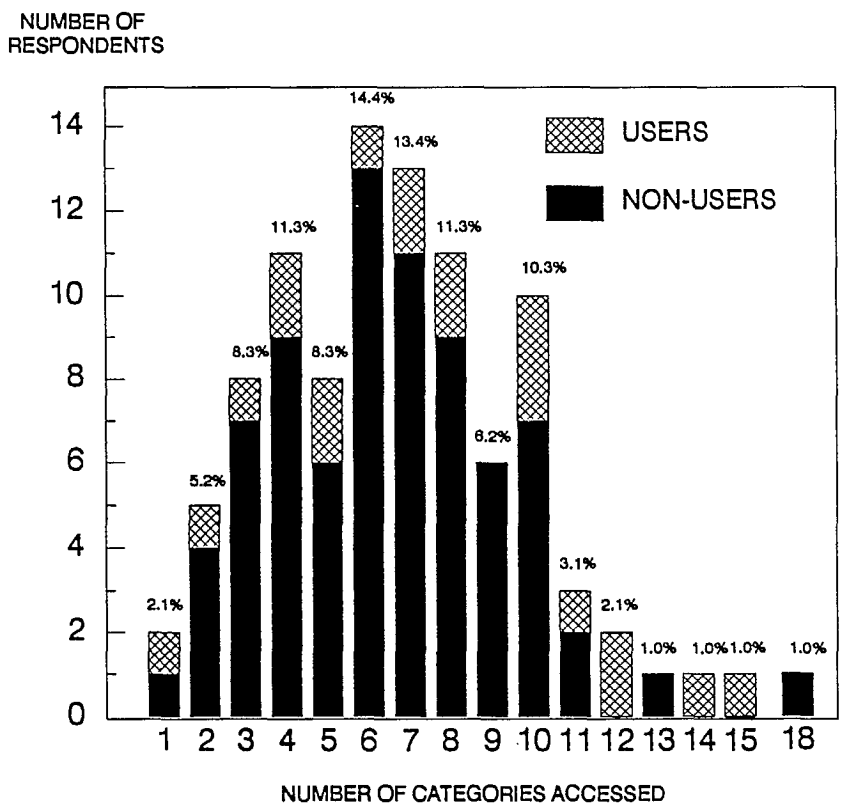
| Economic Sector | No. of Organizations | Librarians #Resp | Librarians #Users | Marketing #Resp | Marketing #Users | Finance #Resp | Finance #Users |
|---|---|---|---|---|---|---|---|
| Agriculture | 4 | 1 | 0 | 4 | 1 | 4 | 0 |
| Construction & Building Materials | 2 | 0 | 0 | 2 | 0 | 2 | 0 |
| Consumer Electronics | 3 | 1 | 0 | 3 | 0 | 3 | 2 |
| Containers & Packaging | 2 | 0 | 0 | 2 | 0 | 2 | 0 |
| Credit Card | 1 | 0 | 0 | 1 | 0 | 1 | 1 |
| Education/Non Profit | 3 | 2 | 2 | 3 | 0 | 2 | 0 |
| Energy | 1 | 1 | 1 | 1 | 0 | 1 | 0 |
| Entertainment | 2 | 0 | 0 | 2 | 0 | 2 | 0 |
| Health Care | 3 | 2 | 1 | 2 | 0 | 3 | 0 |
| Household & Personal Care | 3 | 0 | 0 | 3 | 0 | 3 | 0 |
| Industrial Conglomerate | 2 | 1 | 1 | 1 | 0 | 2 | 0 |
| Legal & Accounting | 3 | 3 | 3 | 3 | 1 | 3 | 0 |
| Lodging & Food Service | 4 | 0 | 0 | 4 | 0 | 4 | 1 |
| Publishing/Printing | 2 | 1 | 0 | 2 | 0 | 2 | 0 |
| Retailing | 2 | 1 | 0 | 2 | 0 | 2 | 0 |
| Telecommunications | 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| Transportation (Freight) | 4 | 2 | 1 | 4 | 0 | 4 | 3 |
| Total | 42 | 16 | 10 | 40 | 3 | 41 | 7 |
| % Users | 20% | | 63% | | 8% | | 17% |

*Usage by Type of Information*

Respondents from Phase II mentioned an average of 6.7 information types, very similar to the 6.5 categories mentioned by online users in Phase I. The distribution of respondents by the number of information categories mentioned is shown in Figure 7.

Figure 7

Distribution of Respondents by Number of Categories of Information Accessed



The distribution of mentions is shown in Table 19.

Compared to Phase I users of online information, these respondents showed much greater use of legislation & government information. On the other hand, they were less likely to use scientific, business and consumer credit and patents and trademark information.

Table 19

Information Usage by Category of Information

| Information Category | # of Mentions | % of Mentions | % of R | Avg. Rating |
|---|---|---|---|---|
| News | 77 | 12% | 79% | 3.9 |
| Legislation & Government | 71 | 11% | 73% | 3.6 |
| Corporate Information | 70 | 11% | 72% | 3.4 |
| Economic | 68 | 10% | 70% | 3.5 |
| Product Information | 44 | 7% | 45% | 3.9 |
| Demographic | 43 | 7% | 44% | 3.3 |
| Foreign Exchange & Money Markets | 40 | 6% | 41% | 4.0 |
| Legal | 39 | 6% | 40% | 4.1 |
| Product Movement | 32 | 5% | 33% | 3.9 |
| Securities | 30 | 5% | 31% | 3.6 |
| Business Credit | 26 | 4% | 27% | 3.3 |
| Vertical Market/Operational | 22 | 3% | 23% | 3.3 |
| Commodities | 19 | 3% | 20% | 3.6 |
| Patents & Trademarks | 18 | 3% | 19% | 4.1 |
| Scientific | 18 | 3% | 19% | 4.1 |
| Audience Assessment | 15 | 2% | 15% | 3.7 |
| Consumer Credit | 12 | 2% | 12% | 3.8 |
| Real Estate | 10 | 2% | 10% | 3.1 |
| Total | 654 | 100% | | 3.7 |
| Avg | 6.7 | | | |

News ranked first in both Phase I and Phase II as the prime type of information used. In fact, news sources were used by 79% of Phase II respondents.

Users of online information contacted during Phase II mentioned an average of 7.7 categories of information (including online and other media), compared to non-users who mentioned an average of 6.5 categories. The average rating in terms of satisfaction with current sources was the same, at 3.7 (on a scale from 1 to 5, with 1 indicating "very dissatisfied" to 5, "very satisfied). These data are shown in Table 20.

Table 20

Information Usage by Category of Information

| Category of Information | Users (N=20) | | | Non-users (N=77) | | |
|---|---|---|---|---|---|---|
| | # of Mentions | % Total | Avg Rating | # of Mentions | % Total | Avg Rating |
| Audience Assessment | 2 | 10 | 2.0 | 13 | 17 | 4.0 |
| Business Credit | 8 | 40 | 2.0 | 18 | 23 | 3.8 |
| Commodities | 7 | 35 | 3.4 | 12 | 16 | 3.7 |
| Consumer Credit | 1 | 5 | 5.0 | 11 | 14 | 3.7 |
| Corporate Information | 16 | 80 | 3.2 | 54 | 70 | 3.4 |
| Demographic | 8 | 40 | 3.8 | 35 | 45 | 3.3 |
| Economic | 13 | 65 | 3.8 | 55 | 71 | 3.5 |
| Foreign Exchange and Money Market | 13 | 65 | 4.3 | 27 | 35 | 3.9 |
| Legal | 8 | 40 | 4.1 | 31 | 40 | 4.1 |
| Legislative & Government | 14 | 70 | 4.0 | 57 | 74 | 3.5 |
| News | 18 | 90 | 4.1 | 59 | 77 | 3.8 |
| Patents & Trademarks | 5 | 25 | 3.6 | 13 | 17 | 4.2 |
| Product Information | 12 | 60 | 3.8 | 32 | 42 | 3.9 |
| Product Movement | 7 | 35 | 4.0 | 25 | 32 | 3.9 |
| Real Estate | 1 | 5 | 2.0 | 9 | 12 | 3.2 |
| Scientific | 7 | 35 | 4.0 | 11 | 14 | 4.1 |
| Securities | 10 | 50 | 3.8 | 20 | 26 | 3.6 |
| Vertical Market/Operational | 4 | 20 | 3.5 | 18 | 23 | 3.3 |
| Average | 7.7 | | 3.7 | 6.5 | | 3.7 |

For both groups of respondents, use of news, corporate, and legislative & government information were mentioned most frequently, with non-users also mentioning the use of economic information. Consumer credit, real estate and audience assessment data were mentioned least frequently among both groups, with commodities, patents & trademark, and scientific information added to this list by non-users.

Major differences did occur in specific categories between those who use and do not use online sources. Business credit, commodities, foreign exchange & money market, scientific and securities information were much more likely to be mentioned by online users compared to non-users. Alternatively, while in relatively low use, consumer credit and real estate information appeared with a higher frequency of mention among non-users.

*Satisfaction Levels*

Generally, both groups were reasonably satisfied with their current sources of information. Since ratings provided by a small number of users of specific categories of information can significantly skew the data (positively or negatively), it is appropriate to compare ratings provided by 20% or more of respondents in both groups. In these cases, business credit sources were rated significantly higher by non-users, while demographic and legislative & government sources were rated higher by online users.

*Frequency of Use*

Users of online information services reported more frequent use of their sources of information compared to non-users. Table 21 identifies frequency of use for both groups.

Table 21

Frequency of Use of Information Sources

| | Users | | Non Users | |
|---|---|---|---|---|
| | # | % | # | % |
| At least once a day | 17 | 85% | 38 | 49% |
| At least once a week | 2 | 10% | 25 | 32% |
| At least once a month | 1 | 5% | 10 | 13% |
| Less than once a month | 0 | 0% | 4 | 5% |
| | 20 | 100% | 77 | *100% |

May not add to 100% due to rounding

*Distribution Media*

Users of online information reported use of a variety of other electronic media, especially compared to non-users, with more frequent mention of use floppy disk, online broadcast databases, CD-ROM, and audiotex. Non-users did however report greater use of magnetic tape. "Other" categories of information by users included telephone (2), electronic mail, microfiche (2) and telex (1). Non-users, on the other hand, reported receiving information through personal contact via telephone or in person (13). Table 22 identifies use by media for users and non-users.

Table 22

Distribution Media by Type of Respondent

| Media | Users (N=20) # | Users (N=20) % of R | Users (N=20) % of Mentions | Non Users (N=77) # | Non Users (N=77) % of R | Non Users (N=77) % of Mentions |
|---|---|---|---|---|---|---|
| Printer Publications | 20 | 100% | 33% | 76 | 99% | 65% |
| Online Interactive Databases | 20 | 100% | 33% | 0 | 0% | 0% |
| Magnetic Tape | 1 | 5% | 2% | 7 | 9% | 6% |
| CD-ROM | 1 | 5% | 2% | 0 | 0% | 0% |
| Floppy Disk | 7 | 35% | 12% | 17 | 22% | 15% |
| Online Broadcast Databases | 4 | 20% | 7% | 2 | 3% | 2% |
| Audiotex | 1 | 5% | 2% | 2 | 3% | 2% |
| Other* | 6 | 30% | 10% | 13 | 17% | 11% |
| Total | 60 | | 100% | 117 | | 100% |

* Users: Includes telephone, electronic mail, microfiche and telex
Non-users: Includes personal contact via telephone or in person

*Use of Information by Source*

Those who used online services reported a very different distribution of the sources of their information.

Where non-users rely on internal information as their primary source (averaging 48% of information), users tend to rely instead on external information for which a fee is paid as their primary source (Figure 23).

Table 23

Use of Information Through Different Sources

| | Users (N=20) Average Distrib of Info | Non-Users (N=77) Average Distrib of Info |
|---|---|---|
| Internal | 29% | 48% |
| External, Free of Charge | 23% | 25% |
| External, with Fees | 48% | 27% |
| Total | 100% | 100% |

*Canadian vs U.S. sources*

Users of online information also appear to be located in organizations whose perspective, by design or default, tends to be more international.

In both cases, Canadian sources are used in the majority of cases. However, users rely on U.S. and international sources to a much greater extent than non-users (Table 24).

Table 24

Canadian vs U.S./International Sources of Information

| | Users (N=20) Average Distrib of Info | Non-Users (N=77) Average Distrib of Info |
|---|---|---|
| Canadian Sources | 58% | 74% |
| U.S./International Sources | 42% | 26% |
| Total | 100% | 100% |

*Penetration of PCs/ Workstations*

One would expect that users of online information would have their own or access to a PC or workstation, and that the majority would use terminals with a modem. This is borne out by the results shown in Table 25.

Table 25

PC/Workstation Access

| | Users | | | Non-Users | | |
|---|---|---|---|---|---|---|
| | # of R | # of R | % of R | # of R | # of R | % of R |
| Have PC/Wkstation | 18 | | 90% | 51 | | 66% |
| With Modem | | 15 | 75% | | 14 | 18% |
| Do Not Have | 0 | | 0% | 5 | | 6% |
| Plan to | | 0 | 0% | | 4 | 5% |
| Have Access | 2 | | 10% | 21 | | 27% |
| Use Frequently | | 2 | 10% | | 2 | 4% |
| With Modem | | 1 | 5% | | 1 | 13% |
| Totals | 20 | | | 77 | | |

However, the penetration of PCs/workstations in the group of non-using respondents is also very high (66%), although modems tend to appear much less frequently (18%). In fact, only 6% of respondents did not have their own or access to a PC/workstation (although access might be made infrequently).

*Attitudes of Users and Non-Users*

Respondents were asked whether they agreed or disagreed with 11 statements related to electronic information services.

Generally, the attitudes of users toward online services are very positive (Table 26). They believe it is relevant to their needs and affordable. The demand for information within their department is perceived as high, especially for competitive information. They often agree however, that both the financial performance of their company and the economy are likely to affect their use of electronic information services.

Table 26

Attitudes of Users and Non-users

| | Users (N=20) Agree | Non-users (N=77) Agree | % Difference |
|---|---|---|---|
| a. The cost of electronic information services is affordable. | 80% | 58% | 22% |
| b. Electronic information services are difficult to use. | 10% | 6% | 4% |
| c. Suppliers of electronic information services are aggressive marketers. | 50% | 26% | 24% |
| d. The information available electronically is relevant to my needs. | 95% | 48% | 47% |
| e. The financial performance of my company affects my likelihood of using electronic information services. | 55% | 31% | 24% |
| f. The economy affects my likelihood of using electronic information services. | 45% | 29% | 16% |
| g. I anticipate an increase in my department's expenditures for information in the following year. | 50% | 47% | 3% |
| h. There is a high awareness within my department of electronic information services. | 60% | 31% | 29% |
| I. There is a high demand for information within my department. | 80% | 66% | 14% |
| j. There is a high demand for competitive information within my department. | 70% | 49% | 21% |
| k. I have heard positive things about electronic information services from other users. | 65% | 47% | 18% |
| "Don't know" to one or more statements. | 20% | 34% | -14% |

To a lesser extent, non-users also believe that there is a high demand for information within their department and that online services are affordable. Close to half believe that electronic information may be relevant to their needs. However, significantly fewer believe that there is a high awareness within their department of electronic information services.

### 4.2.3 Use of Statistics Canada Information

The use of Statistic Canada information was widespread. Sixty four percent of respondents, including 86% of librarians, 57% of marketers and 62% of financial analysts reported using Stats Can data.

These respondents reported significantly higher use of both legislative & government and economic information compared to those who did not use Stats Can data (85% vs 45%, and 79% vs 48%, respectively).

They also reported a much higher ratio of external information, especially that for which a fee is charged (averaging 38% vs 21% of information), while those who did not use Stats Can used internal information to a much greater extent (62% vs 35%).

There was virtually no difference in the ratio of Canadian vs U.S./International sources, with both groups reporting just over 70% of sources as Canadian.

While 68% of online users reported using Stats Can, by far the most common delivery medium was printed publications (98%), with only one report of online use. Another two respondents identified that in addition to print, they also used Stats Can data on microfiche.

Sixty five percent of Stats Canada users reported that they obtained the material directly from government sources. Another 12% reported receiving the information from selling agents. In the remaining 23% of cases, the respondent was not sure what original source had been used (17%) or specifically identified that it had come through others in the organization (6%).

### 4.2.4 The Impact of Centralized vs Decentralized Information Resource Facilities

*Distribution of Respondents*

Thirty five respondents (36%) identified that their company had a central location where employees search for information (i.e. most typically, centralized library facilities). The remaining 62 respondents (64%) identified that there was no central location within the organization where employees search for information.

However, report of centralized facilities varied within respondents from the same organization. In 11 organizations (26%) one respondent identified the existence of central facilities different from other respondents from the same company.

These 11 organizations are removed from the analysis, leaving a total of 31 organizations, and 67 respondents. Several of the relationships that emerge from comparison (Table 27) are intuitively obvious, such as the fact that those librarians included in the study are more much likely to appear in centralized organizations, and consistent with this, the number of respondents per organization is closer to the targeted number of three. Similarly consistent, users of online services are more likely to appear in organizations with centralized library facilities.

Table 27

## Comparison of Respondents Where Library Facilities Are Centralized vs Decentralized

| | Centralized | | | Decentralized | | |
|---|---|---|---|---|---|---|
| | # | % of Resp. | % of Mentions | # | % of Resp. | % of Mentions |
| No. of Respondents | 21 | 100% | | 46 | 100% | |
| No. of Companies | 8 | | | 23 | | |
| Avg. # of Respondents/ Company | 2.6 | | | 2.0 | | |
| No. of Online Users | 7 | 33% | | 5 | 11% | |
| No. of Library Respondents | 6 | 29% | | 1 | 2% | |
| No. of Marketing Respondents | 8 | 38% | | 22 | 48% | |
| No. of Fin. Analyst Respondents | 7 | 33% | | 23 | 50% | |
| Information Category: | | | | | | |
| Audience Assessment | 2 | 10% | 1% | 8 | 17% | 3% |
| Business Credit | 9 | 43% | 6% | 11 | 24% | 4% |
| Commodities | 5 | 24% | 3% | 8 | 17% | 3% |
| Consumer Credit | 2 | 10% | 1% | 8 | 17% | 3% |
| Corporate Information | 16 | 76% | 11% | 36 | 78% | 11% |
| Demographic | 9 | 43% | 6% | 23 | 50% | 7% |
| Economic | 14 | 67% | 9% | 33 | 72% | 11% |
| Foreign Exchange & Money Markets | 8 | 38% | 5% | 19 | 41% | 6% |
| Legal | 8 | 38% | 5% | 19 | 41% | 6% |
| Legislation & Government | 17 | 81% | 11% | 30 | 65% | 10% |
| News | 14 | 67% | 9% | 38 | 83% | 12% |
| Patents & Trademarks | 5 | 24% | 3% | 7 | 15% | 2% |
| Product Information | 10 | 48% | 7% | 21 | 46% | 7% |
| Product Movement | 8 | 38% | 5% | 18 | 39% | 6% |
| Real Estate | 2 | 10% | 1% | 7 | 15% | 2% |
| Scientific | 5 | 24% | 3% | 5 | 11% | 2% |
| Securities | 11 | 52% | 7% | 10 | 22% | 3% |
| Vertical Market/Operational | 5 | 24% | 3% | 12 | 26% | 4% |
| Other | 1 | 5% | 1% | 1 | 2% | 0% |
| Total Mentions | 151 | 100% | | 314 | 100% | |
| Average Mentions/Respondent | 7.2 | | | 6.8 | | |

*Usage by Type of Information*

In addition, the types of information used by respondents in these two groups appears to vary. For example, news is mentioned as a frequent source in both groups, but is mentioned more frequently by those in organizations with decentralized facilities. On the other hand, legislative and government information is the most frequently mentioned type of information by those in centralized organizations.

Although the decentralized group had a larger number of financial analysts included, the centralized group was more likely to mention the use of commodities and securities information.

The average number of information types mentioned by respondents is higher in the centralized group compared to the decentralized group.

*Use by Source*

Those with centralized information facilities are more accustomed to paying for information that they use. This group reported significantly higher use of external information for which a fee was charged, and less use of both internal information and external information available free of charge.

Table 28

Use of Information Through Different Sources

| | Centralized (N=21) Average Distrib of Info | De-centralized (N=46) Average Distrib of Info |
|---|---|---|
| Internal | 35% | 44% |
| External, Free of Charge | 22% | 29% |
| External, with Fees | 43% | 27% |
| Total | 100% | 100% |

*Canadian vs U.S. Sources*

Use of Canadian vs U.S. sources varied somewhat between the two groups, with those with centralized facilities tending to use more U.S./international sources (Table 29).

Table 29

Canadian vs U.S./International Sources of Information

| | Centralized (N=21) Average Distrib of Info | De-centralized (N=46) Average Distrib of Info |
|---|---|---|
| Canadian Sources | 68% | 74% |
| U.S./International Sources | 32% | 26% |
| Total | 100% | 100% |

*Penetration of PCs/ Workstations*

A similar proportion of respondents in both groups reported using a PC/workstation (67% vs 70%). Respondents with centralized facilities who did not have a PC/workstation had access to one (33%), while those with decentralized information facilities either had access (24%) or anticipated using a terminal in the future (2 of the 3 remaining respondents).

*Previous Experience with Online Services*

Approximately one third of respondents in both centralized and decentralized groups (7 and 16 respectively) had experience with online interactive databases. All in the centralized library group continued to be users. However, most respondents in the decentralized group with previous experience no longer used online services (11 or 70%) . The reasons given include: it applied to a previous job (7 or 63%), the information is available in an alternative media (1), it was abused (1) or rarely used (1).

*Awareness*

Non-users in the decentralized facilities group were far more likely to report that they have considered using online information services compared to non-users with centralized facilities (47% vs 24%) and that they were aware of specific online information alternatives for the information that they use (56% vs 19%).

Respondents in the centralized group tended to be significantly more aware of the following companies and the online information that they provide:

BRS
CAN/OLE
CSG
Infomart
IP Sharp
Mead Data
QL Systems

Users in the decentralized group were more familiar with:

Dialog (although less familiar with the services provided)
Dow Jones
Dun & Bradstreet
FP Online (although less familiar with the services provided)
IST

Both groups appeared equally familiar with Info Globe, with centralized users more frequently reporting familiarity with the services provided.

Respondents in the centralized group reported more frequent use of Statistics Canada data (76% vs 48%), with printed publications by far the most widely used media in both groups.

*Attitudes of Those with Centralized vs Decentralized Facilities.*

Those with centralized and decentralized facilities generally held very similar attitudes toward the use of electronic information services (Table 30).

Table 30

## Attitudes Related to Electronic Information Services

| | Central Facilities (N=21) Agree | Decentralized Facilities (N=46) Agree | % Difference |
|---|---|---|---|
| a. The cost of electronic information services is affordable. | 67% | 61% | 6% |
| b. Electronic information services are difficult to use. | 10% | 7% | 3% |
| c. Suppliers of electronic information services are aggressive marketers. | 33% | 33% | 0% |
| d. The information available electronically is relevant to my needs. | 67% | 54% | 13% |
| e. The financial performance of my company affects my likelihood of using electronic information services. | 14% | 30% | -16% |
| f. The economy affects my likelihood of using electronic information services. | 10% | 33% | -23% |
| g. I anticipate an increase in my department's expenditures for information in the following year. | 48% | 50% | -2% |
| h. There is a high awareness within my department of electronic information services. | 38% | 26% | 12% |
| i. There is a high demand for information within my department. | 67% | 70% | -3% |
| j. There is a high demand for competitive information within my department. | 48% | 59% | -11% |
| k. I have heard positive things about electronic information services from other users. | 57% | 37% | 20% |
| "Don't know" to one or more statements | 19% | 35% | -16% |

Those in organizations with centralized facilities more often tended to see electronic information services as relevant to their needs, and they believe that there was a high awareness within their department of electronic information services. Word of mouth about electronic information services also appears to be high, with more than half of respondents saying that they had heard positive things from other users. As important, they typically did not believe that either the financial performance of their company nor the economy would affect use.

### 4.2.5 Attitudes of Non-Users Toward Electronic Information Services

More than experience or awareness, *attitudes* toward information usage and electronic information services were critical in differentiating non-user groups.

Of the 11 attitude measures taken, the most significant factors are:

1. The perceived demand for information within the organization.

2. The expectation that budget for information will increase in the following year.

3. The perception of affordability of electronic information.

4. The perceived relevance of electronic information.

Least critical were:

1. Perception of ease of use.

2. Word of mouth.

3. The expectation that financial performance affects likelihood of use.

4. The perceived marketing efforts of vendors.

In this section, the four critical factors are considered.

*The Perceived Demand for Information within the Organization*

Of the 77 non-users, 51 (66%) agreed that there was a high demand for information within their department. This percentage was consistent across all three job categories.

The perception of demand for information was very consistent on a organization by organization basis.

> In 24 of the 42 organizations (57%), all respondents within the same organizations agreed that the demand for information in their department was high.

> In another 9 companies (21%), all respondents consistently did not agree with the statement.

> Only in 9 companies (21%) did individuals with various job functions perceived the demand for information within their respective departments differently.

In fact, the perception of demand for information appears to be as much related to the specific organization as the economic sector to which it belongs.

Those reporting a high demand for information did, as expected, report the use of a wider range of information types (6.9 categories compared to 5.7). As well, the level of previous experience with online services was higher, reported by 31% of respondents in the "high demand" group, compared to 12% in the other group.

The attitudes of those who agreed with the statement that "There is high demand for information within my department" also held significantly different opinions on the following, compared to their counterparts (Table 31):

> They also believe that there is a high demand for competitive information.

> They believe that the expenditures for information will increase in the following year.

> They believe that electronic information is relevant to their needs.

> They believe that the cost of electronic information services is affordable.

Table 31

## Perceived High Demand for Information (Agree to Statement I)

| | Agree (N=51) | Do Not Agree (N=26) | % Difference |
|---|---|---|---|
| a. The cost of electronic information services is affordable. | 75% | 27% | 48% |
| b. Electronic information services are difficult to use. | 6% | 8% | -2% |
| c. Suppliers of electronic information services are aggressive marketers. | 31% | 15% | 16% |
| d. The information available electronically is relevant to my needs. | 65% | 15% | 50% |
| e. The financial performance of my company affects my likelihood of using electronic information services. | 37% | 19% | 18% |
| f. The economy affects my likelihood of using electronic information services. | 39% | 8% | 31% |
| g. I anticipate an increase in my department's expenditures for information in the following year. | 65% | 12% | 53% |
| h. There is a high awareness within my department of electronic information services. | 37% | 19% | 18% |
| i. There is a high demand for information within my department. | 100% | 0% | 100% |
| j. There is a high demand for competitive information within my department. | 69% | 12% | 57% |
| k. I have heard positive things about electronic information services from other users. | 55% | 31% | 24% |
| "Don't know" to one or more statements | 39% | 23% | 16% |

These results indicate that it is the organization, rather than the sector or individual department that is information intensive. Given an anticipated increase in expenditures for information in these organizations, as well as the perception that electronic information is affordable, these organizations appear to place a premium on the value of information compared to their counterparts.

*Increased Expenditures for Information*

Thirty six non-users anticipated an increase in their department's expenditures for information in the following year. While marketers and financial analysts are equally represented in both groups, librarians agreed with the statement less frequently.

Like the perception of demand for information, the belief that expenditures for information would increase was consistent on an organization by organization basis, although somewhat less so:

> In 16 organizations (38%), all respondents within the same organization believe expenditures would increase.

> In another 16 organizations, all respondents did not agree that expenditures would increase.

> In the remaining 10 organizations (24%), expectations differed.

The suggestion that the organization, rather than the economic sector, was critical in determining attitudes toward information is reinforced in this analysis, where all respondents from companies in only four sectors consistently agreed with the statement. In the remaining sectors, responses varied by organization.

Respondents that anticipated an increase in expenditure for information use more different categories of information (7.2 vs 5.9) and also used them more frequently (56% used their sources daily compared to 44%).

Those that anticipated an increase in expenditures also tended to use Canadian sources somewhat less (70% vs 78% of sources), although both groups rely most heavily on Canadian sources.

Almost 40% of those that anticipated an increase had previous experience using online services (compared to 12%), and 69% (vs. 32%) have considered using online services.

The major difference between those that agreed with that statement and those that did not are on the following (Table 32):

> There is a high demand for information within their department.

> They believe that the cost of electronic information services is affordable.

> They believe that electronic information is relevant to their needs.

> They also believe that there is a high demand for competitive information.

Table 32

## Expectation that Expenditures for Information will Increase (Agree to Statement G)

| | Agree (N=36) | Do Not Agree (N=41) | % Difference |
|---|---|---|---|
| a. The cost of electronic information services is affordable. | 81% | 39% | 42% |
| b. Electronic information services are difficult to use. | 11% | 20% | -9% |
| c. Suppliers of electronic information services are aggressive marketers. | 42% | 12% | 30% |
| d. The information available electronically is relevant to my needs. | 69% | 29% | 40% |
| e. The financial performance of my company affects my likelihood of using electronic information services. | 44% | 20% | 24% |
| f. The economy affects my likelihood of using electronic information services. | 44% | 15% | 29% |
| g. I anticipate an increase in my department's expenditures for information in the following year. | 100% | 0% | 100% |
| h. There is a high awareness within my department of electronic information services. | 44% | 20% | 24% |
| i. There is a high demand for information within my department. | 92% | 44% | 48% |
| j. There is a high demand for competitive information within my department. | 69% | 32% | 37% |
| k. I have heard positive things about electronic information services from other users. | 61% | 34% | 27% |
| "Don't know" to one or more statements | 28% | 39% | -11% |

At this point then, no additional factors related to attitudes are introduced, although the differences or priorities between groups has changed.

*Affordability of Electronic Information Services*

Almost 60% of non-users agreed with the statement that "The cost of electronic services is affordable". Marketers, more than financial analysts or librarians, tended to agree with the statement (65% vs 53% vs 50%, respectively).

Attitudes toward the cost of electronic information are not necessarily held widely within an organization:

> In the same number of companies/organizations where all respondents believed electronic information to be affordable (43%), respondents within the same company held differing opinions.

> In only a small number of companies (14%) did all respondents from the same organization believe that the cost of electronic information is not affordable.

Those who believed that the cost of electronic information is affordable typically used more categories of information (6.9 vs 5.9) and accessed them more frequently (53% vs 44% used sources at least once a day). They also tended to rely on external information -- both available free and for which a fee was charged -- more often than those who did not agree that electronic information was affordable (64% vs 55%).

Interestingly, those who did *not* agree that costs were affordable were more likely to have their own PCs/workstation (78% vs 58%), although the penetration of modems was slightly lower (16% vs 20%).

Major differences between those who agreed or did not agree that online services are affordable occurred in the following statements (Table 33):

> There is a high demand for information within the department.

> An increase in expenditures for information is anticipated.

> Electronic information is relevant to their needs.

> They have heard positive things from other users about electronic information services.

> There is a high level of awareness of electronic information services within the department.

In addition to a high demand for information and the expectation of increased departmental expenditures for information, word of mouth and (consistently) awareness within the department are additional variables appearing to influence the attitudes of non-users.

These latter would seem to be the variables that influence personal, rather than corporate, attitudes toward use of online services.

Table 33

## Affordability of Electronic Information Services (Agree to Statement A)

| | Agree (N = 45) | Do Not Agree (N = 32) | % Difference |
|---|---|---|---|
| a. The cost of electronic information services is affordable. | 100% | 0% | 100% |
| b. Electronic information services are difficult to use. | 7% | 6% | 1% |
| c. Suppliers of electronic information services are aggressive marketers. | 36% | 13% | 23% |
| d. The information available electronically is relevant to my needs. | 64% | 25% | 39% |
| e. The financial performance of my company affects my likelihood of using electronic information services. | 38% | 22% | 16% |
| f. The economy affects my likelihood of using electronic information services. | 38% | 16% | 22% |
| g. I anticipate an increase in my department's expenditures for information in the following year. | 64% | 22% | 42% |
| h. There is a high awareness within my department of electronic information services. | 47% | 9% | 38% |
| i. There is a high demand for information within my department. | 84% | 41% | 43% |
| j. There is a high demand for competitive information within my department. | 60% | 34% | 26% |
| k. I have heard positive things about electronic information services from other users. | 62% | 25% | 37% |
| "Don't know" to one or more statements | 27% | 44% | -17% |

*Perceived Relevance of Electronic Information*

The perceived relevance of electronic information is the fourth critical variable differentiating groups of non-users.

Thirty seven non-users (48%) agreed that information available electronically is relevant to their needs. Librarians and marketers agreed with this statement slightly more frequently than financial analysts (50%, 51% and 44%, respectively).

Respondents from the same organization did not necessarily hold similar views:

> In 40% of cases, all respondents within the same organization agreed to this statement.

> In another 40%, respondents within the same organization held different views.

> Only in 19% of organizations did all respondents believe that electronic information was not relevant.

Those holding the view that electronic information was relevant access only slightly more categories of information (6.8 vs 6.2), although they tend to access them more frequently (54% vs 45% use their sources daily).

They tend use internal sources less in the total mix of information (40% vs 56%), and instead rely on external sources, both free and especially paid, more often.

The attitudes of those who agreed that information available electronically was relevant to their needs, versus those who did not agree, varied significantly on the following (Table 34):

> There is a high demand for information within the department.

> The expectation that expenditures for information will increase.

> The cost is considered affordable.

> Awareness within the department is high.

> They have heard positive things about electronic information services from other users.

Table 34

## Relevance of Electronic Information (Agree to Statement D)

| | Agree (N=37) | Do Not Agree (N=40) | % Difference |
|---|---|---|---|
| a. The cost of electronic information services is affordable. | 78% | 40% | 38% |
| b. Electronic information services are difficult to use. | 8% | 5% | 3% |
| c. Suppliers of electronic information services are aggressive marketers. | 38% | 15% | 23% |
| d. The information available electronically is relevant to my needs. | 100% | 0% | 100% |
| e. The financial performance of my company affects my likelihood of using electronic information services. | 35% | 28% | 7% |
| f. The economy affects my likelihood of using electronic information services. | 38% | 20% | 18% |
| g. I anticipate an increase in my department's expenditures for information in the following year. | 68% | 28% | 40% |
| h. There is a high awareness within my department of electronic information services. | 51% | 13% | 38% |
| i. There is a high demand for information within my department. | 89% | 45% | 44% |
| j. There is a high demand for competitive information within my department. | 62% | 38% | 24% |
| k. I have heard positive things about electronic information services from other users. | 62% | 33% | 29% |
| "Don't know" to one or more statements | 24% | 43% | -19% |

*Prime Target Market*

Since attitudes toward electronic information appear to substantially differentiate groups of non-users, it is appropriate to isolate those respondents in the highest potential use category, i.e. those that agreed with all critical statements:

> high demand for information;

> expectation of increased expenditures for information;

> perceiving costs as affordable;

> perceiving online services to be relevant to their needs.

A total of 18 non-users (23%) met all these criteria.

Of the eighteen, 12 or 67% were marketers, 4 (22%) were financial analysts, and two (11%) were librarians.

With two exceptions, one in the consumer electronic sector and one in the legal & accounting sector, each respondent represented a unique organization (Table 35).

This target group reported that they accessed sources more frequently (67% vs 49% accessed at least once a day), and tended to use electronic media such as floppy disk and mag tape more frequently.

However, they did not did not appear to access a significantly larger number of categories of information (6.9 vs 6.5), and average ratings for sources were very similar (3.6 vs 3.7).

Table 35

Prime Targets for Electronic Information Use

| Economic Sector | No. of Orgs. | No. of Resp. |
|---|---|---|
| Agriculture | 1 | 1 |
| Consumer Electronics | 1 | 2 |
| Containers & Packaging | 1 | 1 |
| Credit Card | 1 | 1 |
| Education/Non Profit | 2 | 2 |
| Energy | 1 | 1 |
| Entertainment | 1 | 1 |
| Health Care | 1 | 1 |
| Household & Personal Care | 2 | 2 |
| Legal & Accounting | 1 | 2 |
| Lodging & Food | 1 | 1 |
| Retail | 1 | 1 |
| Transportation (Freight) | 2 | 2 |
| Total | 16 | 18 |

When all attitudes of this group are compared to other non-users, major differences appear in the level of agreement with virtually every statement. However, the attitude of these prime targets is very similar to users (Table 36).

These criteria therefore seem critical in predicting the propensity to use online services.

Table 36

## Attitudes of Prime Targets vs Users and Other Non-Users

| | Prime Targets (N=18) | Users (N=20) | Other Non-Users (N=59) | Prime vs Users | Prime vs Non-Users |
|---|---|---|---|---|---|
| | Agree | Agree | Agree | % Diff | % Diff |
| a. The cost of electronic information services is affordable. | 100% * | 80% | 46% | 20% | 54% |
| b. Electronic information services are difficult to use. difficult to use. | 11% | 10% | 5% | 1% | 6% |
| c. Suppliers of electronic information services are aggressive marketers. | 56% | 50% | 17% | 6% | 39% |
| d. The information available electronically is relevant to my needs. | 100% * | 95% | 32% | 5% | 68% |
| e. The financial performance of my company affects my likelihood of using electronic information services. | 50% | 55% | 25% | -5% | 25% |
| f. The economy affects my likelihood of using electronic information services. | 61% | 45% | 19% | 16% | 42% |
| g. I anticipate an increase in my department's expenditures for information in the following year. | 100% * | 50% | 31% | 50% | 69% |
| h. There is a high awareness within my department of electronic information services. | 56% | 60% | 24% | -4% | 32% |
| i. There is a high demand for information within my department. | 100% * | 80% | 56% | 20% | 44% |
| j. There is a high demand for competitive information within my department. | 67% | 70% | 44% | -3% | 23% |
| k. I have heard positive things about electronic information services from other users. | 61% | 65% | 42% | -4% | 19% |
| "Don't know" to one or more statements. | 11% | 20% | 41% | -9% | -30% |

* = Selection Criterion

# Section 5:

# Comments of Respondents

# 5. COMMENTS OF RESPONDENTS

While structured questionnaires were used to obtain top-line market information, respondents in Phase I and II were invited to comment on specific issues as well as add their own opinions and concerns.

In this section of the report, a summary of these individual comments is presented.

There has been no attempt by IDC to edit out statements that are obviously "invalid". Rather these remarks are included with others to reflect what market participants *believe* to be true, regardless of the accuracy of these perceptions.

However, IDC has edited comments that reflect similar points of view.

# 5.1 Comments of Phase I Users

*Canadian Versus U.S. Data*

In general, users are hoping that more Canadian databases will become available.

Users feel that some information categories such as corporate and product information are lacking Canadian content. Other categories, such as scientific and some types of economic information, have an increasingly global focus and users will seek more international content in these areas.

The actual location of the database did not appear particularly important to users. International databases containing Canadian content are seen as a viable alternative to Canadian-based services. Users appear sensitive to difference in quality and coverage and there is some *perception* that international databases are improving at a faster rate than their Canadian counterparts.

Notably, news is one information category in which users perceive Canadian content has increased dramatically.

*Cost*

As noted in Section 3, online information is seen by most users as somewhat overpriced and there is some perception that the costs may be affecting demand.

In some cases, use of these online services was considered only when more conventional research methods are exhausted or are otherwise impractical. In addition, media that are less expensive or less usage sensitive (i.e. hardcopy or diskette) may be considered as a viable alternative.

Statistics Canada's service in particular was singled out by one user as essential, but expensive.

While these comments would suggest that convenience of access to current information is still not a decision criterion in many cases, other users perceive online information to be the most cost-effective means of obtaining the information they require. Many users stated that if the coverage and quality are good, price is not a factor.

However, lowering the price of online services is unlikely to stimulate use. A heavy securities user stated that the service his organization uses recently reduced usage charges by 40%. The provider did this by reducing a substantial subscription fee, changing dial-up, loading and updating procedures, and updating equipment. *The user did not redirect his savings into increased use of that or any other electronic services.* Instead, he upgraded the company's microcomputer hardware.

*Pricing Structure*

Pricing structure was mentioned frequently as an issue, although comments indicated varying pricing needs.

Some users like pricing structures that allow them to predict their online information costs upfront. This is particularly true of libraries and educational institutions with fixed information retrieval budgets. Other users prefer a "pay-as-you-go" plan, especially with no upfront subscription or set monthly fees.

Users also identified a concern about the relationship between command structures and pricing structures. They were often unable to predict the effect of command structure changes on their costs.

*Service Changes*

In general, recent service changes have been well received by users and there is a perception that services are becoming more user-friendly. Those enhancements frequently mentioned in a positive light were;

> Simplified search commands, including the introduction of default commands;

> Menu enhancements, including the introduction of optional menus;

> Linking of databases;

> Cross-searching of databases;

> Additional databases.

Two users suggested that menu-driven search structures should be offered on an optional basis, since requirements to manipulate the data as well as proficiency can vary among users.

CAN/OLE was cited as one service that needs to improve ease of use.

*Key Factors Influencing Expenditure*

Users named the following key factors which influence their expenditures for online information:

> Cost;

> Research and development budgets within the organization;

> Economic conditions;

> Awareness of services available;

> Ease and speed of access;

> Scope and coverage of the databases;

> Demand for information within the organization, including awareness of the need for competitive information;

> Recognition and acceptance of the benefits of electronic services by end-users of the information and senior management.

The expectation that information is available free of charge was also cited as a factor inhibiting expenditure. For example, one heavy user of scientific information identified the need to educate management concerning the benefits of online information (i.e. accuracy and currency). However, he perceived management's expectations of obtaining information free of charge as a barrier to increased online use.

*Key Market Areas*

Users cited the following as key market areas for providers over the next 5 years;

> Additional Canadian databases, specifically audience assessment, demographic, corporate, economic forecasts, legislative and government, news, patents, product information, securities and vertical market/operational.

> Standardized search strategies and command languages;

> Increased ease of use;

> Increased level of customer service;

> Increase of textual and numeric versus bibliographic material.

## 5.2 Comments of Phase II Users

Since the majority of Phase II respondents were not users of online information services, their comments were related to use of information, and electronic information, in the next two to five years.

*Greater Sophistication in the Use of Information*

Many respondents expected that automation would change the way in which they access, use and produce information.

While one individual mentioned an increased penetration of hardware and software within his organization over the next few years, most identified more generally an increasing need for sophistication and efficiency in management of information. Even those whose sources were primarily internal expected their use of electronic versus paper-based information to increase.

Specific factors that were mentioned as influencing this trend toward more sophistication included free trade, world trade, and the need to keep up with changes in industry-specific technology.

*Growth in End-User Computing*

In keeping with the concept of greater sophistication in the use of information, penetrations of PCs and workstations is expected to increase dramatically. Only a few of those who currently do not have a PC expect that this situation will continue.

*Scope of Information*

By a 3:1 ratio, information users would prefer more specialized, targeted information than a broader range of information.

Those who would prefer a broader range of information are often information specialists who conduct searches for end-users with varying, "ever changing" needs. In these cases, locating additional sources that can meet specialized needs is appropriate.

However, for the average end-user of the information, easier access and more centralized sources are optimal. One user noted that he expects to be using services "where I can target information and manipulate the data myself, rather than purchasing a large printed publication that is 90% irrelevant". Indeed, some respondents reacted very negatively to the alternative of a broader range of services.

The types of information that are considered ideal may have only limited appeal, and in terms of electronic information, may grow from vertical market/operational applications. This includes one suggestion of industry specific pricing and manufacturing schedules.

*Future Use of Online Information*

When asked, the majority of respondents expected to begin to use or increase usage of online information services in the next five years.

The reasons for this expectation varied. Current non-users were apt to suggest that online services will grow in coverage, and become more readily available, easier to retrieve, and more affordable. One individual noted that his colleagues believed current services "are in their infancy" and as this changes, the likelihood of use will increase.

A number of librarians mentioned that use of online services will increase at the end-user level. However, several end-users identified that although use of online services will increase, they will continue to use intermediaries to do the searching.

*Other Distribution Media*

CD ROM was mentioned by three respondents as a possible delivery media in future. Increased use of microfiche was also noted.

*The Reason that Online Services Are No Longer Used*

A number of respondents had reported that they or their organization had at one time used online services.

Typically, individuals had gained the experience on previous jobs, or working on specific projects in the past (including training courses). In these cases, respondents felt that the specific database was not applicable to their current position, although they held generally positive attitudes toward online information services.

However, several individuals reported that the decision not to use online services was made at a corporate level. Respondents attributed it to the fact that the services were too costly, too costly in relation to benefits, or that the speed of delivery was not necessary and, in addition, the online services had been abused.

# Appendix A:
# Phase I Questionnaire

## USER DISCUSSION OUTLINE

### CORPORATE INFORMATION

1. Where is the company/organization head office?

_____

_____

**(The following questions relate to the company's/organization's activity in Canada.)**

2. How would you describe your company's/organization's major activity?
(What is the company's/organization's major area of business?)

_____

_____

3. What industry/industries is your company/organization in? Approximately what percentage of your revenues come from each?

| | | |
|---|---|---|
| 1 | Advertising Agencies and Market Research | _____ |
| 2 | Aerospace/Aviation | _____ |
| 3 | Agriculture | _____ |
| 4 | Automotive | _____ |
| 5 | Banks & Trust Companies | _____ |
| 6 | Chemicals & Drugs | _____ |
| 7 | Construction & Building Materials | _____ |
| 8 | Consumer Electronics/Appliances | _____ |
| 9 | Containers & Packaging | _____ |
| 10 | Education & Non-Profit | _____ |
| 11 | Energy/Fuel | _____ |
| 12 | Entertainment | _____ |
| 13 | Food & Beverages | _____ |
| 14 | Government (SPECIFY) _____ | _____ |
| 15 | Health Care | _____ |
| 16 | Household & Personal Care Products | _____ |
| 17 | Industrial Conglomerates | _____ |
| 18 | Insurance | _____ |
| 19 | Investment Banking/Management/Brokerage | _____ |
| 20 | Legal & Accounting Services | _____ |
| 21 | Lodging & Food Service | _____ |
| 22 | Mail Order/Direct Mail | _____ |
| 23 | Metals & Metalworking & Machinery | _____ |
| 24 | Office Equipment & Computers | _____ |
| 25 | Paper & Forest Products | _____ |
| 26 | Publishing/Printing | _____ |
| 27 | Retailing | _____ |
| 28 | Telecommunications | _____ |

| | | |
|---|---|---|
| 29 | Transportation (Passenger) (SPECIFY) _____ | _____ |
| 30 | Transportation (Freight) (SPECIFY) _____ | _____ |
| 31 | Other (SPECIFY) _____ | _____ |

**INFORMATION TYPE**

4. What are the categories of electronic information purchased by your company/organization? Approximately what percentage of your total electronic information expenditure is currently accounted for by each information type? What percentage is expected in 1991?

| | | 1987 | 1991 |
|---|---|---|---|
| 1 | Audience Assessment | _____ | _____ |
| 2 | Business Credit | _____ | _____ |
| 3 | Commodities | _____ | _____ |
| 4 | Consumer Credit | _____ | _____ |
| 5 | Corporate Information | _____ | _____ |
| 6 | Demographic | _____ | _____ |
| 7 | Economic | _____ | _____ |
| 8 | Foreign Exchange & Money Market | _____ | _____ |
| 9 | Legal | _____ | _____ |
| 10 | Legislation & Gov't. | _____ | _____ |
| 11 | News | _____ | _____ |
| 12 | Patents & Trademarks | _____ | _____ |
| 13 | Product Information | _____ | _____ |
| 14 | Product Movement | _____ | _____ |
| 15 | Real Estate | _____ | _____ |
| 16 | Scientific | _____ | _____ |
| 17 | Securities | _____ | _____ |
| 18 | Vertical Market/Operational | _____ | _____ |
| 19 | Other (SPECIFY) _____ | _____ | _____ |

5. Which information categories do you anticipate adding to your purchasing over the next five years?

DON'T KNOW [ ]
NO RESPONSE [ ]

ADD: _____

ADD: _____

ADD: _____

ADD: _____

ADD: _____

6. Does your company/organization <u>produce</u> any databases which are serviced or distributed by other companies?

YES [ ]
NO [ ]

If YES, please specify --->

DATABASE: _____

DATABASE: _____

## EXPENDITURES & SUBSCRIBERSHIP

7. Does your company/organization presently contract with any commercial suppliers of electronic information databases?

YES [ ]
NO [ ]
DON'T KNOW [ ]

8. Which electronic information services are being purchased and used by your company?

| Service | Database(s) |
|---|---|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

9. How often have you accessed <u>online</u> electronic information databases so far in 1987?

a. Daily [ ]
b. Almost Daily [ ]
c. Two or three times per WEEK [ ]
d. Two to three times per MONTH [ ]
e. Other (please specify) _____

10. What percentage of your log on time is spent accessing

Canadian databases _____ %

American and International databases _____ %

11. How do you see this ratio changing over the next five years?

_____

_____

12. What is your average monthly bill for electronic information services? What % change do you anticipate over the next five years?

DON'T KNOW [ ]
NO RESPONSE [ ]

Average Monthly Bill

| 1987 | 1991 |
|---|---|
| $ _____ | $ _____ |

13. What was your approximate annual expenditure for electronic information?

In 1986 $ _____

In 1987 $ _____

14. What percentage of that amount is currently used to purchase

Canadian databases _____ %

American and International databases _____ %

15. How do you see this ratio changing over the next five years?

_____

16. At what rate do you expect your company's/organization's annual expenditure on electronic information to grow over the next five years? What dollar figure would that correspond to?

DON'T KNOW [ ]
NO RESPONSE [ ]

_____ % $ _____

## DISTRIBUTION MEDIA

17. What do you estimate to be your relative percentage expenditures among the distribution media of electronic information your company purchases?

| | |
|---|---|
| a. Online Database, Interactive | _____ % |
| b. Online Database, Broadcast | _____ % |
| c. Interactive Voice, Audiotex | _____ % |
| d. CD-ROM | _____ % |
| e. Magnetic Tape | _____ % |
| f. Floppy Disc | _____ % |
| g. Other (PLEASE SPECIFY) | |
| _____ | _____ % |

18. Do you buy paper or micro-fiche based publications which include the same information which is accessible on-line?

YES [ ]
NO [ ]
DON'T KNOW [ ]

19. What is the <u>ratio</u> of your expenditure on such publications to your expenditure on electronic distribution of the same information?

DON'T KNOW [ ]
NO RESPONSE [ ]

| Information Type | Print Ratio | Electronic Ratio |
|---|---|---|
| _____ | _____ % | _____ % |
| _____ | _____ % | _____ % |
| _____ | _____ % | _____ % |
| _____ | _____ % | _____ % |

20. For the entire company/organization, what is the <u>ratio</u> of total print publication expenditure to total electronic information expenditure?

DON'T KNOW [ ]
NO RESPONSE [ ]

| Print Ratio | Electronic Ratio |
|---|---|
| _____ % | _____ % |

## USER SATISFACTION

I would like to focus now on **online** information.

21. How satisfied are you with the **online** information which you currently use?
(Please rate your satisfaction level with each information type named in question 4 as 'Very Satisfied', 'Somewhat Satisfied', 'Somewhat Dissatisfied' or 'Dissatisfied'.)

| Information Type | VS | SS | SD | D |
|---|---|---|---|---|
| _____ | [ ] | [ ] | [ ] | [ ] |
| _____ | [ ] | [ ] | [ ] | [ ] |
| _____ | [ ] | [ ] | [ ] | [ ] |
| _____ | [ ] | [ ] | [ ] | [ ] |
| _____ | [ ] | [ ] | [ ] | [ ] |

For those Information Types with which the respondent is either **Somewhat Dissatisfied or Dissatisfied**, probe for: reasons for dissatisfaction, has the respondent considered changing suppliers (why or why not), etc.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

## TRENDS AND ATTITUDES

22. In your opinion, are the prices for **online** information services:

| | |
|---|---|
| Very affordable | [ ] |
| Affordable | [ ] |
| Somewhat overpriced | [ ] |
| Prohibitively costly | [ ] |
| Don't know/no opinion | [ ] |

23. What key market factors have the greatest influence (positive or negative) over the growth of your company's/organization's electronic information expenditure?

| | |
|---|---|
| DON'T KNOW | [ ] |
| NO RESPONSE | [ ] |

_____

_____

_____

_____

24. In your opinion, on what key areas in your market over the next five years should information providers focus for new database development?

| | |
|---|---|
| DON'T KNOW | [ ] |
| NO RESPONSE | [ ] |

_____

_____

_____

_____

25. What design changes have been introduced to the service(s) you are using in the past year? How do you feel about them?

_____

_____

## JOB FUNCTION

26. What are the typical job functions held by those individuals in your company who use electronic information service(s)? What is the estimated percentage of usage among the various job functions? And in 1991?

| | | 1987 | 1991 |
|---|---|---|---|
| 1 | Accountants | | |
| 2 | Commodity Brokers | | |
| 3 | Consumers | | |
| 4 | Corporate Financial Officers | | |
| 5 | Credit Managers | | |
| 6 | Economists | | |
| 7 | Engineers | | |
| 8 | Farmers & Agribusiness exec's | | |
| 9 | Financial Analysts | | |
| 10 | General Management | | |
| 11 | Health Practitioners | | |
| 12 | Lawyers/Senior/Partners | | |
| 13 | Lawyers/Associates | | |
| 14 | Librarians/Info Specialists | | |
| 15 | Loan Officers | | |
| 16 | Lobbyists | | |
| 17 | Marketers | | |
| 18 | Media Buyers/Planners | | |
| 19 | Money & Fund/Trust Managers (BUY & SELL SIDE) | | |
| 20 | Operations Executives | | |
| 21 | Planners | | |
| 22 | Politicos | | |
| 23 | Product Developers | | |
| 24 | Public Affairs/PR Professionals | | |
| 25 | Purchasing Agents | | |
| 26 | Real Estate Agents | | |
| 27 | Real Estate Developers | | |
| 28 | Reporters/Editors | | |
| 29 | Retail Brokers | | |
| 30 | Retail Managers | | |
| 31 | Scientists & Researchers | | |
| 32 | Site Location Planners | | |
| 33 | Traders | | |
| 34 | Other (SPECIFY) _____ | | |

27. Which <u>additional</u> job functions within your company do you anticipate will be using electronic information services over the next five years?

DON'T KNOW [ ]
NO RESPONSE [ ]

ADD: _____

ADD: _____

ADD: _____

28. Does your firm purchase applications software from an electronic information service as a value-added option?

YES [ ]
NO [ ]
DON'T KNOW [ ]
NO RESPONSE [ ]

If YES --->

... for what application? What is its price?

| Application | Price |
|---|---|
| _____ | $_____ |
| _____ | $_____ |
| _____ | $_____ |

**THANK FOR YOUR TIME**

# Appendix B:
# Phase II Questionnaire

ELECTRONIC INFORMATION QUESTIONNAIRE

1a. I'm going to read a list of information categories. Please tell me if you personally use that type of information and how satisfied you are with your source.

**When respondent indicates use of a category, say:**
**"Let's use a scale of 1-5, with 1 indicating that you are very dissatisfied and 5 indicating that you are very satisfied."**

| | | VD | | | | VS |
|---|---|---|---|---|---|---|
| Audience Assessment | _____ | 1 | 2 | 3 | 4 | 5 |
| Business Credit | _____ | 1 | 2 | 3 | 4 | 5 |
| Commodities | _____ | 1 | 2 | 3 | 4 | 5 |
| Consumer Credit | _____ | 1 | 2 | 3 | 4 | 5 |
| Corporate Information | _____ | 1 | 2 | 3 | 4 | 5 |
| Demographic | _____ | 1 | 2 | 3 | 4 | 5 |
| Economic | _____ | 1 | 2 | 3 | 4 | 5 |
| Foreign Exchange & Money Market | _____ | 1 | 2 | 3 | 4 | 5 |
| Legal | _____ | 1 | 2 | 3 | 4 | 5 |
| Legislation & Govt | _____ | 1 | 2 | 3 | 4 | 5 |
| News | _____ | 1 | 2 | 3 | 4 | 5 |
| Patents & Trademarks | _____ | 1 | 2 | 3 | 4 | 5 |
| Product Information | _____ | 1 | 2 | 3 | 4 | 5 |
| Product Movement | _____ | 1 | 2 | 3 | 4 | 5 |
| Real Estate | _____ | 1 | 2 | 3 | 4 | 5 |
| Scientific | _____ | 1 | 2 | 3 | 4 | 5 |
| Securities | _____ | 1 | 2 | 3 | 4 | 5 |
| Vertical Market/Operational | _____ | 1 | 2 | 3 | 4 | 5 |
| Other (SPECIFY) | _____ | 1 | 2. | 3 | 4 | 5 |

_____

1b. How often do you use these information sources?

| | | | |
|---|---|---|---|
| At least once a day | ___ | At least once once a month | ___ |
| At least once a week | ___ | Less than once a month | ___ |

1c. In what format do you (personally) receive the information?

**Ask as open-ended question -- prompt with list as necessary.**

Printed publications _____
Online interactive databases _____
Magnetic tape _____
CD-ROM _____
Floppy disk _____
Online Broadcast databases _____
Audiotex _____

2a. Does your company have one central location where employees search for information?

Yes [ ]
No [ ]

2b. If you need information, does a librarian actually do the search or do you typically do your own searches?

Librarian _____

Respondent _____

Both _____

2c. We'd like you to break down the information that you use into 3 categories:

* that which is produced internally,

* that which is produced externally and is available free of charge (for example, product brochures from other companies or competitors)

* and, that which is produced externally and must be purchased (such as journal subscriptions or research reports)

Can you tell me what proportion of your information is:

Produced internally? ____%

Produced externally and available free of charge? ____%

Produced externally and available for a fee? ____%

2d. What proportion of your information is from Canadian sources vs. U.S. and international sources?

Canadian ___%

U.S./Int'l ___%

3a. Do you use a PC or workstation, or have access to one?

Yes _____ ---> Does your PC or workstation have a modem?

Yes [ ]
No [ ]

No _____ ---> Do you anticipate using a PC or workstation in the future?

Yes [ ]
No [ ]

Access ___---> 1) How often do you use the PC or workstation?

Frequently [ ]
Not Frequently [ ]

2) Does your PC or workstation have a modem?

Yes [ ]
No [ ]

3b. As part of this study, we're looking at databases delivered electronically. Typically, this information is sold by private companies or government agencies and is accessed via a PC/workstation and a modem.

Have you had any previous experience with information delivered this way?

Yes _____ ---> Continue with question 3c.

No _____ ---> Go to question 4.

**If the respondent has previous experience:**

3c. What services have you used?

**If applicable, prompt for reasons they are no longer using electronic information such as cost, difficulty of use, lack of support, not relevant to their needs.**

---

---

---

**IF THE RESPONDENT IS CURRENTLY A USER OF ONLINE SERVICES, GO TO QUESTION #6.**

4. Have you ever considered using electronic information services in your present position?

Yes [ ]
No [ ]

5. Have you heard of specific electronic information alternatives for the kind of information that you use?

Yes [ ]
No [ ]
Don't Know _____

CONTINUE WITH QUESTION 6 ON PAGE 5.

6. I'm going to read a list of electronic information suppliers and I'd like you to tell me if:

a) You have heard of the company;

b) You are familiar with the electronic services they provide.

| | (A) | | | (B) | | |
|---|---|---|---|---|---|---|
| BRS | Y | N | DK | Y | N | DK |
| CAN/OLE | Y | N | DK | Y | N | DK |
| CSG | Y | N | DK | Y | N | DK |
| Dialog | Y | N | DK | Y | N | DK |
| Dow Jones | Y | N | DK | Y | N | DK |
| Dun & Bradstreet | Y | N | DK | Y | N | DK |
| FP Online | Y | N | DK | Y | N | DK |
| Info Globe | Y | N | DK | Y | N | DK |
| Infomart | Y | N | DK | Y | N | DK |
| IP Sharp | Y | N | DK | Y | N | DK |
| IST | Y | N | DK | Y | N | DK |
| Mead Data | Y | N | DK | Y | N | DK |
| PONY | Y | N | DK | Y | N | DK |
| QL Systems | Y | N | DK | Y | N | DK |

7. Are you using Statistics Canada information?

Yes _____ No _____

In what format?

Printed Publication _____
On-line _____
Other (Please specify) _____

And from what vendor? _____

**If the respondent is unaware of any electronic information suppliers go to question 9.** **(Page 7)**

8. I'm going to read you a list of statements about electronic information services. Please indicate whether you agree or disagree with the statement.

a. The cost of electronic information services is affordable.

b. Electronic information services are difficult to use.

c. Suppliers of electronic services are aggressive marketers.

d. The information available electronically is relevant to my needs.

e. The financial performance of my company affects my likelihood of using electronic information services.

f. The economy affects my likelihood of using electronic information services.

g. I anticipate an increase in my department's expenditures for information in the following year.

h. There is a high awareness within my department of electronic information services.

i. There is a high demand for information within my department.

j. There is a high demand for competitive information within my department.

k. I have heard positive things about electronic information services from other users.

9. Our last question is about your future use of information.

How do you see your use of information changing within the next two to five years?

**Prompt:**
**Will you be using a PC or workstation within 2 to 5 years? (If the respondent does not have one now)**

**Do you think you will be using on-line services in the future?**

**Will you be using a broader range of sources or more targeted information?**

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Verify:

Title_____

Main responsibilities_____

_____

Department_____

Thank you.

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